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The Knowledge Network

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Mr Sam Cope  
Regulatory Services - Offshore Transmission  
Office of Gas and Electricity Markets  
9 Millbank  
London  
SW1P 3GF

9 January 2009

Dear Mr Cope,

## **OFFSHORE TRANSMISSION REGULATORY POLICY**

The Institution of Engineering and Technology offers these comments in response to the consultation document issued on 21 November 2008. It is hoped that they will also be of broader relevance in the run up to the proposed final consultation on the full package of proposals for the offshore transmission regulatory regime in early 2009.

The IET's comments result from the following policy considerations which the IET believes to be of the utmost importance in the public interest:

- Avoiding lock-in as offshore systems develop in the future. To avoid inefficiency it is important that a series of tendered offshore networks can in the future form part of a larger but currently unknown offshore grid
- Recognising the risks and uncertainties of major offshore developments, compared to typical PFI deals or tendered power or private transmission projects elsewhere in the world, and
- Recognising the limited field of potential bidders for private offshore transmission networks
- Recognising the opportunities available elsewhere in the world for wind power developers, and the need to make UK offshore opportunities competitive
- Noting that the proposed risk allocations were developed prior to the full unfolding of the global financial crisis, and that the new situation needs to be recognised

### **Avoiding lock-in**

Tendered build-operate-transfer style solutions, as proposed, give clarity to project developers but have to be managed by the public sector with great care to avoid lock-in. A host of developments are ongoing at present in support of the major expansion of renewable energy across Europe. These include:

- Major and increasing offshore wind and wave deployment
- A possible European supergrid for offshore renewables
- The long term possibility to import large amounts of renewable power into western Europe from Iceland, Scandinavia and north and west Africa.

To avoid inefficiency it is therefore important that a series of tendered offshore networks can in the future form part of a larger but currently unknown offshore grid. However, given the longer timescales for such a larger network, this needs to be done so that pre-investment is minimised and is limited to issues such as:

- Relatively low cost enhancements that buy future options such as allowing space for additional switchgear bays and cable routes, and
- Safeguarding scarce assets such as landfall locations for wider future use by over-sizing the land corridors at planning consent stage

This can be managed through:

- Close attention to detail in functional specifications provided to tenderers in terms of expansion space requirements. This would need to be assessed case by case and balanced with the cost of such space
- A duty on the offshore operator to promote and identify integration and flexibility opportunities

### **Risks and uncertainties in offshore transmission**

PFI schemes work best when clear risk transfer can be achieved, and this usually depends inter alia on robust fixed-price date-certain construction contracts being achievable.

Examples where this is successful include well defined building projects, CCGT power stations and onshore transmission projects (outside UK). Point to point offshore inter-connectors with landfalls both ends have also been contracted fixed price.

However offshore wind energy transmission - involving offshore substations, high voltage DC converter stations, large transformers, harmonic filters and the like - involves technology and construction risks that are new. It is therefore not at all certain that fixed price construction contracts can be obtained in the market, and if they can be obtained they are likely to include large risk margins in their pricing.

In setting tariffs for their bids, offshore transmission developers will have to include large contingencies in their pricing – since the structure of a tendered tariff offers little opportunity to increase returns to offset cost overrun risk. This will have the effect of increasing costs or possibly limiting who will be interested to bid.

There is an argument for more flexible sharing of this risk, especially if bidders are in short supply, and further market testing in this area may be advisable.

### **Limited field of bidders**

Competitive tender processes are only effective if sufficient competent tenderers take an interest for competitive pressures to act.

There are not many parties with both specialist knowledge and an appetite for project investment who might want to bid to be offshore transmission developers/operators. Most transmission utilities worldwide remain state owned and are not likely to be interested in relatively risky offshore transmission investments. Even with upcoming EU unbundling, it seems likely that the European utilities will have other priorities. US utilities also seem unlikely candidates given their domestic priorities; Asian investors might have an interest but typically only on favourable terms.

It is possible that wind farm developers or their affiliates may singly or jointly put forward proposals, but this seems likely to be constrained by legislation and also introduces new risks for anything other than single project connections.

There is therefore a significant risk that bidders will be in short supply, and we recommend that further market testing is undertaken before committing to this form of procurement. The market testing should focus on identifying potential bidders and also exploring the barriers to bid submission for these bidders, so the tender process can be designed to overcome the barriers.

It also seems to be envisaged that bidders will take their own responsibility for seabed surveys and the like. These are expensive and would represent risk investment with limited likelihood of competitive success. There would also be limited time to conduct investigations within a tender period. Normal practice, for example in tendered private power projects around the world, provides perhaps a better way forward: site, environmental and other studies are often undertaken as part of the development of the invitation to tender, and offered to bidders on a “for information” basis.

This can produce more effective competition because if bidders are unable to bid based on proper site information, they are likely to caveat their proposals, making adjudication difficult and leaving open routes to claims and cost escalations.

Appropriate information should therefore be made available to enable this. Options could include its provision at Ofgem’s or National Grid’s cost, recoverable through tariffs, or some arrangement where the compilation of site information was administered by Ofgem/NG with pre-qualified bidders sharing the costs.

### **Competitive opportunities elsewhere in the world for wind developers**

The global wind power industry is supply constrained, even as we move into global recession. Additional capacity is being developed but slowly, and skills seem likely to remain in short supply as demand grows rapidly. Offshore wind is relatively less attractive to suppliers and developers than onshore wind, hence the UK offshore opportunity will tend to fall behind major on-shore developments in the USA, China and elsewhere on priority lists.

Hence it is important to guard against transmission becoming an additional risk or delay factor that further degrades the UK’s comparative advantage as a wind investment location. This needs to be balanced against the proper desire for an economically efficient solution – clear evidence of a solid route to timely delivery will be crucial.

### **Impact of global financial crisis and recession**

We recommend that Ofgem and DECC revisit their analysis of risk allocations and financeability in the light of global market changes, since the underlying work was completed in early November 2008. There have been large negative changes in energy sector sentiment since that time, largely caused by constraints on finance. All projections now are for financiers to look for shorter loan durations and higher equity percentages going forward, and for only the better projects to be looked at seriously.

This review needs to address offshore wind in general (which is predicted to be amongst the hardest hit of the energy technologies) as well as the proposed structure for offshore transmission.

We hope that these points can be taken into account both in this consultation and in the run up to the proposed final consultation on the full package of proposals for the offshore transmission regulatory regime in early 2009. The IET will be pleased to provide further information or assistance if required.

### **About the IET**

The Institution of Engineering and Technology (The IET) is one of the world's leading professional bodies for the engineering and technology community. The IET has more than 150,000 members in 127 countries and has offices in Europe, North America and Asia-Pacific. The Institution provides a global knowledge network to facilitate the exchange of knowledge and to promote the positive role of science, engineering and technology in the world. This submission has been prepared on behalf of the Board of Trustees by the IET's Energy Sector Panel.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Paul Davies', with a stylized flourish at the end.

Paul Davies  
Head of Policy

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