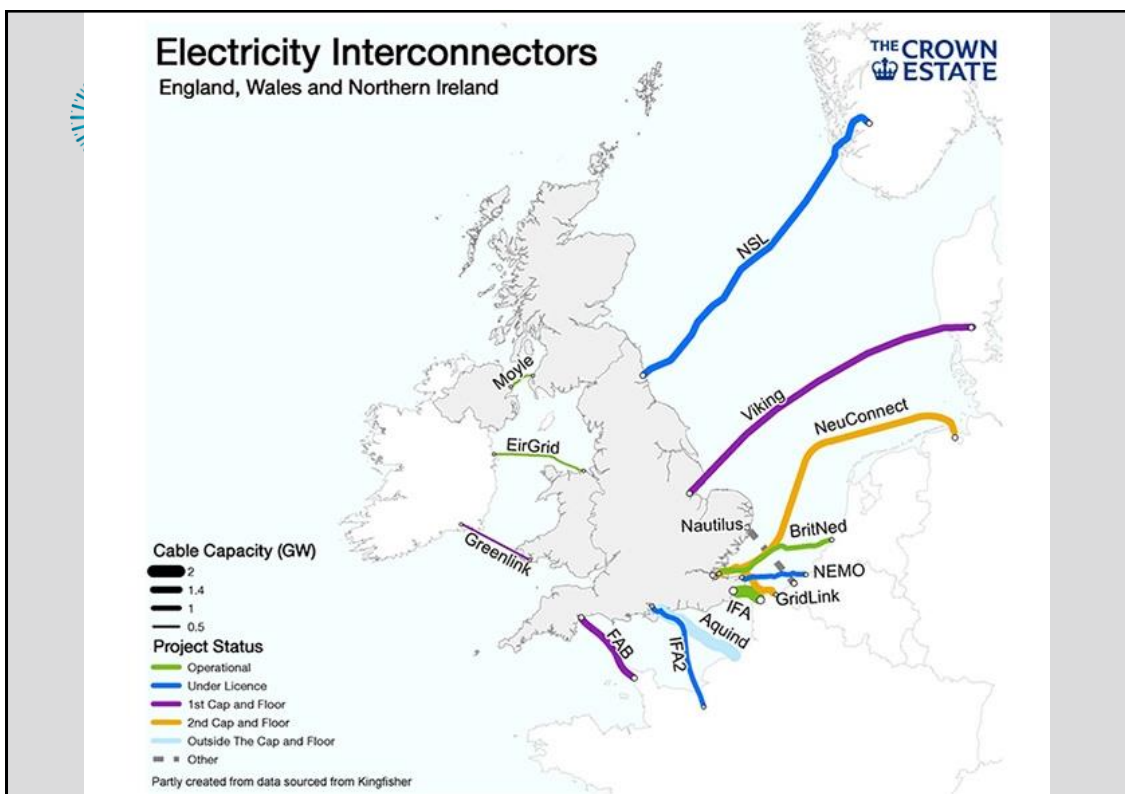


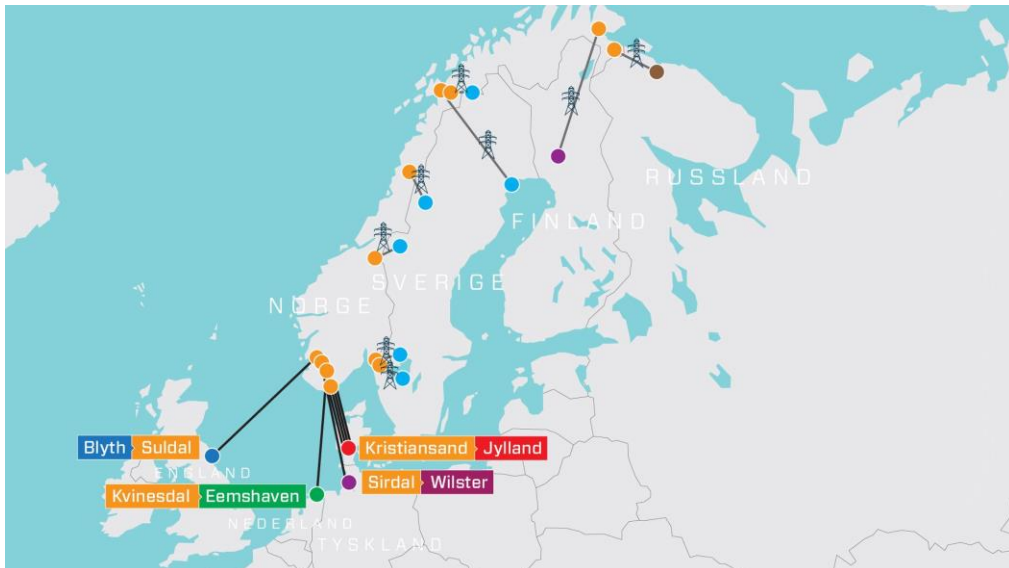
Interconnectors in the UK

- In 2012, under the previous regulatory mechanism, the UK had four interconnectors, linking to France (with a 2GW capacity), Ireland (with a 500MW capacity), the Netherlands (with a 1GW capacity) and Northern Ireland (with a 500MW capacity).
- Interconnectors accounted for 5% of the existing electricity generation capacity in the UK.
- The two previous 'cap and floor' rounds in 2014 and 2016 attracted investment for nine projects and currently 8.5GW of interconnector projects are in various stages of development.
- Great Britain's electricity market currently has 7.4GW of electricity interconnector capacity:
 - 3GW to France (IFA and IFA2)
 - 1GW to the Netherlands (BritNed)
 - 1GW to Belgium (Nemo Link)
 - 500MW to Northern Ireland (Moyle)
 - 500MW to the Republic of Ireland (East West)
 - 1.4GW to Norway (North Sea Link)
- Objective: 18GW

3



Norwegian Interconnectors



Brexit & Impact on IEM

EU Commission's Notice to Stakeholders on Brexit's impact on the IEM

Inter-transmission system operator compensation mechanism will cease to apply to UK transmission system operators (**TSOs**).

Higher fees for imports and exports of electricity to and from the UK for TSOs

TSOs will cease to participate in the single allocation platform for forward interconnection capacity, EU balancing platforms, and single day-ahead and intraday market couplings.

UK TSOs to require certification to continue activities in the EU.

Certification may be refused on the grounds of security of supply or national security.

UK-based market participants who wish to continue trading EU wholesale energy products will need to register with the national regulatory authority (**NRA**) of a Member State in which they are active – as opposed to the Office of Gas and Electricity Markets (**Ofgem**).

No-deal? Trade and fundamental data relating to the UK wholesale energy market will no longer be collected by the Agency for the Cooperation of Energy Regulators (**ACER**).

