

United Kingdom Atomic Energy Authority Annual Report and Accounts 2010/11



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Authority

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CCFE
CULHAM CENTRE FOR
FUSION ENERGY

United Kingdom Atomic Energy Authority **Annual Report and Accounts** 2010/11

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Chairman's Statement

Professor Roger Cashmore

The Chairman

The United Kingdom Atomic Energy Authority (the Authority) manages the UK magnetic fusion research at the Culham Centre for Fusion Energy (CCFE), which is primarily funded by the Engineering and Physical Sciences Research Council (EPSRC) and EURATOM. CCFE is the world leading fusion research centre and is delivering significant steps towards the realisation of electricity generation from fusion in the middle of this century.

For many years, fusion research has concentrated on understanding the science of burning plasmas, with machines such as the Joint European Torus (JET) at Culham being used by researchers to validate their models and investigate the extremes of understanding. CCFE operates JET on behalf of the EURATOM and the other parties to the European Fusion Development Agreement (EFDA).

With the construction of the international project, ITER, the next step in fusion research, now underway in the south of France, it is clear that the next phase of fusion research will concentrate much more on the technological issues to be resolved to meet the aspirations of electricity generation. ITER will be the first machine to demonstrate sustained plasmas with significant power output compared to the input. It will be the final step before the construction of a demonstration reactor and will test many of the new technologies and materials which will be required.

The Authority aims to be at the forefront of the move towards a fusion technology programme, and the Board fully supports the plans put forward by the Executive

during the year to utilise the considerable expertise within CCFE to build up a significant programme over the next few years, so that at the time of JET closure the Authority is ready to step into the critical role of designing the demonstration reactor. This will involve the modification / construction of facilities at Culham in order to support the technology research.

This new programme will also look at opportunities to diversify into areas which can benefit from the experience at CCFE - this includes for example the modelling of the effects on materials within nuclear environments – applicable to new fission reactors as well as fusion.

During the year, the Board noted a number of significant achievements. A major upgrade to the JET machine (completed in May 2011) was carried out for EFDA by CCFE installing an 'ITER-like' wall which will be used over coming years to finalise the design of ITER and prepare its scientific and technical programme. A major upgrade to the Mega Amp Spherical Tokamak (MAST), CCFE's innovative fusion machine of international significance, is now proceeding to final design and procurement, with first operation planned for 2015.

The Authority owns the freehold of the Culham and the majority of the Harwell sites in Oxfordshire and is working with its partners and Government to build up these sites as world class centres of science, innovation and technology.

I would like to take this opportunity to thank Lady Judge, my predecessor as Chairman, who, since her appointment in July 2004, had led the Authority through the

significant restructuring leading up to the sale of UKAEA Limited in October 2009. I would also like to thank Ken Vowles, John Kennedy, Mark Slaughter and Arnold Wagner who all retired as a non-Executive in 2010 after many years serving on the Authority Board and the Remuneration and Audit Committees. We wish all of them well in their new roles.

I am proud to have been appointed Chairman of the Authority in July 2010 and look forward to helping the Authority deliver its aspirations over the coming years. I also welcome the support of the new non-Executive members of the Board - Keith Burnett, Stephen McQuillan and Peter Jones, appointed in November 2010, who are providing invaluable insight and expertise. We also welcome Martin Cox, Operations Director, who was appointed as an Executive Director at the same time.

Roger Cashmore
Chairman
5 July 2011



Professor Roger Cashmore
Chairman The Authority

Chief Executive's Review

Steve Cowley

Chief Executive's Review

Our primary goal is to develop nuclear fusion as a source of energy for commercial electricity generation. It is without doubt one of the most important goals imaginable, and one of the most challenging. World class research and innovation is necessary to reach the goal – the Authority is delivering such research. This year sees the completion of a major upgrade of JET, and the start of a substantial upgrade to our UK machine MAST. Exploitation of these upgrades will enable the UK and Europe to maintain a leading role in international fusion developments and will pave the way for ITER.

Following our first meeting in Whitehall, David Willetts MP, Minister of State for Universities and Science, visited Culham. He expressed his support for the Authority's determination to keep the UK in the lead in fusion research to develop the commercial potential of fusion, with benefits to UK industry. Indeed, to date, we have helped British companies win over €150 million of ITER contracts.

After 18 months the JET upgrade is now complete. This has been a massive undertaking, including the replacement of around 100,000 components, particularly replacing the vessel wall tiles with new "ITER-like" tiles made from beryllium and tungsten. I must commend the effort and dedication of the team and the EFDA Close Support Unit led by Francesco Romanelli. The technical challenges that they have overcome have been substantial.

A side benefit of the JET shutdown has been that all this year when showing VIPs around, we have been able to take

them into the control room and watch the live installation of the ITER-like wall. The superb technology and professionalism of the team never fails to impress our visitors; indeed, it still impresses me.

The MAST upgrade project is well underway and received positive reviews from the MAST Programme Advisory Committee, chaired by Professor Fritz Wagner of the Max Planck Institute, and from the Office of Government and Commerce (OGC) gateway review of the project's delivery strategy. The first element of upgrade hardware, a positive ion neutral injector, has been procured and is on site. It will provide an extra 2.5 megawatts of power to heat the plasma and give our researchers greater flexibility in the way they use neutral beam heating on MAST.

This year has been difficult because we have had to operate within a constrained budget and uncertainties over future funding levels due to the cost of ITER. It is inevitable that there will be complications when building the most sophisticated machine ever, and we will continue to do all that we can to help ensure the successful delivery of ITER. Throughout the year we have received tremendous support from the UK government, for which we are most thankful. It is also a gratifying recognition of the quality of our research that we have received a 6-year grant from the EPSRC including £20 million towards the MAST upgrade.

Our people and the next generation of scientists and engineers are not only important for our future, but for the UK and for the ultimate goal to realise fusion power. PhD students are our biggest training investment and at any one time we have a

portfolio of around 40 students in physics, technology and materials science. Not only do they enliven the technical meetings, they also keep us older scientists on our toes.

An example of the outstanding work this year is the coupling of high resolution diagnostic measurements of the plasma profiles with sophisticated numerical modelling to explain the observation of long-living saturated plasma instabilities in MAST. This has suggested that tailoring the current profile appropriately could avoid these performance-degrading instabilities, and is one of the drives behind the inclusion of off-axis neutral beam heating in the MAST Upgrade to achieve superior performance.

Steve Cowley

Chief Executive and Accounting Officer
5 July 2011

Right Steve Cowley with the Science Minister, David Willetts, discussing the potential of fusion.





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Above 3-D model of JET, currently the worlds largest fusion device.

MANAGEMENT COMMENTARY

The principal mission of the United Kingdom Atomic Energy Authority (the Authority) is to deliver, with its international partners, the world's first fusion generated electricity and to position the UK to participate in the future fusion economy.

The Authority is a non-departmental public body that reports to the department for Business, Innovation and Skills (BIS). The Authority is responsible for the UK magnetic confinement fusion research, which it manages through its fusion arm Culham Centre for Fusion Energy (CCFE).

Fusion

The main purpose of CCFE's research is to develop nuclear fusion as a source of energy for electricity generation. With abundant fuels, no carbon emissions and inherent safety features, fusion has enormous potential if it can be implemented on a commercial scale.

CCFE is home to the UK's fusion research programme, most notably the MAST (Mega Amp Spherical Tokamak) experiment. It also hosts the world's largest fusion facility, JET (Joint European Torus), which CCFE operates for its European partners under the European Fusion Development Agreement (EFDA). The work is funded by the Research Councils UK Energy Programme through the Engineering and Physical Sciences Research Council (EPSRC) and by the European Union under the EURATOM treaty.

To get energy from fusion, gas from a combination of types of hydrogen – deuterium and tritium – is heated to very high temperatures (100 million degrees Celsius). The hot gas (known as a plasma) is confined and controlled with strong magnets until the atomic nuclei fuse, producing large amounts of energy. The most promising device for achieving this is the 'tokamak', effectively a magnetic chamber that contains the plasma.

The fusion programme's objectives are to obtain and study conditions approaching those needed in a commercial power plant, using the tokamak concept. The next step is ITER, an international tokamak experiment which should provide a full scientific demonstration of the feasibility of fusion in power plant-like conditions. ITER, which involves China, the European Union, India, Japan, Russia, South Korea and the United States, is now being constructed at Cadarache in the south of France. It will generate scientific results in the 2020s, with tritium experiments targeted for 2027. If successful, ITER will be followed by a demonstration fusion power station, DEMO, in around 30 years' time.

JET

JET, as the world's largest present-day tokamak, is of vital importance to ITER and is closely involved in technical preparations: rehearsing plasma scenarios; testing materials and technology; and building up expertise among physicists and engineers.

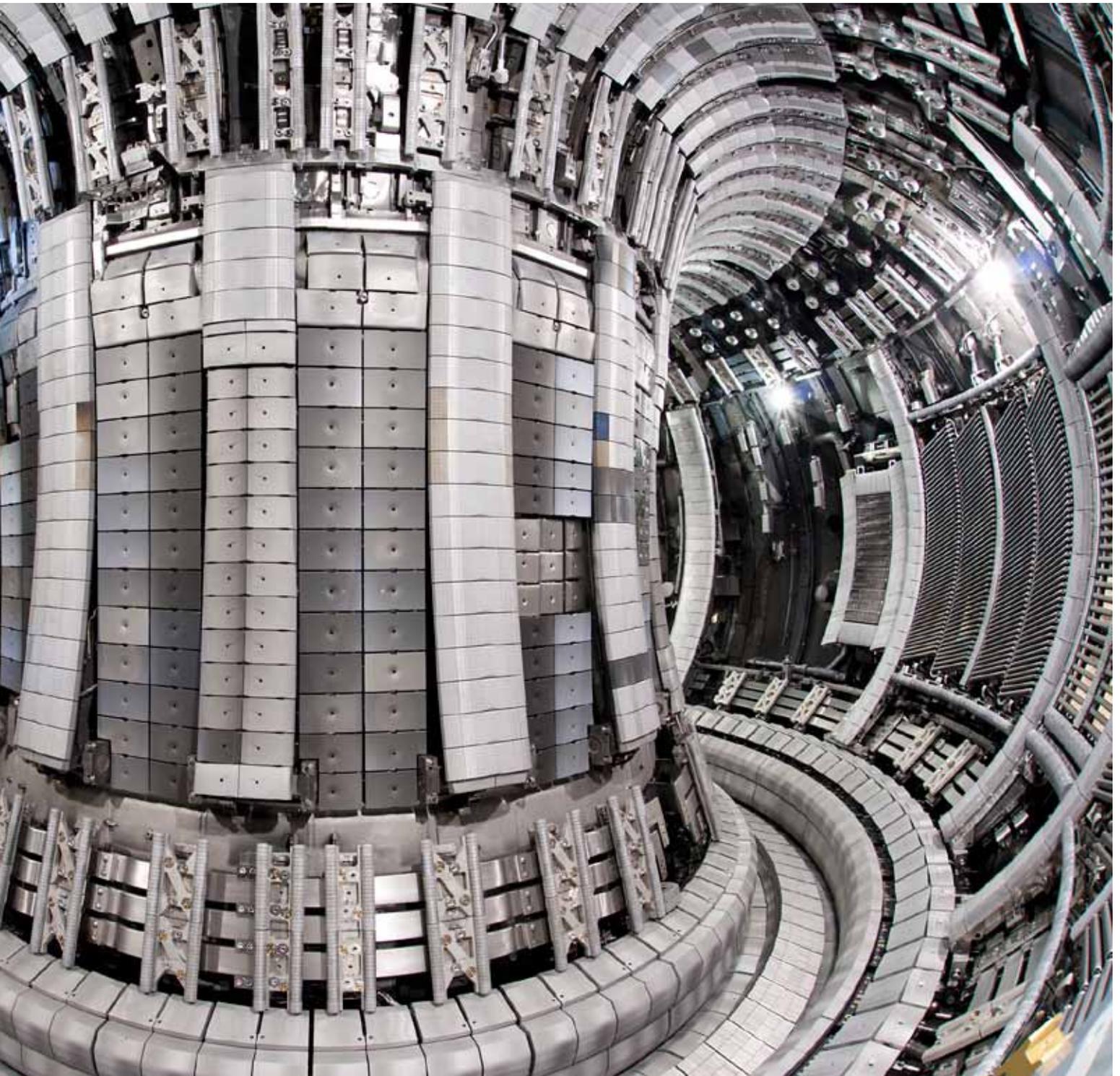
During 2010/11, CCFE installed a range of major upgrades to the JET device that will enable European researchers to advance their work in support of ITER. It was the biggest series of enhancements to JET for almost 20 years, involving some 100,000 components, and included:

- a new 'ITER-like' wall in the JET vacuum vessel. The materials in the wall, beryllium and tungsten, match those that will be used inside ITER. Trialling them on JET will allow researchers to observe how these materials interact with the plasma and will provide validation of their ability to withstand long periods of operation in ITER. CCFE engineers replaced the existing wall and put in around 5,000 new tiles with the aid of state of the art remote-handling techniques;
- a refit of JET's neutral beam heating system. This system provides much of the heating power for JET to reach the temperatures of over 100 million degrees Celsius needed for fusion experiments. The upgrades will increase heating power by 50%, bringing the available neutral beam power to 34 megawatts. This will enable JET to achieve high performance plasmas closer in both absolute and normalised plasma parameters to those that will be achieved on ITER; and
- improvements to the diagnostic tools that gather data from JET experiments, to give physicists unprecedented accuracy in measuring plasma properties.



The upgrade project was completed in May 2011, with over 600 man-years of work carried out during an 18-month period. Plasma experiments are expected to restart in summer 2011, and the upgraded machine will operate as close to ITER conditions as is possible with any present-day tokamak.

Below Inside the upgraded JET reactor vessel, showing the new ITER like tiles and a remote handling manipulator.



Fusion

The first results have been obtained from a new neutron camera on MAST, which was developed in collaboration with Uppsala University, Sweden and can be operated remotely from Uppsala. The camera allows the measurement of neutrons released from fusion reactions and initial data looks extremely promising.

MAST

Between May and November 2010, an engineering shutdown took place in order to make a series of improvements to MAST's diagnostic and plasma control capabilities. Many of these have been developed in conjunction with partner laboratories and universities. Among the new and upgraded systems were:

- fast ion D-alpha system – looking at the distribution of fast ions in the plasma;
- beam emission spectroscopy – measuring plasma turbulence (with RMKI, Hungary);
- microwave imaging system – determining the current at the edge of the plasma (with the University of York);
- Edge Doppler spectroscopy system – producing measurements that aid understanding of plasma confinement properties;
- Retarding Field Energy Analysers – measuring the temperature of ions leaving the plasma (with the University of Liverpool); and
- additional internal magnetic coils for controlling Edge Localised Modes (ELMs). These instabilities at the edge of the plasma have the potential to damage plasma-facing components and are a concern for future devices such as ITER. MAST is well placed to investigate the issue and is already equipped with 12 internal coils for ELM control, which have shown that the effects of ELMs can be mitigated by applying magnetic perturbations to the plasma. The extra six coils will give additional flexibility and control capability.

Meanwhile, work has progressed well in preparing for a major upgrade of MAST, which will be completed in 2015. The MAST Upgrade project will ensure that the UK remains a leading player in fusion and plasma science, and is expected to perform three key tasks within the international research and development plan:

- assess the feasibility of a cost-effective Component Test Facility to study the engineering of commercial fusion reactors;
- study the physics of high-performance plasmas to improve the future operation of ITER; and
- trial reactor systems, notably the 'Super-X divertor' – an innovative plasma exhaust system capable of handling the huge power loads of commercial reactors.

During 2010/11, design activities continued, procurement started and the first items of hardware for the upgrade arrived at Culham. The project also received positive feedback from the OGC Gateway 2 review of delivery strategy, conducted in February 2011. The review panel found that the project was well managed and had robust controls in place, and it was also impressed by the level of external support and funding from outside stakeholders.

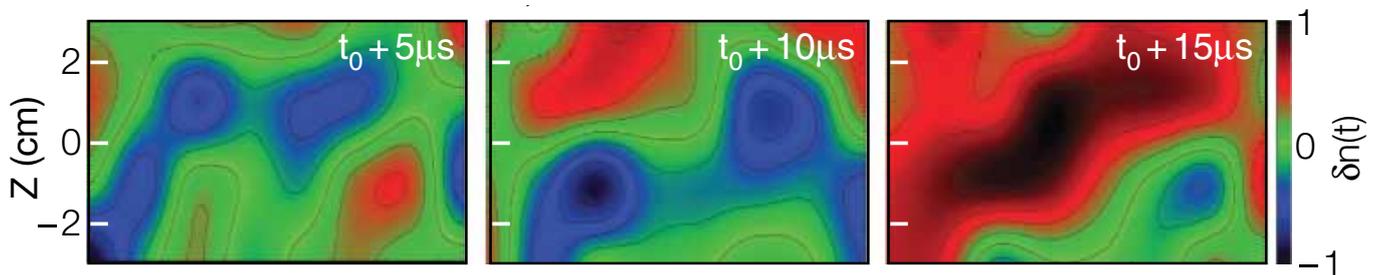
Theory and modelling

Culham has a strong theory and modelling programme that concentrates on the key plasma physics issues that need to be resolved for fusion, in both ITER-like devices and spherical tokamaks such as MAST, for example:

- modelling the plasma turbulence that causes losses of energy in the tokamak;
- the avoidance or mitigation of instabilities that can limit plasma performance, or damage the device; and
- the integrated plasma modelling required for developing operational scenarios. This is a priority area for present and future development, as it will position CCFE for a central role in ITER experiments.

