

URANIUM AND THE THIRD WORLD

ATOMS FOR THE POOR?



Twenty three years ago US President Eisenhower called for an 'Atoms for Peace' programme, to 'provide abundant electrical energy to the power starved areas of the world.'

Atomic power is a technology developed by the powerful, for the rich. It has failed to meet Eisenhower's promise. Now the rich are trying to palm a second class technology off onto the poor.

POWER HUNGRY REGIMES

The power hungry regimes of Asia are making overtures to Australia for uranium supply. These overtures are being orchestrated in Australia by the Fraser Government. Cabinet documents leaked to FOE (6 September) reveal the government 'encouraging visitors from developing countries, specially

Australia's neighbours, which have recognised the need to use nuclear power'.

The mining companies have also suddenly become the champions of the poor as an excuse to mine uranium.

POOR BECOME POORER

The reality is that atomic power in non-industrial societies will make the poor poorer and will reduce the availability of energy where it is needed most. This is the main argument against atomic power.

Even pro-nuclear people like Sir Philip Baxter, one-time Chairman of the Australian Atomic Energy Commission, agree 'that if you put power stations into under-developed countries, it will be the rich - usually the dictatorial governments which run most of these

today - who will get the benefit'.

PROFIT & POWER MOTIVES

The pressure to export uranium comes from two prime movers: profit and political power. Reactors increase the dependency of non-industrial societies on the rich and powerful.

Westinghouse your way of life

45 miles west of Manila in the Philippines at Morong, a 620 Mwe

reactor is being constructed by the Westinghouse Co. The reactor will cost at least US \$1.09 billion.

The plant is being constructed on 300 hectares of land close to 11,000 residents, mostly farmers and fishermen. Only 4 kilometres away is Barrio Nagbalayong with 3,000 residents, 50% younger than 15 years.



ARMY STOPS OPPOSITION

Farmers have already lost cattle grazing land, and road widening has encroached upon ricefields. A staggering 95% reduction of the fish catch (bangus fingerlings) occurred, because erosion from the reactor site increased turbidity in the spawning grounds. These fish supply 80% of the towns income. Morong supplies the whole of Bataan with these fish.

As part of its "public acceptance" campaign, the National Power Corporation staged a meeting with local residents at Morong High School on 4 August 1976. As soon as residents assembled at 1 p.m. they were surrounded by 60 soldiers and the local police force.

Methodist Pastor Pascua asked how the government would control airborne pollution. He was silenced by Colonel Toledo: "Siguro aktibista ka, ano? Ipaarasto kita (Surely you're an activist aren't you? I will have you arrested)".

BIG BRIBE TO MARCOS

Westinghouse got the job, despite lower bids and even better financing terms offered by French and West German firms. Westinghouse's success is explained by the involvement of the Herdis Management and Investment Corporation, headed by Hermino Disini, a relative of the Marcos family and a rising star in President Marcos' business empire.

Herdis acquired Asia Industries Inc., formerly Westinghouse's exclusive distributor in the Philippines. Asia Industries is now the subcontractor for the Westinghouse (US) atomic plant. Another Herdis company, Power Contractors Inc., is doing the civil construction work. Yet another Herdis subsidiary, Technosphere Consultants Group, is providing engineering and construction management.

Finally, Summa Insurance Co., acquired by Herdis in 1974, has contracted a juicy \$US100 million insurance deal.

The decision to go atomic was made in July 1973 (before the oil price rise), under Presidential decree. Marcos reportedly agreed to help the Westinghouse reactor deal provided he got a big kickback. Westinghouse reported to the US Securities and Exchange Commission in 1976 that its subsidiaries had been making "questionable payments" to foreign officials, as well as suspect "commission" payments to overseas sales reps including an "improper allowance" of \$150,000 (Wall Street Journal, 15 March, 1976).

WHO NEEDS IT?

The Philippine National Electrification Administration admit they have no information on the non-commercial fuels used by the poor. Only 2.4% of the electricity is used in all agriculture, fishing and forestry and only 5% of rural houses have electricity. The electricity from the reactor is destined for the city and for the infamous Bataan Free Export Zone.

This is a tax-free haven for multinational corporations with no pollution controls or trade unions to worry about. Companies are given cheap water, land, labour, electricity and housing. None of the products are for local use but are exported to get foreign exchange to pay off the debts the Marcos regime has accumulated plundering and fighting the Filipino people.

