

House of Commons
Science and Technology
Committee

**THE OFFICE OF
SCIENCE AND
TECHNOLOGY:
SCRUTINY REPORT 2002**

Seventh Report of Session 2001–02

House of Commons
Science and Technology
Committee

**THE OFFICE OF
SCIENCE AND
TECHNOLOGY:
SCRUTINY REPORT 2002**

Seventh Report of Session 2001–02

*Report, together with
Proceedings of the Committee,
Minutes of Evidence and Appendix*

Ordered by The House of Commons to be printed 21 October 2002

HC 860
Published on 6 November 2002 by authority of the House of Commons
London : The Stationery Office Limited
£0.00

SCIENCE AND TECHNOLOGY COMMITTEE

The Science and Technology Committee is appointed by the House of Commons to examine the expenditure, administration and policy of the Office of Science and Technology and its associated public bodies.

Current Membership

Dr Ian Gibson MP (*Labour, Norwich North*) (Chairman)
Mr Parmjit Dhanda MP (*Labour, Gloucester*)
Mr Tom Harris MP (*Labour, Glasgow Cathcart*)
Mr David Heath MP (*Liberal Democrat, Somerton and Frome*)
Mr Mark Hoban MP (*Conservative, Fareham*)
Dr Brian Iddon MP (*Labour, Bolton South East*)
Mr Tony McWalter MP (*Labour, Hemel Hempstead*)
Dr Andrew Murrison MP (*Conservative, Westbury*)
Geraldine Smith MP (*Labour, Morecambe and Lunesdale*)
Bob Spink MP (*Conservative, Castle Point*)
Dr Desmond Turner MP (*Labour, Brighton Kemptown*)

Powers

The Committee is one of the departmental select committees, the powers of which are set out in House of Commons Standing Orders, principally in SO No.152. These are available on the Internet via www.parliament.uk.

Publications

The Reports and evidence of the Committee are published by The Stationery Office by Order of the House. All publications of the Committee (including press notices) are on the Internet at www.parliament.uk/parliamentary_committees/science_and_technology_committee.cfm

A list of Reports of the Committee in the present Parliament is on the inside front cover of this volume.

Contacts

All correspondence should be addressed to The Clerk of the Science and Technology Committee, Committee Office, 7 Millbank, London SW1P 3JA. The telephone number for general inquiries is: 020-7219-2794; the Committee's e-mail address is: scitechcom@parliament.uk.

Footnotes

In the footnotes of this Report, references to oral evidence are indicated by 'Q' followed by the question number. References to written evidence are indicated by the page number as in 'Ev 12'.

TABLE OF CONTENTS

	<i>Page</i>
REPORT	
Introduction	5
Departmental performance targets	6
Departmental Annual Report	11
The Spending Review 2002	11
Science Budget	12
Higher Education	14
Departmental science budgets	14
Cross-Cutting Review	15
Roberts Review and Transparency Review	15
European Union funding	16
Restructuring of DTI	17
Quinquennial Reviews of the Research Councils	17
Arts and Humanities Research Board	18
Associated Public Bodies	18
Council for Science and Technology	19
Agriculture and Environment Biotechnology Commission	19
Human Genetics Commission	20
Royal Society and Royal Academy of Engineering	20
Cambridge/MIT Institute	20
OST response to scrutiny	21
LIST OF RECOMMENDATIONS AND CONCLUSIONS	22
LIST OF ABBREVIATIONS USED IN THE REPORT AND EVIDENCE	25
PROCEEDINGS OF THE COMMITTEE RELATING TO THE REPORT	27
LIST OF WITNESSES AND WRITTEN EVIDENCE	28
MINUTES OF EVIDENCE	Ev 1
APPENDIX TO THE MINUTES OF EVIDENCE	Ev 13

SEVENTH REPORT

The Science and Technology Committee has agreed to the following Report:

THE OFFICE OF SCIENCE AND TECHNOLOGY: SCRUTINY REPORT 2002

Introduction

1. Our Committee is appointed by the House of Commons to examine the expenditure, administration and policy of the Office of Science and Technology (OST) and its associated public bodies.¹ The OST is a small department, part of the Department of Trade and Industry since 1995. It is divided into two parts:

- the Transdepartmental Science and Technology Group (99 people), which supports the Chief Scientific Adviser (who is head of OST) in his role of advising the Prime Minister, the Cabinet, the Secretary of State for Trade and Industry, and the Minister for Science on science, engineering and technology matters; and
- the Science and Engineering Base Group (49 people), which supports the Director General of the Research Councils in allocating the science budget and in securing the successful operation of the seven Research Councils, which are the OST's principal associated public bodies.

2. The wide responsibility of the OST for furthering science and technology in the UK means that our Committee has a similarly wide brief to examine science and technology issues across Government and outside; but examining the work of the OST and the Research Councils is our primary role. The importance of this scrutiny role was reinforced by the resolution of the House of 14 May 2002, which approved the Modernisation Committee's Report on Select Committees and called on the Liaison Committee to establish common objectives for select committees taking into account the illustrative model set out in that Report.² The Liaison Committee subsequently agreed a set of ten core tasks for departmental select committees.³ These include: "examining the expenditure plans and out-turn of the department and its principal non-departmental public bodies"; and "examining the department's Public Service Agreements, associated targets and the statistical measures employed, and reporting if appropriate".

3. Mindful of our responsibility for scrutinising the work of OST, we made an informal visit to OST on 13 February 2002 and were briefed by officials on its work. We took evidence on 15 May 2002 from Professor David King, Chief Scientific Adviser (CSA) to the Government, and from Dr John Taylor, Director General of the Research Councils (DGRC). The transcript of the evidence is printed with this Report.⁴ Following the evidence session, we asked the OST a number of questions in writing. These questions arose partly from issues raised at the evidence session, and partly from our scrutiny of the Department of Trade and Industry's Annual Report 2002⁵, the Estimates⁶ and the outcome of the Spending Review 2002.⁷ OST's response is printed with this Report.⁸

¹ House of Commons Standing Order No. 152

² Votes and Proceedings, 14 May 2002; First Report of the Select Committee on the Modernisation of the House of Commons, Session 2001-02, *Select Committees*, HC 224-I, para 34

³ 20 June 2002.

⁴ Ev 1-Ev 13

⁵ *The Government's Expenditure Plans 2002-03-2003-04: Trade and Industry 2002*, Cm 5416, June 2002

⁶ Main Supply Estimates for 2002-03, HC 795, and Supplementary Budgetary Information, Cm 5510

⁷ *2002 Spending Review: New Public Spending Plans 2003-2006, Opportunity and security for all: Investing in an enterprising, fairer Britain*, Cm 5570, July 2002. See also Official Report, 15 July 2002, cols 21-30

⁸ See Ev 13-Ev 24

4. The purpose of this short Report is to put in the public domain the evidence which we have received and to highlight a number of concerns.

Departmental performance targets

5. The objectives of the OST are subsumed in the objectives for the Department of Trade and Industry (DTI) set out in the Public Service Agreements (PSAs) which are published with each Spending Review. The first Public Service Agreements, for 1999-2002, were published after the Comprehensive Spending Review 1998.⁹ Four objectives and 12 underlying performance targets were set for DTI, of which two of the objectives and two of the targets relate to the work of the OST.

