A Nuclear Clean-Up Bill for our Grandchildren

Unreliable cost estimates and inadequate funding arrangements for UK nuclear liabilities are likely to mean that our grandchildren will be faced with a massive bill for dealing with radioactive waste and decommissioning. This is the message of a report published this week by the Science Policy Research Unit.

The report, by Mike Sadnicki and Gordon MacKerron, flatly contradicts the conventional wisdom that nuclear power, alone among energy technologies, deals with all its consequences by accounting for them and then making proper financial arrangements to meet them.

‘Nuclear Liabilities’ are the unwanted products of the nuclear age, for example, radioactive waste, spent reactor fuel and redundant nuclear structures. Using the most recent official figures, the authors of the report estimate the total cost of meeting these liabilities at around £42 billion - and they conclude that not only are current funding arrangements inadequate but official estimates of liability are unreliable.

Of the £42 billion bill, £31 billion is the responsibility of the two main nuclear generators, British Energy and Magnox Electric.

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Lights, camera, action

THERE is a society on campus that thinks nothing of borrowing a train for two weeks.

The Film-Making Society needed the help of Connex South Central to film Mind The Gap, a film set on a commuter train. The film was conceived and directed by MA student Sonja Henrici (GRC in Humanities), and produced by the society which is run by Sonja and Juliane Heckel who is doing Media Studies in EURO. It premiered on campus last month.

The success of the film illustrates the amount of time and effort that students put in to their society. Sonja and Juliane would like to see more films being made by students. “We’re a society for anyone who wants to get involved, enthusiastic people who want some hands-on experience of film-making,” says Juliane. “We are always looking for publicity, advertising, make-up, catering, lights and camera people as well as actors.”

The campus Media Service Unit provides equipment for the society to use. The society hopes to get enough film-makers together to put on a mini-festival next year and is keen to encourage people who want to get involved.

The society isn’t just about making films. Sonja and Juliane are currently organising a coach to transport members to the London Film Festival; they visited BBC studios last year and also run weekend workshops on camerawork and lighting.

According to Sonja, the society works as a team, “which is hard work, but very rewarding and a lot of fun.”

The Film-making Society meets every Thursday at 6.30pm in EDB 125. For details contact Juliane via the society pigeonhole in Falmer House, or tel 01273 734959.
At the Gardner

Film
Sunday 16 November
6.00pm The Big Sleep (PG)
9.00pm Kolya (12)
Monday 17 November
7.30pm The Good, the Bad and the Ugly

Music
Thursday 20 November 7.45pm
An Evening of Jazz Improvisation.
Three of Europe’s most inspired contemporary jazz musicians.
Tickets £6.50 advance £7.50 door.

FREEBIES for the first 10 people to present themselves at the Box Office with this Bulletin.

Centre for Continuing Education
Day Schools

Saturday 22 November
Oral History Training Day
Rob Perks will give an informal and practical introduction to oral history interviewing.

The Moscow Arts Theatre
As the legendary Moscow Arts Theatre celebrates its centennial, Tutor Faynia Williams will assess its impact as the first modern theatre.

Essay writing for new and prospective students
An introduction by Mike Jones and Liz Mandeville to the essential skills of writing good essays.

The Victorian and Edwardian Day Trip: the growth of tourism in Sussex
The day trip was a great feature of leisure time in the Victorian and Edwardian periods, with wide implications for society. In this day school Andre Palfrey-Martin will examine the impact on Sussex tourism.

Environmental Values and Road/Development Protests
Jenneth Parker will examine the values and principles appealed to by road-development protesters with reference to local examples.

To enrol on any of the above courses please contact the Centre for Continuing Education, Education Development Building on 01273 67(8926) / 67(8527) / 67(8640).

News

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However, an estimate of the funds likely to be forthcoming from the two together indicates that over £18 billion of that £31 billion is currently unfunded. Of the overall £42 billion as much as 70% of the costs are unfunded.

To make matters worse, there are serious problems in the estimating process itself. Two case studies using industry-based data illustrate that liabilities could considerably exceed the industry’s estimates and, more generally, many of those estimates ignore the possibilities of cost escalation in the capital intensive projects characteristic of present approaches to managing nuclear waste. If present policies persist, the total liabilities bill could rise to as much as £70 billion.

