

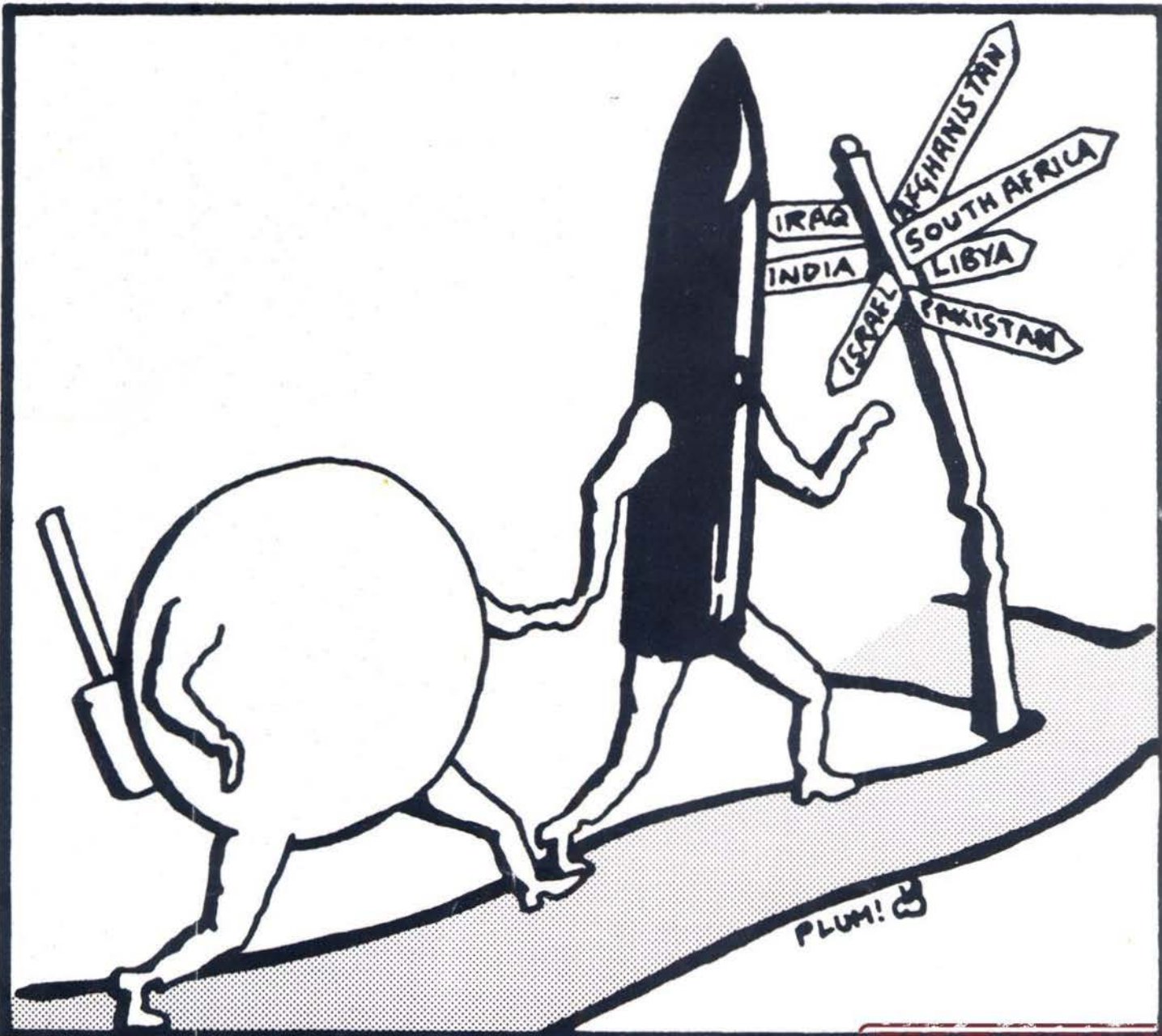
# SCRAM

## ENERGY BULLETIN



No23

30p



# Weapons Issue

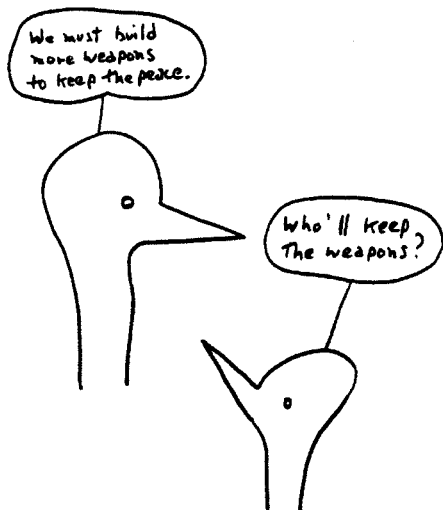
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## Contents

Torness Week of Action	3
Home News	4
Abroad News	5
Select Committee Report	6
Siamese Twins — nuclear weapons and reactors	7-10
Union Response at Cap La Hague	11
Appropriate Technology	12-13
Book Reviews	14
SCRAM	15
Little Black Rabbit; Diary	16

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## Comments



The feature article in this issue clearly illustrates the links between nuclear power and nuclear weapons. Civil nuclear energy originated as a by-product from the production of plutonium for weapons. Since then the proliferation of nuclear weapons has resulted directly from the sale of civil nuclear technology. It is important for both the anti-nuclear-power and the anti-nuclear-weapons movements to realise these links. One cannot be stopped without the other.

Links between the two campaigns are beginning to be forged, with members of both movements participating in events such as the Easter Anti War March.

Joint actions are being seen not only across the nuclear power/weapons issues, but also across more diverse campaigns. The RTZ Week of Action is an example of co-operation between anti-apartheid, anti-nuclear and other campaigns. The struggle against nuclear power must not be seen in isolation.

In the coming months there are going to be numerous anti-nuclear actions. If you are doing something, please send in a report and/or a photo. The only way we can find out what is happening is if you tell us.

## Object NOW

The provisional closing date for objections to the proposed PWR at Sizewell is the end of April. On 30th January the CEBG applied to the Department of Energy for consent to construct a 1200MW PWR beside the existing Magnox reactor at Sizewell. Copies of this application and their accompanying "Project Statement" are available free from Mr. Barrie Skelcher, Local Technical Officer, Sizewell Nuclear Power Station, Leiston Suffolk (0728-2921). He will also supply information and answer questions.

Objections to the PWR have to be sent to the local Planning Officer. Formal objections, which should preferably be short and specifically related to a PWR at Sizewell, should be sent to The Planning Officer, Suffolk Coast District Council, Melton Hill, Woodbridge, and send a copy to the Secretary of State for Energy, Electricity Division, Thames House South, Millbank, London SW1P 4QJ.

**STOP PRESS:** It looks as though the final date for objections to the Sizewell PWR will be put back. So there is still time for you to put in your objection.

### Advertisement

## NUCLEAR ENERGY QUESTIONS A Study Pack



The study pack presents the basic principles of how nuclear energy is produced: from the uranium mine to the reactor itself to the projected disposal of nuclear waste. It also makes a realistic appraisal of the alternatives available now and for the future.

**Available now**

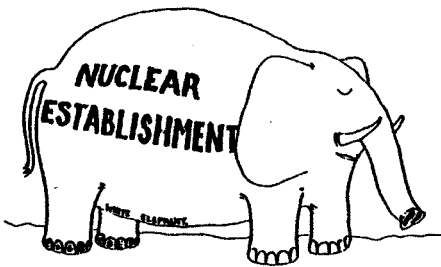
From Information Service on Energy, 30 Frederick Street, Edinburgh 2. 031-225-4414.  
£4.95 plus 65p p&p.

# STOP TORNESS

The period of May 9th to 17th will see a variety of actions opposing the construction of Torness. This "Week of Action" is important in view of the determination of the SSEB to build Torness despite both local opposition, and the arrogant dismissal of the conclusions of the recent Select Committee.

A wide variety of groups, both from East Lothian and further afield, have been involved in a series of planning meetings for this event. In addition to organised events, groups are encouraged to "do their own thing" during this time — either at Torness or elsewhere.

Events planned so far include, on the 9th — a car cavalcade and family outing to Barns Ness or Whitesands, where there will be a picnic and children's events. This is being organised by East Lothian groups for local people and the general theme will be "Torness is a white elephant".



## Women & Children's Action

On Sunday, 10th, there is to be a women and children's event at Torness. Women and children are the traditional victims of war etc., and are usually the last to be consulted about major decisions... such as nuclear power. This event is open to all interested women and children, and will consist of a short march and peaceful demonstration — hopefully with kites, balloons etc. This is being organised by a group of women in SCRAM.

## Edinburgh

On Friday 15th, there will be an evening rally in Edinburgh, for the general public. A theatre event is planned to follow. This event is being organised mostly by people from Students Against Nuclear Energy (S.A.N.E.) and SCRAM. The theme of this event will be a Nuclear Free Zone.

## SNP

The S.N.P. will mount an anti-nuclear/pro-alternatives exhibition in Edinburgh and they plan some kind of event at Torness on Saturday 15th. S.A.N.E. is also planning other events during the week.

# Week of Action



## Direct Action

Various groups have decided to plan direct action at Torness, for the weekend of 16-17th May. At the last planning meeting on 28th February there was a general agreement that a mass direct action and site occupation would not be advertised as such, as there is no way of telling exactly how many groups to expect, and playing the weekend more by ear could be a lot more powerful. A large list of imaginative ideas for what could be done, were "brainstormed", to be available to interested groups. Since it is hoped to get a campsite big enough for everybody, a lot of the last minute plans could get sorted out at the time.

There was a general discussion of possible focuses for action, in addition to the Torness site itself.

A couple of ideas from the "brainstorm" included putting up permanent notices signposting the Torness site — which must be one of the few building sites around that **doesn't** have a notice outside proudly declaring what it is! Another idea is for S.S.E.B. electricity consumers to write out cheques for bills, in big letters on the Torness fence and other places. (Would they have to demolish the fence themselves, to pay the cheques?)

Groups coming up should be self sufficient in food, tents etc., and support people, and preferably having some idea of what they want to do, beforehand. Interested groups should send an S.A.E. to the address below for details of ideas, campsite etc.,

Everything else is up to the participating groups themselves to organise — so over to you, folks!

For the "Week of Action" as a whole, individual groups are encouraged to write their own press releases. There is to be a press group, c/o SCRAM which will operate like a bureau, passing press releases about actions onto the press.

The only actions during the week

organised for the general public are the Friday 15th rally, and the women's action on the 10th (for all women and children).

