

# Consultation

## Post Construction Review of the Nemo Link interconnector to Belgium

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<b>Response deadline:</b>	11 October 2019	<b>Team:</b>	Interconnectors
		<b>Tel:</b>	020 7901 7049
		<b>Email:</b>	<a href="mailto:Cap.Floor@ofgem.gov.uk">Cap.Floor@ofgem.gov.uk</a>

We are consulting on our minded-to position on the Post Construction Review of the Nemo Link interconnector project. In particular, we are seeking views on our proposed values for the Post Construction Adjustment terms and the final cap and floor levels for the project.

This document outlines the scope, purpose and questions of the consultation and how you can get involved. This consultation closes on **11 October 2019**.

Alongside this consultation, we have also published two statutory consultation notices on proposed changes to related standard and special licence conditions.

Once the consultation is closed, we will consider all responses. We want to be transparent in our consultations. We will publish the non-confidential responses we receive alongside a decision on next steps on our website at [Ofgem.gov.uk/consultations](https://www.ofgem.gov.uk/consultations). If you want your response – in whole or in part – to be considered confidential, please tell us in your response and explain why. Please clearly mark the parts of your response that you consider to be confidential, and if possible, put the confidential material in separate appendices to your response.

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## Executive summary

Nemo Link is a 1GW electricity interconnector between Zeebrugge in Belgium and Richborough, Kent in Great Britain (GB). The interconnector is the first project to be developed under our cap and floor regime. The project was built on time and under budget, commencing commercial operations on 31 January 2019.

We granted Nemo Link Limited (Nemo Link) a cap and floor regime in December 2014. Nemo Link's electricity interconnector licence sets out the preliminary cap and floor levels for the project. The licence includes the process for setting the final cap and floor levels following our determination, at the Post Construction Review (PCR) stage, of the values of the Post Construction Adjustment (PCA) terms. These terms adjust the provisional cap and floor levels to take account of our final assessment of the project's costs.

### Scope of this consultation

This document sets out our minded-to position on Nemo Link's PCR, in particular our views on the proposed values for the PCA terms submitted by Nemo Link and proposed final cap and floor levels for the project.

Alongside our consultation on the Nemo Link PCR, we are also:

- conducting a statutory consultation on:
  - consequential changes to the special conditions in Nemo Link's licence; and
  - changes to Standard Licence Condition (SLC) 25: Cap and Floor Regulatory instructions and Guidance; and
- consulting under SLC 25 to issue new Cap and Floor Regulatory Instructions and Guidance (Cap and Floor RIGs), to better reflect the information we need during operations.<sup>1</sup>

We are also seeking views on the Nemo Link Cap and Floor Financial Models and handbooks.

### Overview of our assessment

The cap and the floor levels are set based on a building blocks approach of development costs, capital costs, operating and maintenance costs, replacement costs, decommissioning costs, tax and allowed return. **The preliminary cap and floor levels for Nemo Link, as specified in its licence, are £83.8m and £48.8m each year (2013/14 prices).**

In December 2018, Nemo submitted its proposed values for the PCA terms for determination, together with supporting project cost information (the PCR Submission). These were subsequently updated in June 2019. **Nemo Link proposed downward adjustments to the preliminary cap and floor levels of £5m and £3.5m (2013/14) respectively.** These downward adjustments are based on updated costs and reflect the project being delivered under the anticipated budget.

Based on our assessment, we are minded to set the:

- combined capital expenditure (capex) and development expenditure (devex) value at €598.0m, a decrease of €4.1m from Nemo Link's PCR submission; and

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<sup>1</sup> Comprising a new standard cost assessment template and associated guidance.

- the operating expenditure (opex) value at €605.9m, a reduction of €58.8m from Nemo Link's PCR submission.

Special licence condition 8 of Nemo Link's licence provides that we will review, at the PCR stage, the licensee's proposed values for the PCA terms and we will determine whether the proposed values are acceptable and, if not, specify the values of the PCA terms.

Accordingly, we are minded to determine that the proposed PCA values submitted by Nemo Link **should be adjusted downwards and determined as £7.6m and £6.0m.**

The proposed PCA values generate a **final cap level of £76.2m and a final floor level of £42.8m in 2013/14 prices.**

### **Next steps**

Following the close of the respective consultations and subject to consideration of responses, we expect to make our final decisions on each of the elements outlined above by:

- issuing a direction under special condition 8 on Nemo Link's licence, specifying the determined PCA values and confirming the final cap and floor levels for the project;
- issuing a direction under SLC 25 bringing into effect the proposed new Cap and Floor RIGs; and
- issuing licence modification notices under section 11A of the Electricity Act 1989 to modify both the special licence conditions in Nemo Link's licence, and SLC 25 of the electricity interconnector licence.

Subject to consideration of responses, we anticipate making these decisions by the end of November 2019.