Table 1: DTI Public Service Agreement 1999-2002: objectives and targets relating to OST

Objective 1: Promote enterprise, innovation and increased productivity
Objective 2: Make the most of the UK's science, engineering and technology
Performance targets
v) To improve the overall international ranking of the Science and Engineering Base in terms of quality, relevance and cost-effectiveness (Objective 2).
vi) To increase by 50% the 1997-98 number of companies spun out from universities by 2001-02 (Objectives 1 and 2).

6. The Public Service Agreements 2001-04 published in July 2000, after the Spending Review 2000, set broadly similar targets for OST, though in modified form.¹⁰

Table 2: DTI Public Service Agreement 2001-04: objectives and targets relating to OST

Objective II: to make the most of the UK's science, engineering and technology.
[Target] 5. Improve the overall international ranking of the UK's science and engineering base, as measured by international measures of quality, cost-effectiveness and relevance.
[Target] 6. Increase the level of exploitation of technological knowledge derived from the science and engineering base, as demonstrated by a significant rise in the proportion of innovating businesses citing such sources.

7. The Public Service Agreement 2003-06, published in July 2002, combines these two targets in one.¹¹

⁹ *Public Services for the Future: Modernisation, Reform, Accountability*, Cm 4181, December 1998. Available via www.archive.official-documents.co.uk

¹⁰ *Spending Review 2000: Public Service Agreements 2001-04*, Cm 4808, July 2000, Chapter 11

¹¹ *Spending Review 2002: Public Service Agreements 2003-06*, Cm 5571, July 2002, Chapter 12

Table 3: DTI Public Service Agreement 2003-06: objectives and targets relating to OST

Objective II: science and innovation.

[Target] 2. Improve the relative international performance of the UK's science and engineering base, the exploitation of the science base, and the overall innovation performance of the UK economy.

In common with other Departments, the DTI also has a number of productivity or departmental operations targets. For example, it is expected to achieve value for money improvements of 2.5% a year across the department, to deliver all key services on-line by 2005 and to reduce staff sickness absence by 13.8% by 2003.¹² The OST is required to keep Research Councils' Headquarters administration costs at under 4% of overall Research Councils' expenditure.¹³

8. While the PSA targets themselves have become less explicit since 1998, details of how they will be measured are set out in technical notes to the PSA. The technical notes to the PSA 2001-04 (which were published with the DTI Annual Report 2001) are quite specific.

Table 4: Public Service Agreements 2001-04 Technical Notes: targets relating to OST

5. Improve the overall international ranking of the UK's science and engineering base, as measured by international measures of quality, cost-effectiveness and relevance.

Source: OECD (<http://www.oecd.org/statistics/>)

Science Citation Index (<http://www.isinet.com>)

Measured by: International ranking on quality, relevance and cost-effectiveness of the science and engineering base output.

Date: Annual from 2001; target date 2004

6. Increase the level of exploitation of technological knowledge derived from the science and engineering base, as demonstrated by a significant rise in the proportion of innovating businesses citing such sources

Source: Community Innovation Survey

Measured by: the percentage of innovating businesses, as defined by the Community Innovation Survey, citing science and technology base sources, including DTI supported standards and measurement

Date: survey every two years from 2001; target date 2005

The Technical Notes to the PSA 2003-2006 have not yet been published. **We recommend that in future the Department publish the technical notes with the PSA itself. Doing so might prevent the impression that the targets are insubstantial.**

9. Since 2000, the way in which each Department intends to meet its PSA targets has been set out in a Service Delivery Agreement (SDA). The DTI's SDA 2000 was published

¹² For details see Cm 5416, figure 1.2

¹³ Cm 5416, para 1.157

in its Annual Report 2001 and was available on the DTI website from November 2000.¹⁴ The SDA 2000 adds little in respect of PSA target 5, but some interesting details in respect of target 6.

Table 5: DTI Service Delivery Agreement 2000: targets relating to OST

5 Improve the overall international ranking of the UK's science and engineering base, as measured by international measures of quality, cost effectiveness and relevance.

DTI and the Office of Science and Technology will deliver this target through increasing the ranking of quality and cost effectiveness and the ranking of relevance of the Science and Engineering Base.

The OST will implement the Science Research Infrastructure Fund to renew the science infrastructure in universities and invest in three major new cross cutting science programmes: e-science, post genomics and basic technology.

6 Increase the level of exploitation of technical knowledge derived from the science and engineering base, as demonstrated by a significant rise in the proportion of innovating businesses citing such sources.

DTI and the Office of Science and Technology will work to achieve this target by: achieving a year-on-year increase in the income the university sector earns from working with business, and from spin outs and licences; increasing the amount of university/company, university/intermediary and university/intermediary/company collaborations; increasing the number of papers jointly authored by the science base and industry.

DTI and the Office of Science and Technology will also: establish permanent umbrella mechanisms to enable the Science, Engineering and Technology (SET) base to work with business, such as the Higher Education Innovation Fund in England (HEIF) and at least 24 Faraday Partnerships in the UK by 2002/3; work with other organisations in the field (e.g. Regional Development Agencies and the CBI) through the Teaching Companies Scheme (TCS) and Faraday Partnerships to increase the proportion of SMEs employing graduate scientists/engineers; ensure that innovation facilitators employed by Business Links, Faraday Partnerships and similar organisations are properly trained and aware of the scope for exploiting SET knowledge by firms; deliver final rounds of Science Enterprise Challenge and University Challenge by April 2001; develop, in partnership with Higher Education Funding Council for England (HEFCE), management arrangements for the HEIF and deliver the first round of allocations by April 2001; work with the Research Councils towards their implementation of the Small Business Research Initiative; and help commercialise research by Public Sector Research Establishments.

It is expected that the SDA 2002 will be published on the DTI website by the end of October 2002.¹⁵ We understand that the Department will also be producing in the Autumn a more detailed Delivery Plan, a working document demonstrating how it intends to meet its PSA targets. The Public Service Agreements 2003-2006 White Paper states that "the key features of these plans" will be set out in the published SDAs.¹⁶ **We recommend that the DTI publish its Delivery Plan in full on its website, as well as the headline SDA.**

10. In addition to the SDA, the DTI has in recent years published on its website an annual "Strategic Framework" which sets out "key priorities" for the year ahead. The Strategic Framework 2001-02 contains the following key priorities under Objective II (science and technology).

¹⁴ *The Government's Expenditure Plans 2001-02 to 2003-04 and Main Estimates 2001-02: Trade and Industry 2001*, Cm 5112, March 2001, Annex D and Annex E

¹⁵ Ev 16, para 6.

