SCRAM ENERGY BULLETIN

NUCLEAR POWER? NO THANKS

No 33

40p

Coal Cutbacks • Welsh Energy Ideas

Councils & Nuclear Power

Plus....FREE 8-page SIZEWELL REACTIONS

Comment

With this issue of the Energy Bulletin we have included a special 8 page pull-out on Sizewell, which is the pilot issue of the fortnightly 'Sizewell Reactions' newsletter. Any reason for the further expansion of the nulcear programme has disappeared. Extra demand does not exist and a national energy conservation programme would even decrease our present energy use — for a much lower cost than the nuclear expansion.

The Government's justification is that they wish to 'diversify' electricity generating capacity from its mainly coal-fired base. On page 3 we discuss the cutbacks in the coal industry which the Government will make as a result of the nuclear expansion. Thousands of jobs will be lost in the mines, coal-fired stations and related industry. It all fits with the October 1979 Cabinet decision to destroy the organised labour forces in the mining and transport industries.

Nuclear Free Councils opposing ALL nuclear technologies would be a very strong lobbying force — Councils effectively stopped the Hard Rock war game. The article on page 6 questions the rationale of local authorities which do not oppose the whole nuclear chain.

And to add injury to insult, the noxious wastes from the nuclear industry [both military and 'civil'] continue to be produced in spite of the lack of progress being made on safe disposal methods. The UK continues to dump these radioactive wastes in the oceans of the world, poisoning the food chain, even though there is widespread opposition. A discussion of the forthcoming London Dumping Convention meeting appears on page 7. Several European countries have stopped sea dumping and are now pressing the others to do likewise.

Above all, we must not let the Sizewell Inquiry occupy our minds exclusively over the next year; there are other, equally important, issues to be considered. We must support those groups who are fighting all aspects of the nuclear chain. Stop Nuclear Power not just PWRs.

CONTENTS & CREDITS

This magazine is produced for the Anti-Nuclear, Safe Energy and Disarmament movements in Britain by the Scottish Campaign to Resist the Atomic Menace.

SCRAM, 11 Forth Street, Edinburgh 1. [031 557 4283]. We welcome contributions.

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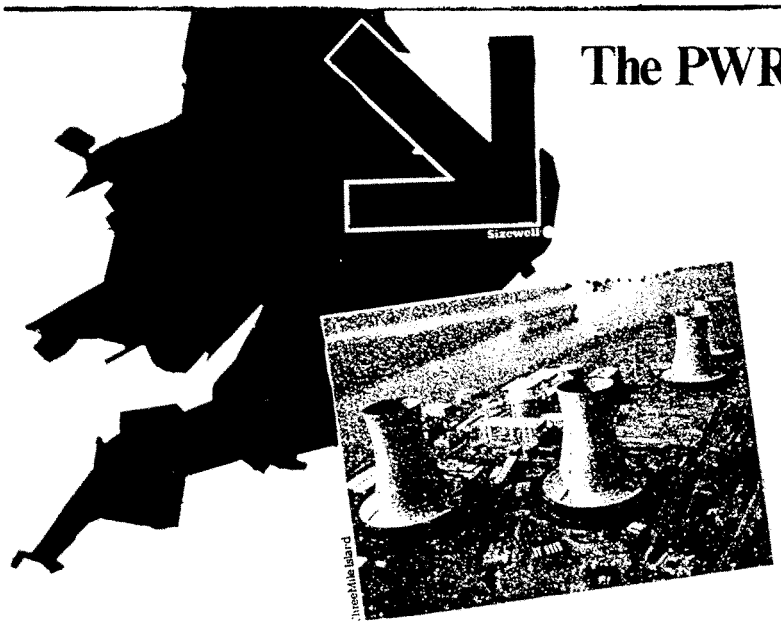
GREENPEACE NEED HELP

As a result of their anti-Sea Dumping activities the Dutch branch of Greenpeace are being sued by the owners of the waste-dumping ships for 'damages' of 31,000 Guilders [£6,000] in a court case. Please write or send a telegram of support to: Greenpeace, Damrak 83, Amsterdam, Holland.

Say that in your opinion the action of Greenpeace in drawing public attention to the dangers of nuclear waste dumping at sea can only be in the best interests of the world environment.

Your letter of support can then be produced in court.



Miner Difficulties

The minutes of the Cabinet meeting held at 10 Downing St. on 23rd October 1979 reported the Secretary of State for Energy, David Howell, saying that a substantial nuclear programme of thermal reactors was essential to the nation's long term energy needs. He proposed a programme of constructing 15GW of nuclear power over a 10 year period from 1982, employing the PWR reactor type.

The minutes also state; "a nuclear programme would have the advantage of removing a substantial portion of electricity production from the dangers of disruption by industrial action by coal miners or transport workers." The previous Conservative Government under Edward Heath had been brought down by the strength of miners' action in 1974. the miners' strikes in the winters of 1972 and 1974 caused a severe disruption of industry, and the Conservative Government backed by Britain's top industrialists were keen to prevent a repeat occurence by undermining the power of the miners.

Nuclear Expansion

This was a major political motive underlying the expansion of nuclear power which was duly announced in the House of Commons on 18th December 1979. David Howell announced that the Government would need to order "at least one new nuclear power station a year in the decade from 1982", equivalent to 15GW (15,000 megawatts) over 10 years, subject to the necessary consents and safety clearances.

In October 1982, the Department of Energy published its "Proof of Evidence for the Sizewell 'B' Public Inquiry". The expansion of nuclear power in Britain will depend upon the outcome of the Sizewell Inquiry. The evidence of the Department of Energy contains the first public projections of future energy trends made by the Department for three years. The implications for Britain's electricity industry are also outlined. This evidence seems to indicate that the Government is bent on an even greater expansion of nuclear power than previously announced. Depending on future levels of economic activity and oil prices, Britain's installed nuclear capacity could multiply by between 5 and 8 times over the next 30 years.

Cuts for Coal

This nuclear programme would drastically alter Britain's electricity supply industry, and have a tremendous impact on the coal mining industry. In 1981, Britain consumed 118 million tonnes of coal, representing 37% of primary energy supply. Roughly three quarters of this, 87 million tonnes was burnt in power stations, and there has been, over the last five years, a growth trend in power station coal consumption in contrast to the decline in coal use by other sectors. The planned massive expansion of nuclear power would contribute directly to a decline in coal consumption by displacing coal from base load generating capacity in the electricity generating boards system. The CEGB has already said that Drax B would be the last coal-fired station that they plan to order. The Department of Energy forecasts that power station demand for coal will fall from the present 89.7 million tonnes to 37.7 million tonnes per year by 2010.

With the main domestic users of coal reducing their demand so dramatically, a decline in coal production is inevitable, given also the world-wide overproduction of coal and the cheap prices offered by the big producers, Poland and South Africa, which makes exporting British coal very difficult. The Department of Energy projects that the production of coal will fall from the 1980 level of 120.8 million tonnes to 80 million tonnes in the year 2010. This in turn will lead to many pit closures with perhaps a half of the coal mining jobs being cut.

On the basis of 3 leaked documents — part of a report to the Monopolies and Mergers Commission's Inquiry into the Coal Board and two other internal documents — Arthur Scargill, president of the National Union of Mineworkers, claims that 75 of the Board's 200 collieries have been classified as 'short life'. The NCB's definition of short life is five years. The closure of these pits would lead to a cut in the workforce to half of its present level by 1988.

James Cowan, the NCB's deputy chairman, has said that **falling demand,** rising overseas competition and increased production from capital intensive pits could result "in a reduction in the industry's manpower requirements". The defeat of Scargill in the pit-ballot over pay and closures may well give the NCB the confidence to deal with the mounting crisis in the coal industry by closing up to 40 'uneconomic' pits with a loss of 20,000 mining jobs. The ratio of jobs in the mining industry to jobs in the industry's suppliers is roughly 6-1. The NCB's 'hit-list' could make 120,000 people unemployed.

The Plan for Coal, launched in 1974, under which total output in the industry was to expand to 135 million tonnes per year by 1985, rising to around 200 million tonnes by the year 2000, has clearly been dropped. The Government is hell-bent on a massive expansion of nuclear power which will kill off the chances of coal developing as a major source of future energy, and make thousands of people redundant in the coal mining and supply industry.

From the front cover of SCOTTISH MINER - journal of the Scottish area NUM

THATCHER TO MINERS: "YOU'RE BEING POLITICAL!"

News

Nuclear Blacklist

Two new rows have erupted recently over the Torness nuclear power stations. The Chairman of East Lothian District Council's Planning Committee alleges that the site's biggest employer, McAlpines, operate a "black-list" which discriminates against local workers. The Council is worried about job figures — since the Torness project started the number of local workers employed at the site has consistently dropped. The Council did not even receive the figures over the summer period! Now, however, there are 3499 people employed of which only 817 or 23.35% live in the East Lothian area. Councillor Tom Ferguson suggested that the Council should "put every block that is possible in the way of companies like McAlpines" and criticised the Government for encouraging "firms like McAlpines with their bully-boy operations". So once again nuclear power fails to meet its promise of more jobs.

