Turning to green gold

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Amory Lovins, the author of *Winning the Oil Endgame* — a book which offers a coherent strategy for ending oil dependence starting with the US but applicable worldwide — is confident that the high oil price (which breached US$70 a barrel last week) will encourage consumers towards alternative energy that will finally kill the demand of crude oil.

He says in the Aug 8 issue of *Newsweek*: "In 1850, most homes in the US were lit by lamps that burnt whale oil [yellowish oil obtained from whale blubber]. As demand rose, supply dwindled — whales became shy and scarce — and prices for whale oil climbed.

"Then alternative fuels such as smokeless, ordourless coal-kerosene began to sweep the market. By 1859, when Edwin Drake struck oil in Pennsylvania, five-sixths of all whale-oil lamps had switched to new fuels. The astonished whalers, who hadn't heeded the competition, ran out of customers before they ran out of whale. Oil may now be poised to repeat that history."

Lovins is of the opinion that new energy resources (like biofuels, natural gas, solar, wind and hydrogen) and energy efficiency (for example, in the transportation sector through lighter and fuel-saving vehicles and hybrid-electric cars) could very much lessen the US and the world's dependency on oil.

And it doesn't even need a US$70 a barrel for the US and the world to do the switching.

He said: "Fortunately, it doesn't matter [if the price reached US$100 a barrel]. With cheap oil-saving technologies and alternative fuels already at our disposal, the sooner we get off oil, the sooner we'll start making bigger profit.

"That's right... profits. The conventional wisdom is thaUS$50 a barrel oil has made alternative fuels economically viable. But the truth is that they were viable back when oil was US$25 a barrel. The arguments in favour of phasing out oil have now merely become overwhelming."

There have been many arguments like Lovins' in the past but the world still relies overwhelmingly on oil to power its economy. And every time the price of oil reaches record levels, the issue of alternative fuels will crop up. That happened during the Arab oil embargo in the early 1970s, the Iran-Iraq war in the late 1970s and early 1980s and the first and second Gulf wars, and in today's high-demand-short-supply situation, made worst by bottlenecks in refining and exploration and production activities and the fear factor of terrorist attacks on oil installations. But when prices fall, many of these plans on alternative fuels will again be on the back burner.

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But the thing that Malaysia should do is that irrespective of the level of oil price, research and development and commercialisation of alternative fuels should continue. Yes, as an exporter, we are benefiting from the high crude oil price and natural gas is still abundant as a source of energy but the quest for alternative fuel must not stop.

This is especially so when oil and natural gas are depleting resources and many other countries in Europe, North and South America are already ahead in their biofuel programme — to replace "black gold" with "green gold". US president George W Bush recently signed an energy bill that has set biofuel/biodiesel to form 5% of the total fuel consumption in the US by 2012.

| BY AZAM ARIS |

my say

Biofuels are fuels made from biological ingredients (from crops like oil palm, sugar cane, rapeseed, soyabean, corn, sunflower and coconut) instead of fossil fuel. In Brazil, ethanol (a form of alcohol) distilled from sugar cane is being used quite extensively in cars and even aeroplanes — mostly by blending it with petroleum products. But there are now in Brazil, cars which can run straight from ethanol.

The country's sugar cane fields now feed a network of 320 ethanol plants with 50 more planned in the next five years. And they are already exporting sugar cane-based ethanol in tankers to fuel-hungry countries with limited agricultural land like Japan and South Korea — which are always on the lookout for alternative energy in the international market. To quote *Newsweek*: "To keep up with demand, local sugar barons and multinationals will invest some US$6 billion in new plantations and distilleries over the next five years."

Like biofuel, petroleum is made by capturing energy stored in living things (fossil) but unlike biofuel which can be sourced from fast-growing crops, it takes nature billion of years to make oil. And unlike oil, biofuels — in Malaysia's case derived from oil palm where the country is the largest producer in the world — are renewable resources.

Biofuels are also cleaner and will help fight global warming caused by greenhouse gases, such as carbon dioxide, which is produced when petroleum is used. I am glad that the government is formulating a long-term national biofuel policy to embark on an alternative and environment-friendly energy source.

Once the policy is finalised, there must be follow-through programmes by the government and the private sector to ensure that this alternative energy policy will be successfully implemented. As a start, the national biofuel policy will basically entail a four-prong strategy:

- Producing a bio-diesel fuel blend of 5% processed palm oil with 95% petroleum-based diesel;
- Encouraging the use of biofuel among the public which will involve giving out incentives for oil retail companies to provide biodiesel pumps at stations;
- Establishing an industry standard for biofuel/biodiesel quality; and
- Setting up of a palm oil biofuel plant in Labu, Negri Sembilan, for export.

Producing biofuel from palm oil will also create a buffer for Malaysian producers as it will help to strengthen demand and boost prices

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Plantation companies to take lead

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especially during low-demand periods from major markets like China and India. Even if only 5% of production (based on the policy) is blended with diesel, a total of 500,000 tonnes of palm will be utilised.

While plantation companies (including local ones) are expected to take the lead in the commercialisation of biofuel, oil multinationals are not keeping still. More countries, expecially in Europe, now require biofuels to be mixed with oil-based fuel as a way to reduce carbon emissions and the likes of Shell and British Petroleum are already making huge investments in this field. Shell, for example, is already the world's largest distributor of ethanol through its global service-station network.

It is good to know that the country is ready to invest in a large-scale biofuel facility in Labu and in addition to this, national oil corporation Petronas is also planning to build a 200,000-tonne methyl ester plant.

There is always a long possibility that Lovins might be right when he concluded: "In only two generations, oil — once the foundation of our strength but now a source of weakness — could become as obsolete as whale-oil lamps."

Black gold may or may not give some way to green gold but either way, Malaysia as a producer and exporter of both crude oil and palm oil must be prepared for any eventuality. We must not end up as the people Lovins' noted in his article — the astonished whalers who had not heeded competition, and ran out of customers before they ran out of whales. E

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