¹⁶ Cm 5571, para 1.10

Table 6: DTI Strategic Plan 2001-02: Key priorities for 2001-02 (science and technology)

- Further strengthen national capabilities in science, engineering and technology by improving the means by which strategic research priorities are identified and the quality of the science base is assessed
- Undertake and implement the results of a review of public understanding of science engineering and technology policies and activities
- Implement recommendations of current Quinquennial Review (QQR) of the Council for the Central Laboratory of the Research Councils (CCLRC), and complete QQR of the six grant awarding Research Councils
- Deliver:
 - the Science Research Investment Fund for science research infrastructure, in partnership with the Higher Education Funding Councils and devolved administrations
 - the Higher Education Innovation Fund
 - the final rounds of University Challenge and Science Enterprise Challenge
- Launch the Science and Engineering Ambassadors scheme as part of Science Year
- Develop improved mechanisms to support and encourage knowledge transfer, particularly between higher education and business, including expansion of the network of Faraday Partnerships to at least 24 by March 2002
- Work to help business recruit and retain the high quality fully trained people it requires, supporting the review by Sir Gareth Roberts of the provision of skilled scientists and engineers
- Continue to ensure world class measurement science programmes which satisfy users' needs by implementing the recommendations of the National Measurement System Review and by completing the construction of improved laboratory facilities in Teddington
- Negotiate a well-focused sixth EU Research and Development framework programme that reflects UK priorities
- Work towards ensuring UK space-related industries are ready to meet the infrastructure requirements for global electronic business and any European global satellite navigation positioning system
- Promote the conditions that will enable the UK to become an international leader in the new markets for cleaner energy and green technologies, products and services

No Strategic Framework has been published for 2002-03 and we understand that these documents have been superseded by a new system of Business Plans which is being introduced across Government. **We recommend that the Department demonstrate its commitment to openness by publishing its Business Plan on its website.**

11. We appreciate that it is not easy to encapsulate what a Department is expected to achieve in a few clear and measurable targets, and the PSA targets for science and technology are not a bad effort. However, they are far too general and high-level to allow judgement of OST's performance. We asked the OST whether it had more detailed performance targets than those set out in the PSA and SDA, and, if so, for a copy. The response is disappointing: "The PSA target on science and the associated SDA targets form the basis on which the performance of the Science and Engineering Base Group within OST is measured. Those targets are cascaded down to all staff through the DTI's

annual appraisal and business planning cycle.”¹⁷ We appreciate that the overall PSA targets will be reflected in individual staff performance targets, but that is not what we are after. We find it hard to believe that the OST, or parts of OST, do not have more detailed collective targets than the headline targets given in the PSA. We understand that the new Business Plans will set out targets at various levels. Furthermore, the OST’s response states that the PSA target applies to the Science and Engineering Base Group: we are unclear to what targets OST’s Transdepartmental Science and Technology Group is working. **We believe that OST should be more open about its detailed performance targets and intend to pursue this with the Department.**

12. In January 2001, the Trade and Industry Committee published a Report highly critical of the information available on the Department’s performance against target.¹⁸ In response, the Department has included in its Annual Reports for 2001 and for 2002 a useful chapter outlining its progress against its PSA targets. In its Annual Report 2002, the DTI states that, in respect of the 1998 PSA targets, it is on course to achieve its target of improving the international ranking of the Science and Engineering Base, though there has not yet been any improvement on baseline in the UK’s share of citations in scientific papers worldwide.¹⁹ DTI states that it has met the target of increasing by 50% the 1997-98 number of spin-out companies.²⁰ In 1999-2000, 199 companies were spun out from universities, compared to 26 in 1997-98; though reliable information on their survival rates – which must be a more important indicator – is not available.²¹ In respect of the Spending Review 2000 PSA targets, the DTI reports that it is on course to improve the overall international ranking of the Science and Engineering Base (as discussed above). It has not yet assessed its progress in increasing the level of exploitation of technological knowledge derived from the Science and Engineering Base, as demonstrated by a significant proportion of innovating business citing such sources: baseline figures are to be based on the Community Innovation Survey 2001, a Europe-wide initiative, and will be compared with results from the next Survey in 2005.²² We note that the DTI, in common with other Departments, will be publishing an annual Autumn Performance Report, updating the information on progress against PSA targets.²³ The National Audit Office is to validate the data systems underlying DTI’s reporting of progress towards its PSA targets. We await its findings with interest.

13. OST’s memorandum states that it is “reviewing the whole issue of strategic and performance management of the activities supported by the Science Budget ... and we expect to have something to say about this later this year”.²⁴ It appears that this review relates primarily to the performance management framework between OST and the Research Councils, rather than within OST itself. Nevertheless, we await its outcome with interest. **The proliferation of documents and acronyms – PSAs, SDAs, Technical Notes, Strategic Frameworks, Delivery Plans and Business Plans – is highly confusing to the outsider. We recommend that the Government rationalise these publications, for the sake of greater clarity and transparency.**

¹⁷ Ev 16, para 7

¹⁸ Second Report of the Trade and Industry Committee, Session 2000-01, *The Department of Trade and Industry: Role, Objectives and Targets*, HC 140

¹⁹ Cm 5416, paragraphs 1.20 - 1.24

²⁰ Cm 5416, paragraph 1.25

²¹ Qq 65-69; Ev 18, para 12

²² Cm 5416, paras 1.95 to 1.107

²³ Cm 5571, para 1.16

²⁴ Ev 16, para 8; see also Ev 17, para 9

Departmental Annual Report

14. OST does not publish an Annual Report of its own: information about its activities and expenditure plans are contained in the Annual Report of the DTI. In the 2002 Annual Report, chapter 3, “The Science and Engineering Base”, relates to the work of the OST’s Science and Engineering Base Group and the Research Councils, and chapter 5, “Cross-Departmental Work on Science”, to the work of OST’s Transdepartmental Science and Technology Group. Parts of Chapter 4, “Raising Productivity and Innovation in Business”, relate to OST responsibilities (Foresight, University Challenge, Science Enterprise Challenge and the Cambridge/MIT Institute, for example). All three chapters are grouped in a section entitled Innovation Group, although, as we understand it, OST does not form part of that Group.²⁵ **The present lay-out of the DTI Annual Report makes it difficult to distinguish clearly between the activities and expenditure of OST and those of other parts of DTI.**

15. The OST publishes every two years, in the year following each Spending Review, a document entitled *The Forward Look*.²⁶ It is a useful publication, comprising a short statement from every Government Department and other body that spends money on science, engineering and technology, and from each Research Council, on its strategy for science and technology, and tables showing departmental expenditure on RD&D and science, engineering and technology; but, apart from a short statement from the CSA and from the DGRC, it contains little on OST itself. *The Forward Look*, as its name suggests, is a forward-looking, aspirational, document, not an account of what has been achieved.

16. We asked OST whether it had considered publishing an Annual Report of its own. It responded that “OST is not a Department in its own right and does not therefore publish its own annual report”.²⁷ We accept that, as it is not a Department in its own right, OST could not present its expenditure plans formally to Parliament, but there would be value, we suggest, in it publishing an annual report on its activities. **We recommend that OST consider publishing an annual activity report of its own. If it does not, we recommend that there should be a self-contained OST section within the DTI Annual Report.**

17. Following the Government’s review of departmental reports in 2001, the Annual Report 2002 contains a significantly reduced set of financial tables. The more technical tables are now published in a new and separate document entitled Supplementary Budgetary Information, which is published alongside the Main Supply Estimates.²⁸ **We regret the loss of financial detail in the Departmental Report, and the further proliferation of documents, though we accept that the readership for the more technical financial tables will be small. Departmental Annual Reports are a valuable source of factual information and a crucial element in Departments’ accountability to Parliament: they must not become merely a glossy presentation of the Department’s activities and aspirations.**

The Spending Review 2002

18. The outcome of the Spending Review 2002 in July 2002 was very positive for science. The Spending Review White Paper promises an increase of £1¼ billion a year in overall government spending on science by 2005-6 compared to 2002-03. This increase is to comprise £890 million on the Science Budget, “the major part of” £244 million for

²⁵ For DTI Organisation Structure, see Minutes of Evidence, 19 December 2001, HC 459-i, Ev 4

²⁶ See *The Forward Look 2001*, December 2001, Cm 5338

²⁷ Ev 20, para 19

²⁸ Central Government Supply Estimates 2002-03 Supplementary Budgetary Information, Cm 5510, May 2002

DfES recurrent spending on research (of which around 80% is expected to be on science), “at least” £100 million through DfES to implement the recommendations of the Roberts Review and £50 million through DfES for science research infrastructure.²⁹ We note that these figures use 2002-03 (the current year) as their baseline, instead of 2003-04. Thus, the reported increase includes the increase from 2002-03 to 2003-04 already agreed in the Spending Review 2000.