## Torness Situation

At present there are over a thousand workers at the Torness site. Among other things, the sea wall is being built at present, with roll-on, roll-off facilities for taking parts in by the sea.

Earlier this year two main contracts were placed for the station:-

**Sir Robert McAlpine and Sons Ltd.**, have the contract for the main civil engineering and building works, and **G.E.C. Turbine Generators Ltd.**, have the contract for two turbine generators plus some other parts.

There are 643 unemployed construction workers in East Lothian but the contractors at Torness are busing in 614 workers from outside the Lothians and Borders. So much for providing employment for locals.

At a recent meeting of the Torness Joint Consultative Committee councillors from the East Lothian District Council expressed their dissatisfaction with this situation. They are demanding both an explanation and a change of policy from the SSEB and McAlpines.



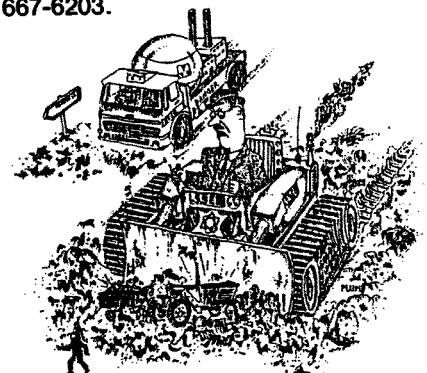
## Contacts

**East Lothian groups:** John Richardson, Tel. Haddington 2351.

**Women and Children's action:** Women at SCRAM.

**Rally:** SANE/SCRAM.

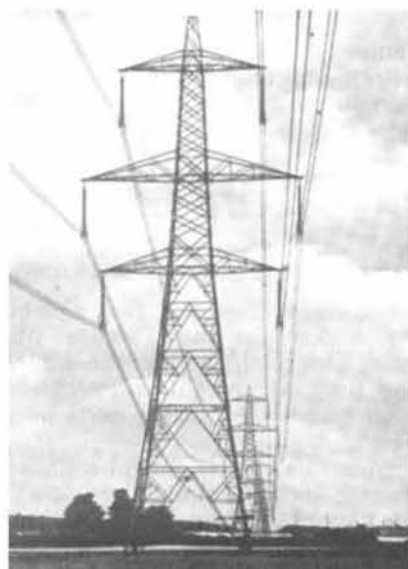
**Direct Action:** c/o SCRAM or SANE, Tony Nec, Tel. 031-556-8253 or 031-667-6203.



THE TORNESS MONSTER—TOGETHER WE CAN STOP IT.



# Home



## Direct Action

On March 3rd an SSEB exhibition was destroyed by anti-nuclear campaigners. The exhibition was the first of a series scheduled to cover Dunbar, Haddington, Duns and Dalkeith, and dealt with the proposed routes for two double 400KV overhead power lines connecting Torness with the Scottish grid.

The group painted over the exhibition and covered displays with anti-nuclear stickers. In an anonymous phone call to a Fife News Agency a spokesperson said "For the SSEB to bring this blatant nuclear propaganda to Dunbar, days after the Government Select Committee on Energy reported that Torness was a massive economic blunder, is an insult to the local community".

The group regretted having to damage council property by forcing a door, but money would be sent towards the repair costs.

**Edinburgh Evening News**  
4.3.81

## Teachers' Seminar

In Inverness on 22nd November, the UKAEA held a seminar on nuclear energy for teachers in the highlands. It was organised in conjunction with the education department of the Highland Regional Council.

After much lobbying the regional councillors on the education committee have agreed to allow the Inverness branch of the Highlands Anti-Nuclear Group (HANG) to organise, in conjunction with the regional council, their own seminar.

The seminar will be held in Inverness on Saturday 9th May. HANG are hoping to have 4 or 5 speakers to talk on alternative energy projects in the Highlands and Islands, the wind power programme on Orkney, combined heat and power and the economics of the fast breeder reactor. Following the tradition already established by the UKAEA, the seminar will only be open to teachers. However HANG are hoping to hold a meeting/debate in the evening to which members of the public would be invited... and also the UKAEA. For more details contact HANG, c/o 1 Attadale Road, Inverness, or phone Inverness 38349.

## £3,300m

BNFL (British Nuclear Fuels Ltd) has announced a £3,300 million development programme for the next ten years, subject to approval by the government. The company expects to be able to raise all but £650 million from its own earnings.

Of this huge sum of money, £800-1000 million (January 1980 prices) will be spent on the construction of THORP, the reprocessing plant that was the subject of the Windscale Public Inquiry in 1977. This plant will reprocess the uranium oxide fuel from the AGR programme. Another £365 million is to go on research and development of THORP. The refurbishing of the Magnox reprocessing plant and vitrification has been allocated £1000 million. The vitrification programme will cost upwards of £200 million, and is planned to be in operation by 1987. The plant is to combine the best features of the Harvest programme and the French vitrification process.

Not all the money is to be spent at Windscale. £450 million is to go on centrifuge enrichment at Capenhurst, £5 million on fuel canning facilities for the AGR programme at Springfields. An unspecified amount is to go on new ships and spent fuel containers.

**Nuclear Engineering International**  
February 1981



## Mullwharrior

In the House of Commons on 4th March, a question was put to the Secretary of State for Scotland, by Mr. George Foulkes, concerning when and how he intends to announce his decision on the report of the inquiry into the proposal to test-bore at Mullwharrior.

Mr. George Younger's reply was as follows, "The report is under consideration. It is not possible to say at this stage when the decision will be announced. The normal procedure for notifying decisions on planning appeals to the appellant, planning authority and other parties concerned will be followed; I shall consider nearer the time the form of any wider announcement which may be made in view of the public interest in this case."

The Mullwharrior inquiry ended on 19th March last year. This long delay in announcing the decision is very sinister.

## Referendum

At the beginning of April every household in four constituencies around Mullwharrior will receive through the post by the post-office Household Delivery Service, a referendum form, asking all members of the household to say what they want to happen to the wilderness area of the Galloway forest park — in which sits Mullwharrior. The Scottish Conservation Society have organised this referendum, which will be co-ordinated by the post office in Ayr. The constituencies are Galloway, South Ayrshire, Ayr and Dumfries-shire.



Fines totalling £300 were paid at Haddington on February 12th with a cheque written on a coffin. The fines resulted from the arrests made last May at the Torness demo.



More than 100,000 people were determined to demonstrate against the construction of the Brokdorf atomic power station in March. Thousands never got near the site as they were stopped by armed police as far as 200 miles away. The demo had been made illegal by the German state authorities and everybody who went to demonstrate knew that he or she could be made financially responsible and liable for the state's defence of capitalistic profit making: 20,000 police were stationed on the site and in the near vicinity, 30 helicopters, masses of watercannons and armoured cars will now be paid for by the 260 arrested who were picked out purely at random. Still, the demo was a glorious victory for the anti-nuclear movement in Krautland. Demonstrators walked 8 miles to get to the site and had to pass bodysearchers at two police checkpoints (this tactic had been used

to divide the demo and hinder the 100,000 to get to the site as one huge mass). There was no chance to occupy the site despite well equipped demonstrators. When a few stones had been thrown the police started to attack the whole demo. This was supported by 12 helicopters dropping off 200 police and then flying close over the demonstrators' heads. People were beaten even when they had fallen into the ditches or were lying unconsciously on the wet ground (the same happened to one policeman), press photographers had their cameras and films taken away and were beaten. But the tremendous success of the demo rests on the fact, that all demonstrators had been criminalised before and knew what to expect and still turned up so massively. And the nuclear state made sure that our protest will be even more determined from now.

## More Cracks



Four of West Germany's 11 operating nuclear reactors have been ordered to be shut down by the Federal Minister of the Interior. All four reactors are of the boiling water type. The order came after the Bonn Reactor Safety Commission found that there is corrosion and cracking of the primary circuits, the huge steam pipes linking the reactors to the turbines. The West German authorities are requiring that the primary circuits be replaced in all four reactors. The total output from these four reactors is almost half the nuclear baseload on the country's electricity grid.

Officials estimate that the reactors would be closed for one year, but nuclear engineers say 2-3 years seems more likely. Almost no mention of these closures has been made in the German and Dutch press, possibly because officials are keeping quiet as they fear these closures will link credibility to opponents of the Brokdorf reactor.

WISE, 24.2.81.

## Going Underground

An interdisciplinary team of scientists has recently been set up to investigate the possibility of underground nuclear power stations in Israel. The team are expected to report in 12-18 months.

Alex Beck, head of the Atomic Energy Commission's Siting and National Planning Department said the main advantage of an underground site is that the earth would protect the power station from enemy attack, and would absorb the radioactivity in the event of a leak. An underground plant, he said, would also be more secure from natural hazards such as earthquakes and violent storms, and it could be located closer to the main centres of population.

The cavern containing the plant would be about 70 meters below the surface, 70-75 meters high and 30 meters wide. The tunnelling, extraction of the earth and construction work would add about 30% to the overall cost of an underground station. The major expense would be the development of a prototype — this could take three years and add an additional 80% to the cost.

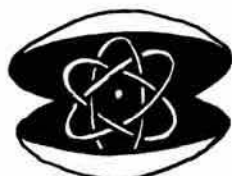
# Abroad

## Plogoff Revisited

Five directors of nuclear power stations in France decided to visit the Plogoff site last Autumn 'incognito'. The site is vigilantly observed by the villagers, and they questioned the smartly dressed visitors. The men said they were from the merchant navy, just 'taking a look'. Unconvinced the Plogoffites discovered documents in their car which revealed their real identities. They held the directors in Plogoff town hall until the evening, to make sure they didn't get up to any further deceptions.

There was no mention of this incident by the French electricity board.

## Seabrook Delivery



On March 3rd, with less than an hours notice, some 250 people gathered at Seabrook to protest at the delivery of the reactor core. The Seabrook power station, despite numerous protests in the last five years is now almost 50% complete.

The protest was called when it was discovered earlier in the day that the reactor core was being moved from its storage site on a barge off the coast of New Hampshire to Seabrook. This is the second core to be delivered to the site. The first was returned to the manufacturer when it was found to be corroded.

After the core had been delivered protestors lined up outside the station fence, chanting at the police and leaning on the fence. When the fence began to sway, one policeman, who had his hand on top of the fence, received a minor cut. He then permitted the police to open a gate in the fence which caused the fence to topple over. As a result one woman was caught under the fence and received a brain concussion.

In other incidents, police supposedly picked out known leaders of the anti-nuclear movement and were especially brutal with them. The afternoon protest ended when three people were arrested on charges of assaulting and battering a policeman.