## 1. Introduction

### Nemo Link project overview

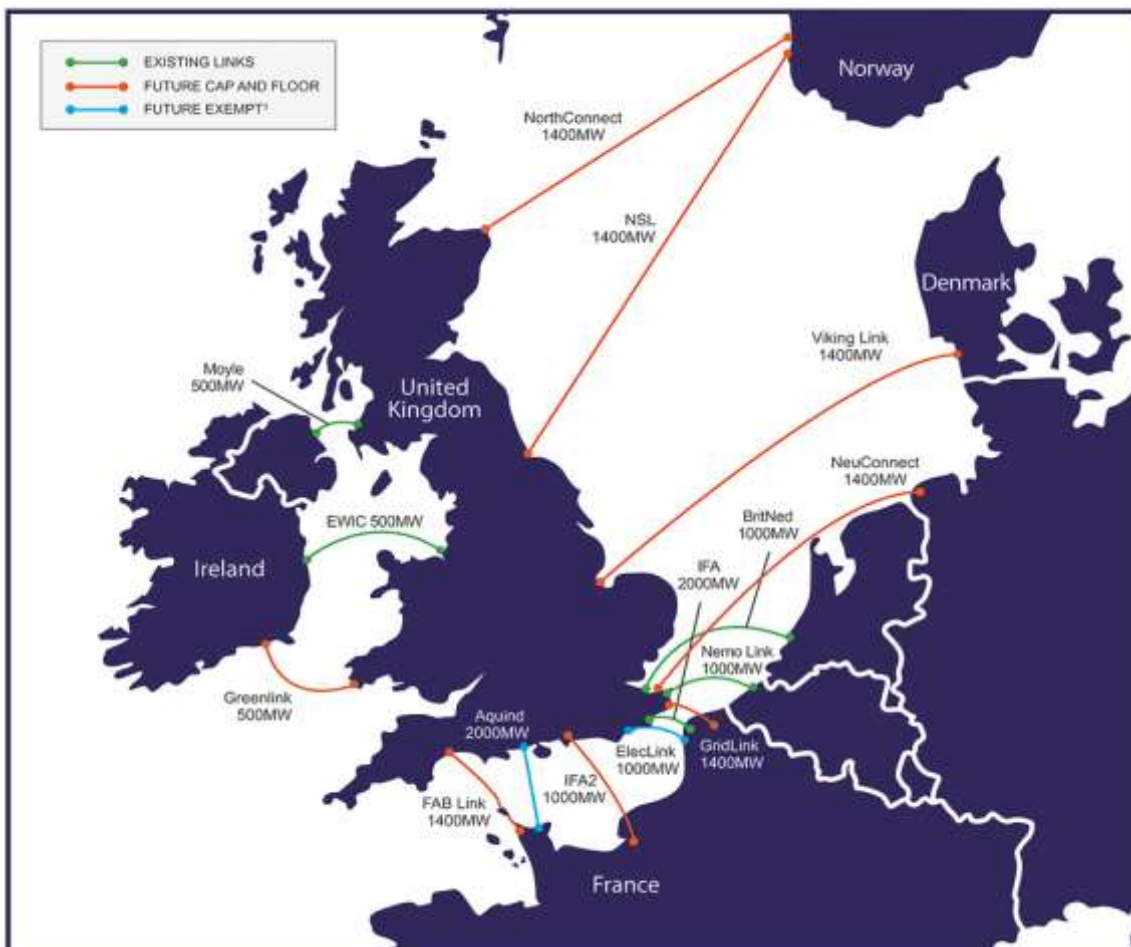
1.1. The Nemo Link project is a 1,000 MW electricity interconnector between GB and Belgium. On the GB side the cable landfall is at Pegwell Bay, Kent, followed by approximately 2 km of onshore cable to a converter station located in Richborough. The Belgian end of the cable lands at the port of Zeebrugge crossing through UK, French and Belgian territorial waters, followed by 9km of onshore cable to a converter station at Herdersbrug (near Bruges).

1.2. The Nemo Link interconnector started operating commercially on 31 January 2019 and is the first project to be regulated under our cap and floor regime. We developed the cap and floor regime for Nemo Link jointly with the Belgian energy regulator, the Commission de Regulation de l'Electricite et du Gaz (CREG).

1.3. The project developers are National Grid Interconnector Holdings Limited and Elia System Operator NV/SA (Elia), the Belgian transmission system operator. Each owns 50% of the shares in Nemo Link.

1.4. Figure 1 below shows the Nemo Link interconnector alongside other operational and proposed electricity interconnector projects.

Figure 1 - Map of existing and proposed GB electricity interconnectors

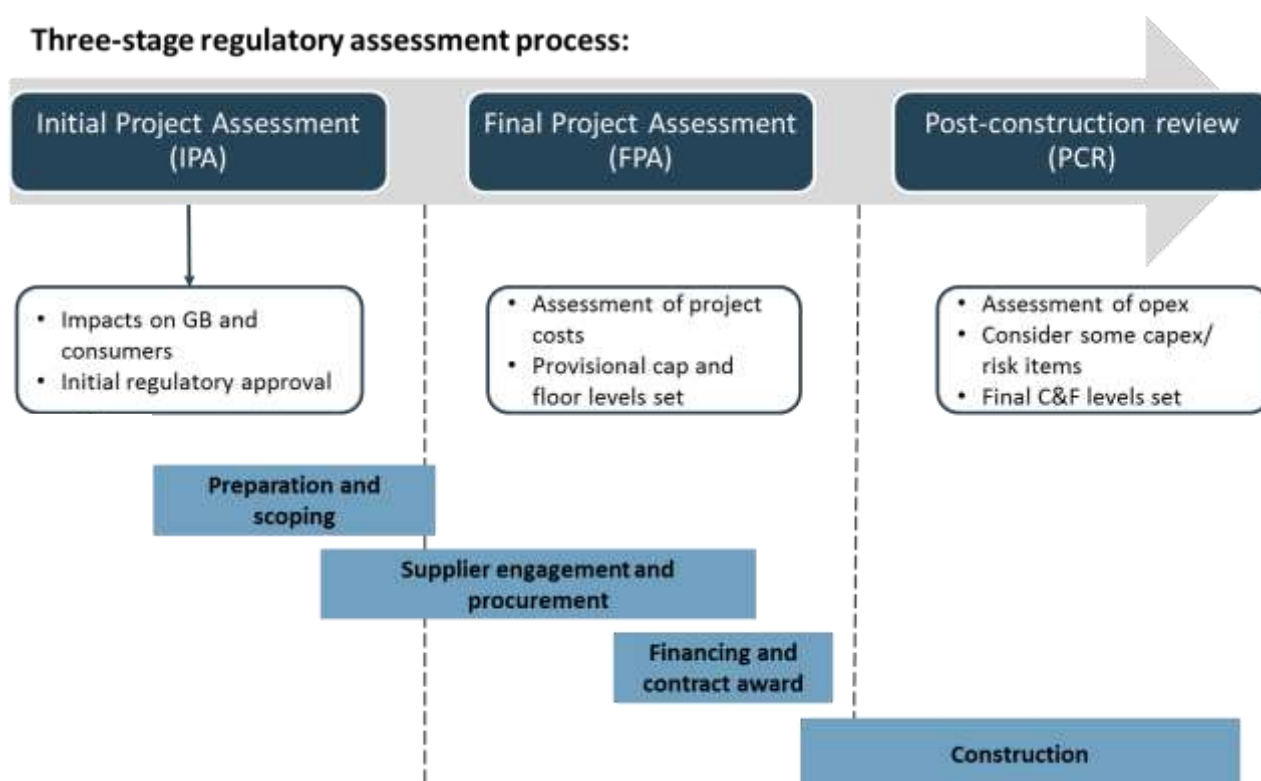


## Our cap and floor regime

1.5. The cap and floor regime is the regulated route for interconnector development in GB. It sets a minimum and maximum return that interconnector developers can earn. We developed the cap and floor regulatory model for Nemo Link jointly with the Belgian regulator, CREG. We then extended the cap and floor regime to other interconnectors in August 2014.<sup>2</sup>

1.6. There are three main stages to our cap and floor assessment framework, shown in Figure 2 below. Nemo Link is at the PCR stage of this assessment framework.