Gavin Strang, an Edinburgh M.P. is to raise questions in Parliament regarding transport of nuclear waste. He states "I think it is very significant that Scottish Office Ministers are in no way involved and that all decisions and clearance comes from Whitehall. The real issue and serious area of concern is the possibility of accidents during transport of the material by rail and road." After hearing reports of trains carrying radioactive material sitting in East Anglia for five days he is urging Scottish local authorities to consider legislation which would give them a say in this.

Briefly...

The UKAEA have appointed a new chairman Sir Peter Hirsch on a part-time basis.

* * *

The technical arguments for and against the continuation of the Fast Breeder Reactor at Dounreay are once again raging in Parliament.

* * *

The ANC held a rally against the Sizewell PWR on the 6th November which was attended by over 1,000 people. The rally attracted people from all over the country showing the strength of the ANC's campaign.

Deathfield

The BNFL plant at Springfields seems to be having problems. Local farmers have found that their cows have poor appetites and milk yields have dropped dramatically. Up to a dozen cows have died and more are ill. Vets are completely baffled. In addition, grass have been scorched, paint on outbuildings has blistered and fish have vanished from ponds. A Ministry of Agriculture official said "We have been asked to treat this in the strictest confidence. It would appear to be particularly sensitive — even political. There is a big question mark over Springfields in all this."

* * *

British Nuclear Fuels Ltd. and its trade unions unveiled an agreement to settle compensation claims to dependents of workers who have died from radiation exposure, without legal proceedings. The deal is retrospective, covering 30 years and 20,000 employees. BNFL has undertaken to go through its personnel files looking for cases of cancer and linking them through computer runs. They claim that if the balance is more than 50% in the employee's favour, full compensation will be paid. A very useful public relations job for them but it will probably mean very little extra money to radiation victims' families — and will also mean that BNFL will not have to admit responsibility.

Bombs away

Enough plutonium to make 150 nuclear power bombs of the size that destroyed Nagasaki has disappeared. Sir Martin Ryle and a top CEGB official, Dr. Ross Hesketh say that more than half a tonne of plutonium has not been accounted for. Hesketh and Ryle assert that the "weight of evidence" is that civil weapons grade material has been sent to the US and used in weapons.

Empty THORP

The long delays suffered by Britain's AGR nuclear stations will mean spare capacity of more than 900 tonnes in THORP, the new reprocessing plant being built at Windscale. According to Mr. John Moore, Under Secretary of State for Energy, this spare capacity will occur during THORP's "first ten years of operation". "BNFL has been authorised to seek further business abroad to fill this."

Foreign waste will therefore constitute the major throughput for THORP. This was one of the concerns that lead to widespread opposition at the Windscale Inquiry.

Experience suggests, though, that successful operation of THORP is unlikely. The average lifespan of reprocessing plants has only been 6 years, according to a recent study by Dr. Arjun Makhijani, a private consultant with a PhD in nuclear engineering. What's more, the plants have operated at a mere 10-35% of capacity.

The plant at La Hague in France has run at less than 10% of rated capacity since 1976. There has been an average of one serious accident every four months between January 80 - June 82. The Tokai Mura plant in Japan opened in 1981, but only operated at 15% capacity before it was shutdown on 15 April this year.

Community policing at RTZ A.G.M.

RTZ Assaults

Rio Tinto Zinc, the world's largest mining multinational, is to be served with a writ alleging vicarious assault, and a claim for damages by four shareholders. At the AGM, when questions about the group's activities in Namibia and Australia proved too embarrassing, the chairperson brought the meeting to an abrupt halt. Later RTZ officials, stewards and police brutally evicted about 40 shareholders.

It looks as if they won't be getting away with their dirty tricks this time.

Their half year financial reports are out, and their profits are down. But guess which was the only area to show a rise in profits? It was, of course, Namibia. Earnings from every other sector were down but profits from Rossing Uranium were up again. It seems as though they're trying to get it out of the ground as fast as they can.

As well they might. Negotiations are proceeding on when South Africa's illegal occupation of the Territory will end. The UN are threatening to take action against RTZ in the international courts for their exploitation of Namibian mineral resources. Meanwhile, SWAPO have been granted a seat in the IAEA. Things don't look too rosy for RTZ. SWAPO is almost certain to become the government of an independent Namibia and it has promised it will demand compensation from RTZ for their years of plunder.

Peace camps

Lossiemouth

On Saturday, 9th October, Scotland's second peace camp was established outside RAF Lossiemouth.

The RAF personnel have already been told not to communicate with the campers. They need your support desperately. Send mail donations etc. to:- The Peace Camp, outside RAF Lossiemouth, Hopeman Road, Lossiemouth, Morayshire.

Faslane

The campers were recently seen to be putting the theory of non-violent direct action into practise. They blocked the main gates of the base for half an hour (in sympathy with the women down at Greenham Common who were given final eviction notices) creating a 4 mile tailback.

On 20th October the camp was given planning permission for 2 years by Dumbarton District Council, making it the first 'legal' camp in Britain.

The campers are planning more direct action in the future, if you would like details or wish to send donations (much needed) contact:- "Peoples Peace Camp", Faslane, Below St. Andrews School, Shandon, near Helensburgh, Dumbartonshire, or ring the SCRAM Office and ask for Steve.

Latest Blockade planned for December. People needed. Contact as above.

Home..

The Windscale AGR has closed down. The AEA are allowing £2-3 million a year for the programme but admit that significant capital expenditure would be incurred. They say it will be 50-100 years before the reactor island is dismantled.

The first of two 1200MM turbine generators designed and manufactured by GEC in Britain has been commissioned and synchronised at the San Onofore PWR station from Southern California Edison. The second machine is being commissioned at the Enrico Ferni BWR station at Manroe in Michigan.

..and away

France's first experimental fast breeder reactor, the Rhapsodie, has been shut down permanently. The reactor started up in 1967 in the research centre at Cadarache in Southern France. In January 1982 it was shut down following the discovery of a nitrogen leak.

The U.S. have threatened to leave the International Atomic Energy Authority over the expulsion of Israel. Israel is to be expelled for its bombing of the Iraqi reactor last year. The function of the IAEA is to uphold the Non Proliferation Treaty and to inspect the safety and performance of reactors. If the U.S. leave, it will make a farce of the IAEA.

Direct action works

On September 9th, Carl Rising-Moore was fined $25.00 in a British Columbia Court for blocking a train carrying 150 tonnes of Australian yellowcake. Rising-Moore and protestors in four other locations stood in front of a train to protest against uranium that they believed was "contributing to the production of nuclear weapons". Since the protest, the British Columbia Federation of Labour has decided to refuse to handle uranium and uranium is no longer moving through British Columbia. Rising-Moore said, "I know one thing for sure, non-violent civil **disobedience** can really have an effect."

Nuclear waste protest, Severnside July '80

Letting off steam

Referring to defective steam generators supplied to three of Spain's nuclear power plants by Westinghouse, Spain's Socialist Party Chief Energy Planner, Javier Solana, said: "It is nothing less than shameful for a big multinational to supply us with defective systems costing millions of dollars." Almaraz 1, one of the reactors with a defective steam generator, was recently cleared to operate at 50% capacity, but was taken off line September 20 after 67 hours of operation when a control rod was automatically activated, signalling a malfunction. Westinghouse officials were unavailable for comment.

The Socialist Party won the General Election and have said they will cancel plans for a further 5 nuclear stations.

China syndrome

Financial arrangements are still being discussed for the proposed 2 x 900 MW PWR station near Daya Bay in Sherizahan special economics zone, Guangdong provinces, Southern China. The electrical output of the station intends to help meet Hong Kong's growing power requirements.

At a cost of around $500m the project would involve more than double the total foreign investment in China so far. This disclosure follows a visit by a British team to China in July, which included representations from British Nuclear Fuels Ltd., GEC generators, Department of Industry officials and British bankers. France is also competing to supply PWRs for the plant.

Breeding

West Germany's fast breeder reactor project SMR 300 at Kalkar, on the lower Rhine, which was at risk because of escalating costs, has been saved by the incoming conservative-liberal coalition government.

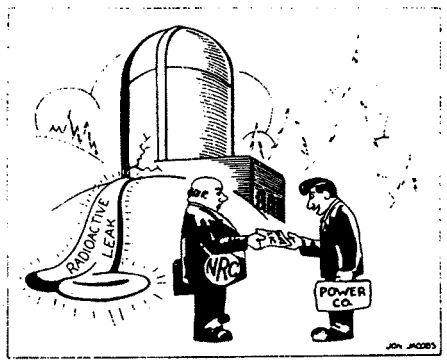
Cost estimates for the project have soared from DM3700m (£877m) in 1980 to the latest figure of hearly DM6500m (£1540m).

The finances of Germany's high-temperature reactor at Schmehausen are all out of control, with the bill now estimated at DM4300 (£1019m) — more than four times the original figure.

The government has agreed to pay a large part of the extra cost, leaving industry to increase once more its construction. At present industry is footing 9% of the costs at Kalkar, and 20% at Schmehausen.

