**How to conserve energy**

Syed Akhtar Ali

Thursday, Dec 29, 2022

Oil imports have decreased by 26 per cent in the first five months of the current fiscal year (July-Nov). Crude oil imports have fallen by 16 per cent, diesel imports by 44 per cent, and gasoline by 20 per cent. While there may be some inventory effect as well, this is a clear demand-reduction signal. The reasons appear to be obvious: economic slowdown and pricing and foreign exchange issues.

Whenever there are financial issues in energy supplies, there are immediate calls for closing the markets by 8pm. A research study by ‘Business Recorder’ concludes that the commercial sector’s share in electricity consumption is only 10 per cent and that electricity saving in this area may not be significant. The market closure proposal has not been accepted by the commercial sector and remains largely unimplemented.

Similar attempts were made in the past. However previously the country faced an electricity-capacity crisis; this time there is a fuel-price crisis. On the contrary, tariff incentives have been given to incentivize high electricity consumption so that unit capacity charges could be reduced due to high capacity utilization.

Surprisingly, there is apparently no move to conserve and reduce unnecessary oil consumption although high prices are discouraging oil consumption. Reduction in energy/oil consumption can be a double-edged sword; it can affect economic output. It is wasteful consumption that should be discouraged, while also introducing efficiency measures.

The country’s elite who drive posh vehicles consume gasoline irresponsibly. There is a case for increasing gasoline prices only for the rich and the elite. But the problem is that this commodity is consumed by both the rich and the poor. In my previous articles, I presented a mechanism for introducing a low-octane cheaper variety of gasoline for the poor.

It is time to promote public transport across the country – be it transport for goods or passengers. Public transport consumes diesel, and there is a case for reducing diesel prices vis-a-vis gasoline so that public transport can become affordable and attractive. Low diesel prices incentivize economic output as well. It can be done easily by high taxes on gasoline and lower on diesel. Many advanced countries have adopted this practice.

The Covid-19 pandemic has also introduced several fuel-saving options like Zoom meetings or the work-from-home model. Authorities should promote ride-sharing in the country, regularize and expand it. The corporate sector should be asked to introduce fuel-saving programmes and targets.

The oil imports of $20-25 billion as opposed to the $36 billion total exports are clearly unsustainable. This situation will continue for some time unless conservation measures are taken. It is similar to the 1973 oil crisis, which forced several Western countries to promote oil conservation and efficiency. We have a similar situation, and it will continue unless exports increase without incurring high energy costs.

The International Energy Agency (IEA) has advised its OECD member countries to adopt conservation measures. They have developed a ten-point agenda, which may be partly relevant and useful for us. Can Pakistan develop a 10-point agenda of its own?

Pakistan needs to refine and better coordinate its oil import process. The power sector requires furnace oil mostly in winter. There is enough furnace oil production by local refineries. Its import ban was lifted in 2020-21 due to the LNG crisis. As a result, excessive furnace oil imports were made, leading to a surplus, which created a disposal problem.

The demand for furnace oil is high in winter, except for occasional demand in other seasons. Oil refineries should be encouraged to build sufficient storage units for furnace oil. There are other areas where procurement and internal oil logistics can be improved, resulting in oil savings.

Oil is mostly consumed in the transport sector. Some 80 per cent of the total oil consumption is by passengers and freight transport. Conservation and efficiency efforts in this sector may save up to $2 billion of oil imports, depending on the prevailing oil prices. The following three areas can lead to oil savings in transport: driving and maintenance, automotive fuel efficiency, and spare parts availability.

It is important to raise awareness about fuel-efficient driving among vehicle users and drivers. Though people know some techniques to be more fuel-efficient, they are not sensitive about it. Awareness campaigns may help sensitization. Oil marketing companies (OMCs) can play a vital role and use petrol pumps for spreading the message. In Pakistan, one comes across the following tips on the official websites of OMCs: don’t be an aggressive driver; observe speed limits; maintain the speed between 50 and 80 km/hr on highways; avoid revving the accelerator to a high RPM; and avoid breaking aggressively.

Other tips include: avoid excessive idling; keep the trunk empty; don’t carry unnecessary load; no overload for truckers and CVs; and fill vehicle at the lowest setting, when the pump stops and gives a sound; drive with the AC on instead of opening windows at high speeds; and keep your vehicle exterior clean to reduce air drag. The list goes on: keep tyres inflated at the right pressure; clean, adjust or change spark plugs and air filters regularly; and change engine oil and oil filter as per oil manufacturer’s specifications.

Training programmes for automotive technicians should be introduced to implement these requirements adequately. Such trained manpower can also be sent abroad to earn remittances.

The oil crisis of 1973 initiated several energy efficiency and diversification programmes, led by the US. The vehicle fuel efficiency standards (VFES) were introduced which tremendously improved fuel efficiency. Today, vehicle fuel efficiency has doubled or even quadrupled as compared to that in the 1970s-80s.The movement spread to Europe, Japan and Korea. Developing countries recently introduced such schemes and initiatives. India introduced emission standards in 2015, and is now introducing the VFES, which will be enforced by April 2023. Perhaps, time has come to take similar initiatives in Pakistan.

In Pakistan, there are used imported vehicles which are usually more fuel efficient – the fuel consumption of 20km per litre – than the locally produced ones. Import and taxation policies can encourage fuel efficiency through varying tariff rates.

Currently, except for engine capacity, there is no other tariff differentiation. Import policy can place an upper or lower limit on fuel consumption. Imported vehicles should be type-certified in the manufacturing country, specifying fuel consumption rating. Similarly, local producers may be encouraged to increase fuel efficiency of the vehicles they assemble or produce by making adjustments. Tariff incentives may work.

Older vehicles are generally less fuel-efficient either through wear and tear or through fuel efficiency improvement in new vehicles. There are other possible rules and regulations that can be introduced to convince vehicle owners to change to new or less old vehicles. Tax or credit term incentives may work. Since Pakistan is a poor country, it cannot introduce the policy on mandatory retiring of vehicles.

Many countries have extended their energy labelling programmes to the automotive sector as well. Advanced countries introduced this labelling scheme many years back. Now, India, Chile, Vietnam, Thailand, Singapore and Indonesia have adopted the system. Pakistan’s National Energy Efficiency and Conservation Authority (NEECA) may consider going into the automotive sector as well.

There should be some initiatives to promote the spare-parts industry to reduce the prices of spare parts. People delay changing parts at the end of its recommended life due to the high prices of these products. Take the case of spark plugs. Its price can vary between Rs1,000 and Rs10,000. This component plays an important role in fuel consumption. There is a huge market for these plugs. Its local manufacturing can be economical. Similarly, other parts like various filters of engines and AC can be produced locally.

There are other approaches as well, such as introducing electric vehicles (EVs). But these plans are mid- to long-term. The combined effect of small changes in several sectors can be quite big. We should not look towards revolutions; history tells us that they do not deliver much.

The writer is a former member of the Energy Planning Commission. He can be reached at: akhtarali1949@gmail.com