# SCRAM ENERGY BULLETIN

THE SCOTTISH CAMPAIGN TO RESIST THE ATOMIC MENACE, 2 AINSLIE PLACE, EDINBURGH. 031-225 7752

[No. 1 ... 1977]

## 2 YEARS ON

In the two years that SCRAM has been in existence, the nuclear scene has changed beyond recognition.

Two years ago, nuclear power was unquestioningly accepted as a clean, safe and cheap source of energy. Now, after the excellent sixth report of the Royal Commission on Environmental Pollution on "Nuclear Power and the Environment", and following persistent blunders by the nuclear industry, the volume and extent of public protest has grown considerably.

And this is not just because nuclear power is uniquely dirty - leaving highly radioactive wastes to be safeguarded for up to half a million years. It is not just because nuclear power is supremely dangerous to society - a 'plutonium economy' has distinctly totalitarian implications. It is not just because nuclear power is questionably economic- Tony Benn, the Secretary of State for Energy, has publicly recognised the inadequacy of current nuclear-economic analysis. The reason that SCRAM and more people in Scotland and elsewhere are reacting against 'going nuclear' is that it is becoming increasingly clear that there *are* many simpler and better ways of meeting our energy needs.

To take just one example, Professor Sir Martin Ryle, the Astronomer Royal, argued recently in an article in "Nature" that the most economically feasible and environmentally acceptable method of avoiding the so-called 'energy gap' was to develop windpower - along with the other renewable energy options - now. The large-scale production of windmills would also create much more useful long-term employment (especially in the structural steel, electrical and aircraft industries) than any conceivable nuclear programme.


SCRAM Pickets Australian Consulate, Edinburgh.

## URANIUM PROTEST

A shipload of uranium left Australia several weeks ago. It sailed in spite of a mass demonstration by trades-unionists and environmentalists at the dockside.

SCRAM discovered from Greenpeace in London that the uranium was due to arrive in Merseyside on Wednesday 27th July - so, at very short notice, a picket of the Australian Consulate in Edinburgh was organised for that day. It attracted attention and showed solidarity with the Australian demonstrators.
(See uranium mining story on page 2.)

Aware of, and encouraged by, the growing public support for SCRAM and its aims, we have launched this Bulletin to provide a medium for nuclear and energy news and information for the many people and groups whom we know are sympathetic. This introductory issue contains articles on waste-dumping in the Galloway Hills, uranium mining on Deeside and the muddles surrounding the proposed developments at Torness, East Lothian.
It is intended to give an overall picture of the proposed (and opposed) nuclear programme in Scotland. Future issues will



(Continued on page 2)

feature guest articles by various experts and will examine alternative energy strategies as well as in-depth critiques of nuclear policies. We will also take care to keep you informed of the activities of SCRAM and other sympathetic groups.

We have come a long way in two years - but we're still a long way from halting this country's nuclear aspirations. One of the main purposes of this publication is to bring together groups, individuals and information, in order to strengthen the campaign in Scotland. If you think this is a worthy aim, we hope that you will be able to support us and contribute to the Bulletin. We have been able to produce and distribute No.1 free, but we will need your help, criticism and subscriptions if we are to continue - a mere £1.00 pays for the first six issues (including postage)!

We hope to be hearing from you

Rob Edwards Chairman, SCRAM

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WHO WE ARE

THE SCOTTISH CAMPAIGN TO RESIST THE ATOMIC MENACE (SCRAM) is a national organisation established in November 1975. Its objectives are :

1. To inform the public of the present and proposed nuclear developments and their social, political and environmental implications.

2. To oppose the further development of nuclear power in Scotland and elsewhere.

3. To press for a long-term strategy based on conservation and on the use of renewable resources.

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SCRAM has organised several nuclear site occupations and other national protests, has held many public meetings and has established links with all sectors of the community. There are local groups throughout Scotland who associate with SCRAM and campaign on nuclear issues. SCRAM is strictly non party-political. We are always anxious to hear from anyone who has time, expertise or (of course) money to offer.

