Consultation on further detailed regime parameters for the Offshore Hybrid Asset pilot scheme

Rob Rome
Commercial, Customer & Regulation Director
National Grid Ventures
Ventures House, Warwick Technology Park, Gallows Hill
Warwick, CV34 6DA

Ofgem
10, South Colonnade
Canary Wharf
London, E14 4PU

18 October 2024

Dear Ofgem,

NGV Response to the consultation on further detailed regime parameters for the OHA pilot scheme.

Thank you for the opportunity to respond to the above consultation. NGV, together with our European partners, successfully operates six point-to-point interconnectors into GB. We are developing several Offshore Hybrid Asset (OHA) projects, the most mature being the Nautilus project, connecting to Belgium, and the LionLink project (formerly Euro Link) connecting to the Netherlands. Nautilus and LionLink are the two projects that were selected for the OHA pilot cap and floor regime, and are the Pilot Non-Standard Interconnectors (NSIs) that Ofgem's proposed regime parameters would be applied to.

As outlined in our IPA responses, **both the LionLink and Nautilus projects offer huge benefits to GB consumers, as well as wider strategic value to UK plc**. These benefits, of decarbonisation, reduced renewables curtailment and vital contributions to security of supply, are far wider than the welfare impacts presented in the traditional economic assessment of Ofgem's CBA. Our IPA responses set out monetised estimates for each of these, demonstrating billions of pounds of savings and value for GB consumers, and clearly demonstrating their strong societal value.

OHAs are a new asset class and, compared to point-to-point interconnectors, present incremental benefits and incremental risks. Coordinating cross-border transmission with connecting offshore generation is a logical and necessary evolution to traditional point-to-point interconnection. The UK government has set decarbonisation targets to create 50GW of offshore wind and 18GW of interconnector capacity by 2030, and our neighbouring countries have similar ambitions, with the European Commission committing to 300GW of offshore wind by 2050. OHAs will support both the UK and Europe in meeting these decarbonisation ambitions. These assets enable improved cable utilisation, reduced environmental footprint and maximised renewable generation. However, compared to point-to-point interconnectors, which are a well-established asset class, there are broader risks and uncertainties associated with OHAs. Some of these are unique to this new category of assets, others are existing risks that, while familiar in nature to point-to-points, are amplified for OHAs[1].

The scale of risks and revenue uncertainty for OHA investment is extremely high. As well as the engineering challenges associated with the new interfaces, there is considerable revenue uncertainty, with the details of the commercial model still being developed. The commercial outturn will depend on policy decisions and other

[1] For a comprehensive outline of OHA risks, please see 'Relative Risk Assessment of Offshore Hybrid Assets' by FTI Consulting, Dec-23.

external factors that determine market and trading arrangements, as well as the future market fundamentals. Compounding these risks to investment decisions are the rapidly escalating levels of capex needed to deliver this large-scale infrastructure that, even with the most economic and efficient procurement strategies, significantly increase the burden of costs that project revenues must repay. Unlike the earliest GB interconnectors, at this point in time, investment cases that are based on merchant revenues alone could not successfully deliver OHAs. **A new regime design is needed to be able to provide appropriate returns in response to the unprecedented level of risk for these pilot projects, while maintaining a fair risk-reward balance between investors and consumers.**

The OHA pilot scheme offers a valuable opportunity to evolve the cap and floor regime to be suitable for these new assets and Ofgem has decided that a 'narrow cap and floor' is the appropriate regulatory framework to deliver the Pilot NSIs[2].

A broad range of commercial outcomes could transpire over the respective 25-year period for which the Pilot NSIs are regulated under the proposed regime, and if commercial revenues are particularly strong, then it may be the case that the floor payments are rarely activated. However, our investment decisions must also account for scenarios where merchant revenues are at the lower range of projections. **As the Pilot NSIs represent more risky investments, raising the level of floor returns to an appropriate level is critical to achieving the positive investment decisions that can deliver these projects into operations**. **We firmly believe that increases to the floor should be met with suitable reductions to the cap, such that the investor's allowed returns are conceded to enable higher rewards to consumers in the more favourable commercial years.**

To support our assessment of Ofgem's proposals for the Pilot NSIs, we have asked FTI Consulting to provide an independent review, which is attached to this submission[3]. Appendix 1 provides a summary of its key conclusions and our detailed consultation responses are provided in Appendix 2. In the confidential annex of this response, Appendix 3, we provide further detail to demonstrate the revenue uncertainty and price curve sensitivities that underpin our assessment of the necessary floor returns for project investment.

