

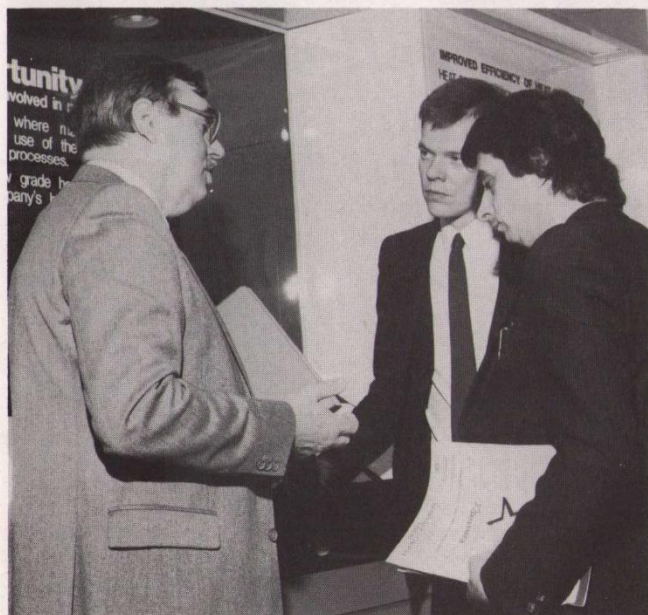
HARWELL bulletin

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MECCA '85



▲ From the left, at the London West Hotel, the venue for the Energy Systems Trade Association (ESTA)'s recent annual exhibition, MECCA, are George Finney (EDMD) with David Hunt (Parliamentary Under-Secretary of State for Energy), and John Ward, Gordon Fowler and Brian Sanders of EDMD. (HR 7188)

HARWELL featured its work on low temperature heat utilisation at the 1985 MECCA (Material and Energy Conservation Control in Action) exhibition. A key element of this work (carried out by Engineering Design and Manufacture Division and sponsored by the Energy Efficiency Office of the Department of Energy) is to bring together equipment designers, manufacturers and energy users to develop new ideas for this technology; as reflected in the 'information exchange' theme of the stand.

The EDMD team were kept extremely busy at this two-day event and dealt with enquiries from the Press and many industrial concerns including dairies, laundries, the confectionery trade, shipping and plastics extrusion; in all, establishing 75 good business contacts.

The stand will be on show again at the National Energy Management Conference and Exhibition being held at the NEC, Birmingham, in November.

◀ Gordon Fowler (EDMD) talking to two visitors to the HARWELL stand. (HR 7189)

Director's Senior Staff Meeting – 1 March 1985

In opening his talk, the Director referred to the appointments of Dr. Jack Williams as Deputy Director, Dr. Stuart Nelson as Director, Nuclear Power and Dr. Ron Bullough as Head of Materials Development Division.

AEA Review

The review of the AEA, initiated by the Department of Energy in March 1984, had been completed by the autumn and had subsequently been discussed at senior level in Government. The outcome was announced in a statement to the House of Commons on 11 February by Mr. Alistair Goodlad, Parliamentary Under-Secretary of State for Energy (the Minister directly responsible for nuclear power and electricity). This had been followed by a useful short debate both in the Commons and in the House of Lords.

During the review, the AEA research programmes had been carefully scrutinised and had stood up well. Most of the discussions had been on the funding of the programmes (who pays) and the ways in which the financial and project affairs of the AEA were managed. There had been a gradual change of AEA responsibilities since it was set up in 1954; there was a general trend towards a formal customer/contractor relationship in R&D and clearer accountability for use of funds in the Civil Service and Government-funded bodies generally. The aim was a shift of funding to major beneficiaries against a background of reduced public sector expenditure generally. The new arrangements would take effect on 1 April 1986 and there would be a great deal of preparatory work within the AEA beforehand. This was already under way – there had been two AEA senior management conferences at Crick (near Rugby) at which members of the HARWELL Directorate and some Division Heads had participated, followed by a full discussion at the HARWELL Council.