Figure 2 – Cap and floor assessment framework



- The **Initial Project Assessment (IPA)** stage is when we assess the needs case for new interconnector projects. This is predominately an economic assessment, taking into account the total costs and benefits of new interconnectors and assessing the likely impacts on consumers.
- At the **Final Project Assessment (FPA)** stage we confirm the grant of a cap and floor regime and set the provisional cap and floor levels. We assess the economic and efficient costs associated with developing, constructing, operating, maintaining and

<sup>2</sup> We extended the cap and floor regime to near-term projects in August 2014, and then confirmed this as our enduring approach to interconnector regulation in March 2015 as part of our Integrated Transmission Planning and Regulation project conclusions.

decommissioning of the licensee's interconnector. We also set the project's financial parameters, develop a project-specific financial model, and set the values for incentives.

- The cap and floor levels are then confirmed at the **Post-Construction Review (PCR)** stage, when we revisit aspects of our cost assessment that were not fixed at the FPA stage, and assess the efficiency of costs incurred during construction.

1.7. In December 2014, we granted Nemo Link a cap and floor regime. In November 2016, we made licence changes to give practical effect to that decision. The licence specified preliminary cap and floor levels of £83.8m and £48.8m (in 2013/14 prices). The licence provides for the final cap and floor levels for Nemo Link to be set following our determination of the Post Construction Adjustment (PCA) terms at the PCR stage.<sup>3</sup>

1.8. The determined PCA terms adjust the preliminary cap and floor levels (whether upwards or downwards) to account for the difference between:

- (a) our estimate, assumed in the preliminary cap and floor levels for Nemo Link, of the costs associated with developing, constructing, operating, maintaining and decommissioning Nemo Link; and
- (b) our assessment of these costs at the PCR stage (when the majority of the development and construction costs have been incurred).

1.9. The determined PCA values are used to calculate the final cap and floor levels for Nemo Link. The final cap and floor levels then remain fixed for the duration of Nemo Link's cap and floor regime.<sup>4</sup>

1.10. In December 2018, we received Nemo Link's PCR submission (the PCR submission) which included Nemo Link's proposed values for the PCA terms. Section 2 below sets out details of our assessment of the PCR submission together with our minded-to position on the proposed values for the PCA terms submitted by Nemo Link.

### Use of Revenues statement

1.11. Nemo Link is the first interconnector project to be developed under our cap and floor regime. As such, it is also the first interconnector project operating under the cap and floor regime to submit a use of revenue statement.

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<sup>3</sup> Relevant provisions are included in Special Condition 8: Process for determining the value of the Post Construction Adjustment terms and Special Condition 2: Cap Level and Floor Level. The PCA terms consist of two terms – the Post Construction Adjustment At Cap term (PCAC) and the Post Construction Adjustment At Floor term (PCAF).

<sup>4</sup> The regime allows for a discretionary revision of the final cap and floor levels after no less than 10 years from the start of the regime to re-assess and benchmark the opex forecast submitted at the PCR stage and, if required, for multiple revisions to re-assess the decommissioning costs forecast submitted at the PCR stage.



1.12. SLC 9 requires interconnector licence holders to submit a use of revenues statement to allow the Authority to collect accounting information of, and review and approve the use of revenue resulting from, the allocation of interconnector capacity.

1.13. The use of revenues statement must set out, in respect of the year ending on 30 June, the total amount of revenue resulting from the allocation of interconnector capacity and the use made of those revenues, which must be in accordance with Article 16(6) of Regulation 2009/714/EC.<sup>5</sup>

1.14. Nemo Link submitted its first use of revenues statement on 15 July 2019 and we are currently assessing the submission. All conditions being met, we will approve Nemo Link's use of revenues statement within 3 months of the receipt of the use of revenues statement, as set out in SLC 9.

## What are we consulting on?

1.15. We are consulting on our minded-to position on the PCR of the Nemo Link interconnector project. In particular, we are seeking views on our proposed values for the PCA terms.

1.16. Alongside our consultation on the Nemo Link PCR, we are also:

- conducting a statutory consultation on:
  - consequential changes to the special conditions in Nemo Link's licence to reflect our proposed changes to the governance arrangements for the Nemo Link cap and floor financial model and to correct a few cross referencing errors. These changes are described in Appendix 3 published alongside this consultation document; and
  - changes to SLC 25: Cap and Floor Regulatory Instructions and Guidance, of the electricity interconnector licence to allow for interconnector specific variations to the Cap and Floor RIGs. These changes are described in Appendix 4 published alongside this consultation document;
- consulting under SLC 25 to issue new Cap and Floor RIGs, as described in Appendix 5 published alongside this consultation document, to be utilised by relevant interconnector licensees to report costs and revenue during the development, construction, operation, maintenance and decommissioning of their interconnector; and
- seeking views on the Nemo Link Cap and Floor Financial Models and associated handbooks, also published alongside this consultation document.

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<sup>5</sup> Regulation 2009/714/EC:

<https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:211:0015:0035:EN:PDF>

## Structure of this document

1.17. The remainder of this document is structured as follows:

### **Section 2: Our Post Construction Review (PCR) cost assessment**

1.18. This section provides:

- a summary of Nemo Link's previous cost submissions;
- a summary of Nemo Link's annual RIGs;
- a description of the PCR cost assessment process and its scope; and
- a summary of our PCR cost assessment of Nemo Link and our proposed final cap and floor levels.

### **Section 3: Updates to the Cap and Floor Financial Model and proposed licence modifications**

1.19. This section sets out our proposed changes to the Cap and Floor Financial Model (CFFM) and our revised arrangements around governance of the CFFM. It also outlines our proposed modifications to the special conditions in Nemo Link's electricity interconnector licence to reflect:

- the change in governance arrangements related to the CFFM, as described in Appendix 3 published alongside this consultation document; and
- consequential PCR-related changes as well as correction of cross-referencing errors.

### **Section 4: Proposed modifications to SLC 25 and new Cap and Floor RIGs**

1.20. This section outlines our intention to issue new Cap and Floor RIGs pursuant to SLC 25 of the electricity interconnector licence as well as proposed modifications to SLC 25, as described in Appendices 4 and 5 published alongside this consultation document.