WISE, 10.3.81

# MPs Slam Nuclear Industry

A new upsurge in interest in the nuclear debate has resulted from the publication of the first report from the Select Committee on Energy. The report considers the implications of the Government's announcement to order 15GW (gigawatts) of nuclear capacity over ten years.

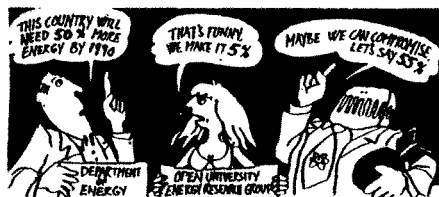
In considering the size of the programme the Committee concluded '... we are sceptical, however, whether the eventual figure should be as high as 15GW', (by the year 2000), as they 'remain unconvinced that the CEBG and the Government have satisfactorily made out the economic and industrial case for a programme of the size referred to...'.  
 As 'The estimated outlay of £15 billion over ten years represents a pre-emption of a large slice of the nation's resources which might otherwise be available for investment in other parts of the economy', the Select Committee devoted considerable attention to both the need for such a large programme and the economic case. They were 'dismayed to find that, seven years after the first major oil price increases, the Department of Energy has not idea of whether investing £1,300 million in a single nuclear power plant is as cost effective as spending a similar sum to promote energy conservation.'

## Economics

On the question of the economics of nuclear power, the Committee were unable to come to any conclusions as to whether, or not, nuclear generated electricity is cheaper than coal as 'The historic cost method used by the Board (CEGB) to justify past investments distorts the effect of inflation on capital costs, rendering the resultant figures highly misleading as a guide to past investment decisions and entirely useless for appraising future ones'. They were not helped by the CEGB, as illustrated in the following statement: 'It would have been more helpful to the Committee had certain important statistical information relating to the Board's economic case been made available, unsolicited, at the start of our enquiry'. However, they did conclude that 'Unless the CEGB are able to effect considerable reductions in their own costs, this country will continue to produce electricity more expensively than need be the case'.

## Need

On the need for an increased nuclear power programme, the Committee felt that 'It would have been less



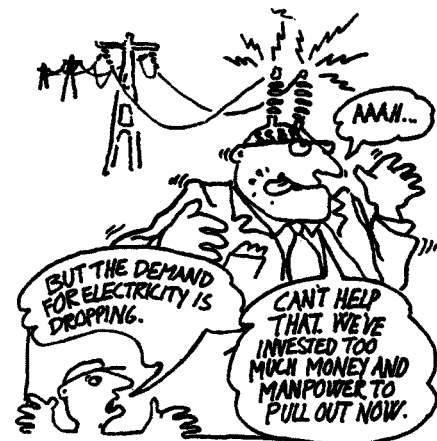
misleading and more helpful to the Committee if the CEGB had informed us during their first evidence session that the electricity load forecasts contained in their initial memorandum had already been overtaken by events and were in the process of being revised downwards, even if the precise figures may not have been known at that stage. The credibility of much of the CEGB's subsequent evidence was undermined by this omission'. However the report does state that 'Given: the recent electricity price increases; the depressed state of the economy; the prospect of more competition due to rising gas availabilities; the possible impact of the private generation of electricity...; the added scope for conservation and the saturation of the market for some components of electricity demand, — further reductions in the CEGB's load forecast cannot be ruled out'.

## Torness and Heysham

As part of their remit, the Select Committee considered the ordering of the AGRs at Torness and Heysham B. After the reduction in load forecasts in early 1980, the Government instructed the Central Policy Review Staff (CPRS) to review the need for these two stations. The Committee considered it 'most regrettable that the Government were not prepared to divulge the advice tendered by the CPRS, for it might have helped the Committee to understand better why the Government decided to continue with the two new AGRs'. They were also 'surprised to learn that the Scottish Office has not seen fit to re-examine the economic case for the Torness AGR in light of the SSEB's plant margin of 73%. The fact that Torness has been ordered so far ahead of need is all the more worrying in light of uncertainty about future coal prices, which is one of the main arguments used by the SSEB to justify the decision on economic grounds.'

The Chairperson of the Select Committee and the Chairperson of the SSEB exchanged letters about the consequences of any decision to cancel Torness, but they were not included in the evidence to the Committee that was published with the report. However, when the Committee asked the SSEB

how much it would cost to cancel the project, the SSEB answered 'The Board has the necessary formal approvals for Torness and has no intention of cancelling the project. No estimate has therefore been made of the cost of reimbursing contractors.' At the end of November, when the SSEB were asked this question, it had only committed itself to £76.5 million — but was in the process of committing itself to a total of £572 million. At the time of the publication of the report, the SSEB had committed itself to about £330 million, but despite the Select Committee's conclusion that 'there was undoubtedly a case for not ordering two AGR's and 'The generation Boards should give higher priority... to reducing the planning margin to a lower level as soon as practicable', it is obvious that the SSEB still have no intention of even considering cancelling Torness.



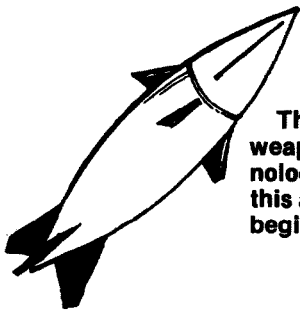
## Sizewell

The Select Committee makes some recommendations on the terms of reference of the future Public Inquiry into the proposed building of a PWR at Sizewell. They suggest that 'It would be unreasonable in our view to exclude any mention of the costs and of the latest (and revised) electricity demand projections from the public inquiry into the Sizewell PWR', that 'The Government should take steps to ensure that the CEGB and the NII (Nuclear Installations Inspectorate) publish the maximum amount of information and documentation relating to the licence application, pleading commercial confidentiality only where this is absolutely essential', and that 'It would be reasonable to allow a period of four months for parties to the inquiry to examine the NII's report'.

The final recommendation in the report was 'As soon as possible after the publication of this Report, the Government should institute a full day's debate in the House on a substantive motion to approve the Government's Statement, including the decision to proceed with a PWR.'

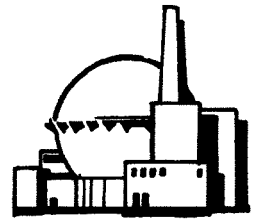
In conclusion, the Report vindicates much of what anti-nuclear campaigners have been saying for years.





# Siamese Twins

The past eighteen months has been a massive public outcry against nuclear weapons. However, the case against the military application of nuclear technology cannot be viewed in isolation from the civil nuclear power programme. In this article we illustrate how nuclear weapons and nuclear power have from their beginnings walked hand in hand with each other.



## The Birth of Siamese Twins

The discovery that an atom of Uranium 235 was fissile (i.e. could split to release vast amounts of energy in a chain reaction) was made at a crucial time. The research was published at the beginning of the Second World War.

The 'Manhattan Project' was set up in 1941: a joint UK-US-Canadian effort to develop the atomic bomb before Nazi Germany. The project went ahead in tremendous secrecy. In Britain, the Cabinet was excluded from atomic decision-making, and information about expenditure was concealed from Parliament. **Secrecy has remained an integral feature of the nuclear programme ever since.**

The power locked up in fissile material was demonstrated to the world when the bombs were dropped on Hiroshima and Nagasaki in 1945. 250,000 people were killed. The radiation released then is still taking its deadly toll now.

In an attempt to preserve its position in the nuclear field, the US passed the McMahon Act in 1946, which made it illegal for Americans to divulge information about nuclear weapons or the use of nuclear energy in the generation of power. The 3 countries went their separate ways, and hopes for the international control of nuclear arms were stillborn.

The US developed its water-cooled nuclear submarine reactor into the present commercial Pressurised Water Reactor.

The UK was outraged by the McMahon Act. In January 1947, 6 ministers agreed at a secret meeting to develop an independent UK nuclear arsenal. In great haste and secrecy, facilities were constructed for the production of plutonium for warheads.

Enrichment and reprocessing facilities were built, subsequently used in the civil nuclear power programme. In 1950 and 1951, Britain's first atomic piles at Windscale went critical. The plutonium they produced enabled the detonation of Britain's first atomic bomb in 1952. The military Chiefs of Staff had called for an increased production of plutonium, and the embryo designs for power-producing reactors were built with this in mind. Calder Hall, Britain's first nuclear power station, was opened in 1956, and Chapelcross in 1958. Both these reactors provided plutonium for an expanding nuclear arsenal.

Thus the origins of the civil nuclear power programme lie in the military applications of nuclear energy, and nuclear technology still has the dual purpose of providing electricity and processing material for bombs.

While economics had not been a factor in the military development of the nuclear power programme, extravagant claims were now made for the cheapness of electricity produced by nuclear power, and private industry was soon clamouring to invest in the nuclear industry. However, the haste and secrecy involved in early nuclear construction had obscured many of the difficulties and the extent of military subsidies, and as the years have gone by, the economics of nuclear power have proved less and less attractive.

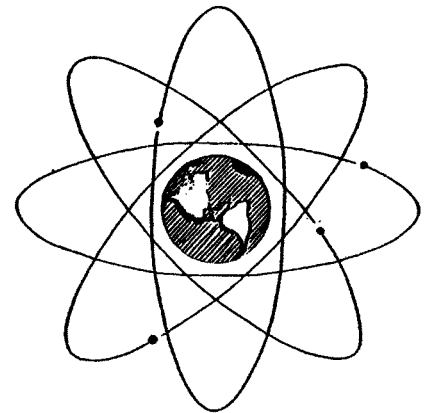
## Atoms For Peace?

In the US, President Eisenhower reversed earlier policy by launching the 'Atoms for Peace' programme, which provided assistance for other states in the development of nuclear technology. The motivation was commercial—aimed at securing export markets for US companies and hence keeping the domestic nuclear industry strong. A strong nuclear industry also

meant a continuing ability to provide the fissile material for warheads.

Some of Eisenhower's advisors and some foreign politicians expressed concern at that time that nations might misuse a nuclear industry intended for civilian purposes, but this was rejected by the administration, mainly on the grounds that nuclear explosives could only be manufactured by 'complicated, difficult and expensive measures that could not remain undetected', (John Foster Dulles).

The possibilities of supervising the nuclear fuel cycle were overrated at the time, the ease with which bombs could be manufactured was severely underrated. Dulles' opinion and that of others promoting Atoms for Peace was that reactor grade plutonium, produced by the operation of an ordinary nuclear power station, was totally unsuitable for bombs. It may not be as powerful as those equipped with specially prepared military plutonium, but it would still be equivalent to the Hiroshima bomb. All doubts about the military suitability of reactor-grade plutonium vanished when America tested such a bomb in Nevada in 1977.