There is also an inequitable distribution of the costs between the current generation of taxpayers and the next. Current funding arrangements allow the accumulation of interest into the 22nd century. The authors argue that the “polluter pays” principle, a key component of sustainability, requires that all funds for liability tasks, in particular decommissioning reactors, should be in place by 30 years from now, in order to avoid the financial burden falling on future generations.

According to Gordon MacKerron, “As things presently stand, future generations are likely to be laded with a large bill that we ought to be paying for now. In addition it is not at all clear that the division of financial responsibility between the private and public sectors is fair; on the face of it, tax-payers are currently being asked to foot a bill which belongs to the private sector.”

The cost of ensuring that the polluter pays may be substantial although this could be offset through a quest for less expensive strategies for managing nuclear waste. Also technological alternatives for the disposal and storage of waste have not been exhausted and choice on the timing of these options can be altered.

The report recommends a comprehensive and fundamental Review of the management of nuclear waste, with full public participation, as a matter of urgency. Such a Review needs to examine all options systematically in terms of all impacts—economic, health, environmental, social, institutional and political—and achieve an equitable distribution of burdens. Above all it must achieve both sustainability and cost-effectiveness.

Isaiah Berlin

Isaiah Berlin who died last week at the age of 88, had close links with the University. Robin Milner-Gulland, Professor of Russian Studies, who knew Sir Isaiah for some 40 years, writes:

Among the obituarists’ thousands of words devoted to Isaiah Berlin I have not noticed any mention of his links with Sussex; but they were, in fact, close. We awarded him an honorary degree (as did over 20 other universities), but more significantly he was for years a member of Court and a key adviser on academic appointments as the University was growing. He clearly found it most rewarding to be associated with the creation of a “new map of learning” in the stock phrase of the time. He was a familiar figure on campus in the 1960s—70s, lectured here, but with his unquenchable interest in new people seemed happiest talking (and supping) with students of the University Russian club.

He appreciated Sussex musical life, and my sharpest memory of him here is connected with this. For the 1980 Brighton Festival, New Sussex Opera put on a memorable production of Musorgsky’s Boris Godunov, conducted by Michael Hall, at the Gardner Centre. I was due to chair a seminar on the opera and its sources; I mentioned this to Isaiah, who was eager to take part in it. But he swore me to secrecy, explaining that his doctor had stopped him speaking in public. I was naïvely astonished to discover that this consummate improvisatory lecturer, whom even the BBC allowed to give talks without a script or even notes, found such performances extremely stressful and prepared them very carefully.

In the event the twenty-odd people who turned up for the seminar were treated to a discussion in which Isaiah showed all his learning, wit and rhetorical power: no-one encountering this would ever be likely to forget it.

Search Committee for new Vice-Chancellor

Elections for Senate and Council members of the Search Committee for a new Vice-Chancellor have now been completed.

The five academic faculty members of the Senate elected to serve on the Committee are Professors Geoffrey Bennington, Charles Goldie, Ben Martin, Anthony Moore and Helen Wallace.

The five lay members of Council are Sir John Chatfield, Sir David Davies, Ms J.M. Rutherford, Mrs B.J. Solkhon and Mrs P.K. Stewart-Roberts.

Catherine Copenhagen, the current President of the Students’ Union, will be involved as an observer of the work of the Committee. The Search Committee will be chaired by the Chairman of Council, Dr Brian Manley, and Barry Gooch, Registrar & Secretary, will act as its Secretary.

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**News**

**BROCKS AND FOX**

When the unspeakable pursue the untenable across our rural tranquillity, badgers may become inadvertently involved because of the unwitting tendency of foxes to seek refuge in badger setts. The Protection of Badgers Act of 1992 allows the hunt temporarily to block sett entrances; this can happen as many as eight times per season in areas where foxhunting is intense. Stopping is an old rural practice but how does this ‘protection’ affect the badgers; are they in danger of suffocation? Apparently not, according to Tim Roper and Ildiko Kemenes of BIOLS, writing in the *Journal of Applied Ecology*.

Anxious for the welfare of badgers, Tim and Ildiko worked with occupied setts on the South Downs, near Lewes, comparing the internal conditions before, during, and after blocking all entrances for 48 hours, using plastic sacks filled with sawdust, equivalent to a substantial barrier of soil. When they measured conditions in the tunnels and chambers, using instruments inserted through the soil above, they found that blocking had the effect of decreasing air flow within the sett but that there were no significant changes in the concentrations of oxygen or carbon dioxide.