We broadly welcome Ofgem's proposals for the detailed design of the narrow cap and floor regime, which establishes the building blocks for a fair risk and reward framework for investment. However, considering the risks currently involved at this pilot project stage, the **parameters are not currently set at the right level to incentivise investment in the Pilot NSIs**.

Yours sincerely,

Rob Rome,
Commercial, Customer and Regulation Director (NGV)

[2] https://www.ofgem.gov.uk/sites/default/files/2024-02/NSI_Decision.pdf
[3] 'Review of OHA risk-reward balance' by FTI Consulting, Oct-24.

Appendix 1: Conclusions from 'Review of OHA Risk-Reward Balance' by FTI

There is limited evidence available to indicate the quantifications of the expected impacts of new risks on investment rates of returns. FTI Consulting prepared an assessment of Ofgem's Pilot NSI proposals, which is attached to this response[4]. The key observations and conclusions from this report are as follows:

- **The differentials between the proposed rates of returns of Pilot NSIs versus point-to-point assets are low, given the level of incremental risks, compared to precedents from other 'next generation asset-classes' within the sector.**
  FTI assessed the risk-reward differential between point-to-point interconnectors and the Pilot NSI proposals against relevant precedents. This considered impacts on rates of returns in instances where successive generations of energy assets were regulated under a similar regulatory regime: floating versus fixed offshore wind assets; early offshore versus onshore wind assets. FTI found that the **expected return of second-generation assets is observed to be c. 150 – 200 basis points (bps) higher than that of the previous generation**. This represents an indicator of the premium for new and emerging technologies but, unlike Pilot NSIs, these precedents exclude new commercial and regulatory risk and, therefore, are likely to be conservative proxies for the premium required for Pilot NSI investment. The floor rate is only 90 bps higher for the Pilot NSIs compared to P2P (the cap rate and IDC rates are 100 bps and 200 bps higher, respectively).

- **Ofgem has underestimated the FOAK premium for the IDC, cap and floor rates.**
  The NERA report cited by Ofgem references two ranges for the FOAK premium, 0-50 bps for onshore wind and 0-100 bps for offshore wind. NERA recommends that the offshore wind range is more relevant to investments where the technology is particularly reliant on the support provided by the regulatory regime. The Pilot NSIs will be more heavily dependent on the floor level, given the level of ex ante risks and uncertainty, indicating that the FOAK premium range of 0-100 bps is more suitable for these assets. FTI has set out evidence from Offshore Transmission Owner (OFTO) projects which suggests a **FOAK premium of 40-100 bps**.

- **Under the current NSI Pilot proposals, the implied cap and floor levels may not be set at an appropriate level to incentivise investment in the new asset-class**.
  That is, it is not clear that the proposition satisfies the 'fair bet' principle for investment in regulated assets which expects a proportionate risk and reward balance, given the level of uncertainty. A reasonable solution to this would be to **narrow the current implied cap and floor levels** for Pilot NSIs.

- Where it is not clear that commercial revenues (especially congestion income) will be sufficient to allow investors to recover their cost of capital, the level of the floor for Pilot NSIs becomes more relevant for the fair bet to be achieved.

- It appears reasonable to consider **raising the floor rate by 80 – 100 bps.**

- This could be **offset by a reduction to the cap level** to maintain the risk-reward balance.

[4] 'Review of OHA risk-reward balance' by FTI Consulting, Oct-24.

Appendix 2: Detailed responses to the consultation questions

Q1. Do you agree with our assessment of the risk considerations for the Pilot NSIs set out in this Section 2 and in Appendix 1? If not, please describe your rationale, to what risks it applies, and what its effects would be on the approach to the regime parameters for the Pilot NSIs.

Non-Standard Interconnectors (NSIs) are a new asset class and, while representing an evolution to point-to-point interconnectors, have technological and commercial characteristics that make them clearly distinct. By contrast to the well-established point-to-point interconnectors, the risk profile of NSIs is significantly higher with greater levels of uncertainty, some existing risks that are shared with point-to-point interconnectors are more amplified, while other new risks have been introduced.