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'SCRAM', in nuclear jargon, means to 'shut down' a reactor.

ANTI-NUKE

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Stickers read 'Nuclear Power? No thanks'

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# URANIUM PROSPECTS

Scotland's ancient granites and sandstones sometimes contain weak concentrations of uranium and the nuclear lobby are well aware of its increasing scarcity value. Uranium resources are of great international strategic importance, both economically and politically. There is simply not enough in existence to fuel the projected global expansion of thermal reactors - hence the industry's pressure for the fast breeder and CFR 1 at Dounreay.

The OECD expect shortages to get desperate in the next decade. At present, Britain imports about 2000 tonnes a year from Canada (all of whose reserves are already sold out for the next decade) and from South Africa. Supplies are also expected shortly from Namibia, where the Rossing contract with Rio Tinto-Zinc Ltd. (an allegedly monopoly contract) is the source of growing controversy over apartheid- and from Australia where development has already been delayed by environmentalist action and where the Opposition Labour Party has voted to ban mining for export.

Add to this the current American litigation against RTZ and the alleged producers' cartel which pushed up the price sevenfold over the last seven years and you can see why the SSEB want to get started on Scotland's expensively weak but increasingly viable uranium ores: especially as it could take 12 years before a Scottish mine begins production (assuming no delays from opposition groups!).

Proposals by the SSEB to carry out test drilling for uranium in Orkney have been greeted with widespread opposition. Friends of the Earth, Aberdeen (formed in Spring 1977) is campaigning against the SSEB's plans to do test drilling on Deeside. Adrian Watts, Co-ordinator of FoE in Aberdeen, explains the situation.

Between 1968 and 1973 the Institute of Geological Sciences carried out initial surface surveys in the North of Scotland for the UKAEA. They are currently pursuing more surveys for the Department of Industry. The IGS are acting as consultants to the SSEB who are interested in Orkney, Caithness and elsewhere in the Highlands and in Aberdeenshire and Kincardine. So far no drilling has begun; and in the North East we have helped to persuade the District Council concerned to subject drilling to planning procedures (which are discretionary in this case).

The SSEB would employ a mining company (RTZ perhaps) to pursue viable discoveries. Fortunately, FoE have the experience of successfully helping to defeat RTZ when they tried to mine copper in Snowdonia five years ago - and know some of the tricks that can be tried (like pretending to dredge for gold nearby as a decoy project).

The main objections to uranium extraction, apart from the obvious arguments against this first stage in the fuel cycle, arise from the vast scale of operations involved. Scotland's uranium deposits are so weak and yet so increasingly valuable that very large mining operations would be necessary...on a scale that would literally devastate wide areas. An open-pit mine that may be likely on Deeside could be a mile wide and 700 feet deep. Tailings lagoons (for dumping toxic wastes) could cover thousands of acres. The health hazards arising from radioactive dust and gas would be compounded by pollution from toxic heavy metals that would be leached into soils, water and organisms over a wider area still. This could possibly sterilise valuable forested and agricultural land for centuries.

Friends of the Earth (Aberdeen) have produced a detailed report on this subject, entitled "A Promise to Move Mountains: The Search for Uranium on Deeside"* which has had a reasonable impact on the local authorities and in the local press. Our main concern now is to pursue a national campaign. Not only might the SSEB public relations exercises succeed in other places (eg Caithness, where the Dounreay syndrome is so malignant),but fighting through local planning procedures seems almost certain to ultimately come unstuck - since the Secretary of State for Scotland is not only Judge and Jury for final planning decisions but Chief Prosecutor also, in being responsible for the SSEB and their prospecting activities.

