

	<b>NUCLEAR SAFETY DIRECTORATE - BUSINESS MANAGEMENT SYSTEM</b>		
	<b>RESEARCH</b> <b>LEVY PROGRAMME DEVELOPMENT &amp; FINANCIAL ARRANGEMENTS</b>		<b>G/RES/007</b>
	Approved By: P Storey	P Storey	<b>ISSUE 002</b>
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## 1. Purpose and scope

- 1.1 This guidance note addresses the objectives of the HSE levy programme, its content, the responsibilities of the various parties, the process for developing it and the financial arrangements. The levy programme is that part of the HSC coordinated programme commissioned by HSE.
- 1.2 Other guidance documents address responsibilities, procuring, monitoring, disseminating and evaluating levy research projects, and dealing with policy relevant projects.

## 2. Legal Basis

- 2.1 The Nuclear Installations Act 1965, as amended by the Atomic Energy Act 1989, gives powers to the HSC to direct HSE to recover the costs from nuclear licensees "incurred wholly or partially in connection with the carrying out of research at the direction of HSC" from the nuclear licensees. At present the levy arrangements cover just 4 licensees – BEG(UK)L, BEGL, BNFL and Magnox Electric plc. Although NSD has received confirmation from HSC that it has the powers to levy all licensees, this confirmation was subject to extra resources being made available, and this has not been the case.

## 3. Content of Levy programme

- 3.1 Subject to the appropriate direction from the HSC, HSE/NSD will commission research:
  - required by NSD to retain access to external independent technical expertise,
  - when it is an international activity most appropriately conducted through a government agency.
  - when a licensee is failing to address a safety issue that in NSD's judgement warrants research ('punitive top-up');
- 3.2 The above three themes and further objectives for HSE commissioned research are further discussed below.

### **Maintenance of NSD's Independent Technical Capability (ITC)**

- 3.3 The function of the independent technical capability is to provide NSD with a source of technical advice for its normal regulatory assessment work, in addition to its own staff, which, where possible, is independent from those used by the nuclear licensees. There are various degrees of independence,

and it is acknowledged that most experts in the field will have or will have had some association with the licensees. A balance is struck between the level of expertise which comes through working for the industry and the independence from specific plant evaluation.

3.4 Support may be by:

- specific one-off projects
- a long term agreement to support a team or facility with levy contracts
- a long term agreement to guarantee a minimum value of programme of work from various sources, with a levy top-up if needed.

The use of the levy programme for this purpose should be proportionate to the safety significance of the issue(s).

**International work**

3.5 International work means information exchange and collaborative projects which contractors, including licensees, participate in. In the case of an involvement in international projects, this was viewed as continuing to support the strategy of maintaining NSD's awareness of worldwide developments in safety issues, particularly those relating to PWR technology. NSD is party to strategic discussions in the NEA to maintain essential international expertise and facilities to combat the world-wide decline in the nuclear research infrastructure. From the mid-90s the UK has largely stopped maintaining large scale facilities, and when these have been required has sought access to international facilities or contributed financially to internationally co-ordinated projects.

3.6 With the decline of nuclear safety research across the world many countries have started to adopt a similar collaborative approach to the UK's and, therefore, increasingly collaborative programmes of research are the means for addressing safety issues especially on PWR and generic matters. Whereas the licensees use agreements with other nuclear operators or organisations like EPRI to access technical expertise abroad, NSD tends to be the focal point for collaborations with other regulators, Technical Safety Organisations, the EC and collaborative initiatives through the Agencies. Apart from answering technical safety issues, these collaborations are one way NSD keeps informed about international developments.

3.7 It can be seen from the above that some international activities are most appropriately conducted through a government agency because of the way that they are organised. However additional reasons for including international activities in the levy programme are:

- to demonstrate to the public and our other key stakeholders that we are well informed on, and learn from, international nuclear safety development
- to ensure UK participation in international projects where the licensees decline involvement, but which HSE believes to be justified (part of punitive top-up)

- to ensure HSE access to the information
- to ensure that HSE can influence the conduct of the project.