Science Budget

19. The additional £890 million in the Science Budget, as reported in the Spending Review White Paper, represents an increase of an average of 10% a year in real terms. The Spending Review White Paper presents the new Science Budget as follows.³⁰

Table 7: Spending Review 2002: Science Budget

Science Budget	£ million			
	2002-03	2003-04	2004-05	2005-06
Resource Budget	1,988	2,246	2,458	2,791
Capital Budget	104	131	207	205
Total Departmental Expenditure Limit	2,006	2,285	2,570	2,899

The Spending Review White Paper states that the Science Budget will receive, by 2005-06, an additional £400 million for research project funding through the Research Councils for investment in new areas of scientific development (such as proteomics and brain science); £120 million in increased Research Council contribution to the indirect costs of university research; £30 million on knowledge transfer, including a new fund for knowledge transfer from public sector research establishments; £100 million a year for postdoctoral academic fellowships and PhDs (raising the minimum PhD stipend to £13,000); and around £100 million a year for large scientific facilities such as the Diamond Synchrotron. It states that there will be a dedicated capital funding stream for university research worth £500 million, of which £300 will be from the Science Budget.³¹ On the basis that this will replace the SRIF (which is to end in 2003-04), this means increased expenditure of £50 million from the Science Budget and £50 million from DfES. Adding these figures together we reach an additional £800 million for the Science Budget by 2005-06. We are unclear how the figure of £890 million is arrived at.

20. The Government’s *Investing in Innovation* document, published shortly after the White Paper, gives further details. Resources for the Research Councils’ research programmes are to increase by £136 million in 2004-05 and £300 million in 2005-06.³² A further £122 million from 2002-03 to 2005-06 is to be provided for the Diamond Synchrotron. (Annual figures are not given.) An additional £30 million a year by 2005-06 is to be provided for new investments in other large facilities and the renewal of infrastructure in Research Council institutes.³³

²⁹ 2002 Spending Review – *Opportunity and security for all: Investing in an enterprising, fairer Britain*, Cm 5570, chapter 25; also paras 2.18-21 and 15.4ff.

³⁰ Cm 5570, Table 25.1

³¹ Cm 5570, para 15.5

³² *Investing in Innovation: A strategy for science, engineering and technology*, July 2002, para 3.49

³³ *Ibid*, para 3.50

21. OST's memorandum presents the new money for the Science Budget as follows.³⁴

Table 8: Spending Review 2002: Science Budget Settlement

New money £ million						
	Resource			Capital		
	2003-04	2004-05	2005-06	2003-04	2004-05	2005-06
New science	0	116	255	0	20	45
Large facilities				31	87	60
Knowledge Transfer	0	16	30			
Roberts implementation	10	40	100			
University research sustainability – RC indirect cost contribution	0	0	120			
University research sustainability – dedicated capital line				0	50	50

OST's figures show an increase in the Science Budget of £660 million from 2003-04 to 2005-06. The difference between this and the figure of £890 million given in the Spending Review White Paper is accounted for by the difference in baseline, plus some difference in accounting for depreciation. The OST's figures take 2003-04 as the baseline, as is the standard methodology. The Spending Review White Paper, on the other hand, uses a 2002-03 base. Thus, it includes the increase from 2002-03 to 2003-04 already agreed under the Spending Review 2000, which amounts to some £244 million. **The increase in the Science Budget brought about by the Spending Review 2002 is more accurately represented as £660 million, not as £890 million. The way in which the Spending Review White Paper presents the increases to science spending is misleading and leaves the Government open to accusations of double-counting.**

22. OST's memorandum states that the funds for new science and large facilities and some of the funds for Roberts implementation will be allocated to Research Councils during the autumn. Knowledge transfer funds will be distributed in a separate exercise "over the next year", in which universities will bid for funds from the new HEIF. The new dedicated capital line for university research infrastructure will be allocated by formula from 2004-05.

23. **The additional funds for Research Council programmes are very welcome, though the emphasis on funding of new science gives us some concern: valuable existing programmes must be maintained too.** *Investing in Innovation* acknowledges that "a key issue for the Research Councils in the period ahead will be to consolidate their existing core programmes", but also identifies a number of new areas in which investment will be considered: brain science, regenerative medicine, proteomics, sustainable energy and rural economy and land use.³⁵ It will be important to ensure that focus on directed programmes does not lead the Research Councils to neglect speculative research and response mode funding.

³⁴ Ev 13, para 1

³⁵ *Investing in Innovation*, paras 3.51-3.52

24. Much will depend on the decisions on the Science Budget allocations which are still under negotiation. **We intend to take evidence from the Science Minister in November 2002, when the Science Budget allocations have been published.**

Higher Education

25. **We welcome the additional funds for research infrastructure announced in the Spending Review and the fact that it will be provided through an ongoing capital funding stream, which should facilitate long-term planning.** In evidence to us the DGRC recognised that there was “a serious level of underfunding” in research infrastructure, though he believed that the £1.75 billion invested through JIF and SRIF (the Government’s Joint Infrastructure Fund and Science Research Investment Fund) had had a considerable impact.³⁶ However, a consultants’ report commissioned by OST recently found that only 15% of research infrastructure would benefit from JIF and SRIF, and estimated that £3.2 billion was required to bring research infrastructure and laboratory equipment up to standard.³⁷ The additional funds will only partly meet this shortfall. We note that “an element of the new capital stream will be retained centrally to support strategic rationalisation and restructuring of the university science base”.³⁸

26. **We also welcome the increase in resource funding for higher education research, which will go some way towards remedying the longstanding imbalance in the dual funding system.** On the OST side, the Research Councils’ contribution to universities’ indirect costs will be increased by £120 million a year by 2005-06. On the DfES side, HEFCE recurrent spending on research will increase “starting in 2003-04 and rising to an additional £244 million in 2005-06”.³⁹ We remain uncertain whether the Government will meet the recommendation, made in our recent report on the Research Assessment Exercise, that it fund in full the results of the RAE 2001.⁴⁰ **Much depends on the outcome of the DfES’s current review of higher education strategy which the sector awaits with trepidation.**

Departmental science budgets

27. **While the Science Budget, and to some extent the Higher Education budget, has done well out of the Spending Review, its impact on the science and research budgets of other departments remains to be seen.** The CSA acknowledged that departments’ research funding had dropped for a period after 1986, though he maintained it was currently “fairly static”. He told us that he was focusing on improving the quality of department research: “once quality and fitness for purpose are excellent, I believe funding will flow much more naturally into those areas”.⁴¹ The Spending Review White Paper states that the Government is introducing “new procedures for the external review of the quality of Government science”.⁴² Further detail is given in the Cross-Cutting Review.⁴³ Though understandably guarded about naming names, the CSA admitted that he was worried about the quality of research in some Departments.⁴⁴ The Department for Environment, Food and Rural Affairs (DEFRA) is widely regarded to be a problem area. The Environment, Food

³⁶ Q29

³⁷ JM Consulting, 2002: available via www.ost.gov.uk. See also *Investment in Innovation*, para 3.37

³⁸ *Investment in Innovation*, para 3.40

³⁹ *Ibid*, para 3.41. The devolved administrations “will receive their share of the funding ... and will, if they so decide, be able to use it to fund recurrent research in the universities”.

