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Abstrak

The nature of biodiesel production itself is complex with multisectors and multi-actors conditions, and with addition of sustainability issues from various stakeholder, created a complex challenges for developing the biodiesel industry. In order to understand of the complexity, this research developed a comprehensive sustainability model to draw the relationship and analyze the effects of government policy for stimulating biodiesel industry using the combination methods of process mapping, financial modeling, life cycle analysis (LCA) and business sustainability strategy. The model combines its output translated into a complete sustainability index of financial, social and environment. The model simulation results show that accomplishment of a sustainable biodiesel production within the target and timeframe is impossible without releasing the subsidized price of diesel fuel and further directions from the government.