

## DISCUSSION PAPER

### PROPOSAL FOR A WECP DOCTORATE PROGRAMME

This paper proposes the establishment of a WECP Doctorate Programme that will allow the development of a number of PhD Doctorate research projects to be established between Universities located in WECP member cities. The scheme would be funded through industry support, such support to be secured through the member cities.

#### Introduction

The goal of WECP is to act “...as a forum for energy cities to share experiences, contacts and provide support for each other in tackling common industry issues.”

Although WECP has been mainly a route to partnerships in petroleum-related activities, all the energy cities are now meeting new challenges related to the environment, changes in the petroleum sector and a sustainable way of producing and using energy. These represent important changes and opportunities for the cities to understand and respond to. This proposal argues that a scholarship programme would be one useful way for gaining knowledge and sharing experience in this respect.

The World Energy Cities Partnership (WECP) currently has 16 member cities (<http://www.energycities.org>). Since 2008 WECP has been developing interchange between Universities located within WECP member cities with a view to establishing collaborative academic programmes.

A proposal to establish a WECP Academic Exchange programme was first put to WECP in 2008 at the AGM in Aberdeen. This proposal facilitated the development of an Academic Collaboration programme agreed at the AGM in Calgary in 2009, and three meetings have since been held during 2010 to establish this group (February, Stavanger; May, Houston; October, Perth). There now exists a core group of Universities engaged in discussions to develop collaboration opportunities. Current participants include:

University of Aberdeen  
Robert Gordon University, Aberdeen  
University of Calgary  
Dalhousie University, Halifax

University of Texas, Houston  
Curtin University, Perth  
University of Western Australia, Perth  
Universitet i Stavanger (*de facto co-ordinator*)

#### WECP Academic Collaboration

Discussions in 2010 have focussed on development of joint research opportunities, with 2 or more Universities collaborating on the development of research proposals in areas of common interest, and aligned with WECP objectives. Other initiatives and projects have also been discussed. These projects are conceived with funding to be secured from traditional University sources from each Partner. The collaborative research programme has received significant interest and has engaged the Universities. However projects require potentially up to \$500K-\$1 million of funding, which in the current challenging funding climate may mean that this programme will be slower to reach fruition than anticipated. As such there are currently no University projects that have been successfully launched as yet as a result of WECP.

In order to generate a demonstrated track record of collaborative research, it is now proposed that a WECP Doctorate programme be established which would combine the mobility of students, the collaboration between Universities, and the outputs from research. This would have the additional benefit of requiring a lower amount of overall funding.

## **Proposal for a Doctorate Programme**

### **Outline of the programme**

To enable academic collaborations between member cities to progress more quickly, it is proposed to develop focussed PhD research projects. Each project would be hosted by a University in a WECP member city, and one other University would act as co-Supervisor. The lead University would award the Doctorate degree. The student would ideally (but perhaps not inevitably) come from a WECP member city.

The scholarship programme would cover a wide scope of topics, including petroleum related activities, development and management of new and renewable energy sources, socio-economic, environmental and sustainability perspectives to support aims of the WECP and to provide research into the future development of both the private and public sector in the energy cities.

The scholarship programme should encourage students and academic staff to study and analyse the changes taking place in the different energy cities so that complementary expertise and experience can be shared and developed across the global network. As students would have at least two supervisors and the project would have value and impact in both WECP cities involved, this arrangement would provide a three year “bridge” to enable academics in the WECP cities to develop greater understanding of the common issues involved as well as broader understanding of additional local features. It is expected that such projects would produce results which would lead to applications for further research funding. Students would have the benefit of accessing at least two university networks of academic clusters, thus enhancing their individual expertise and experience and creating more globally aware citizens and employees for the future direction of energy.

### **Case Example**

The University of Stavanger may have a suitable project aligned to the interests of WECP member cities. UiS would bid for, and be awarded, funding through this scheme. UiS would control the project through their designated Principal Investigator. UiS would set up a collaboration with the University of Aberdeen, through a co-Supervisor. A student might be recruited from Villahermosa, Mexico (for example) who registers for a PhD at UiS. As part of their PhD programme the student would spend a minimum of 6-12 months at Aberdeen as part of their study, and Aberdeen would be reimbursed for their supervision by UiS from the awarded sum. The results of the research would be published through normal academic channels, and would also communicated directly to WECP members. The student would be awarded a PhD by UiS.

### **Resourcing**

The funding required per studentship would be of the order of €45,000/US\$60,000 per annum, equivalent to €135,000/US\$180,000 in total over a 3 year period. This sum is the current award level for a PhD studentship funded through EU programmes (e.g. ERASMUS Mundus), and includes University tuition fees, a maintenance allowance for the student, plus a small sum for travel and equipment. The actual sums involved will vary, and could be varied by the Universities themselves, according to current fee levels, and variations according to the country of origin of the student(s).

It is suggested an initial target would be to raise US\$1 million for 5-6 studentships, these funds being sought from multinational industry partners who have offices located in several energy cities. Such funds would need to be in the form of a corporate donation, and it is suggested that larger donations of the order of US\$100,000 are sought from fewer, larger companies (rather than smaller donations of say US\$10,000 from a wider pool of potential industry sponsors).

There are a number of large companies with global office locations (e.g. Houston, Aberdeen, Stavanger, Port Harcourt, Perth, Calgary etc) who could be approached. It is acknowledged that

sensitive management of such funding requests would be necessary to ensure that this was complementary to and supportive of any other initiatives within the cities and the Universities involving these organisations.

### **Leverage and stimulation of other activity**

The proposed Doctorate programme would enable further activity to be leveraged as a result. For example:

- Relationships thus developed would also permit exchange of Masters students between participating Universities for short periods
- Relationships would facilitate academics in building contacts and networks that should naturally engender other research projects, and lever funding from other sources
- The PhD projects themselves should develop research ideas with follow on activities
- The PhD students themselves should be able to build contacts and potentially gain employment within the Energy cities

### **Participants**

The current academic network is based around 6 cities, and it is suggested these cities take the initiative in establishing the fund:

*Aberdeen, Calgary, Halifax, Houston, Perth, Stavanger*

Other cities can potentially be engaged and will no doubt be able to contribute. Those Universities who have already demonstrated some interest in participating in the academic collaboration are located in:

*Port Harcourt, St John's, Villahermosa*

The remaining cities may well also wish to be involved, and the fact they are not yet engaged is of no reflection on their potential interest or ability to participate.