













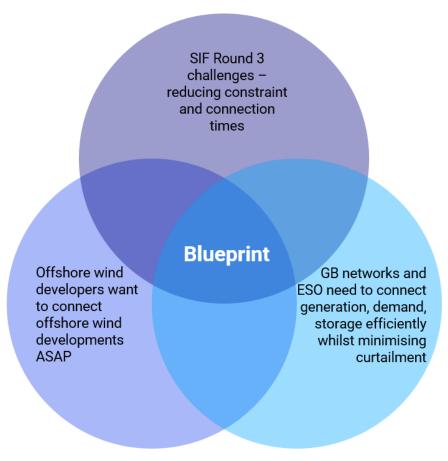








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Project problem



- The HND and HNDFUE are vital to alleviate constraints (and hence constraint costs) on the electricity network.
- However, the HND and HNDFUE are dramatically changing the landscape for offshore wind and transmission network development.
- There are significant technical, regulatory and commercial uncertainties in what the HND and HNDFUE means for offshore wind developers and onshore transmission network owners
- Blueprint Discovery phase aims to investigate these issues, understand the risks, and develop solutions be implemented























Project overview



Building Industry Collaboration and Methodologies for Offshore Wind Development Behind Constraint



- Characterise the regulatory, commercial and technical risks and gaps to offshore wind and transmission
 infrastructure development in constrained areas to better understand what is stopping build out and connection of
 nationally vital GW-scale offshore wind farms
- Identify and prioritise potential mitigations and solutions for these risks and gaps to avoid delayed offshore wind connections and/or high constraint payments.

















Gap analysis - problems identified



Information gathering

Literature review

Partner 121s

Partner workshops

Problems with connecting behind constraint

Network reinforcement

Infrastructure build out Stressed supply chain

Coordinating network Financial planning risk

Onerous consenting

Network utilisation

Managing Constraints Price signals
Thermal management
Data availability Network stability

Grid forming inverters

Industry collaboration and communication

Lack of holistic thinking

Constraint transparency

Data sharing





















Gap analysis learnings – solutions identified



Problems found

Network reinforcement

Network utilisation

Industry collaboration and communication

Solutions to investigate in next phase

Active Network Management (ANM) **Dynamic Line Ratings** (DLR)

Paired connection applications

Better coordination of development activities

















Benefits of discovery phase



Aligned industry partners and key players on gaps and priority solutions for mitigating connection behind constraint.

Identified viable beyond BAU solutions to increasing current network capacity and maximising build out of future networks.

Highlighted the need for increased coordination between major HND stakeholders on data, consenting and construction.



















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Future activities and next phase

Solutions to investigate in next phase

Better coordination of development activities

Active Network Management (ANM)

Paired connection applications

Dynamic Line Ratings (DLR)

Coordination of consenting and construction of new transmission assets

Proposition of ideal, feasible and potentially shared approaches to coordinated design, consenting and construction processes.

An Industry alliance, defining a data sharing agreement between HND involved parties which provides detail of, and the form in which IP must be shared between interconnected assets.

Justified proposal of overarching ownership and coordination of building new and interconnected assets.

























Any Questions?













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