⁴⁰ Second Report, Session 2001-02, HC 507, paras 78-79, 90

⁴¹ Q49; also Q56

⁴² Cm 5570, para 25.10; see also Q56

⁴³ *Cross-Cutting Review of Science and Research: Final Report, March 2002*, paras 281-285

⁴⁴ Q51

and Rural Affairs Committee has recently highlighted the erosion of Ministry of Agriculture, Fisheries and Food research spending over the past twenty years and recommended that DEFRA's review of the organisation of its science be extended to its funding.⁴⁵ It is to be hoped that the appointment of Professor Howard Dalton as its Chief Scientific Adviser will strengthen scientific research in DEFRA, but more money may also be required.⁴⁶ **We welcome the steps being taken by Government to improve the quality and fitness for purpose of scientific research by departments. It must also ensure that this research is adequately funded.**

Cross-Cutting Review

28. The Spending Review 2002 was informed by seven cross-cutting reviews set up by the Treasury. Lord Sainsbury, the Science Minister, led a Cross-Cutting Review of Science and Research, whose terms of reference were to consider how to maximise the benefits provided by public spending on science and research to the UK's economy and quality of life. It began work in July 2001 and reported its findings to the Treasury at Easter 2002.⁴⁷ We were disappointed that only a digest of the Cross-Cutting Review was published with the Spending Review, and pressed the OST to publish the Review in full.⁴⁸ **We are pleased that the Government has now published the Cross-Cutting Review of Science and Research in full. It is a very useful document and we find it hard to understand why it was not published at the time of the Spending Review. We recommend that the Government publish such important policy documents in future, without waiting for prompting by our Select Committee.**

Roberts Review and Transparency Review

29. The Spending Review was also informed by two other science-related reviews: the Roberts Review into the supply of scientific skills and the Transparency Review on the costing of university activities. The Roberts Review was published in full in April 2002.⁴⁹ The Government's response is published as an Annex to the *Investing in Innovation* document.⁵⁰ We also pressed OST to publish the Transparency Review. OST's response states that "the review has never produced a final report as such" and that the work of the Transparency Review was subsumed within the Cross-Cutting Review and reflected in the outcome of that review.⁵¹ OST states that the Transparency Review's steering group had accepted that the universities should adopt a costing tool called TRAC (Transparent Approach to Costing) and that this system is now in operation with figures aggregated and published by the Funding Councils. One of the conclusions of the Cross-Cutting Review was that more needed to be done to embed proper costing and pricing methodologies across the HE sector and work is underway to achieve this. Now that the Cross-Cutting Review has been published, we are able to confirm that it contains very useful information on the funding of university science research, including data obtained from the Transparency Review.⁵² **It is ironic that it has taken so long to bring transparency to the Transparency Review.**

⁴⁵ Sixth Report of the Environment, Food and Rural Affairs Committee, *Departmental Annual Report 2002*, Session 2001-02, HC 969, paras 25-26

⁴⁶ See Q8-Q9

⁴⁷ Ev 13, para 1; see Q1 ff

⁴⁸ Ev 14, para 2. See www.treasury.gov.uk/mediastore/otherfiles/science_crosscutter.pdf

⁴⁹ *SET for success: The Supply of People with Science, Technology, Engineering and Mathematics skills: The Report of Sir Gareth Roberts' Review*, April 2002

⁵⁰ *Investing in Innovation*, p 95

⁵¹ Ev 15, para 3

⁵² *Cross-Cutting Review*, para 60 ff

30. Shortly after the Spending Review announcement, the Government published another document, entitled “Investing in Innovation – A Strategy for Science, Engineering and Technology”.⁵³ The status of this document is unclear: it is not a Command Paper and was not laid before Parliament. Indeed, copies were not made available in Parliament at the time of publication. This document purports to “set out a long-term vision for science in the UK”. It provides some useful information and is for the most part sensible enough in what it says. What is curious is that it seems to have been produced by the Treasury, not OST. **We welcome the close interest being taken by the Treasury in science and engineering, particularly since this has led to additional funding, but responsibility for policy-making in this area must lie clearly with the OST.**

European Union funding

31. In addition to providing funds through the UK Science Budget, the Government also funds scientific research in the UK through the European Union. The European Fifth Framework Programme for research, technological development and demonstration activities is now nearing completion.⁵⁴ Since 1998, it has dispensed a budget of some €14.960 billion. The DGRC was confident that the UK had received a good deal from this investment: “If you measure it crudely in terms of how much money came back from the programme as opposed to how much went into the programme, the balance is positive.”⁵⁵ **We recommend that the OST carry out a detailed analysis of the costs and benefits of the Framework 5 programme to UK science, and that this analysis be published.**

32. Negotiations are nearing completion on the next funding period, Framework Programme 6, which will run from 2002-2006. The total budget is €17.5 billion. Of this, €11.285 billion is to fund research focused on seven priority areas: biotechnology for tackling major diseases; next generation information technologies; nanotechnology; aeronautics and space; food quality; sustainable development; and economic and social sciences.⁵⁶ €2.925 billion is to be spent under Framework Programme 6 to structure, and to strengthen the foundations of, the European Research Area, which is envisaged as the research and innovation equivalent to the common market for goods and services. OST’s memorandum states that the aim is to network national research activities, share best practice on engaging science with society, and support the planning of research infrastructure. €1.23 billion is to be spent, under the Euratom Treaty, on nuclear research and training.⁵⁷

33. OST’s memorandum states that the main Framework 6 Programme was adopted on 3 June 2002, and that it is hoped that the Specific Programmes will be adopted by the end of September, subject only to agreement on the provisions applying to the funding of research on human embryos and human embryonic stem cells.⁵⁸ It states that the UK has secured a commitment to more efficient management of the programme by the Commission.⁵⁹ OST has also assured us that it is actively encouraging the UK scientific community to access Framework 6 funding.⁶⁰ **The European Framework 6 programme is responsible for the outlay of considerable sums of public money: the UK Government must monitor it closely to ensure that the commitment to more efficient management is achieved in practice.**

⁵³ *Investing in Innovation: A strategy for science, engineering and technology*, July 2002. Available via www.hm-treasury.gov.uk

⁵⁴ For details, see www.europa.eu.int/comm/research/fp5

⁵⁵ Q12

⁵⁶ Q19-Q20; Ev 15, para 4 and Ev 23, Annex C

⁵⁷ Ev 15, para 4 (iv) and (v) and Ev 24, Annex C

⁵⁸ Ev 15, para 4 (i) and (iii).

