

CORE comments to PIU.

The following comments are made by CORE (Cumbrians Opposed to a Radioactive Environment) to the Performance and Innovation Unit's Energy Review.

CORE welcomes the review of energy as being long overdue. Whilst comments are confined almost wholly to PIU's Nuclear Scoping Note, CORE makes the following general observations.

The closest scrutiny of all energy sources at this time is to be encouraged. Given the current lobbying for new-build by the UK's nuclear industry, it is vital that projections by this sector in particular are examined in closest detail. Experience over 20 years warns that over-statements and unsubstantiated optimism are a byword for industry.

CORE is disappointed that energy conservation and efficiency potential features so little in the energy review documents. The conservation and efficient use of energy, conspicuous by its absence in the past, must play a key role in any future energy policy. Relatively simple and cost effective, measures could be applied without delay and would provide at least some measure of control over expected increases in future demand for energy.

Research into, and use of renewable energies should be expanded with continued emphasis on and commitment to the use of wind and wave power around the UK coasts. So long the 'poor relation' of research and development funding, programmes of renewable energy in the UK lag far behind those in many other European countries through lack of R&D funding and Government support. CORE is concerned that in-fighting between Government Departments is stalling initiatives on the development of renewables, and shares the view of the Sustainable Development Commission and the Forum of the Future that the Government's approach to the issues is too tentative and lacking in commitment. It is hoped that the Energy Review will put these matters right.

PIU: Nuclear - Initial Scoping Note

General

However the nuclear industry ‘dresses up’ its proposals for a continuation and expansion of nuclear power in the UK, it cannot escape the consequential production of plutonium and nuclear wastes, and a flow of environmental discharges from power stations and other installations – irrespective of which new reactor type is utilised. These represent detriments and dangers to the environment and to society and which will remain potent for many thousands of years.

The case for new build in the UK should be looked at in isolation and not on the basis of what plans are being laid in other countries. Moreover, the UK case should be reviewed against its operational track record over 50 years and not on promises for the future which, from that record, are unlikely to be met.

“ There should be no commitment to a large programme of nuclear fission power until it has been demonstrated beyond reasonable doubt that a method exists to ensure the safe containment of long-lived, highly radioactive waste for the indefinite future “

Royal Commission on Environmental Pollution. 6th Report 1976 page 202

25 years on from the Royal Commission’s recommendation, no progress whatsoever has been made in the indefinite and safe containment of wastes.

“ The dangers of the creation of plutonium in large quantities in conditions of increasing world unrest are genuine and serious. We should not rely for energy supply on a process that produces such a hazardous substance as plutonium unless there is no reasonable alternative “ (CORE emphasis)

Royal Commission on Environmental Pollution. 6th Report 1976 page 204

Even without the prospect of new nuclear build, the UK stockpile of unused and unwanted plutonium will stand at over 100 tonnes by 2010. At best, only a small fraction of that total is capable of conversion to new fuel, the majority destined for a disposal route unlikely to be identified for the next 50 years at least. Any new build will add to the stockpile, whether in the form of separated plutonium or in spent fuel.

As submissions to PIU reveal, there are a significant number of ‘reasonable alternatives’ available today. Their promotion and utilisation, in preference to new nuclear build, must now be a priority.

Prospects

[14] There is little likelihood of any Magnox station being life extended beyond 2010. To the contrary, it is becoming increasingly clear that closure dates will have to be brought forward from that date because of the increasing problems faced by BNFL with the reprocessing of magnox fuel at Sellafield.

Magnox reprocessing plant B205 is currently scheduled for closure around 2012. The plant's continuing and serious shortfall in performance and the strict limitations placed on reprocessing by NII's highly active liquor reduction programme identify 2012 as being a closure date that can now only be achieved by the implementation of new method of spent fuel management.

Despite company suggestions that spent magnox fuel might be reprocessed through the Thermal Oxide Reprocessing Plant (THORP) via a new 'head-end', no such new management method is apparently now being contemplated. This appears to be for reasons of high front-end costs and build-time. BNFL's submission to PIU on this topic states 'there is currently no identified alternative (to reprocessing in B205) which has sufficient clarity in terms of costs and licensability to make its implementation worthwhile'.

