

# Long term Electricity Consumption Forecasting in Laos Using ARDL Based on Bounds Testing

Guowei Tian<sup>1</sup> and Napon Hongsakulvasu<sup>2</sup>

<sup>1</sup>Economics, Chiang Mai University  
E-mail: 361723810@qq.com

<sup>2</sup>Faculty, Chiang Mai University  
E-mail: me@mymail.com

## ABSTRACT

Electricity is an important energy in national daily life, and it is also an essential factor for economy growth. Due to the generation and consumption of electricity must happen at the same time, and the unstorable nature characteristic, the long term electricity forecasting helps country to plan and make economically viable decisions in regard to future generation and transmission investments to meet the demand growth. This paper is proposed to analysis the determinants factors, and forecast the future electricity consumption using autoregressive distributed lag model (ARDL) based on bounds testing method in Laos. Gross domestic product(GDP), population are selected as the input factors based on the correlation coefficient. The result shows that in the next five years, the electricity consumption from 2019 to 2023 are predicted to be 6041.41, 6581.65, 7308.41, 7946.19, 8542.31 GWh respectively in Laos.

**Keywords:** Electricity consumption forecasting, ADRL, Bounds testing

**JEL Classification:** O13, Q42, Q43