In our previous submissions to Ofgem[5], NGV set out the incremental risks associated with NSI assets in detail. We are pleased that Ofgem has recognised many of these risks and used them to inform its assessment of the appropriate narrow cap and floor structure for the Pilot NSIs. However, in some cases, it appears that the magnitudes of these risks have been under-estimated, or assumed to be more within the developer's ability to influence than is the case.

In the table below we respond to Ofgem's qualitative assessment of relative risks to the Pilot NSI projects. In question 2 we address how well these risks are quantified and reflected in the regime parameters.

[Please note, our terminology throughout this response adopts Ofgem's concepts of 'NSIs' and 'OHAs'. The NSI is the electricity interconnector which is connected to an offshore converter station in the connecting jurisdiction. The NSI constitutes part of the end-to-end configuration of assets that form the wider OHA[6].]

Risk Area	NGV response
Revenue	- We agree that the congestion income allocation risk has been partially mitigated through progress on the cross-border cost and revenue sharing arrangements. However, risk remains in this area compared to the traditional point-to-point revenue sharing model and, while agreed in principle, the arrangements remain subject to conditions. - As Ofgem acknowledges, while the Offshore Bidding Zone (OBZ) is the preferred market model in the connecting countries, it is not yet fully developed or confirmed. The market arrangements will fundamentally determine the shape of the commercial model, but are subject to policy decisions in connecting countries, and so there is continued revenue uncertainty associated with this. - Similarly, modelling of efficient trading under an OBZ typically assumes it will function under implicit price coupling. Currently, UK electricity trading with The Netherlands and Belgium occurs under explicit capacity auctions. The level of efficiency (and, revenue capture) that can be achieved under an OBZ with explicit arrangements is unclear. However, progress on returning to a form of implicit coupling remains subject to UK-EU trading arrangements. - Relative to point-to-point interconnectors, OHAs are subject to 'sequential risk' from further transmission or generation build connecting to the offshore platform

[5] 'NGV response to Ofgem's consultation on changes to the financial parameters of the cap and floor for Window 3 electricity interconnectors and risk considerations for Offshore Hybrid Assets', Sep-23.
'Relative Risk Assessment of Offshore Hybrid Assets' by FTI consulting, Dec-23.
[6] 'Decision on the Regulatory Framework for the Non-Standard Interconnectors of the Offshore Hybrid Asset pilot scheme' Jan-24.

	(e.g. an additional connection that had not been anticipated at the time of initial investment). Such an adaptation to the configuration could change the price fundamentals in the OBZ, impacting the distribution of power flows and congestion income. This is a unique feature to OHAs rather than point-to-point interconnectors, due to the offshore platform having a separate price zone (under OBZ). In the consultation, Ofgem states that 'some protection is available in the consultation processes'. However, in the case of NSIs, where it would be a policy decision from the connecting jurisdiction, we would not expect to have significant influence over that result or for the economic impact on the NSI necessarily to be considered. Currently, the Pilot NSI owner has no protection against the impact of this risk. - The eligibility risk for Capacity Market and ancillary services revenues for the Pilot NSIs adds to the revenue uncertainty for these projects. There are no established arrangements to refer to at present to indicate future revenue expectations. There is the risk that the Pilot NSIs are treated differently to point-to-point assets and this must be accounted for in the investment risk profile for these projects.
Capital expenditure	- We agree with Ofgem's view that: (1) the global supply chain challenges of delivering offshore infrastructure (including point-to-point projects) have increased the development and construction period risks for all developers; and (2) those challenges are intensified and incremental for the Pilot NSIs given the coordination and interface requirements with other assets comprising the OHA. - The additional uncertainties within the various risks highlight the number of factors outside the control of the developer that could impact project progression. These exacerbate the requirements to provide upfront supply chain commitments and incur increasing levels of devex at risk. - The interface requirements with the TSO-led project also requires the undertaking of non-standard procurement processes due to the lack of established technical interoperability and delivery of an aligned in-service date. These necessary processes are being carried out at risk as to the impact on recoverability. - Regarding the extreme case of temporary asset stranding risk if there is delayed connection of offshore wind in the connecting country's jurisdiction. While we agree with Ofgem's view that it is very low likelihood, it is a high severity risk and therefore not an immaterial one. NGV will be entering into joint development and other partnership agreements with our project partners for the different stages. However, such commercial agreements can only provide limited protection against these scenarios in terms of certain termination/delay cost sharing and given the dependency on the domestic policies of the jurisdiction of the connecting country, we disagree with Ofgem's view that the risk can be sufficiently mitigated by commercial agreements alone.
Operating costs	- We agree with Ofgem's assessment of this risk.
Operational performance	- We agree with that the increased operational performance risk of these assets is a consideration that could potentially impact expected revenues. - We agree with Ofgem's position that the availability measures should be based on the delivery and performance of the Pilot NSI (line 1). - Given the different operational performance risk of NSIs, we agree that the terms of the floor start test, the eligibility threshold for floor payments and the cap availability incentive should be reviewed.
First of a Kind (FOAK)	- We agree with Ofgem's description of this risk and would add that it impacts the capital expenditure risk category given that the interfacing with the offshore platform is new from an engineering perspective. As set out in our response to