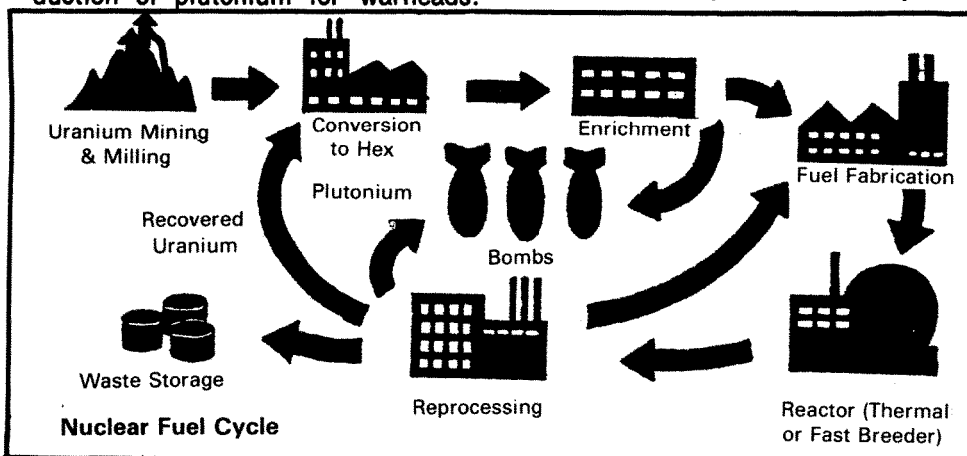


A WORLD HELD HOSTAGE.

## Non-Proliferation Treaty

When it became clear to the major powers that nuclear weapons were spreading around the world, and under the impetus of Chinese atomic tests, international controls on weapons proliferation were formalised in the Nuclear Non-Proliferation Treaty (NNPT). This was signed in 1968, with the overseeing function invested in the International Atomic Energy Agency.

There is a basic contradiction in the NNPT which makes it ineffective in controlling nuclear weapons proliferation. It aims to halt the spread of



nuclear weapons while encouraging the spread of civil technology from which bomb capability can be derived. The Treaty's conditions are hardly rigorous. Countries without nuclear weapons are barred from making them, but there is nothing to stop them assembling the components. Signatories can withdraw with 3 months notice. It can take only days to assemble components into weapons.



Even so, only half the nations on earth have signed the treaty. India refused to sign unless the major powers disarmed. It saw the NNPT as an attempt by the nuclear weapons states to preserve the balance of power in their favour while continuing to build up nuclear stockpiles. Indeed, nuclear weapons proliferation controls contain the arguably racist assumption that third world countries are unstable, irresponsible and should not be trusted with a nuclear weapons capability, while such weapons are acceptable in the hands of the 'responsible' superpowers.

The NNPT benefits those countries with enrichment and reprocessing facilities—the keys to bomb production. Countries can obtain reactors but are obliged to buy enriched uranium from, and send spent fuel for reprocessing to, countries which are signatories. Even so, France, with both enrichment and reprocessing plants, operates outside the treaty, having refused to sign, and has made controversial deals with Iraq and Pakistan.

### Who Has the Bomb?

As a result of declining domestic markets for nuclear power stations, nuclear countries have scrambled to find export markets overseas, notably in third world countries. Fierce competition has resulted, in the words of one commentator, in 'trade wars that could lead to nuclear wars'. Since 1968, the number of countries with bomb capability has trebled. The paths taken by these countries have been various, but have relied upon the provision of technology developed in the civil nuclear fuel cycle.

South Africa, for example, has received aid from all the major nuclear countries in developing its civil nuclear programme: the US (2 research reactors and training for staff); UK (enriched uranium for the first reactor); West Germany (built the Valindaba enrichment plant, and has been collaborating militarily for years); Iran under the Shah (financial assistance in return for 14,000 tons of enriched uranium) and France (2 nuclear power stations).

At the opening of the first reactor, Prime Minister Voerward unmistakably declared South Africa's military intentions for its nuclear programme. This obviously did not deter future deals. Political and commercial considerations outweighed concern about proliferation.

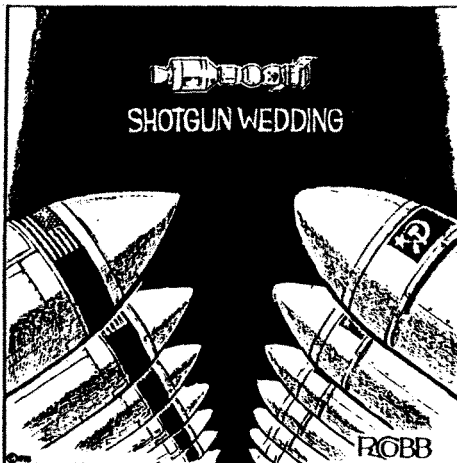
South Africa has access to Namibian uranium deposits through its illegal occupation of that country. It built the Valindaba plant in a bid to join the ranks of enriched uranium exporters. The plant has also given it the capacity to make nuclear weapons. In the face of growing international opposition to its racist regime, achieving a nuclear weapons capability is a way of both buying off international pressure and deterring neighbour states from aiding opponents to its regime.

One model of South Africa's enrichment facilities suggested that it could produce slightly more bomb-grade enriched uranium every year than would be required to make a Hiroshima-sized bomb. In September 1979, an event was detected in the South Atlantic which has been identified almost certainly as a South African nuclear test.

Without western involvement in South Africa's nuclear programme, it would not have nuclear weapons.

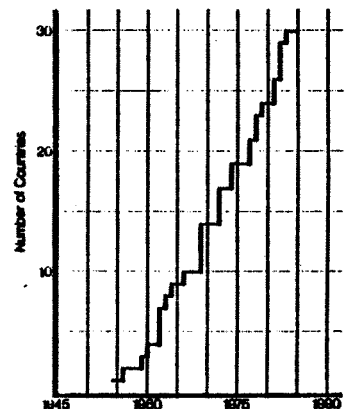
### Nuclear Flashpoints

Around the world are groupings of countries within which exist political and economic tension: ideological differences, and competition for territory and resources. In several areas, this tension has been heightened by the acquisition of nuclear bomb capability through purchases of nuclear power technology.



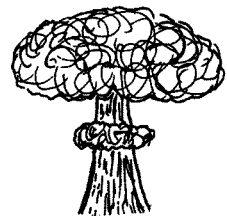
The clearest example of how civil nuclear programmes can provide a 'smokescreen' for military development is that of India and Pakistan.

India went into the Nuclear field very early, its first reactor at Trombay going critical in 1956. The Canadians also built a second larger reactor. This CANDU reactor uses natural uranium, and can produce a lot of plutonium if required. India also acquired a plutonium separation plant.



The number of countries with nuclear reactors.

Over these years, India stated an interest in nuclear explosions for 'peaceful' purposes, such as dam excavation. When China exploded a nuclear weapon, India however made clear its intention to reserve the option of making nuclear weapons.



In May, 1974, India exploded a 15 kiloton bomb in the Rajasthan Desert, still insisting that it was a 'peaceful' atomic test. The plutonium had come from the CANDU reactor.

International reaction was swift. Canada immediately cut off aid (though this was later forthcoming from other quarters, notably France) and in 1976, Canada halted the export of reactors and uranium. The facade of 'Atoms for Peace' had been irrevocably shattered.

### Pakistan

Pakistan reacted by accelerating its nuclear programme. It already had a pilot reprocessing plant, CANDU research and electricity-producing reactors and plans for 20 more nuclear power stations. In 1976, it negotiated with France to buy a reprocessing plant, but US pressure halted the sale. There is evidence that this plant is still being built in secret, and that a bomb test site is being prepared. It is estimated that Pakistan could have a bomb in 1 year.

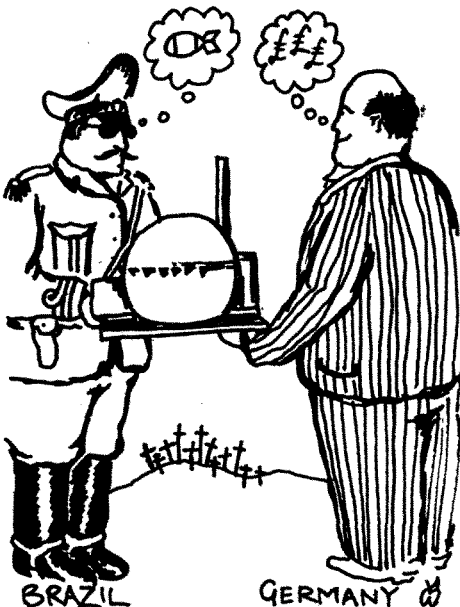
In 1979, it was revealed that a Pakistani scientist had stolen designs for a uranium enrichment plant, and the government had set about acquiring the components on the open market. Since Pakistan's reactors were to use natural uranium, it was assumed that its intentions were military. The US cut off aid, but Pakistan has not been short of money for its nuclear programme. Libya gave \$5 million in 1972 to develop nuclear weapons — Libya has never made secret its desire to acquire civil nuclear technology to further its military aims.



## Iraq

In response, Arab countries, apart from investing in Pakistan's nuclear programme, have begun to move towards their own nuclear weapons capabilities. Iraq, probably the most advanced, has 10 years of experience in nuclear reactors through its Soviet-built research centre (proliferation controls on Soviet reactors are far stricter than those imposed by such countries as France, and it is difficult to use them for anything other than their intended function). France has just completed a 70 MW reactor, and supplied a stock of highly enriched uranium. CIA sources suggest that once this is operational, it will be only a short time before Iraq has the bomb which is presumably why the reactor was bombed in the recent Iran-Iraq war.

Iraq also has co-operation agreements with India and Brazil, and is reported to have signed a secret deal with Brazil for plutonium, to be supplied once West Germany has completed its 1975 contract to build an entire nuclear fuel cycle for Brazil.

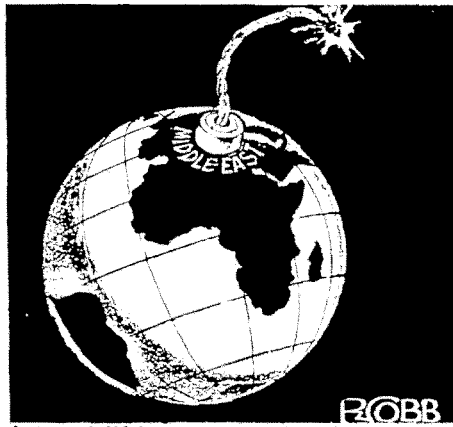


## Israel

Tension between Israel and its nearer Moslem neighbours has also been fuelled by the development of nuclear weapons.

