

Charging Arrangements for Offshore Transmission

Consultation Document

nationalgrid

Offshore Charging Consultation

Pre-consultation

- ◆ Pre-consultation issued in July 2007
 - ◆ 9 responses
- ◆ Three main issues highlighted
 - ◆ *Offshore Connection / Use of System Boundary*
 - ◆ Offshore substation LV busbar; or
 - ◆ Offshore substation HV busbar; or
 - ◆ Onshore Connection point
 - ◆ *Offshore Circuit Expansion Factors*
 - ◆ Generic or Specific
 - ◆ *HVDC*
 - ◆ Inclusion of convertor station costs in either a generic or specific expansion factor

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Pre-consultation Responses

	Connection Boundary	Expansion Factor	HVDC Cable Expansion Factor	HVDC Convertors
Airtricity	1, definitely not 3	Specific initially, generic eventually	Specific	Hints at specific EF
British Energy	3	Cable would be connection asset	Cable would be connection asset	Connection asset
BWEA	1, definitely not 3	Specific initially, generic eventually	Specific	Hints at specific EF
Centrica	3	If not connection, prefers specific	If not connection, prefers specific	Split locational & non-locational
EDF Energy	Prefers 3 then 2	If not connection, generic	If not connection, generic	If not connection, generic EF
E.ON	1	Generic	Generic	Residual
Lewis Windpower	1	Generic indicative, specific actual	Generic indicative, specific actual	Residual
RWE	1	Specific	Specific	
SSE	1	Generic		

Offshore charging consultation

Scope

- ◆ Three main issues highlighted in pre-consultation
 - ◆ Offshore connection / use of system charging boundary
 - ◆ Offshore expansion factors
 - ◆ HVDC
- ◆ Arrangements to address offshore transmission connections to onshore distribution networks (“Embedded Transmission”) also required
 - ◆ National Grid presented options at CISG and Offshore Access Workshop
 - ◆ Intention to include in this consultation
- ◆ Ofgem subsequently announced formation of Embedded Transmission Working Group, to meet in January 2008
 - ◆ National Grid will publish initial thoughts at this time
 - ◆ Inappropriate to make proposals as part of this consultation

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Offshore Connection / Use of System Boundary

- ◆ Three options:
 - ◆ Offshore substation LV busbar
 - ◆ Consistent with onshore / plugs methodology, would facilitate multiple LV connections; substation costs socialised?
 - ◆ Offshore substation HV busbar
 - ◆ Cost reflective charging of substation assets; but counter to plugs, sharing rules required, would expose users to costs from OFTO over provision of assets and actions of other users
 - ◆ Onshore Connection point
 - ◆ Most cost-reflective, would avoid “rebalancing effect”; but counter to rationale for regime and plugs (incl 2km rule), sharing, over-provision
 - ◆ **National Grid proposal**
 - ◆ **Offshore substation LV busbar, consistent with onshore**

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Expansion Factors

- ◆ Options:
 - ◆ Generic
 - ◆ Simple, would give certainty and predictability; but no historic data, not cost reflective (could be significant cost differences)
 - ◆ Specific – 2 sub-options:
 - ◆ Recover entire OFTO revenue as locational; or
 - ◆ Split between locational (cable + **reactive compensation**) and non-locational (substation)
- ◆ Specific with split would be more cost-reflective than generic and consistent with onshore, but would require new process to determine split
- ◆ **National Grid proposal**
 - ◆ **Specific, with locational / non-locational split**
 - ◆ **Aspiration to move to generic if appropriate**

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HVDC

- ◆ Options for HVDC Expansion Factors:
 - ◆ Generic vs specific
 - ◆ Inclusive or exclusive of cost of convertor station
- ◆ Generic, inclusive approach may deter use
- ◆ No historic data; few likely to be built
- ◆ Convertor stations - costs disproportionate to residual; intrinsically linked to a specific line
- ◆ **National Grid proposal**
 - ◆ **Specific, inclusive of convertor station costs**

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Other Issues

- ◆ Generation Charging Zones
 - ◆ Current criteria of £2/kW – each offshore zone likely to contain only one node
 - ◆ £2/kW is fixed – intend to separately consult on this
 - ◆ Still unlikely to result in multiple node zones offshore
- ◆ Locational Security Factor
 - ◆ Separate consultation on SQSS design variations
 - ◆ Offshore SQSS subgroup recommended zero redundancy offshore
 - ◆ Design variation consultation therefore designed to address this

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Summary

- ◆ Intend to issue offshore charging consultation by 14 December, proposing:
 - ◆ Offshore connection charging boundary at the offshore substation LV busbar;
 - ◆ Specific expansion factors for locational elements of offshore connections, and recovery of non-locational through the residual;
 - ◆ Specific expansion factors for HVDC connections, including convertor station costs

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