Meanwhile the public operation continues. Up to 20,000 people demonstrated at Kalkar earlier in October.

A reactor in Belgium which only recently opened has been forced to shut down after an accident which released 1300 gallons of radioactive water.



"DON'T WORRY ABOUT IT. HERE'S YOUR LICENSE."

TMI trials

General Public Utilities (GPU), owner of Three Mile Island, are attempting to sue Babcock & Wilcox, the plant manufacturer, for £2.4 billion. GPU are charging Babcock & Wilcox with alleged negligence and with failing to inform the utility of safety hazards at the plant. Babcock & Wilcox deny that they failed to provide adequate safety equipment and training.

GPU has also charged the Nuclear Regulatory Commission with failing to monitor and promote nuclear safety. They are seeking £2.4 billion in damages.

Another case being heard in the Supreme Court is deciding if Federal nuclear regulators must consider the psychological stress on local residents before the one undamaged plant at TMI starts up again. The Appeals Court already says they should, but the nuclear industry has appealed against this, claiming this ruling could force the evaluation of stress before the licensing of any nuclear plant.

Putting power into NFZ's

Over 140 Local Authorities in England, Scotland and Wales have declared themselves Nuclear Free Zones. Although their powers in this area are limited their support gives strength to the peace and anti-nuclear movements and they are in a useful position to put pressure on central government and can cause it acute embarrassment as in October this year when it was forced to cancel the 'Hard Rock' civil defence exercises.

Unfortunately confusion still surrounds the nature of Nuclear Free Zones. The idea originally related to nuclear power. The first NFZ in Britain was declared by South Yorkshire CC in June 1980. Their resolution opposed the construction of nuclear power plants and reprocessing of waste in the country, they also declared they would "use all means at the disposal" to stop storage and transport of nuclear waste in the country.

In November 1980 the NFZ campaign made rapid progress following Manchester City Council's resolution calling on the Government "to refrain from the manufacture and positioning of nuclear weapons of any kind" within the city. It is interesting to note that the resolution made no mention of nuclear energy at all. Manchester sent copies to all the Local Authorities in Britain who responded rapidly in support of the resolution. Most adopted resolutions identical or similar to Manchester's, only a few adding their opposition to nuclear energy

Manchester took a lead in coordinating the NFZ campaign, Cllr. Risby chairing the National Steering Committee. At the National NFZ Conference on April 16th '82 the motion before delegates was an important one — Hackney Council had proposed that opposition to nuclear energy be included in the campaigns remit. For the Steering Committee Cllr. Risby said it was "most important to the Campaign not to lose the support of any Local Authorities who already supported a stand against nuclear weapons but who might not support an extended campaign also concerning nuclear energy and waste." Cllr. Lichman for Hackney replied that a failure to recognise the involvement of nuclear power industries in the development of nuclear weapons and to exclude this subject from the campaign for the sake of unity was an unrealistic approach. The motion was overwhelmingly lost.

The links between the peace and anti-nuclear movements have become very strong over the last two years, each recognising that nuclear energy and nuclear weapons are intimately involved. Unfortunately this message has not reached our elected representatives and attempts to incorporate opposition to nuclear energy into the NFZ campaign are being effectively blocked by those on the committee who are in favour of nuclear power.

There **is** something we can do. Those of us currently lobbying councils to declare themselves Nuclear Free can make sure that the declaration includes opposition to both nuclear weapons and energy. For those already living in NFZs, only 73 of the 140 Authorities attended the Conference. Did yours bother to attend? And did its vote reflect your views? Should your authorities NFZ declaration be amended? It's time for all of us to start reading the small print.

Margaret & Peter Savage-Jones

NFZ latest

The Ministry of Defence have recently released a film "Peace Games" to be shown in schools throughout the UK. The film is designed to counter the growing influence of peace groups throughout the country, and to present the "official government position". However, Schools Against the Bomb have provided an alternative! Their film "Protest and Survive" is to be used by the education committees of Nuclear Free Zones throughout England and Wales.

NFZ latest

The Greater London Council will be holding a conference to consider the transportation of nuclear waste by rail through the capital and the possibilities of stopping it.

NFZ latest

New civil defence regulations have been proposed by the government. They could force local authorities to make provision for nuclear war. The Steering Committee of NFZ has circulated a draft resolution for the adoption of NFZs. They say "There can be no protection of the population of this country while it remains a nuclear weapons state, against the terrifying consequences of nuclear war." They call on local authorities to declare their total opposition to the proposed regulations and to convey this to the government.

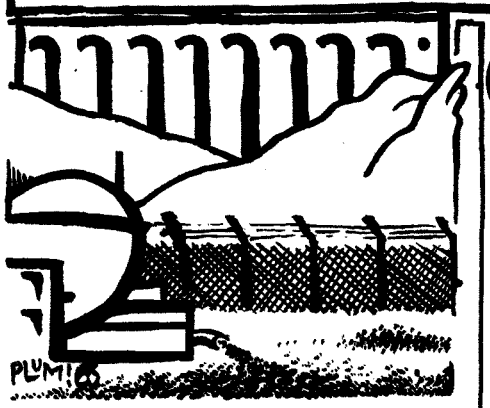
NFZ latest

Fife Regional Council have become the latest Nuclear Free Zone to disinvest their shares in Rio Tinto Zinc. Rio Tinto Zinc are the notorious multinational illegally mining uranium in Namibia (see news page). Fife Region have disinvested their 70,000 shares because they feel it would be inconsistent for a NFZ to support uranium mining. Other NFZs still haven't realised this. If your NFZ holds shares, ask them **why**? For a full list of NFZs with RTZ shares, write to: PARTIZANS at 218 Liverpool Road, London N1 1LE.

Wasting away in London

The principal international treaty that regulates the dumping of radioactive wastes into international waters is the London Dumping Convention (LDC). The next meeting of this body is due to be held in February 1983, in London. Opposition to the present and future dumping operations can be manifested through the LDC; e.g. the treaty could be modified to prohibit ocean dumping of radioactive wastes by amending the appended annexes such, that radioactive matter is listed on Appendix 1 (Black list).

The procedure of the LDC permit any Contracting Party to propose amendments to the LDC.



The next LDC meeting is scheduled to take place in London on 14-19 February 1983. Efforts to find sponsoring nations for a principal amendment, which would call a ban on dumping of radioactive wastes into the ocean, have been concentrated on Scandinavian LDC members, and it is likely that two or three Nordic countries will propose such an amendment.

A fall-back position would be a proposal to prohibit the initiation of new radioactive waste dumping programmes. The Pacific nations, Kiributi and Nauru, stated in July that they wished to also sponsor the amendment proposal and the back-up resolution which Vanatua and the Solomon Islands are also considering co-sponsoring.

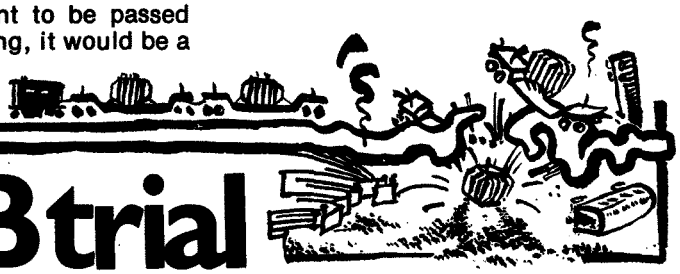
For passage of amendments, a two-thirds majority is required. It seems likely that there will be a positive voting block of nine nations: Denmark, Sweden, Finland, Norway, Iceland, Philipines, Tunisia, Spain and Portugal. Further support is probably likely from the Netherlands (who recently announced the halting of their sea dumping programme). Various Pacific Island governments (not all unfortunately are signatories to the LDC) are also opposed to Japan's plans for sea dumping. If the amendments failed to obtaining the two-thirds majority, resolutions could also be submitted during the meeting, which only require a simple majority to be adopted.

1983 meeting of the LDC will be the most important there has been, because if the amendment to the Black List (Appendix 1) is passed, the dumping of radioactive wastes at sea will be prohibited, a move which would be a significant blow to the nuclear power and weapons programme world-wide. If the amendment is not passed, it is likely that Japan will start dumping wastes at sea.

While it is perhaps unrealistic to expect the amendment to be passed at the February meeting, it would be a victory in itself if a vote were to be held on this issue, since that has never been done in the LDC, all previous decisions being taken by consensus.

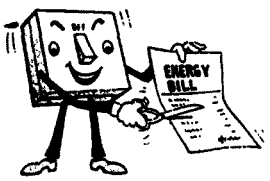
Between now and February, Greenpeace Limited are co-ordinating a world-wide campaign to pressurise their government representatives to the LDC, to back the amendment.

Contact: Greenpeace Ltd., 36 Graham Street, London N1 8LL. Tel. 01-251-3020.



