



ofgem

Making a positive difference
for energy consumers

**Cap and floor regime:
unlocking investment in electricity
interconnectors**

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Ofgem has created the cap and floor regime in order to encourage investment in electricity interconnectors. It strikes a balance between commercial incentives and appropriate risk mitigation for project developers. The regime will deliver a new generation of interconnectors that will benefit GB energy consumers.

Why is it needed?

Electricity interconnectors are physical links which allow electricity to flow across borders. They bring significant benefits to consumers. Through allowing the trade of energy into and out of the GB energy market they can lower electricity bills, improve security of supply and support decarbonisation. Electricity interconnectors also have the capability to enhance the European energy market and enable the efficient integration of new renewable energy sources.

Before the cap and floor regime was introduced, only a limited number of electricity interconnectors had been either built or proposed. Ofgem therefore created the cap and floor regime to unlock beneficial investment by reducing risks.

How does it work?

Electricity interconnectors developed under the cap and floor regime will earn revenue from the allocation of capacity to users who want to flow electricity between GB and our neighbours. Interconnectors may also earn additional revenue streams, such as from participating in the GB capacity market or providing services to system operators.

The floor is the minimum amount of revenue that an electricity interconnector can earn. This means that, if an interconnector does not receive enough revenue from its operations, its revenue will be 'topped up' to the floor level. The funds will be transferred from the GB system operator (National Grid), which will in turn recover the sum from transmission charges applied to all users of the national electricity transmission system.

Ultimately, this means that consumers are underwriting the risk that interconnector developers are unable to generate sufficient revenues to pay for their investment.

The cap is the maximum amount of revenue for an electricity interconnector. This means that, should an interconnector's revenue exceed the cap, the interconnector will transfer the excess revenue to the GB system operator, which will in turn reduce transmission charges. For consumers, the cap on revenues provides benefits in return for their exposure in underwriting the floor. For electricity interconnectors, it provides an investment route that complies with use of revenues requirements under EU legislation.¹ There is a wide band of 'merchant' exposure between the cap and the floor.

Ofgem's role

Ofgem's role is to decide whether granting a cap and floor regime to an interconnector project is in the interests of GB consumers. If so, we then regulate and monitor projects under the regime. We also work closely with energy regulators at the other end of the interconnector, particularly to ensure our cap and floor regime joins up well with the regulatory approach applied in the connecting country.

Regime principles

The floor is set at a level that ensures that an interconnector can cover its annual operating expenditure and service its debt. However, in order to qualify for consumer underwriting, interconnectors must meet a minimum level of asset performance. To qualify for a floor payment in any given year, interconnectors must achieve a minimum of 80% availability.

The cap is set to ensure that equity investors receive sufficient, but not excessive, returns. In order to incentivise maximum availability, the cap can increase or decrease by +/- 2% depending on availability performance.

The width between the cap and floor levels is designed so that developers are exposed to the benefits that the interconnector provides and so are incentivised to identify and develop projects in a way that maximises these benefits.

¹ The use of revenues requirements are set out in Article 16(6) of the EU Electricity Regulation (Regulation No 714/2009 of 13 July 2009).

The cap and floor levels are built from building blocks of capital costs, operations and maintenance costs, decommissioning costs, tax and allowed return. The cap and floor levels are then profiled so that they are flat over time in real terms.

The cap and floor regime duration is 25 years, and actual revenues earned are assessed against the cap and floor levels every five years. Interconnectors may also request a within-period adjustment during a five-year period, for financeability reasons or in anticipation of a large end of period adjustment.

The regime also includes some risk-share with consumers for force majeure events.

Developers granted a cap and floor regime will need to comply with relevant European legislation (eg the new 'European network codes' and unbundling requirements²).

Developers may request regime variations in order to reflect project-specific circumstances. This could include, for example, variations to better enable investment via project finance.

Application and assessment process

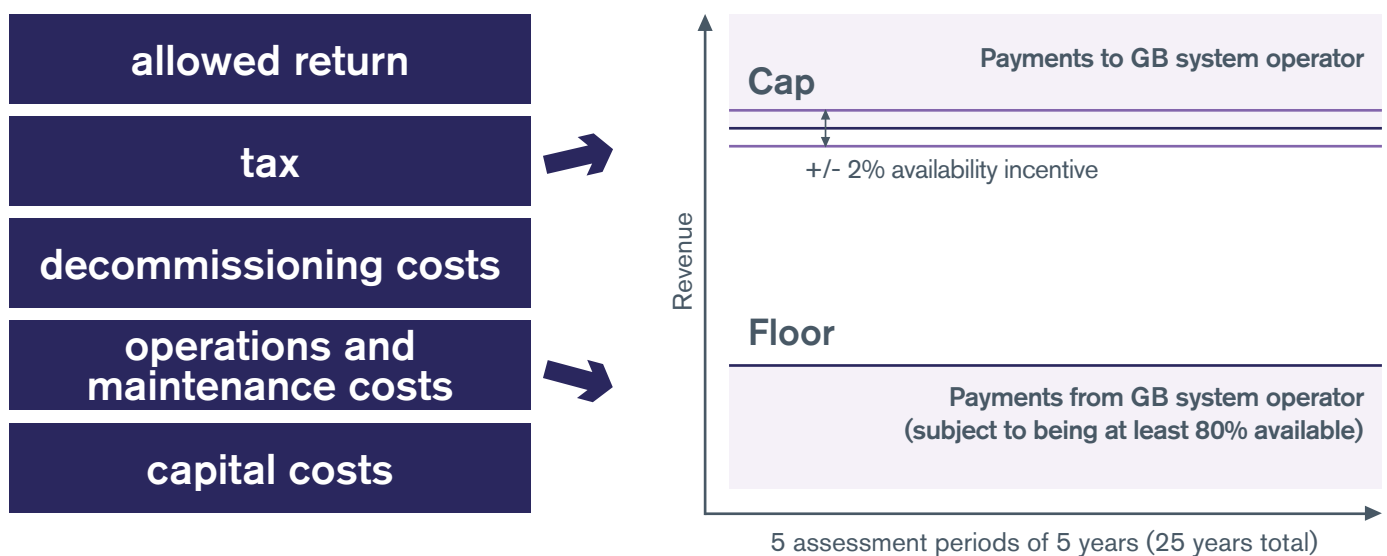
We conduct our assessment of projects in three principal stages.

