

Energy Technology Partnership
Response to Scottish Funding Council Consultation
Development of a single 'knowledge exchange office'

The Energy Technology Partnership (ETP) is an Alliance of Scottish Universities engaged in world-class energy related Research, Development and Demonstration. ETP was established in 2008 for two main reasons, firstly to promote greater levels of collaboration between its member universities and secondly to use the strength and reputation of the 'ETP Brand' to develop new partnerships, particularly with industry. Research pooling provides a sound foundation for outreach and effective 'knowledge exchange pooling'; research excellence with impact.

ETP's success is heavily dependent on effective Knowledge Exchange (KE) mechanisms and we welcome the opportunity to respond to the SFC Consultation on the Development of a Single 'Knowledge Exchange Office'.

This response is made by Dr Simon Puttock (ETP Executive Director) on behalf of ETP's Directorate (Profs. Sir Jim McDonald - Chair, Paul Mitchell, Robin Wallace, Andy Knox, Patrick Corbett, John Irvine).

1. Is the remit of the national policy forum correct?

ETP supports the proposal to develop a national KE Forum and agrees that this should focus on high level strategic issues and setting the overall policy landscape for KE in Scotland. In fulfilling this role it should also take a lead in identifying and recommending relevant global best practice for effective KE.

The University sector should strive to increase the absorptive capacity of businesses for technology innovation. The Forum should therefore also develop strategies to work with the private sector to increase Business Expenditure on Research and Development (BERD) which in Scotland continues to lag behind our competitor countries.

2. What membership should the forum have to deliver this remit?

The Forum should provide an opportunity to greatly increase the coherence of Scotland's KE related activities and deliver significant added value. A step-change in performance and impact will require fresh thinking and ambition and this should be reflected in the composition of the Forum. Representation from existing government agencies needs to be balanced with that from industry (large and SMEs), industry representative bodies and other international experts who will effectively challenge the status quo and help deliver significant and sustainable change.

3. What functions might usefully be included in a system of national support to be delivered by Interface?

ETP has a very good working relationship with Interface and holds the organisation in very high regard. However, we are not in full agreement with the proposed extension of the Interface role in relation to the proposed national support infrastructure.

Interface is currently very effective and should continue with its existing roles as outlined in the consultation paper;

- A national platform to stimulate engagement between SMEs and HEIs across Scotland
- Dealing with enquiries outwith the identified streams at the national level

Interface currently sends energy related enquiries to ETP's KE team as well as to the separate HEI R&KE Offices. This is potentially confusing for companies (getting multiple responses from ETP and individual HEIs). It is proposed that once the KE teams are fully operational then sector specific enquiries are routed from Interface to the sector teams who then engage with relevant HEIs to coordinate a response via Interface to the company. R&KE Offices should also be copied in on the enquiries to enable contact with the sector KE teams if required to highlight HEI capability. This will be more responsive, will ensure that the most appropriate HEI-company interaction is promoted and further simplify the academic landscape for business. ETP is in a position to manage this with immediate effect.

ETP does not believe that the role of Interface should be further extended to include the other two areas identified in the consultation paper;

- Assure the delivery of sector resources such as common contract templates and 'easy access IP'
- Work with the sector to share expertise-based services across the sector for appropriate needs such as spin-out support

The development of standardised templates and processes across Scotland's HEIs is important for effective engagement with the private sector. Considerable progress has been made in recent years to achieve this goal although this is not yet complete. ETP is of the view that this work should continue to be led by university Research & Commercialisation Directors with support as required from the national KE Forum. ETP is supportive of broadening the 'easy access IP' model where this will provide benefit to business and society.