So, blocking did not seem to disturb the within-sett environment sufficiently to be detrimental to badgers. One reason for this could be that multi-chambered, multi-entrance setts contain large volumes of air, around five cubic metres or more, and the badgers are fairly inactive during winter with a low oxygen consumption. For comparison, an averagely inactive student, weighing about 60 Kg, would need about 0.4 cubic metres of oxygen per day, normally extracted from about 10 cubic metres of fresh air (leaving the expired air still with 16% of oxygen). Adult badgers weigh about 8 Kg and are well insulated, both by their body fat and by the nest material.

Furthermore, it seems unlikely that blocking provides a complete air seal; ventilation of the tunnel system would probably be sufficient through the small holes made by other animals, such as rabbits or rodents, as long as the badgers did not become distressed and therefore more active. The Masters of Foxhounds Association recommends using bundles of sticks or sacks of straw and removing these within 24 hours. This should minimise the problem, but would still impose an unwelcome curfew, should the badgers wish to go out or to have visitors.

**Royal Medal for John Maynard Smith**

THE Royal Society has awarded one of the three Royal Medals this year to Professor John Maynard Smith (BIOLS). Professor Maynard Smith, Fellow of the Society, will receive the prestigious medal in recognition of his outstanding contributions in the fields of paleobiology, genetics and behavioural ecology, among other disciplines.

Professor Maynard Smith will receive the award at the Royal Society ceremony on 1 December.

Entries are now being taken for the third annual Christmas Charity Challenge at 6pm on 10 December at the Sportcentre. Teams of 8 required to take part in challenges for the mind, body and spirit, £16 entry fee per team. All proceeds to the Sussex Cancer Treatment Fund. For details contact Karen Dunster on 3947 or 8228, or via the Sportcentre reception.

**Letter**

Apart from the obvious financial gains for some obscure and un-named University department, can the powers-that-be give any other justification for blocking off 20 (yes, 20!) desperately needed parking spaces in the Boiler House car park to enable a private company to advertise their wares? Those of us who actually work here are hard-pressed at the best of times to find a parking space after 9 o’clock, and now I see that those desperadoes who ended up parking illegally are being ‘ticketed’ by traffic wardens. Could these pantechinicons not be parked in the Visitors’ Car Park, or in the Science Road?

Jenny Money

**Student Discipline**

Members and employees of the University are reminded that all students are obliged to abide by the general provisions of the Ordinance on Student Discipline which says that: "Students shall maintain a standard of conduct which is not harmful to the work, good order or good name of the University."

Under the Ordinance, all University members and employees should report any breach of University discipline to the Registrar & Secretary. The Discipline Committee refers alleged breaches of discipline to the appropriate Dean for action (if minor) or to the Disciplinary Panel if considered to be a major breach.

**In brief**

**RESEARCH OPPORTUNITIES**

This is a selection of Research Opportunities. More details of these and other opportunities are available from Mylene Powell in the Research Grants and Contracts Office, ext 3812 or email: M.Powell@sussex.ac.uk.

**MRC INNOVATION GRANTS:** to provide short-term funding for high-risk, speculative or innovative research. Applications may be submitted any time.

**U.M.ASSOCIATION (TERRORISM) LTD RESEARCH PROJECT:** to assist research on weather patterns and natural hazards affecting the electricity infrastructure.

**IMI INTEGRATED AEROSPACE MANUFACTURING INITIATIVE:** call for research projects to be carried out in close collaboration with industry. Deadline: 28 Nov 1997.

**INFORMAL ECONOMICS CORE PROJECT:** ESRC call for proposals. The aim is to measure and better understand the extent of informal economic activities, both by building on existing data and/or generating new data. Deadline: 8 Dec 1997.

For an extensive listing of funding opportunities see REFUND linked to the Research web site: http://www.sussex.ac.uk/Units/research or USIS Home Page, select 'Teaching & Research', 'Research Funding at Sussex'.

**LINK ANALYTICAL BIOTECHNOLOGY PROGRAMME:** to tackle the barriers to the take-up of existing analytical biotechnology methods. It also aims to develop commercially viable new techniques.

**ESRC NEW RESEARCH FELLOWSHIPS:** the scheme is aimed at developing the careers of researchers by offering a 2-3 year period in which to concentrate on research activities and development skills. No deadline: Application forms available from mid to end Nov.