### **Top-up**

- 3.8 NSD will ensure that each licensee is adopting the necessary research arrangements and commissioning the appropriate research and in so doing will be able to advise the HSC on the adequacy of that research. The principal objective of 'top-up' is to ensure that, from an NSD perspective, there is an adequate and balanced programme or research. Where a licensee does not take account of NSD's safety concerns, NSD will retain the power to commission its own research and recover the costs from the licensee.
- 3.9 The current licensee programme includes research which is addressing emerging safety issues raised by the NSD. The research aims to inform both the regulators and licensees about the safety significance of a change which is occurring or which has occurred or where there is a clear trend to a potential lowering of safety. For some safety issues the indicators which demonstrate a change may not be transparent but expert judgement exercised by NSD would expect a change which could lead to the lowering of safety. NSD would expect licensees to take steps to address these safety issues when justifications are provided and no alternative means for addressing the issues are made. However, where the justification is not accepted by a licensee or where NSD prefers to address the issues itself, NSD may decide to commission its own research.
- 3.10 'Punitive top-up' in cases of disagreement between NSD and the licensees is regarded as exceptional, but not necessarily as a sign of failure. There is a guidance note on a disputes procedure (Licensee NSR GN 5).

### **Others**

- 3.11 In the past some teams identified by the licensees as being Essential Research Capability have been supported by the levy with the agreement of the licensees. This was so that the levy programme would be kept above a minimum size. However the levy programme should no longer be used for this, and the responsibility for all ERC has been transferred to the licensees and included in their Nuclear Research Schedule.
- 3.12 In the past some PhD studentships and essential long term operational support principally associated with PWR technology was funded through the Levy Programme by agreement with the licensees. Such work for the future should be incorporated into the licensees' Nuclear Safety Research Schedules.
- 3.13 Research to improve the way NSD regulates - NSD is committed to a programme of continuous improvement with the aim to achieve regulatory excellence. To assist progress in this NSD participates in international agency initiatives which aim to establish good practice for regulators to follow. NSD may decide to commission its own research to assist it in improving its regulatory effectiveness. There have been some support projects in the past relevant to this objective.

3.14 Independent confirmatory research - NSD maintains both in-house and out-house expertise to answer safety issues which arise through its regulatory activities. The regulator needs to be able to independently draw its own conclusions on submissions made by licensees and for this reason it may need to analyse any proposal, including the interpretation of research data for forecasts of a model and generate its own research data so as to support the conclusions it will draw. This confirmatory research, especially in terms of creating data, may be commissioned by a licensee on behalf of NSD but in which case NSD may choose to have its own analysis undertaken independently of the licensee. Traditionally NSD has not used the levy programme for this, but it has used the support programme to carry out independent analyses. The former Memorandum Of Arrangements stated in paragraph 2.3 that 'the HSC Co-ordinated Programme excludes nuclear safety research commissioned by HSE's Nuclear Installations Inspectorate (NII) to enable it to take specific licensing decisions both today and in the future (covered by separate arrangements)'. These separate arrangements are the support programme, and this principle still applies. Such independent research is distinct in principle from the above use of research to support the continued existence of a team which can give technical advice and support in the future.

#### **4. Timetable**

4.1 This is an expansion of the levy programme part of the timetable given in BMS/RES/001 and licensee NSR GN 2.

- May to June - NSD technical reps discuss issues with licensee
- Mid July - NSD technical reps complete adding issues to NRI
- End October - NSD technical reps inform NSD 4A of proposal for levy programme
- End October - NSD 4A inform licensees of Issue 1 of proposed levy programme with projects, costs and charging proposals at same time as Issue 1 of licensees' Nuclear Research Schedule
- November to February - Dialogue between NSD and licensees
- End February - NSD finalise proposed levy programme
- April - Programme submitted to NuSAC SCR and NSRSG (by exception)
- April/May - Programme submitted to HSC
- Levy project technical monitor commissions project if programme is approved by HSC (although in some cases projects may be commissioned before this - NSD 4A will advise)

- During project execution, NSD technical rep informs licensee(s) of progress
- After project completion, NSD technical reps close issue in NRI if appropriate
- After project completion, levy project technical monitor completes evaluation form for NSD 4A
- September - NSD 4A presents levy evaluation report to NuSAC SCR
- April/May - NSD 4A submits evaluation report to HSC.

## **5. Notification of licensees**

5.1 HSE shall not levy licensees for research without prior consultation and notification. HSE will:

- give the licensees a first estimate of the levy programme content and cost in October and the final details of the proposed programme in February in respect of the forthcoming financial year (i.e. 1 April to 31 March).
- formally notify the Nuclear Licensees after approval of the levy programme at the HSC meeting in May/June of the total levy amount estimated as being payable.
- send a profile of the sums to be invoiced during the year.
- recover its expenses on a quarterly in advance basis.