In the absence of the THORP or any other alternative, and with B205 unable to deliver the throughputs required for a 2012 closure, BNFL must soon bring forward power station closure dates. The resultant reduction in new magnox spent fuel arisings from the premature closure of stations will enable the 2012 closure date for B205 to be met with more confidence, and enable the company to go some way to satisfying the discharge reductions required by OSPAR.

CORE advocates the early closure of BNFL's magnox reactor stations and British Energy's AGR stations on safety grounds and as a means of minimising nuclear waste production and radioactive discharge levels in the UK. The policy of reprocessing of both fuel types at Sellafield should be abandoned in favour of a policy of dry storage at reactor site.

[19] Historically the nuclear industry has presided over a catalogue of chronic over-estimates in terms of costs. New claims should be scrutinised in minute detail. CORE sees no reason why any form of public support or tax advantage should be given in the event of new-build. Such assistance should be given to cleaner and safer forms of electricity generation.

[22] High front-end costs and long build-times for nuclear power plant mitigate against any meaningful contribution by new nuclear plant to carbon reductions in the short term – reductions far better able to be met by other energy sources that do not themselves carry the contaminating detriments inherent in the nuclear industry. New build would not only have little effect on carbon reductions but would also impose its own global set of environmental degradations through radioactive discharges and wastes.

The high costs for nuclear construction should not be met by the public sector, a sector already faced with the plant decommissioning and waste disposal debt burden resulting from 50 years of UK nuclear operations. If new build is to be considered, it must face the rigours of the commercial market place and private sector scrutiny. Such testing and scrutiny is likely to rule out new build but, in the event of private sector acceptance, CORE believes that no new build should be sanctioned by Government until an environmentally acceptable disposal route for existing stockpiles of nuclear waste has been amply developed – with full public participation. Further, similar public participation at all stages should be a pre-requisite to any new build of reactors..

[23] CORE remains unconvinced that any new reactor design is sufficiently well advanced, tested or technically able to meet the plans currently advocated by the nuclear industry. This includes the AP 1000, AP 600 and PBMR as advocated by BNFL. Given the industry's historic and well documented over-optimism in reactor potential, the under statement of costings and build-times and the trivialisation of health, safety, waste and discharge issues, the government can expect 'more of the same' in the future. A robust and workable energy policy designed for the next 50 years cannot be based on the unsubstantiated and overstated claims of an industry in largely self-inflicted terminal decline.

[29] It is untrue to say that nuclear power stations emit no greenhouse gases in operation. Whilst PIU acknowledges the 'very small' emissions which result from the construction of nuclear power stations and to fuel production and handling, routine carbon dioxide discharges from BNFL's magnox power stations are ignored. These are not insignificant and result from the cooling of the reactors which takes place 24 hours a day. Relatively small compared to emissions from fossil fuel generation, the discharges from magnox stations should be taken into account.

[32] The technical expertise to dispose of high and intermediate level wastes, as claimed by the industry, is conspicuous by its absence. The claims should be treated with utmost suspicion. Evidence given to the 1996 Public Inquiry into the application by NIREX to construct a Rock Laboratory near Sellafield showed clearly that realistically costed and technically robust means of permanently disposing of these wastes underground were virtually non-existent. PIU should familiarise itself with this evidence and with the conclusions of the Inquiry Inspector.

It is highly unlikely that a disposal route for HLW will be available in the next 40 years, if at all, and it is even more unlikely that an overseas site will be utilised for UK wastes. CORE continues to advocate that, as a precursor to 'solving' UK's waste disposal problem, all further waste production should be halted. Existing stockpiles should be stored in custom-built, above ground stores – at the site of origin – where they can be properly monitored, managed and moved if necessary.

[33] There is no good evidence that sufficient monies are being properly set aside (ring-fenced) by the nuclear industry to cater for the high back-end costs of its past and current operations, or that they can be relied upon to do so. To the contrary, there is evidence that monies accrued from public levy and ostensibly set aside to cover back-end costs have in the past been used in part to pay for capital constructions and reprocessing charges.