CEGB trial

Following the announcement of October 19th as the date for the Pre-Trial Hearing, the Board entered an Affidavit to the effect that there was no valid defence to the action, and requested a summary judgement in their favour. Dr. John then entered a Counter-Affidavit outlining his points of defence and "exhibiting" all his correspondence with the Board in order to demonstrate that there was a bona fide dispute going on. He also wrote to his MP asking for his intervention in the case, and in response to the MP's enquiries the Board spokesman twice admitted to a consumer "dispute". Dr. John also "exhibited" this important letter with his Affidavit. At the Pre-Trial Hearing on 19th October the Registrar did not



make a summary judgement in favour of the Board, but gave Dr. John the choice of either arbitration or a full Court Hearing as a means of determining the case. Dr. John chose the latter course of action, although if he loses the case there may well be an award of several hundred pounds worth of expenses against him.

The important feature of this case so far is that the Electricity Board (in its letter to Nicholas Edwards MP) and the County Court Registrar (in refusing to issue a summary judgement in favour of the Board) have both recognised that there is a genuine consumer dispute going on. Normally the only disputes recognised by Electricity Boards are those relating to the reading of a meter, and indeed it was because of this that Nigel Griffiths lost his case against the SSEB on 30th November 1981. Having admitted to a dispute, the South Wales Electricity Board cannot now disconnect Dr. John's electricity supply until the dispute is settled.

The South Wales Electricity Board is taking a Pembrokeshire man to court in an effort to reclaim £52.09 which has been withheld as a protest against the Board's acquiescence in the use of nuclear power for electricity generation. Dr. Brian John, of Trefelin, Newport, has been withholding 11% of his electricity bills for the past 18 months or so and paying the residue into the ANC Trust Fund for the promotion of safe and cost-effective methods of electricity generation. Dr. John says that he will ask ANC to pass the money on to the Electricity Board as soon as the dispute is settled.

The Court Case, which will be heard towards the end of the year in Cardigan County Court before the County Court Judge, is the first such case in England and Wales. It is therefore a precedent of some importance for consumers all over the UK.

After a prolonged correspondence, in which the Electricity Board consistently refused to discuss Dr. John's grievances with him, the Board finally threatened to disconnect his electricity supply in April. Dr. John made it clear to the Board that he would not allow Board personnel onto his premises without a magistrate's warrant, and that he would not accept a magistrate's warrant issued without full consideration of his case. The Board then changed its tactics and decided to go ahead with court proceedings.

Sunny days

Q. **How much will a Solar Water Heating System Save?**

A. In UK conditions a typical 3 or 4 panel (4 square metres area) system for a household of four people should usefully collect between 30% and 40% of the annual solar energy which lands on the panels. This amounts to about 1,400 kilowatt-hours which is worth about £70 if saving ordinary rate **electricity** at 5p/kWh, and about £30 if replacing **gas** at 30p/therm.

Q. **How Much Will Such A System Cost?**

A. Present costs vary widely, from as much as £2000 for some professionally installed systems to as little as £200 for a DIY system.

Q. **How Difficult Is DIY Solar Water Heating?**

A. About the same difficulty as a small central heating system.

Q. **Is Solar Water Heating Worthwhile?**

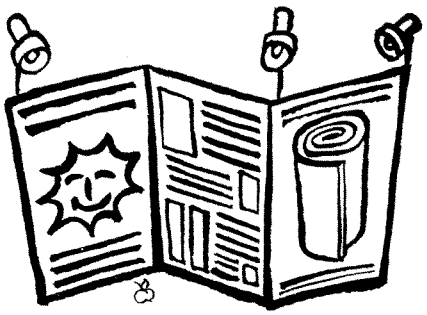
A. The simple payback period can vary from less than 3 years (a DIY system saving electricity) to more than 60 years (one of the more expensive professionally installed systems saving gas). The householder should compare this with other possible investments. In most cases it makes sense to insulate to a good standard **before** considering solar water heating. It should also be remembered that inflation in fuel prices will make a present investment in solar water heating (or insulation) more attractive than a simple payback time estimate would indicate.

The economics of solar water heating are greatly improved for larger systems with a high demand for hot or warm water in the summer months — for example in hotels and boarding houses. Other attractive applications are swimming pools and fish farms.

Q. **Are The Costs Of Solar Water Heating Likely To Fall?**

A. There are several new developments which could help to reduce costs, including the use of synthetic rubbers and plastics to replace expensive metals such as copper. In the long run it would probably be realistic to expect the real costs of solar water heating systems to be about half those at present.

LEG exhibit



The first national public exhibition on energy conservation and renewable energy technology opened in Edinburgh on November 1. The exhibition, designed to high professional standards, was compiled by Lothian Energy Group, with help from many sources. It has been sponsored to the tune of £60,000 by amongst others the Lothian Regional Council and the Department of Energy.

The wording of the 50 graphic panels was, perhaps not surprisingly, carefully checked by the Department of Energy to remove anything that hinted of criticism of government policy. Despite this constraint, the exhibition provides an impressive introduction to 'energy', with sections on Energy at Home, Energy Nationwide and Renewable Energy for Britain.

In addition to the 50 large colour panels there are a number of models on display. There is also a large section devoted to displays by commercial firms in the energy field. Solarway and Warmfill are two firms with particularly large displays, including full size banks of solar panels. (The South of Scotland Electricity Board also have an exhibit expounding the 'virtues' of Hunterston nuclear power station!)

"The exhibition unfortunately ran for only two weeks in Edinburgh. The organisers hope it will be able to travel throughout the U.K. It is certainly worth getting along to see if you have the chance. Maybe you can even arrange for it to visit your area. If you are interested why not contact Lothian Energy Group, 15 Buccleuch Place, Edinburgh 8.

CHP conference

Combined Heat and Power is an energy technology for the future. An investigation is taking place to find cities for lead schemes. But this will take some time before being implemented. What can we do in the meantime?

One exciting possibility is small scale units in public institutions, that could link into larger schemes at a later date. Such units would not only meet the needs for efficient cheap heat but be used as exemplary demonstration to promote the technology.

Already the Polytechnic of the South Bank is thinking of introducing such a scheme and this exciting seminar will introduce the ideas to a wide audience, bringing together speakers and participants from local authorities, manufacturers, researchers, engineers and the energy industry.

South Bank will be holding a One Day Seminar on 'Small Scale CHP Schemes for Public Institutions' on December 15th, 1982 at 9.30 a.m. to 5.30 p.m. The fee is £25.00 for the day with negotiable reductions for small groups and individuals. Applicants should contact: Ms. Chris Richards, Centre for Energy Studies, Polytechnic of the South Bank, London SE1 OAA, 01-928-8989 ext. 2584.

Wave power for Lewis

The North of Scotland Hydro-Electricity Board is planning to build a 4mw wave power unit off the village of Barras in the Island of Lewis in the outer Hebrides. The scheme has been described by the NSHEB as "Practical, has economic potential and should prove to be worth developing further."

The station will be based on the National Engineering Laboratory's Breakwater design, which is an oscillating water column, standing on the seabed, 1.2km from shore, in 20km of water. The dense is 34m high from the seabed and 65m wide by 32m.

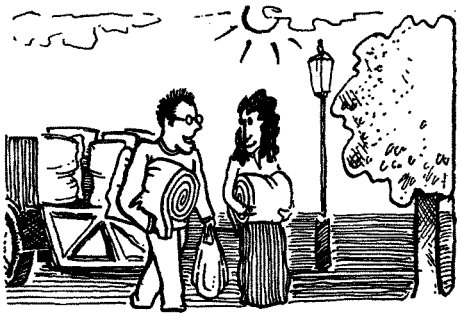
Preliminary studies have been made and work will start in 2 years now the Department of Industry have agreed to make a grant of £350,000 towards the cost of a detailed feasibility study. The construction of the station will take a further 18 months and will cost £12m. The second module which is also planned would cost less than half that figure.

Electricity from the first module will cost about 9p/kwh compared with the 7-8p which Lewis is paying at present for diesel electricity. Later units will bring down the price compared to the expected increase in the price of oil.

Lots of local energy

The Newport and Nevern Energy Group is a voluntary community initiative based on two rural parishes on the west coast of Wales in the UK, is still thriving.

Our Group was set up in March 1980 by a small group of friends worried about the global and local implications of energy policies based upon the philosophy of ever-accelerating growth and ever-increasing energy consumption. We decided that there are enough anti-nuclear and other protest organisations around already, and we decided right from the outset that our "image" must be one of the positive thought and creative and constructive action. We have stuck to our original belief that the Group must be strictly non-political and should have no affiliations with other groups.



Our aim is to work both inside and outside the establishment and to demonstrate the communities can reduce their energy demands by 10% or even 20% through a process of "energy education" and direct action. We realised at the outset that there is a tremendous leakage of energy cash from the local economy which in turn reduces local wealth, local social stability, and local self-reliance. Our key objectives, written into the NNEG constitution, are (a) to encourage a more efficient and rational use of energy resources; and (b) to promote energy-saving and small-scale power-generating projects for the benefit of the local community.

