PROMOTioN

PROGRESS ON MESHED HVDC OFFSHORE TRANSMISSION NETWORKS

WP 7 – legal, regulatory and financial challenges

Legal framework

The North Sea Countries need to cooperate. We propose a **North Sea Agreement to**:

Set a common goal for long-term offshore grid development

Provide a basis for the legal framework in a post-Brexit world

Create a governance and decision-making structure for the offshore grid

Adopt rules on regulatory governance, including which entity regulates the offshore grid

Provide a stable legal framework for conflict resolution in the offshore grid

The first building blocks of a meshed offshore grid are "**hybrid assets**": cables between at least two countries and at least one offshore wind farm.

The EU legal framework is not yet adjusted to this: hybrid assets are considered interconnectors, so they need to make 70% of the capacity available to market participants. This puts OWFs connected to a hybrid asset in a worse position than other renewables.

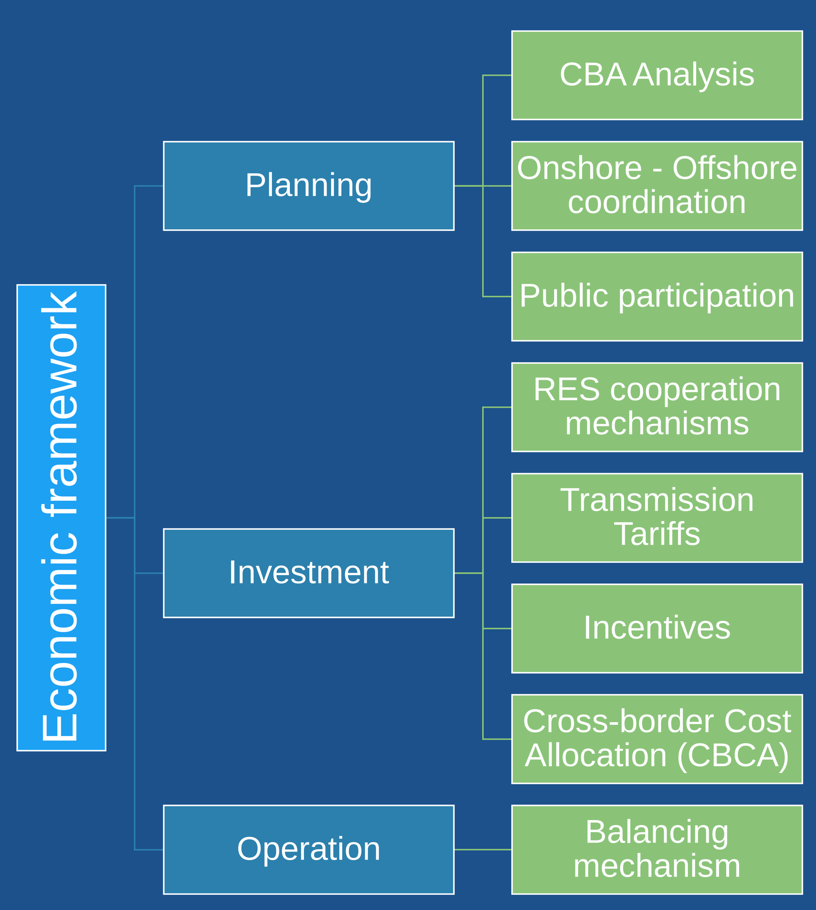
Two possible solutions: amend EU law (make an exception for hybrid assets) or change the bidding zone model (see poster WP12).

Other recommendations:

- The **planning and permitting** frameworks of the coastal states are not aligned with each other. Streamlining would save administrative costs and risks.
- **Offshore wind support schemes** are currently nationally oriented. They should at least be opened up to electricity flowing in different directions. Even better: a support scheme for all OWFs connected to the offshore grid, based on "beneficiary pays"
- **Decommissioning** of cables and grid assets is a topic that needs more regulatory attention at international level.

Economic framework

TOPICS STUDIED



RESEARCH PROCESS

KEY RESEARCH RESULTS

Recommendations on Cross-border cost allocation

Formalize the CBCA as a binding contract between the involved parties with specification of non-compliance penalties

A common CBCA for a group of projects within the MOG could be a key enabler for their development (Coordinate CBCA decisions for complementary projects).

In multi-country projects such as the MOG, the significance threshold may become a barrier in allocating costs and reaching a complete CBCA.

Assessment results on balancing mechanisms

Imbalance settlement rule: a single price rule is the desirable solution from all perspectives. This view is also supported by the EB GL.

Imbalance settlement period: A convergence to 15 mins ISP is foreseen and supported by EB-GL with possibility of temporary exemption. A conflict between the user and service provider perspective occurs.

Product and service definition: Smaller bid sizes and contract periods, gate closure as close to real time as possible and asymmetric balancing products are desirable for OWF.

Scarcity pricing: System cost may reduce possible greater competition. BSPs too would benefit from better valuation of their services. For BRPs, scarcity pricing may add risk from possible price spikes.

Intraday market: a well functioning liquid intraday market with gate-closure as close to real time as possible would be beneficial from all three perspectives.

Integrating balancing market: greater integration is desirable. However, current market designs need to evolve further to effectively realise benefits from the integration and also from intraday markets.

Financial framework

A financial framework to kick-start, encourage and accelerate investments in a MOG, will only succeed when an adequate legal and regulatory framework is in place.

Great interest in the market for investing in a MOG	**Barrier:** Lack of adequate legal and regulatory framework for MOG investments

The regulatory framework determines the investor income and plays the most important role in attracting investments and securing financing for the MOG. Key regulatory elements to incentivise investments in a MOG are:

- Regulated income
- Long-term, stable & predictable regulatory framework
- Cost recovery for innovative technology
- Remuneration for anticipatory cross-border investments
- No time lag in cost recognition
- Clear allocation of liabilities

The development of a MOG is expected to be capital intensive. Financing structures and ownership models are needed, such that investors can anticipate and fund the required cross-border investments. Examples include:

TSO sub-structure/ SPVs
- Equity partnerships with external investors
- TSO-majority of voting rights
- External investors majority of economic interest

Tenders of transmission assets to third parties
- High leveraged project finance structures (gearing>70%)
- Experience in several countries shows sufficient funds should be available
- Applied at the early phase of development

Innovative financial sources & EU funding
- Green bonds
- Hybrid green bonds
- Funding from EU (e.g. CEF, EIB support) for innovative technology & anticipatory cross-border investments
- Accessible to different types of investors

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