		question 2, and the accompanying FTI report, the FOAK risk premium is currently too low.
Financing	-	We agree that the additional risks highlighted will affect the cost of debt and equity finance for the Pilot NSIs and should be accounted for in the cap and floor levels.
Development period risk – change in law or policy	-	Ofgem recognises that the Pilot NSIs are the first generation of these projects both in GB and the connecting countries. The policies and frameworks for the operation of the end-to-end OHA configuration are being developed on both sides. Consequently, there is significant 'learning by doing' in the sequencing and substance of the development and approvals stages, which requires coordination with partners and the connecting country NRAs and ministries.
	-	This development period risk for the Pilot NSIs is made more pronounced by the concurrent needs of the global procurement environment, which now demands earlier milestones for supply chain commitments to secure delivery slots, before full regulatory certainty can be achieved.

Q2. Do you agree with how we have set the further detailed regime parameters for the Pilot NSIs, as described in this Section 3? If not, please describe your rationale, to what parameters it applies, and what its effects would be on the selection and values of regime parameters for the Pilot NSIs.

Ofgem's proposed framework for setting the parameters for the Pilot NSI narrow cap and floor regime can, in principle, provide a fair and proportionate risk-reward balance for project investment and allowed returns. However, the proposed parameters to the Interest During Construction (IDC), cap and floor rates, do not yet set the cap and floor to sufficient levels to attract the investment needed given the levels of risk.

Interest During Construction (IDC)

We agree with the principle of Ofgem's proposed adjustments to determine the Pilot NSI IDC rate, but the risk premium is insufficient to compensate investors for the unprecedented risks associated with developing and delivering this new asset class.

The cap and floor regime does not provide the opportunity for any revenues to the developer until the asset is commissioned and enters commercial operations. This cash-flow issue, and the lack of any form of pre-construction funding, represents a key challenge to securing investment funding for such large-scale infrastructure. In the case of Viking Link, this was an investment of approximately £0.8bn, with a 10-year lag from the initial development costs that were incurred to receipt of any revenues. Huge escalations in capex costs, and the requirement for early supply chain commitments, only exacerbate this issue.

The Interest During Construction (IDC) therefore plays a vital role under the regime, by providing compensation for the delay between when costs are incurred, in the pre-operational period, and when the developer starts receiving income to remunerate them. This is particularly true in the current environment with the tighter supply chain driving up costs and higher costs of capital.

Given the early-stage maturity of policy arrangements for OHAs, there will certainly be a development phase risk associated with these projects. We agree with Ofgem's conclusion that the development of the untested policies represent an OHA-specific risk which is incremental to that of point-to-point interconnectors.

In addition to the construction risks faced by point-to-point projects in an offshore marine environment, there are additional OHA-specific construction risks including the engineering challenges of the marine interface with the offshore platform and coordination in construction with the European partners[7]. Therefore, we would expect the Pilot NSIs to have IDC rates higher than those of the early cap and floor interconnectors.

Ofgem's methodological change has resulted in lower compensation to the Pilot NSIs compared to early-stage cap and floor interconnectors. The methodology for calculating IDCs changed from Window 2 onwards[8]. For Nemo Link and Window 1 projects, a construction risk premium of 91 basis points (bps) was applied to account for the additional construction risk faced by interconnector projects. Ofgem's justification for applying the construction risk premium for those projects was based on the technology risks of the assets[9]. Ofgem's revised methodology seeks to capture the construction risk in the equity beta, which uses comparators from construction and engineering companies. However, the use of these parameters generates a smaller uplift than the 91 bps premium, and it is not clear that these comparators are representative of the offshore construction risks faced by interconnector projects, working in a marine environment.