Our practical involvement in the community of about 1500 people began with the organisation of the first North Pembrokeshire Energy Show in Newport in October 1980, which was a tremendous success and profits being used for an energy conservation scheme in the town's Memorial Hall. As our membership has grown, so have the activities, getting the County Council to insulate and draught-proof the local primary school; putting on film shows and workshop sessions on energy conservation and natural energy use; and badgering the County Council into including an energy conservation policy in the County Structure Plan and building up a library of books and leaflets on natural energy use. In one scheme with the slogan "Use paper logs — save trees!" school-children collect old newspapers for resale as paper logs. Tree nurseries have been started on waste land owned by NNEG members. We are encouraging members to start their own natural energy schemes, and Alternative Technology items are now beginning to come into use in the local area. We met David Mellor (the Under-Secretary for Energy) and pressed him to provide more support for community energy initiatives. A meeting was organised for local architects and planners on passive solar heating and building design; a full-day conference on "Energy Conservation and Neighbourhood Action", attended by delegates from all over Pembrokeshire. Our longest-running project is a bulk-purchase scheme by which we buy-in loft insulation rolls at a greatly reduced price to members. So far we have had six delivered, and about 60 local homes have had their lofts insulated. The annual saving to the community is about £5000 in reduced fuel bills. At present we are planning a country-wide open competition for new inventions in the natural energy field. It is called "Natural Energy '83", and it is being organised jointly with Intermediate Technology Development Group in London. We are raising £4500 in prize money, local motivation being that we want to see the prize-winning devices brought into production in our own home area where unemployment currently runs at about 30%. The prize-winning entries will be put on show in the Second North Pembrokeshire Energy Show in June 1983.

Much more information about the growth of NNEG, and guidelines for people interested in forming their own Local Energy Groups, can be found in the NATTA booklet "Community Action and Alternative Technology" (May 1981, with an update in Dec. 1981).

Brian John

Support ebbs for Severn Barrage

A recent meeting of **the Network for Alternative Technology and Technological Assessment [NATTA]** on the topic of the proposed barrage for generating electricity from tidal movements in the Severn, voiced a number of criticisms of the project, it felt better use could be made of the resources it would absorb.

Dave Elliott, co-ordinator of NATTA said that the construction of the barrage would involve a major 10-20 year civil engineering project, costing £5-6 billion and providing jobs for 21,000 workers. If completed the barrage would provide 6% of current electricity consumption.

Elliot argues that the Severn barrage is a low investment priority at a time of stagnant electricity demand and increasing interest in energy conservation. Putting the resources into energy conservation instead of the barrage could yield spectacular benefits. A general guideline is that it costs 10 times as much to generate a watt of electricity as to save it.

A recent study demonstrates that 141,000 person years of work could be produced by a programme designed to save up to 9.6% of Britain's primary energy use. The cost would be up to £9 billion but in contrast to the barrage, such a scheme would start delivering benefit within the initial years. It would also allow an exporting industry to be built up in Britain.

At the same time, cash could be put into domestic solar heating, cutting down on electricity use for heating and allowing expansion of an industry which has already given Britain 20,000 solar water and space heating units. In addition, there might be a case for putting cash into domestic other renewable energies or even into smaller tidal barrages at sites like the Mersey which would yield less power than the Severn but which would have better economics and be built faster.

NEW HEAT SCHEME STARTS IN PIMLICO

A new coal fire Sorter plant has recently been opened to replace the old Pimlico District Heating System which used waste heat from Battersea Power Station due to be closed in 1983.

The new plant is adjacent to Battersea Power Station on land leased from British Rail. Water heated by the Sorters will be pumped down pipes to 4000 nearby flats, plus other buildings in Pimlico, including shops, sports and community centres and a school. Each Sorter has an annual fuel consumption of 12500 tonnes of coal.

Classified

Tyneside Anti-Nuclear Campaign now meet on the 4th Tuesday of the month at 7.30 p.m. at their office in 1 Charlotte Square, Newcastle. All welcome.

Accommodation on craft — 7 miles — PITLOCHRY — suit hill walkers or those interested in self sufficiency. Home baking. Organic produce, friendly farm and domestic animals. Long or short stays. Reasonable rates — SAE Cynthia McArthur, Drumnagowan, Glen Fincastle, PITLOCHRY, Perthshire PH16 5RJ. Phone 0796-3175.

Reviews

The Lucas Plan: A new trade unionism in the making? Hilary Wainwright & Dave Elliott. Allison and Busby. £2.95.

As the power of multinational companies grows so the power of trade unions has diminished. The most successful answer to the corporate crisis has been the attempts by unions to organise across traditional plant and union divisions. The strength of these unofficial "combine" committees has been to challenge company plans with an unorthodox and imaginative unionism.

In their attempt to fight redundancies, the Lucas Combine Committee published their Alternative Corporate Plan in 1976. Their aim was to "demonstrate that workers are prepared to press for the right to work on products which actually help to solve human problems rather than create them". The Plan proposed a shift from the production of aerospace and military technology to "socially useful products" such as kidney machines, heat-pumps, and a road-rail vehicle as well as a whole range of appropriate energy products.

A worthy aim surely — but one which faced not only the hostility of the company but also that of traditional trade unionism, the then Labour Government and the academic world. They found industry had vested interests everywhere. In spite of formidable opposition, two workshops have been set up to develop the ideas and products — one, the Centre for Alternative Industrial and Technical Systems at North East London Polytechnic and the other, the Unit for the Development of Alternative Plans at Lanchester Polytechnic. Prototypes from the Plan are being developed but there is still little or no funding for them compared with massive investment in nuclear power and weapons of destruction.

This comprehensive book raises fundamental questions about the nature of our society. Depressingly, the book reveals the extent of the power of the military-industrial complex. But it counters this, with the workers response, popular support for the Plan and the knowledge that this can only happen with our consent. We must not only fight **against** nuclear power and weapons but must fight **for** an alternative. The Lucas workers have provided it — and Hilary Wainwright and Dave Elliott have written an enthralling book about it. Most books about trade unionism say nothing about women — this one makes them integral to the book. This book is a **MUST** — buy it and support the Lucas workers.

Energy Policy. Martin Ince, Junction Books. £5.95.

Martin Ince, one-time member of the UNDERCURRENTS collective, has written an excellent first book in the new series: 'Society, Technology and Science' of which he is the editor.

The book offers a comprehensive outline of the major institutions that comprise the electricity industry in Britain; including the generating boards, other government agencies, the supply industry, trade unions and pressure groups. It provides a clear perspective of the institutional needs and forces which dictate current and future energy policies. This is something which anti-nuclear campaigners must seriously consider, because the implications for activity are enormous.

Martin Ince, himself, makes a number of sound criticisms of the existing energy policy, including the role assigned to nuclear power, and he proposes an alternative strategy based on conservation, fluidised-bed combustion technology and combined heat and power. These are both realistic and feasible, given the institutional constraints which he outlines.

The book does cover technical issues, like energy forecasting methods and economies of scale, but it does so in an accessible way. I would put this book alongside W. Paterson's "Nuclear Power" and P. Bunyard's "Nuclear Britain" as essential reading for all people interested in the nuclear /energy issue.

These books are all available from:-
SCRAM 11 Forth St, Edinburgh
Mail Order

Trade Union Action on Namibian Uranium. Published by SWAPO and the Namibian Support Committee. £1.00 [inc. p&p].

Britain obtains over half of its uranium for its civil and military nuclear industry from Namibia. Meanwhile Namibia has the largest military occupation in proportion to the number of citizens - 20 South African soldiers to every Namibian citizen. Western countries contribute to maintaining the occupation by their exploitation of Namibian resources and workers. Rio Tinto Zinc, the British based mining multinational, is one of the biggest culprits — it mines uranium at the Rossing mine. Even Sir Mark Turner, a company director, described conditions at the mine as "appalling".

This book provides a comprehensive briefing on the illegal trade in Namibian uranium and its implications for the Namibian people in their struggle for national liberation. The book reproduces key policy statements from SWAPO, the National Union of Namibian Mineworkers, the United Nations and European trade unionists. There is detailed information on the Rossing mine, the campaign throughout Europe and a comprehensive list of the foreign companies illegally operating in Namibia. One very interesting inclusion is RTZ's security scheme at Rossing marked "to be destroyed by shredding"!

And no wonder they didn't want it to get out - it described how a 69 man paramilitary force polices the mine and is used in trade disputes and civil unrest.

All in all, well worth a read. Informative whether you're in the know or not.

APOLOGIES

Last issue we wrongly credited Target North West to Ian Welsh. It should have been Bob Poole. Sorry! £1 inc post...

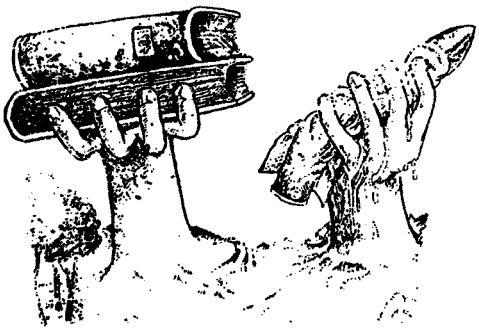
Other groups

Fodder for industry

SCOTTISH STUDENT CND
XI FORTH ST, EDINBURGH EHI 3LE
031 557 4283

As the term ends, students are mobilising to take on the nuclear-military presence in their colleges. At two student conferences recently, in England and Scotland, students vigorously reasserted their intent to make their colleges nuclear-free.

