

Topic: A Study of Energy Consumption of the Household Sector in Myanmar

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ABSTRACT

The energy consumption of the household sector in Myanmar has increased rapidly as a result of tremendous economic growth rate and structural changes in Myanmar's society. As an agro-based country, biomass-based fuels are currently being used as a major fuel in Myanmar. They were about 76% of a total primary energy supply of 14.056 MTOE derived from biomass in 2011. In the same year, the household sector consumed 10.464 MTOE and became the largest energy consumption, accounting for 80% of the total final energy consumption, industry 10%, transportation 6%, agriculture 1% and other sector 3%. Given the country's steady economic growth, cleaner energy sources are needed.

This study focuses on the analysis and the forecast for the energy demand of the household sector in Myanmar. The household's energy demand was estimated by using an end use model, the Long-range Energy Alternative Planning (LEAP) model. The model was applied to analyze data collected from household's living in urban and rural areas at the regions of Yangon, Mandalay and Nay Pyi Taw in Myanmar.

Furthermore, the patterns of household energy utilization by different levels of income groups are presented and discussed using the survey results. Finally, the model forecasted the household energy consumption in business as usual (BAU) scenario and energy efficiency (EE) programs according to the government energy saving potential in this study. In this model result, the total final energy consumption projected to be 233.16 million GJ in 2013. Due to the EE program in 2020, the total final energy consumption was projected to be 257.05 million GJ and 236.15 million GJ from BAU case to EE scenario in this study. The EE program was assumed to be 8% reduction in the household sector in Myanmar from BAU, starting in 2020.

Moreover, this study includes the quantity of the CO₂ emissions of the household sector in Myanmar. Recommendations are given to future improve intervention planning and to enhance the effectiveness of interventions.

Keywords: Myanmar's household energy consumption, LEAP model