These topics are addressed by analytic theory, and also by computational modelling. CCFE studies plasma turbulence with a range of codes, each with their own strengths: some concentrate on detailed local calculations while others give global but less detailed simulations of the tokamak plasma. This work benefits from EPSRC and European supercomputers, as well as CCFE's own computing facilities.

There are many collaborations with UK universities, with other EURATOM Associations (via EFDA and its Integrated Tokamak Modelling Task Force) and with fusion researchers in the rest of the world.



Materials and technology

CCFE, together with collaborating universities, participates in EFDA programmes on the materials needed for tokamaks, and also undertakes technology studies of the DEMO prototype fusion power reactor as part of EFDA and international programmes. CCFE's materials research concentrates on:

- how mechanical properties of structural materials – especially low activation steels – are degraded by high energy neutrons from fusion;
- how these and other materials used in fusion become radioactive; and
- how surfaces in JET are affected by exposure to fusion plasmas.

Recent work has included studies into the effect of neutrons on elemental composition and thereby how the performance of materials can change. This is a relatively new area, and CCFE's work will increase understanding of how to develop structurally sound, low activation materials. Much of this materials research is conducted in partnership with the University of Oxford, which has been awarded a £1 million-a-year grant by EPSRC over six years.

Technology studies have concentrated on the advantages and disadvantages of running tokamaks continuously or on an intermittent 'pulsed' basis in a fusion power plant. Continuous 'steady state' operation will put less stress on materials, but a pulsed machine may have cost benefits. The findings of CCFE's assessment will be important for the design of DEMO, which is still to be determined.

ITER

As construction work on the ITER site at Cadarache began in earnest, CCFE continued to carry out research and design activities on a number of machine components.

The European domestic agency for ITER, Fusion for Energy, allocates grants and fully-funded contracts to fusion laboratories and industry to develop specialist ITER heating and measurement systems and to construct components. CCFE has been successful in winning a number of these as part of consortia, some of which it is leading. Systems being developed include: the Ion Cyclotron Resonance and Neutral Beam heating systems; the LIDAR diagnostic which uses lasers to measure the plasma temperature; neutronics (the study of how fast fusion neutrons affect surrounding materials); and studies for magnetic diagnostics.

In October 2010, CCFE won a £1m grant to design remote handling equipment for ITER's Neutral Beam Cell. Scheduled for 15 months, the project is led by the CCFE Remote Handling Group and supported by Oxford Technologies Ltd and Consorzio RFX (Italy). It includes the design of a heavy duty monorail crane system, and at least six systems of dextrous manipulators and booms.

At Cadarache itself, construction of the ITER complex got underway in August 2010 – the tokamak excavation pit, headquarters building and poloidal field coil assembly building are all visible signs of the progress being made on the site.

Above 2-D images of turbulence measured using the new Beam Emission Spectroscopy, analysed in collaboration with the University of Oxford.

Property Development & Other Activities

The Authority has additional missions to enhance the value of its property assets at Culham and at Harwell in Oxfordshire, and to undertake residual activities for which it retains responsibility.



Culham Science Centre

Culham Science Centre is home to the UK fusion energy research programme and hosts JET. In addition, over 40 companies are located at Culham, mainly in the science, technology and energy sectors. Some 2,000 people work at Culham Science Centre. Culham is also home to the Culham Innovation Centre, which provides start up companies with an environment where they can turn

bright ideas into commercially sound businesses. Over the past 10 years it has hosted over 60 companies, with some major success stories for Oxfordshire, including Kaspersky Lab UK, Toumaz Technology, OXIS Energy and Acro Aeronautical Services.

The vision is that Culham will continue as a leading international centre for fusion research and technology and will continue to support and grow science and technology-related businesses. The local planning authority supports these aspirations and has agreed a specific planning policy for the site in their emerging local development plan that recognises and supports redevelopment

and employment growth on the site. Work is underway, with the District Council, to agree a master plan for the site to support and guide its future development.

As part of the programme of regeneration a number of redundant buildings on the northern part of the site have been demolished and opportunities for new development on the site are being explored. Investment in the renewal of site infrastructure has continued during the year, with the completion of a number of schemes including road improvements.

The property programme and historic liabilities are funded by BIS by grant-in-aid under the Shareholder Programme Agreement.



Above The innovation centres at Culham and at Harwell provide support to help start up companies transition into commercially successful enterprises.



HARWELL
O X F O R D

Harwell Oxford

At Harwell, the Authority is a partner in a joint venture company with the Science and Technology Facilities Council (STFC) and Goodman International to manage and develop the Harwell Oxford campus into a world leading location for science, technology and business. The campus already provides employment for some 4,500 people in around 150 organisations including key UK Research Councils, start-ups and multi-national organisations focussing on a range of commercial applications including healthcare, medical devices, space, detector systems, computing, green enterprise and new materials. The development master plan envisages the eventual creation of over 100,000 square metres of laboratory, high technology industrial and office accommodation providing up to 5,000 new jobs.

Harwell Oxford will benefit from the budget announcement of further substantial investment of public money in science facilities at four centres across the country. This includes the International Space Innovation Centre, based at Harwell Oxford, which aims to link space-related activities and capabilities across universities, industry, national research centres and Government.

The Authority and Goodman International completed the £23m sale of the 14.9 hectare Chilton Fields site adjacent to Harwell Oxford to David Wilson Homes for residential development, which will enhance the vibrancy of the site and make it a more sustainable place for people to work and live. The land, which was owned by the Authority, had previously been used as a waste storage area and was the subject of a substantial land remediation project which was completed in 2002.

Other activities

Other activities and responsibilities of the Authority are:

- legacy issues including historic restructuring from previous reorganisations, the compensation scheme, and other historic liabilities;
- responsibility for overseeing the management of the Authority's pension schemes, which have over 50,000 members; and
- a nuclear records management service on behalf of the Nuclear Decommissioning Authority (NDA). This service will be competed by the NDA during 2011/12, and the Authority staff will be transferred to the new service provider.

KPIs & Risk

Key Performance Measures

The Authority seeks to set itself stretching targets. The key performance measures and outturns for the year are set out below.

The programme milestones seek to cover the range of activities at Culham: operation of fusion devices, management of shutdown activities, upgrades to fusion facilities, work on ITER, fusion science, collaboration with industry, collaboration with universities and educational and public outreach. The majority of the Fusion Programme milestones and deliverables for ITER contracts and F4E Grants and Contracts were achieved. The MAST-Upgrade project was approved by the MAST Programme Advisory Committee (PAC) and received a positive Gateway 2 review (delivery strategy). However, full PAC approval was not achieved until April 2011 due to the availability of external members. Although the programme milestone relating to the completion of the JET shutdown was missed, this was due to unforeseen technical complications. Both the Executive and Commission recognise the hard work involved in the completion of this complex project.

The majority of the targets related to the achievement of the Safety Health and Environment Improvement Plan and to the Management Improvement Programme were achieved. The level of operating profit for commercial property exceeded the target.

Performance measure	Target	Achieved
Programme milestones		
Achieve the milestones agreed with EPSRC for 2010/11.	80-100%	80% - 32 of 40 milestones set by EPSRC were delivered on time.
Achieve full approval by the MAST PAC for the MAST-Upgrade Stage 1 project, and pass OGC Gateway 2 review.	As described	66.6% - 2 of 3 targets met within the financial year.
Achieve deliverables on ITER Contracts and Fusion for Energy Grants and Contracts awarded to CCFE and consortium partners, in tasks where CCFE is in control.	80-100%	82% - 31 of 38 were delivered on time.
Completion of JET Shutdown by target date of 22 January 2011	As described	Missed.
Other performance measures		
Achieve the milestone dates in the 2010/11 Safety, Health and Environment Programme.	As stated in the milestone	89% - 24 of the 27 milestones were completed on time.
Achieve the milestone dates in the 2010/11 Management Improvement Programme.	As stated in the milestone	75% - 9 of the 12 milestones were complete on time.
Property: Achieve good results on commercial property operating profit.	£342k – £392k	Exceeded - Operating profit of £604k achieved.



Principal Risks

The Authority is recognised as a world leader in fusion research. Its future is strongly linked to the global collaborative programme to construct ITER. The large increase in the projected cost of ITER construction is putting strong pressure on the availability of European funding to both the JET and UK Fusion programmes. Funding for the UK Fusion programme is also under pressure as extra funding needs to be diverted to the upgrade of the MAST machine and to absorb one-off and step cost increases. To reduce the exposure of the science programme, the Executive have introduced austerity measures and cost saving exercises, in particular focused on reducing overheads and gaining greater efficiencies. The Authority is also seeking to identify additional sources of funding and income for the future.

Safeguarding people and the environment are key values of the Authority. The management of the risk of a major safety or environment incident is of paramount importance. Robust safety measures and systems are in place and the Authority continues to drive good safety and environmental performance and implement safety initiatives and improvements. As a result safety and environmental incidents continue to be low.

As the Authority takes on more commercial contract work and transitions towards a more technology focused organisation there is the risk of a mismatch between available skills and developing requirements. This is being managed by detailed resource planning, tailored training and development, and embarking on a culture change to ensure that staff are able to adapt to the changes ahead.

Above The Positive Ion Neutral Injector will help heat the MAST plasma by firing in fast atoms which collide and transfer their energy to the background plasma nuclei.

People

The Authority recognises that its staff and the next generation of scientists and engineers that it helps to develop are assets not only for the organisation, but for the UK.



Investment

Development and Training Staff development is recognised as an essential part of a healthy organisation and is encouraged by the Authority on a number of levels. Management development and executive coaching programmes are continuing, as are the graduate development and engineering apprentice schemes. The intake to the latter two has been downscaled reflecting the funding constraints during 2010/11, although it has been possible to maintain a constant level of apprentice intake as a result of collaboration with local industry, in opening up the scheme to a small number of trainees from external organisations.

A pilot mentoring scheme was run successfully and is in the process of being rolled out across the Authority. Feedback from participants on the pilot was extremely positive and this scheme is seen as being a key tool in supporting staff as the Authority moves forward into a period of significant change.

Safety training has continued to dominate the training programme, with over 700 attendees on such courses (totalling over 2,500 hours).

Students and Apprentices Over recent years, CCFE has introduced training programmes for apprentices and post-doctoral students, and greatly expanded its doctoral (PhD) training. CCFE also sponsors "Power Academy" students in electrical engineering, has summer "internship" projects for engineering and physics undergraduates, hosts students doing Masters projects, and supports several research fellows.

The apprentice scheme has been highly complimented by authorising bodies and comprises training at a local college and then at Culham in mechanical and electrical skills needed in fusion. During the year,

Lydia Feasey, a first year apprentice, was awarded Engineering Apprentice of the Year by Abingdon & Witney College.

In November 2010, CCFE held its second annual Open Day for students keen to learn more about fusion research. Over 120 students came, nearly twice as many as in 2009. The event was organised with the Fusion Doctoral Training Network (FDTN), and several other universities attended, to describe PhD and Masters research opportunities in fusion and related areas.

The 47th annual two week Culham Summer School in Plasma Physics was held in July 2010, for about 50 students from around the world and with lecturers from CCFE, UK universities, and overseas institutes.

Staff Engagement

Staff communications have evolved significantly over the period 2010/11, recognising its increasing importance in a period of change. The continued use of team talks and the e-mail site broadcasting system has been supplemented with a brand new intranet platform - maintained and updated with regular news items by the Communications group. Regular 'In Brief' reports continue to be provided for department managers as a basis for team talks, and a quarterly safety brief is issued by the safety group at CCFE

A new series of web based employee survey forms has been developed jointly by the HR and Communications groups, and will be rolled out in 2011/12.

Working in partnership with the Trade Union is an important aspect of the employee relations on the Culham site, with views being sought at an appropriately early stage in any particular instance and input being highly valued by senior management.

1. Lydia Feasey with her 1st year apprentice of the year award from The Engineering Trust.
2. CCFE's Dr Ian Chapman being presented a gold award by for the excellence of his scientific research at a competition held in the House of Commons
3. The annual plasma physics summer school provides an opportunity for students across the world to come together.
4. The CEO and directors give regular talks to keep staff up to date with changes and key achievements.

Employee consultation initiatives during 2010/11 have included improved people management and various continuous improvement initiatives such as a series of strategic development workshops with managers and programme leaders.

Staff Figures

Financial pressures, including the need to allocate funding to deliver the MAST Upgrade project, have meant a downward pressure on other areas of the research programme and also the support services areas. These issues, together with the need to begin to prepare Culham for a post-JET existence, led to a need to reduce staffing levels and an associated voluntary redundancy exercise, which had to be balanced with a need to maintain essential expertise to ensure a viable long term future. A total number of 8 staff were released during 2010/11 as part of the redundancy exercise, with agreement being reached (to date) to release a further 7 staff during 2011/12. The invitation for applications for voluntary redundancy remains open for 2011/12. In addition, a further 7 staff were released during 2010/11 as a result of a previous – restructuring initiative.

The Authority had an average of 568 full time equivalent (FTE) employees during 2010/11, compared with 579 in 2009/10. This reduction is due to the effects of the public sector recruitment freeze, natural wastage and the ongoing programme of restructuring. In addition, an average of 467 FTE agency workers were employed.

The average sickness absence per employee for the Authority during the 2010/11 year was 4.29 days per person, compared with 4.37 days in 2009/10. This is almost half of the public sector average of 8.1 days per person.

The Authority is an equal opportunity employer and does not discriminate on the grounds of age, sex, ethnic origin, religious belief, sexual orientation, Trade Union membership or disability.

Stakeholder Engagement

Efforts to engage key stakeholders at local, national and international level are of the utmost importance to retain support for fusion. CCFE is also working hard to ensure that UK industry is able to benefit from the fusion economy and to date UK companies have won in excess of €150 million in ITER contracts.

The Authority has quarterly meetings with its shareholder in BIS to review performance. Following the year end the shareholder responsibility within BIS transferred from the Shareholder Executive to the Knowledge and Innovation Group.

The Culham Euratom Steering Committee meets twice a year and allows the Authority to agree and review the programme with the Commission and EPSRC. The fusion programme is also reviewed twice a year by the Research Councils' Fusion Advisory Board (FAB). During the year a Technology and Industry Advisory Committee was set up, as a sub-committee of FAB, to provide advice on how to expand UK involvement in the development of technologies for fusion, including the engagement of industry. There are, as necessary, meetings with EPSRC on programme and financial matters and EPSRC has a representative on the MAST Upgrade Project Board.

Industry

CCFE continued its strong industry liaison programme in 2010/11, which is focused on increasing involvement by UK companies in ITER. The aim is to bring even more companies into the fusion sector and create a base of technical expertise that will put the UK in a leading position as fusion moves towards commercial realisation. With this in mind, in September 2010, CCFE hosted an industry event attended by over 100 engineering companies and representatives from Fusion for Energy, ITER and UK Trade & Investment.

The Science Minister, David Willetts met four UK companies when he visited Culham and was interested in fusion's benefits to UK industry. The Authority has played a facilitating role in helping UK companies secure over €150 million in ITER contracts, and aims to increase this figure. A major industry success story

during the reporting period was Halcrow's lead role in the Energhia consortium which won a €27 million, six-year contract to provide engineering services to Fusion for Energy.

Outreach and public engagement

There is a busy and varied programme of public information and education at Culham, some of which is undertaken with the EFDA-JET programme under Host Support. CCFE organises many visits by VIPs, schools, universities and professional societies; demand for visits exceeds capacity to take them (there were around 50 visits from educational institutions alone in the reporting period). Ten open evenings for the general public were held during the year, which allowed more than 1,000 people to view the fusion facilities. CCFE staff also gave many talks and demonstrations, particularly at schools and local and national science events. The Sun Dome, CCFE's science roadshow for primary school age children, visited over 40 local schools in 2010/11, with help now provided by students from the University of Oxford. It also did a tour of York schools with the University of York.

Media appearances in the UK (including an episode of BBC Horizon), the United States, Sweden, Spain, Germany, Australia, Japan and Italy helped to communicate the value of CCFE's and EFDA-JET's work and the potential of fusion to a wide audience.

The Authority operates a successful sponsorship fund, moderated by a staff panel, which provides donations to a range of charities, education and community projects. One of the main aims of the fund is to make awards to schools for projects which encourage enthusiasm and curiosity for the study of science. In addition, other grants are given to the local community and to staff participating in organised charity events.

