

Fuel economy standards could save Malaysia 16.2 billion liters of petrol by 2030

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Introducing fuel economy standards will significantly contribute to fuel savings and emissions mitigation in Malaysia, according to new international research by Xi'an Jiaotong-Liverpool University and

University of Technology Sydney (UTS).

In the past 20 years, the [transport sector](#) in Malaysia has consistently consumed more than 40 percent of the country's total energy use with land transport—mainly private cars—using the most.

In a paper published in the journal *Sustainability*, Distinguished Professor Teuku Meurah Indra Mahlia and Ph.D. student Ahmad Zuhairi Muzakir, both from UTS, along with Professor Eng Hwa Yap from XJTLU, found that if Malaysia adopted a [fuel economy standards](#) policy similar to those implemented internationally, it would provide huge savings in fuel consumption and reduce carbon emissions.

"In Malaysia, fuel consumption by private cars is not governed by a national policy on fuel economy standards, which is in contrast to many developed economies," Muzakir says.

"We explored what the impact of adopting a fuel economy standards policy on passenger vehicles would be compared to what it might look like if the country continued business as usual.

"Our data showed that the lack of fuel economy standards in Malaysia has resulted in the loss of potentially tremendous savings in [fuel consumption](#) and emission mitigation."

Forecasting a five-year period from 2025 to 2030, the findings suggest Malaysia would save 16.2 billion liters of petrol, or more than 12,300 ktoe (kilo tons of oil equivalent), if fuel economy standards were implemented. In addition, the standards would reduce at least 37.6 million tons of CO₂-equivalent greenhouse gas emissions.

Muzakir says the research can help guide officials and policymakers in Malaysia to see the benefits of the fuel economy standards and influence

their decision to implement one in the future.

"Fuel economy standards have been talked about in many international platforms, including Malaysia, but so far the country has been hesitant to implement it," he says.

"Transportation plays an important role in [economic growth](#) in many countries—particularly developing countries in the Asian context. That's why there is some reluctance to introduce policies that have a perceived economic risk.

"Our research highlights in real terms what countries like Malaysia have to gain by putting in place fuel economy standards. We hope that our modeling can be used for other countries in the region as well to support them in deciding to implement similar standards.

"Governments have a responsibility to their people as well as the world around them. If our nations act responsibly—in this instance, by implementing [fuel economy](#) standards—it not only helps the environment. It also helps the physical health of people through the reduction in emissions."

Muzakir is supervised by Professor Yap, Dean of the School of Intelligent Manufacturing Ecosystem and the School of Robotics at XJTLU Entrepreneur College (Taicang) and Distinguished Professor Mahlia of UTS.

Professor Yap says international research projects that transcend traditional borders and academic disciplines are critical in addressing complex challenges in today's world.

"When we look at problems from a systematic perspective, we can clearly see everything is intertwined. Every part or component, each

system or subsystem, are all related to each other," he says.

"There's a lot more to be done in tackling problems like this, where economic and environmental costs must be balanced.

"No one party or government, no one department or organization can go it alone. We will prosper only if we work together."

More information: Ahmad Zuhairi Muzakir et al, The Way towards an Energy Efficient Transportation by Implementation of Fuel Economy Standards: Fuel Savings and Emissions Mitigation, *Sustainability* (2021).

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Provided by Xi'an jiaotong-Liverpool University

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