Brexit – Impact on Interconnectors



Trading: new access rules for all interconnectors need to be approved in the UK and with the relevant EU Member State authorities – all current UK-EU interconnectors (eg, IFA1, NEMO and BritNed) have published these access rules, which broadly move from implicit day-ahead allocation under the IEM to explicit day-ahead allocation.

Regulatory issues: interconnectors will have to demonstrate benefit to two Member States (which would exclude the UK) to obtain Project of Common Interest (PCI) status to be eligible for funding from the Connecting Europe Facility (CEF).

For UK – Norway interconnectors, generally no PCI status (as UK was only anchor to EU)

North Sea Energy Law Cooperation – post Brexit

Special Mention in TCA: Setting Common Framework, maintaining cooperation

Hybrid and joint projects

Maritime spatial planning

Support framework and finance

Delivering 2050

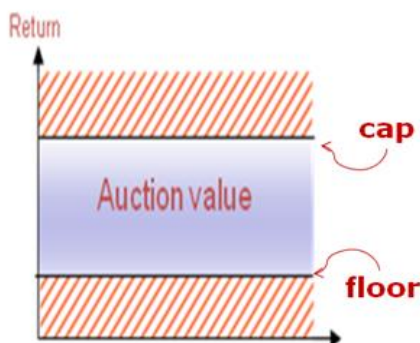


Cap and Floor

- Ofgem introduced and rolled out the ‘cap and floor’ regime in May 2014.
- The cap and floor regime has a mechanism that limits the amount of profit a developer can gain from its interconnector, by way of a cap. Where the cap is exceeded, the excess revenue is returned to the consumer.
- Likewise, the loss of revenue is also limited, by way of a floor. If the revenue falls below the floor, the consumers will effectively top up the developer’s revenue to the floor’s level.
- Interface with EU law?
- Principle: A single annual maximum (cap) and minimum (floor) level of revenue is set in real terms to apply for 25 years.
- Annual revenue allowance adjusted for (RPI) inflation: Interconnector revenues are assessed against the cap and floor levels every five years
- If total revenues exceed the cap, interconnector returns additional profits to customers
- If total revenues fall below the floor, interconnector can recuperate balance from GB customers through the electricity transmission system operator

