

Consultation on the Energy Research Strategy

Response from José Ospina, Development Consultant

I am pleased to reply to the Consultation on the Energy Research Strategy. In my capacity as Development Consultant working in related fields of the application of energy efficiency and renewable energy to social housing, Eco-design and energy efficiency of electric and electronic equipment and renewable energy development for a variety of organisations over the past 10 years.

My role in these projects has mainly been to advise NGO's and SME's seeking funding on the availability of different national and European support programmes. This has included investigating and negotiating with the bodies responsible for various energy related funding programmes, developing Bids and in some cases management of successful Projects.

In doing so, I have had opportunity to explore areas mentioned in the Consultation documents, and on this basis I would like to offer a number of comments:

1. Energy in Buildings

The main issue around research related to Energy in Buildings is ensuring that mechanisms are in place to allow this research to be put into practice and disseminated. In the area of Rational Use of Energy (RUE) and Renewable Energy Sources (RES) in housing, a natural constituency for application of research and innovation is the Housing Association Sector. This has been amply demonstrated in other European Countries, with project like BedZed in UK (http://www.bioregional.com/programme_projects/ecohous_prog/bedzed/bedzed_hpg.htm) that was developed by Peabody Housing Trust. Other work in this field has been documented by CECODHAS, the European Confederation for Social Housing (<http://www.cecodhas.org/>). However, having tried for a number of years to develop research into this area, and to implement the results of this research in West Cork, it is evident that a "joining-up" of **policies** regarding social housing development and energy sustainability has not taken place.

I have worked with Carbery Housing Association (CHA) as a part-time Project Manager since 2001. CHA is a non-profit company (Reg. No, 349217) and an Approved Voluntary Housing Body with the Department of Environment, Heritage and Local Government. Practically since its inception, the Association undertook to develop models for sustainable social housing that incorporate bio-climatic design and renewable energy use. In 2002 CHA formed a Partnership, which included Cork County Energy Agency, Blackwater Resource Development (BRD) locally, as well as Partners outside Ireland, the Northern Ireland Housing Executive and the REVES (Cities and Regions of the Social Economy) Network, to submit a project to the European Commission under the ALTENER II Programme.

The Project was called RENEASE (Renewable Energy Against Social Exclusion) and included both desk and practical research into Good Practice in sustainable social housing in Ireland and other parts of Europe. The Project operated for a two-year period, and was relatively successful. It produced a Good Practice Guide on Energy Efficient Housing, allowed the organising of a Conference in Cork around this subject, and a Study Visit to Gwalia Housing Association in Wales, a housing association that was already designing and building to a sustainable brief, and incorporates RES. As a final action, the Project commissioned an architectural feasibility, carried out by Solearth Ecological Architects for a sustainable social housing development of in Kinaith Fineen, Bantry, West Cork. Details of this Project may be found on the web site www.carberyha.utvinternet.com.

In spite of the apparent success and obvious benefits of a pilot project of this type, the Association was not able to secure the required support from Cork County Council to implement the Project. The site for the pilot was not a residential site, as this would have made the pilot project financially unviable. The County were therefore not willing to give the scheme planning approval, but were also not willing to offer a residential site from their Land Bank that the project could be developed on. CHA then worked on a second proposal, on the same sustainability criteria, this time designed by Akiboye Conolly Architects (Cork). This was also rejected, this time on the basis of opposition by local Councillors. Details of both proposals and their rejection by the County may be found on www.carberyhousing.eu

After the effort and resources involved in carrying out the Research, the lack of support and practical blocking of the project had both a demoralising effect, and a punitive financial impact on the Association, discouraging further research efforts. The message to the voluntary group was that the Association's efforts to introduce sustainability into social housing were not appreciated, in fact quite the opposite. This type of disjointed and contradictory policy response is clearly not the way to encourage the participation of Housing Association and Co-operatives in R&D on energy efficiency and renewable energy application. It would seem to me that in order to ensure that research is applied and replicated, the bodies responsible for permitting and researching its application, Government Departments and Local Authorities must also buy into the endeavour.

