

PHEE response to HEFCE Consultation on REF (2009/38)

Annex A

Consultation questions and response form

Respondent's details

Are you responding: (Delete one)	On behalf of an organisation
Name of responding organisation/individual	Professors and Heads of Electrical Engineering (PHEE)
Type of organisation (Delete those that are not applicable)	Academic association or learned society

Consultation questions

Consultation question 1: Do you agree with the proposed key features of the REF? If not, explain why.

We support the key features of REF as stated in the consultation document i.e. to assess the quality of research outputs, maintain and develop a sustainable infrastructure and encourage the dissemination of the outputs to the benefit of society. The HEFCE intention stated in paragraph 7 "...the mechanisms should become simpler and less burdensome...." is also an important principle which we support fully.

We are concerned about the very large size of the Engineering UoA and feel that the large and diverse workload may have a negative impact on the panel's ability to assess Electrical and Electronic Engineering submission's in particular. It may have an indirect effect of reducing both HEFCE and institutional resource to Engineering research across the board as HEIs are likely to reduce the size of their submissions.

We are also concerned that HEFCE proposals on defining and measuring impact are still poorly specified at this stage and yet it is to be awarded a high weighting in the overall scheme for assessing UOA excellence. While impact should clearly be a key feature of Electrical Engineering and related subjects until the assessment criteria and methodology are better established, this should be weighted at 15%.

Consultation question 2: What comments do you have on the proposed approach to assessing outputs? If you disagree with any of these proposals please explain why.

Comments are especially welcomed on the following proposals:

- that institutions should select research staff and outputs to be assessed
- for the categories of staff eligible for selection, and how they are defined
- for encouraging institutions to submit – and for assessing – all types of high-quality research outputs including applied and translational research
- for the use of citation information to inform the review of outputs in appropriate UOAs (including the range of appropriate UOAs, the type of citation information that should be

provided to panels as outlined in Annex C, and the flexibility panels should have in using the information)

and on the following options:

- whether there should be a maximum of three or four outputs submitted per researcher
- whether certain types of output should be 'double weighted' and if so, how these could be defined.

We agree that institutions should select the staff and outputs to be assessed.

Staff on fractional contracts whose research outputs are clearly identified in the authorship as being based in the submitting HEI should be allowed for submission to REF but not outputs which do not clearly indicate this.

We welcome the provisions for early career researchers, part-time staff and staff with special circumstances just as we believe that all types of high quality research outputs should be eligible including applied and translational work.

On citation data we are clear that this is not sufficiently robust to be meaningful in the assessment process. We believe that this was demonstrated in the pilot studies carried out by HEFCE and to use these data can be misleading especially when the data are sparse as in many subjects and especially in engineering. If this bibliometric data were to be provided to panels the information could lead to erroneous conclusions if the panel members chose to weigh it heavily. Equally, since peer review will be required anyway, then to include bibliometric data will involve both HEFCE and every HEI in considerable extra work in checking this data which the pilot study indicates to be of dubious utility. This extra work violates one of the first tenets of the change to REF, namely to reduce the burden. It seems more reasonable to abandon citation data in view of the results of the pilot study and the considerable extra work involved. Further, the use of bibliometrics fails to address one of the measures of impact, increasingly emphasised by EPSRC and Government namely that whilst many papers in engineering are not highly cited, they are widely used by industry and commerce.

We do not feel strongly regarding the number of submitted outputs as in science and engineering but on balance would support 4 papers as most staff would be expected to have in excess of 4 papers over the period.

Consultation question 3: What comments do you have on the proposed approach to assessing impact? If you disagree with any of these proposals please explain why.

Comments are especially welcomed on the following:

- how we propose to address the key challenges of time lags and attribution
- the type of evidence to be submitted, in the form of case studies and an impact statement supported by indicators (including comments on the initial template for case studies and menu of indicators at Annex D)
- the criteria for assessing impact and the definition of levels for the impact sub-profile
- the role of research users in assessing impact.

Impact is the most significant new criterion injected into REF and thus the forthcoming pilot exercise is a very welcome inclusion in that process. We believe that the impact of research is important but is very difficult to assess accurately and therefore ought not, at this introductory stage, be weighted so heavily.

The consultation document itself highlights that some research outputs which are outstanding and ahead of their time will need a long gestation period before the value of impact will be realised. The 10 to 15 years quoted in the consultation is not unreasonable but the difficulty in tracking this over such timescales and cross-referencing the impacts to outputs from the HEI is likely to be problematical. There is no clear guidance on how to deal with staff who retire or move on to other jobs. Likewise, it is difficult to see the justice of giving such prominence to newly imported staff. This could well further enhance the already distorting effects of the RAE/REF process on the academic labour market, with no net gain to society.

The common list of Impact Indicators given in Annex D is appropriate. The case study methodology does not seem a precise method of assessing these and will involve a good deal of extra work for both panels and HEIs. Although in engineering most of the research outputs will be applied, there is still a significant amount of curiosity driven research and it should be recognised as being of equal value with applied research as it often forms the basis for the next generation of applied research.

Research *users* were successfully incorporated into the earlier RAE panels and should be part of the REF as they add a different and important dimension to the assessment process. We are, however, concerned that if we maintain 25% as the weighting for the “impact” then each case study will dominate the scores for the outputs themselves and may result in unintended consequences.

Consultation question 4: Do you have any comments on the proposed approach to assessing research environment?

The approach to assessing research environment is appropriate. The overlap with impact (e.g. with respect to income) is confusing and implies some ‘double-counting’ which might be open to different interpretation by different panels.