As the matter was so important to the future, the Director devoted the major part of his talk to dealing with the outcome of the review and its implications for both HARWELL and the AEA in the years ahead. The conclusions of the review had been widely circulated but they could be briefly summarised as follows:

1. *The AEA should continue as a unit*
2. *The AEA should not be privatised, in whole or in part*
3. *Substantial Government funding would continue*
4. *There would be further moves to a commercial basis for all operations.*

DEN nuclear budget

The funding of our nuclear programme by the Department of Energy would be under the following headings:

1. *Fast reactor R&D*
2. *Fusion R&D*
3. *Thermal Reactor and general safety research*
4. *Share of underlying R&D costs*
5. *Some funding of other programmes*

Giving further details of these, the Director said that the Fast Reactor programme had been reviewed a year ago; DEN had agreed to fund a collaborative programme and more recently had given their support to the proposal that a large-scale fast reactor reprocessing plant at Dounreay should form part of the agreed international collaboration. This proposal would lead to an inevitable Public Inquiry before final agreement to a formal negotiation with our European partners. The costs would **not** come from R&D funds.

Fusion had been the subject of a separate review in 1985. While there was no change in the funding of the joint European programme, the non-JET fusion programme at Culham would be reduced by £1M, £2M and £3M in three successive financial years.

The Government would continue to fund some research on thermal reactor and general reactor safety in the AEA, to guarantee the independence of the Authority in these topics. The importance of the underlying research programme had been stressed in the review and repeated in the parliamentary statement. There was still a problem of the mechanism of funding but DEN had agreed to fund part of this programme.

Major financial decisions

The major financial conclusions of the review were:

1. *The Department of Energy would agree with the AEA, a set of programme letters (quasi-contracts) defining objectives and budgets for those programmes they would continue to fund*
2. *The AEA would become a Trading Fund with effect from 1 April 1986.*

Giving details of the Trading Fund contracts, Dr. Roberts said that these would be categorised as follows:

- C** Authority-wide contracts with bodies other than the Department of Energy in areas of work previously funded by DEN
- E** Authority-wide contracts with the Department of Energy for nuclear R&D work
- M** Contracts between individual Management Units and external customers for specific items of work undertaken on a repayment basis
- O** Other Authority-wide contracts with the Department of Energy.

Contracts in category **C** covered work for the generating boards and BNFL. Category **M** contracts are the programmes for industrial companies as at present and category **O** cover assessment and other advisory services to Government (e.g. ETSU, MaTSU etc.) and also public information services in the national interest. Category **E** contracts are detailed below:

1. *AGR (independent)*
2. *PWR (independent)*
3. *Fast Reactor*
4. *General reactor safety research (independent)*
5. *Radioactive Waste Management R&D*
6. *Radiological protection research*
7. *Nuclear instrumentation*
8. *Safeguards*
9. *Nuclear materials (general)*
10. *Fusion – JET*
11. *Fusion – Contract of Association*
12. *Winfrith reactor operation*

The Trading Fund

The Director said that establishing a Trading Fund in the public sector was broadly equivalent to forming a limited company but with the Treasury as the sole shareholder. The capital of the Trading Fund will be the capital valuation on Vesting Day. The capital will be treated as a loan from the National Loans Fund at long-term interest rates. The Trading Fund is permitted to lend and borrow money. The Treasury will set a financial target and there will be an incentive to generate a surplus.

The tasks ahead

The Authority's tasks in response to the review are listed below:

1. *A Review Implementation Steering Committee has been established. This is chaired by Mr. R. Simeone (Comptroller of Finance & Administration)*
2. *The definition of programme letters from the Department will be the responsibility of Mr. A. Hills (Principal Finance Officer) assisted by the Authority Programme Directors*
3. *The re-negotiation of major customer contracts will be a matter for Programme Directors and Commercial Officers*
4. *To negotiate agreements on the funding of the underlying programme*
5. *To agree Trading Fund targets with the Treasury*
6. *A panel has been set up to co-ordinate and review Income Targets, chaired by Mr. R. Nicholson (Finance & Programmes Officer)*
7. *Corporate Planning. There will be a detailed four-year forecast (which will supplant the present five-year forecast) and also a longer-term (10-year) strategy document.*

Financial Control

Following the quite separate examination by Peat, Marwick and Mitchell (accountants) two working parties were set up to consider their recommendations. As a result, in future, a hierarchy of budgets will be allocated to **Cost Control Centres** (CCCs) which will be directly accountable for staff costs, external purchases and stores purchases. These CCCs will be used for the better definition of controlled costs (direct, semi-direct and overhead) and the aim is to formulate a uniform system throughout the AEA. It is proposed that the next financial year (1985/86) should be used as a 'dry-run' for the new system.

