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## Efficiency key to cutting transportation energy use

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### THE GREEN EQUILIBRIUM

**THE** government has begun the first phase of subsidy rationalisation by floating diesel prices and providing targeted subsidies to selected groups. This will be followed by petrol and others but the timeline remains unknown. Before Covid-19 hit the world, the national final energy demand for 2019 still showed high energy usage in the transportation sector at 37.6% followed by the industrial sector at 28.5%. High energy use for transportation is not a sustainable way of allocating resources to develop our economy.

We have proposed a few solutions to tackle both the cost impact of fuel prices as well as ways to reduce the high dependency on energy from this sector. Some solutions have been implemented with success but others are still pending.

Let's look at some solutions to tackle the cost and environmental impact of the transportation sector.

#### Energy efficient vehicle (EEV)

Efficient fuel use is the basic rule that must be implemented. Since 2011, we have continuously pressured the government to implement minimum energy performance standards (MEPS) and mandatory energy efficiency labelling for electrical equipment. The government agreed to this approach in 2014 and now we have more equipment with MEPS and labelling. Via this method products that do not meet our benchmark, will not be allowed to be sold in our market and this step contributes to reducing electricity consumption. A similar approach was proposed for the transportation sector as well. Why do we need MEPS and labelling urgently? We have observed that when

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a country does not have such a requirement, changes in regional legislation may cause the flow of non-efficient products into our market and cause us to waste energy or electricity. Thus, moving forward, the government must implement mandatory MEPS and labelling for all vehicles.

#### Road design and traffic management

In Malaysia, we can notice that there are too many intersections for arterial roads which lead to congestion. A slower flow of traffic and 'zig-zag' conditions will basically aggravate bad traffic conditions. As an example, the Federal Highway section between Mid Valley Megamall and University Malaya Medical Centre (UMMC) has been "upgraded" numerous times since 1999 to directly connect to nearby development areas. A similar situation also occurs in many arterial roads. If stricter exit and in-flow regimes are introduced, it will reduce unnecessary traffic blockage at every short distance. Thus, we can discipline drivers using traffic management. New intersections, ramps, turns or even 'U' turns should be based on actual traffic management study and not demand from certain quarters alone. Reduction of traffic congestion will reduce fuel consumption.

#### Public transport

Almost a decade ago, we conducted a national-level survey to establish baseline data on energy-related issues including public transport under the National Energy Security Survey (NESS) using the Department of Statistics's methodology. We found out that 52.78% of Malaysians said they would switch to public transportation if public transportation services were improved to be more effective. Based on this, if first-mile and last-mile connectivity is done properly while reducing overall travelling time, we may have a good 60% public transport modal share. Integration as well as proper planning is vital to ensure increased public transport usage to assist members of the public to reduce their fuel cost expenditure. Public transport does not include taxis and the like. At the moment, the reality on the ground for train and bus services which are "sardine-packed" during peak hours as well as longer travelling time will hamper this opportunity. High-speed rail was seen as a game changer and also reduced emissions from the vehicles and aviation sector. Will we miss the boat again?

#### End-of-life vehicle policy

Upon implementing the above-mentioned

solution successfully, the government can eventually implement End-of-Life Vehicle (ELV) policy. All equipment will have wear and tear issues as well as a reduction of operational efficiency. Every decade engine technology improves rapidly and reduces fuel consumption significantly. In the Malaysian context, a 9-year loan period to own a vehicle hampers short ELV target. This will leave middle and low-income groups unable to recoup from the investment into vehicles and live in debt for a long time. Thus, the government must think out of the box and ensure the above three solutions are fully implemented before venturing into ELV policy. There are also substitution solutions which may prolong the life of a vehicle that can be considered under the Design-for-Environment (DFE) approach.

Therefore, it is imperative that the government carry out its subsidy rationalisation in a structured manner so that we can prevent huge spikes in living costs as well as provide seamless transportation services for members of the public to be future-proof and build a robust economy.

*This article is contributed by Association of Water and Energy Research (Awer) Malaysia president Piarapakaran S.*