So we would like other SCRAM groups and members to help by sending letters to the Secretary of State for Scotland, to M.P.s and to the media, demanding :

a) that the Secretary of State should stop all uranium exploration <u>now</u> until he states a policy on extraction (eg naming those parts of Scotland which will or will not be protected from extraction on local, social, economic or environmental grounds);

b) and that we should have the opportunity to challenge the SSEB's assumed right to search for uranium on behalf of the Scottish electricity consumer.

Finally, FoE (Aberdeen) would greatly appreciate the help of anyone who has experience of fighting the SSEB on points of policy, with knowledge of the principal personalities involved, or with good arguments challenging the SSEB projections of electricity demand, their nuclear programme or just to tear apart their propaganda about how profitable and cheap nuclear electricity really is!

*Price 75p including postage from FoE, 165 King Street, Aberdeen.

# TORNESS CONFUSION

Public attention has recently been centred on Fast Breeder Reactors and Oxide Reprocessing at Windscale. Construction work is due to start on a thermal reactor at Torness early in 1979 - yet it is still uncertain which type of reactor will be built there.

After the public inquiry in June 1974, the South of Scotland Electricity Board received permission to build any of four types of reactor :

AGR - Advanced Gas-cooled Reactor
SGHWR - Steam Generated Heavy Water Reactor
HTR - High Temperature Reactor
LWR - Light Water Reactor

In July 1974 the then Secretary of State for Energy, Mr. Eric Varley, announced that the Government, after taking advice from the Nuclear Power Advisory Board, had decided that electricity boards should adopt the SGHWR for their next nuclear power station orders.

## RUMOURS

During the early summer of 1976, there were various rumours in the national press and particularly at the National Energy Conference organised by Tony Benn, that the Government were considering the cancellation of the SGHWR programme in which they had placed such faith for two years.

## SELECT COMMITTEE

The Select Committee on Science and Technology rapidly convened an inquiry. They considered that there were four possible alternative strategies open to the U.K. if the SGHWR was abandoned:

1. Withdraw from nuclear power altogether and base a future programme on a combination of fossil fuels and renewable sources of energy.

2. Abandon thermal reactors and concentrate on the Fast Breeder.

3. Adopt the AGR instead of the SGHWR.

4. Adopt the American Pressurised Water Reactor (PWR).

SCRAM camp at Torness, 1976

In fact, only the last three options were given any consideration. So the real choice the committee had to make was between the AGR, PWR and SGHWR.

## ADVANCED GAS-COOLED REACTORS

The Sunday Times, in February 1976, described the AGR programme as a "technological muddle even more expensive than Concorde".

Considerable difficulties have been encountered with AGR stations. There are continuing doubts about corrosion and the process of deterioration in graphite and steel components. The CEGB themselves, in December 1973, described them as "a catastrophe we must not repeat" after a long series of construction difficulties which had prevented them from producing a single kilowatt of electricity.

If more AGR stations were to be ordered, including one for Torness, another two or even three years operating experience would be required before they could be ordered with confidence. This time lag could throw the nuclear industry into disarray.

## PRESSURISED WATER REACTORS

The CEGB has long been in favour of these reactors. Friends of the Earth helped to persuade the Government not to order these American Light Water Reactors in 1973. Many scientists still believe that PWRs have such severe unsolved safety problems that we dare not order any. There is, at present, an enormous legal and political row blowing up in West Germany over PWR safety.

## STEAM GENERATED HEAVY WATER REACTORS

The South of Scotland Electricity Board has consistently championed the SGHWR. It argues that the present reference design is "unnecessarily costly" and is not an "optimised engineering solution". This is due partly to more severe safety criteria applied to SGHWRs than are applied to PWRs. On the other hand, the CEGB and Atomic Energy Authority are in favour of cancellation. The CEGB Chairman, as far back as 1972, described them as out of date technology. The AEA has given no convincing reasons for its change in policy. Without such evidence, the credibility of its advice must surely be open to question.