[7] See 'Relative Risk Assessment of Offshore Hybrid Assets' by FTI Consulting, Dec-23.
[8] https://www.ofgem.gov.uk/decision/decision-calculation-interest-during-construction-idc-and-idc-rate-apply-during-201819-offshore-transmission-and-future-cap-and-floor-interconnectors
[9] 'Proposed interest during construction approach for offshore transmission and Project NEMO' Oct-13

The change in methodology prevents a direct like-for-like comparison of IDC components and instead requires an assessment of the final rates after standardising for market rates (in the cost of debt and risk-free rates). We chose to assess the IDC rates of NSL, IFA2 and Greenlink from Window 1, each of which have gearing similar to the pre-operational notional gearing of 37.5%[10].

Table 1: IDC in RPI and CPIH, not standardised for interest rates

RPI/Project	NSL[11]	IFA2[12]	Greenlink[13]	Proposed Pilot NSI (CPIH)
Cost of Debt	0.88%	-0.21%	-0.84%	4.18%
Cost of Equity	6.94%	9.07%	6.80%	8.46%
Pre-Op. Gearing	33.41%	40.61%	39.77%	37.50%
WACC	4.92%	5.30%	3.76%	6.85%
Development + FOAK risk	0.54%	0.54%	0.54%	0.80%
Construction risk premium (CRP)	0.91%	0.91%	0.91%	0.00%
Final IDC	6.37%	6.75%	5.21%	7.65%
+1%	*1.01	*1.01	*1.01	-
CPIH IDC	7.43%	7.82%	6.26%	7.65%

Note: figures are CPIH-deflated, IDC values have been adjusted using the historic wedge between RPI and CPI of 1% for the Window 1 projects.

In Table 1, the CPIH-deflated IDCs remain unadjusted for interest rates and reflect the prevailing rates at the time when the regime parameters were fixed. We apply those adjustments[14] in Table 2 to allow an equivalent comparison of final IDCs on a like-for-like basis. The average IDC rate of return across NSL, IFA2 and Greenlink is 8.26% compared to 7.65% for the Pilot NSIs.

Table 2: IDC in RPI and CPIH, standardised for interest rates (equivalent to current rates for OHAs)

RPI/Project	NSL	IFA2	Greenlink	Proposed Pilot NSI (CPIH)
Cost of Debt	2.92%	2.92%	2.92%	4.18%
Cost of Equity	6.93%	8.75%	6.80%	8.46%
Pre-Op. Gearing	33.41%	40.61%	39.77%	37.50%
WACC	5.59%	6.38%	5.26%	6.85%
Development risk premium	0.54%	0.54%	0.54%	0.80%
Construction risk premium (CRP)	0.91%	0.91%	0.91%	0.00%
Final IDC	7.04%	7.83%	6.71%	7.65%
+1%	*1.01	*1.01	*1.01	-
CPIH IDC	8.11%	8.91%	7.77%	7.65%

[10] The Nemo Link Pilot is excluded due to the blending of Belgian and GB returns. Viking Link is excluded as the pre-operational gearing was 23.32%.
[11] Ofgem, NSL: Cap and Floor handbook, September 2023, Appendix 3
[12] Ofgem, IFA2: Cap and Floor handbook, August 2022, Appendix 3
[13] Ofgem, Greenlink: Cap and Floor handbook, August 2022, Appendix 4
[14] Controlling for equivalent market interest rates within the cost of debt and risk-free rate.

Note: figures are CPIH-deflated, IDC values have been adjusted using the historic wedge between RPI and CPI of 1% for the Window 1 projects.

The Pilot NSIs face unique development and construction risks through new interfacing and coordination requirements, which Ofgem has acknowledged in its risk assessment. The parameter proposals reflect the risk in the first-of-a-kind (FOAK) premium of 26 bps and development risk premium of 54 bps to the IDC, alongside aiming at the upper range of Ofgem's annual decision on interconnector IDC rates. We note that the accompanying FTI report to this submission finds that the proposed FOAK is "insufficient remuneration for the FOAK risk that investors are exposed to during construction … [and would be expected to be] at least as high as high as that applied to operational equity investors i.e. 50bps."[15]

A comparison of the final IDC rates implies that, relative to the early-generation cap and floor projects, while the Pilot NSIs are facing significantly greater risks in the pre-operational period, the proposed regime is providing lower rates of returns.