First, the 'initial project assessment' (IPA) stage is where we consider the 'needs case' for the project (ie the benefits the project provides to GB consumers and other stakeholders). Here, we accept applications during 'windows' and assess several projects together to ensure that interactions between projects are understood. Projects that successfully pass the IPA stage are granted a cap and floor regime in principle, subject to certain conditions.

Second, the 'final project assessment' (FPA) stage is where we consider the efficiency of the developers' capital costs and determine the preliminary cap and floor levels. We also make our final decision on whether to grant a project a cap and floor regime. Each project is considered individually at this stage.

Third, the 'post construction review' (PCR) stage is where we consider the efficiency of operations and maintenance costs, conduct a review of final capital costs and set the final cap and floor levels.

Cap and floor building blocks



² Unbundling requires the ownership of transmission networks, including interconnectors, to be separate from energy supply or production businesses.

Progress to date

The Nemo Link project to Belgium was awarded a cap and floor regime in 2014. It is expected to be operational in 2019. Nemo Link was the pilot cap and floor project and we developed the regime with the Belgian energy regulator, CREG. Nemo Link's cap and floor regime applies to the whole interconnector and is split 50:50 between GB and Belgium.

The first cap and floor application window was held in 2014. Five projects applied and were awarded a cap and floor regime in principle in 2015:

- NSL project to Norway
- Viking Link project to Denmark
- IFA2 project to France
- FAB Link project to France
- Greenlink project to Ireland

These projects are expected to be operational between 2020 and 2022.

Benefits for consumers

Investment in interconnectors allows electricity to flow across borders which helps lower bills, improve security of supply and support decarbonisation.

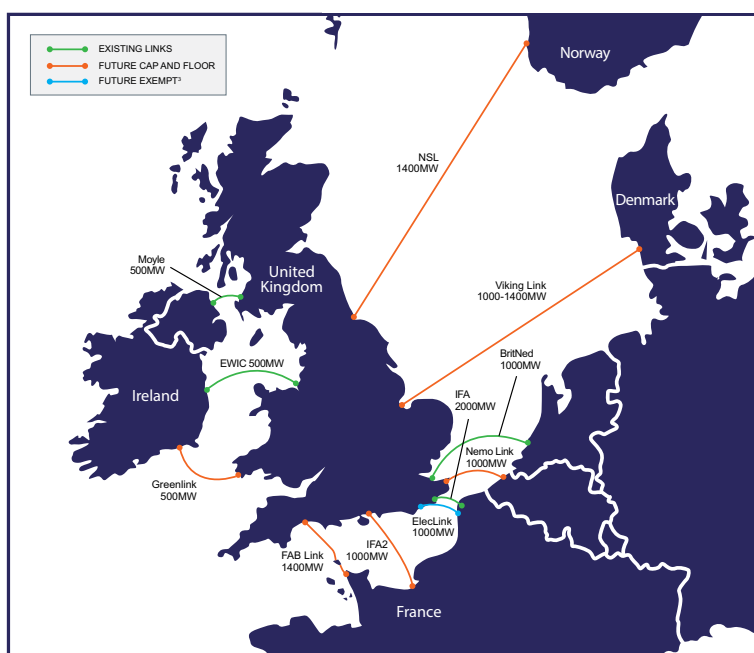
Benefits for developers and investors

The floor reduces project risks by providing a guarantee of a minimum amount of revenue (subject to achieving at least 80% interconnector availability).

The cap provides an investment route that complies with use of revenues requirements set out in EU legislation.

What if the project is a 'multiple-purpose project' (MPP)?

A MPP is a project that serves more than one purpose of electricity transmission. For example, it could combine interconnection with onshore or offshore transmission, or include the coordination of generation with interconnection. Developers considering a MPP should talk to Ofgem early on so that we can consider the best regulatory approach to apply to the project. We are committed to supporting MPPs that are in consumers' interests.



Upcoming developments and further information

The second cap and floor application window is open from 31 March to 31 October 2016.

If you are interested in finding out more about the cap and floor regime, please contact us at cap.floor@ofgem.gov.uk

³ Merchant 'exempt' is the alternative route for delivering interconnector investment in GB. Projects are developed without consumer underwriting and request exemptions from certain aspects of EU legislation.