## COMMITTEE RECOMMENDATIONS

On December 22nd, 1976 the Select Committee finally recommended the continuation of the SGHWR programme and that site work should begin on schedule at Torness. However, it had one reservation : "although 2½ years have elapsed since the adoption of the SGHWR system for the next series of reactors, the reactor has neither been designed to agreed parameters nor accurately costed and, in consequence, neither the opponents nor the supporters can argue their case with the ability to carry conviction in the minds of others."

## CONFUSION

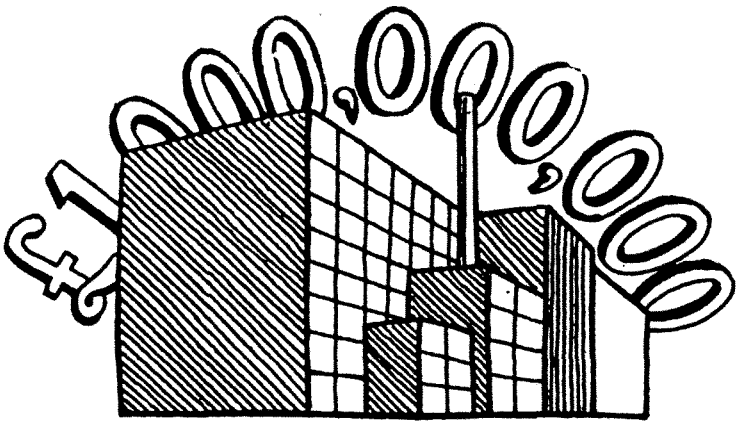
Since December the SGHWR programme has been under review yet again. Tony Benn, after pressure from the AEA, asked for a report from the Nuclear Inspectorate and from the Nuclear Power Company on the three possible reactor systems.

The Sunday Times, on 20th March this year, reported that the Department of Energy had conceded that the case against the SGHWR was almost irresistible.

Furthermore, the Nuclear Inspectorate is expected to be relatively unenthusiastic about the PWR, pointing to the difficulty of adapting it to British safety requirements. The AGR now begins to look more attractive to the Government.

The final decision should come some time during this summer, but if it is decided to use the AGR as the design for Britain's next phase of nuclear reactors, neither the CEGB nor the SSEB will be wholly satisfied. Also, the further delays necessary to gain operating experience with the AGR will undoubtedly cause problems for the turbine manufacturers and the nuclear power construction industry. If the next phase of AGR construction goes as well as the last (Dungeness B is now seven years behind schedule), perhaps the Government will realise that nuclear power is far more expensive than it appears to be and not necessarily safe.

Pete Roche, Treasurer, SCRAM




## THE NEUTRON BOMB

President Carter has now approved the development (but not the deployment) of the neutron bomb. This weapon, unlike conventional nuclear warheads, produces little blast and fire damage but large quantities of neutron radiation. Blast damage is likely to be restricted to a few hundred yards but doses of 8,000 rads of neutron radiation will reach out for half a mile from the detonation point.

This warhead has been greeted enthusiastically in some quarters because it could be used as an effective tactical weapon between opposing armies without leaving a long-lasting residue of radiation or causing extensive damage. Equally, however, it could be used against cities: destroying the inhabitants but leaving the city intact.

Senator Hatfield of Oregon has suggested that the neutron wave produced by the bomb might convert carbon in the air into radioactive carbon-14. Since carbon-14 has a half-life of 6,000 years, the neutron bomb may be a significant long-term radiation hazard after all.

# NUCLEAR DUSTBIN ?

Proposals by the UKAEA to carry out test drilling for the possible disposal of high level nuclear waste in Galloway have led to much local opposition, including the formation of SCRAM South West. Dorothy Paulin, their Chairman, explains how they feel and what they are doing

The basic problem of the nuclear industry, a problem which has not been, and is nowhere near being, solved is that of waste disposal.