FILIPINO PEOPLE SAY NO THANKS

The Marcos regime crushes internal resistance to its projects. No opposition to the atomic reactor is tolerated.

Little wonder then that the residents have appealed: "In our time of great need, we request that a campaign be started against the export of a nuclear power plant by Westinghouse Electric Corporation to the Philippines".

One Filipino says that no uranium should "be exported to us — our people are not ready for the nuclear age. They have not even been asked if they want it. We really don't need that much electricity. It is the big foreign businessmen, mainly American and Japanese and some Australians, with the co-operation of the present oppressive government who simply want to make us a dumping ground of their products".

Whom should we support? The Fraser-Carter-Westinghouse-Marcos connection? Or the struggle of the Morong people against the use of Australian uranium exports?

WHAT IS ENERGY?

The pro-uranium lobby continually equates energy with electricity. Electricity is only one of

many forms of energy. It provides less than one tenth of the world's commercial energy.

Energy is the capacity to do work. This capacity can come from different sources such as wood, dung, coal, oil, food, wind, solar radiation, etc. Each source provides energy of a different quality. An energy source should be chosen so that its quality matches the nature of the task to be performed.

For example, cooking needs thermal energy or heat, whereas drilling through steel is easier using electrical energy. Often electricity is not the right quality and cannot do the things that most need doing in a non-industrial society. More and cheaper energy matched to the tasks can be obtained by avoiding centralised electrification where possible.

Electricity itself is not a need. It is only a means of satisfying needs. People need warmth, transport, food and so on, which can be obtained using many different forms of energy.

APPEAL TO STOP ATOM PLANT

7 August 1977

I am a native of the town of Nagbalayong, Morong Bataan. At present we are facing a very big problem which we have no power to stop even if the whole town joins forces. A nuclear power plant is under construction. This plant alarms us because we are already experiencing the effect of the project on our livelihood and on our health. Many of us have no more land to till. The lands where we used to get our food and livelihood from are either bought at low price or confiscated because they are needed by the plant. Before, the fishermen used to fish

near the shore. Now, the National Power Corporation has driven the fish away because earth fillings are washed directly into the sea. Parts of the mountains abundant in fruit trees and other crops are already levelled off and are now replaced with NPC contractors' barracks.

Since the town is near the plant site, we might be relocated. If so, where shall we get the livelihood to support our children? I hope that you will help us in our problem. I hope that we will not suffer too much poverty and sickness in the future because of the National Power Corporation.

(signature withheld)

HARD AND SOFT ENERGY PATHS

Some Definitions

Development is necessary to meet human needs, not human greed. These needs vary, so there is no one path to development.

Development should not be confused with growth. The UN World Employment Conference in 1976 concluded that rapid growth of gross national product has not reduced poverty, inequality or

unemployment. "Reliance upon rapid growth on its own is quite likely to worsen the pattern of income distribution, and still further delay the meeting of the basic needs of the poor".

Development puts the needs of the neediest first, reduces their dependence, increases their self reliance and conserves the environment.

Environment is the source from which the means to meet needs are drawn. Energy is only one means of satisfying needs. Environmental destruction and frustration of development only occur when resources are misdirected. The environment is only destroyed when political obstacles stand in the way of development.

Liberation is the removal of

these obstacles so that people have control over their own development.

Self-determination is the best strategy to achieve development. Only people who have control over their own lives can do what is best for themselves. A softenergy path is one which supports self-determination. A hard energy path destroys it.

HARD

Nuclear energy is the hardest energy path. A country which adopts nuclear power will hinder rather than help the development of its people. The reasons for this are that it is:

Unsuitable

The electrical energy from a reactor is very poorly suited to the needs of a developing country. It does nothing for the poorest farmers and villagers. It cannot be used for plowing, sowing or reaping, or for transport. It is very wasteful to use high quality electrical energy to produce low quality

heat for cooking, drying and space heating.

It is only appropriate for lighting, pumping, and providing motive power in industry. These things can be done more cheaply with other means.

Nuclear electricity is the most expensive form of energy available. In India thirty times as much capital must be invested to produce a unit of energy from a nuclear system as to produce the same unit of energy from a methane generator. In other words, by choosing to invest in nuclear energy, the



45% of all trees cut down are used for firewood and half the world's people still depend on wood for two of their most basic needs — heating their homes and cooking their food.

Indian rulers are depriving the people of 29 units of energy for every unit that is produced. And this unit does not go to the people who need it, but to the urban rich.

