



# Some flaws in the reasons given for selling our uranium

By BRIAN MARTIN\*

**T**HE question of whether the use of nuclear power as a source of electricity should be promoted in present-day societies is a contentious one. There are numerous reasons and rationalisations for supporting or opposing this development.

The purpose here is to assess critically several of the arguments in one aspect of the debate, arguments which are used to justify export of Australia's uranium.

There are a number of people who, while they profess to have no particular liking for a continued dependence on nuclear power in the world for any lengthy period, favour the export of Australian uranium.

## Reasons

Some of the reasons offered for this stance are:

- (1) Export of uranium is necessary to help the poor peoples of the world;
- (2) By exporting uranium, Australia can exert a greater influence on safeguards arrangements designed to minimise proliferation of nuclear-weapons capability and terrorist use of nuclear materials;
- (3) Cheaper nuclear power in the rich countries is necessary as a stop-gap source of energy until sources of renewable energy can be exploited and energy-conservation measures implemented; and
- (4) Export of Australian uranium can help preclude "forcing" some countries to move more quickly towards breeder technology as a source of energy.

Each of these arguments will be discussed here.

## NUCLEAR POWER AND THE THIRD WORLD

In theory, one way that nuclear power might benefit the poor peoples of the world is by being used directly as a source of power in the Third World. There are several reasons why this developmental strategy is suspect.

## Ill-suited

If one looks at the human and material resources available in most Third World countries, one finds: a low utilisation of available human labour, or in other words high unemployment and under-employment; scant capital resources; a very small number of technically trained personnel; and a meagre infrastructure of public services (such as electrification and plumbing).

Nuclear power seems singularly ill-suited for such countries: it creates very little employment, uses massive amounts of capital, requires relatively large numbers of highly trained personnel, and requires an extensive network of facilities (such as electric pumps) for distribution and end-use.

This is not to say that nuclear power would necessarily be worse than no power. But the relevant comparison is not with no power, but with alternative developmental strategies.

## Effective

There is considerable evidence that technologies do exist which are more directly suited to the needs of poor communities: diffuse solar collectors, biogas

heaters, and use of manure for fertiliser (rather than energy-intensive artificial fertilisers).

Such possibilities produce more employment and utilise available capital in a more effective manner than nuclear power. They also reduce dependence on foreign expertise, develop the skills and self-reliance of the local people, and foster a more equitable distribution of social wealth.

To reiterate, this is not to say that artificial fertiliser, produced from oil using nuclear electricity, would not be useful in poor agrarian communities. It would. But the real question concerns the best way to allocate scarce capital and expertise in a situation characterised by low utilisation of labour and unrealised innovative potential.

A second way that nuclear power might benefit the poor peoples of the world, in theory, is by stimulating the world economy (that is, by benefiting the economies of the rich countries).

## Plausible

The idea is that nuclear power would boost productivity in the industrialised countries, and that through trade this would benefit the non-industrialised countries.

This idea seems plausible in the conceptual world of classical economics, but modern ideas of international political economics tell a much different story.

It has been strongly argued by a number of writers — so much so that this is now becoming the conventional wisdom — that most trade between rich and poor countries is exploitive.

First, the terms of trade are strongly weighted against the poor countries: prices of raw materials and basic agricultural commodities have not kept pace with inflation.

## Unbalanced

Second, the poor countries are forced into producing a few basic commodities for export to pay external debts, and at the same time come to depend on imports for industrial goods; this stunts the pace of development in these countries.

Finally, the development that does occur in the poor countries is highly unbalanced. It is geared to the production of luxury goods and services (automobiles, advanced medical services) for elites in the metropolitan areas, while the rural poor and the new urban squatters gain few advantages, and may even suffer a decrease in material living standards along with the destruction of their traditional social fabric.

Another argument along the same lines, offered by those favouring export of Australian uranium, is that if the rich countries use more nuclear electricity, they will use less oil and coal, which will thus be available to the poor countries at a lower price.



"At present a sizable fraction of energy in the rich countries is used to produce and run such 'necessities' as recreational vehicles (and) inordinately wasteful transport systems . . . In any rational society these things will eventually change, and it might as well be now that the changes begin. Anyone who argues for nuclear electricity just to maintain the luxuries of the rich is plainly stating a commitment to the current gap between rich and poor".