## Related publications

[Statutory consultation on changes to the standard conditions of the electricity interconnector licence, the electricity interconnector licences held by Nemo Link and NGIL and the electricity transmission licence held by NGET](#)

Published: November 2016

[Decision on the cap and floor regime for the GB-Belgium interconnector project Nemo](#)

Published: December 2014

[Decision to roll out a cap and floor regime to near-term electricity interconnectors](#)

Published: August 2014

[The regulation of future electricity interconnection: Proposal to roll out a cap and floor regime to near-term projects](#)

Published: May 2014

[Cost assessment consultation for the proposed GB-Belgium interconnector, Nemo](#)

Published: April 2014

[Cap and Floor Regime for application to project Nemo: Impact Assessment](#)

Published: December 2013

[Offshore electricity transmission and interconnector policy: minded-to position on interest during construction \(IDC\)](#)

Published: October 2013

[Cap and Floor Regime for Regulated Electricity Interconnector Investment for application to project Nemo](#)

Published: March 2013

[Preliminary conclusions on the regulatory regime for project Nemo and future subsea electricity interconnector investment](#)

Published: December 2011

[Cap and floor regime for regulation of project Nemo and future subsea interconnectors](#)

Published: June 2011

## Consultation stages

1.21. Our consultation on Nemo Link's PCR and the other elements outlined above will close on 11 October 2019. Following the close of this consultation and subject to consideration of responses, we expect to make our final decisions on each of elements as follows:

**Determination of the PCA values for Nemo Link** – by issuing a direction pursuant to paragraph 15 of special condition 8 on Nemo Link's licence, specifying the determined PCA values;

**Modifications to Nemo Link special conditions and SLC 25** – by issuing licence modification notices under section 11A of the Electricity Act 1989;

**Proposed new Cap and Floor RIGs** – by issuing a direction pursuant to paragraph 10 of SLC 25 in order to bring into effect the proposed new Cap and Floor RIGs.

1.22. We anticipate making these decisions by the end of November 2019.

## How to respond

1.23. We want to hear from anyone interested in this consultation. Please send your response to the person or team named on this document's front page.

1.24. We have asked for your feedback in each of the questions throughout. Please respond to each one as fully as you can. We will publish non-confidential responses on our website at:

[www.ofgem.gov.uk/consultations](http://www.ofgem.gov.uk/consultations).

## Your response, data and confidentiality

1.25. You can ask us to keep your response, or parts of your response, confidential. We'll respect this, subject to obligations to disclose information, for example, under the Freedom of Information Act 2000, the Environmental Information Regulations 2004, statutory directions, court orders, government regulations or where you give us explicit permission to disclose. If you do want us to keep your response confidential, please clearly mark this on your response and explain why.

1.26. If you wish us to keep part of your response confidential, please clearly mark those parts of your response that you *do* wish to be kept confidential and those that you *do not* wish to be kept confidential. Please put the confidential material in a separate appendix to your response. If necessary, we'll get in touch with you to discuss which parts of the information in your response should be kept confidential, and which can be published. We might ask for reasons why.

1.27. If the information you give in your response contains personal data under the General Data Protection Regulation 2016/379 (GDPR) and domestic legislation on data protection, the Gas and Electricity Markets Authority will be the data controller for the purposes of GDPR. Ofgem uses the information in responses in performing its statutory functions and in accordance with section 105 of the Utilities Act 2000. Please refer to our Privacy Notice on consultations, see Appendix 2.

1.28. If you wish to respond confidentially, we'll keep your response itself confidential, but we will publish the number (but not the names) of confidential responses we receive. We won't link responses to respondents if we publish a summary of responses, and we will evaluate each response on its own merits without undermining your right to confidentiality.

## General feedback

1.29. We believe that consultation is at the heart of good policy development. We welcome any comments about how we have run this consultation. We would also like to get your answers to these questions:

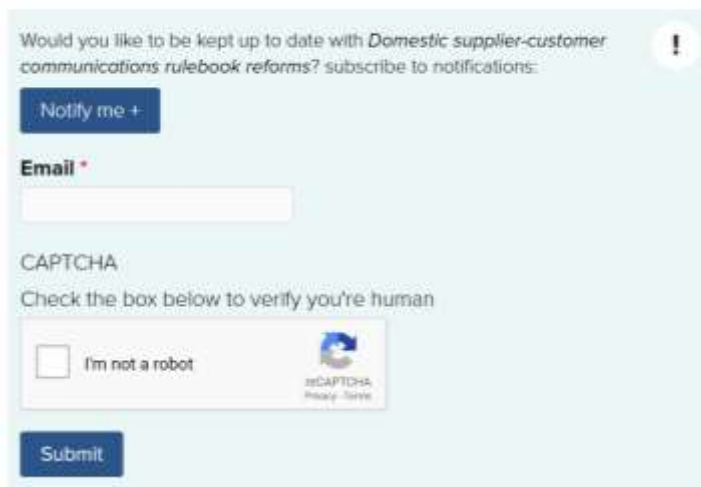
1. Do you have any comments about the overall process of this consultation?
2. Do you have any comments about its tone and content?
3. Was it easy to read and understand? Or could it have been better written?
4. Were its conclusions balanced?
5. Did it make reasoned recommendations for improvement?
6. Any further comments?

Please send any general feedback comments to [stakeholders@ofgem.gov.uk](mailto:stakeholders@ofgem.gov.uk)

## How to track the progress of the consultation

You can track the progress of a consultation from upcoming to decision status using the 'notify me' function on a consultation page when published on our website. [Ofgem.gov.uk/consultations](https://www.ofgem.gov.uk/consultations).

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Once subscribed to the notifications for a particular consultation, you will receive an email to notify you when it has changed status. Our consultation stages are:



## 2. Our Post Construction Review (PCR) cost assessment

### Section summary

This section provides an overview of the PCR cost assessment that we have undertaken, detailing our provisional position on the project's costs.

### Questions

**Question 1: Do you agree with our proposed cost allowances?**

### Previous cost assessments

2.1. In 2013, Nemo Link submitted provisional costs in order for us to set the provisional cap and floor levels at the start of the project's construction. We conducted a cost assessment and consulted on our view of the efficient cost levels in April 2014,<sup>6</sup> and subsequently set the provisional values in our decision in December 2014.<sup>7</sup> These preliminary levels are now being updated as the outcome of the PCR process. **All costs discussed in this section are reported as real 2013/14 prices.** Costs submitted by Nemo Link are in euros (EUR), whilst the cap and floor levels are set in pounds sterling (GBP).