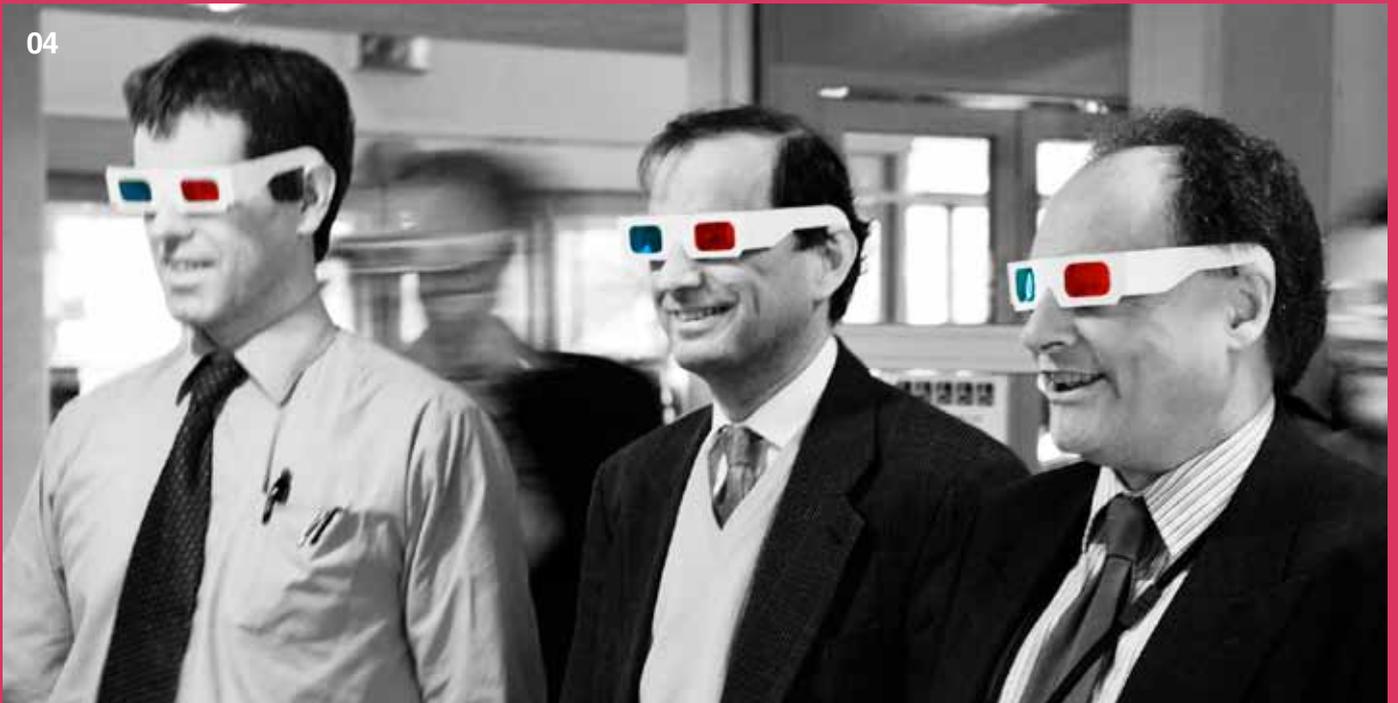
53 requests for information were received in 2010/11 and treated under the Freedom of Information Act regime. All were completed within the 20-day limit. The Authority's publication scheme can be found at www.atomic-energy-authority.org.uk.

University Collaborations

Over the last decade, university contributions to fusion research have expanded greatly and CCFE has developed links with over twenty universities. While CCFE funds some of this research, EPSRC has also provided major grants for many projects, with the largest at University of Oxford (fusion and fission materials research), University of Warwick (capacity building in fusion plasma physics) and University of York (plasma physics and training). Other universities making important contributions include University of Strathclyde (physics and both mechanical and electrical engineering) and Imperial College London (engineering, materials and plasma physics).

The University of York has set up a 'virtual' MAST control room so that they can run MAST plasmas from their campus, making collaboration easier, saving travel time and opening up the research to more students. It also leads FDTN, which has several PhD students with CCFE; the other members are Durham University, University of Liverpool and University of Manchester, and University of Oxford is likely to join soon.

CCFE staff lecture at a number of universities, most notably the new MSc course in Fusion Energy at the University of York. Some of staff have professorships at UK universities, while others are on advisory boards for university programmes.



1. Open evenings allow members of the public to learn about fusion activities at Culham.
2. With near €2 billion euro ITER contracts over the next three years, there are significant opportunities for UK companies.
3. One of CCFE's donations – for the creation of an outdoor science space for a local primary school.
4. Senior managers participating in a fund raising event for Children in Need.
5. The Sundome introduces children to the science of fusion, the energy that powers the sun.

Assurance

Safeguarding the health and safety of the public, employees and contractors and protecting the environment are key values to the Authority.

Health, Safety & Environment

Incident statistics As one of its measures of safety performance the Authority uses the Total Recordable Incident Rate (TRIR), which is the ratio of work-related injuries per 200,000 hours worked. The 12-month rolling average at March 2011 was 0.54, up on the previous year, but still low by industry standards and within the site limit set for the 2010/11 year. This is considered to be a commendable achievement given the nature and intensity of work associated with the JET shutdown. The ratio of occurrences to near misses has declined markedly over recent years falling from a high of 0.46 to the current 0.14. This indicates that a positive incident reporting culture exists within the Authority allowing most risks to be addressed prior to any loss or personal injury occurring. No events were reportable on the International Nuclear Event Scale and no fatalities or serious injury occurred.

Electrical Safety The JET and MAST experimental devices at Culham operate at very high voltages and currents and electrical safety is therefore of critical importance to the Authority's overall safety performance and is arguably the Authority's most significant day-to-day safety hazard. Over recent years, significant resources have been directed towards ensuring installations (some of which are more than 20 years old) meet modern standards. One example of this involves a project to survey and upgrade over 2000 electrical cubicles which is now nearing completion. Following an independent review of electrical safety arrangements further work has been undertaken to ensure working practices meet the highest standards.

Radiation dose The total radiation dose to the 683 monitored/classified people employed by CCFE for 2010/11 is greater than the previous year due to manned vessel entries into the JET machine as part of the shutdown. However the total radiation dose continues to be well below legal dose limits and Culham Site dose constraints. The highest individual radiation dose this year was 0.96mSv, substantially below the individual legal limit of 20mSv/year and the site dose constraint of 5mSv/year. The average occupational dose received by employees was 0.032mSv, which is less than 2% of the average background radioactive dose received by members of the public (Average annual background dose = 2.4mSv).

Discharge authorisations All discharges from Culham were compliant with the revised Radioactive Substances Act 1993 discharge authorisation limits that were set by the Environment Agency (EA) and excellent progress has been made with the processing and disposal of solid and organic liquid waste. In support of developing an operational Integrated Waste Strategy, as required by the EA, a Best Available Techniques study has been successfully completed; this engaged key local stakeholders in the decision making processes to determine the best practical environmental options for all radioactive wastes.

Management Systems and Quality

The Authority operates an integrated management system for all its activities certified to the internationally recognised standards for quality (ISO9001), environmental (ISO14001), and health and safety (BS OHSAS18001) management. In addition the Authority Health Physics Group has achieved accreditation to

ISO17025, the international standard for testing laboratories. The internal audit programme provides assurance to management and stakeholders that the required standards are being maintained. During the year operating to the international standards has provided the Authority with a strong base from which to meet the demanding requirements set by Fusion for Energy when commissioning work in relation to ITER. As part of the continual improvement process the Authority has developed and launched a revised Project Management system and toolbox to facilitate the delivery of major projects.



Security

The Authority continued to maintain robust standards of security and to work in accordance with the regulatory requirements of the Office for Civil Nuclear Security.

A significant site security audit was implemented to provide the Authority with a realistic view of site security management. The Authority continues to introduce better integrated security solutions involving personnel, physical and information security.

There is a comprehensive site emergency plan in place. Arrangements are kept up to date with regular training and practice drills and tested by an annual emergency exercise involving cross-site teams.

Information security and risks are monitored by the Information Assurance Steering Board, chaired by the Senior Information Risk Officer. During the

year a number of improvements were made including implementation of a new information security policy.

The Cabinet Office's Level 1 training is mandatory for all staff and network account holders and 83% of staff nominated have passed Level 2 training. Level 3 training will be undertaken in 2011/12.

There were no reportable personal data related incidents during the year.

Above Access to the Culham site is via a 24 hour manned security gate.

Financial Review

Operating performance

Revenue for the year amounted to £89.8m (2009/10 - £106.1m). This reduction was mainly caused by lower income from the European Commission (£4.2m), changes in income in advance and work in progress for a number of customers and the effect of accounting adjustments relating to the sale of UKAEA Ltd and presentation of the ongoing continuing activity of the Authority. The Group made an operating profit of £0.8m (2009/10 – profit of £5.3m). This reduction was mainly due to adjustments relating to the annual investment property revaluation (a credit of £0.7m compared with £2.5m in 2009/10), an operating loss of £0.4m in AEA Insurance Limited (AEAIL; 2009/10 – profit of £0.3m) and the lower 2010/11 revenue described above. The retained profit for the year after financing and sale of fixed assets but before income tax, was £7.4m, mainly due to the £6.3m profit on the sale of Chilton Fields. Profit for the year after taxation was £8.9m. The effect of a tax liability on the sale of Chilton Fields was deferred in part by tax credits.

Comparatives

The Authority's 2009/10 accounts included the sale of its subsidiaries UKAEA Ltd, Dounreay Site Restoration Ltd (DSRL) and Research Sites Restoration Ltd (RSRL) to Babcock International. This disposal was treated as a discontinued activity and appropriate comparatives have been retained for the 2010/11 accounts.

Sale of surplus land

The sale of the Chilton Fields at Harwell in February 2011 raised proceeds of £23m excluding VAT. The profit on the sale, after writedown of the asset and costs of sale, was £6.3m.

Nuclear Liabilities Estimate

The estimated cost of decommissioning and environmentally restoring the JET facilities at the Authority's Culham site is £177.1m, in 2010/11 money values and discounted at 2.2% to the date of the Statement of Financial Position. It is expected that the part of the Culham site on which the JET facilities are located will be designated to the NDA after the current research programme has ended and the liabilities will be transferred to NDA at that time. Given the various uncertainties that affect this estimate, the effects of key factors on the estimate have been disclosed in note 21 to the accounts.

Taxation

The statement of comprehensive income shows an income tax credit of £1.5m.

This comprises £2.5m of corporation tax payable relating to the Chilton Fields sale, offset by a £4.0m credit for deferred taxation.

Current Taxation

The estimated tax charge for 2010/11 of £2.5m arises because the Authority has insufficient current year losses to offset capital gains tax on the sale of Chilton Fields and its other non-trading profits. A claim for research and development tax relief to HM Revenue and Customs (HMRC) has been prepared and partially offsets the non-trading profits above.

During the year, the Authority concluded discussions with HMRC on the treatment of brought forward losses and capital allowances in excess of depreciation, the majority of which related to the discontinued decommissioning activity. Agreement was reached on an apportionment of brought forward losses between the continuing Authority and the

decommissioning activities, and a reduced capital allowances pool for continuing Authority assets. Note 20 to the accounts reflects these changes and their effect on the unrecognised tax asset.

Deferred Taxation

The £4.0m credit to the income statement for deferred taxation reflects the release of the deferred taxation provision relating to Chilton Field (credit of £3.7m), adjustments relating to investment property revaluation (debit of £0.2m) and adjustments relating to the change of tax rate for the carried forward deferred taxation provision following the Government announcement that the rate of corporation tax would reduce to 26% from 1 April 2011 (credit of £0.5m). Full details are in note 20.

Insurance

During 2010/11, the Authority insured most non-nuclear risks through its wholly-owned subsidiary, AEAIL. AEAIL also covers some nuclear risks, but in the main where necessary these continue to be covered by the UK Government under the Nuclear Installations Act 1965. The Authority will continue to cover most of its remaining insurance requirements through AEAIL.

Pensions

The Authority retains overall responsibility for oversight of the management of the Combined Pension Scheme (CPS), the Principal Non-Industrial Superannuation Scheme (PNISS) and the Protected Persons Superannuation Scheme (PPSS) and for the preparation of their annual accounts. The management of the Schemes and the preparation of their accounts is carried out under contract by Babcock. Further details of Authority pension arrangements are set out in Note 22 to the accounts. The Combined pension resource accounts are at www.official-documents.gov.uk.

Borrowing

The Atomic Energy Authority Act 1986 permits the Authority to borrow from the National Loans Fund and elsewhere if the Secretary of State for BIS, with HM Treasury approval, consents. Borrowing is subject to an overall limit that stood at £200 million throughout the year. There were no borrowings during the current or previous year.

Charitable and political contributions

During the year, the Authority made charitable contributions of £10,320 (2009/10 £63,234) to local charities in line with its policy of supporting local stakeholders. No political contributions were made in the current or previous year.

Research and development

Costs associated with the Authority's research and development activities are charged to the income statement as incurred.

Statement of payment policy and practice

The Authority follows the Confederation of British Industry Prompt Payment Code. Its policy is to settle the terms of payment with suppliers when agreeing the terms of each transaction, to ensure that suppliers are aware of the terms of payment and to abide by the terms of payment.

In addition, the Authority has complied, where applicable, with the prompt payment guidance for public sector organisations, issued in 2008/09. This set out the requirement to pay suppliers within 10 days in order to assist the cash flow of smaller businesses, subject to the submission of valid invoices and to the usual financial control procedures.

During the year, the Authority's suppliers were paid within an average of 7 days (2009/10 – 8 days), which is well within both the 30 days specified in the Prompt Payment Code and the 10 day public sector requirement referred to above.

Going Concern

The Directors believe that the continuing commitment of both the UK and Europe to Fusion Research, and the acceptance by BIS of responsibility for costs associated with specified Authority liabilities are sufficient to support continuing operations for the foreseeable future. Accordingly, the Directors continue to adopt the going concern basis in preparing the accounts.

Corporate Governance

The United Kingdom Atomic Energy Authority has a policy of seeking to comply with established best practice in the field of corporate governance, insofar as it applies to the Authority, and has adopted core values and standards, which set out the behaviours expected of staff in their dealings with stakeholders, customers, colleagues and suppliers.

The Board

The United Kingdom Atomic Energy Authority is controlled through its Board of Directors who are appointed by BIS. The Board's main role is to establish the Authority's vision, mission and values, set strategy and structure, and exercise accountability to the Authority's stakeholders. The Directors who served throughout the year unless otherwise stated are set out below.

Chairman

Professor Roger Cashmore, CMG, FRS (appointed 30 July 2010)

Lady Judge, CBE (appointment ended 30 July 2010)

Executive Directors

Steve Cowley, Chief Executive Officer (CEO)

Martin Cox, Chief Operating Officer (appointed 1 November 2010)

Non-Executive Directors

Professor Keith Burnett, CBE, FRS (appointed 1 November 2010)

Peter Jones (appointed 1 November 2010)

Stephen McQuillan (appointed 1 November 2010)

John Kennedy (appointment ended 31 May 2010)

Mark Slaughter (appointment ended 4 April 2010)

Ken Vowles (appointment ended 30 November 2010)

Arnold Wagner (appointment ended 30 April 2010)

Board Secretary

Eric Hollis

Biographical details of the Directors are included on pages 26 to 28. The responsibilities of the Directors are included on page 33.

The arrangements made by the Authority to ensure continuity during the changes in appointments above are described in the Statement on Internal Control on page 34.

The Board, which met five times during the year, has a schedule of matters reserved for its approval. This includes: establishing the overall strategic direction of the Authority within the policy and resources framework agreed with the responsible Government Minister; reviewing the Authority's corporate objectives and goals; approving the annual accounts, budget and corporate plan; ensuring that high standards of corporate governance are observed at all times; and reviewing the safety, environmental and security performance of the Authority.

The Board delegates responsibility for day-to-day and business management control to the Chief Executive who is assisted by key senior managers comprising the Executive Committee. The Executive Committee meets twice a month. Specific responsibilities delegated to the Executive Committee include: development of Authority performance measures; implementation of the strategies and policies as determined by the Board; monitoring of the operating and financial results against plans and budgets; and developing and implementing risk management systems.

The members of the Executive Committee, in addition to the Chief Executive and Chief Operating Officer, were:

Eric Hollis – Chief Financial Officer and Authority Secretary

Dr Derek Stork – Director of Technology

Biographical details of Eric Hollis and Derek Stork are included on page 27. Their remuneration has been included in the Remuneration Report.

The roles of the Chairman and Chief Executive

The division of responsibilities between the Chairman of the Board and the Chief Executive is clearly defined and has been approved by the Board. The Chairman leads the Board in the determination of its strategy and in the achievement of its objectives.