[37] Wastes from new power stations may turn out to be less in volume than that from existing stations. They will however simply compound the unsolved problem of waste disposal in that they will increase stockpiles and therefore add to the size and cost of any eventual disposal site.

CORE does not share the view that tomorrow's wastes will be any different from today's 'historic' wastes. In physical terms there is no difference (other than volume) and a realistic view would be that any wastes produced today will tomorrow become historic, and for energy review purposes they must be considered the same.

[38] CORE maintains that, with or without compensation/inducement, no community in the UK will ever accept the burden and stigma of an underground waste dump. It is naive and patronising of the industry to suggest otherwise. Views on public acceptability were well aired at the NIREX Inquiry in 1996, where it was concluded that the level of public acceptability proclaimed by the industry (for existing nuclear sites, or sites close to them) did not exist. Further, many of the objections to the underground dumping of wastes at or near Sellafield, including objections from BNFL workers and Unions, were rightly based on an objection to the requirement for a UK community to host the disposal of foreign wastes. Foreign wastes continue to be produced by BNFL through the THORP reprocessing plant where two-thirds of contracted business comes from overseas. Currently all Low and Intermediate Level Waste from overseas contracts is destined to remain in the UK – with only HLW returned to customer under contract. Contracts pre –1976 had no such return clause and all levels of waste from those contracts will be retained in the UK.

[39] CORE does not accept that because the public is exposed to levels of background radiation, the 'topping up' from man made sources is somehow acceptable. The NRPB's view is that there is no level of radiation below which there is no risk to human health. Any contribution from the nuclear industry is adding to the level of risk and health detriment to the public who, in many cases, are gaining no benefit from the industry's operations. PIU should note that the current policy of reprocessing spent fuel from UK's power stations will lead to further radioactive discharges to an environment which, particularly around the West Cumbrian coastline, hosts levels of contamination that would be illegal in all BNFL's customer countries.

[40] The UK nuclear industry has a poor safety record. BNFL's record is particularly disturbing as evidenced by court convictions over the years, and by the number of incidents and events at Sellafield and other plant which continue to be routinely reported every month. Many of these result from human error – a trait that will be present in future operations.

[44] Uranium stocks continue to be cheap, plentiful and readily available in the foreseeable future. Despite this, BNFL continues to pursue the option of reprocessing - an operation which the company has attempted to justify over the last three decades on the basis that uranium stocks would become scarce.

Reprocessing was further justified on the basis that it would recover materials for re-use – uranium and plutonium as new fuels for reactors. As the records show, re-use has not happened to any degree and the recovered materials are stockpiled at Sellafield and other BNFL sites and considered by customers to be too expensive and/or too contaminated for re-use. Figures reveal the reality that no more than 5% of the uranium ever recovered via reprocessing at Sellafield has in fact been re-used. As a ‘recycling’ operation, reprocessing has been an abysmal failure.

[46] The economic case for reprocessing evaporated many years ago. It continues today only by courtesy of contracts signed in the 1960’s-1980’s with customers who are today counting the costs of excessive reprocessing fees and the ever-spiralling costs of waste vitrification and HLW return. No overseas customer is contemplating new reprocessing contracts with BNFL and none are expected from UK’s British Energy. There is no case for reprocessing fuel from any new generation of reactor.

[56] The abandonment of reprocessing today will undoubtedly raise the nuclear industry’s chances of new build in terms of public acceptability. However, with many other public acceptance issues still to be resolved, even this is unlikely to be sufficient to permit new-build with any level of confidence.

[59] PIU should not be swayed by the industry’s ‘greater efforts into structured stakeholder dialogues’. After almost 3 years involvement in a BNFL stakeholder dialogue, CORE has recently withdrawn from the process when it became apparent that BNFL, as sponsors, had little if any intention of taking seriously or implementing their stakeholders’ recommendations.

[64] CORE is opposed to any new nuclear build and advocates that Government policy on any such initiative remains at least neutral – and at best anti-nuclear. Existing nuclear power stations should be subject to the earliest closure as possible.