2.2. Our 2013/14 assessment involved a detailed review of all aspects of the submitted costs, with a particular focus on the capital costs related to the construction of the project. Our assessment was also informed by an independent report from BPI consultants. Using this information, we set out our view of the efficient costs for Nemo Link, resulting in total provisional project costs (construction and operating costs) being set at €1,238m compared to the submitted cost of €1,287m. This was used to define the provisional cap and floor levels, which were set, respectively, at £83.8m and £48.8m per year (2013/14 prices).

### Annual reporting

2.3. Following changes to Nemo Link's licence in November 2016 and prior to the PCR, Nemo Link was required to submit annual reports during the construction phase, via the Cap and Floor Regulatory Instruction and Guidance (Cap and Floor RIGs). These submissions included updates on construction progress, cost variations from those set in December 2014, and any other relevant information.

2.4. The Cap and Floor RIGs is the primary means by which we ensure that interconnector licensees collect and provide the information we require to monitor their performance and, where appropriate, make adjustments to the returns they can earn under the cap and floor regime.<sup>8</sup> There is no obligation for us to adjust the cost allowances or cap and floor levels as a

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<sup>6</sup> Cost assessment consultation for the proposed GB-Belgium interconnector, Nemo: <https://www.ofgem.gov.uk/publications-and-updates/cost-assessment-consultation-proposed-gb-belgium-interconnector-nemo>

<sup>7</sup> Decision on the cap and floor regime for the GB-Belgium interconnector project Nemo: <https://www.ofgem.gov.uk/publications-and-updates/decision-cap-and-floor-regime-gb-belgium-interconnector-project-nemo>

<sup>8</sup> SLC 25 of the electricity interconnector licence.

result of the RIGs, but the process is nonetheless valuable for us when it comes to assist our assessment at the PCR.

2.5. Nemo Link made two formal RIGs submissions to us, one in March 2017 and one in March 2018. The RIGs submissions consist of a narrative update of the main elements of the project, the status of construction and of the latest capex costs, and detailed explanations of specific line items where there has been a change in cost.

2.6. In addition to the narrative, each submission includes an updated version of the project's cost assessment template, breaking down the project costs into all major components and highlighting where costs have deviated from previous submissions. Our review takes into account the submission materials along with any additional evidence we might require. Any decisions made on alterations to the agreed 2014 cost levels have been reflected in the PCR cost changes, discussed below.

## Description of the PCR process

2.7. The PCR is the process for determining the values of the Post Construction Adjustment at the Cap (PCAC) and at Floor (PCAF) terms as set out in special condition 8 of Nemo Link's licence.

2.8. The PCR process is initiated by the licensee, who submits a request for the proposed value for the PCA terms with supporting cost information, once between 85% and 95% of the development and capital expenditure, excluding interest during construction,<sup>9</sup> has been committed to the development and the construction of the interconnector.

2.9. The values of the PCA terms for Nemo Link are determined by the Authority (Ofgem) following consultation with CREG, and are expressed in real 2013/2014 sterling prices.<sup>10</sup> The PCA terms are equal to zero until their determination by the Authority. Once determined, they remain fixed from the date on which they take effect for the remainder of the Regime Duration.<sup>11</sup>

2.10. Special condition 8 of the licence defines the PCA terms as the adjustment (whether upwards or downwards) of the cap level and the floor level proposed by the licensee as a consequence of the difference between:

- (a) the Authority's estimate, assumed in the preliminary cap and floor level, of the costs associated with developing, constructing, operating, maintaining and decommissioning of the Nemo Link interconnector; and
- (b) the Authority's assessment, at the PCR stage, of the economic and efficient costs associated with developing, constructing, operating, maintaining and decommissioning of the Nemo Link interconnector.<sup>12</sup>

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<sup>9</sup> Interest during construction (IDC) is a return that developers will earn on economically and efficiently incurred spend incurred during the development and construction phases of the project.

<sup>10</sup> Cost figures have been deflated to 2013/14 prices by taking into account a 50/50 allocation of the inflation rates in the UK and Belgium.

<sup>11</sup> Special Condition 2, paragraph 12(d) of Nemo Link's licence.

<sup>12</sup> Special Condition 8, paragraph 2 of Nemo Link's licence.

2.11. After confirmation of the receipt of all the necessary information to define the PCA terms, we have to determine, in consultation with CREG, whether we consider the proposed values to be acceptable; or to specify alternative values for these terms within 12 months.<sup>13</sup>

2.12. Once determined, we specify the values of the PCAC and PCAF terms in a direction. As detailed in Appendix 3, we are proposing to amend Special Condition 8 of Nemo Link's licence so that the determined PCAC and PCAF values take effect from the Regime Start Date of 31 January 2019.<sup>14</sup>

2.13. The PCAC and PCAF terms feed into the formula used to calculate the final cap and floor levels for Nemo Link, as described in special condition 2, paragraph 4 of Nemo Link's licence.

## Scope of the PCR for Nemo Link

2.14. Nemo Link made its PCR submission in December 2018, with a further capex update provided in June 2019. Construction costs were submitted in nominal terms while forecasted costs during operations were submitted in real terms (2018 prices); both were denominated in euros. In order to set cap and floor levels in pound sterling and real terms (2013/14 prices), we had to convert the base year and currency of both sets of costs. More details on the approach used to carry out these conversions are provided in Appendix 1.

2.15. Since the cap and floor levels are largely based on Nemo's costs, we assess these costs to ensure that consumers do not underwrite inefficient costs for the project. The key components that we assessed during this PCR were the tender process and the final project costs.

2.16. In reviewing the tender process, we assessed the level of competitiveness by considering the following aspects:

- the pricing differentials between the bidders;
- the effect of the proposed, and final, allocation of risks on the pricing; and
- the processes and criteria in place to exclude tenderers.

2.17. The PCR capex review consisted of:

- reviewing the engineering, procurement and construction (EPC) contracts;
- reviewing our minded to positions on the cost variations that we considered during the previous RIGs;
- reviewing the cost variations that occurred during the final year of construction; and
- reviewing any remaining risk costs included within the PCR submission.

2.18. The PCR operational costs review covered the following key elements:

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<sup>13</sup> Special Condition 8, paragraph 13 of Nemo Link's licence.

<sup>14</sup> Special Condition 8, paragraph 15 of Nemo Link's licence.