With regard to the other proposed element of the proposed national support infrastructure;

- Manage the virtual presentation of engagement opportunities at the national level including the current operation of University-technology.com

ETP supports the need to present engagement opportunities (with a business focus) at a national level and searchable by sector. University-technology.com includes some of these opportunities but does not include others (e.g. many Proof of Concept outcomes, IP etc.). It is suggested that a more fundamental review is first needed of how HEIs can best present this information and what the target audience (business, investors) require. A system of tracking the status and outcomes of these engagement opportunities should also be developed. The subject of whether this is then best managed and updated by Interface or another organisation can then be considered. One option is that the proposed sector KE groups help promote its sector specific content, once a standard web-based system has been established and that the R&KE Offices continue to manage contractual, IP and financial issues. This would further simplify the KE landscape.

4. For which additional functions could the sector share expertise to enhance engagement with industry?

The working group report highlighted the Wilson review adopted definition of KE as the “two-way flow of people and ideas between the research environment and wider economy...” The report states “the (working) group noted, but did not consider in detail, this definition’s emphasis on the exchange of people, focussing instead on the exchange of ideas.

Feedback from industry is clear on this point. Whilst KE and innovation are important for competitiveness and company growth, the development of a highly skilled workforce through recruitment of appropriately trained people and the development of existing staff (through CPD etc.) is often a much higher priority. KE and skills development are heavily interlinked and it is suggested that both need to be considered in the design of this new sector based approach.

ETP has been increasingly active in the skills area. ETP’s Industry Doctorate programme (initially funded from SFC Spirit award) currently supports ca. 60 high quality studentships all with strong industry relevance and backing. This will be extended to a Masters based programme during 2013. In addition, ETP received SFC funding to deliver CPD to industry that was highly successful and provided over 400 training opportunities; this will be extended with new funding into 13/14. Opportunities are being sought for internships, both from academia into industry and vice-versa. The recently announced Scottish Energy Skills Academy will add new impetus for the benefit of industry. All these examples have a skills development dimension, involve the two-way flow of people and also have a strong focus on the development and exchange of new ideas and innovation, i.e. the broader definition of KE.

It is not proposed that the proposed national KE Forum should include a skills remit as this would duplicate other existing structures (e.g. Energy Skills Action Group). However, it is recommended that this should be an integral part of the role of the sector stream activities and measures of success should recognise this important area as well as the existing (hard) Knowledge Transfer Grant measures. This is important from an HEI organisational perspective since KTG measures are owned by HEI commercialisation groups but skills are not. The sector teams would therefore be well placed to bring these two aspects together.

The issue of skills is also relevant to the development of expertise, competency and ultimately the performance of the sector KE teams. The University of Strathclyde has recently introduced a formal career path and grading structure (6-10) for Knowledge Exchange Professionals which together with the delivery of high quality training opportunities for KE staff, should be encouraged across all HEIs.

The report of the working group does not detail how the KE performance of the sector teams will be measured. It is proposed that an accurate (sector based) baseline is developed of existing KTG measures that can be used to track progress on KE effectiveness. In many HEIs these data are not recorded by sector and this would require manual analysis by the individual universities. A baseline measurement of BERD (as noted in Q1 above) should also be undertaken on a sector basis.

5. Do ILGs provide sufficient coverage of the business base to meet the objectives for sector streams? If not, are there other collective industry bodies that the SFC should engage with to carry out this role?

From energy sector and ETP perspectives, the ILGs provide sufficient coverage of the business base and these have an important role to play in helping to define the sector's KE requirements. It is likely that the terms of reference (and possibly the membership) of the ILGs will need to be modified to explicitly reference the enhanced KE role.

There are currently four energy-related ILGs (Renewables, Carbon Capture and Storage and Thermal Generation, Grid, Oil and Gas) and further thought will be required as to how the different and potentially conflicting KE related views and priorities from these different groups can be effectively rationalised, prioritised and delivered by the energy sector stream. The pre-existing ETP Directorate would provide an effective mechanism to engage with the ILGs on KE related issues and manage priorities.

6. Where there is existing knowledge exchange infrastructure focussed on an industry sector how might this be co-ordinated under a national sector strategy?

ETP has greatly increased its KE infrastructure over recent years and our sector focussed approach is largely in line with the proposals contained in the working group report.

