

**ENERGY EFFICIENCY AND ENERGY-RELATED EMISSION OF THE INDUSTRIAL
SECTOR OF THAILAND**

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Abstract

This study estimated energy efficiency and energy-related emissions of the Thai industrial sector from 1991 to 1999; and forecasted future emissions. The economic-thermodynamic indicator was used for energy efficiency. Three air pollutants, CO₂, NO_x, and SO₂, and nine industrial sub-sectors were studied. Energy efficiency estimates of the sector in 1991-1999 were in the range of 42.58-50.95 million baht per ktoe. The estimates varied widely across the industrial sub-sectors. Overall, the numbers have been declining in most sub-sectors. Fabricated Metal had the highest values, followed by Wood and Textile. Non-metal had the lowest values, followed by Basic Metal and Food. The main contributor to the emissions was Non-metal, emitted, on average, 47%, 33%, and 63% of the total CO₂, SO₂, and NO_x emissions, respectively. The major sources of air pollution emission were solid fossil fuel and petroleum products. Analyses of questionnaire data from three industrial enterprises identified possible improvement options.

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