Students have become increasingly aware of the growing presence of the nuclear-military complex in their colleges. With the recession and education cuts biting deep into college budgets, colleges are being asked to look to industry for finance. But guess what? The only growth industries these days are in the civil and military nuclear industries. Colleges, once places of enlightened thinking and free research are being transformed into planning centres for our destruction.



The student campaign — a broad-based body consisting of Anti-Apartheid, Third World First, Students Against Nuclear Energy, Student CND and the National Union of Students — will be focussing their efforts on two student campaigns (as well as being part of the campaign against Sizewell, Cruise and Trident). These are military research and anti-recruitment.

CND brought out a pamphlet in 1974 called Study War No More. It listed military research taking place in universities and colleges. At that time, £2 million was spent on military research in colleges. Since then, the figure has more than doubled even according to official sources. And more money comes from other bodies — NATO, the US forces, private industry and so on. One department at Edinburgh University does 30% of its work for the military. Students will be working all over the country next year to amass information about how much research is done in individual colleges for military and nuclear purposes. A reprint of the pamphlet Study War No More will then be produced. That information will then be used for campaigning. Leeds University have already set up a joint staff-student committee which is working on proposals on research to put before the University Senate.

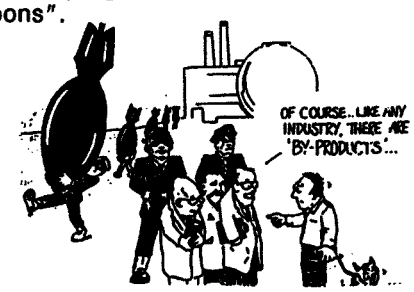
The other main campaign students will be working on is anti-recruitment. Each year companies visit universities to recruit graduates. More than half of the companies participating in this "milkround" are involved in the nuclear-military complex. The nuclear industry is totally dependent on skilled personnel. Graduates are their life's blood without which they would seize up. A broad based campaign has been initiated to make sure these companies won't find it so easy to pick up nuclear fodder.

Atoms for peace, children....

The first Study Pack on nuclear energy appeared only a year ago. **Nuclear Energy Questions,** produced by Information Service on Energy, proved so popular that it rapidly sold out. To satisfy continuing demand a new revised edition is now available. With a new additional booklet it deals for the first time with the links between nuclear energy and nuclear weapons. The new pack will be particularly welcomed by teachers, given the current widespread interest in the vital question of nuclear weapons.

Atoms for Peace?, the title of the new booklet, deals with the links in the same clear easy to understand way that the other five booklets look at energy. It traces the development of nuclear weapons showing that they depend upon the same facilities that produce 'peaceful' nuclear power. The two are linked like siamese twins.

The booklet continues by considering the controls designed to prevent the spread of nuclear weapons. But the point is made, with suitable examples, that "despite international treaties, the promotion of 'civil' nuclear power has led to many countries developing their own nuclear weapons".



The new edition of **Nuclear Energy Questions** includes two re-designed wall posters, as well as revised Tutors' Guidelines and Resources Handbook.

The pack sells at the same price of £4.95 + 65p P&P. Copies of the new booklet are available separately at 35p + 15p P&P. Orders to Information Service on Energy, 11 Forth Street, Edinburgh 1.

Acid rain's gonna fall

The highlighting of **acid rain** as an issue of national and international significance was one result of the highly successful 11th Annual Meeting of FRIENDS OF THE EARTH INTERNATIONAL (FOEI), held in Scotland in October and attended by representatives from ten countries.

As both victim and producer of this pollution hazard, Scotland was chosen to act as lead nation in the gathering and dissemination of information on the issue. A key element in the campaign — in addition to stressing the lethal effects of acid rain on waterways, forests and soil — will be that it adds yet more weight to our call for vigorous energy conservation and the development of renewable sources. The fact that much of the problem stems from the burning of fossil fuel in **no** way strengthens the nuclear power case, but we will need to say so loud and clear.

Other issues identified by FOEI groups as meriting priority co-operative action include: tropical deforestation, food, illegal pesticides trade to the 3rd world and nuclear waste dumping in the Atlantic and Pacific oceans. Also of interest was the high emphasis laid by many participants on the jobs question and Les Amis de la Terre have offered to organise a conference on 'Employment and the Environment' in Paris next Spring.

Confirmation of the part-time Secretariat in Sweden, another major discussion at the Meeting, should do much to help the interchange of information and views essential to build up a strong, coherent international lobby. Next year's meeting will be held in Lisbon.

Mairi MacArthur

Moles in the Burrow

Little Black Rabbit heard some strange noises when she swivelled her special big ears south recently. It seems that the Sizewell Inquiry is not going to be as free and open as it is made out to be.

The Atomic Energy Authority have been whipping their employees into line. They forced one of them to withdraw from taking part in a recent conference on Sizewell, in case he should blurt out something untoward about the safety or otherwise of the PWR.

Among those who did speak at the Conference was Trevor Brown. The AEA bounced him out of his job at Aldermaston because he wanted to get the safety of the plutonium factory up to a decent standard. They even threatened to send him to Dounreay — that was more than he could take.

The CEGB are putting the squeeze on one of the other speakers — Ross Hesketh, who happens to work for their Berkley Labs. Dr. Hesketh is worried about British plutonium going into US nuclear weapons. Little Black Rabbit is puzzled why this should concern the CEGB. It's not **their** plutonium that's being used, is it?

The CEGB are even trying to issue their own 'D' notices about Sizewell They have been offering confidential information on their generating costs to certain prominent critics, on condition that they make no public use of it! Rumour has it that at least one has taken the bait. We shall see.

Bye bye & keep burrowing!

Diary

Dec. 6	Parligaes. Walter Marshall (who?) talking on 'Electricity Generation in the future' 6.30 p.m. House of Lords.
Dec. 9	Edinburgh Public Meeting on Sizewell PWR, Cannonball House, High St. 7.30 p.m. ... followed by SCRAM/CND benefit Ceilidh at Grindlay St. Union. 8 p.m. till late. Dance band with caller & local musicians. Tickets from Smiling Sun or or door - £1.50 (£1.00 unwaged). SEE YOU THERE!
Dec. 12-13	Women's Action at Greenham; embrace the base, followed by blockade.
Dec. 15	One day seminar on Small Scale CHP schemes for Public Institutions. South Bank Poly.
Dec. 23	No Nukes Music Christmas Party at Nite Club.
Jan. 1	Nuclear Free in '83?
Jan. 11	Sizewell Inquiry starts....
Feb. 14-17	London Dumping Convention.

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WHAT WILL IT COST?

Two things largely determine the cost of the electricity coming out of a power station:

[ ] how much it costs to build;
[ ] how much it costs to run

CONSTRUCTION COST

Nobody has built a commercial PWR in this country. The CEGB are going to the United States for the designs for Sizewell: to Westinghouse for the reactor and to Betchel Corporation for the housing, which is based on a new standard layout called SNUPPS — the Standard Nuclear Unit Power Plant System. So it is worth taking a look at how PWRs fared in the States, and at the big Westinghouse models in particular.

PWRs are getting a lot more expensive. The ones that were finished in the early seventies cost little more than equivalent coal stations to build and appeared cheaper to run. But by the late seventies they were so much more expensive to build that their advantage in running costs were cancelled out, even allowing for coal costs increasing with stricter regulations governing moke stack emissions. The few PWRs that are still being built are in an even worse financial state. It looks as though they are going to cost two or three times as much as the equivalent coal stations. This will make the electricity that they produce one and a half times as expensive as that from coal stations, even though the coal stations now have to be cleaner still.

Why have things got worse for the PWR when they are supposed to be getting better? Where is the effect of the "massive engineering effort" and "enormous resources" that the CEGB keep going on about? Perhaps the effort to persuade them to buy one has worked better than the attempt to sort out its problems.

The pro-nuclear lobby blame the anti-nuclear movement — like Goliath complaining that David has stood his ground. The facts give a different story. The main reason that PWR costs escalate all the time is that they keep going wrong. And whereas one or two dangerous reactors might not be noticed, when you start building them in large numbers they have to be that much safer. So every PWR that is built incorporates precautions against repeating the accidents that have befallen its predecessors. So they keep getting more complicated and hence more expensive. And there is no sign that the process is coming to an end.

FUEL COST

Three things have kept the cost of nuclear power down: lies, disguise and procrastination. Let's take them in reverse order.

PROCRASTINATION

Much of the cost of nuclear fuel arises from things that have to be done to it after it has been used — storing it and perhaps separating it chemically into its constituents (reprocessing). The way the CEGB works out how much things cost, the longer you put them off, the cheaper they get. So to drive the costs of handling spent fuel as low as you wish, all you have to do is put the process off for thirty or forty years. The same applies to the cost of dismantling a nuclear station.

DISGUISE

Nuclear fuel used to be cheap. There were a number of reasons for this.

Cheap Uranium: from easily accessible sources where the safety precautions were not allowed to stand in the way of profit. In this case, the mining companies showed a rare policy of equal opportunity — the miners in the United States were given just as much chance of getting cancer from radiation as those in Africa.