**Local Buses**

A presentation of the recent developments of the Brighton and Hove Bus Company (including their merger with Brighton Blue Buses and the new Metro Service) will be held at 4pm on Thursday 20 November in the Orange Room, Refectory. Managing Director Roger French will attend and there will be an opportunity for questions.

Everyone is very welcome to attend.
What’s on...

Monday 17 November – Sunday 23 November

Lectures, Seminars, Colloquia

Monday 17 November
1.00 pm Experimental Psychology Colloquium: Pete Clifton, Fat mice and feeding. Biology Lecture Room
2.00 pm Particle Physics Seminar: Hugh Shanahan (Cambridge University) Spaceliner transitions in SU(2) Higgs field theories for large Higgs masses. Room Pevensey 2A1
3.00 pm Mathematical Analysis Seminar: E Sharorgorsky (King’s) T.h.a. Room Pevensey 2A2
4.00 pm CULCOM Lecture: Kirsten Hastrup (University of Copenhagen) Theatrical spaces: an anthropologist visiting the world of Shakespeare. CCS Common Room
4.30 pm Neuroscience Seminar: Richard Andrew, Cerebral lateralisation and memory formation. Biology Lecture Room
5.00 pm Sociology & Social Psychology Seminar: Clifford Stott (University of Abertay) Changing identities: self-categorisation and the inter-group dynamics of a ‘riot’. Room D310

Tuesday 18 November
10.15 am COGS Open Lecture: Margaret Boden, A-life in embryo. Room C133
10.15 am British and American Universities, Past, Present, Future: Penny Chaloner, On being a campus scientist: observations of faculty and student life in Britain and America. Room EDB 121
12.30 pm Sussex Life History Research Seminar: Olivia Bennett, Oral history and development work. Room EDB 302
4.00 pm Engineering Colloquium: Theo Arvanitis, Java for engineers. Room ENGG 1-A82
4.00 pm CCGS Seminar: Ian Pratt (University of Manchester) Plane merceotopology. Room COGS 5C11
4.15 pm Biochemistry & Genetics & Development Seminar: Martin Rumsby (University of York) Control of protein kinase C synthesis. Biology Lecture Room
4.30 pm Social & Political Thought Seminar: David Lloyd Thomas (King’s College London) Nationalism and particular values. Room D630
5.00 pm Social Anthropology Seminar: Dominic Bryan (Queens University Belfast) The politics of paradises: the Orange Order in Northern Ireland. Room EDB 121
5.00 pm International Relations and Politics Seminar: Mick Dillon (University of Lancaster) War crimes and the possibility of justice. Room D640
5.00 pm American Studies Open Seminar: Peter Russell (University of Toronto) Prospects for Aboriginal de-colonisation in Canada. Room D750
5.15 pm German Research Colloquium: Monica Lowenberg, ‘The last of the line’: life history work with a German-Jewish survivor. Room A155
6.15 pm Professorial Lecture: Anthony Moore, Hot plants, genes and biotechnology. Chichester Lecture Theatre

Wednesday 19 November
1.00 pm IDS Occasional Seminar: Gabriel Palma (University of Cambridge) The macroeconomics of avoiding the Dutch disease. Room 221
1.30 pm Sussex Centre for Atomic and Optical Physics Seminar: David Meecher (Oxford University) Optical lattices. Room Pevensey A2A
2.00 pm Queer Lesian & Gay Studies Seminar:

Ashley Tellis (University of Cambridge) The well of hopelessness in South Asians. Room D630
4.00 pm Centre For Legal Studies Seminar: Nick Herbert-Young, Friendly persuasions? Quakers and legislation in Britain during the nineteenth century. Room D610
4.00 pm Geography Research Seminar: Russell King, Asia across the British retirement migration to Southern Europe. Room D630
4.30 pm History of Art Work In Progress Seminar: Tamya Coop, ‘Money and the humility of death: portraits of a goldsmith, miser, draper and embroiderer in early modern London. Lecture Theatre A3
5.00 pm English Graduate Colloquium: Matthew Turner, Murder in the music hall: the role of the audience in T.S.Eliot’s ritual drama. Room D640