Recently, we heard that another Housing Associations, having been successful in securing funding from SEI under the Homes of Tomorrow Programme for RES installations on a social housing site, was told by the DeHLG that these costs deducted from the Voluntary Housing Grant due to the Project. This response seems shortsighted and can only work to discourage social housing groups from researching and pursuing innovation in energy applications. The cost limits for voluntary housing grant are very stretched as they stand, and investment in RES certainly should be seen as an additional investment for the future, above and beyond the normal cost limits of the dwellings.

We believe there is great potential for the social housing sector to carry out R&D into energy efficiency and renewable energy use in buildings, either promoting this R&D or as practical partners in it, and to demonstrate the introduction of innovation in bio-climatic design, energy efficiency and RES, and even the development of energy services. But a precondition of this that these initiatives are encouraged and supported, by bodies like SEI, the DEHLG and by Local Authorities, and that funding for such initiative is available to them in addition to the funding received to develop social housing.

Since 2003, CHA has continued to promote and participate in other Bids for European Funding for sustainable housing, under the LIFE Programme in 2005 (BSND - Bantry Sustainable Neighbourhood Development) and IEE Programme in 2006 (SUNRISE – Sustainable Neighbourhood Renewable and Innovative Sources of Energy). In spite of considerable effort by the Association and its Partners, these attempts have not been successful, again consuming financial resources and demoralising officers and committee. Again, they have found little support in these efforts forthcoming from any official body.

2. Ocean Power.

In a similar vein, Small and Medium Sized Enterprises (SMEs) can make a valuable contribution to research by developing appliances as processes that are suited to the particular coastal conditions in Ireland. But until now there have been no accessible mechanism for securing support for such initiatives, and as a result developing them has proved very difficult.

Tidal Turbines (TT) Ltd. is a small ocean device manufacturing company based in West Cork. Since 2003, TT have been working, mainly on the voluntary work of Directors, on the development of a tidal turbine device of their own design, based on the better known Gorlov Model, and adapted for the Irish conditions. The founders of TT carried out preliminary design work and assembly of a pre-prototype themselves.

In 2005 they submitted a proposal to SEI, for RTDI Funding. This was prepared entirely with their own resources and based on their own research. The proposal was turned down by SEI, on the grounds that not enough scientific research had been done by the Company prior to submitting the proposal. TT was of course aware of this, and they were making the application precisely because they lacked those resources. We suspect this is a situation that innovative SME's are likely to find themselves in with respect to existing support programmes. They cannot carry out R&D research unless they have the resources, and they cannot secure the resources for R&D until have carried it out themselves.

The only concrete option that seemed to allow the Company to carry out R&D is Enterprise Ireland's Innovation Partnership. It therefore began working with the Hydraulics & Marine Research Centre (HMRC) at University College Cork. Although this seemed promising it has not been as straightforward as it first appeared. Negotiations began in March 2007. In April 2008 the agreement between Enterprise Ireland and HMRC was still not finalised. At the moment, with the change in procedures under this Programme, it looks like if the application will have to be made again from

scratch. In spite of this, TT has found no other basis for securing support for its R&D proposals, in spite of the clear potential and value that these proposals have.

We now understand that the Department of Energy Communications and the Marine are to launch a new Ocean Prototypes Fund later this year that might provide resources for the required R&D and the development of a Prototype. This is welcome, but we have yet to hear details of this programme. We have also heard that to secure funding it is likely that developers will have to establish the market and commercial viability of their products. For an SME to do this it is likely to require additional funding to carry out marketing and business planning. The question again would be, where can this funding go to come from? One possibility would be Enterprise Ireland's Growth Programme, which may provide Feasibility Funding, Start Up Funding, and long-term investment. But we also heard that this might not be considered to fall under Enterprise Ireland's remit, as they do not want to overlap in the funding of Energy Developers with SEI.

Whatever the outcome, sources of support and funding for inexperienced SME's that wish to carry out R&D into Ocean Energy seems unclear, and the result is that too much responsibility for initial investment is left to the SME itself. At the same time, lack of support at the installation and marketing stage means that there is too much risk that this initial investment will never have a chance to see implementation. It is not surprising then that SME's are reluctant to get involved in this, especially if they have already had bad experiences.

