

Thesis Title	Assessment of Air Pollution from Transport Sector
Thesis Credits	6
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Degree of Study	Master of Science
Department	Energy Technology
Academic Year	1998

Abstract

This study assessed amounts of air pollutants from Thai transportation sector such as carbon monoxide (CO), oxides of nitrogen (NO_x), sulfur dioxide (SO₂) and suspended particulate matter (SPM) during 1997-2001. By using data of fuel consumption in the transportation sector during 1990-1997, an equation for fuel consumption forecasting was established. Predicted fuel consumption were used to estimate the four types of emissions mentioned above. Suitable mitigation technologies were also recommended.

The fuel consumption in the transportation sector is expected to increase from 22,605 ktoe in 1998 to 27,824 ktoe in 2001. Road transportation has had the highest share of fuel consumption in the transportation sector. High speed diesel (HSD) was consumed most in this sector. The emission loads of carbon monoxide, oxides of nitrogen, sulfur dioxide and suspended particulate matter from transportation sector were estimated to be 1,497 kton, 472 kton, 198 kton and 28 kton in 1997. These are estimated to increase to 1,794 kton, 670 kton, 265 kton and 36 kton in 2001, respectively. The values of these emissions will increase from 5,448 million dollars U.S. in 1997 to 7,362 million dollars U.S. in 2001.

To protect the environment and reduce air pollution, recommended mitigation are emission standards of engines, reformulation of fuels, transport and traffic management, alternative fuels to replace fossil fuel and financial policy of government.

Keywords : Emission Load/ Emission Value/ Pollutant/ Transportation