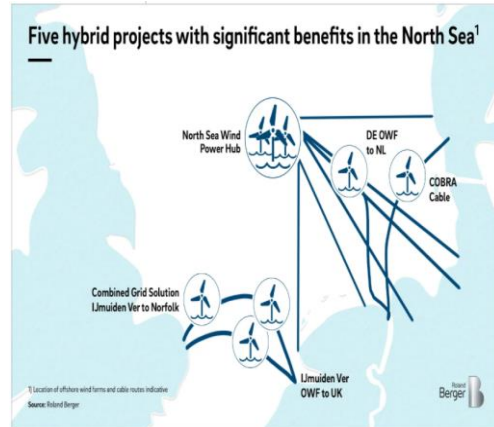
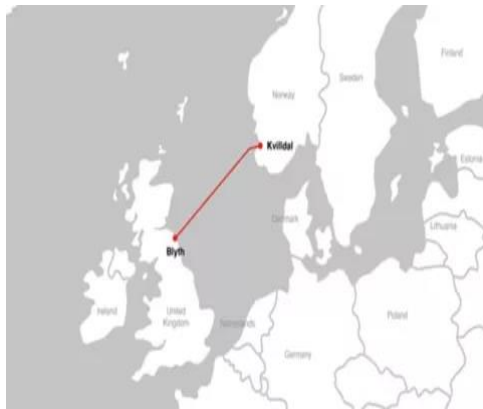
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What does “cap and floor” mean ...



- Recoup profits within bounds of pre-set revenue cap and floor
- Returns over cap – paid back to consumers
- Returns fall below floor – triggers payment from consumers
- Allows revenue regulation, protects consumers from market power
- Maintains element of market valuation of interconnection
- Project specific incentives
- So far, 2 « Windows »
- NSL is part of Window 1
- Now: Review of Cap and Floor regime

Point to Point Interconnectors vs Multipurpose Interconnectors



What is a multi-purpose interconnector (MPI)?

No standard definition, but typically referred to as MPIs or “hybrid” projects and include a combination of generation and interconnection, eg:

- EU’s Renewable Energy Strategy of November 2020 mentions hybrid projects and refers to a 2019 [study](#) in which they are defined as: *“transnational, coordinated offshore energy generation projects. Typically, hybrid projects combine generation and transmission assets across maritime boundaries.”*
- Ofgem’s [open letter](#) of 12 August 2020 to launch its interconnector policy review simply describes multiple-purpose interconnectors as: *“projects which could link interconnectors with offshore renewable generation, and might form part of a potential North Seas grid.”*
- Regulation (EU) 2019/943 refers to: *“Offshore electricity infrastructure with dual functionality (so-called ‘offshore hybrid assets’) combining transport of offshore wind energy to shore and interconnectors”*

Progress on MPIs in the UK and EU

UK authorities are considering MPIs under current reviews

- BEIS' Offshore Transmission Network Review ("OTNR") will "*consider the role of multi-purpose hybrid interconnectors in meeting net zero through combining offshore wind connections with links to neighbouring markets and how the enduring offshore transmission regime can support the delivery of such projects.*"
- The OTNR is considering MPIs as a long-term standalone workstream (currently in legal and regulatory review and scenario-building phase) and as part of many other workstreams.
- The OTNR will cover asset classification and market arrangements for trade. BEIS and Ofgem joint [response](#) of 18 December 2020 notes stakeholder suggestions to:
 - define the treatment of MPIs in the connections process, grid code & licensing and network charging; and
 - explore novel MPI incentive mechanisms and future proofing these against EU-exit negotiations as well as addressing EU cross-border trading rules.
- BEIS is holding the next UK Hybrid Project [Forum](#) on 10 March 2021.
- Ofgem's interconnector policy [review](#) will focus on the cap and floor regime, but includes considering options for the regulation of MPIs and whether the final conclusions of its 2015 [ITPR](#) project on MPPs remain fit for purpose.

Progress on MPIs in the UK and EU

The EU has a broad provision in the existing Electricity Regulation and has set out its strategy on the future approach to these projects

