IWEA Offshore Wind Conference 2019 – Developer Led ‘v’ Centralised Grid Connections

12th September 2019

energia group

Developer Led ‘v’ Centralised Grid Connections

Developer Led Key Characteristics:

- Developers fund costs to identify and secure rights on suitable offshore/onshore sites
- Bespoke connection applications made to TSO on a project by project basis. Grid access system facilitates individual connections on an agreed allocation basis
- Near shore projects can access strong near to coast transmission networks in the East and South much faster than centrally planned nodes.
- This allows projects that are successful in achieving planning consent to progress without being queued against projects that are offered grid but don’t achieve planning
- This is the successful connection philosophy used in UK offshore industry to date.

Developer Led ‘v’ Centralised Grid Connections

Centralised Key Characteristics:

- TSO/TAO design consent and build common Offshore “Grid Hubs”
- TSO/TAO prioritises and effectively chooses the Offshore locations. There is a risk that this prioritises grid for projects that may not achieve planning consent.
- Developers compete to “win” rights to specifically allocated areas including their grid connection. Separate body for site selection required, not role a role TSO/TAO.
- Similar in nature to onshore Subgroups
- Preferred method of Utilities in Netherlands/Germany/Denmark (over a 20 year period), though hybrid connections have also been used in Germany, and Denmark is moving to near shore developer connections

Developer Led Pros/Cons

Pros	Cons
Facilitates faster build out of projects	Potential for Sub-optimal use of Transmission Infrastructure
Allows processing of connection applications for projects that have achieved planning consent and inefficient grid where projects don’t achieve planning	May be additional cost to consumer
Avoids creation of Subgroups which need critical mass to proceed	May be overlap of applications in attempt to secure optimum sites
Cost of site investigation borne by the developer. Developers can progress onshore grid route planning in parallel	Higher cost and risk to the developer
Developer planning application is holistic and covers site, onshore grid connections and onshore port upgrades and traffic surveys in a single application – no project splitting	More onshore planning implications

Centralised Pros/Cons

Pros	Cons
Centrally planned use of transmission system	High potential for longer timeframes from design to delivery. Timeframe for design by TSO/TAO delays projects submitting their planning until connection details are known. Risk of designing grid for projects that don’t achieve planning consent.
Least cost solution to developer (and customer)	“Subgroup” centralised solutions needs critical mass to proceed (Crory/Knockranny Subgroups delays). Sub groups not feasible for large offshore projects
Areas of development more controlled	Large cost to state in gathering data (seabed Geophysical and Geotechnical information)
Less onshore planning implications for developer	Higher potential for Project Splitting to be alleged for both the grid and the offshore planning applications
Far-shore and weak transmission grid areas will need centralised transmission upgrades with longer lead times	Could take longer than developer led approach

DCCAE 70/30 – Terms of Reference:

- 1GW of offshore wind to be built by 2025
- 3.5GW of offshore wind to be built by 2030.
- Designing, consenting and building offshore hubs by TSO/TAO will delay offshore project planning applications, will delay grid connections and connection nodes.
- Climate action plan target of 9 months to achieve windfarm and grid planning consents from identification of suitable zones won’t be achievable under centralised approach – delays inevitable

Developer Led ‘v’ Centralised Grid Connections

Proposed Solution to achieve the fastest and least risk Offshore delivery to contribute to 2030 targets and beyond:

Phase 1

- Legacy projects and those near shore in-development projects on the east/south coast proceed on a developer led basis.

Phase 2

- Centralised study for west/north coast commence to allow projects in these regions obtain grid access in late 2020’s/ early 2030’s

Phase 3

- Centralised study for far-shore projects to allow floating offshore solution gain optimal grid access once commercially viable

Advantages of Proposed Solution:

- Allows in development and legacy projects in which significant investment has already been made proceed and enable State to achieve Climate action plan targets.

- Facilitates optimum design of Offshore “Phase 2 & 3” with west/north coast and floating solutions designed around a centralised grid connection method, allowing such projects to be delivered post 2030.

Developer Led ‘v’ Centralised Grid Connections

Summary:

- Offshore Industry recognises benefits of centralised design solutions where projects are far shore or west and south west coast where the transmission system is weak

- However, If Ireland is to achieve its 2030 targets developer led solutions are the only option for legacy and in development projects.

- Prudent to begin process of implementing a centrally designed solution for Phase 2 and 3 projects now, with a view to delivering post 2030.