We welcome the introduction of a standard format for reporting research income and PGR student data. We strongly support proposals to more closely align the REF data requirements with those of HESA. It is frustrating and an unnecessary burden to have to reconfigure research student and research income data to accommodate different census dates and subject groupings.

Consultation question 5: Do you agree with our proposals for combining and weighting the output, impact and environment sub-profiles? If not please propose an alternative and explain why this is preferable.

We agree that the greatest weighting should be given to the outputs element. The most important assessment is the quality of the outputs and the overall profile should not mask this by the impact and environment profiles which, on the proposed, schemes could well happen. There are far more outputs than case studies which means that even after taking

account of the percentage make up of the overall score, impact carries much greater influence per assessed unit (case study) than the outputs. We suggest that in the 2013 REF, and subject to the outcome of the pilot study on impact, a level of 15% is more reasonable until panels and the academic community have confidence in its assessment. Conversely 15% for environment which includes measureable parameters such as grants and research students seems relatively low. We suggest 60-65% outputs, 15% impact (until we have a robust assessment procedure when this could rise to 25%) and 20-25% environment. We are happy that all panels work to the same ratios.

Consultation question 6: What comments do you have on the panel configuration proposed at Annex E? Where suggesting alternative options for specific UOAs, please provide the reasons for this.

The argument for reducing the overall number of main panels and introducing greater consistency between related fields is accepted. However, in the case of Engineering, the proposed UoA is extremely large; it is more than twice the average panel size and 30% larger than the next largest UoA, which is Clinical Medicine. Since Engineering is a very broad subject, this is likely to both result in a very high volume of work for the panel members and to lead to use of strongly devolved sub-panels to deal with specialisms. The very large Engineering and Materials panel is a cause for concern both from an organisational viewpoint of such a large scale unit and because of difficulties in comparing work of widely differing kinds such as semiconductor nanotechnology and civil engineering. Indeed much electronics and some materials outputs appear in the physics literature rather than in engineering journals. Arguably the breadth of engineering is comparable with that of pure science, yet 'science' would not be considered as a single UoA. Paragraphs 94-98 of the consultation document explain about sub-panels which seem to be surrogates for panels in their own right and the use of associate members as well as advisors but the responsibilities of these need clarification.

It is not yet clear whether universities could make several separate submissions to the proposed single panel from distinct departments or if these would have to be combined into one single submission. There are practical problems for the majority of institutions and for the overall health of Engineering in the UK generally with both routes. Multiple submissions will lead to spurious comparison (and ranking in league tables) of widely differing subject areas. Single submissions are likely to lead to institutions being even more selective in the staff included and an overall reduction in activity in the Engineering field at a time when investment in research in STEM subjects is vital to the UK economy.

PHEE would support having smaller engineering panels in associated areas to address the above issues and bring panel sizes closer to the average. These might be: a) Electrical & Electronic Engineering & Computer Science, b) Mechanical, Civil and Chemical Engineering c) General or Integrated Engineering including Materials. We would not support a split which did not include some sort of General Engineering category as many of our members are part of broad Engineering Schools for whom it would be difficult to divide a submission.

Consultation question 7: Do you agree with the proposed approach to ensuring consistency between panels?

The suggested provisions for consistency of panels' approach seem reasonable but we should note that research income (and to some extent PGR numbers) will differ significantly between different subjects.

Consultation question 8: Do you have any suggested additions or amendments to the list of nominating bodies? (If suggesting additional bodies, please provide their names and addresses and indicate how they are qualified to make nominations.)

No

Consultation question 9: Do you agree that our proposed approach will ensure that interdisciplinary research is assessed on an equal footing with other types of research? Are there further measures we should consider to ensure that this is the case and that our approach is well understood?

We believe that interdisciplinary research involving engineering was well catered for in RAE 2008 and since the current proposals are similar we believe that this will generally be satisfactory.

Consultation question 10: Do you agree that our proposals for encouraging and supporting researcher mobility will have a positive effect; and are there other measures that should be taken within the REF to this end?

We welcome the proposal to add a category to the 'individual staff circumstances' to reduce the number of outputs required for staff who have spent time in industry during the REF period. It is important to encourage the flow of staff between academia and industry. This aspect is vital for the health of engineering research and the proposals will help dispel worries that academic staff may have about the effects on their outputs of spending time in an industrial environment.

Consultation question 11: Are there any further ways in which we could improve the measures to promote equalities and diversity?

The inclusion of "Impact" could well affect early stage researchers adversely as they will not have had time to develop their work and whilst the proposed case studies refer to groups of submitted staff, where departments have had a large staff change this could be a concern. Should early career researchers be exempt from the Impact count?

The proposal to take a much more centralised approach to individual staff circumstances seems sensible. It is likely that almost all cases would be of a type which would not require the specialist judgement of sub-panel members.

Consultation question 12: Do you have any comments about the proposed timetable?

While maintaining a 5-year cycle would be a good idea under normal circumstances when the procedure changes every cycle this inevitably leads to pressure to delay. This time we do see problems in terms of achieving adequate consultation and collective understanding of how to handle 'impact' in this current round. The timetable is extremely tight with submissions due in 2012 and the pilot on impact only just starting. Hence we would favour a year's delay.

Consultation question 13: Are there any further areas in which we could reduce burden, without compromising the robustness of the process?

The use of templates would help considerably in the organisation and reading of the submissions. It is our belief that the extra burden of citation and bibliometric data will not be cost effective and should be abandoned.

Consultation question 14: Do you have any other comments on the proposals?

RAE 2008 was widely considered to be a fair process. While there may have been disagreement on the funding that followed from it the overwhelming view from those involved was that the assessment process itself was robust. REF should therefore model its processes closely on RAE 2008 which had the confidence of the academic community.