- Opex costs (costs associated with managing, operating and maintaining the interconnector, including resources and expenses, business services, trading systems and agreements, planned and unplanned maintenance, business rates and insurance);
- Repex costs (costs associated with the replacement of assets to ensure continued functionality of the interconnector over the 25-year period);
- Decommissioning allowance (funds set aside for decommissioning the interconnector's assets at the end of its operational life).

2.19. In accordance with our December 2014 decision and Nemo Link's licence, we have not assessed market related costs<sup>15</sup> at this stage. Market related costs are treated as partial pass-through costs and, as such, these costs will be netted off Nemo Link's gross congestion revenues on an annual basis. Net congestion revenues will then be assessed against the cap and floor levels every five years. Where net congestion revenue is between the cap and floor levels, Market related costs are borne by Nemo Link. If, however, net congestion revenues are below the floor, then Nemo Link would be eligible for a floor payment.

2.20. We set an allowance for decommissioning costs<sup>16</sup> as part of our December 2014 decision.<sup>17</sup> Nemo Link's licence provides for adjustments to the cap and floor levels (whether upwards or downwards) in the event that a change in legislative requirements results in additional or reduced decommissioning costs agreed by the Authority. This is to reflect the fact that legislative requirements relating to decommissioning could change before the end of Nemo Link's cap and floor regime, and could lead to additional or reduced decommissioning costs which Nemo Link would not have foreseen.

## Summary of our PCR cost assessment

2.21. In its PCR submission, **Nemo Link proposed downward adjustments to the preliminary cap and floor levels of £5m and £3.5m (2013/14), respectively.** This downward adjustment is based on updated costs.

2.22. After our cost assessment, we are minded to set the **combined capital expenditure (capex) and development expenditure (devex) value at €598.0m, a decrease of €4.1m from Nemo Link's PCR submission.**

2.23. We have also considered Nemo Link's operational costs over its 25 year regulatory lifetime. We are minded to **set the operational cost value at €605.9m, a reduction of €58.8m from Nemo Link's PCR submission.**

2.24. Our initial view at this stage **suggests that the PCA values submitted by Nemo Link should be further revised downwards and adjusted by £7.6m and £6.0m respectively.**

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<sup>15</sup> Market related costs include firmness costs (the cost of compensating parties who have purchased interconnector capacity that cannot be provided), error accounting costs and trip contract costs.

<sup>16</sup> Decommissioning costs are those relating to sufficiently removing (or taking other relevant actions in relation to) assets at the end of the operational life.

<sup>17</sup> The allowance set in the December 2014 decision was €12.8m.

2.25. Table 1 below shows a summary of these costs:

**Table 1 - Summary of project costs<sup>18</sup>**

<b>€m, 2013/14 prices</b>					
Item	2014 Nemo Link submission	2014 Ofgem position	Nemo Link PCR submission	Our provisional PCR position	
<b>Devex</b>	17.0	17.3	18.5	18.5	
<b>Capex</b>	<i>Firm costs</i>	591.8	577.9	583.6	579.5
	<i>Risks</i>	31.9	31.9	0.0	0.0
<b>Operational costs<sup>19</sup></b>	645.7	610.9	664.7	605.9	
<b>Total</b>	<b>1,286.5</b>	<b>1,238.0</b>	<b>1,266.8</b>	<b>1,203.8</b>	

2.26. Table 2 below sets out the preliminary cap and floor levels, the adjustments to these levels proposed by Nemo Link, our provisional determination of these adjustments and the corresponding impacts on the final cap and floor levels. Our cost analysis is presented in more detail in the following sections.

**Table 2 - Summary of proposed cap and floor levels**

<b>£m, 2013/14 prices</b>		
	Cap	Floor
Nemo Link's preliminary cap and floor levels	83.8	48.8
Nemo Link's proposed PCA values	-5.0	-3.5
Final cap and floor levels using Nemo Link's proposed PCA values	78.8	45.3
<b>Our provisional determination of the PCA values</b>	<b>-7.6</b>	<b>-6.0</b>
<b>Final cap and floor levels using our provisionally determined PCA values</b>	<b>76.2</b>	<b>42.8</b>

## Tender process

2.27 The contracting process was established under an amended version of the Fédération Internationale Des Ingénieurs-Conseils (FIDIC) Silver Model terms and conditions, which is widely used in the offshore sector. Throughout the contracting process bidders were provided with two contracting options referred to as "Lot 1 + Lot 2" and "Lot 3":

- "Lot 1 + Lot 2": Lot 1 relates to the converter station scope of works, and Lot 2 relates to the cable system scope of works. In this option, suppliers could tender for either or both Lots and the most economically efficient combination of Lots would be selected.
- "Lot 3" bundled all the scope together in a single EPC contract. In this option, suppliers

<sup>18</sup> For all tables in this document, due to rounding the figures in the table may not add up precisely to the totals indicated.

<sup>19</sup> Includes market related costs

had to tender for the full scope of construction works.

2.28 The EPC procurement process took place between April 2012 and June 2015 and followed Official Journal of the European Union (OJEU) rules. It consisted of a pre-qualification round process, after which 11 candidates out of 16 were selected to proceed to the initial full tender stage. Two candidates chose not to submit a bid. The remaining candidates provided responses which were evaluated against defined technical and commercial criteria, leading to the exclusion of three more candidates.

2.29 After this stage, however, the tender process was put on hold as planning permission for the initial design of the Nemo Link project was not obtained. The change of scope determined a net EPC cost increase, requiring the EPC tender to be re-scoped.

2.30 All the original bidders that had passed 'pre-qualification' stage were invited to re-submit revised bids. A total of seven price re-submissions were received, two of which were subsequently withdrawn. The final round included a candidate for each of Lot 1 + Lot 2, as well as a candidate for Lot 3.

2.31 Nemo Link decided to follow the first contracting option, i.e. Lot 1+Lot 2. Nemo Link chose Siemens to supply the two converter stations for the project (Lot 1), and Nemo Link awarded J-Power Systems (JPS), a subsidiary of Sumitomo Electric Industries Ltd., a full Engineering, Procurement and Construction (EPC) contract to design, manufacture and install the underground and subsea cables (Lot 2). JPS appointed DeepOcean 1 UK Ltd for the installation and protection works for HVDC cables.

2.32 Both contractors won the tenders on commercial and technical grounds. The costs associated with these two contracts constitute the majority of the project's capital expenditure, and we believe these were efficiently and economically procured.