Military Subsidies: much of the machinery for making nuclear fuel was used to make material for nuclear weapons — and the same establishments still serve civil and military programmes. The military subsidies come in two forms: secret subsidies for doing the dirty work of producing plutonium for weapons, free gifts — whole factories were handed over to British Nuclear Fuel Ltd. when they were split off from the Atomic Energy Authority. Always protesting commercial confidentiality BNFL are very coy about where they get their income from. Even the terms on which they sell to the CEGB remain secret again for "commercial reasons".

LIES

Even so, as the nuclear industry has become responsible for more of its own costs, they have hit the wall of economic reality. In 1982 the CEGB say that the cost of PWR fuel in the late eighties will be only a third of what they pay for AGR fuel.

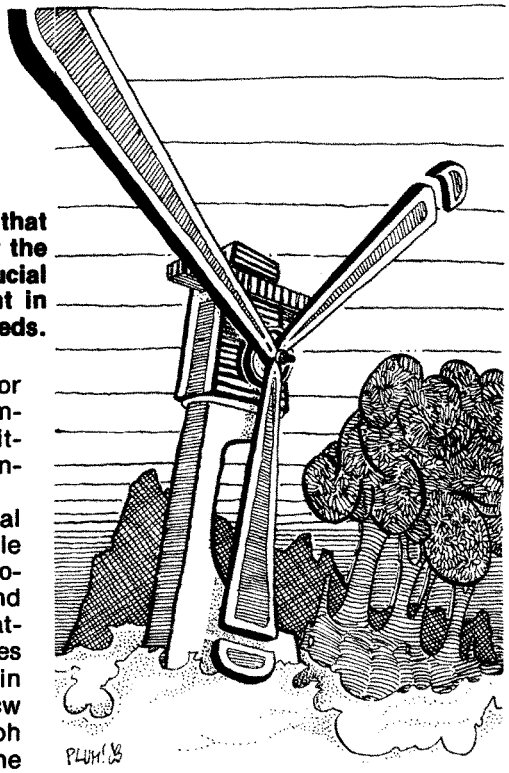
They have to resort to such flights of fantasy in order to make the PWR costs appear lower. Then they assert, that it is worth their while to build new PWR stations and to shut down the stations they already have. If they keep going the way they are headed — towards a big nuclear programme — either they or Britain will be bankrupt in twenty years time.

From the first Report of the House of Commons Select Committee on Energy, 1980-81 session.

"We are dismayed to find that, seven years after the first major oil price increases, the department of energy has no clear idea of whether investing around £1,300 million in a single nuclear plant... is as cost effective as spending a similar sum to promote energy conservation."

"..... in view of the inevitable uncertainties surrounding many of the CEGB's key assumptions, the obscurity of presentation of much of the relevant information, and the CEGB's less than satisfactory attitude to cost comparisons, we remain unconvinced that the CEGB and the Government have satisfactorily made out the economic and industrial case for a programme of the size referred to by the secretary of state in his statement to the House in December 1979."

Wind of change

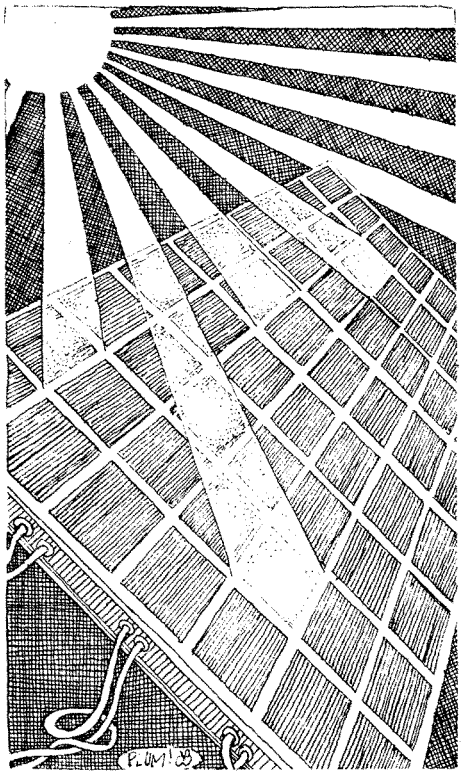


An Alternative Energy Plan For East Anglia

One of the arguments used to justify the proposed PWR project at Sizewell is that it will underpin local employment — creating some 2000 construction jobs for the duration of the construction period. Obviously, creating employment is of crucial importance, but we have to ask whether the same investment could be spent in other ways to create more jobs, and jobs better matched to local employment needs.

It is generally accepted that investment in conservation (e.g. building insulation) is far more cost effective than investment in new supply technologies like the PWR, and likely to create much more employment locally. In the context of East Anglia generally, such a programme would create employment throughout the region — not just of the Sizewell site. The skills required are also much more relevant to the area; whereas the bulk of the 2000 construction workforce at Sizewell would have to be brought in from outside the region.

By contrast, investment in non-nuclear technology could help underpin employment in the area on a more sustainable basis.



East Anglia could well become one of the main sites for exploiting wind power in the U.K. The CEGB is already planning to erect a series of ten test windmills.

Proposed sites include Wigsley in Lincolnshire and Bradwell in Essex. If the concept of land based wind turbines (in say the 1-2 range) proves viable, then East Anglia could become a major centre for the exploitation of wind energy, with obvious implications for local employment. The bulk of the manufacturing work associated with large grid linked windmills would be likely to be carried out in major firms, particularly by aerospace companies, local employment being limited to on-site erection and maintenance.

However, there would be, in rural areas like East Anglia, a considerable potential for **smaller** wind plants providing power (both electricity and heat) for agricultural use. It is estimated that if small (10-100kw) machines were installed on 50% of the farms in the UK, this would imply some 3.3cw of installed capacity and, at 12 mph windspeed, around 6Twh p.a. so the resource is by no means trivial. Moreover small mills of this type can be more easily built locally by smaller medium sized firms. Several already exist in the U.K.: for example Trimble Mills Ltd. in Yorkshire, WESCO in Sussex and Windtech in Devon.

The other major option for windpower is the location of large wind turbines in the shallow water off the coast of East Anglia — particularly in the Wash. It has been estimated that offshore wind systems could provide around 25% of the U.K. electricity at reasonable cost. The total potential offshore wind resource has been put (by the CEGBO at 150 mtce (million tonnes coal equivalent) p.a. Once again there would be major local employment impact.

Clearly at this stage it is difficult to estimate the precise employment implications — that would depend on the scale of investment. But it has been estimated that a programme designed to generate only 2.4% of the U.K.'s electricity would create some 100,000 job years of direct and indirect work over the next two decades. ('Energy Options and Employment' CAITS 1978). Given that the potential of wind power is much greater than this, it would seem likely that East Anglia could expect to benefit from a considerable growth in employment, well beyond the 2000 temporary jobs associated with Sizewell PWR project.

There are, of course, many other renewable energy options beside wind turbines — with **solar power** perhaps being the most relevant to East Anglia. Some 19,000 solar collector units have already been installed in the U.K. and the U.K. industry has an annual turnover (including exports) of some £25m. Solar collector manufacture is very labour intensive and well suited to small batch production in small firms and co-operatives serving local customers.

The manufacture of wood and straw burning combustion systems is also likely to grow and lead to the creation of jobs in rural areas such as East Anglia. The whole field of biomass and biogas production has also obvious implications for the areas (e.g. farmers and agricultural engineers). Similarly, small-scale water power (using water wheels and turbines) has many local implications — there are already many small firms in the U.K. active in this field and it has been estimated by Peter Musgrove at Reading University, that we might expect to obtain up to 6% of our power naturally from such sources. Finally, there has been some discussion of the potential for harnessing **tidal** energy in the Wash. A Barrage there could generate some 4.69 Twh — and, of course, being a major civil engineering project, create many jobs. If large scale electricity generation is required, then this option might be preferable to the PWR.

It seems that, taken together, the local exploitation of land based wind, solar and water power in East Anglia region could provide us with as much electricity (in terms of locally used heat and electricity, and electricity produced for the grid) as the Sizewell B reactor — if we should need it. Of course, this is not necessarily the case. Certainly, the PWR has not been proposed on the basis of local/regional need — the bulk of its electricity will be exported out of the region.

But if only a limited programme of conservation and renewable energy development were initiated in the region, more local direct and indirect employment would be created that would result from the PWR project. The PWR is **not** the most desirable option in the energy field.

NATTA

Energy Spending

Over the last five years the government have spent a total of £785 million in researching and developing nuclear power, of which about £446 million has been spent on the fast reactor. This compares to a paltry £46 million on all forms of renewable energy and a miniscule £2 million on research into energy conservation. In other words the government have invested over sixteen times as much money in nuclear power as they have in all the renewables and conservation.

Nuclear spending also greatly outstrips spending on conventional energy technologies. Since 1977 coal has absorbed £12 million in research and development, while the comparable figure for offshore oil and gas technology is £83 million. Even fusion, the most exotic and remote possibility for future energy supply, was considered worth £67 million of investment — 40 per cent more than renewables and conservation.