## **6. Management costs**

6.1 Currently HSE recharges as management costs the staff time for the work of the research unit that is relevant to the whole of the HSC coordinated programme, but not the related work of the technical assessors. It does not charge the costs of the research unit time that are spent on general policy work, international work, servicing committees, etc. HSE will keep the management costs charging system under review.

## **7. Monitoring of expenditure and finalisation**

7.1 HSE will monitor expenditure closely during each year on both the research programme and HSE's administrative costs. HSE will notify the Nuclear Licensees promptly in writing of any necessary changes to the sums as notified that will be due in any financial year and, if necessary, will adjust the subsequent profile payments.

7.2 After the end of each financial year, HSE will calculate the final recoverable expenses for that year, based on work actually done and expenses actually incurred, and notify the Nuclear Licensees accordingly. Any over or under collection will be identified and reimbursements made or payments sought as appropriate.

## **8. Generation and Treatment of Income**

8.1 There may be occasions, e.g. by:

- the exploitation of HSE owned intellectual property,
- the sale of HSE owned equipment
- the use of computer codes obtained under international agreements,

when HSE can / will derive income from activity related to the HSE Levy Programme. HSE will endeavour to charge equitably in such cases and will normally use any such net income to reduce the size of the HSE levy on the relevant licensee(s).

8.2 If research done under the levy programme benefits licensees not covered by levy arrangements or non-licensees, HSE shall endeavour to set up equitable financial arrangements. For licensees, HSE may use the Nuclear Safety Studies (ie support) programme as a means of cost recovery, but HSE regards the widening of the levy arrangements as being a preferable process since it is more transparent and allows greater scrutiny.

## **9. Allocation of costs**

9.1 For research specific to a single licensee, only that licensee will be levied.

9.2 For research relevant to operating reactors of more than a single licensee, the costs will be recharged by the levy according to a 3:1 weighted average of declared MW capacity and number of operating reactors. This is given in more detail in the appendix.

9.3 The figures resulting from this formula will be reviewed and agreed annually before the draft levy programme is drawn up in the light of any changes, and applied to the following financial year.

9.4 Where research is not of safety significance for a particular licensee but is of commercial benefit (for example BNFL fuel vending interests), HSE will endeavour to reach an agreement for an equitable contribution. Payment may be effected by means of repayment between licensees, ie HSE may levy Magnox, who are reimbursed by BNFL.

9.5 For research into decommissioning and waste management, an appropriate basis should be agreed on an ad hoc basis. Currently there are no such levy projects. When the Nuclear Decommissioning Authority is set up, an

agreement on an appropriate funding mechanism will be reached between NDA and HSE.

- 9.6 The management costs for the reactor programme are not proportional to the research costs, and are related to the whole HSC Co-ordinated programme, not just the levy programme. They will be allocated to the reactor licensees according to the standard formula for a project relevant to all reactor licensees.

## **10. Associated documents**

RES/001	Nuclear safety research
G/RES/001	Policy relevant research and support
G/RES/008	Commissioning research and support
G/RES/009	Monitoring research and support
G/RES/010	Disseminating research and support
G/RES/011	Evaluating research and support

## **11. Abbreviations**

EC	European Community
EPRI	Electric Power Research Institute
HSC	Health and Safety Commission
HSE	Health and Safety Executive
ITC	Independent Technical Capability
NDA	Nuclear Decommissioning Authority
NRI	Nuclear Research Index
NSD	Nuclear Safety Division
NSR	Nuclear Safety Research
NSRSG	Nuclear Safety Research Steering Group
NuSAC SCR	Nuclear Safety Advisory Committee Sub Committee on Research

**Appendix - Division of levy charges in % between licensees for different categories of projects for 2005/06**

	BNFL	BNFL Magnox	BEGL
Generic reactor	0	22.9	77.1
GCR	0	25.0	75.0
AGR			100
Magnox	0	100	
PWR			100

This is based on a 3:1 weighted average of MW capacity and number of operating reactors, with the following operating reactors per licensee. These figures are not appropriate for W&D projects, but there are currently no such levy projects. The figures should be updated if the list of operating stations changes. The arrangements may change after the introduction of the NDA.

Licensee	Station	No reactors	MW
Magnox	Dungeness A	2	445
	Oldbury	2	430
	Sizewell A	2	430
	Wylfa	2	1050
BEGL	Dungeness B	2	1104
	Hartlepool	2	1237
	Heysham 1	2	1148
	Heysham 2	2	1320
	Hinkley B	2	1300
	Sizewell B	1	1220

	Hunterston B	2	1150
	Torness	2	1250