By 1973, the CIA estimated that Israel had a small nuclear arsenal. Weapons-grade plutonium had been extracted from the French-built reactor at Dimona, and France had also helped by allowing Israeli scientists to study the French nuclear programme and atomic tests. The original enriched uranium fuel for Dimona was stolen — a fact which the European watchdog EURATOM covered up for 10 years. Subsequent fuel has come from South Africa. These two countries have collaborated to fill each other's gaps in nuclear matters.

In the 1973 war, Israel was at the point of defeat. It blackmailed the US



into airlifting conventional arms by threatening to use its nuclear weapons. The result of that war justified Israel's decision to use the potential afforded by Dimona. This illustrates the military benefits to be obtained from nuclear technology. It also suggests that for some governments, the use of nuclear weapons may be a **realistic option**. The development of nuclear power in western countries is therefore contributing directly to an increased threat of nuclear war in some part of the world.

## The Nuclear State

To minimise disruption at nuclear power facilities, trade union rights are restricted. Political control can also be exercised through the manipulation of the large amounts of capital that nuclear power demands—e.g. reducing investment in the coal industry to control militant miners. The centralisation of energy production in nuclear stations allows other forms of manipulation, e.g. selective electricity cuts in parts of France resisting the introduction of nuclear stations. Nuclear power also creates an elite of 'experts', in the face of which people feel powerless — an attitude benefitting that controlling elite. These features make nuclear power attractive to repressive regimes, quite apart from its military uses.

Britain has not participated directly in reactor sales abroad — No foreign order has been placed for 20 years, due to its adoption of gas-cooled technology. It does participate in the enrichment and reprocessing markets, through British Nuclear Fuels Ltd. BNFL owns a reprocessing plant at Windscale, the Capenhurst enrichment plant and has a 1/3 share in URENCO, which operates another enrichment plant at Capenhurst.

Given the current British situation of massive overcapacity in electricity generation, falling demand, dubious economics and competition for scarce financial resources, it becomes clearer that the pressures keeping the civil nuclear power programme going have some force behind them... the force of arms.

It is revealing that the list of 3rd world countries which have invested in nuclear power over the last 10 years reads like a who's who of repressive and/or military regimes: Brazil, Argentina, South Africa, Phillipines, Chile and Indonesia. Western governments and multinationals are supplying nuclear technology, often with massive financial aid from bilateral agencies, to those countries with appalling attitudes to human rights and political freedom. South Africa is a stark example. The reasons for this interest in part mirror arguments used against nuclear power in 'liberal' first world countries: nuclear power is a political tool par excellence. The hazards of operation of the nuclear fuel cycle, the possibility of 'terrorists' attack on nuclear installations and the potential use of nuclear materials for bombs are presumed to justify secrecy and security measures. The creation of an armed police force like the UKAEA Special Constables, with powers of search and arrest, phone tapping, letter opening, positive vetting and surveillance are all justified by the need for security, but could be used against political dissidents, whether they live in Clapham or Chile.

## The Weapons Capability of Non Signatories of the Non Proliferation Treaty

Country	Weapons capability
France	Weapons capability
China	Weapons capability
Argentina	Near to having weapons capability
Brazil	Near to having weapons capability
Chile	
Cuba	
India	Weapons capability
Israel	Weapons capability
North Korea	
Pakistan	Near to having weapons capability
Portugal	
Saudia Arabia	
South Africa	Weapons capability
Spain	
Tanzania	
North Vietnam	
Zambia	

## BNFL's Involvement

Capenhurst is in the process of expansion, partly to provide enriched uranium fuel to power Britain's new nuclear submarine fleet.

Windscale reprocesses spent reactor fuel. It also performs the important military function of reprocessing the plutonium in warheads every 10 years or so, and purifying the reprocessed plutonium up to weapon grade material, BNFL can account for 10 tonnes of the plutonium produced by the civil programme, whereas calculations point to about 30 tonnes having been produced. The missing 20 tonnes has presumably ended up in warheads.

### The final solution

The INFCE report, recording 2 years investigation of such issues, concluded that there was no technical solution to the problem of proliferation of nuclear weapons resulting from civil technology. The solution had to be 'political'. In the past, 'political' solutions, such as the Non Proliferation Treaty, have not worked. Pressure from multinationals, First World governments, the military in all countries and the desire of non-nuclear weapons countries for political parity with nuclear states, have all combined to produce a literally explosive mixture.

The only way to stop the spread of nuclear weapons would be to stop nuclear power altogether, a view which was surprisingly endorsed by Dr. Marshall (Chairman of UKAEA) at a conference in 1980.

In 1975, David Rosenbaum, reported to the US atomic authorities on the possibility of malevolent use of fissile materials and passed this judgement:-

"The sad truth is we've opened Pandora's Box, and there is no way to return to a world safe from nuclear weapons... Atoms for Peace may turn out to be one of the stupidest ideas of our time".

### Paths to the Bomb

"It is a fact that none of today's nuclear weapons powers used the level of civil nuclear energy as a route to their objectives."

BNFL December 1978

"The spread of nuclear power will inevitably facilitate the spread of the ability to make nuclear weapons... the proliferation problem is serious and will not go away by refusing to acknowledge it".

Flower's Commission 1976



This article is based on an exhibition on the links between civil nuclear power and nuclear weapons produced by SCRAM. The exhibition costs £3 + carriage to hire and £5 + carriage to buy. Available from SCRAM, 30 Frederick Street, Edinburgh 2.



### Further Reading

- The Nuclear State, Robert Jungk, 1979
- Reflections on Atomic Energy History, Margaret Gowing, 1978.
- Nuclear Controversy, M. Stott and P. Taylor, 1980.
- Nuclear Links, SANE - Third World First, 1981.
- Nuclear Prospects, Mike Flood and Robin Grove-White, 1976.
- Nuclear Power, Walt Patterson, 1976.
- Nuclear Plants Take Root in the Desert, New Scientist, 1979.
- South Africa's Nuclear Capability, D. Smith, 1980.

# RTZ Week of Action

The week of 4th-11th May sees the launching of what is probably the most concerted and broad-based action ever undertaken against multinational corporations. It is an International Week of Action against mining multinationals, called last summer at the Survival Gathering in S. Dakota, USA.

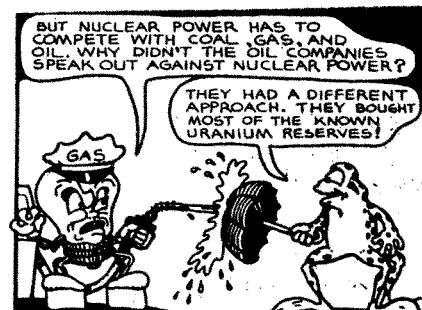


Supported by numerous groups, particularly Third World, Anti-Apartheid and Anti-Nuclear Groups (including SCRAM & ANC), the Week of Action in Britain focusses on the British-based multinational mining giant Rio Tinto Zinc. RTZ embodies all that is worst in the manipulation, exploitation and oppression of indigenous peoples throughout the world by mining multinationals.

It is particularly appropriate that this Week of Action immediately precedes the Torness Week (9th-17th), as RTZ supplies well over half the uranium for Britain's nuclear programme. The bulk of this (about 45% of Britain's total) comes from the RTZ Rossing mine in Namibia.

Namibia is illegally occupied by S.A., in defiance of a United Nations Decree, which means that all uranium mined there is exported in breach of international law.

Various actions are planned for the Week. An anti-recruitment campaign has already been launched in several British universities; there will be public meetings, films, slides etc., in many towns; a teach-in is being held at the RTZ lead smelter at Avonmouth; the RTZ tin smelter at Capper Pass, near Hull, will be picketed, as will electricity board show-rooms and offices throughout the country. The main focus of the Week will be a hearing or Tribunal to be held in London,



which will hopefully be attended by representatives of peoples directly affected by RTZ mining activities in many parts of the world.

Badges and posters are already available — either from SCRAM, or from PARTIZANS (People Against RTZ and Subsidiaries), PO Box 797, 5 Caledonian Rd., London N1, or from CIMRA, 218 Liverpool Rd., London N1. Tel. 01-609-1852. Also from PARTIZANS, stickers and a booklet with full back-ground information on RTZ will be available soon. General leaflets on RTZ and the Week of Action are available from Third World First, 29 Bleinheim Terrace, Leeds. Tel. 0532-30151.

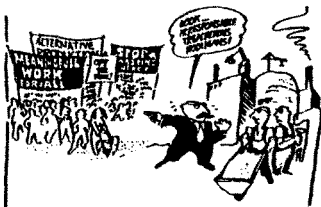
PARTIZANS is the national co-ordinating group for the RTZ Week of Action.

# Waste Workers at Risk

On 6th January 1981, a fire broke out in a trench storage facility for high level radioactive waste at Cap La Hague — the French reprocessing plant near Cherbourg on the Normandy coast.

The main union at the site, the C.F.-D.T., had demanded checks on the storage trenches in the north west corner of the site a year before, including a permanently attended alarm system. Nothing had been done by COGEMA, the company which runs the plant, and although the fire began at 5 a.m., it was not properly detected until 10 a.m. The union demanded evacuation of the building downwind from the storage tank at 1.30 p.m., but this was ignored, and the workers continued as normal until 4.30 p.m., when they went home.

19 workers close to the north west corner of the site were contaminated and one painter received a dose of 6 rems (5 rems is the maximum permitted yearly dose). Higher levels of caesium than normal were measured inside certain buildings because the air system was pumping contaminated air in. The workers were suspicious about other radiation hazards since, in the past, the management has admitted releases of caesium, because that is the least dangerous radio nuclide. However, the workers have strong reason to believe that the escape of plutonium and strontium has taken place undeclared. At the perimeter fence on the 6th January 1981, a level of radiation was observed to be **ten times higher than the limit.**



Three hundred vehicles had to be decontaminated on 7th January, although this was only done **after** the union put pressure on the management. On 9th January, 1200 workers at La Hague demonstrated outside the director's office to demand proper information about accidents, and more stringent application of regulations, both on personal radiation levels and on rapid evacuation procedures.