But there is no evidence that rich countries will cut their consumption of oil because a little more nuclear electricity is available. It is more likely that oil not used for electricity generation will be used for petrol and space heating.

Furthermore, the price of petroleum is likely to reflect political considerations (in particular, OPEC policy) as well as purely economic ones.

## Better ways

If Australia were truly concerned about helping the poor of the world, there seem to be several ways more promising than exporting uranium to the rich countries.

Some of these ways are:

- (1) No-strings-attached offers of help to poor countries in developing appropriate low-level technology;
- (2) Subsidised exports of coal to meet energy shortages in poor countries;
- (3) Diplomatic efforts to encourage OPEC and other countries to provide petroleum at reduced prices to poor countries.

## INFLUENCE ON SAFEGUARDS

Proponents of the mining and export of Australian uranium sometimes argue that if Australia exports its uranium, it can have some beneficial influence on international arrangements for preventing misuse of nuclear materials and technology, whereas if it does not export its uranium it can have no influence. This argument is questionable on two grounds.

First, there is little evidence that even the most stringent safeguards in practice, can prevent proliferation of nuclear-weapons capability or terrorism.

The experience of Canada is appropriate here. The Canadian Government has imposed some of the tightest requirements on its exported fuels and reactor technology; yet India in 1974 initiated its nuclear-weapons capability with plutonium produced in a Canadian reactor.

## Positive

Second, Australia could maintain an international influence on safeguards even if it does not export its uranium.

To have an influence, it is necessary to take some positive actions. For example, Australia might say it had decided not to export uranium until it had been conclusively shown that safeguards were operating effectively; or Australia might lobby for better safeguards as a possible exporter of uranium.

The proponents cannot have their argument both ways. Either lobbying for safeguards is futile, in which case their argument is irrelevant; or lobbying is effective, in which case it can be used without exporting uranium — probably from a stronger bargaining position.

## Consequence

The argument for exporting to have influence with safeguards sounds suspiciously like the argument used to justify trade with South Africa: that links must be maintained to have a progressive effect on the South African Government.

The likely consequence in both cases is that a policy of export or trade is established — for whatever reasons — and the high hopes (or promises) of beneficial influences are subverted or forgotten.

## RICH COUNTRIES "NEED" NUCLEAR ENERGY

Some proponents of the export

of Australian uranium say they are not really that much in favour of nuclear power, and certainly not in the long term, but that the rich countries need nuclear power as an interim source of energy until renewable energy sources can be exploited and energy-conservation measures instituted.

## Conservation

Those who argue in this way seem to underestimate the ability of people in rich countries to change their habits and their priorities.

Energy conservation can easily take the place of any increase in nuclear electricity that might be plausibly programmed — if concerted action is taken. This involves such simple measures as less-extreme heating and cooling of buildings, tuning of motors, and close scrutiny of new construction and industrial projects. Even within the normal patterns of use, electricity demand shows a surprising price elasticity.

Incidentally, an energy policy strongly based on energy conservation would generate much more employment in the rich countries than one based on nuclear power. Similarly, in Australia the employment generated by widespread energy conservation measures would be larger and longer lasting than that generated by uranium mining.

## Indefensible

Those who use the spectre of unemployment to attack environmentalists for their opposition to uranium mining find it quite easy to forget their own opposition to rapid moves towards energy conservation and low-level technology, alternatives

whose contribution to employment would dwarf anything uranium mining could ever support.

Even if energy conservation could not replace all possible nuclear-generated electricity in the next few decades, the stance that this electricity must be supplied is morally indefensible, given the present contrast between the rich and the poor peoples of the world.

At present a sizable fraction of energy in the rich countries is used to produce and run such "necessities" as recreational vehicles, a plethora of electrical appliances, pointless packaging, inordinately wasteful transport systems, planned obsolescence of numerous goods, and "defence" systems based on multiple overkill.

In any rational society these things will eventually change, and it might as well be now that the changes begin.

## Postponing

Anyone who argues for nuclear electricity just to maintain the luxuries of the rich is plainly stating a commitment to the current gap between rich and poor.

Many people would agree that a more equitable distribution of material wealth should come about some day. There is no reason not to start making the shift now. Uranium to keep up energy-extravagant life styles in the rich countries is only postponing the day of reckoning.

\*Dr Martin has a Ph.D. in Theoretical Physics from Sydney University.

To be concluded tomorrow.