⁵⁹ Ev 15, para 4 (i)

⁶⁰ Q13; for details see Ev 16, para 4 (vi) to (x)

Restructuring of DTI

34. In June 2001 the Secretary of State for Trade and Industry launched reviews of the DTI's support for business and of its priorities and structure. In December 2001 the DTI provided us with a memorandum explaining the implication of these reviews for OST.⁶¹ We were told that the position of OST was essentially unchanged, but that there would be a new group, the Science, Technology and Innovation Group, outside OST, one of whose objectives would be to maximise the Government's significant investment in science by providing a sharper focus within DTI on technology transfer. There was to be a new Knowledge Transfer Strategy Committee, bringing together the CSA, DGRC, the Head of the new Group and others, to ensure that the DTI made the most of its investment in the science base. The Science, Technology and Innovation Group was to be headed by the DGRC until a new externally recruited Director General was appointed. In evidence to us in December 2001, the Science Minister told us that the new Director General would be "amongst other things, the Chief Scientist for the Department".⁶²

35. By the time the CSA and DGRC gave evidence to us in May 2002, the Science, Technology and Innovation Group had been renamed simply the Innovation Group. We were told that the Secretary of State had decided that one word was enough for each of the new groups.⁶³ While we agree that complex titles are best avoided, we fear that the name change may risk a loss of focus on science and technology. The post of Director General Innovation was filled on a temporary basis by a DTI official, Alistair Keddie. An external candidate, David Hughes, formerly of BAe Systems, was finally appointed in September 2002 and took up post on 3 October.⁶⁴ **We intend to take evidence from the new Director of Innovation at DTI at an early opportunity. It will be essential for the new Innovation Group to work very closely with the OST, if it is to achieve what was intended.**

Quinquennial Reviews of the Research Councils

36. The outcome of a Quinquennial Review of the six grant-awarding Research Councils was announced in December 2001. It found that the Research Councils system was broadly working well, but that a clearer strategic framework was required, that they needed to work more closely with their stakeholders in a more collegiate fashion, and that they should be more focused on public service delivery.⁶⁵ It made some 50 specific recommendations. An implementation plan was published in August 2002.

37. Among the Quinquennial Review's recommendations was that a Research Councils UK Strategy Group be formed, comprising the Chief Executives of the seven Research Councils and the DGRC, in order "to enhance the collective leadership and influence of the Research Councils and to secure greater strategic co-ordination in the funding of science". Research Councils UK – or RCUK, as we fear it is to be known – was launched on 1 May 2002, and is staffed by a small secretariat based, with most of the Research Councils, in Swindon. The DGRC identified three areas in which he expected Research Councils UK to add value: a more coherent approach to research funding; a focus for dialogue; and greater operational efficiency.⁶⁶

⁶¹ HC459-i, Ev 1-Ev 5.

⁶² HC459-i, Q3.

⁶³ Q58.

⁶⁴ DTI Press Notice P/2002/586, 23 September 2002.

⁶⁵ Quinquennial Review of the Grant Awarding Research Councils Stage 2 Report by the Review Team, November 2001. Available via www.ost.gov.uk

⁶⁶ Q71

38. The Council for the Central Laboratory of the Research Councils (CCLRC) has also been subject to a Quinquennial Review. The review, published on 30 April 2002, recommended that CCLRC should act as the national focus for large scale facilities for neutron scattering, synchrotron radiation and high power lasers, and that it should receive direct funding from OST for providing, operating, maintaining, developing and upgrading its large facilities and their instrumentation, rather than through annual service level agreements with the individual Research Councils. It set out a number of areas in which improved performance was required.⁶⁷ OST's memorandum states that the new arrangements will contribute to a more strategic approach to the investment, management and operation of large facilities, and that the direct funding arrangement will ensure that the Chief Executive of CCLRC is clearly accountable for the delivery of these facilities.⁶⁸

Arts and Humanities Research Board

39. While the Research Councils are responsible for funding basic research in the sciences and social sciences, research in the arts and humanities is funded by the Arts and Humanities Research Board (AHRB), which is accountable to the DfES. The AHRB was established as an interim measure in 1998 following the recommendation of the Dearing Committee that there be an Arts and Humanities Research Council. In July 2002, the report of the DfES-led Review of Arts and Humanities Funding was published, recommending that the AHRB become a Research Council, operating UK wide, under the aegis of OST.⁶⁹ It also suggested that the British Academy (which partly funds the AHRB) might also be funded by OST – rather than by DfES as at present – in the same way as the Royal Society and Royal Academy of Engineering. The Government is consulting the Devolved Administrations on the future of the AHRB and is expected to announce its response to the Review later in the year. The indications are that the change will happen but it is unclear when. The creation of an Arts and Humanities Research Council will require primary legislation, and thus the change, as OST's memorandum states “would be bound to take some time to enact given the pressures on legislative time”.⁷⁰

40. The DGRC told us that he was very positive about the change: “There are many areas of overlap with the sciences, engineering and technology ... It can only be advantageous to have a single funding organisation, in other words to move AHRB from its position in DfES into the OST.”⁷¹ The Chief Executive of AHRB is already attending meetings of Research Councils UK as an observer.⁷² The DGRC told us that the change might require OST's name to be changed: the CSA suggested OST might become “the Office of Research”.⁷³ **We welcome the proposal for an Arts and Humanities Research Council under the OST and will be following developments closely, as this change has considerable implications for the future of OST and its place within Government.**

Associated Public Bodies

41. Our order of reference requires us to scrutinise the “associated public bodies” of the OST. Identifying these bodies is not entirely straightforward: there is no formal list showing which of the DTI's non-departmental public bodies (NDPBs) fall within the responsibility of OST. The Research Councils certainly fall into this category, as does the

⁶⁷ Quinquennial review of the CCLRC Stage 2 “Improving Performance”, April 2002. Available via www.cclrc.ac.uk

⁶⁸ Ev 18, para 15

⁶⁹ Available via www.ahrb.ac.uk

⁷⁰ Ev 18, para 14.

⁷¹ Q83

⁷² Q82

⁷³ Q84

Council for Science and Technology and also, in part, the Agriculture and Environment Biotechnology Commission and the Human Genetics Commission.

Council for Science and Technology

42. The Council for Science and Technology (CST) is an advisory NDPB, first established in 1993, whose purpose is to advise the Prime Minister on the strategic policies and framework for science and technology in the UK. It is, in effect, a committee of “the great and the good” in science and technology, meeting quarterly, with a small secretariat provided by OST. Its chairman is nominally the Secretary of State for Trade and Industry, though its meetings are normally chaired by the Science Minister or the Chief Scientific Adviser.⁷⁴ Our predecessor Committee considered the work of the CST in two reports in 2001 and recommended that more effort should be made to disseminate its work more widely and to give more prominence to its activities.⁷⁵ The CST has published only one report since June 2001 (on the links between the arts and humanities, science and technology⁷⁶) but has also provided input to the Quinquennial Review of the grant-awarding Research Councils, the Roberts Review and the review of Foresight. It is currently undertaking a study of the links between knowledge intensive business services and the science base.⁷⁷ **We share the view of our predecessor Committee that the work of the Council for Science and Technology should be better publicised.**

43. A Quinquennial Review of the CST was announced in August 2002.⁷⁸ The first stage of the review will examine the role and organisation of CST, concentrating on whether its function of providing independent strategic advice to Government on science and technology continues to be necessary, and if so whether CST as a Non-Departmental Public Body (NDPB) is the best way for the Government to obtain such advice. It is due for completion in October 2002. If it is decided that CST should continue, stage 2 will consider whether the way in which in which CST carries out its functions can be improved. The final report is due in December 2002.