BNFL would like to sweep it under the carpet and go blithely ahead, hoping that it will be solved "some day soon" - but they must not be allowed to do so. It is immoral and irresponsible not only to put present generations at genetic and other risk, but to thrust a problem of unknown and incalculable danger (which, even now with existing wastes extends further into the future of mankind than the Stone Age extends backwards) upon defenceless generations yet unborn.

It is reprehensible to propose burial of high-level wastes *anywhere* in a small, over-crowded island like Britain and more especially (as is envisaged) in a water catchment area pronounced unsuitable by the Institute of Geological Sciences (Report 76/12 HMSO). For this, and other reasons, every effort should be made to support protestors at the Windscale Enquiry so that a breathing space may be won and the nation may have a chance to get its priorities right. Our own Professor Tolstoy, who is a distinguished geo-physicist, is a witness at the Enquiry on behalf of SCRAM. Help us to support him - write (having got your facts right) to your M.P., to the Secretaries of State for Scotland/Energy/Environment, to the Kyle & Carrick District Council, or to anyone you think may be helpful; and be prepared, should it become necessary, for a spot of civil disobedience!

Earlier this year we, in the South-West, had visits from various charming and persuasive gentlemen who harangued us on how safe and desirable was their project for burial of high-level nuclear waste among our granite hills. They would, they said, be starting test borings in April to initiate this delightful scheme.

We let them know in certain (so we thought) unmistakable ways that we did not agree with them or wish to become guinea pigs for their lethal experiment. Various heated arguments took place in different centres - Dalmellington, Ayr, Patna, Dumfries, Castle Douglas, Newton Stewart - and, though they persisted in stating that the views expressed at the meetings were "not representative", we venture to hope that BNFL and Harwell were, in fact, left in little doubt about the overwhelming local and, indeed, national opposition to the project.

A petition from the electorate of Galloway with around 10,000 signatures, and two similar petitions from South Ayrshire and from the S.N.P., may have helped to convince them. Similar waste disposal projects in other parts of the country have apparently been abandoned, possibly because private ownership, or weight of national opinion (as in the Lake District) made access more difficult - as opposed to the accommodating of Forestry Commission owned land in Galloway and South Ayrshire.

But fierce opposition in the South-West has at least forced Harwell to admit that, even to do test borings, it would be necessary to have Planning Permission from Kyle & Carrick District Council. We expected this to be applied for in early spring. No application has yet been made. Why? Are they trying to find a way round? Are they awaiting the result of the Windscale Enquiry? Are they hoping people will weary and relax their vigilance so that they can slip in unnoticed? We don't know, but we don't trust them an inch.

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Kyle and Carrick District Council will have to decide whether or not to allow test drilling for waste dumping (if the UKAEA applies). Please write to Mr. Gibson-MacDonald of the Planning Committee, Kyle and Carrick District Council, Burns House, Burns Statue Square, Ayr, to express your opposition to the AEA's plans. Every letter will help.

## NON-NUCLEAR FUTURE FOR SCOTLAND

A paper by Andrew MacKillop concerning possible non-nuclear energy futures for Scotland is expected to be published shortly by the S.N.P.

This paper will include details of how energy conservation will reduce energy demands, while renewable energy can also make a substantial contribution.

In 1975-76, nuclear energy contributed about 10.7% of our electricity and 1.06% of our gross total primary energy; by 1988 and 1993, energy conservation measures could eliminate 19% and 31% of 1973 gross primary energy, with the generation of up to 19,000 jobs. By 1988 and 1993, renewable energy sources could provide about 7% and 10% of 1973 baseline energy demand, or 8 2/3% and 15% of energy demand after conservation. Several of the energy conservation measures, and some of the renewable energy resources could alone eliminate a need for energy more than equal to the present nuclear contribution.

# EUROPE

## FAST-BREEDER DEVELOPMENT

France, West Germany, Belgium, Italy and Holland have signed a series of agreements in order to set up a joint company for research and development of fast-breeder reactors and their marketing abroad.