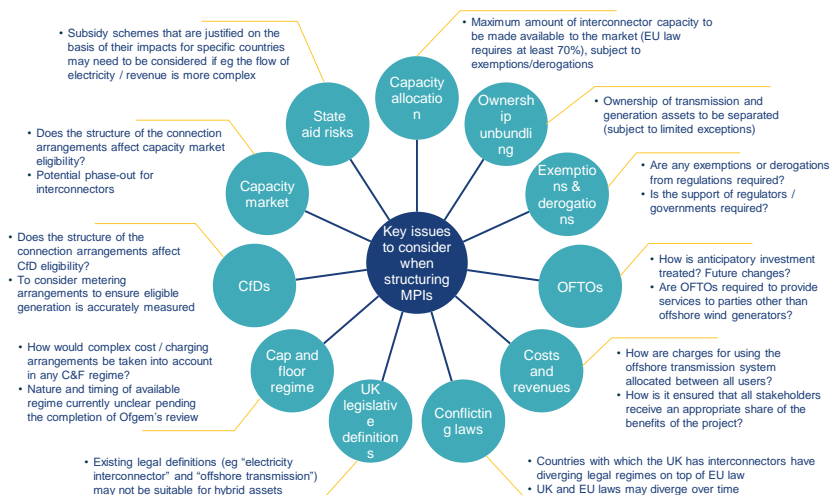
- Recital 66 of Regulation 2019/943 on the internal market for electricity demonstrates support (in theory) for the facilitation of hybrid projects:
 - "*Offshore electricity infrastructure with dual functionality (so-called 'offshore hybrid assets') ... should also be eligible for exemption such as under the rules applicable to new direct current interconnectors.*"
 - "*Where necessary, the regulatory framework should duly consider the specific situation of those assets to overcome barriers to the realisation of societally cost-efficient offshore hybrid assets.*"
- The European Commission published its offshore renewable energy [strategy](#) on 29 November 2020, which hailed a "new approach" and noted that:
 - "*In order to step up offshore renewable energy deployment in a cost efficient and sustainable way, a more rational grid planning and the development of a meshed grid is key.*"
 - "*A share of the future offshore grid will ideally be built around hybrid projects, in cases where they can reduce costs and use of maritime space.*"
 - "*Hybrid projects will form an intermediate step between smaller-scale national projects and a fully meshed, offshore energy system and grid.*"

Progress on MPIs in the UK and EU

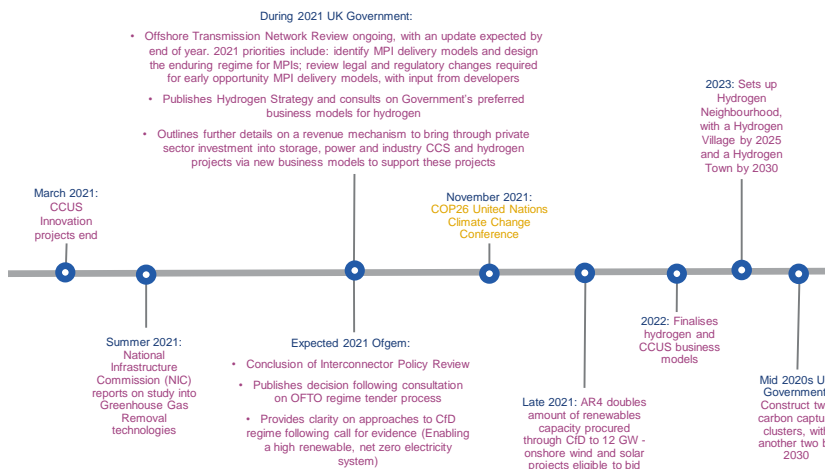
Collaboration between the UK and EU is vital to the goals of both

- Collaboration with the UK is important in the context of the EU's increasing focus on its meshed offshore energy systems, of which the North Sea will be a crucial part.
 - UK projects accounted for nearly half of all new offshore wind capacity installed in Europe in 2019, including the world's largest offshore wind farm (Hornsea One). On the demand side, the UK's highly ambitious decarbonisation targets make it a significant and growing market for renewable energy.
 - As per the 2020 strategy: *"the interoperability of the various national off-shore systems is necessary... To achieve a significant scale-up of offshore renewable energy, the development and planning for an offshore grid needs to go beyond national borders and cover the whole sea basin."*
- Trade and Cooperation Agreement, Title VIII (Energy) – parties will cooperate on:
 - establishing a specific forum for the development of renewable energy in the region and the development of an offshore grid
 - hybrid and joint projects
 - sharing of information on new technologies and best practices on rules, regulations and technical standards
 - development of multipurpose interconnectors

Key issues for MPIs



Key policy developments timeline



Ofgem: Regulatory Framework Update: Next Steps

Applications in window 3 must meet the following eligibility criteria:

- a GB connection agreement for connection prior to the end of 2032;
- all information for the first stage of the application (initial project assessment) must be complete.

In particular, Ofgem expects applicants to:

- work with Ofgem throughout the pilot to develop a C+F regime for the project;
- continue development activities, as far as possible, throughout the pilot.

Unlike the requirement for window 2, Ofgem will not require a licence ahead of application.

Ofgem will open an MPI cap and floor pilot scheme to run in parallel to the window 3 for interconnectors in mid-2022.

Offshore Transmission Network Review – Multi-Purpose Interconnectors: Minded-to Decision on interim framework: Due any time now

Tusen takk! Har du noen spørsmål?