At HARWELL, the major CCCs will be the **Divisions**. Across the matrix, Programme Managers and Business Centre Managers will still be accountable for meeting sales targets. The Director said that the new system would not be much different from the present – more a case of evolution than revolution.

In dealing with the HARWELL estimates for expenditure in 1985/86 the Director said that in real terms these were a few per cent below the expected out-turn for 1984/85 but the estimate of receipts was about the same, at £52M.

Future prospects

The Director concluded by saying that the review offered a sound, but challenging future for the AEA in the decade ahead. It would be important to get the Trading Fund on its feet but this would provide a flexibility which we could exploit.

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Discussion

In answer to questions, Dr. Roberts made the following additional points:

- complement would be tied to financial success but we must be cautious and some form of overall complement control was likely.
- in the legislation required to set up the Trading Fund the AEA would not be seeking additional powers to manufacture. However, in the future we would wish to take equity in companies exploiting our inventions if there was a good reason for so doing.
- the land of Authority sites would be invested in the AEA.
- a major task of the Review Implementation Steering Committee would be the control and distribution of profits generated by the Trading Fund.
- the cost of vote-successor contract work would probably be increased by about 10%.
- the Department of Energy was being pressed to accept future responsibility for the costs of decommissioning major facilities.

- the special costs of security at AEA sites was being taken into account by the Department of Energy.
- there would be no change in the name of the UKAEA although the nature of its business was continuing to extend outside the field of atomic energy.
- since there would continue to be substantial Government funding, it was unlikely that there would be any break of the link with Civil Service Salaries in the near future.
- there may well be a sharpening of career opportunities. □

Resurfacing of Fermi Avenue

There will be temporary restrictions to road traffic on Fermi Avenue in the area of the Rutherford Appleton Laboratory Main Entrance and Atlas. Work is due to start on **Monday, 11 March** and is expected to last about three weeks.

Strathclyde Sinclairs

Strathclyde University is to provide each of its 7,000 students with a Sinclair microcomputer (QL model) at a total cost approaching £3M. ('Financial Times', 4 March 1985)

Meteorological Data

The following is a summary of meteorological data obtained at HARWELL for the month of February 1985.

Maximum temperature	13.0°C (55.4°F)	27 February
Minimum temperature	-11.2°C (11.8°F)	12/13 February
Maximum days rainfall	9.0 mm (0.35 ins)	9/10 February
Total rainfall for February	33.6 mm (1.32 ins)	31 Jan. – 28 Feb.

Average rainfall for February 40.92 mm (1.61 ins) [Average from 31 years data]

Prototype fast reactor at full power

The prototype fast reactor station at Dounreay reached full power electrical output of 250 MW at 1440 hrs, Monday, 4 March.

CERN Fellowships and Scientific Associateships

Details of Fellowships and Scientific Associateships offered by CERN can be obtained from Personnel Department 'A', Building 77 (Ext. 2306). All papers are to reach the Delegations by 9 April 1985.

BNES Conference – Final Reminder

The BNES Conference on Nuclear Fuel Performance is being held in Stratford-upon-Avon, 25–29 March 1985. Details from Conference Office, Institute of Civil Engineers, 1–7 Great George Street, London SW1P 3AA.

Growmore with ICI

The chemical company ICI has joined the elite club of British firms whose profits exceed one billion pounds. Last year its sales rose from £8.3B to £9.9B and pre-tax profits increased by 67% to £1.034B. (Others in the £B club are BP, Shell and BAT Industries.)