The Chief Executive has direct charge of the Authority on a day-to-day basis and is accountable to the Board for the financial and operational performance of the Authority and its subsidiaries. The Chief Executive is also the Authority Accounting Officer and is responsible to Parliament through the Committee of Public Accounts for the stewardship of resources. His responsibilities are set out in a letter from the BIS Permanent Secretary and the accompanying Accounting Officer Memorandum. The Accounting Officer has a personal responsibility for the propriety and regularity of the public finances for which he is answerable; for the keeping of proper accounts; for prudent and economical administration; for the avoidance of waste and extravagance; and for the efficient and effective use of all available resources. He is also responsible for taking formal action if the Authority Board is contemplating a course that would infringe these requirements.

Directors and Directors' independence

As at 31 March 2011, the Board comprised the Chairman, two Executive Directors and three independent Non-Executive Directors. The Non-Executive Directors constructively challenge and help develop proposals on strategy, and bring strong, independent judgement, knowledge and experience to the Board's deliberations. The independent Directors are of sufficient calibre and number that their views carry significant weight in the Board's decision making.

The Board considers all its Non-Executive Directors to be independent in character and judgement. No Non-Executive Director:

- has been an employee of the Authority within the last five years;
- has, or has had within the last three years, a material business relationship with the Authority or its former or current subsidiaries;
- receives remuneration from the Authority other than a Director's fee;
- has close family ties with any of the Authority's advisers, Directors or senior employees;
- holds cross-directorships or has significant links with other Directors through involvement in other companies or bodies; or
- has served on the Board for more than nine years.

Corporate Governance continued

The number of full Board meetings and committee meetings attended by each Director during the year was as follows:

	Audit	Remuneration Committee	Audit Committee
Roger Cashmore	3 (3)	1 (1)	2 (2)
Keith Burnett	3 (3)	1 (1)	1 (2)
Steve Cowley	5 (5)	–	–
Martin Cox	3 (3)	–	–
Peter Jones	3 (3)	1 (1)	2 (2)
Stephen McQuillan	3 (3)	1 (1)	2 (2)
Lady Judge	2 (2)	1 (1)	1 (1)
Ken Vowles	3 (2)	1 (1)	1 (1)

Figure in brackets indicate the maximum number of meetings in the period in which the individual was a Board member. Ken Vowles attended one meeting after his appointment had ended, in an advisory capacity.

Remuneration Committee

The composition of the Remuneration Committee changed during the year. At its first meeting it comprised Lady Judge and Ken Vowles and was chaired by Ken Vowles. At its second meeting it comprised Roger Cashmore, Keith Burnett, Peter Jones and Stephen McQuillan, and was chaired by Keith Burnett. All members of the Committee were independent Non-Executive Directors. The Remuneration Committee met twice during the year. Where necessary, non-committee members were invited to attend.

The Committee's principal responsibility is to make recommendations to BIS on the level of Directors' remuneration. In addition the Committee regularly reviews the Authority's executive remuneration policy in relation to its competitors and industry norms and contract periods.

As the members of the Authority Board are appointed by BIS, the Authority does not maintain a nominations committee.

Audit Committee

The composition of the Audit Committee changed during the year. At its first meeting it comprised Lady Judge and Ken Vowles and was chaired by Ken Vowles. At its subsequent meetings, it comprised Roger Cashmore, Keith Burnett, Peter Jones and Stephen McQuillan, and was chaired by Peter Jones. All members of the Committee were independent Non-Executive Directors. The Audit Committee met three times during the year.

During the year, the Committee had at least one member possessing what the Smith Report describes as recent and relevant financial experience (Ken Vowles and Peter Jones). It will be seen from the Directors' biographical details, appearing on pages 26 to 28 that the other members of the Committee brought to it a wide range of experience from positions at the highest level in the UK scientific and business community.

Under its terms of reference, the Committee is responsible for: monitoring the effectiveness of the external audit process and approving the terms of engagement and remuneration of the external auditor; endorsing the Authority's policy on the provision of non-audit services by the external auditor; monitoring and reviewing the effectiveness of the internal audit programme; reviewing the actions and judgements of management in relation to annual and other financial statements before submission to the Authority Board; and reviewing annually the system of internal control and the processes for monitoring and evaluating the risks facing the Authority.

Board of Directors

Chairman and Non-Executives

1



1 Professor Roger Cashmore, CMG, FRS was Appointed Chairman of the UK Atomic Energy Authority on 30 July 2010. He is a Fellow of the Royal Society and the Principal of Brasenose College in Oxford, as well as being Professor of Experimental Physics in Oxford. Before returning to Oxford, he was Director of Research and Deputy Director General of CERN, the European high energy physics laboratory in Geneva, Switzerland, where he was responsible for the experimental programme at the Large Hadron Collider.

Before leaving for CERN he was Chairman of Physics in Oxford and during his teaching and research career he has more than 200 publications in learned journals. He has been a Visiting Professor in Tsukuba in Japan, Brussels, Padua, Fermilab in the United States and holds an Honorary Doctorate from the Joint Institute of Nuclear Research in Dubna, Russia. Currently, he is Chairman of the scientific committee at the Gran Sasso National Laboratory of the National Institute for Nuclear Physics in Italy. He was awarded the C V Boys Prize of the Institute of Physics and a Research Award by the Alexander von Humboldt Foundation in Germany. In 2004 he was made a Companion of the Order of St Michael and St George for services to international particle physics.

Currently his research is directed towards the LHC using the Atlas detector in which Oxford is involved and the search for dark matter in underground experiments.

2 Professor Keith Burnett, CBE, FRS Appointed to the Authority Board on 1 November 2010. He became Vice-Chancellor of the University of Sheffield in 2007. Previously he was Head of the Division of Mathematical, Physical and Life Sciences at the University of Oxford, having been a professor of Physics there for almost twenty years.

2



His research is in the area of ultra cold atomic physics. His direct involvement in fusion science policy started when he was head of Physics at Oxford and chaired the review of fusion science for the DTI. This report led to EPSRC taking up the funding role for the UK effort in fusion research. He was from 2001 to 2007 Chair of the Fusion Advisory Board which advised EPSRC, and hence the Authority on fusion strategy.

Last year he chaired the expert group that helped develop the Research Councils UK Fusion strategy, and had the opportunity to assess the UK's programme for the years ahead. He was appointed to the Council of the Central Laboratory of the Research Councils, which was merged into the STFC on whose Council he still sits. Since 2009 he has been Chair of the Universities and Colleges Employers' Association.

3 Peter Jones Appointed to the Authority Board on 1 November 2010. He became a non-executive director of National Nuclear Laboratory and Chairman of its Audit Committee in August 2009. Since 2005 he has been a member of the Competition Commission. His previous roles have included: Principal Private Secretary to the Chairman of the National Coal Board, and during a subsequent 19 year career in Corporate Finance at Samuel Montagu & Co. Limited and HSBC Investment Banking, as a senior adviser to the Department of Trade and Industry during the 2003-4 strategic review of BNFL, as a senior adviser to Scottish Power and British Coal during their respective restructurings and privatisations and to British Nuclear Fuels Ltd during the implementation of the strategic review and also as a consultant to the Shareholder Executive and Department of Trade and Industry during the final preparations for the restructuring of the civil nuclear clean-up sector in 2004-2005.

3



4



Peter is also a qualified Chartered Certified Accountant and has had exposure to a wide range of financial management and planning issues in a variety of sectors varying from financial services to electricity production.

4 Stephen McQuillan Appointed to the Authority Board on 1 November 2010. He is currently the CEO of a listed UK Engineering group – Avingtrans plc. His previous position was as Director/CEO of the National Physical Laboratory (NPL) working for Serco. Prior to joining NPL, Stephen ran a division of Oxford Instruments and, in his three most recent roles, he has acquired a high level of understanding of risk mitigation and corporate governance, including assurance of risks in areas like: ionising radiation sources; cryogenics; very high magnetic fields; hazardous chemicals; and high voltages.

In more recent years, Stephen has taken on non-executive and Board roles in technical organisations such as Engineering UK and Association of Independent Research and Technology Organisations to broaden his Board experience, governance and influencing skills.

Board of Directors

Current Executive Team



1 Professor Steve Cowley Joined the Authority in September 2008 as Director of Culham and was appointed to the Board as Chief Executive Officer and Accounting Officer for the Authority on 31 October 2009. He is part time Professor at Imperial College London and is Chair of Princeton's Plasma Physics Laboratory Science Advisory Committee.

A qualified physicist and Fellow of the American Physical Society and the Institute of Physics, Professor Cowley started his career at Princeton University in 1987 following his post-doctoral work at Culham. In 1993, he joined University of California, Los Angeles (UCLA) and became a Professor in 2000. From 2001, he led the plasma physics group at Imperial College, London for three years. In 2004, he was appointed Director of the Centre for Multi-scale Plasma Dynamics at UCLA and held this position before joining the UK Atomic Energy Authority in 2008. He recently co-chaired the US National Academy's decadal assessment of, and outlook for plasma science. He has published over 120 papers and articles covering theory of fusion plasmas, the origin of magnetic fields in the universe, the theory of plasma turbulence and explosive behaviour in both laboratory and astrophysical plasmas.

2 Martin Cox Appointed to the Authority Board as Chief Operating Officer on 1 November 2010. He is responsible for the day-to-day running of the UK's fusion research programme, and for the operation of JET on behalf of EURATOM and fusion laboratories across Europe. Mr Cox is a theoretical physicist who joined Culham upon graduating, working on plasma modelling. He then became involved in the operation of the experimental facilities. In 1994 he was appointed the Project Manager for the design and construction of the MAST device. From 2000, when the Authority assumed responsibility for the operation of JET on behalf of the European



fusion community, he became manager of the Machine Operations Department, overseeing the operation of most of the JET facilities as well as MAST. In 2007 he was appointed Senior Manager for all aspects of JET operation and in 2008 was appointed Assistant Director (Operations). He was appointed Operations Director on 1 November 2009.

3 Eric Hollis Has over 35 years' experience within the Authority. He began his career working at the London HQ on energy forecasting and has since undertaken a wide range of roles including development and application of HR policy at both HQ and site levels before becoming Head of the Authority's Finance Branch in 1986. After a number of finance-related roles, he was appointed the Head of Corporate Finance for the the Authority Group in 2003, and acted as UKAEA Ltd's Group Financial Controller from its creation in 2008. He has been on the Board of AEA Insurance Ltd since 1997. He has been heavily involved in a number of major organisational restructuring projects, and has played a key role in the development of corporate governance and financial strategy as the Authority has evolved. He was appointed Chief Finance Officer and Authority Secretary for the UK Atomic Energy Authority on 1 November 2009.

4 Derek Stork Became Assistant Director (Technology) in 2008 and was appointed Director of Technology on 1 November 2009. He leads the UK's work in providing ITER Systems, the Fusion Technology and Materials programmes, power plant studies, and the MAST Upgrade project. After gaining his PhD, Dr Stork became a Research Associate at CERN. He joined Culham in 1978, working in the Heating and Injection Group. In 1980 he was seconded to JET's Neutral Beam Systems Group. From 1987 he became involved with JET's physics programme as a Session Leader for the Divertor Task Force.



Dr Stork then held senior positions at JET including Programme Leader and Head of Neutral Beam Heating Division. In 2000, he became Manager of Culham's Heating and Fuelling Department, responsible for JET and MAST heating systems. From 2000 to 2004 he was also Task Force Leader for JET Deuterium-Tritium experiments, leading the 2003 tritium campaign. Dr Stork has over 100 publications and conference contributions.

Non-Executive Directors who departed during 2010/11



1 Lady Judge, CBE Appointed to the Authority Board on 1 September 2002 and appointed as Chairman on 30 July 2004 and reappointed in July 2007; her appointment ended on 30 July 2010. In June 2010 she was awarded Commander of the Order of the British Empire in the Queen's Birthday Honours for services to the Nuclear and Financial Services Industries. She is currently Chairman of the Pension Protection Fund. She is a US-trained lawyer with a broad international career and has held senior executive and advisory appointments in law, finance, industry, public service, the arts and academic life in the UK, US and Asia.

2 Ken Vowles, OBE Appointed to the Authority Board on 1 May 2002; his appointment ended on 30 November 2010. He is a Non-Executive Director of Cegelec and a Professor at Herriot-Watt University, Edinburgh. He served as an advisor to the Performance and Innovation Unit (PIU) on renewable energy to the DTI's Energy Advisory Panel and is currently a member of the Advisory Committee on Business and the Environment. He was formerly Executive Director International at Scottish Power plc and played a significant role in the development of the company in helping change it from a public utility to a successful multi-national.

3 Mark Slaughter Appointed to the Authority Board on 5 April 2005; his appointment ended on 4 April 2010. He is Chief Administrative Officer at Investcorp. A qualified nuclear physicist, he started his career at Westinghouse (Bettis Atomic Power Laboratory) in 1979 before becoming a lawyer with major New York law firm, Cravath, Swain and Moore in 1984. He joined Goldman Sachs International in 1986 and became the company's Chief Operating Officer in 2000. In 2005, he joined Citigroup as Managing Director/ Chief Operating Officer of Global Banking and held this position before joining Investcorp in 2009.



4 John Kennedy Appointed to the Authority Board on 1 June 2005; his appointment ended on 31 May 2010. He is Executive Chairman of Wellstream Holding plc and holder of a number of other Directorships. He is a qualified Chartered Engineer and Fellow of the Institution of Electrical Engineers with over 35 years' experience in the oil and gas sector, and started his career at Schlumberger and has held several senior management positions. He led the buyout of Wellstream and Vetco International in 2003 and 2004 respectively.

5 Arnold Wagner, OBE Appointed to the Authority Board on 1 May 2006; his appointment ended on 30 April 2010. He retired as Director, Human Resources at Smiths Group plc in October 2009. Prior to this, he was Director of Group Personnel at the support services group, Bunzl plc and Director of Personnel and Administration for the Scientific Equipment Division of Fisons plc. He led the largest single school Private Funded Initiative project in the UK when he was the Chair of Governors at Jewish Free School. He was awarded the OBE in 2003 for services to education.



Remuneration Report

The United Kingdom Atomic Energy Authority applies the Principles of Good Governance relating to Directors' remuneration to the extent that they are appropriate to the Authority. The principal implementation arrangements are set out below.

Remuneration policy

The remuneration of Directors is set by the Secretary of State for BIS with the approval of HM Treasury in accordance with the Atomic Energy Authority Act 1954. The Authority Remuneration Committee makes recommendations to BIS on the overall remuneration package for Executive Directors. The Non-Executive Directors who form the Committee are not involved in decisions relating to their own remuneration.

In reaching its recommendations, the Committee has regard to the following considerations:

- the need to recruit, retain and motivate suitably able and qualified people to exercise their different responsibilities; and
- the funding available to the Authority

The Committee takes account of the evidence it receives about wider economic considerations and the affordability of its recommendations.

Service contracts

Directors are appointed by the Secretary of State for BIS. This is normally for a three year term that may be renewed upon expiry in accordance with the guidelines issued by the Commissioner for Public Appointments.

Remuneration and pension entitlements

The individual components of the remuneration packages are:

Salary and fees

Executive Directors receive a basic salary which is reviewed annually. The Chairman and Non-Executive Directors receive fees for their services. Members of the Executive Committee also receive a basic salary which is reviewed annually.

Benefits

Executive Directors are entitled to certain benefits under the terms of their service contracts. These principally comprise a company car or personal allowance in lieu of car and private health care, and, for the current CEO, relocation assistance.

All Directors are also reimbursed for reasonable expenses incurred in line with the policy for the Authority's employees. These reimbursements are not included in the table below.

Performance related bonuses

The performance bonuses for Executive Directors are calculated in accordance with formulae that are agreed each year with BIS on the basis of recommendations from the Remuneration Committee. The total bonus is made up of two components: the performance of the Authority against specific quantified targets, and the performance of the individual against specific targets. Members of the Executive Committee receive bonuses based on formulae that are agreed each year by the Remuneration Committee. The performance related bonuses for 2010/11 shown in the table below are an estimate of the amounts which may be payable. The final amounts payable will be subject to approval by BIS where applicable.

Individual Directors' remuneration for the year is shown in the table below, with salaries disclosed on an actual payments basis.

This part of the report is subject to audit.