Thursday 20 November
11.30 am Economics Seminar: Paul Johnson (IFS) Explaining the growth of income inequality in the UK. Room D310
1.00 pm AUT Open Meeting: The next VC - who and how? Arts A3
4.00 pm Experimental Psychology Colloquium: John Culling (Oxford University) What goes on between the ears at cocktail parties. Biology Lecture Room (EP 3.9)
4.00 pm Chemistry, Physics & Environmental Science Colloquium: R Snith, Egyptian mummies: what, why, how? Chichester Lecture Theatre
5.00 pm Sussex Development Lectures: Chris Freeman, Technical change and economic growth. Room A1
5.00 pm History Work In Progress Seminar: Kay Morris Matthews (University of Auckland, New Zealand) Accessing women’s lives. Room A155
5.00 pm Centre for Modern French Thought Seminar: Susan Marson (Royal Holloway College) Cryptonymics: the autobiographical moment (Violette Leduc.). Room A71
5.00 pm Centre for Statistics & Stochastic Modelling Seminar: Derek Robinson, Modelling genetic mutant frequency using the EM algorithm. Room Pevensey 2A2

Friday 21 November
11.30 am Topology, Algebra & Geometry Seminar: C J Mulvey, Foulis quantales and orthomodular lattices II. Room Pevensey 2A1
2.00 pm SPRU Seminar: Daniel McCaughan (NORTEL Satellite Network Solutions) Management of technology R & D in today’s fast moving environment. Room EDB 121
4.00 pm Applied Mathematics & Numerical Analysis Seminar: Mark Pelletier (Bath University) Localised structures in geological folding. Room Pevensey A2A
4.30 pm Philosophy Society Seminar: Alistair Young, Can the mind move? Room A155

Miscellaneous

• Senior Common Room AGM on November 21 at 1 pm, followed by the Periodicals Auction at 1.15 pm
• New Metaphysical Art seminar - Painting The Depths of the World with Oliver Soskice, 20 November at 4.15 pm. Garden Arts Music Room
• Assisted Student Regulations - UKCOSA is looking for EU students who have had problems with the LEA refusing to pay their fees. If you are affected please contact UKCOSA on 0171 226 3762

Small Ads

FOR SALE: Moulinex Masterchef food processor, £30; video tripod, used once, £20; Canon BJC-210 printer, one year old, £95; 14" Orion colour TV with teletext, £80; Goodman video recorder, 6 months old, £95; microwave, £45; other small things, all with box and manual. Contact Dora on ext. 2592 or 603454.

FOR SALE: 486SX, 4MB RAM, 80MB HDD, 14" colour VGA, Dos 6.22, Win 3.1, good condition, £150. Contact R 307834.

FOR SALE: Peugeot 309 style, D-reg, 62,000 miles, good condition, 5-dr, full service history, £1,200. Contact Mike on ext. 2761 or 557999.

FOR SALE: stunning silver-blue 1988 Rover 828, well maintained with new clutch, a bargain at £1500 o.n.o. Contact Sally on ext. 2812 or e-mail: sallyw@biols.sussex.ac.uk

WANTED: Hindi lessons with native or near native Hindi speaker, preferably with some teaching experience. I have done a year’s Hindi language course and would like some more practice. Contact Sarah on 685114.

WANTED: tutor for Lewes student on occasional basis for help with quantitative chemistry A-level. Contact 01825 872616

Career Development Talks

Free talks are given by employers to describe graduate opportunities in various fields. Please sign up in advance at the CDU.

Monday 24 November: Defence Engineering Science Group, 5.30 pm. CDU Information Centre, first floor Falmer House.

Tuesday 25 November: International House, teaching English as a foreign language, 5.30 pm in CDU Information Centre, first floor Falmer House.

Wednesday 26 November: Law careers, 6.00 pm in CDU Information Centre, first floor Falmer House.

Thursday 27 November: BUNAC, 6.00 pm in CDU Information Centre, first floor Falmer House.

Meeting House Events

• November 18 - lunchtime recital with Charles Macdonald (organ) in the chapel at 1 pm
• November 20 - The Ethics of Gene Therapy - Fabricating Human Beings, a lecture with Robin Gill & Michael Ramsay (University of Kent). Quiet Room, 6 pm

Bulletin

The Bulletin appears every Friday of term, with copy deadline the preceding Friday lunchtime. We welcome any suggestions for news, events, letters and small ads. Please contact the Information Office, Sussex House on ext. 8209 or e-mail: Bulletin@sussex.ac.uk

Bulletin is now on the web: http://www.sussex.ac.uk/information_office/bulletin/