## Risks Minimised

At this time, the management still had no answer to the sudden fire in the waste storage. No further instrumentation had been installed (as requested by the union) to measure exactly was being put in the trench, and what volume was there. The attitude of COGEMA was to minimise the incident: "La Hague is less dangerous

than a factory making women's clothes. Statistics can prove it", declared M. Delange, the director of La Hague. This is after a year of incidents, including 2 fires, as well as a complete breakdown of the electricity supply for several hours, endangering the safety of the cooling system for the waste (15th April 1980).

## Demands

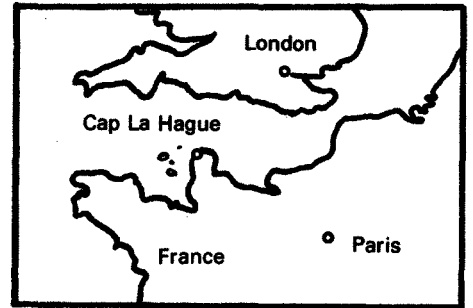
On 13th January 1981, the results of tests were revealed, showing that some alpha rays were emitted, suggesting plutonium escape. A union commission was set up to investigate this. The C.F.D.T. had already complained that not enough information was given about strontium and plutonium releases. The C.F.D.T. has taken a militant line in insisting on their right to information and as much safety as possible for their workers at La Hague. Since COGEMA became a private company (it was sold off by the French State) conditions have become even worse. "It is intolerable that because of a political desire to show they are in control of the situation, they expose the workers to risks which could affect them physically in the future". Frequent reports made by the C.F.D.T. show they have reason to make such bald statements.

They demand:

1. That union representatives be allowed to stop machines that are dangerous.
2. That information on the safety of the installation is open to workers.
3. That individual records be held by each worker of his/her radiation levels.
4. That an epidemiological study be done on nuclear industry workers in France.

## Windscale

In Britain, the G&MWU has been trying to make conditions for workers at Windscale better. BNFL (the state-owned company which runs Windscale) has not always been co-operative. Last year, G&MWU proposed that supervisors should rectify potentially hazardous situations without waiting for the alarm to be sounded. BNFL replied that supervisors were already instructed 'properly', and the matter could always be taken up at the



time with 'higher levels of management'.

Like at La Hague, management at Windscale do not consider evacuation a likely possibility, although there have been serious incidents at Windscale too. Queries from the G&MWU are frequently passed from the works at Windscale to the BNFL Health & Safety Committee. In the same way, COGEMA at La Hague refuses to comment on certain areas, referring to the Government Safety Committee in Paris. There, however, very little information is released, as was shown when one demonstrator, Brice Lalonde, went to demand to see the safety report on storage of waste at La Hague, on the day after the fire. He was refused after a day's wait, on the grounds that "the peaceful debate between experts must be guaranteed".

Evidently a great deal of pressure will have to come from unions before any information will be forthcoming from either government or management in the reprocessing industry. In France, the CFDT is highly critical of the provisional storage of waste, and the careless way in which it is done. It does not wish to see any more imported nuclear waste arriving at La Hague.

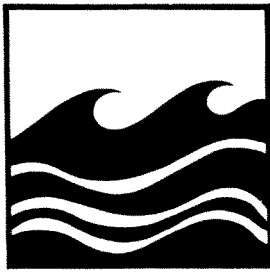
## Pressure Needed

It is time the British unions involved at Windscale took a stronger stand on the health and safety of their workers. The CFDT have not succeeded in their struggle yet, but they have their foot in management's door, and they are strong enough not to have that door slammed in their face. **Windscale is no less dangerous and irresponsible than La Hague**, (a recent report from PERG shows that it is worse but well hidden from the public eye.)

Serious accidents at either La Hague or Windscale would affect huge areas of both countries — La Hague is nearer to London than to Paris) Trade Unionists who demand safety at nuclear installations are protecting themselves, their relatives, and their whole society.

Good reading: **Near Miss**: Agenot 82, 70p from Smiling Sun or mail order (p&p 20p).





## Wave Energy

Wave energy research continues at a somewhat leisurely pace. Funding has been increasing steadily over the years, as have the number of wave energy devices, but the true test of the government's commitment has yet to come — the decision to build full scale prototypes.

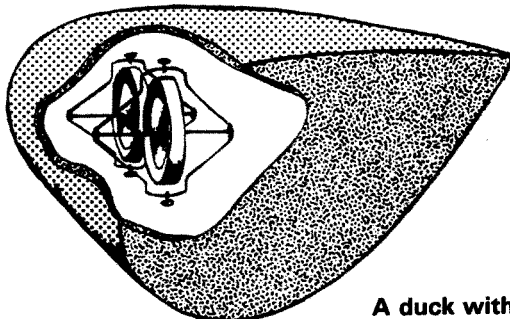
Government thinking is to narrow down the field in 1983/4 to one device, into which all the effort will then be channelled. This could, however, turn out to be an unwise course of action. A feature of wave energy devices is that they are made up of relatively small units which can usefully be employed either singly or in short strings. They do not require the same commitment of resources as a prototype nuclear reactor of 1300MW at £1300m.

With full scale wave energy devices of 1-20MW it makes sense to continue the development of several at the same time. This will minimise the risks of going for the wrong one, and also recognise that different devices are probably suited to different environments. An ideal plan would seem to be the supply of electricity for the islands of Scotland or maybe the Scilly Isles.

### Half Submerged Submarine

Government funding has already been narrowed down to work on the Lancaster flexible air bag, the Bristol cylinder, and the oscillating water column, with some additional basic work. The Lancaster flexible air bag is a relative newcomer. It differs radically from most of the other devices. It lays end on to the waves, like a half submerged submarine.

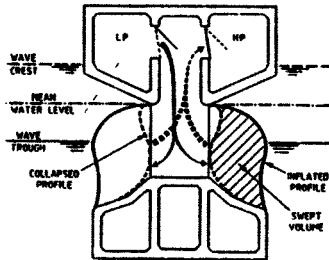
The concept is for a 200m long concrete structure with a flexible rubber bag along its length below the water level. The pressure of the waves collapses the bag forcing air along a high pressure duct to drive an air turbine. The bag fills again in the wave trough with air from the low pressure side of the turbine in a closed system.



A duck with gyroscopes.

# Appropriate

Lying end-on to the waves, the device should take less of a battering than other devices.



The operational cycle of the flexible air bag.

Unlike Steven Salter's nodding ducks, which can extract 90% of the energy from the waves, the Lancaster flexible air bags extract a much smaller proportion of the total energy in a wave front. It will, though, be possible to place a second line behind the first to capture some of the remaining energy. It is claimed that 400 Lancaster flexible air bag devices sited in water at least 50m deep off the Outer Hebrides would have a peak output of 2,000MW or a mean annual power of 500MW. Current demand for baseload electricity in the UK is 10,000-25,000MW.



Artist's impression of ducks at sea.

### A Word of Caution

The Lancaster flexible air bag is still at an early stage of development and it is hoped it will fulfill its promises, one of which is for cheaper power. The cost of electricity from this system has been independently assessed to lie in the range 4-6p per

unit (kwh), about 2/3 capital cost and 1/3 running cost — the fuel though is free. These figures make wave energy competitive with oil and the gap with coal and nuclear is narrowing rapidly. Indeed the cost estimates for all wave energy figures has been coming down from the early figures of 20-30p per unit to generally lie in the range 4-8p per unit.

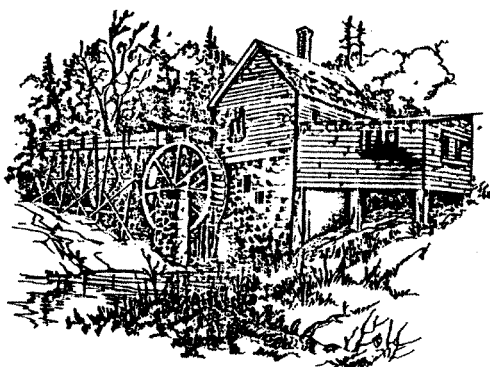
### New Power Takes Off

In most wave energy devices the up and down motion of the wave is converted into useful energy (electricity) by pumping liquid or air through a turbine. Now a new idea has entered the scene whereby the movement created by the waves is converted directly into electricity. Steven Salter at Edinburgh University is studying the use of 17 tonne gyroscopes placed in his nodding ducks. Two gyroscopes spinning at 1,500 rpm in the opposite directions will be placed in each 'duck'. The up and down movement of the ducks each will create a third movement in the gyroscope which will be transformed into electricity. The entire unit will be sealed off with only a cable coming out of each duck. There will be no messy pumping along the spine of the string of ducks.

Wave energy devices will not provide us with all the electricity we need. A recent re-evaluation suggests that 30,000MW (annual average) of energy is available off the British coastline, although conversion losses would reduce this to perhaps 10,000MW of delivered electricity. This is still nevertheless a substantial resource, and one which will last forever. It should not be ignored.

There is no doubt that the problems of getting wave energy off the ground — and into the sea — are still formidable, but certainly not as daunting as trying to get nuclear power to work. The main barrier now to a rapid development of wave energy probably lies in institutional resistance. It is to be hoped this will not prove more insurmountable than the technical problems.

# Technology



## Water Boost

An important amendment to the Energy Conservation Bill has had its third reading in the House of Lords. It seeks to amend section 60 of the Water Resources Act 1963 which inhibits the use of water power by making charges on the water used — despite the fact that the water is put back in the same volume and condition as it was taken out.

At present Water Authorities can waive the charges, but not when the water is used as an energy source. Having completed its stages in the Lords the Energy Conservation Bill now has to be introduced into the Commons.

The Bill's main provisions would give power for setting and enforcing standards of energy efficiency and safety for new gas appliances and new appliances for space and water heating — certainly a step in the right direction.

Energy Management,  
February 1981

## Heat Recovery

A £50,000 waste heat recovery system has been installed at Berk Spencer Acids plant in Stratford, London as part of the Government's Energy Conservation Demonstration Project. There are 70 such projects under the scheme. The Berk Spencer system recovers heat from the absorption stage of the production of sulphuric acid, which is then put to work pre-heating the feed water to a waste heat boiler.

Monitoring of the scheme over a period of 22 weeks has shown that it will save £37,000 a year in energy costs and will pay for itself in 16 months.

Under the Demonstration Scheme, the Government pays the user of novel energy saving technology 25% of capital and installation costs plus the full cost of monitoring any energy savings.

