



Mr. Bob Hanna,
Chief Technical Advisor,
Department of Communications, Marine & Natural Resources,
29-31 Adelaide Road,
Dublin 2.

17th May 2005.

Dear Bob,

Re: Energy Research, Development and Demonstration: Consultation Paper

Airtricity wishes to thank the Dept. for the opportunity to respond to the above paper and hereby details its comments.

Airtricity's experience of energy research, development and demonstration in Ireland is one of disappointment, failure to provide a clear industry/government partnership and loss of opportunity. This is particularly true when comparisons are made with energy research bodies in the US and their role in working with industry.

To date energy research has been short term, reactive to events and more concentrated in providing policymakers with comparisons of short term operational practices in other countries to provide a challenge to "accepted wisdom and practices" in Ireland.

There has been a lack of transparency in the manner in which current energy research funds are expended and little assessment of the value obtained from such expenditure.

There has been little attempt by the existing agencies to work with industry on large-scale demonstration-type projects to help prove the commerciality of near-commercial technologies in contrast to other countries.

As a result Airtricity is unwilling to provide any more development capital to promote such demonstration projects until the existing research framework is radically reformed.

Airtricity is of the view that the development of an explicit energy policy would provide a framework against which energy research, development and demonstration targets and goals could be set and agreed with industry. This would enable industry to have a backdrop against which its involvement in early development of near commercial technologies (e.g. offshore wind farms) could be assessed.

Airtricity therefore welcomes the initiative of the Dept. to review the current structure of energy research, development and demonstration.

Airtricity has the following specific comments in respect of the consultation:-

Governance

- Airtricity is of the view that it would not be appropriate to have a unit with the Dept co-ordinating research and would prefer to avoid the delays required for primary legislation to establish a statutory body.
- The Dept.'s own preference for an energy research coordination council, which would identify needs and priorities for energy research is therefore preferred by Airtricity. Such a body would need to have an independent chairman and strong representation from a wide spectrum of industry and academia.
- Given the narrow remit and experience of SEI, Science Foundation Ireland would be the preferred mechanism to service the requirements of the energy research council.
- In terms of delivery mechanisms, Airtricity thinks that the model of the Electricity Research Centre at UCD has many merits. It is linked into an international academic network which enables sharing of experiences. It also has a pool of research students which are straddling the difficult boundaries of electrical engineering, regulation and economics. It also encourages significant industry involvement in setting priorities for research at Board level and interaction with industry at student research level. Any new structures should take account of the organisation and role of the ERC in order to maximise its input into energy research for electricity issues.

All-Island Perspective

- There should be strong representation from appropriately experienced personnel based in NI. This will assist sharing of experiences and facilitate an all-island co-ordinated approach to resolving challenges, including potentially sharing of resources and knowledge.
- This will be particularly important as we move towards an all-island energy market and look to align support mechanisms over time.

EU Perspective

- There are opportunities within the EU for funding projects, particularly where there have a cross-EU perspective and improve the position of peripheral Member States.
- The challenge is to narrowly focus on the key areas of potential funding from EU, where Ireland has a potential competitive advantage, in terms of natural

resources (e.g. wind, tidal, wave energy). A “shotgun” approach to obtaining EU funding will dissipate key resources and be ineffectual.

Links with the Environment

- The biggest challenge facing Ireland is to move its energy consumption away from a largely fossil-fuelled based economy to one where energy is provided on a sustainable basis, making best use of natural resources which do not contribute to environmental damage.
- The linkage between environment and energy should be examined in this context.

Long Term v Short Term Goals

- Much of the current research funding is focused on addressing short term operational issues and providing policymakers with an information backdrop against which decisions can be made and policy developed.
- Whilst this has been useful – it has not addressed the opportunities presented to work with industry on demonstration projects. It has also not provided the stimulus to bring forward from research stage, technologies which are promising nor examined the longer term challenges which prevent Ireland from exploiting its natural resources.
- The key objective for energy R&D is to pull potential technologies from an academic stage towards commerciality and promote, through demonstration projects, near commercial projects towards full implementation.

Funding

- Significant funding needs to be directed towards proving support for early stage R&D. At later stages in a technology’s life-cycle, commercial applications will be recognised and industry will be interested in involvement.
- It will be critical to ensure that industry participation will be required at later stages of development through to demonstration projects, as industry will provide “hands-on” operational experience, a commercially-driven cost challenge and a realism in terms of commercial application in a market environment. Industry will not contribute this skill and experience, without a clear expectation of a return on the resources (experienced and skilled personnel and potentially equity) invested at this stage. The State will have to be prepared for private companies to benefit, through profits from their involvement in State-sponsored research.

Capacity Building

- Airtricity agrees that capacity building within academic institutions is vital for the success of development of our natural resources and to obtain a sustainable future. It will also be important to have excellent links between academic

institutions and industry, through placement and other schemes, to ensure the relevance of the academic work is firmly and continually instilled.

- Airtricity's experience in developing its organisation in Dublin is that it has had to recruit nationals from 10 countries to enable a suitably experienced/skilled workforce to deliver electricity from sustainable generation projects. The capacity of Ireland to deliver such personnel is limited.
- However there is an element of "chicken and egg". Given the "pull" of a co-ordinated energy research programme, the resultant roles, when appropriately marketed, could provide excellent opportunities for some of Ireland's brightest students. Many students are benignly inclined to work in this area. It is up to the policymakers to ensure that we utilise their enthusiasm and energy to deliver a coherent research programme, the output of which will deliver Ireland a sustainable future.

Summary

- Airtricity does not believe that the current approach has delivered an effective energy research, development and demonstration programme.
- Resources are scattered through a number of organisations, some with overlapping remits.
- Existing target or goals, against which existing expenditure can be evaluated, are not explicit or clearly enough laid out.
- There has been little transparency or measurement of success with existing expenditure.
- Opportunities have been lost, particularly with demonstration targets (e.g. offshore wind) and leadership on these projects is now being transferred to other countries, even though Ireland would have a competitive advantage, given its natural resources.
- A tightly run, independently chaired, energy research co-ordination council could be effective provided that it has strong industry representation. A co-ordination group, composed mainly of government-sponsored bodies, will be ineffectual.

We thank you for the opportunity to contribute to this consultation and look forward with interest to the outcome.

Yours sincerely,

Dermot O'Kane