Tidal Turbines has also considered participation in European Projects. After attending FP7 and IEE seminars and entering its details into the Partner facility, it was invited to participate in an FP7 Bid and two IEE Bids. The effort put into providing information proved wasted, as none of the Bids were successful. To a certain extent, the lack of previous R&D carried out by TT (for reasons stated above) might have had a role in this refusal, as well as the lack of experience of Partners.

Again, for effective participation in EU Bids, SME's and relatively new and inexperienced organisations need support and mentoring, in order to ensure they are not just wasting their time.

3. Biomass

In the area of biomass, SME's again have an interest in developing R&D, both into innovative methods and appliances (such as gasification, or the production of agrichar) as well as in the exploration of the viability of different organic matter as biomass (such as algae or gorse). However, in practice we find that there is little encouragement for SME's to take this role.

Organic Power Ltd. (www.organicpower.ie) is an SME based in West Cork. In 2007 OP put forward a proposal to investigate the feasibility of developing a gasification plant in the Enniskeane area. Funding was sought from various sector organisations to support this initiative, such as SEI and West Cork LEADER.

When it appeared that there was no appropriate source available to carry out this research, the Company decided to put together a Bid to the Intelligent Energy for Europe Programme for funding to develop the feasibility. After some research it brought together a partnership of companies and agencies in nine European regions that had similar interests, it wrote and submitted a proposal called REDEPLOY - Biomass (Redeployment of Biomass in European Regions). The aim of the project was to investigate the viability of biomass development in all these regions. As Lead Partner, the Company invested considerable resources in developing and submitting this Bid.

In February 2008 we found that the REDEPLOY Bid was not given a sufficiently high score to allow funding. The reason given was that the Company and its Partners did not already have sufficient biomass experience to be able to contribute effectively to a project on this theme. That merely wanting to explore the feasibility of a RES source was not enough justification for funding. Once again, an SME wanting to carry out R&D into a renewable energy application is told that it must already have been working in the area to secure funding. Again the question comes back to, how do you take the first steps?

4. Conclusions

All these examples are drawn from one region of Ireland over the last 5 years. They have number of common themes that are worth taking on board if the aim is to stimulate not only R&D but also the practical application of this R&D.

In all cases the organisations involved have been small, but with interest and willingness to research promote and eventually apply energy efficiency and renewable energy solutions, and finding themselves unable to progress these aspirations, in spite of the expenditure of not insignificant resources.

The following conclusions could be drawn:

- 4.1 That mechanisms and funding programmes are needed to allow SME's and non-profit NGO's to carry out R&D into energy efficiency and renewable energy applications, without these enterprises having to bear the all the investment risk in this R&D.
- 4.2 That other public bodies and local authorities should be encouraged to co-operate with the implementation and dissemination of this R&D, once it has been carried out. Small enterprises, private or social need to be pro-actively encouraged to undertake these initiatives and cannot afford to see them blocked or suppressed through Funding and Planning barriers, often of a political nature.
- 4.3 Energy agencies or development agencies (e, g. ADM. LEADER Partnerships, etc.) at a local or national level should be funded and to support and encourage these initiatives, as well as to help participation by these bodies in the various European Energy-related Programmes, FP7 and IEE and the LIFE Environment Programme.
- 4.4 Ideally, funding for project preparation and Match Funding should be available to initiatives and partnership that demonstrate real potential, to allow their participation in National and European Programmes.
- 4.5 National Programmes need to be co-ordinated with European Programmes to ensure that organisations develop expertise and resource through national programmes that will give them a stronger possibility in European Programmes.
- 4.6 Short and accredited and subsidised training should be available for professionals in related disciplines (such as architecture) to further train or re-train in energy related areas, including energy efficiency and renewable energy application. A recent FAS Training Programme in this area seems a step in the right direction.
- 4.7 A Network of companies, agencies, academic institutions and individuals engaged in Energy Research should be promoted. This Network can be a basis for information and exchange, but also for joint ventures and National and European Projects. The model of the StEP (Solving the E-Waste Problem - <http://www.step-initiative.org/>) which includes private, academic and non-profit organisations, would be a good model to use.

Congratulations on this worthwhile initiative. Please contact me if collaboration in your endeavour is of value.

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28.06.08