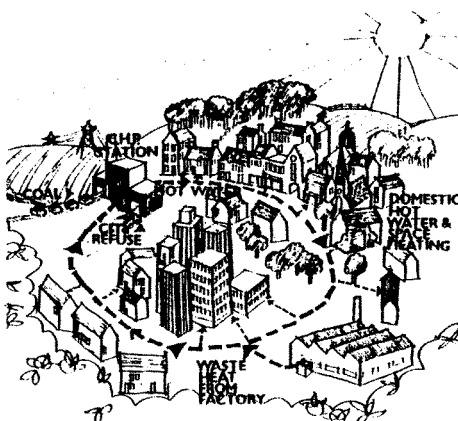
Energy Management, February 1981

## Solar Power

The construction of Europe's first solar power station in Sicily is now completed. The station, called Euroelios, should achieve an output of 1MW within the next few months. Euroelios has been built by a consortium of German, French and Italian companies at a cost of £5 million.

The station is based on the principle of a tower collector. A computer controls the direction of the 182 solar reflectors, so that they reflect sunlight towards a radiation receiver in the central tower. The collected energy is stored in a salt reservoir before it is used to generate steam. This drives a turbine which in turn drives a generator.

New Scientist, 5.3.81



ONE PILOT STUDY PROPOSED  
— BUT A MAJOR PROGRAMME  
URGENTLY NEEDED

## CHP

The slow process of implementing the recommendations of the Marshall Report of 1979 continues. Out of the 18 or so local authorities who expressed an interest in Combined Heat and Power/District Heating (CHP/DH) schemes last year a short list of nine has recently been announced. Those areas still being considered are Belfast, Edinburgh, Glasgow, Leicester, London (two locations), Manchester, Newcastle and Sheffield.

These areas all comply with three conditions laid down by the Department of Energy; a high density heat load, a local power station site, and a high level of interest from the local authority.

A consultant will now be appointed for each of these areas, who will carry out a detailed feasibility study. By the end of the year the Department of Energy hope to be in a position to grade the areas according to suitability. The one or more areas considered most suitable will then undergo a detailed design study.

## Heat Exchanger

A simple innovation could revolutionise the traditional methods of heating and ventilation in the house. The machine, a heat exchanger, sucks out stale air in the house, retains the air's heat and pushes out the cold stale air from the building. Fresh air is pulled in through wall ventilators and is passed over the heat exchanger to be warmed to room temperature by the heat which has been removed from the stale air.

This means that for less than the cost of heating a one-bar electric fire, the machine can maintain the level of warmth and freshness inside the room without the need for a continuous main source of heat such as radiator or fire. It also eliminates the need to open windows for fresh air.

Another advantage of the system is that it effectively draws moisture from the air, stopping condensation build-up in the house.

Glasgow District Council, who are about to put the system into a house in the city for tests, hope that it may prove the solution to one of the city's major problems. So far the many houses within the city which suffer from dampness have been difficult to treat and the methods involved are expensive and not very effective.

At present there are no sets of figures for how much it would cost to install the system in a house.

Scotsman, 10.3.81

## Methane *yes*

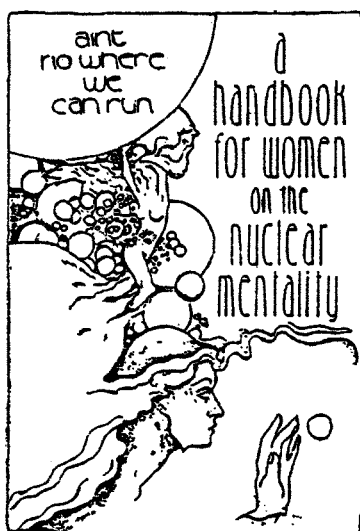
The Greater London Council is thinking of utilising the methane gas produced at a 70 acre refuse landfill site in Aveley, Essex. The local people were complaining about the smell from the site at the time when the GLC was taking part in a nationwide investigation into the extraction of methane gas at landfill sites. Tests carried out by the GLC and the National Coal Board revealed high levels of methane. Since 1978 studies have been made to discover how best to extract the gas and use it as a source of energy.

It has been estimated that at least 900 million cubic feet (5 million therms) a year could be extracted for up to 15 years. The scheme would involve sinking about a dozen boreholes and constructing a grid of mobile collector pipes — necessary because the site will continue to be used as a landfill area for the next five years. The gas would then be piped to the user from a fixed extraction plant on site. First indications show that rate-payers could benefit by several hundred thousand pounds a year.

Approval of the proposals are subject to agreement by the GLC Finance and Establishment Committee.

Energy Management, February 1981

# Book Reviews



## Feminism & Nuclear Power

**Ain't nowhere we can run - a handbook for women on the nuclear mentality.** Susan Koen and Nina Swalm, The Crossing Press, New York, 1980. [Available soon from SCRAM price around £1.50].

This book is composed of four sections. The first poses the question of how nuclear madness and feminism are related. The issues it raises are important ones and the points made extremely valid, but I was disappointed that they were not expanded more fully. It looks very specifically at how we, as women, are affected by the nuclear programmes and shows that women and children are, yet again, the victims of patriarchal machinery.

The second section is in many ways the most surprising. The "stars" of the movement — what it describes as "women who have been in the forefront" — make personal statements about their involvement and their particular issue. I felt very uncomfortable with this section. It is interesting to read other women's personal statements and to make these very strong links between the personal and the political, but I found it difficult to identify with. The concept of holding up "examples" is a strange one and I felt that a great deal of the feminist theory was lost at this point.

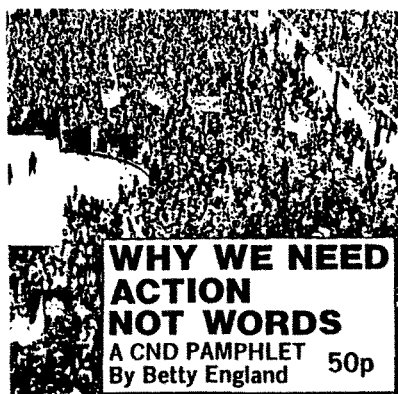
I had high expectations for the third section. It contains extracts from a discussion between fourteen women in New Hampshire. The reason given for its inclusion is "to give credit to women who are working at the grass roots level". I find this rationale rather strange and in direct opposition to feminist ways of working. The discussion starts with the question "Why as women have we become involved with the issue of nuclear power, especially when there are so many other issues facing us — such as rape, abortion, battered women, job discrimination, and sexism in general". Each of the women makes a personal statement. Again, interesting but somehow not enough. I didn't feel that the question was really answered (maybe there are no answers!) and would have liked to see more emphasis on the links between

these issues and an analysis of the system within which these atrocities are allowed to fester.

The final section looks at the whole area of "Eco-feminism" and calls for radical changes in the system. Margaret Thatcher is described as "Prime Minister of England" — were that only the case! Some very practical experience is passed on about setting up a group. There is a strong focus on the strengths of women working together — how all our skills can be shared and used to fight the nuclear threat.

The book is nicely illustrated and well designed. Despite my criticisms I think it is worth reading. It's the only book I've seen which attempts to put a feminist perspective on the nuclear question. I think that my frustrations only show how desperately we need more books of this kind to be made available.

Marion Levitt



## Disarmament

**British Nuclear Disarmament - Why we need action not words.** Betty England, CND, 1981, 50p [+ 15p p&p from SCRAM mail order].

In this excellent pamphlet Betty England provides one of the most clearly written cases for British nuclear disarmament. She examines the history of nuclear weapons in Britain showing how the philosophy for their use has changed and in consequence the dangers multiplied. The deterrent effect of merely having nuclear weapons has been overtaken by plans to actually use nuclear weapons in a first strike. The major roles played by the US and NATO are highlighted. Britain has become a pawn in the hands of both NATO and the US — a pawn that can be sacrificed in a theatre nuclear war.

At an early point Betty England poses a number of questions used to argue against disarmament. For instance "If the deterrent were never weakened the Russians would overrun the West." This is carefully examined and shown to be a myth (probably propagated to support an aggressive defence policy). In the words of the 1980 Defense White Paper "We have no reason to believe that the present Soviet leaders are deliberately planning to attack NATO". Indeed, throughout the pamphlet Betty England makes good use of quotes from authoritative and official sources.

The final chapter draws together the strands to show that multilateral disarmament is not on the horizon and hence why we must now take unilateral action. The "action not words" in the title of the pam-

phlet refers to CND mobilising support and to the TUC and the Labour Party doing more than just passing resolutions. It is perhaps a little unfortunate that this title can be read in two ways, resulting in the belief that the pamphlet is more about how to take action rather than why action is necessary.

This small point aside the pamphlet does an admirable job in its 23 pages. Questions raised in opposition to nuclear disarmament are answered in a clear, concise, unemotional way. The pamphlet is easy to read and should be essential reading for all campaigners who are ever in a position to have to argue the case, as well as for anyone who remains unconvinced. At only 50p there is no excuse.

Duncan Laxen

## From Hiroshima to Harrisburg

**From Hiroshima to Harrisburg: The Unholy Alliance.** Jim Garrison, SCM Press Ltd., 1980. £5.50 [+ 60p. p&p from SCRAM mail order].

This book traces the development of the 'nuclear age' from its military origins through to the widespread use of nuclear power for electricity generation. The book's main aims appear to be two-fold. Firstly, to establish that civil and military nuclear technology are indivisible and, secondly, that the nuclear technology has had a distorting impact upon the 'collective psyche' producing 'psychic numbing' leading to 'death immersion' and 'collective paranoia'. This paranoia being seen as the driving force behind the arms race.

To the author, this psychic imbalance is manifest in three forms which can be roughly seen to correlate to dedicated nuclear proponents, concerned citizens and anti-nukes. These are: 1. Identification with the bomb and nuclear technology in general, 2. muddling through — a mixture of guilt and acceptance of nuclear technology and 3. 'Opening up' — the realisation of the totality of the threat posed to humanity by nuclear technology, a transcendence of 'death immersion' and the discovery of a 'life mission' in opposing nuclear power through non-violent, non-cooperation with the authorities responsible for it. The liberal usage of psychological and psychoanalytical concepts in the book give it the air of a down market attempt at societal psychoanalysis. This is one of the many unfortunate aspects of the book for the ill-defined and sloppy usage of these concepts detracts totally from one which, applied more rigorously, could hold much promise.

The consequences of sensationalism, the sloppy, and at times wildly inaccurate, use of figures and psychological concepts means that the book fails to convincingly establish either of the main points it seeks to substantiate. To the reader familiar with popular journalistic styles the book should provide a readable horror story on the nuclear issue. To the more discerning its weaknesses must more than outweigh its strengths and it cannot be recommended other than as an example of how not to try and establish the links between nuclear weapons and reactors (within a context of collective paranoia.).