Part of ICI's success is due to its fast-growing Agrochemicals Division. They plan a five-year investment programme costing > £25M. This will include recruiting 200 staff (80 PhDs + 120 support) for synthesis of organic chemicals at their Jealott's Hill headquarters in Berkshire.

Film Badge Notice

2 weekly films: Period 11F (colour stripe NONE) commencing Monday 11 March.

Please change your film(s) promptly and return old ones for processing.

Diary of Events

Harwell

Chemical Technology Division Colloquium	Dr. R.J. Akers	'Flocculation'	Tuesday 26 March at 3.30 p.m. Large Conf. Room, Bldg. 551
Materials Development Division Colloquia	Professor N.S. Stoloff (Rensselaer Polytechnic Institute)	'Intermetallic compounds – new developments: 1. Microalloying, macroalloying and processing'	Tuesday 12 March at 2.00 p.m. Conference Room, Bldg. 551
	Dr. C. Britton (CMS Wantage)	'Effective corrosion monitoring'	Tuesday 19 March at 3.30 p.m. Bldg. 552
Materials Physics and Metallurgy Division Seminars	Dr. M.T. Hutchings	'High temperature studies of uranium dioxide'	Thursday 14 March at 11.00 a.m. Large Conf. Room, Bldg. 521
	Dr. S.B. Wright	'The work of the reactor physics group'	Thursday 28 March at 11.00 a.m. Large Conf. Room, Bldg. 521
Theoretical Physics Seminar	Dr. N.A. Chapman (British Geological Survey, Nottingham)	'Natural analogues for radionuclide migration'	Tuesday 26 March at 2.00 p.m. Lecture Room, Bldg. 424.4

MRC Radiobiology Unit

Seminar	Dr. N. Hastie (MRC, Edinburgh)	'Molecular and genetic analyses of protease inhibitor genes in rodents'	Tuesday 19 March at 3.30 p.m. Large Seminar Room
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Rutherford Appleton Laboratory

Neutron Division Seminar	A. Howie (Cambridge)	'Study of localised inelastic scattering events by electron microscopy'	Tuesday 12 March at 1.30 p.m. Conference Room 11, Bldg. R3
Astrophysics Seminar	Dr. Colin Coleman (Oxford)	'Active Galactic Nuclei' (Joint with G & R Division)	Wednesday 20 March at 2.00 p.m. Conf. Room 12, Bldg. R68

Culham Laboratory

Colloquium	Professor J.S. Dugdale (University of Leeds)	'Non magnetic metallic glasses'	Friday 29 March at 11.00 a.m. Main Lecture Theatre
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Outside

Oxford University Low Temperature & Solid State Physics Seminars	Dr. N. Rivière (Imperial College)	'The properties of glasses from a topological viewpoint'	Thursday 14 March at 2.30 p.m. Townsend Lecture Theatre, Clarendon Laboratory
Institution of Nuclear Engineers & BNES – lecture	Dr. R.S. Hall, CEBG and M.D. Vignon, EdF	'Fast reactors worldwide – a progress report'	Thursday 14 March at 4.00 p.m. The Institution of Civil Engineers, 1-7 Great George Street, London SW1. Further information: Tel. 01-698-1500

Exhibitions: Icknield Way House Exhibition Centre, Bldg. 173, Harwell

Exhibitions held take place between 10.00 a.m. and 4.00 p.m. on the day concerned.

When	Who
19 March	Planner Products Ltd. , Planner Biomed of Sunbury-on-Thames will be showing their <ul style="list-style-type: none"> – Planner controlled-rate cooling and thawing systems. – MVE cryogenic equipment for handling and storage of liquid gases including helium. – MVE cryo-biological storage equipment with liquid nitrogen. – REVCO low-temperature freezers and back-up systems.
26 March	Comark (Electronics) Limited will exhibit their range of electronic Temperature and Humidity Instruments. On show will be the latest Microprocessor controlled range of Multi-Input Units for use with computers, hand held thermometers, hygrometers and sensors. They say they will be "delighted to help solve your measurement problems".