Agriculture and Environment Biotechnology Commission

44. The Agriculture and Environment Biotechnology Commission (AEBC) was established in June 2000 to advise the Government on developments in biotechnology and their implications for agriculture and the environment. It works closely with two other advisory commissions: the Human Genetics Commission and the Food Standards Agency. It is an advisory NDPB, originally established by the Cabinet Office and MAFF: responsibility passed to OST and DEFRA in June 2001. Its secretariat is provided by OST (with administration costs shared between OST, DEFRA and the devolved administrations).⁷⁹ It has to date published two major reports (*Crops on Trial* in September 2001 and *Animals and Biotechnology* in September 2002) and an annual report on its activities in 2000-01 (in October 2001). We note that the Environment, Food and Rural Affairs Committee draws extensively on the AEBC’s *Crops on Trial* report in its recent report on Genetically Modified Organisms, and commends the AEBC for its transparency.⁸⁰

⁷⁴ For minutes of CST’s meetings, reports etc see www.cst.gov.uk

⁷⁵ Fourth Report, Session 2000-1, *The Scientific Advisory System*, HC 257, para 14; Sixth Report, Session 2000-01, *Are We Realising Our Potential?*, HC200-I, paras 35-38.

⁷⁶ *Imagination and Understanding*, July 2001

⁷⁷ See Cm 5416, paras 5.16-5.17, and CST Annual Report for 2001-02

⁷⁸ OST circular 19 August 2002. For details see www.ost.gov.uk

⁷⁹ Cm 5416, para 5.22

⁸⁰ Fifth Report of the Environment, Food and Rural Affairs Committee, Session 2001-02, *Genetically Modified Organisms*, HC 767, para 17

Human Genetics Commission

45. The Human Genetics Commission, which advises Government on developments in human genetics and their impact on people and healthcare, is an advisory NDPB reporting jointly to the Department of Health (DoH) and OST. OST has co-responsibility for the HGC's secretariat, although it is based at DoH: surprisingly, no mention is made of this in the DTI's Annual Report. We examined the role of the Human Genetics Commission in our recent Report on *Developments in Human Genetics and Embryology*.⁸¹

Royal Society and Royal Academy of Engineering

46. The Royal Society and the Royal Academy of Engineering are not public bodies but they do receive recurrent public funding from the OST's Science Budget. This amounts to £28.783 million and £4.770 million respectively in 2002-3. A breakdown of this expenditure is provided in OST's memorandum.⁸² The purpose and value of this expenditure is examined in detail in our recent Report, *Government Funding of the Scientific Learned Societies*.⁸³

Cambridge/MIT Institute

47. Another somewhat surprising line in the OST's Science Budget and Estimates relates to the Cambridge/MIT Institute (CMI). In November 1999, it was announced that the Government would contribute £65 million over a five year period from July 2000 to a collaboration between the University of Cambridge and the Massachusetts Institute of Technology (MIT).⁸⁴ This money has been channelled through OST. Under the 2002 Science Budget allocations, £14 million a year has been allocated in 2001-02 to 2003-04 to fund CMI programmes in four areas: integrated research; undergraduate exchange; professional practice; and national competitiveness network. It was intended that CMI would work with the Science Enterprise Centres to disseminate best practice.⁸⁵ The *Investing in Innovation* strategy document states that "CMI is now starting to deliver tangible benefits to UK research and business", but gives no details.⁸⁶

48. We asked OST how the expenditure on CMI was being evaluated. OST's response states that CMI is evaluating its own activities, with the assistance of external consultants and the DTI Performance and Evaluation Unit; and OST will be commissioning an independent evaluation.⁸⁷ **We welcome OST's decision to commission an independent evaluation of the Cambridge/MIT Institute and recommend that it be published when complete. The decision to fund the CMI, made outside the usual Science Budget allocation process, is somewhat curious, and we intend to ensure that its effectiveness is monitored.**

⁸¹ Fourth Report of the Science and Technology Committee, Session 2001-02, HC 791

⁸² Ev 21-Ev 23, Annexes A and B

⁸³ Fifth Report of the Science and Technology Committee, Session 2001-02, HC 774-I.

⁸⁴ Treasury Press Notice 186/99, 8 November 1999. See also www.cmi.cam.ac.uk

⁸⁵ Science Budget 2001-02 to 2003-04, page 9 and Table 2. £1,145 was spent in 2000-01.

⁸⁶ *Investing in Innovation*, para 5.31

⁸⁷ Ev 19, para 17

OST response to scrutiny

49. We are grateful to the OST, and to the DTI more widely, for its assistance and co-operation in our work of scrutiny. We acknowledge that parliamentary scrutiny places a burden of work on Departments, and especially on an Office so small, and tightly-staffed, as OST. **We hope that the Department will recognise the value of effective scrutiny, and ensure that OST is resourced appropriately to meet the reasonable demands and expectations of Parliament.**

LIST OF RECOMMENDATIONS AND CONCLUSIONS

Departmental performance targets

1. **We recommend that in future the Department publish the technical notes with the Public Service Agreement itself. Doing so might prevent the impression that the targets are insubstantial (paragraph 8).**
2. **We recommend that the DTI publish its Delivery Plan in full on its website, as well as the headline Service Delivery Agreement (paragraph 9).**
3. **We recommend that the Department demonstrate its commitment to openness by publishing its Business Plan on its website (paragraph 10).**
4. **We appreciate that it is not easy to encapsulate what a Department is expected to achieve in a few clear and measurable targets, and the PSA targets for science and technology are not a bad effort. However, they are far too general and high-level to allow judgement of OST's performance. ... We believe that OST should be more open about its detailed performance targets and intend to pursue this with the Department (paragraph 11).**
5. **The proliferation of documents and acronyms – PSAs, SDAs, Technical Notes, Strategic Frameworks, Delivery Plans and Business Plans – is highly confusing to the outsider. We recommend that the Government rationalise these publications, for the sake of greater clarity and transparency (paragraph 13).**

Departmental Annual Report

6. **The present lay-out of the DTI Annual Report makes it difficult to distinguish clearly between the activities and expenditure of OST and those of other parts of DTI (paragraph 14).**
7. **We recommend that OST consider publishing an annual activity report of its own. If it does not, we recommend that there should be a self-contained OST section within the DTI Annual Report (paragraph 16).**
8. **We regret the loss of financial detail in the Departmental Report, and the further proliferation of documents, though we accept that the readership for the more technical financial tables will be small. Departmental Annual Reports are a valuable source of factual information and a crucial element in Departments' accountability to Parliament: they must not become merely a glossy presentation of the Department's activities and aspirations (paragraph 17).**