For example, in 2011, ETP secured funding (ca. £3m) from the European Regional Development Fund (ERDF), Scottish Government, Scottish Funding Council, Scottish Enterprise and ETP Member Universities to establish a Knowledge Exchange (KE) Network. This comprises 15 Business Development and Technology Transfer posts (funded for a period of 3 years) providing the necessary continuity, critical mass and breadth of technology focus that is now resulting in a step change in energy related KE activity, across all of ETP's 9 Thematic Areas.

ETP's KE Network structure is strongly aligned with the proposed Industry Sector Element shown in the consultation paper. Furthermore its considerable impact during the first 9 months of operation is real evidence that the proposed sector approach can be highly effective. It is noted that Interface Food and Drink is of a similar (sector based) design to ETP's KE Network and discussions between Interface and ETP have enabled the sharing of good practice and learning. A regular meeting of all sector team KE Directors would be extremely beneficial.

The proposed enhancement of the national sector approach will require effective links into HEI R&KE Office teams, to avoid duplication of effort with industry engagement and to manage transactional aspects (contracts, IP, NDAs etc.). The majority of ETP's KE Network members report into their host HEI R&KE Office (with dotted line to the Project Director) and this has helped develop effective engagement and communications. This could be further extended with sector 'focal points' in each HEI, responsible for promoting the engagement between the HEI R&KE Offices and the sector KE team.

The consultation recommends that one of the elements of the national KE Policy should be to "enhance alignment of public sector investments in knowledge exchange". ETP supports this aim and has recent evidence that this is required. In addition to ETP's KE Network, five other low carbon, KE related projects were funded under the same ERDF call (total value £10m). ETP was subsequently asked by Scottish Government to help coordinate the delivery of these projects, reducing duplication

and delivering added value through signposting of companies and joint marketing etc. This coordination has been effective, but is a good example of retrospective and sub-optimal action being taken as oppose to these key investment being driven by strategic imperatives and coordinated from the outset on a sector basis. It should also be noted that some of these projects involve the college sector and highlights that some sector KE activities will likely span both HEI and FE. Consideration should therefore be given as to how KE related activities involving the College sector can best be integrated with those of the University sector thereby further simplifying the landscape for industry.

It should also be noted that ETP's KE activity is currently coordinated by the existing Executive Director and KE Project Manager and this approach is mirrored in many of the other existing research pools. The proposed function of a "KE Director" for each sector therefore needs to be considered in the light of existing structures so as to avoid duplication and potential confusion. This point was highlighted in the report of the working group "in order to minimise the risk of further complexity, therefore, development should aim to develop existing structures and remove duplication".

The need for new KE related infrastructure and funding should be demand led, informed and endorsed by the ILGs, aligned with the overall sector strategy and prioritised against other competing KE project opportunities. The future development and funding of 'orphan projects' should therefore be minimised. To assess current reality, it is proposed that each sector KE team should map out existing KE related projects and activities and also consider opportunities to add value through improved coordination of these (similar but broader to ETP's work with ERDF projects described above).

7. For industry sectors where there is currently an inadequate knowledge exchange infrastructure how might this be developed on a collaborative basis in the context of limited public funding?

Interface could play a coordination role to assess the potential costs and benefits of investing in additional KE infrastructure of this type.

Any investment cases should then be compared to funding opportunities available in other established sector streams to ensure that the economic impact of future funding is optimised on a pan-Scotland and cross-sector basis. The absence of existing knowledge exchange infrastructure in a particular sector might indicate a lack of industry demand rather than a gap to be filled.

Consideration could also be given to embedding KE related needs from one research pool into an established sector KE team, e.g. life sciences related biofuels, or chemistry related hydrogen storage into the energy team. To ensure that the KE teams have a clear line of sight into their respective sectors and provide clarity for businesses, a piece of work is suggested that would 'map' the R&D excellence in the various Scottish research pools with the activities of the sector KE teams.