	Salary/ Fees⁽¹⁾	Benefits	Annual Bonus	2011 Total	2010⁽³⁾ Total
	£	£	£	£	£
Chairman					
Roger Cashmore (from 30/7/10)	16,801	–	–	16,801	–
Lady Judge (to 30/7/10)	20,000	–	–	20,000	60,000
Non-Executive Directors					
Keith Burnett (from 1/11/10)	6,250	–	–	6,250	–
Peter Jones (from 1/11/10)	6,250	–	–	6,250	–
Stephen McQuillan (from 1/11/10)	6,250	–	–	6,250	–
John Kennedy (to 31/5/10)	4,167	–	–	4,167	25,000
Mark Slaughter (to 31/5/10) ⁽²⁾	4,167	–	–	4,167	25,000
Ken Vowles (to 30/11/10)	16,667	–	–	16,667	25,000
Arnold Wagner (to 31/5/10) ⁽²⁾	4,167	–	–	4,167	25,000
Executive Directors					
Steve Cowley	155,295	30,818	20,577	206,690	144,312
Martin Cox (appointed to the Board 1/11/10)	114,119	5,000	10,191	129,310	59,721
Norman Harrison (resigned 31/10/09)	–	–	–	–	276,900
Colin Bayliss (resigned 31/10/09)	–	–	–	–	113,669
Andrew Jackson (resigned 31/10/09)	–	–	–	–	239,208
Members of the Executive Committee					
Eric Hollis	103,000	5,000	9,075	117,075	51,829
Derek Stork	103,733	6,946	9,160	119,839	52,939
	560,866	47,764	49,003	657,633	1,098,578

(1) The annual fees of the Chairman and Non-Executive Directors who were not in post for the whole of 2010/11 were:

Non-Executive Directors	£	Chairman	£
Keith Burnett	15,000	Roger Cashmore	25,000
Peter Jones	15,000	Lady Judge	60,000
Stephen McQuillan	15,000		
John Kennedy	25,000		
Mark Slaughter	25,000		
Ken Vowles	25,000		
Arnold Wagner	25,000		

(2) The appointments of Mark Slaughter and Arnold Wagner ended on 4 April and 30 April respectively. They received remuneration to 31/5/10, as they continued to provide advice to the Authority CEO up to that date.

(3) The annual salaries for Executive Directors and members of the Executive Committee for both 2010/11 and 2009/10 were:

	£
Steve Cowley	155,295
Martin Cox	114,119
Eric Hollis	103,000
Derek Stork	103,733

2009/10 comparatives for these individuals cover the period from 1 November 2009 to 31 March 2010.

Remuneration Report continued

Pension entitlements

Executive Directors and members of the Executive Committee are members of the United Kingdom Atomic Energy Authority Combined Pension Scheme that pays an annual pension based on pensionable final earnings together with a lump sum at normal retirement age. Benefits are also payable in the event of death or ill health retirement. The former Chief Executive Norman Harrison also had an unfunded pension arrangement to take account of pensionable pay above the earnings cap introduced by the Finance Act 1989, which is reflected in his pension entitlements in the table below.

Further details of the pension schemes and unfunded pensions can be found at Note 22 to the accounts.

The pension entitlements shown in the table below (which is subject to audit) are those that would be paid annually on retirement based on service to 31 March 2011 (or 31 October 2009 in the case of the Directors who resigned during 2009), and include the value of added years paid for by Directors.

	Accrued Pension 2010 £	Lump sum 2010 £	Increase in accrued pension £	Increase in lump sum £	Accrued Pension 2011 £	Lump Sum 2011 £
Executive Directors						
Steve Cowley	2,826	8,477	1,547	4,641	4,373	13,118
Martin Cox	42,894	128,682	1,848	5,545	44,742	134,227
Norman Harrison (resigned 31/10/09)	84,274	252,821	–	–	–	–
Colin Bayliss (resigned 31/10/09)	42,347	127,042	–	–	–	–
Andrew Jackson (resigned 31/10/09)	8,825	26,474	–	–	–	–
Members of the Executive Committee						
Eric Hollis	46,793	140,378	4,051	12,154	50,844	152,532
Derek Stork	42,411	127,234	1,714	5,141	44,125	132,375
	270,370	811,108	9,160	27,481	144,084	432,252

The following table (which is subject to audit) sets out the Cash Equivalent Transfer Value (CETV) of the Executive Directors' and Executive Committee members' accrued pension entitlements which have been calculated by the Scheme managers in accordance with the Occupational Pension Schemes (Transfer Values) Regulations 1996 as amended, having taken actuarial advice. The transfer values do not represent sums paid or payable to the Directors or Executive Committee members but represent a potential liability of the pension scheme or the Authority.

	Transfer Value 2010 ⁽¹⁾	Directors' contributions	Increase net of contributions	Transfer Value 2011
	£	£	£	£
Steve Cowley	50,540	6,180	21,487	78,207
Martin Cox	851,367	5,706	31,362	888,435
Members of the Executive Committee				
Eric Hollis	887,672	5,150	72,727	965,549
Derek Stork	986,059	5,187	35,155	1,026,401
	2,775,638	22,223	160,731	2,958,592

(1) The actuarial factors used to calculate CETVs were changed in 2010/11. The CETVs at 31/3/10 and 31/3/11 have both been calculated using the new factors, for consistency. The CETV at 31/3/10 therefore differs from the corresponding figure in last years report, which was calculated using the previous factors.

Members of the pension scheme have the option to pay Additional Voluntary Contributions; neither the contributions nor the resulting benefits are included in the above tables.

On behalf of the Board

Keith Burnett

Chairman of Remuneration Committee
5 July 2011

Steve Cowley

Chief Executive and Accounting Officer
5 July 2011

Statement of Directors' and Accounting Officer's Responsibility

Section 4(3) of the Atomic Energy Authority Act 1954 requires the United Kingdom Atomic Energy Authority to prepare a statement of accounts for each financial year in the form and on the basis set out in the Accounts Direction. The financial statements are prepared on an accruals basis and must give a true and fair view of the state of affairs of the Authority and of its profit and loss, recognised gains and losses and cash flows for the financial year.

In preparing those financial statements, the Accounting Officer is required to comply with the requirements of the Government Financial Reporting Manual and in particular to:

- observe the Accounts Direction issued by HM Treasury, including the relevant accounting and disclosure requirements, and apply suitable accounting policies on a consistent basis;
- make judgements and estimates that are reasonable and prudent;
- state whether applicable accounting standards as set out in the Government Financial Reporting Manual have been followed, and disclose and explain any material departures in the financial statements; and
- prepare the financial statements on a going concern basis.

The Accounting Officer of the Department for Business, Innovation and Skills (BIS) has appointed the Chief Executive as Accounting Officer of the United Kingdom Atomic Energy Authority. The responsibilities of an Accounting Officer, including responsibility for the propriety and regularity of the public finances for which the Accounting Officer is answerable, for keeping proper records and for safeguarding the Authority's assets, are set out in the Accounting Officers' Memorandum published by HM Treasury.

External audit

The Accounting Officer and Directors confirm that:

- there is no relevant audit information of which the auditors are unaware;
- all relevant steps have been taken to ensure that they are aware of relevant audit information; and
- all steps have been taken to establish that the auditors are aware of the information.

Details of the remuneration of the Group's auditor are set out in Note 9.

Statement on Internal Control

Scope of responsibility

As Accounting Officer, I have responsibility for maintaining a sound system of internal control that supports the achievement of the United Kingdom Atomic Energy Authority's policies, aims and objectives, whilst safeguarding the public funds and assets for which I am personally responsible, in accordance with the responsibilities assigned to me in Managing Public Money. I am assisted in this by the Chief Financial Officer.

The purpose of the system of internal control

The system of internal control is designed to manage risk to a reasonable level rather than to eliminate all risk of failure to achieve policies, aims and objectives; it can therefore only provide reasonable and not absolute assurance of effectiveness.

The system of internal control is based on an ongoing process designed to identify and prioritise the risks to the achievement of the Authority's policies, aims and objectives; to evaluate the likelihood of those risks being realised and the impact should they be realised; and to manage them efficiently, effectively and economically. During the period of change in Non-Executive Board membership during the year described at page 15, the Board and Audit and Remuneration Committees have remained quorate; and three outgoing Members continued to provide informed advice in the first part of the year to provide continuity during the period of transition. The new Chairman and Non-Executives have received an appropriate induction into the Authority's business, and have undertaken a programme of training to enable them to fulfil their new roles effectively. The system of internal control has therefore been in place in the Authority for the year ended 31 March 2011 and up to the date of approval of the Annual Report and Accounts, and generally accords with HM Treasury guidance.

Capacity to handle risk

The Board has delegated day-to-day responsibility for risk management to the Executive Committee and each member of the Committee is responsible for ensuring that a sound system of risk management is in place in the area of the organisation that they represent. The Authority Chief Financial Officer has taken overall responsibility for co-ordinating risk management arrangements across the Group and has also been appointed the Senior Information Risk Owner (SIRO). He works with the other members of the senior management team to ensure consistency of approach.

The risk and control framework

A Risk Management Champion, in his role as Head of Assurance, has been appointed to work with the members of the Executive Committee and their staff to facilitate the identification, evaluation and mitigation of key risks applicable to their areas of responsibility together with the design and operation of suitable internal controls. In addition, Information Asset Owners have been appointed throughout the Authority, to take the lead in identifying, monitoring and controlling data-related risks. Risks have been captured in terms of both threats and opportunities to achieving Authority objectives. The Authority Risk Register is regularly reviewed and updated to ensure that it is relevant to the activities of the Authority, and underpins the risk and control framework in place across the organisation.

The Authority's organisational structure has clearly documented and communicated levels of responsibility, delegated authority and reporting procedures. Management systems have been externally accredited. The professionalism and competence of employees is maintained through recruitment, performance appraisal, written job descriptions and personal training and development plans. The Board supports the highest levels of commitment and integrity from employees and has endorsed a code of business ethics.

Control procedures are documented in the Authority's management systems, which are subject to internal audit. These include a finance manual, corporate and local quality assurance manuals, safety, security and environmental management procedures. Procedures are designed to ensure that work is carried out to meet stated objectives, risk is managed through risk-based internal controls, delegations are based on risk assessments, and variances are identified and reported in a timely way to enable corrective actions to be taken. Procedures are also subject to review so that improvements to enhance controls can be made.

Business reports are prepared by the Authority executive team focusing on the following areas:

- key risks to the achievement of business objectives;
- progress against key performance indicators; and
- progress of programme against budget.

The Executive Committee considers the risk and performance reports quarterly and the financial report monthly. The Board takes an annual report on key risks and updates in the event of significant changes, and regular reports on performance and financial progress.

Statement on Internal Control

Review of effectiveness

As Accounting Officer, I have responsibility for reviewing the effectiveness of the system of internal control. My review of the effectiveness of the system of internal control is informed by the work of the internal auditors and the senior managers within the Authority who have responsibility for the development and maintenance of the internal control framework, the SIRO's report on how risks to information are being managed and controlled, and comments made by the external auditors in their management letter and other reports. I have been advised on the implications of the result of my review of the effectiveness of the system of internal control by the Board and the Audit Committee and a plan to address weaknesses and ensure continuous improvement of the system is in place.

The Authority has an internal audit department which operates in accordance with Government Internal Audit Standards and an Audit Charter approved by the Audit Committee. The work of the internal audit department is determined by analysis of the risks to which the Authority is exposed. The annual internal audit programme is based on this analysis. It includes reviews which test and challenge the effectiveness of the management of risks and information. The Head of Internal Audit provides me, as Accounting Officer, with regular reports on internal audit activity in the Authority. These reports include an independent opinion on the adequacy and effectiveness of the Authority's system of internal control. The Head of Internal Audit has confirmed that there is a generally sound system of internal control within the Authority group and that the adequacy and effectiveness of the control environment continues to operate to an acceptable standard.

There were no material internal control issues identified during the year.

Steve Cowley

Chief Executive and Accounting Officer
5 July 2011

The Certificate and Report of the Comptroller and Auditor General to the Houses of Parliament

United Kingdom Atomic Energy Authority

I certify that I have audited the financial statements of the United Kingdom Atomic Energy Authority for the year ended 31 March 2011 under the Atomic Energy Authority Act 1954. These comprise the Consolidated Statement of Comprehensive Income, Consolidated Statement of Financial Position, Consolidated Statement of Cash Flows, Consolidated Statement of Changes in Taxpayers' Equity and the related notes. These financial statements have been prepared under the accounting policies set out within them. I have also audited the information in the Remuneration Report that is described in that report as having been audited.

Respective responsibilities of the Accounting Officer and auditor

As explained more fully in the Statement of Directors' and Accounting Officer's Responsibilities, the Accounting Officer is responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view. My responsibility is to audit, certify and report on the financial statements in accordance with the Atomic Energy Authority Act 1954. I conducted my audit in accordance with International Standards on Auditing (UK and Ireland). Those standards require me and my staff to comply with the Auditing Practices Board's Ethical Standards for Auditors.

Scope of the Audit of the Financial Statements

An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the United Kingdom Atomic Energy Authority's and the group's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the United Kingdom Atomic Energy Authority; and the overall presentation of the financial statements. In addition I read all the financial and non-financial information in the annual report to identify material inconsistencies with the audited financial statements. If I become aware of any apparent material misstatements or inconsistencies I consider the implications for my certificate.

In addition, I am required to obtain evidence sufficient to give reasonable assurance that the expenditure and income reported in the financial statements have been applied to the purposes intended by Parliament and the financial transactions conform to the authorities which govern them.

Opinion on Regularity

In my opinion, in all material respects the expenditure and income have been applied to the purposes intended by Parliament and the financial transactions conform to the authorities which govern them.

Opinion on financial statements

In my opinion:

- the financial statements give a true and fair view of the state of the United Kingdom Atomic Energy Authority's and the group's affairs as at 31 March 2011 and the group's profit, changes in taxpayers' equity and cash flows for the year then ended; and
- the financial statements have been properly prepared in accordance with the Atomic Energy Authority Act 1954 and HM Treasury directions issued thereunder.

Opinion on other matters

In my opinion:

- the part of the Remuneration Report to be audited has been properly prepared in accordance with HM Treasury directions issued under the Atomic Energy Authority Act 1954; and
- the information given in the Management Commentary and Board of Directors sections included in the Annual Report for the financial year for which the financial statements are prepared is consistent with the financial statements.

Matters on which I report by exception

I have nothing to report in respect of the following matters which I report to you if, in my opinion:

- adequate accounting records have not been kept; or
- the financial statements and the part of the Remuneration Report to be audited are not in agreement with the accounting records or returns; or
- I have not received all of the information and explanations I require for my audit; or
- the Statement on Internal Control does not reflect compliance with HM Treasury's guidance.

Report

I have no observations to make on these financial statements.

Amyas C E Morse

Comptroller and Auditor General
National Audit Office
157-197 Buckingham Palace Road
Victoria, London, SW1W 9SP

7 July 2011

Consolidated Statement of Comprehensive Income for the year ended 31 March 2011

	Note	Group		Authority	
		2011 £m	2010 ⁽¹⁾ £m	2011 £m	2010 £m
Income					
Revenue	6	89.8	106.1	89.5	107.5
Other income		0.1	0.1	0.4	0.3
Share of revenue of joint venture		(0.3)	(0.3)	–	–
		89.6	105.9	89.9	107.8
Expenditure					
Raw materials and consumables		16.5	17.6	16.5	17.7
Other external expense		15.4	20.8	15.4	21.0
Staff costs	7	48.5	50.6	48.5	51.9
Depreciation, amortisation and impairment		0.3	0.3	0.3	0.3
Other expense		8.7	16.1	8.7	16.7
Costs capitalised		(0.6)	(4.8)	(0.6)	(4.8)
		88.8	100.6	88.8	102.8
Operating profit					
Finance income	10	0.4	0.4	0.2	0.1
Finance expense	10	(0.2)	(0.2)	(0.2)	(0.2)
Profit on disposal of fixed asset		6.3	–	6.3	–
Share of profits of joint venture after tax	14	0.1	(0.1)	–	–
		7.4	5.4	7.4	4.9
Profit before tax		7.4	5.4	7.4	4.9
Income tax credit (debit)	11	1.5	(0.7)	1.5	(0.7)
		8.9	4.7	8.9	4.2
Profit after tax					
Profit for the year from continuing operations		8.9	4.7	8.9	4.2
Profit for the year from discontinued operations		–	26.7	–	27.5
		8.9	31.4	8.9	31.7
Profit for the year					
Other comprehensive income:					
Gains on property revaluation		0.4	–	0.4	–
Actuarial gains (losses) on defined benefit pension plans		0.1	(0.2)	0.1	(0.2)
Income tax credit relating to components of other comprehensive income		0.1	–	0.1	–
Other comprehensive income for the year		0.6	(0.2)	0.6	(0.2)
		9.5	31.2	9.5	31.5
Total comprehensive income for the year					

The notes on pages 41 to 62 are an integral part of these financial statements.

⁽¹⁾ In accordance with changes in the Government Financial Reporting Manual, the 2010 Statement has been adjusted to exclude the notional cost of capital credit and its reversal. As this adjustment has no impact on the statement of financial position, a statement of financial position as at 31 March 2009 has not been presented.