Spending Review 2002

9. **OST's figures show an increase in the Science Budget of £660 million from 2003-04 to 2005-06. ... The increase in the Science Budget brought about by the Spending Review 2002 is more accurately represented as £660 million, not as £890 million. The way in which the Spending Review White Paper presents the increases to science spending is misleading and leaves the Government open to accusations of double-counting (paragraph 21).**
10. **The additional funds for Research Council programmes are very welcome, though the emphasis on funding of new science gives us some concern: valuable existing programmes must be maintained too (paragraph 23).**

11. **We intend to take evidence from the Science Minister in November 2002, when the Science Budget allocations have been published (paragraph 24).**

Higher Education funding

12. **We welcome the additional funds for research infrastructure announced in the Spending Review and the fact that it will be provided through an ongoing capital funding stream, which should facilitate long-term planning (paragraph 25).**
13. **We also welcome the increase in resource funding for higher education research, which will go some way towards remedying the longstanding imbalance in the dual funding system ... Much depends on the outcome of the DfES's current review of higher education strategy which the sector awaits with trepidation (paragraph 26).**

Departmental science budgets

14. **While the Science Budget, and to some extent the Higher Education budget, has done well out of the Spending Review, its impact on the science and research budgets of other departments remains to be seen. ... We welcome the steps being taken by Government to improve the quality and fitness for purpose in scientific research by departments. It must also ensure that this research is adequately funded (paragraph 27).**

Cross-Cutting Review

15. **We are pleased that the Government has now published the Cross-Cutting Review of Science and Research in full. It is a very useful document and we find it hard to understand why it was not published at the time of the Spending Review. We recommend that the Government publish such important policy documents in future, without waiting for prompting by our Select Committee (paragraph 28).**

Transparency Review

16. **It is ironic that it has taken so long to bring transparency to the Transparency Review (paragraph 29).**

Responsibility for science policy

17. **We welcome the close interest being taken by the Treasury in science and engineering, particularly since this has led to additional funding, but responsibility for policy-making in this area must lie clearly with the OST (paragraph 30).**

European Union funding

18. **We recommend that the OST carry out a detailed analysis of the costs and benefits of the Framework 5 programme to UK science, and that this analysis be published (paragraph 31).**
19. **The European Framework 6 programme is responsible for the outlay of considerable sums of public money: the UK Government must monitor it closely to ensure that the commitment to more efficient management is achieved in practice (paragraph 33).**

DTI restructuring

20. **We intend to take evidence from the new Director of Innovation at DTI at an early opportunity. It will be essential for the new Innovation Group to work very closely with the OST, if it is to achieve what was intended (paragraph 35).**

Arts and Humanities Research Board

21. **We welcome the proposal for an Arts and Humanities Research Council under the OST and will be following developments closely, as this change has considerable implications for the future of OST and its place within Government (paragraph 40).**

Council for Science and Technology

22. **We share the view of our predecessor Committee that the work of the Council for Science and Technology should be better publicised (paragraph 42).**

Cambridge/MIT Institute

23. **We welcome OST's decision to commission an independent evaluation of the Cambridge/MIT Institute and recommend that it be published when complete. ... The decision to fund the CMI, made outside the usual Science Budget allocation process, is somewhat curious, and we intend to ensure that its effectiveness is monitored (paragraph 48).**

OST resources

24. **We hope that the Department will recognise the value of effective scrutiny, and ensure that OST is resourced appropriately to meet the reasonable demands and expectations of Parliament (paragraph 49).**

LIST OF ABBREVIATIONS USED IN THE REPORT AND EVIDENCE

AEBC	Agriculture and Environment Biotechnology Commission
AHRB	Arts and Humanities Research Board
BAe	British Aerospace
BBSRC	Biotechnology and Biological Sciences Research Council
C&AG	Comptroller and Auditor General
CCLRC	Council for the Central Laboratory of the Research Councils
CE	Chief Executive
CMI	Cambridge MIT Institute
CSA	Chief Scientific Adviser [to the Government]
CST	Council for Science and Technology
DEFRA	Department for Environment, Food and Rural Affairs
DfES	Department for Education and Skills
DG	Director General
DGRC	Director General of the Research Councils
DoH	Department of Health
DTI	Department of Trade and Industry
EPSRC	Engineering and Physical Sciences Research Council
ERA	European Research Area
FP(6)	(Sixth) Framework Programme
FRS	Fellow of the Royal Society
GDP	Gross Domestic Product
GMO	Genetically Modified Organism
HE	Higher Education
HEFCE	Higher Education Funding Council for England
HEIF	Higher Education Innovation Fund
HMT	Her Majesty's Treasury
IDIL	Infectious Diseases in Livestock
JIF	Joint Infrastructure Fund
KTSG	Knowledge Transfer Steering Group
MAFF	[the former] Ministry of Agriculture, Fisheries and Food
MIT	Massachusetts Institute of Technology
MRes	Masters Degree in Research
NDPB	Non-Departmental Public Body
OECD	Organisation for Economic Co-operation and Development
OPI	Output Performance Indicator
OST	Office of Science and Technology
PSA	Public Service Agreement
PSX	Ministerial Committee on Public Services and Public Expenditure
QQR	Quinquennial Review
RAE	Research Assessment Exercise
R&D	Research and Development
RCPS	Research Councils Pension Scheme
RCUK	Research Councils UK
RfR	Request for Resources
SDA	Service Delivery Agreement
SEB	Science and Engineering Base
SET	Science, Engineering and Technology
SME	Small and Medium-sized Enterprise
SP	Specific Programme
SR	Spending Review
SRIF	Science Research Investment Fund

TCS	Teaching Companies Scheme
TDST	Transdepartmental Science and Technology [Group]
TRAC	Transparent Approach to Costing
UMIST	University of Manchester Institute of Science and Technology
UUK	Universities UK

PROCEEDINGS OF THE COMMITTEE RELATING TO THE REPORT**MONDAY 21 OCTOBER 2002**

Members present:

Dr Ian Gibson, in the Chair

Mr David Heath
Mr Mark Hoban
Dr Brian IddonMr Tony McWalter
Geraldine Smith
Bob Spink

The Committee deliberated.

Draft Report (The Office of Science and Technology: Scrutiny Report 2002), proposed by the Chairman, brought up and read.

Ordered, That the draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 49 read and agreed to.

Resolved, That the Report be the Seventh Report of the Committee to the House.

Ordered, That the Chairman do make the Report to the House.

Ordered, That the provisions of Standing Order No. 134 (Select committees (reports)) be applied to the Report.

A paper was ordered to be appended to the Minutes of Evidence.

Ordered, That the Appendix to the Minutes of Evidence taken before the Committee be reported to the House.—(*The Chairman.*)

[Adjourned till Wednesday 23 October at Four o'clock.]

LIST OF WITNESSES

Wednesday 15 May 2002

THE OFFICE OF SCIENCE AND TECHNOLOGY

Professor David King, Chief Scientific Adviser to the Government, and Dr John M Taylor,
Director General of the Research Councils Ev 1

APPENDIX TO THE MINUTES OF EVIDENCE

Memorandum from the Office of Science and Technology Ev 13