In combination, **the risk premia applied to the IDC of the Pilot NSIs should be set higher to reflect the unique risks faced.**

Form of narrow cap and floor for Pilot NSIs

We agree that Ofgem's proposed narrowing of the cap and floor rates can provide a framework for ensuring appropriate additional risk compensation at the floor is exchanged for a reduction in returns at the cap.

Ofgem has chosen to use the mid-point between the lower and upper bounds of the cap and floor rates. The apportionment of the WACC-based rate and adjusted-P2P rate in the final cap and floor rates does not necessarily need to be 50:50 and could be varied. In our view, increasing the weighting of the WACC-based rate at the floor would be a closer reflection of the quantum of risks for the Pilot NSI. Applying a higher WACC-based weighting to both the cap and floor rates would ensure consistency in the risk-reward balance for GB consumers.

Floor rate

Ofgem's proposed derivation of the Pilot NSI floor rate can, in principle, provide a balanced risk-reward framework for investment in these projects. However, some of the proposed values are not currently set at a level that will achieve this.

We welcome Ofgem's proposed modifications to derive the floor rate, which recognise that there are new substantial risks for these projects relative to point-to-point interconnectors. However, in some elements of the design we believe that Ofgem has underestimated the quantum of the risk and/or that the proposed parameters do not sufficiently reflect the scale of the risk. Below we outline the floor rate components that we believe should be revisited and revised.

1. The **FOAK uplift to the ('adjusted P2P') lower bound floor rate is insufficient.** In our view, the value of 25 basis points (bps) does not draw from the appropriate reference point for investment in these assets and should be revised upwards to at least 40 bps.

As Ofgem outlines in the consultation, there are several FOAK risks that underpin the operational period for the Pilot NSI assets. While the cap and floor regime is well-established, the market arrangements for Pilot NSIs are still being developed and how the NSI commercial model interacts with the regulatory regime is new. Similarly, as previously discussed, these assets comprise new technologies that will manage the hybrid operation of cross-border transmission with the offshore wind connection.

[15] Section 4 in 'Review of OHA risk-reward balance' by FTI Consulting, Oct-24.

Ofgem has proposed a FOAK uplift on the assumed cost of debt for the floor of 25 bps, citing the mid-point of the 0-50 bps range in NERA analysis[16] from 2013, that was conducted for government. The 'novelty premium' is the uplift on hurdle rates related to investor uncertainty for untested regulatory mechanisms and emerging technologies. NERA presents two ranges for the FOAK premium on the WACC: 0-50 bps for onshore wind and 0-100 bps for offshore wind, the latter is more applicable to technologies that are particularly reliant on the regulatory regime. In the case of Pilot NSIs, the commercial uncertainty is such that the floor mechanism within the regulatory regime is critical to project investment[17]. Therefore, the offshore wind FOAK range of 0-100 bps is more appropriate for the Pilot NSIs.

The December 2023 FTI report produced for NGV reviewed observed market data from Offshore Transmission Owner (OFTO) tender rounds. This recommended a minimum FOAK premium of 40 bps for debt investors (at the floor) and 75-100 bps for equity investors (at the cap).

2. The **FOAK uplift should be applied to the equity in the ('WACC-based') upper bound floor rate as well as the debt**.

Within Ofgem's proposals, the absence of the FOAK risk premium to the cost of equity component in the WACC-based floor rate appears to be an anomaly. In line with the conclusions of FTI's review of these proposals (Oct-24 report), the FOAK premium should be applied to both debt and equity in the WACC-based floor.

3. The ('WACC-based') upper bound floor rate should **aim at the top of the RIIO-ET range for the cost of equity components**.

Ofgem's proposals imply that the cost of equity components to the WACC-based floor will reference the mid-points of the RIIO-ET range. In our view, Ofgem should aim at the upper end of the RIIO range, given that the characteristics of NSI operations will be associated with the typically higher risk asset operations of Transmission Owners (marine environment with multiple interfaces). Further, Ofgem signalled in the Sector Specific Methodology Decision (SSMD) that the beta value might be selected from the upper half of the range.

Cap rate

When formulating the narrow cap and floor regime, the cap rate is instrumental to ensuring that a balanced risk-reward framework is maintained. We support Ofgem's objective to retain symmetry when setting the rates.