This united action is in direct opposition to President Carter's call for a moratorium on fast-breeder development.* The agreements were signed only a few days after a "very substantial" leak of uranium hexafluoride gas occurred at an atomic plant at Pierrelatte in France. This plant, which produces 'hex' fuel, is comparable to BNFL's Springfield works. The leak is said to have occurred as a consequence of human error.

*Germany and France have agreed not to export further reprocessing facilities on account of the threat of nuclear proliferation. It appears that they consider that the export of fast-breeder reactors does not constitute proliferation.

# ACTION

The Campaign for Nuclear Disarmament is organising a major demonstration against the British nuclear base at Holy Loch on the Clyde on September 10th.

Transport is being arranged by CND from different parts of the country to Glasgow and the journey from Glasgow to Dunoon (near the Holy Loch) will be by the paddle steamer 'Waverley' for the first 1000 people who book.

Leaflets advertising the demonstration are available free (but preferably with a donation that will at least cover the postage). For leaflets, bookings and further information contact :

Ian Davison,
Scottish CND,
420 Sauchiehall Street,
Glasgow G2.
(tel: 041-942 1099)

If in Edinburgh, for transport contact Fiona Riddoch, 2a Ainslie Place.

The Windscale Public Enquiry is likely to continue until at least November and funds are still required by the objectors in order that they can present their case. Donations of any size will be gratefully accepted. These should be sent to :

"Windscale Fighting Fund"
Friends of the Earth,
9 Poland Street,
London W1V 3DG.

## MALVILLE DEMONSTRATION OF EUROPEAN SOLIDARITY

Malville in France is the site for the 'Superphoenix' - the proposed French Fast Reactor. Groups in opposition to this have already held demonstrations at the site; but these will be eclipsed by a massive demonstration to be held there on 30th July.

*The organisers expect that 100,000 people will attend, coming from all over Europe.*

Groups unable to attend have sent letters of support which will be read out at the demonstration - SCRAM's letter of solidarity will be among them. As far as we know, this is the first time that a British anti-nuclear group has made such a move and it is to be hoped that this will be the beginning of further international contact and co-operation.

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**NEXT ISSUE OF THE SCRAM ENERGY BULLETIN: OCTOBER**

This issue will contain an up-to-date analysis of the Windscale Enquiry, an ex-employee's view of the nuclear industry plus current news. We also hope to carry an article on wind power by Sir Martin Ryle and articles and news sent to us from around the country.

Any comments or contributions to the Bulletin should be addressed to :

Mike Leven, Editor, SCRAM, 2a Ainslie Place, Edinburgh 3 (031-225 7752 office hours).

In particular, we hope to publish details of any events or activities in Scotland and hope to receive regular contributions from around the country. This Bulletin should act as a medium of communication between groups throughout Scotland but this can only happen if the groups are willing to contribute.

So, let's hear from you please...!

# SUPPORT SCRAM !

# PLUTONIUM ON THE ROAD

The Private Secretary to Sir John Hill, Chairman of the AEA, says in a letter dated 19 July, 1977 :

"It will be several years before the additional plants which will close the full plutonium fuel cycle have been built and commissioned at Dounreay. During this period...plutonium will be transferred between Dounreay and Windscale and for a limited time these transfers will be as plutonium nitrate. In addition, fuel elements for PFR will be moved from Windscale to Dounreay.

It will be some time before any movements of plutonium nitrate take place between Dounreay and Windscale and in the meantime the Authority are in consultation with the Government Departments concerned on the best arrangements for doing this."

In other words, they are actually planning to transport *plutonium nitrate* from one end of Scotland to Windscale. Plutonium nitrate was picked out by the Royal Commission on Environmental Pollution in the Sixth Report on "Nuclear Power and the Environment" as being "especially hazardous from the point of view of dispersion" (para 319). It is one of the easier forms of plutonium to make into a bomb....