### Proposed final capex costs

2.33 The value of the capital expenditure (capex) submitted by Nemo Link at the 2014 assessment was €591.8m whereas the submitted PCR value was €583.6m, a decrease of €8.2m. We are minded to make reductions totalling €4.1m to this PCR value, detailed in Table 3 below.

**Table 3 - Proposed capex cost adjustments**

<b>€m, 2013/14 prices</b>				
<b>Cost</b>	<b>Reasons for adjustment</b>	<b>PCR submitted cost</b>	<b>Proposed adjustment</b>	<b>Minded-to adjusted cost</b>
Herdersbrug lease	Lease costs adjusted following independent valuation.	0.8	0.02	0.8
Elia staff chargeout	Additional rate mark-ups.	0.9	-0.1	0.8

Trading desk costs	Trading desk costs prior to operations were determined to be market related costs, and therefore not eligible as capex.	0.4	-0.4	0.0
Cable resistivity	Communication issues between Nemo Link and contractor resulted in extra costs for mitigation and associated project management.	0.24	-0.05	0.19
Remedial cable burial	High level of contingency included. Three instances of cable monitoring requested on top of the planned annual cable monitoring campaigns.	1.3	-0.5	0.8
Delay in start-up (DSU) Insurance	DSU insurance was procured but does not provide consumers with additional benefit; this is in line with treatment of insurance for IFA2.	3.0	-3.0	0.0
Launch event	Launch event provides no benefit to consumers.	0.2	-0.2	0.0
<b>Total</b>			<b>-4.1</b>	

2.34 In addition to the above adjustments, a number of notable events occurred during the project's construction period, the cost of which we have determined to be economic and efficient. We therefore propose to allow these costs for inclusion in the final cap and floor levels. An overview of these is provided below:

2018 Engineering, Procurement and Construction (EPC) cost variations

2.35 There were 56 EPC cost variations made by JPS in 2018 with a total value of €36.6m. In addition, three variations were submitted by Siemens with a total value of €0.8m. The JPS claims mainly related to remedial works and weather delays or conditions outside of the contract threshold. Nemo Link engaged with JPS and were able to agree a settlement of €5.8m. We have assessed the costs within the settlement agreement, and after examining the causes of increased costs and the responsibilities of the involved parties, we are minded to accept the cost as an economic outcome.

Unexploded ordnance (UXO) campaigns

2.36 Nemo Link and its contractor encountered a much higher level of potential unexploded ordnances (UXOs) than was initially estimated. Due to the large number of UXOs, additional costs were incurred for additional surveys and UXO removal works. The additional cost was €28.9m. We have assessed these costs and we believe that they are economic and efficient because the UXOs and potential UXOs that Nemo Link encountered could not have been foreseen based on the information available.

Imbalance costs

2.37 Nemo Link’s commissioning test took place on 11 January 2019 and resulted in a power trip; a re-test was conducted on 14 January with no issue. The total cost of purchasing power for the tests and managing the imbalance resulting from the trip was €0.9m. Analysis presented by Nemo Link suggests that the maximum potential imbalance cost could have reached €26.6m without the mitigation strategies that Nemo Link put in place. We are minded to allow the commissioning test costs, but not the €0.4m service costs that Nemo Link has incurred through using the National Grid Ventures trading desk service for imbalance management during the pre-operations phase. We are therefore minded to allow €0.5m in total.

**Proposed final operational costs**

2.38 Excluding market related costs (which do not directly affect the cap and floor levels) Nemo Link submitted projected operational costs of €512.3m in total for the 25-year cap and floor regulatory term as part of the PCR submission.<sup>20</sup> We have reviewed the submission, and are minded to make cost reductions equating to €58.8m. The main components of the operational costs are provided in Table 4 below.

**Table 4 - Overview of proposed operational cost adjustments**

Category	Description	PCR submitted cost (€m)	Proposed adjustment (€m)	Indicative adjusted cost (€m)
Controllable opex	All of the main operating costs	408.3	-8.8	399.5
Non-controllable opex	Costs relating to leases and statutory fees	41.0	-6.3	34.7
Repep	Costs for periodic asset replacement	49.6	-43.7	5.9
Decommissioning	Funds provisioned for decommissioning costs	13.4	0	13.4
<b>Total</b>		<b>512.3</b>	<b>-58.8</b>	<b>453.5</b>

<sup>20</sup> In its PCR submission, Nemo Link submitted projected total operational costs of €664.7m of which €152.4m were indicative market related costs.

2.39 The details of our intended adjustments are as follows:

Real wage growth (controllable opex)

2.40 Nemo Link's PCR submission provided an annual increase in real wages of 1.5% over the 25-year period. We take the view that the 1.5% rate is at the high end of possible estimates in light of historic data and current wage growth trends, and hence we are minded to use a 1% rate. This reduces the annual average wage growth cost from €1.0m to €0.6m, and the total cost over the full 25 years is reduced from €24.7m to €15.8m. Nemo Link may request reassessment of these costs at the opex reassessment stage, which would take effect for the remainder of the regime duration if approved.

Lease cost for converter sites (controllable opex)

2.41 The Belgian regulator CREG has agreed with Elia, the Belgian transmission operator, on the regulated asset base (RAB) value of the converter station land in Belgium. This has been fixed at €0.24m per year, an increase from the submitted cost figure of €0.17m per year.

Environmental permits (controllable opex)

2.42 Nemo Link's PCR submission erroneously stated that the cost of Belgian environmental monitoring was €0.022m per year. This has been corrected to €0.002m per year.

Legal consultancy (controllable opex)

2.43 We have reduced the submitted allowance for legal consultancy support (which supplements Nemo Link's in-house legal counsel) from €0.22m to €0.21m per year, since our assessment shows that anticipated costs are higher than we believe are likely to occur.

Travel and expenses (controllable opex)

2.44 We have reduced the submitted allowance for travel and expenses from €0.22m to €0.19m per year, a value that we believe to be more reflective and efficient for this expenditure.

Capacity Allocation and Congestion Management (CACM) and Day Ahead power exchange related costs (controllable opex)

2.45 Nemo Link submitted a total allowance over the 25-year period of €7.4m for CACM and day ahead power exchange related costs. We recently published our decision on approach to cost sharing and cost recovery under the CACM Regulation.<sup>21</sup> Amongst other things, the decision specifies that enduring arrangements for cost sharing and cost recovery for efficiently incurred, reasonable and proportionate development and operational CACM related costs shall

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<sup>21</sup> Decision on approach to cost sharing and cost recovery under the Capacity Allocation and Congestion Management (CACM) Regulation: <https://www.ofgem.gov.uk/publications-and-updates/decision-approach-cost-sharing-and-cost-recovery-under-capacity-allocation-and-congestion-management-cacm-regulation>

apply to new interconnectors from the date they commence commercial operations. The decision also sets out how the total share of relevant costs attributable to interconnectors should be shared between them.