The package of modifications to the cap and floor regime for Pilot NSIs are necessary evolutions that respond to the heightened risk and uncertainty of these asset investments. We believe that it is appropriate that commensurate adjustments to the cap are considered alongside adjustments to the floor. Below we set out our recommendations to the cap rate proposals.

1. **Any changes to Ofgem's upper bound floor should be coupled by changes to the lower bound cap**, given that the two rates are tethered to each other.

In line with our recommendations to the upper bound floor rate, the ('WACC-based') lower bound cap rate should include a FOAK risk premium and aim at the top of the RIIO-ET range for the cost of equity components.

2. **Ofgem's proposed Window 3 cap rate parameters must be revised to avoid under-investment** and the Pilot NSI P2P-adjusted cap rate should follow.

We agree with the principle of using a standard CAPM model to generate the ('adjusted P2P') upper bound cap rate. In our response to the Window 3 cap parameter consultation, NGV challenged Ofgem's proposals to the

[16] https://www.ofgem.gov.uk/sites/default/files/2024-09/Consultation_on_further_detailed_regime_parameters_for_the_Offshore_Hybrid_Asset_pilot_scheme.pdf

[17] For further expansion of this point, please see Section 4 in 'Review of OHA risk-reward balance' by FTI Consulting, Oct-24.

equity beta and Total Market Return (TMR), and these continue to apply. Ofgem's proposed choice of comparator companies to derive the equity beta is not representative of the systematic risk associated with point-to-point interconnector investments, National Grid and Iberdrola are not appropriate comparators and a higher TMR value is required. At a time when changes in capital markets indicate that required returns are increasing, Ofgem's proposals for the TMR and equity beta do not provide sufficient equity returns at the cap and undermine the incentives to invest in these assets and need to be revised.

3. The **equity beta for Pilot NSIs should reflect the higher enduring risk** associated with investment in these assets compared to point-to-point interconnectors.

The different levels of enduring risk between point-to-point interconnectors and the Pilot NSIs should be reflected in the respective equity betas (and, consequently, the allowed equity returns) for these assets. Ofgem's proposal is to take the Pilot NSI equity beta from the average of the Window 3 sample group of comparator companies, but based on 55:45 gearing (rather than the 50:50). We are not convinced that this results in an equity beta that sufficiently captures the increased risk and uncertainty of the Pilot NSIs, Ofgem should consider aiming up in the sample of comparator companies.

4. The **FOAK risk premium applied to the upper bound cap rate should be 75-100 bps**.

As set out in the 'Floor rate' discussion, and in line with recommendations from the accompanying FTI report to this submission, in principle (and before any 'narrowing' of cap and floor rates), the FOAK premium at the cap should be in the 75-100 bps range.

Equity and Debt Transaction Costs

In our view the proposed equity and transaction costs are in the low range of costs for raising equity and debt to finance project investment for this high value and new class of assets.

The initial costs of raising new equity were assessed to be in the range of 5% - 12% and the low range of 5% was chosen by regulators[18]. Meanwhile, evidence shows that direct issuance equity costs have been estimated to be at 6.1%[19] or 7.11%[20]. Both observations imply that applying 5% transaction cost for raising equity finance is too low.

Similarly, the initial costs of raising new debt were assessed to be in the range of 2.5% - 3% and the low range (2.5%) was chosen by regulator[21]. Currently, the cost of borrowing allowance to regulated electricity transmission networks is 25 bps per year. If this annual allowance were equated to a one-off upfront payment for the 25-year period (as applied under the cap and floor regime), the regulated network equivalent is 6.25%. This implies that the proposed Pilot NSI transaction cost allowance for raising debt of 2.5% is far too low.

[18] CEPA (2010), Cost of raising equity, p. 3

[19] Slovin, M., Sushka, M. and Lai, K. (2000), 'Alternative flotation methods, adverse selection, and ownership structure: evidence from seasoned equity issuance in the U.K', Journal of Financial Economics, August, 57:2, pp. 157–190.

[20] Levis, M., Meoli, M. and Migliorati, K. (2014), 'The rise of UK Seasoned Equity Offerings (SEOs) fees during the financial crisis: The role of institutional shareholders and underwriters', Journal of Banking & Finance, November, 48, pp. 13–28.

[21] NAO (2010), Financing PFI projects in the credit crisis and the Treasury's response, p. 9