Consolidated Statement of Financial Position

for the year ended 31 March 2011

	Note	Group		Authority	
		2011 £m	2010 £m	2011 £m	2010 £m
Non-current assets					
Property, plant and equipment	12	18.6	17.7	18.6	17.7
Investment property	13	37.9	52.9	37.9	52.9
Investments	14	2.6	2.5	5.6	5.5
Other receivables	16	194.8	185.1	194.8	185.1
Total non-current assets		253.9	258.2	256.9	261.2
Current assets					
Trade and other receivables	16	13.2	17.3	13.2	17.3
Investments	14	19.7	39.8	10.0	30.0
Cash and cash equivalents	17	51.4	34.7	48.1	31.4
Total current assets		84.3	91.8	71.3	78.7
Total assets		338.2	350.0	328.2	339.9
Current liabilities					
Trade and other payables	18				
Provisions for liabilities and charges	21	55.8	80.7	55.8	80.7
Total current liabilities		7.0	6.6	6.0	6.2
		62.8	87.3	61.8	86.9
Non-current assets plus net current assets		275.4	262.7	266.4	253.0
Non-current liabilities					
Other payables	18	0.1	–	0.1	–
Deferred income	19	0.1	0.2	0.1	0.2
Deferred income tax liabilities	20	9.5	13.6	9.5	13.6
Provisions for liabilities and charges	21	199.5	192.2	198.7	190.7
Total non-current liabilities		209.2	206.0	208.4	204.5
Assets less liabilities		66.2	56.7	58.0	48.5
Taxpayers' equity					
General reserve		13.7	13.7	13.7	13.7
Revaluation reserve		7.3	7.1	7.3	7.1
Retained earnings		45.2	35.9	37.0	27.7
		66.2	56.7	58.0	48.5

The notes on pages 41 to 62 are an integral part of these financial statements.

The Financial Statements on pages 37 to 62 were approved by the Board on 5 July 2011 and were signed on its behalf by:

Steve Cowley
Chief Executive and Accounting Officer

Eric Hollis
Chief Financial Officer

Consolidated Statement of Cash Flows

for the year ended 31 March 2011

	Note	Group		Authority	
		2011 £m	2010 £m	2011 £m	2010 £m
Cash flows from operating activities					
Profit for the year		8.9	31.4	8.9	31.7
Adjustments for:					
– Depreciation	12	0.3	0.3	0.3	0.3
– Deferred income released	19	(0.1)	(0.1)	(0.1)	(0.1)
– Change in fair value of investment property	13	(0.7)	(2.5)	(0.7)	(2.5)
– Net finance income recognised		(0.2)	(0.3)	–	–
– Income tax debit (credit)	11	(1.5)	0.7	(1.5)	0.7
– Profit on sale of fixed assets		(6.3)	–	(6.3)	–
– Gain on sale of discontinued operations, net of tax		–	(27.5)	–	(27.5)
Changes in working capital:					
– (Increase)/Decrease in trade and other receivables		4.4	20.5	4.4	0.5
– Investments		20.1	16.1	20.0	16.5
– Increase/(Decrease) in trade and other payables		(27.5)	(28.4)	(27.4)	(11.1)
– Derivative financial instruments		–	(5.7)	–	(5.9)
– Provisions for liabilities and charges		(2.3)	(0.1)	(2.3)	0.7
Net cash inflow (outflow) from operating activities		(4.9)	4.4	(4.7)	3.3
Cash flows from investing activities					
Purchase of property, plant and equipment	12	(0.8)	(4.9)	(0.8)	(4.9)
Proceeds from sale of property, plant and equipment		22.0	–	22.0	–
Disposal of discontinued operations, net of cash disposed of		–	(16.2)	–	–
Interest received		0.4	0.4	0.2	0.1
Net cash inflow (outflow) from investing activities		21.6	(20.7)	21.4	(4.8)
Cash flows from financing activities					
		–	–	–	–
Net increase/(decrease) in cash and cash equivalents in the period		16.7	(16.3)	16.7	(1.5)
Cash and cash equivalents at the beginning of the period		34.7	51.0	31.4	32.9
Cash and cash equivalents at end of the period		51.4	34.7	48.1	31.4

The notes on pages 41 to 62 are an integral part of these financial statements.

Consolidated Statement of Changes in Taxpayers' Equity for the year ended 31 March 2011

Group	General reserve £m	Revaluation reserve £m	Retained earnings £m	Total £m
Balance at 1 April 2009	59.1	7.2	8.7	75.0
Changes in Taxpayers' Equity 2009/10				
Total comprehensive income for the year	–	–	31.2	31.2
Disposal of discontinued activities	(45.4)	(0.1)	(4.0)	(49.5)
Balance at 31 March 2010	13.7	7.1	35.9	56.7
Changes in Taxpayers' Equity 2010/11				
Total comprehensive income for the year	–	0.5	9.0	9.5
Depreciation transfer	–	(0.3)	0.3	–
Balance at 31 March 2011	13.7	7.3	45.2	66.2

Authority	General reserve £m	Revaluation reserve £m	Retained earnings £m	Total £m
Balance at 1 April 2009	59.1	7.2	(3.8)	62.4
Changes in Taxpayers' Equity 2009/10				
Total comprehensive income for the year	–	–	31.5	31.5
Disposal of discontinued activities	(45.4)	–	–	(45.4)
Balance at 31 March 2010	13.7	7.1	27.7	48.5
Changes in Taxpayers' Equity 2010/11				
Total comprehensive income for the year	–	0.5	9.0	9.5
Depreciation transfer	–	(0.3)	0.3	–
Balance at 31 March 2011	13.7	7.3	37.0	58.0

Notes to the Financial Statements

1 General information

The Authority is an NDPB and was established by the Atomic Energy Authority Act 1954. The address of the Authority's registered office is Culham Science Centre, Abingdon, Oxfordshire, OX14 3DB. Its sponsoring government department is the Department for Business, Innovation and Skills. The Authority and its subsidiaries are referred to as "the Group".

The Accounting Officer authorised these financial statements for issue on 7 July 2011.

2 Basis of preparation

The financial statements comply with the provisions of the Atomic Energy Authority Act 1954 and the Accounts Direction issued by HM Treasury. The latter requires the financial statements to be prepared in accordance with the Government Financial Reporting Manual (FReM) issued by HM Treasury as updated annually. The accounting policies contained in the FReM apply International Financial Reporting Standards (IFRS) as adapted or interpreted for the public sector. Where the FReM permits a choice of accounting policy, the accounting policy which is judged to be most appropriate to the particular circumstances of the Group for the purpose of giving a true and fair view has been selected.

The financial statements have been prepared on a going concern basis, under the historical cost convention, except for land and buildings, investment properties, assets held-for-sale and derivative financial instruments which are stated at fair value. The financial statements are presented in pounds sterling which is the Authority's functional currency.

The preparation of financial statements in conformity with IFRS requires judgements, estimates and assumptions to be made that affect the application of accounting policies and the reported amounts of income, expenses, assets and liabilities. Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimates are revised and in any future periods affected. Information about significant areas of estimation uncertainty and critical judgements in applying accounting policies that have the most significant effect on the amounts recognised in the consolidated financial statements is included in the notes to the financial statements.

3 Significant accounting policies

The principal accounting policies applied by the Authority in the preparation of these financial statements are set out below. These policies have been applied consistently in dealing with all items that are considered material to the financial statements.

3.1 Consolidation

(a) Subsidiaries

Subsidiaries are entities controlled by the Group. Control exists when the Group has the power to govern the financial and operating policies of an entity so as to obtain benefits from activities and actually exercises this power. In assessing control, potential voting rights that are currently exercisable are taken into account. The financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases. The accounting policies of subsidiaries are changed when necessary to align them with the policies adopted by the Group.

(b) Joint ventures

Joint ventures are those entities over which the Group exercises joint control through a contractual arrangement. The results, assets and liabilities of joint ventures are incorporated in the consolidated financial statements using the equity method of accounting. Investments in joint ventures are initially carried in the statement of financial position at cost and subsequently adjusted by post-acquisition changes in the Group's share of the net assets of the joint venture, less any impairment in the value of individual investments. Losses of joint ventures in excess of the Group's interest in those joint ventures are not recognised, except where the Group has made a commitment to make good those losses.

(c) Transactions eliminated on consolidation

Inter-group transactions, balances and unrealised gains and losses on transactions between Group companies are eliminated on consolidation.

(d) Disposal of subsidiaries

The disposal of the subsidiaries UKAEA Ltd, DSRL and RSRL at 31 October 2009, included in the 2009/10 comparatives in these financial statements, was accounted for as a discontinued activity, in accordance with the requirements of IFRS 5, Non Current Assets held for Sale and Discontinued Operations, and, where applicable, International Accounting Standard (IAS) 1, Presentation of Financial Statements.

3.2 Revenue recognition

Revenue is recognised when the amount can be reliably measured, it is probable that future economic benefits will be received and when specific criteria have been met as described below. The amount of revenue is not considered to be reliably measurable until all contingencies relating to the sale have been resolved. Revenue is shown net of value added tax, returns, rebates and discounts.

(a) Service contracts

Revenue from cost recovery contracts for managing the UK's fusion research programme and the European Union's JET facility is recognised to the extent of costs incurred in the period that are expected to be recoverable from customers.

Revenue from other service contracts is recognised under the percentage-of-completion method. Revenue is generally recognised based on the services performed to date as a percentage of the total services to be performed. If circumstances arise that may change the original estimates of revenues, costs or extent of progress toward completion, estimates are revised. These revisions may result in increases or decreases in estimated revenues or costs and are reflected in income in the period in which the circumstances that give rise to the revision become known.

(b) Rental income

Rental income from investment properties is recognised in the statement of comprehensive income on a straight-line basis over the term of the lease. Lease incentives granted are recognised as an integral part of the total rental income over the term of the lease.

(c) Grant-in-aid

Grant-in-aid relating to revenue expenditure is recognised in the statement of comprehensive income in the same period as the related expenditure that it is intended to fund. Grant in aid relating to property, plant and equipment is included in non-current liabilities as deferred income and is credited to the statement of comprehensive income on a straight-line basis over the expected lives of the related assets.

This departure from the specified treatment in the FReM has been agreed with HM Treasury.

3.3 Research expenditure

Expenditure on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, is recognised in the statement of comprehensive income when incurred.

3.4 Employee benefits

(a) Short-term employee benefits

Short-term employee benefits are recognised in the year in which the related service is provided. A liability is recognised for the amount expected to be paid under short-term bonus arrangements if the Group has a present legal or constructive obligation to pay this amount as a result of past service provided by employees and the obligation can be estimated reliably.

(b) Termination benefits

Termination benefits are payable when employment is terminated by the Group before the normal retirement date, or whenever an employee accepts voluntary redundancy in exchange for these benefits. The Group recognises termination benefits when it is demonstrably committed to either: terminating the employment of current employees according to a detailed formal plan without possibility of withdrawal; or providing termination benefits as a result of an offer made to encourage voluntary redundancy. Benefits falling due more than 12 months after the reporting date are discounted to their present value.

(c) Retirement benefits

Obligations for contributions to defined contribution schemes are recognised as an expense when they are due. The Group has no further payment obligations once the contributions have been paid.

The Group operates three defined benefit schemes for the benefit of its employees. Two of these are closed to new members. The schemes are unfunded multi-employer defined benefit schemes. In accordance with the FReM, these schemes are accounted for as defined contribution schemes in these financial statements and the obligations recognised are limited to the contributions due.

Notes to the Financial Statements

The Group has a liability in respect of unfunded retirement benefits. The liability recognised in the statement of financial position is the present value of the defined benefit obligation at the reporting date, together with adjustments for unrecognised past-service costs. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using a real rate of interest set by HM Treasury. Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to equity in the period in which they arise.

3.5 Segment reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision-maker. The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the Authority Board.

3.6 Foreign currency translation

Transactions in foreign currencies are translated to the functional currency of the Group using the exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the reporting date are retranslated to the functional currency using the exchange rates at that date. Foreign exchange gains and losses resulting from the settlement of transactions and from the translation of monetary assets and liabilities are recognised in the statement of comprehensive income except when deferred in taxpayers' equity as qualifying cash flow hedges.

3.7 Property, plant and equipment

Land and buildings are occupied by the Group and are shown at fair value, based on periodic, but at least quinquennial, valuations by external independent valuers, less subsequent depreciation for buildings. In the intervening years, these valuations may be updated by the Group with the assistance of independent advice as required. Fair value is based on market values for existing use as there are no alternative uses for the land and buildings.

Increases in the carrying amount arising on revaluation of land and buildings are credited to the revaluation reserve. Decreases that offset previous increases of the same asset are charged against the revaluation reserve; all other decreases are charged to the statement of comprehensive income. Each year the difference between depreciation based on the revalued carrying amount of the asset charged to the income statement and depreciation based on the asset's original cost is transferred from the revaluation reserve to retained earnings.

In accordance with the FReM, other classes of property, plant and equipment with short useful lives or low book values are stated at historical cost less depreciation as a proxy for current valuations. Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. All other repairs and maintenance are charged to the statement of comprehensive income during the financial period in which they are incurred.

Land is not depreciated. Assets under construction are not depreciated until they are in use. Depreciation on other assets is calculated using the straight-line method to allocate their cost or revalued amounts to their residual values over their estimated useful lives, as follows:

–	Buildings	up to 40 years
–	Plant, machinery and equipment	up to 10 years

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each reporting date.

An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount (Note 3.11).

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount and any amounts to be released from deferred income on disposal and are recognised in the statement of comprehensive income. When revalued assets are sold, any amounts included in the revaluation reserve are transferred to retained earnings.

3.8 Investment property

Investment property, comprising freehold land and buildings, is held either for rental yields or capital appreciation and is not occupied by the Group. Investment property is carried at fair value, representing open market value determined annually by external independent valuers.

Fair value is based on active market prices, adjusted, if necessary, for any difference in the nature, location or condition of the specific asset. In the absence of current prices in an active market, the valuations are prepared by considering the aggregate of the estimated cash flows expected to be received from renting out the property. Valuations reflect the allocation of maintenance and insurance responsibilities between the Group and the lessee and the remaining economic life of the property.

Changes in fair values are recognised in the statement of comprehensive income.

3.9 Intangible assets

Intangible assets comprise acquired computer software licences and are stated at cost, net of amortisation and any provision for impairment. The cost of intangible assets, less estimated residual value, is amortised on a straight line basis over their estimated useful lives of up to five years.

3.10 Non-current assets held for sale

Non-current assets are classified as assets held for sale when their carrying amount is to be recovered principally through a sale transaction and a sale is considered highly probable. They are stated at the lower of carrying amount and fair value less costs to sell if their carrying amount is to be recovered principally through a sale transaction rather than through continuing use.

3.11 Impairment of non-financial assets

Assets that are subject to depreciation or amortisation are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows. Non-financial assets that suffered impairment are reviewed for possible reversal of the impairment at each reporting date.

3.12 Inventories

Inventories are stated at the lower of cost and net realisable value. Cost is determined using the first-in, first-out method. The cost of work in progress comprises raw materials, direct labour, other direct costs and related production overheads. Net realisable value is the estimated selling price in the ordinary course of business, less applicable selling expenses.

3.13 Cash and cash equivalents

Cash and cash equivalents includes cash in hand, deposits held at call with banks and other short-term highly liquid investments with original maturities of three months or less.

3.14 Current and deferred income tax

The tax credit for the period comprises current and deferred tax. Tax is recognised in the income statement, except to the extent that it relates to items recognised directly in equity. In this case, the tax is also recognised in equity.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantially enacted at the reporting date, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognised, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. Deferred tax is determined using tax rates (and laws) that have been enacted or substantially enacted by the reporting date and are expected to apply when the related deferred tax asset is realised or the deferred tax liability is settled.

Deferred tax assets are recognised only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

Notes to the Financial Statements

3.15 Provisions

Provisions are recognised when: the Group has a present legal or constructive obligation as a result of past events; it is probable that an outflow of resources will be required to settle the obligation; and the amount has been reliably estimated.

Where there are a number of similar obligations, the likelihood that an outflow will be required in settlement is determined by considering the class of obligations as a whole. A provision is recognised even if the likelihood of an outflow with respect to any one item included in the same class of obligations may be small.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation using real rates of interest. The increase in the provision due to passage of time is recognised as finance expense.

Where assurances have been received from another party that they will reimburse some or all of the expenditure required to settle a provision, a reimbursement asset will be recognised to the extent of the amount expected to be reimbursed. The reimbursement asset is shown separately from the related provision in the statement of financial position.

3.16 Financial instruments

(a) Non-derivative financial instruments

Non-derivative financial instruments comprise trade and other receivables, investments, cash and cash equivalents and trade and other payables and are recognised initially at fair value. Subsequent to initial recognition, non-derivative financial instruments are measured as described below.

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are included in current assets, except for maturities greater than 12 months after the reporting date which are classified as non-current assets. The carrying values, less impairment provision, of loans and receivables are assumed to approximate their fair values.

Other financial liabilities are non-derivative financial instruments with fixed or determinable payments that are not quoted in an active market. They are included in current liabilities, except for maturities greater than 12 months after the reporting date which are classified as non-current liabilities. The carrying values of other financial liabilities are assumed to approximate their fair values.

(b) Derivative financial instruments

Derivative financial instruments comprise financial instruments held to hedge foreign currency risk exposures and embedded derivatives in host contracts. Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently re-measured at their fair value. The method of recognising the resulting gain or loss depends on whether the derivative is designated as a hedging instrument.

Financial instruments held to hedge foreign currency risk exposures are designated as cash flow hedges if the criteria for applying hedge accounting under IAS 39 are met. The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognised in equity. The gain or loss relating to the ineffective portion is recognised immediately in the statement of comprehensive income. Amounts accumulated in equity are recycled in the statement of comprehensive income in the periods when the hedged item affects profit or loss.