Reactors are enormously expensive. The smallest and cheapest now commercially available will cost one thousand million American dollars by the time it is ready to operate. Most poor countries are desperately short of foreign exchange and reactors will only make the situation worse. They are paid for by exporting resources which are better used at home and

TWO WAYS OF INCREASING FERTILIZER PRODUCTION

Target: 230,000 tonnes of nitrogen fertilizer per year

1 Hard Path

One large coal-based fertilizer plant in the city



2 Soft Path

25,150 small village-level biogas fertilizer plants



TOTAL COST



\$140
MILLION



\$125
MILLION

FOREIGN EXCHANGE COST



\$70
MILLION

\$0

JOBS CREATED

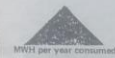


1000



130,750

ENERGY CONSUMED



0.1
MILLION
MWH per year consumed

ENERGY GENERATED



6.35
MILLION
MWH per year generated

by taxing people who are already poor.

Unreliable

On an average, the reactors operating in America only produce 70% of the electricity for which they were designed. Much of the money invested in a reactor is wasted because it fails to produce the anticipated amount of energy.

Expanding markets and neglecting needs

The reactor itself is only a small part of the electricity system. For every billion dollars spent on a reactor, between two and five billion dollars must be spent on transmission and distribution equipment, and between five and ten billion dollars on consumption equipment ranging from motors to

stoves and consumer goods for the richer sections of the population. These things must either be imported or manufactured locally, usually by companies such as Westinghouse or General Electric or their subsidiaries which sold the reactors in the first place.

The reactor is a way to convert the poor country to a western style consumerist economy, and further diverts its resources away from the real problems of agriculture and development. It withdraws financial and human resources from areas of real need. Consequently it increases rather than decreases the inequality between rich and poor.

A nuclear electricity system requires a huge investment in the education of engineers and skilled people. Where educational facilities

are scarce, the skill devoted to a nuclear program must be taken from other vital areas such as agriculture, health, housing and the development of local industry. The country's ability to become self-sufficient in these areas is reduced.

Overcentralised

Nuclear reactors can only be used in very large electrical systems. Such centralised systems are under centralised government control. They are insensitive to the needs of the people, and give the central government enormous control over the people.

Increasing dependence

Countries buying reactors sacrifice independence and self-sufficiency in many ways.

For Fuel

Nuclear energy depends on a supply of uranium. Uranium at reasonable prices is a very scarce non-renewable resource and most of it is found in industrial countries. According to the Ranger Uranium Report, known supplies will be fully committed by the year 2000, when nuclear power will be providing only a small fraction of the world's energy needs. Breeder reactors have no chance of changing this situation until large numbers of them are built, which will be well into the next century if ever.

For finance and technology

Reactors are extremely difficult to manufacture so that they must be bought from an industrial country such as America, Russia, Japan, France or Germany. If these countries refuse to supply spare parts and experts, the reactor becomes useless.

The reactor is only part of the nuclear fuel cycle. Uranium enrichment and fuel reprocessing plants are even more complex and expensive than reactors. A poor country buying a reactor will generally have to obtain its uranium fuel and reprocessing from industrial societies.

Environmentally Destructive

Nuclear reactors and centralised power system cause enormous

destruction of the environment. For every unit of electricity generated in a nuclear power station two or three units of heat are unavoidably released into the environment. Even in industrial countries releases of radioactivity are unacceptably high. No solution has been found to the problem of radioactive waste. A country which buys a nuclear reactor buys itself environmental destruction. Because the power station provides no energy to the poor, people will continue to burn trees, dung and other organic material and consequently denude the land. This destruction could be prevented if the money invested in the reactor had been invested in the soft energy path.

WHO NEEDS IT?

The real logic behind atomic power is found in Richard Nixon's words in 1974: "There are only 6% of the people of the world living in the U.S., and we use 50% of all the energy. That isn't bad; that's good. That means we are the richest, strongest, people in the world. That is why we need so much energy and may it always be that way".

In 1969, the Head of the US Atomic Energy Commission, Dixy Lee Ray, spelt out what atomic power means for the poor: "Let nature take its course. By 1985, 84% of the people will live in Africa or Asia. Can the remaining 15% take care of them? I'm sorry, dreadfully sorry, but there just won't be enough to go around. I don't see this obsession with the lowest strata of humanity against all biologic experience. We must accept that life is unfair..."