Ian Welsh



## Dose Limit

The Radiation Hazards Campaign has started up a newsletter called Dose Limit. It aims to be a focus for the campaign against the proposed relaxations in the radiation standards and to deal more generally with the health hazards of exposure to low-level ionising radiation.

It will contain news items on radiation, news from groups campaigning on the issue and longer articles analysing the scientific information on radiation effects.

The subscription for 6 issues is £2. We plan a year's trial, so back issues will be sent for those subscribing later in the year. Subs should be sent to:-

**Radiation Hazards Campaign, 25 Kestrel Avenue, Herne Hill, London SE24.**

## Leaflets

Ecoropa is going to stop producing their leaflets; 'Nuclear Power — the Facts' and 'Radiation — the Facts...', due to the high cost of having to produce them in smaller amounts. Because these leaflets have become a standard item in the anti-nuclear campaign they are prepared to continue their production for a short time, to enable those groups who wish to obtain further stocks of their own to do so. They also have a cheap range of posters which sell at 10p each, which will also be run down. **Contact Ecoropa P.O. Box 11, Godalming, Surrey.**

## Demonstrate

In response to the announcement about the Mullwharchar inquiry (whenever this happens) Dumfries and Galloway Friends of the Earth, and the Campaign Opposing Nuclear Dumping are planning a demonstration in Dalmellington, starting from the Loch Doon road end at 11 a.m.

This demonstration will be the **second Saturday** after the announcement, if this is made on a **Monday, Tuesday or Wednesday**, or the **third Saturday** after the announcement if made on a **Thursday or Friday**. The aim is to make a **quick** response while allowing reasonable time for organisation/publicity.

For further details contact Noel Charlton at 09887-442.

## Obituary

Mrs. Sheila Pease, SCRAM's landlady for the past five years, died on March 1st aged 86. Mrs. Pease generously provided SCRAM with cheap office accommodation which enabled SCRAM to mount its campaign against nuclear power.

## Torness Campaigner

SCRAM is looking for another person to work from the office in Edinburgh on the campaign against Torness. Anyone interested please contact the office urgently.



### SUBSCRIBE TO THIS MAGAZINE

If you have enjoyed reading this magazine why not subscribe to it? Or get your friends to. If you are part of a local anti-nuclear group you can buy the **SCRAM Energy Bulletin** at reduced rates — and make some money for your activities. Contact us for details of bulk rates.

Subscription to the **SCRAM Energy Bulletin** costs £4 a year for six issues. Alternatively if you wish to join **SCRAM** you can become a supporting member which costs £6 a year. For this you will receive the **SCRAM Energy Bulletin** every two months and the member's newsletter twice a year.

As we are always short of money, we must stress that these are minimum subscriptions. If you are able to give more, please do so. If you feel able to make a regular contribution to our funds please complete the bankers order form. We need the financial certainty of standing orders to enable us to plan for future activities.

## SCRAM

After a couple of hectic weeks trying to run the old office at the same time as painting the new offices, we moved into the fourth floor of 30 Frederick Street, Edinburgh in the middle of March. It is great to be working in a light spacious environment after so long in a basement. As our regular subscribers will know we have launched an appeal to cover our moving expenses. Although we have had a fairly good response we still need more to cover our costs.

We are hoping to raise £2000 by asking each of our supporters to give £1 each. Many people have already donated more than this.

At the same time as the office move we have been trying to reorganise SCRAM. For a while we have been aware that our weekly meetings tend to be bogged down with business matters. These meetings can be somewhat boring for newcomers. So we are trying a new approach. The SCRAM business meetings will in future be every other Monday, and will alternate with the meetings of an Edinburgh-based campaign group. Stop Torness, the name of the new group, has been set up in co-operation with other anti-nuclear groups in Edinburgh. Please contact SCRAM to find out when and where the next Stop Torness meeting is.



### SUBSCRIPTION FORM /SCRAM MEMBERSHIP

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.....Tel:.....

**SCRAM Energy Bulletin Subscription only.**  
Annual sub for 6 issues:- Ordinary £4 ☐;  
Foreign £6 money order ☐; Institutions  
£9 ☐.

**SCRAM Membership only.**  
Members receive a 6-monthly review of the campaign. Annual membership:- Minimum £2 ☐.

**Supporting Membership [Combined].**  
Supporting members receive 6 issues of the SCRAM Energy Bulletin and the 6-monthly review. Supporting memberships:- Ordinary £6 ☐; Foreign £7 money order ☐; Life(!) Membership £30 ☐; Household £50 ☐.

**Affiliation.** Groups and organisations are invited to send for an Affiliation form ☐.

### BANKERS ORDER PAYMENT SCRAM CAMPAIGN FUNDS

Your Name:.....

Address:.....

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To the Manager.....Bank,

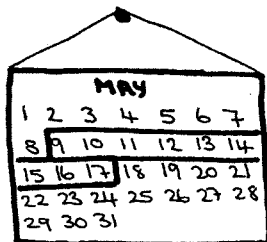
Address.....

.....A/C No:.....

Please pay on .....(1st payment) to Royal Bank of Scotland, 142 Princes Street, Edinburgh (83-51-00) the sum of for the credit of SCRAM CAMPAIGN FUND 262721 and make similar payments monthly/yearly until cancelled.

Signed.....Date.....

## Diary



**April 30th:** Closing date for objections to the Sizewell PWR. Write to The Planning Officer, Suffolk Coast District Council, Melton Hill, Woodbridge, Suffolk, and send a copy to Secretary of State for Energy, Electricity Division, Thames House South, Millbank, London. SW1P 4QJ.

**4-11th May:** RTZ week of action. Contact Partizans, 218 Liverpool Road, London N1. 01-609-1852.

**6th May:** Public meeting and films, part of the RTZ week of action. 7 - 9 p.m., Lecture Theatre B, David Hume Tower, George Square, Edinburgh.

**9th May:** East Lothian motor cavalcade and family picnic. Contact John

Richardson, Haddington 2315.

**10th May:** Women and children's action at Torness, contact SCRAM, 031-225-7752.

**15th May:** Edinburgh March and gathering with live entertainment. Contact SCRAM, 30 Frederick Street, Edinburgh 2, 031-225-7752.

**16th May:** CND meeting for trade unionists in Edinburgh. Contact Kevin Holmes, 031-667-4416.

**16-17th May:** Imaginative actions at Torness and elsewhere. It's up to you!

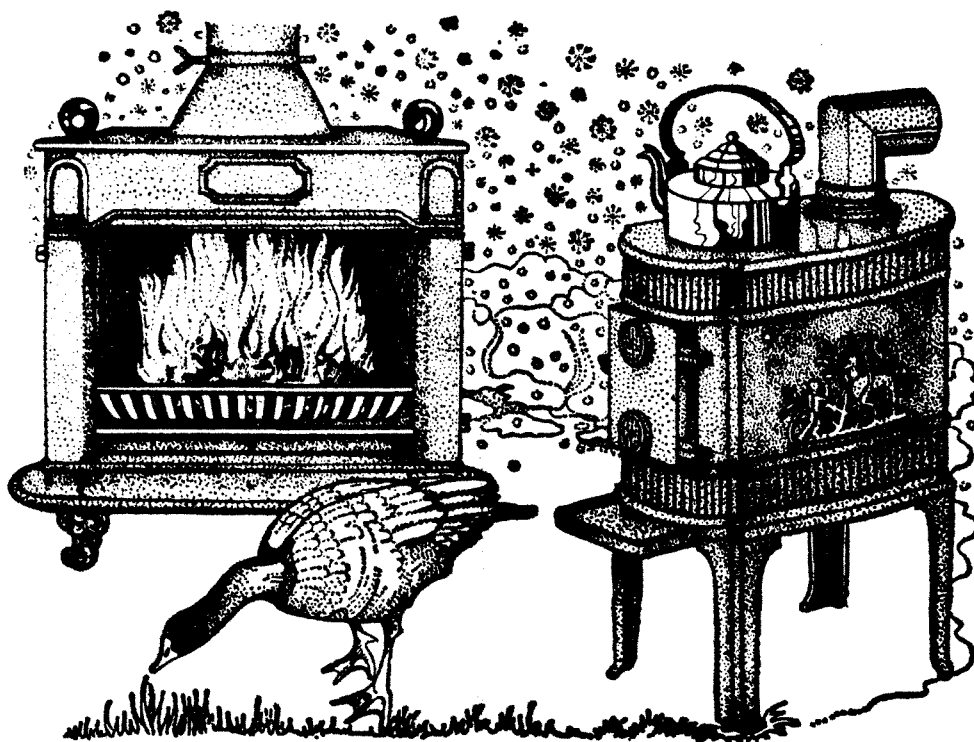
**16-19th May:** Windpower course, speakers to include Peter Musgrove, Geoff Watson, Robert Todd, and Andrew Brown. Contact the National Centre for Alternative Technology, Machynlleth, Powys.

**30th May:** Anti-Nuclear demonstration in Ullapool. Assemble at 2 p.m. at the pier for march. Speakers, 'The War Game' and ceilidh in the evening. For details contact Jean Uguhart, 4 West Lane, Ullapool.

**7th June:** June Meet at Mullwharchar. Contact Kathleen Miller, 0644-3380.

**27th July - 2nd August:** Ecology Party Summer Gathering, Worth Farm, Pilton, near Glastonbury, Somerset, contact Christine Crossingham, 11 Stanley Road, Bristol.

## Advertisement



## Forest Fire

The well-established Edinburgh wood-stove suppliers **Forest Fire**, offer a wide range of wood, peat and coal burning appliances for space heating, cooking and central heating.

**FOREST FIRE**

**50 ST MARYS ST. EDINBURGH. 031-556-9812.**

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## Little Black Rabbit XO



Whilst out at sea on her winter cruise, Little Black Rabbit wondered why she could not see any wave power devices extracting all that wave energy that was making her feel terribly sea sick. Perhaps it was something to do with the CEGB sending their pro-nuclear henchmen along to every firm that had been approached by the wave research teams for advice, and persuading them not to co-operate. To think that at one time the CEGB were all in favour of wave energy. Now they are venturing into wind energy, and Little Black Rabbit wonders how long before they will destroy that too.

## Anti Nuclear Campaign

The office of the Anti Nuclear Campaign has now moved out of London to Sheffield. The new address is A.N.C., The Terrapin Building, Cambridge House, Division Street, Sheffield 1. There is no telephone number as yet, but messages can be left on 0742-739933 ext. 232.

In February the Anti-Nuclear Campaign appointed Harold Immanuel as their full time Trade Union Organiser.