When a hedging instrument expires or is sold, or when a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in equity at that time remains in equity and is recognised when the forecast transaction is ultimately recognised in the statement of comprehensive income. When a forecast transaction is no longer expected to occur, the cumulative gain or loss that was reported in equity is immediately transferred to the statement of comprehensive income.

If the criteria for applying hedge accounting are not met, the gain or loss on derivative financial instruments is credited or charged to the statement of comprehensive income instead of being deferred in equity.

Embedded derivatives are separated from the host contract and accounted for separately if the economic characteristics and risks of the host contract and the embedded derivative are not closely related. Changes in the fair value of separable embedded derivatives are recognised immediately in the statement of comprehensive income.

3.17 Operating leases

Payments made under operating leases are recognised in the statement of comprehensive income on a straight-line basis over the term of the lease. Lease incentives are recognised as an integral part of the total lease expense over the term of the lease.

4 Changes in presentation of the financial statements

4.1 Statement of Comprehensive Income: Authority profit

In the previous financial statements, the Directors took advantage of the exemption available under S408 of the Companies Act 2006 and did not present a statement of comprehensive income for the Authority alone. This presentation has been changed in these financial statements and a statement of comprehensive income, with 2009/10 comparative, has been presented for the Authority.

4.2 Notional Cost of Capital

In the previous financial statements, as required by the FReM, a charge reflecting the cost of capital utilised by the Authority was included in the statement of comprehensive income. The FReM has now withdrawn this requirement with effect from 1 April 2010, and the charge has been removed from the financial statements, and the 2009/10 comparative. The profit for 2009/10 is not affected by this change as the charge was reversed on the face of the income statement. As this adjustment has no impact on the statement of financial position, a statement of financial position at 31 March 2009 has not been presented.

5 Financial risk management

Due to the nature of its activities, the Group is not exposed to the same degree of financial risk faced by other business entities. Financial instruments play a much more limited role in creating or changing risk and generally financial assets and liabilities are generated from day-to-day operational activities and not held to change the risks facing the Group in undertaking its activities. While the Group has significant financial liabilities relating to decommissioning and restructuring, most of the risks attached to these liabilities do not rest with the Group as they are broadly matched by reimbursement assets.

(a) Foreign exchange risk

Foreign exchange risk arises when future commercial transactions or recognised assets or liabilities are denominated in a currency that is not the Group's functional currency. The Group operates internationally and is exposed to foreign exchange risk arising from various currency exposures, primarily with respect to the euro. To manage foreign exchange risk, the Group may use forward contracts for the purchase or sale of foreign currencies.

(b) Interest rate risk

As the Group has no borrowings or significant interest-bearing assets, the Group's income and operating cash flows are substantially independent of changes in market interest rates. Cash balances on deposit are held in highly rated fixed term deposits and the exposure to interest rate risk is minimal and appropriately managed.

(c) Credit risk

The Group's income is received primarily from public sector bodies in the UK and Europe and the exposure to credit risk is therefore considered to be low.

(d) Liquidity risk

The Group is primarily financed by income from other public sector bodies, in the UK and in Europe and there is therefore no exposure to significant liquidity risks. The Group has a facility to request temporary working capital funding from the Department for Business, Innovation and Skills should the need arise.

Notes to the Financial Statements

6 Segment information

As the majority of the Group's activities do not represent the provision of public services, segment information in accordance with IFRS 8 is included in these financial statements and the fees and charges analysis required by the FReM is not disclosed.

6.1 Reportable segments

The Group has two reportable segments, as described below, which are the Group's main business areas reported to the Authority Board. The business areas offer different services and are managed separately because they require different strategies and have different funding streams.

The following summary describes the operations in each of the Group's reportable segments:

(a) Fusion research – research into using fusion to create a new source of energy that is safe and environmentally benign.

(b) Property management – management and development of the Culham and Harwell campuses for future scientific use.

Other segments include grant-in-aid funding, nuclear records services and insurance. None of these segments meets any of the quantitative thresholds for determining reportable segments in 2011 or 2010. The results of these segments are included in the "other" column in the segmental analyses below.

Two segments (Site restoration and Consultancy services) were sold in October 2009 and are included in the comparatives for 2009/10.

The segment information for the reportable segments for the years ended 31 March 2011 and 31 March 2010 is as follows:

	Fusion research	Property management	Other	Site restoration (discontinued October 2009)	Consultancy services (discontinued October 2009)	Total
	£m	£m	£m	£m	£m	£m
Year ended 31 March 2011						
Total segment revenue	82.8	3.6	3.4	–	–	89.8
Inter-segment revenue	–	–	–	–	–	–
External segment revenue	82.8	3.6	3.4	–	–	89.8
Operating profit/(loss)	–	0.7	0.1	–	–	0.8
Finance income	0.2	–	0.2	–	–	0.4
Finance expense	–	–	(0.2)	–	–	(0.2)
Profit on disposal of fixed asset	–	6.3	–	–	–	6.3
Share of profits of joint venture	–	0.1	–	–	–	0.1
Profit/(loss) before income tax	0.2	7.1	0.1	–	–	7.4
Year ended 31 March 2010						
Total segment revenue	91.7	6.1	10.3	119.6	21.7	249.4
Inter-segment revenue	–	–	(0.9)	(3.8)	(9.5)	(14.2)
External segment revenue	91.7	6.1	9.4	115.8	12.2	235.2
Operating profit/(loss)	(0.1)	2.5	2.9	(0.2)	(0.6)	4.5
Finance income	0.1	–	0.3	–	–	0.4
Finance expense	–	–	(0.2)	–	–	(0.2)
Profit/(loss) before income tax	–	2.5	3.0	(0.2)	(0.6)	4.7

Sales between segments are carried out at arm's length. Revenue from external parties is measured in a manner consistent with that in the statement of comprehensive income.

6.2 Reconciliation of reportable segment revenues, profit or loss and net assets

	2011	2010
	£m	£m
Revenues		
Total revenue for reportable segments	86.4	239.1
Other revenue	3.4	10.3
Elimination of inter-segment revenue relating to discontinued operations	–	(13.3)
Elimination of discontinued operations	–	(130.0)
Elimination of inter-segment revenue included in continuing operations	–	(0.9)
Consolidated revenue	89.8	105.2
Profit or loss		
Total profit or loss for reportable segments	7.3	1.7
Other profit or loss	0.1	3.0
Unallocated amounts	–	–
Consolidated profit before income tax	7.4	4.7
Assets		
Net assets for reportable segments	66.5	62.4
Other net assets	(0.3)	(5.7)
Other unallocated amounts	–	–
Consolidated net assets	66.2	56.7

6.3 Geographical segments

In presenting information on the basis of geographical segments, segment revenue is based on the geographical location of customers. Segment assets are based on the geographical location of the assets.

Group	Revenue		Net assets	
	2011	2010	2011	2010
	£m	£m	£m	£m
United Kingdom	32.8	183.6	66.2	56.7
Europe	56.9	65.3	–	–
Rest of the world	0.1	0.5	–	–
	89.8	249.4	66.2	56.7

6.4 Revenue from major customers

	2011	2010
	£m	£m
European Union	56.5	60.7
Nuclear Decommissioning Authority (NDA)	1.0	115.0

Revenue from the European Union is attributable to the fusion research segment.

Revenues from the NDA were largely attributable to the site restoration and consultancy services segments discontinued in October 2009. 2011 revenue is mainly attributable to the provision of nuclear records services at Harwell.

Notes to the Financial Statements

7 Staff Costs

	2011 £m	2010 £m
Directly employed staff:		
Salaries, bonuses and allowances	23.2	24.1
Social security costs	2.0	2.2
Pension costs – defined contribution plans	3.3	3.5
	28.5	29.8
Other staff	20.0	20.8
	48.5	50.6

The average number of full-time equivalent staff during the year was as follows:

	2011	2010
Directly employed	568	579
Other staff	467	465
	1,035	1,044

Exit packages paid to employees

Exit package cost band	Number of compulsory redundancies		Number of other departures agreed		Total number of exit packages by cost band	
	2010/11	2009/10	2010/11	2009/10	2010/11	2009/10
< £10,000	–	–	4	–	4	–
£10,000 - £25,000	–	–	5	(1)	5	(1)
£25,000 - £50,000	–	–	2	(7)	2	(7)
£50,000 - £100,000	–	–	5	(3)	5	(3)
£100,000 - £150,000	–	–	2	(1)	2	(1)
£150,000 - £200,000	–	–	–	(1)	–	(1)
£200,000 - £250,000	–	–	–	–	–	–
£250,000 - £300,000	–	–	1	(5)	1	(5)
£300,000 - £350,000	–	–	2	–	2	–
£350,000 - £400,000	–	–	–	(1)	–	(1)
£400,000 - £450,000	–	–	–	–	–	–
£450,000 - £500,000	–	–	–	(1)	–	(1)
Total number of exit packages	–	–	21	(20)	21	(20)
Total resource cost £	–	–	1,804,419	(2,942,557)	1,804,419	(2,942,557)

The majority of the departure costs disclosed above relate to voluntary early release costs paid in accordance with redundancy terms set out in the Authority's Conditions of Employment Manual. Exit costs are accounted for in full in the year of departure. Where applicable, the additional costs of early releases are met by the Authority and not by the Authority's Combined Pension Scheme (CPS). Ill-health retirement costs are met by the CPS and are not included in the table.

8 Operating profit

Operating profit has been arrived at after charging/(crediting):

	2011	2010
	£m	£m
Change in fair value of investment property	(0.7)	(2.5)
Net foreign exchange gains	(0.1)	–
Operating lease rentals -plant and machinery	0.1	0.3

9 Auditor's remuneration

The total remuneration of the Group's auditor, National Audit Office, for services provided to the Group was:

	2011	2010
	£000	£000
Audit fees		
Authority	44	44
Authority pension schemes	23	22
	67	66
Other services (audit of IFRS adoption in 2010 and audit of Whole of Government Accounting)	3	8
	70	74

10 Finance income and expense

	Group		Authority	
	2011	2010	2011	2010
	£m	£m	£m	£m
Income				
Interest on term bank deposits	0.4	0.4	0.2	0.1
Expense				
Revalorisation of provisions:				
– Changes in price levels	9.2	6.6	9.2	6.6
– Unwinding of discount	3.8	3.5	3.8	3.5
– Escalation of reimbursement receivables	(12.9)	(10.0)	(12.9)	(10.0)
Interest on unfunded retirement benefits	0.1	0.1	0.1	0.1
	0.2	0.2	0.2	0.2

Notes to the Financial Statements

11 Income tax (expense)/credit

	Group and Authority	
	2011	2010
	£m	£m
Current tax		
Current tax on profit for the year	(2.5)	–
Deferred tax		
Origination and reversal of temporary differences	4.0	(0.7)
Income tax credit (debit) excluding tax on sale of discontinued operations and share of income tax of joint venture	1.5	(0.7)

	2011	2010
	£m	£m
Income tax from continuing operations	1.5	(0.7)
Income tax from discontinued operations (excluding gain on sale)	–	–
	1.5	(0.7)
Income tax on gain on sale of discontinued operations	–	–
Share of income tax of joint venture	–	–
Total income tax (expense)/credit	1.5	(0.7)

The tax on the Group's profit before tax differs from the theoretical amount that would arise using the weighted average tax rate applicable to profits of the consolidated entities as follows:

	2011	2010
	£m	£m
Profit for the year	8.9	31.4
Income tax expense/(credit)	(1.5)	0.7
Profit excluding income tax	7.4	32.1
Tax calculated at the standard UK corporation tax rate of 28%	2.1	9.0
Tax effects of:		
– Reversal of timing differences	–	0.1
– Expenses not deductible	(0.7)	(0.2)
– Capital gain in excess of accounting profit recognised	3.7	–
– Enhanced relief for research and development expenditure	(2.7)	(2.5)
– Substantial Shareholding tax exemption	–	(7.7)
– Tax losses for which no deferred income tax asset was recognised	0.1	1.3
Current tax expense for the year	2.5	–

The income tax charged/(credited) to equity during the year is as follows:

	2011	2010
	£m	£m
Fair value gains on property, plant and equipment	(0.1)	–

12 Property, plant and equipment

Group	Land and buildings £m	Plant and equipment £m	Assets under construction £m	Total £m
Cost or valuation				
At 1 April 2009	13.4	4.6	1.8	19.8
Additions	–	0.1	4.8	4.9
Disposals	–	(0.8)	–	(0.8)
Revaluation	–	–	–	–
Disposal of subsidiary	(0.2)	(0.5)	–	(0.7)
At 31 March 2010	13.2	3.4	6.6	23.2
Additions	–	0.2	0.6	0.8
Disposals	(0.8)	(0.6)	–	(1.4)
Revaluation	0.4	–	–	0.4
At 31 March 2011	12.8	3.0	7.2	23.0
Depreciation and impairment				
At 1 April 2009	2.3	4.1	–	6.4
Depreciation charge	0.2	0.1	–	0.3
Disposals	–	(0.7)	–	(0.7)
Disposal of subsidiary	(0.1)	(0.4)	–	(0.5)
At 31 March 2010	2.4	3.1	–	5.5
Depreciation charge	0.2	0.1	–	0.3
Disposals	(0.8)	(0.6)	–	(1.4)
At 31 March 2011	1.8	2.6	–	4.4
Net book value				
At 31 March 2010	10.8	0.3	6.6	17.7
At 31 March 2011	11.0	0.4	7.2	18.6

Notes to the Financial Statements

Authority	Land and buildings £m	Plant and equipment £m	Assets under construction £m	Total £m
Cost or valuation				
At 1 April 2009	13.2	4.1	1.8	19.1
Additions	–	0.1	4.8	4.9
Disposals	–	(0.8)	–	(0.8)
Revaluation	–	–	–	–
At 31 March 2010	13.2	3.4	6.6	23.2
Additions	–	0.2	0.6	0.8
Disposals	(0.8)	(0.6)	–	(1.4)
Revaluation	0.4	–	–	0.4
At 31 March 2011	12.8	3.0	7.2	23.0
Depreciation and impairment				
At 1 April 2009	2.2	3.7	–	5.9
Depreciation charge	0.2	0.1	–	0.3
Disposals	–	(0.7)	–	(0.7)
At 31 March 2010	2.4	3.1	–	5.5
Depreciation charge	0.2	0.1	–	0.3
Disposals	(0.8)	(0.6)	–	(1.4)
At 31 March 2011	1.8	2.6	–	4.4
Net book value				
At 31 March 2010	10.8	0.3	6.6	17.7
At 31 March 2011	11.0	0.4	7.2	18.6

All property, plant and equipment is owned by the Group.

Capital expenditure contracted for at the reporting date but not recognised in the financial statements was £0.3m (2010-£0.9m).

13 Investment property

	Group and Authority	
	2011 £m	2010 £m
At 1 April	52.9	50.4
Disposal	(15.7)	–
Change in fair value	0.7	2.5
At 31 March	37.9	52.9

Investment properties were valued at fair value at 28 February 2011 by independent valuers. The valuations were undertaken by the Valuation Office in accordance with the Appraisal and Valuation Manual of the Royal Institute of Chartered Surveyors. The Group has adopted this valuation at the reporting date on the grounds that there were no material changes between the valuation date and the reporting date.

Investment properties are held for their investment potential. Rental income from tenants outside the Group is negotiated at arm's length. The following amounts have been recognised in the income statement:

	Group and Authority	
	2011 £m	2010 £m
Rental income	1.8	2.0
Direct operating expenses:		
– Investment properties that generated rental income	1.5	1.9
– Investment properties that did not generate rental income	0.4	0.3

14 Investments

	Group		Authority	
	2011 £m	2010 £m	2011 £m	2010 £m
Non-current				
At 1 April	2.5	2.6	5.5	20.6
Additions	0.1	–	0.1	–
Disposals	–	–	–	(15.0)
Impairment	–	(0.1)	–	(0.1)
At 31 March	2.6	2.5	5.6	5.5
Investment in subsidiary undertakings	–	–	3.0	3.0
Investment in joint venture	2.6	2.5	2.6	2.5
	2.6	2.5	5.6	5.5
Current				
Term bank deposits	19.7	39.8	10.0	30.0

(a) Investment in subsidiary undertakings

Name	Country of incorporation	Ownership interest (%)	
		2011	2010
AEA Insurance Limited	Isle of Man	100	100

All subsidiary undertakings are included in the consolidation. The proportion of voting rights in the subsidiary undertakings held directly by the Group do not differ from the proportion of shares held.

Notes to the Financial Statements

(b) Investment in joint venture

The Group has a 50% interest in a joint venture, Harwell Science and Innovation Campus Public Sector Limited Partnership, which is responsible for the development of the Harwell Oxford Campus. The interest in the joint venture is accounted for using the equity method in the Group financial statements.