The regimes opting for atomic power all face massive internal opposition to their oppressive policies. They want to increase overseas investment so that the industrial countries will aid them to fight their own people. They want to increase their dependency. The decisions are not made on economic or environmental grounds. They have nothing to do with high oil prices. They are political decisions.

We must stop them forcing the hard energy path upon people everywhere.

SOFT

The soft path has no prescriptions for instant success. It does not rely upon one panacea in the way that the hard path depends upon the atomic "alternative".

It relies upon the transformation of traditional technologies. It meets the needs of the neediest first, reduces dependency and maximises self-reliance. It is environmentally sound and sustainable. It emphasises local solution of technical problems.

Information

The soft approach does not need exact information about energy use because needs are evaluated locally. Centrally produced inputs are reduced to the minimum necessary to assist with the mobilisation of local resources

and skills. Hard energy path planners pretend that they have the information to justify gigantic plants which take 10-15 years to build. In fact the statistics available on actual energy use and needs in poor countries are extremely unreliable.

The hard path cannot handle this uncertainty and accommodates it by ignoring it. The soft energy path recognises that exact information about energy use and needs is unavailable because of the decentralised nature of use. It does not seek to obtain exact information in order to control development.

Rather, it seeks to respond to the particular needs expressed by local people.

Diversity

The soft path uses many units of different technologies which are quick to build. This increases the number of eggs in the basket and reduces the risk of them all being smashed at once.

As a report to the UN Habitat Conference in 1976 put it, "A diversified approach to energy supply offers the greatest flexibility. It avoids over-dependence on a single energy source or on vulnerable centralised power networks".

The soft path concentrates upon improving the efficiency of actual energy use by the poor. It starts with the technologies they already use. It does not depend upon a trickle down of electricity from above.

The soft path is based on the enthusiasm and creativity of the people who have most to gain.

These principles apply to the over-developed as well as to the under-developed societies.

Commercial and non-commercial energy

Commercial energy is energy that is sold for a price, like coal, oil, gas and electricity. Non-commercial energy is available free from the environment. It only has to be collected, sometimes a very arduous task.

Usually the non-commercial sources such as wood, dung and agricultural wastes are simply neglected by energy planners because they are diffuse and difficult to measure. Yet in poor rural areas

Energy use in a Typical Indian Village

Source	Use (percent of total village energy use)				
	Agriculture	Domestic	Lighting	Transport	Manufacture Total
Non-commercial	17.6	64.8	0	3.1	6.8
Commercial	2.0	1.4	4.3	0	7.7
Total	19.6	66.2	4.3	3.1	6.8
					100

non-commercial energy is much more important than commercial energy, as the table shows.

Over a billion of the poorest people live between the latitudes 35 deg N and 35 deg S, the area receiving the highest concentration

of solar radiation.

Their situation is often far from idyllic. More energy is needed to reduce drudgery, avoid disease and to increase food production. Soft energy technologies exist which can meet all these needs, but

they are often not deployed.

Biogas units use bacteria to decompose human, animal and agricultural wastes to produce methane gas, which is almost the same as natural gas.

Over 1.5 billion biogas units

have been built in China since 1976. The first edition of the simple technical manual ran to 490,000 copies. Many millions of homes use it today for cooking and lighting. It conserves local timber and imported coal or kerosene, converts vegetable wastes and dung into useful energy with a high efficiency, improves village hygiene and converts wastes, including human excreta, into excellent fertiliser. The methane also powers internal combustion engines and substitutes for diesel oil in small electricity generators. Biogas is a multi-purpose, flexible, soft energy technology.

ONLY YOU CAN STOP URANIUM

THAILAND'S ATOMIC DECISION

Plan to use nuclear power go back to 1966. In February 1969 the Thanom regime approved in principle a plant at Pai Bay on the east coast of the Gulf of Thailand.

The Thanom regime was overthrown by democratic forces on 14 October, 1973. From this date until 6 October, 1976, the nuclear power project was completely stalled because it was strongly opposed by various citizen groups led by Friends of the Earth, Thailand.

On 6 October 1976, the urban democratic forces were bloodily destroyed by the present government backed by the monarch and the US. The reactor got a new lease of life and was given the official green light in August 1977.

The technique used to get

approval for the reactor was simple. In August 1977 the Electricity Generating Authority of Thailand (EGAT) threatened to reduce the production of electricity in Bangkok, using the OPEC oil price increases as an excuse. Rich urban consumers (who use 60% of electricity produced) were alarmed.