To make matters worse, total annual nuclear spending is due to increase by 7 per cent between 1981-82 and 1982-83 to £223.6 million, whereas total non-nuclear spending is to be cut by 9 per cent to £41.6 million. Although spending on renewables has increased over recent years, cuts are now planned, the details of which are not yet known. With these bizarre priorities, it is no wonder we are hurtling towards a nuclear future.

Rob Edwards

Government research and development spending on energy sources.

£ million

	77/78	78/79	79/80	80/81	81/82
Nuclear Energy					
General	34.8	33.6	51.6	73.8	78.4
Fast Reactor	69.0	85.0	82.9	101.2	107.5
Fusion	7.3	10.7	12.9	13.7	22.5
Total Nuclear	111.1	129.3	147.4	188.7	208.4
Renewable Energy					
Wind	n/a	0.3	0.6	0.8	1.0
Wave	n/a	1.8	3.0	3.3	4.4
Geothermal	n/a	0.2	1.3	2.4	8.1
Solar	1.3	0.2	1.2	0.7	) 1.1
Biomass	n/a	0	0.1	0.3	)
Tidal	n/a	0.1	0.6	1.4	0.3
Miscellaneous[1]	1.1	1.5	1.9	3.2	4.0
Total Renewable	2.4	4.1	8.7	12.1	19.0
Conservation	n/a	0.4	0.4	0.4	0.8
Coal	2.0	0.8	2.3	2.7	4.6
Oil & Gas	13.9	12.2	16.8	18.3	21.7
Total Non-Nuclear[2]	18.1	16.3	27.8	33.2	45.8

1. Includes some energy conservation from 1980-81.
2. Includes small receipts.

Source: Written Parliamentary Answer from Energy Secretary Nigel Lawson to Robin Cook MP, 28 October 1982.

Torness Experiences

The construction of the Torness Advanced Gas-cooled Reactor, 6 miles east of Dunbar in East Lothian, Scotland, has caused a great number of local grievances which have been consistently ignored by the electricity generating board. Many of these grievances could be felt by people living near Sizewell if construction work at the site gets underway.

The strongest feelings of disgust have been over the lack of local jobs at the site. To win acceptance for Torness, the SSEB have promised on many occasions that the project would provide substantial work opportunities for locals. But, in February 1981 only 26% of the workforce came from East Lothian. A year later this was **down** to 21.5% for East Lothian, with 13.7% drawn from Edinburgh and the Borders, and 64.8% from elsewhere. The local M.P. John Hume Robertson has said "The promise of jobs (at Torness) is the biggest let down of all." The normal practice for big contractors like McAlpine, the main civil engineering contractor at Torness, is to bring in their own band of construction workers.

Many of these workers live in a work camp 2 miles from the site. Others have found local lodgings. Their main leisure-time activity seems to be drinking in the pubs, and this causes problems. On Saturday especially, the peaceful seaside town of Dunbar is taken over by crowds of drunken construction workers. Women get hassled. Fights are common. It is reported that to avoid getting involved, the police often pick up local drivers on minor traffic charges, or young people for petty crimes, and then travel to the police HQ in Dalkeith 30 miles away to process the charge. They try not to get back to Dunbar until the pubs are shut, and so aren't around to sort out any trouble.

Construction work at the site has also had some nasty side-effects. The trade at the adjacent caravan holiday-park has been ruined. Cement dust from the batching plants has covered nearby agricultural land, crops and machinery. The on-site tower cranes have disrupted the T.V. reception on many local sets. Explosives, used to blast rock for use in constructing the sea wall, have shattered the quietness of the countryside. A large section of the coast is no longer accessible to mussel collectors.

These are only some of the grievances which have been voiced. The list could be much longer. Local resentment of the SSEB is very high. The Torness project is a dirty blob on a beautiful landscape. Similar consequences could well be the result of constructing Sizewell B.

Reading

There will no doubt be numerous pamphlets published over the coming year about the proposed Sizewell PWR. We hope to mention them in future issues of Sizewell Reactions.

But for background reading before the Inquiry you could send for Friends of the Earth's pamphlet — "The Pressurised Water Reactor - a critique of the Government Nuclear Programme." This report, published in 1981, is an expanded version of FoE's evidence to the Parliamentary Select Committee on Energy. It covers Energy Forecasts, Nuclear Economics, PWR Safety and proposes more appropriate energy sources.

More recently the Anti-Nuclear Campaign (ANC) published **"The Costs of Nuclear Power"**. In this pamphlet Colin Sweet questions whether there is an economic case for nuclear power and probes beneath the electricity industry's figures to reveal the real costs of building and running nuclear reactors. The message is clear — if there are no economic benefits from nuclear power then why take the risk?

The most prolific propogandists to date have been the Central Electrcity Generating Board — who want to build the PWR at Sizewell. To obtain their documents (free) **you must formally register as an objector.**

If you have not already done so please now write a short letter of objection to the CEGB plans to:-

The Secretary, Electricity Division, Department of Energy, Thames Ho South, London SW1P 4QJ.

THE PRESSURISED WATER REACTOR, £1.85 inc. from FoE, 377 City Road, London EC1V 1NA.

THE COSTS OF NUCLEAR POWER, £1.25 inc. from ANC, PO Box 216, Sheffield S1 1BD.

Groups

As well as thousands of individuals a large number of groups and organisations have formally objected to Sizewell 'B'. Following the Energy Minister's final refusal to allow any public funding for registered objectors the **East Anglian Alliance Against Nuclear Power** (EAAANP), the regional coalition of anti-nuclear groups, decided to boycott the Inquiry. Even so, enormous demands will be made on the Alliance office in Ipswich in their role as a sort of secretariat for grassroots groups taking part in activities both inside and outwith the Inquiry.

During 1982 the Alliance convened meetings of the **Sizewell Coordination**, the forum for all objecting organisations — and these will probably continue during the coming year. Additionally regular issues of the **Sizewell Reactions** newsletter will be produced from their Ipswich office.

Most of the other regional anti-nuclear alliances are equally disgusted at the wholly unbalanced financial resources available to parties at the Inquiry and refuse to lend any credibility to it by participating.

The **Anti-Nuclear Campaign** (ANC), the UK wide network of groups, has also withdrawn from the Inquiry itself. They will work closely with a number of Trade Unions who will be at the Inquiry.

On the other hand **Friends of the Earth** (FoE) took an early decision to present a case against the PWR on the basis of potentially catastrophic hazard. They will argue at the Inquiry that the PWR is unsafe as well as uneconomic and unnecessary.

Based in Leiston, just beside the reactor site, the **Stop Sizewell 'B' Association** will be presenting local peoples' objections at the Inquiry.

The need for more nuclear generating capacity will be questioned by the **Council for the Protection of Rural England** (CPRE) and its local branch, the Suffolk Preservation Society, will be objecting on amenity grounds.

On the broader question of need and cost the **Town and Country Planning Association** (TCPA) is coordinating a case on behalf of a number of local authorities threatened by the nine other PWR's announced by the Government in 1979.

The **Campaign for Nuclear Disarmament** (CND) has yet to decide, at their AGM in November, on the extent of its involvement. They highlighted the plutonium connection with nuclear weapons and the dangers of proliferation.

These notes give only a very brief introduction to some of the organisations opposing Sizewell 'B'. When contacting them for further information on their activities please enclose a £1 or so donation towards their printing and postage costs.

Additionally all these organisations are desperately short of money. Give your financial support to their Sizewell Appeals; organise fundraising activities locally for the campaign of your choice, or even give a specific donation towards production of future issues of Sizewell Reactions.

CONTACTS

EAAANP
2 St. Helen's St,
Ipswich.
(0473 214308)
also contact for
Sizewell Coordination
& Sizewell Reactions.

Stop Sizewell 'B'
PO Box 9,
Leiston, Suffolk.
ANC,
PO Box 216,
Sheffield.
S1 1BD.
(0742 754691)

FoE,
377 City Road,
London EC1.
(01 837 0731).
CPRE,
4 Hobart Place,
London SW1.
(01 235 5959)

TCPA
17 Carlton Ho Ter.,
London SW1.
(01 930 8903).
CND,
11 Goodwin Street,
London N4.
(01 263 0977).

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Address:.....

.....

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

Sizewell Reactions will provide a regular coverage of the issues and activities around the controversial Sizewell 'B' PWR Inquiry. If you want to keep in touch with events then PLEASE SUBSCRIBE NOW. We desperately need to have a strong base of subscribers and supporters to establish Sizewell Reactions as a valued and valuable source of information on the campaign during 1983.

Bulk discounts and special rates available.

This pilot edition of **Sizewell Reactions** has been printed and published by **SCRAM**, the Scottish Campaign to Resist the Atomic Menace, 11 Forth St., Edinburgh 1. (031 557 4283). Future issues will be printed at the EAAANP office in Ipswich.

The plan is to publish **Sizewell Reactions** as a regular newsletter before during and after the actual Inquiry. During the key periods it will be fortnightly. Your subscription will cover the whole life of the newsletter.

Please send with your cheque/PO payable to "Sizewell Reactions", c/o EAAAP, 2 St. Helen's Street, Ipswich, Suffolk.

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