	Group & Authority	
	2011 £m	2010 £m
At 1 April	2.5	2.6
Transfer of assets	–	–
Share of profits net of tax	0.1	(0.1)
At 31 March	2.6	2.5
Analysed as follows:		
Cost	2.5	2.6
Share of retained profits	0.1	(0.1)
	2.6	2.5

The following amounts represent the Group's 50% share of the income, results, assets and liabilities of the joint venture. They are included in the Statement of Comprehensive Income and Statement of Financial Position:

	2011 £m	2010 £m
Profit net of tax		
Income	0.3	0.3
Expenses	0.2	(0.4)
	0.1	(0.1)
Assets		
Non-current assets	1.6	1.5
Current assets	1.6	1.4
	3.2	2.9
Liabilities		
Current liabilities	0.4	0.2
Non-current liabilities	0.2	0.2
	0.6	0.4
Net assets	2.6	2.5

There are no contingent liabilities relating to the Group's interest in the joint venture, and no contingent liabilities of the venture itself.

(c) Term bank deposits

Term bank deposits are held with major UK banks. The average interest rate on the deposits held at 31 March 2011 was 1.48% (2010 – 1.28%). The credit risk associated with these investments is considered to be low because of the size and status of the banks involved.

15 Financial instruments by category

All financial assets of the Group and the Authority were categorised as loans and receivables at both 31 March 2011 and 31 March 2010. All financial liabilities of the Group and the Authority were categorised as other financial liabilities at both 31 March 2011 and 31 March 2010.

16 Trade and other receivables

	Group and Authority	
	2011	2010
	£m	£m
Non-current		
Reimbursement receivables (Note 21):		
– Site restoration	177.1	164.3
– Restructuring	17.1	20.3
Other receivables	0.6	0.5
	194.8	185.1
Current		
Trade receivables	1.5	1.7
Reimbursement receivables (Note 21):		
– Site restoration	–	–
– Restructuring	4.9	4.5
Prepayments and accrued income	6.1	9.5
VAT	0.7	0.8
Other receivables	–	0.8
	13.2	17.3

There are no impaired assets in any of the classes of trade and other receivables.

Receivables can be analysed as follows:

	Group and Authority	
	2011	2010
	£m	£m
Non-current		
Other Central Government bodies	193.2	183.3
Bodies external to Government	1.6	1.8
	194.8	185.1
Current		
Other Central Government bodies	6.3	5.8
Bodies external to Government	6.9	11.5
	13.2	17.3

17 Cash and cash equivalents

	Group		Authority	
	2011	2010	2011	2010
	£m	£m	£m	£m
Cash at bank and on hand	18.1	31.4	18.1	31.4
Short term bank deposits	33.3	3.3	30.0	–
	51.4	34.7	48.1	31.4

All bank balances were held with commercial banks.

Notes to the Financial Statements

18 Trade and other payables

	Group and Authority	
	2011 £m	2010 £m
Non-current		
Payments received on account	0.1	–
Current		
Trade payables	0.3	1.4
Accrued costs	9.0	10.6
Payments received on account	41.3	66.4
Social security and other taxes	3.1	0.8
Other payables	2.1	1.5
	55.8	80.7

Payables can be analysed as follows:

	Group and Authority	
	2011 £m	2010 £m
Other Central Government bodies	3.5	1.2
Bodies external to Government	52.3	79.5
	55.8	80.7

19 Deferred income

Deferred income consists of grant-in-aid funding received to finance capital expenditure.

	Group and Authority	
	2011 £m	2010 £m
At 1 April	0.2	0.3
Grant-in-aid received	–	–
Released to income statement	(0.1)	(0.1)
As at 31 March 2011	0.1	0.2

20 Deferred income tax

Group and Authority	Investment property £m	Land and buildings £m	Total £m
At 1 April 2009	10.3	2.6	12.9
Income statement debit	0.7	–	0.7
Charged directly to equity	–	–	–
At 31 March 2010	11.0	2.6	13.6
Income statement debit/(credit):			
- Revaluation	0.2	–	0.2
- Disposal	(3.7)	–	(3.7)
- Effect of change in tax rate	(0.5)	–	(0.5)
Charged directly to equity:			
- Revaluation	–	0.1	0.1
- Effect of change in tax rate	–	(0.2)	(0.2)
At 31 March 2011	7.0	2.5	9.5

The March 2011 Budget announced that the UK corporation tax rate will reduce from 28% to 23% over the 4 year period from 1 April 2011. The first reduction in the rate from 28% to 26% was substantively enacted on 29 March 2011 and is effective from 1 April 2011. The deferred tax arising as a result of this rate change is disclosed above.

The additional reductions to 23% will reduce the deferred tax liability by an additional £1.1m over the 4 years. This has not been included in the financial statements as the rates are not substantively enacted.

Deferred income tax losses are recognised for tax depreciation and tax loss carry-forwards to the extent that the realisation of the related tax benefit through future taxable profits is probable. The Group did not recognise deferred income tax assets of £2.4m (2010 – £30.3m) in respect of tax losses amounting to £9.3m that can be carried forward against future taxable income. The reduction in the tax asset follows the conclusion of discussions with HMRC on the treatment of brought forward losses and capital allowances in excess of depreciation, the majority of which related to the discontinued decommissioning activity. HMRC have now agreed an apportionment of brought forward losses appropriate to the business of the continuing Authority.

21 Provisions for liabilities and charges

Group	Site restoration £m	Restructuring £m	Other £m	Total £m
At 1 April 2009	154.4	35.7	11.3	201.4
Changes in price levels	6.6	–	–	6.6
Unwinding of discount	3.4	0.5	–	3.9
Increase/(decrease) in provision	–	4.5	(0.1)	4.4
Disposal of discontinued operations	–	(5.9)	(5.1)	(11.0)
Expenditure during year	–	(5.7)	(0.8)	(6.5)
At 31 March 2010	164.4	29.1	5.3	198.8
Changes in price levels	9.2	0.8	–	10.0
Unwinding of discount	3.6	0.7	–	4.3
Increase/(decrease) in provision	(0.1)	(0.1)	(0.1)	(0.3)
Expenditure during year	–	(5.5)	(0.8)	(6.3)
At 31 March 2011	177.1	25.0	4.4	206.5
At 31 March 2010				
Non-current	164.4	23.5	4.3	192.2
Current	–	5.6	1.0	6.6
	164.4	29.1	5.3	198.8
At 31 March 2011				
Non-current	177.1	19.7	2.7	199.5
Current	–	5.3	1.7	7.0
	177.1	25.0	4.4	206.5

Notes to the Financial Statements

Authority	Site restoration £m	Restructuring £m	Other £m	Total £m
At 1 April 2009	154.4	29.8	3.7	187.9
Changes in price levels	6.6	–	–	6.6
Unwinding of discount	3.4	0.5	–	3.9
Increase/(decrease) in provision	–	4.5	0.5	5.0
Expenditure during year	–	(5.7)	(0.8)	(6.5)
At 31 March 2010	164.4	29.1	3.4	196.9
Changes in price levels	9.2	0.8	–	10.0
Unwinding of discount	3.6	0.7	–	4.3
Increase/(decrease) in provision	(0.1)	(0.1)	–	(0.2)
Expenditure during year	–	(5.5)	(0.8)	(6.3)
At 31 March 2011	177.1	25.0	2.6	204.7
At 31 March 2010				
Non-current	164.4	23.5	2.8	190.7
Current	–	5.6	0.6	6.2
	164.4	29.1	3.4	196.9
At 31 March 2011				
Non-current	177.1	19.7	1.9	198.7
Current	–	5.3	0.7	6.0
	177.1	25.0	2.6	204.7

(a) Site restoration

The decommissioning provision represents the estimated costs of decommissioning fusion research facilities at the Authority's Culham site, including the storage, processing and eventual disposal of radioactive wastes.

Calculation of the liabilities is based on the technical assessments of the processes and methods likely to be used in the future to carry out the work. Estimates are derived from the latest technical knowledge and commercial information available, taking into account current legislation, regulations and Government policy. Summary figures are built up by aggregating detailed estimates for individual liabilities. Allowance is also made for infrastructure costs, which are an appropriate share of site running costs and other overhead costs attributable to plant and buildings. The calculation is reassessed annually.

The best estimate of the cost of dealing with the liabilities at 31 March 2011 is discounted at 2.2% to the reporting date and expressed in 2010/11 money values using RPIX to inflate costs from the dates of the original assessment. The timescale over which it is estimated the costs will need to be incurred is as follows:

	Group and Authority	
	2011 £m	2010 £m
Up to 3 years	0.1	0.1
From 4 to 10 years	57.4	32.9
Beyond 10 years	119.6	131.4
	177.1	164.4

The best estimate of the undiscounted cost of dealing with the liabilities is £233.3m (2010 - £221.3m).

A letter issued by the then Secretary of State for Energy in 1986 stated that the Government was prepared to continue to accept responsibility in principle for those costs which the Authority incurs in treating and disposing of nuclear wastes and in decommissioning plant arising from:

- (i) programmes carried out by the Authority and its predecessors prior to 1 April 1986; and
- (ii) programme agreement work undertaken for BIS and its predecessors after 1 April 1986.

These assurances have been reconfirmed by BIS in July 2011. On the basis of these assurances a matching receivable is included in the statement of financial position.

Since much of the work required to deal with the liabilities will not be done until well into the future, there is a significant uncertainty as to the amount of the provision and the associated receivable due from BIS. This significant uncertainty does not impact on either net assets or the net profit reported in the financial statements.

The Authority has assessed the impact of the date of JET closure, which is a key variable, on the best estimate included in the 2010/11 Annual Accounts. This gives a range of undiscounted and discounted costs as follows:

Undiscounted costs - £232.9m to £233.6m.

Discounted costs - £169.7m to £184.9m.

Costs associated with new equipment and facilities installed during the recent JET upgrade are not included in the estimates above as these cannot be assessed with sufficient certainty at this stage for provision to be made.

(b) Restructuring

The restructuring provisions represent termination benefits payable under early retirement arrangements to employees who had retired early, or had accepted early retirement, before 31 March 2011. These benefits continue at least until the date at which the employee would have reached normal retirement age. The restructuring provisions are discounted to the reporting date at the discount rate for pensions liabilities, which is 2.9% in 2010/11. The undiscounted cost of the group provisions is £28.5m (2010 – £31.8m) and the benefits are estimated to be payable over a period up to 30 years.

Part of the expenditure required to settle the restructuring liabilities will be reimbursed by other parties as follows:

- (i) Lump sums paid to employees on early retirement are refundable to the Group from the appropriate pension scheme at or after the date on which the individual concerned would have reached normal retirement age.
- (ii) Assurances covering restructuring provisions made before 1 April 2004 and for certain early retirements in 2010 and 2011 have been received from BIS and expenditure related to these provisions is reimbursed by BIS.

On the basis of these reimbursement arrangements, receivables have been included in the statement of financial position.

(c) Other provisions

Other provisions comprise unfunded retirement benefit obligations (Note 22) and claims relating to industrial-related injuries.

22 Retirement benefits

(a) Defined benefit schemes

The Group has three defined benefit schemes: the Combined Pension Scheme (CPS), the Principal Non-Industrial Superannuation Scheme (PNISS) and the Protected Persons Superannuation Scheme (PPSS). These schemes have members from other employers as well as the Group. No information in these financial statements relates to other employers participating in the CPS, PNISS or PPSS, although the Group has overall responsibility for the management of the scheme. No contingent liability is expected to arise from this responsibility.

In common with other public sector schemes, the CPS, the PNISS and the PPSS do not have many of the attributes of normal pension schemes. All contributions are paid to and benefits paid by HM Government via the Consolidated Fund. Any surplus of contributions made in excess of benefits paid out in any year is surrendered to the Consolidated Fund and any liabilities are met from the Consolidated Fund via the annual Parliamentary vote. The Government does not maintain a separate fund and actuarial

Notes to the Financial Statements

valuations are based on a theoretical calculation as to how a typical UK pension scheme would have invested the historical surplus of contributions over payments.

In accordance with the FReM, the schemes are accounted for in these financial statements as defined contribution schemes.

Employer contributions are calculated in accordance with HM Treasury methodology "Superannuation Contributions Adjusted for Past Experience" and are based on the expected cost of members' benefits as they accrue. The total contributions paid by the Group during the year were £3.3m (2010 – £8.5m, which included contributions paid by subsidiaries up to their disposal in October 2009).

(b) Defined contribution schemes

The Group manages two defined contribution schemes, the Additional Voluntary Contribution (AVC) scheme and the Shift Pay Pension Savings Plan (SPPP) scheme, both of which are fully insured schemes administered by Prudential Assurance Company Ltd to whom contributions are paid.

The AVC scheme includes members from the Group and from other employers who are members of CPS or PPSS and who have opted to pay additional voluntary contributions. No employer contributions are made to this scheme.

The members of the SPPP scheme include shift working employees of the Group and other employers who are members of CPS or PPSS. The costs of the SPPP scheme, which are directly linked to shift pay earnings, are charged to the statement of comprehensive income at the time the shift pay is paid. The total contributions paid by the Group during the year were £18,000.

(c) Unfunded retirement benefits

Three former Authority chief executives have unfunded retirement benefits which are not included in the Authority pension schemes. The movement in the liability for these benefits is shown below:

	Group and Authority	
	2011	2010
	£000	£000
At 1 April	1,572	1,317
Change in discount rate	(71)	311
Interest on liability	69	80
Current service cost	(68)	14
Benefits payable	(24)	(25)
Actuarial gain (loss)	(21)	(125)
	1,457	1,572

The interest on liability and current service cost are included in the statement of comprehensive income and the actuarial loss is included in taxpayers' equity. The closing liability, discounted at the appropriate pensions liability discount rate, is included in other provisions for liabilities and charges in the statement of financial position (Note 21).

23 Operating leases

(a) The Group as lessee

Non-cancellable operating lease rentals are payable as follows:

	Group and Authority	
	2011	2010
	£m	£m
Less than one year	0.1	0.1
Between two and five years	–	0.1
More than five years	–	–
	0.1	0.2

The Group leases vehicles and office equipment under operating leases.

(b) The Group as lessor

leases its investment property with lease terms of between 0.5 and 25 years. The leases contain market review clauses in the event that the lessee exercises the option to renew. The lessee does not have an option to purchase the property at the expiry of the lease period.

The future minimum lease payments under non-cancellable leases are as follows:

	Group and Authority	
	2011	2010
	£m	£m
Less than one year	1.4	1.6
Between two and five years	3.2	3.5
More than five years	2.1	2.7
	6.7	7.8

Rental income received during the year is disclosed in Note 13.

24 Related-party transactions

The Authority is an NDPB sponsored by BIS which is regarded as a related party. During the year, the Group had various material transactions with BIS and with other entities for which BIS is regarded as the responsible department, in particular EPSRC. STFC is the Authority's partner in the Harwell Science and Innovation Campus Public Sector Limited Partnership (note 14).

In addition, the Group had various material transactions with other government departments and other central government bodies. Most of these transactions have been with NDA.

No Board member, key manager or other related party has undertaken any material transactions with the Group during the year.

25 Statutory borrowing limit

During 2010/11, the statutory borrowing limit set by Section 3 of the Atomic Energy Authority Act 1986 as amended by The United Kingdom Atomic Energy Authority (Limit on Borrowing) Order 1991 remained at £200m. There were no borrowings by the Authority during the current or previous year.

Glossary

AVC	Additional Voluntary Contribution	NDPB	Non-Departmental Public Body
AEAIL	AEA Insurance Ltd	NDA	Nuclear Decommissioning Authority
Authority	UK Atomic Energy Authority	OGC	Office of Government and Commerce
BIS	Department for Business Innovation and Skills	PNISS	Principal Non-Industrial Superannuation Scheme
CETV	Cash Equivalent Transfer Value	PAC	Programme Advisory Group
CEO	Chief Executive Officer	PPSS	Protected Persons Superannuation Scheme
CERN	European Laboratory for Particle Physics	RSRL	Research Sites Restoration Ltd
CPS	Combined Pension Scheme	RPIX	Retail price index – all items excluding mortgage interest payments
CCFE	Culham Centre for Fusion Energy	STFC	Science and Technology Facilities Council
DEMO	Demonstration fusion power station	SPPP	Shift Pay Pension Savings Plan
DSRL	Dounreay Site Restoration Ltd	SIRO	Senior Information Risk Officer
ELMs	Edge localised modes	TRIR	Total Recordable Incident Rate
EPSRC	Engineering and Physical Sciences Research Council		
EA	Environment Agency		
EURATOM	European Atomic Energy Community		
EFDA	European Fusion Development Agreement		
FRoM	Government Financial Reporting Manual		
FTE	Full Time Equivalent		
FAB	Fusion Advisory Board		
FDTN	Fusion Doctoral Training Network		
HMRC	Her Majesty's Revenue and Customs		
IAS	International Accounting Standards		
IFRS	International Financial Reporting Standards		
ITER	Next generation international experimental fusion reactor		
JET	Joint European Torus		
MAST	Mega Amp Spherical Tokamak		
NPL	National Physical Laboratory		

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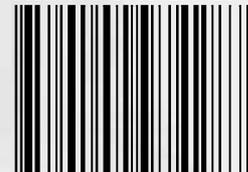
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