A few days later, EGAT announced that it would not cut the supply of electricity, but would instead increase the price of electricity and proceed with the nuclear power project.

The plant will have a capacity of 600 Mwe and will cost at least \$US1000 million. It is expected to be built by General Electric.

"Electrification in Thailand has been primarily financed by increasing exploitation of Thai workers and farmers. Only a redistribution

of political power can achieve a decentralised investment pattern in which electricity can play a significant role in fulfilling human needs. Unless the centralised system is to continue and collapse under its own

weight with tragic consequences, the Thai people must now achieve their own liberation. This option has been forced upon the Thai people, not chosen by them."

Apichai Puntasen



...AND START A NON-NUCLEAR FUTURE

WHAT SHOULD WE DO?

The U.S. has a long history of supporting dictatorships and repressive regimes throughout the world to maintain political control, and because it is good for business.

The political and industrial leaders of other countries such as Russia, Japan, France and Germany are involved in the same game.

Australia is a pawn in American global politics. They are robbing us blind just as they are robbing the people of Thailand, Chile, the Philippines and dozens of other countries.

The uranium policy of the present Fraser government is almost indistinguishable from the policy of the American government. As the *Australian Financial Review* puts it: (27/10/77, p.8):

'Australia's role in the vanguard of international (nuclear) fuel... policy is... immensely useful to President Carter.

'Australia under the Fraser Government is so thoroughly aligned with US policy that it is a perfect surrogate for the US itself...' (our italics)

Our first task, if we are to help the people of other countries in their struggle against nuclear power,

is to free ourselves.

Development means the full realisation of human potential. No one can foretell the shape this realisation will take. We cannot tell the people of other countries how to develop. They must determine this for themselves. What we can do is make sure that we are not restricting their freedom and ability to make their own decisions.

In Australia we still have some freedom to organise. We have access to information to understand nuclear power and other energy options. We have some political power.

We must use all these means to make sure that Australia ceases to participate in the exploitation of poor countries by the rich.

You could start by:-

* Learning as much as you can about nuclear energy and about its relationships with social, economic and political structures.

* Becoming active and bringing the uranium issue home. There are many ways to do this.

You could talk to your friends and start a positive discussion and take constructive action to achieve self-reliance in the five basics - shelter, food, energy, information and spirit.

For further information contact:

FRIENDS OF THE EARTH

- 51 Nicholson St., Carlton 3053. Phone (03) 3476788
- 423 Crown St. Surry Hills, 2010. Phone (02) 6989714
- P.O. Box 1875, Canberra City, 2601. Phone (062) 473064
- 310 Angus Street, Adelaide, 5000. Phone (08) 2236917
- C/- W.A. Environment Centre, 537 Wellington St., Perth 6000. Phone (092) 215942
- P.O. Box 2120, Darwin 5794. Phone (089) 813804
- 235 Boundary Rd., West End 4101. Phone (07) 441766

MOVEMENT AGAINST URANIUM MINING

- 277 Brunswick St., Fitzroy, 3065. Phone (03) 4191457
- P.O. Box N196, Grosvenor St., Sydney 2000. Phone (02) 2413004
- P.O. Box 1875, Canberra City, 2601. Phone (062) 473064

URANIUM MORATORIUM

- C/- Tasmanian Environment Centre, 102 Bathurst St., Hobart 7000. Phone (002) 345543

CAMPAIGN AGAINST NUCLEAR ENERGY

- C/- W.A. Environment Centre, 537 Wellington St. Perth. Phone (092) 215942
- C/- Conservation Council of S.A., 310

Angas St, Adelaide, 5000. Phone (08) 2235155

URANIUM ACTION GROUP

- P.O. Box 2120, Darwin 5794. Phone (089) 813804

CAMPAIGN AGAINST NUCLEAR POWER

- P.O. Box 238, North Quay 4000. Phone (07) 2210188

COMMUNITY AID ABROAD

- National and Victorian Office, 75 Brunswick St., Fitzroy 3065. Phone
- G.P.O. Box 1000, Sydney 2001

- 19-21 Berry St., North Sydney 2060. Phone (02) 9226060

- 306 Murray St., Perth, 6000. Phone (092) 225077

- 2A Gay's Arcade, Adelaide 5000. Phone (08) 223369

AUSTRALIAN COUNCIL OF CHURCHES

- 199 Clarence St., Sydney 2000. Phone (02) 292215

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