

Getting connected – what are the grid requirements of wave and tidal projects and what is being done to meet them?

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Introduction

- Requirements of wave & tidal project developers
- The current position
 - Onshore
 - Offshore
- Changes
 - New offshore transmission regime
 - Transmission access review
 - New capacity
 - Planning

Requirements of project developers

- Sufficient capacity preferably close to resource
- Capacity available on long term, exclusive basis
- Certain and reasonable charges for:
 - Connection to network
 - Use of system
- Fixed connection date within a reasonable period
- Bankability

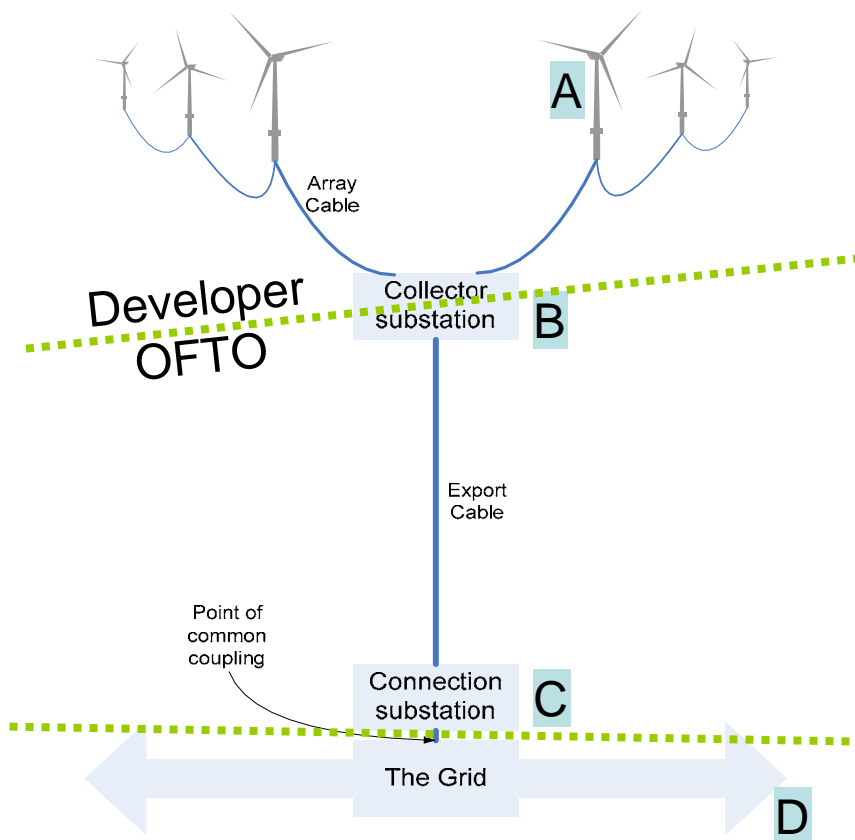
Current position - Onshore

- Lack of capacity close to wave & tidal resources
- Incumbents hold existing capacity
- Capacity upgrades:
 - Only prompted by developers' applications
 - Can take many years to deliver
- Remote connection dates
- No remedy for late delivery
- Extensive contract re-openers for Transmission Owners (TOs) and Distribution Network Owner (DNOs)

Current position - Offshore

- All offshore networks currently treated as distribution
- New offshore transmission regime
 - due to go-active June 2009
 - Will apply to all networks operating at 132kv or above

Let's make it harder than it needs to be



**Grid connection dedicated to project
best optimised together**

**UK Offshore transmission regime requires
separate ownership
no direct commercial relationship
pre-defined standard designs –SQSS**

The new offshore transmission regime

Key features of the new regime:

- Separation of ownership of generating station and offshore transmission system
- New transmission licences for Offshore Transmission Owners (OFTOs)
- Developer only to have contract with NGET, not with OFTO
- Annual windows for applications for connections
- Ofgem run competitive tender to own and operate offshore transmission assets
- Each offshore transmission licence holder to be given a price controlled licence for at least 20 years

Impacts on offshore developers

- Existing TOs to act as OFTO of last resort
- Developer contracts with NGET not OFTO:
 - payments for late delivery of connection?
 - poor performance by OFTO
 - insolvency of OFTO
- Availability of CPO powers and timing for securing land rights

Offshore - projects connecting to distribution systems

- Class licence exemption applies
- Benefits of being licence exempt:
 - licence fees
 - no separation of businesses
 - no price control
- Disadvantages of being licence exempt
 - companies will lack licence powers, such as CPO powers
 - no standing in discussions on changes to regime

Onshore - Transmission access review

- Current transmission regime favours incumbents who currently hold existing capacity
- Ensuring grid access:
 - connect and manage
 - volume and duration
- Faster connections – queue management

New transmission capacity

- Delivering new infrastructure:
 - incentivising 'strategic investment' ahead of applications for connections
 - Short term pre-construction work being incentivised by Ofgem
- Electricity Networks Steering Group report
 - Blueprint for grid network in 2020 (15% of energy from renewables)
 - Recommends new HVDC cables from the north of Scotland to England and pre-emptive actions by TOs

Planning

- Offshore Projects over 100MW under Infrastructure Planning Commission
 - Created under the Planning Act 2008
 - 9 month timetable
 - Pre-application consultation
 - Can cover onshore works
 - CPO powers
- Offshore Projects under 100MW must use Marine Management Organisation process
 - To be created under the Marine Bill
 - Process not yet clear
 - Onshore works subject to local authority process

Conclusion

- Current connection arrangements are far from ideal for new wave & tidal projects
- A number of steps are being taken to improve the position for larger projects but:
 - Projects connecting to distribution networks face greater uncertainty
 - Requirements of offshore wind, not wave & tidal driving changes

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