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I REFER to the letter "Nuclear energy is our best bet" (NST, April 9) from A.M.O. of Kuala Lumpur.

In assessing the use of nuclear power to generate electricity and for general energy purposes, we must weigh the pros and cons before embarking on such a course of action. Nuclear energy accounts for just one-sixteenth of the world's energy needs and the truth is that its popularity is on the decline.

In propagating measures to mitigate the effects of global warming, the use of nuclear energy is quickly cited without mentioning its adverse effects. A recent study by German scientists has shown that the risk of contracting cancer, especially leukaemia in children, living in the vicinity of a nuclear power plants, is increasing.

It is a fallacy to imagine that the cost of electricity production from nuclear power is low. Research and development in nuclear applications are borne by governments and these costs are, therefore, not factored into the ultimate cost of electricity produced. On the other hand, the cost of research and development for renewable energy sources is mostly financed by the private sector and, therefore, added to the production cost.

A second point to remember is that if nuclear power plants were to be fully insured against all risks by their operators, the generated electricity would cost more than twice as much as now. The risks instead are borne by the people of the state concerned.

Nuclear proliferation is the term used to describe the dissemination of weapons-applicable nuclear technology and information to nations that at present have no nuclear weapons.

Most nations using nuclear energy for generating electricity also possess nuclear weapons. It is a natural anxiety that the chances of an eruption of a nuclear war between nations does

increase with the number of nations with nuclear weapons. It is not difficult to transfer the technology in making electricity into making a bomb.

The average lifespan of a commercial nuclear reactor is 23 years. Practice has shown that more power stations are being shut down than built. Statistics in 2007 show that world nuclear power production fell by 1.8 per cent and the number of operating reactors was 439, five fewer in 2002.

The construction of a nuclear power plant in Olkiluoto, Finland is a glaring example of what can go wrong in economic terms. It is so plagued with construction delays, cost overruns and hidden subsidies that the country now regrets having started the dubious project.

We must bear in mind that accidents can and do happen as in the Chernobyl tragedy. No system is accident-proof and fail-safe. In a plane crash, a few hundred may die but in a nuclear accident, millions could die.

Alternative sources of energy are available. For instance, solar energy is an unending source of power. Since 1985, half a million people in California have got their electricity from CSP, the technique of concentrating sunlight using mirrors to create heat to raise steam to drive turbines and generators. We have not fully exploited other sources of renewable energy like wind, water, biomass or geothermal.

One of the few "pros" of nuclear power advocated is the so called "relatively low" emission of carbon dioxide (CO₂), one of the major causes of global warming. For this reason, it has been proposed as the best method to mitigate the effects of climate change. However, a recent life-cycle analysis showed that nuclear power produces four to 10 times more CO₂ emissions per kWh of electricity than renewable energies.

It is said that "for whom enough is too little, nothing is enough". Let's play safe. Let's rely on renewable energy sources.

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