2.46 Whilst we intend to accept the submitted allowance for now we note that it was submitted ahead of our recent decision on cost sharing and cost recovery under the CACM Regulation. We therefore expect to update this allowance once we have received a revised value from Nemo Link that takes into account our recent decision.

#### Richborough converter business rates (non-controllable opex)

2.47 Since the PCR submission, Nemo Link has revised the estimated business rates for the converter station from €1.0m per year to €0.8m per year.

#### Repex

2.48 At the PCR stage, Nemo Link submitted an estimated cost of €49.6m over the 25-year operational period. This is a significant increase from our 2014 decision, which set the allowance at €5.9m based on Nemo Link's 2013 submission of €16.1m. Nemo Link has submitted information to us to support the PCR cost estimate, but at this stage, it has not been sufficient for us to make a determination of what would form an economic and efficient allowance. We will therefore maintain the allowance set in our 2014 decision as a placeholder value. We will be able to reconsider this figure if Nemo Link provides us with further information that better demonstrates the efficient repex cost level.

2.49 As stated in our 2014 decision, repex is treated as a standalone operational RAV addition (rather than being part of opex), meaning there is no provision for adjustments to our repex allowance following our PCR decision.

### **Updates from our 2014 Nemo Link cost assessment decision**

2.50 Our 2014 Nemo Link decision commented on a number of issues which were to be reviewed at the PCR stage. These costs have been included in our previous totals within this document. At this stage of our review, the outcome for each is as follows:

- EPC contract costs. The 2014 decision stated that cost efficiency was to be judged once tender prices are final, and the costs will be accepted unless there are major changes. Our minded-to position for the PCR is that the final tender prices were efficient and justified, and therefore we are minded to accept the updated cost. In addition, these costs are similar to the 2014 allowance of €539.4m.
- Project Management (PM) costs (capex). In 2014, BPI consultants recommended to set a provisional allowance of €10.5m.<sup>22</sup> Our current view is that this estimate was low. The submitted out-turn PM cost at the PCR stage was €23.8m. Whilst this represents a significant increase from the 2014 provisional allowance, Nemo Link's overall PM costs constitute 3.9% of project capex, which is comparable with offshore transmission and

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<sup>22</sup> BPI undertook a cost assessment of Nemo Link for Ofgem and CREG that informed the April 2014 consultation position:  
<https://www.ofgem.gov.uk/publications-and-updates/cost-assessment-consultation-proposed-gb-belgium-interconnector-nemo>

interconnector projects of a similar nature, and so we are minded to accept the updated cost.

- Mid-life replacement. The 2014 decision set the allowance at €5.9m. This is discussed in “Proposed final operational costs”, above.
- Decommissioning. As part of the 2014 decision, Nemo Link requested decommissioning allowance for the project's onshore works and the subsea cables. However, we only allowed the costs associated with the onshore decommissioning, in line with legislation.

Nemo Link's PCR submitted estimate is in line with our 2014 decision, having only included costs associated with the decommissioning of the project's onshore works.

The 2014 decision set the allowance for these works at €12.8m. The submitted estimate at the PCR stage is €13.4m. This €0.6m increase is not in relation to the physical decommissioning of the project's assets; it relates to financing costs associated with funds that Nemo Link must set aside to comply with Belgian licence requirements.

Following our review of these requirements, we have found the total value associated with the project's decommissioning costs of €13.4m to be acceptable.

- Development costs. The 2014 decision set the allowance at €17.3m. The submitted devex cost at the PCR stage is €18.5m. We have assessed Nemo Link's updated cost and found it to be efficient and justified, and therefore we are minded to accept the updated cost.



### 3. Updates to the Cap and Floor Financial Model and proposed licence modifications

#### Section summary

This section presents our proposed changes to the Cap and Floor Financial Model (CFFM) used to determine the cap and floor levels and assess revenues and availability of interconnector projects operating under our cap and floor regime. It also presents our proposed changes to the Nemo Link's licence to implement these changes.

#### Questions

**Question 2: Do you agree with our proposed changes to the CFFM?**

**Question 3: Do you agree with our proposed modifications to Nemo Link's licence?**

### The Cap and Floor Financial Model (CFFM)

3.1 The CFFM is a workbook in Microsoft Excel ® format that is used to set and adjust the cap and floor levels and to assess interconnector revenues against these levels in accordance with the relevant special conditions of the licence.

3.2 Nemo Link's licence currently envisages the CFFM used for the project, currently referred to as the Nemo Link Cap and Floor Financial Model (NLCFFM) in the licence, being owned and maintained by Nemo Link and modified from time to time in accordance with the Nemo Link Cap and Floor Financial Model Protocol (NLCFFMP).<sup>23</sup> The NLCFFMP describes important governance arrangements for operating and modifying the NLCFFM.<sup>24</sup>

3.3 As the cap and floor regime was developed further and implemented for new interconnector projects, we have reviewed our position on model ownership as currently reflected in Nemo Link's licence. Following this review, we have decided to modify the governance arrangements for the NLCFFM to ensure that it is more robust and consistent with arrangements for other cap and floor projects.

3.4 We believe that we should retain responsibility for the development, maintenance and operation of a standardised CFFM to be used for all interconnector projects operating under the regime. This would ensure consistency in how the model is used and updated across all interconnector projects.

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<sup>23</sup> Special condition 11, paragraph 3 of Nemo Link's licence.

<sup>24</sup> Special condition 11, paragraph 1 & 2 of Nemo Link's licence.

3.5 This revised approach was first reflected and implemented in the licence for the North Sea Link (NSL) interconnector in July 2018.<sup>25</sup>

3.6 We are also proposing to split the CFFM into two separate models, which we refer to as NLCFFM1 and NLCFFM2 in the context of the Nemo Link project:

- **NLCFFM1** - to be used to determine final cap and floor levels at PCR stage, following the final assessment of costs for developing, building, maintaining, operating and decommissioning the interconnector project; and
- **NLCFFM2** - to be used during the operational period to adjust cap and floor levels (where required following revision of the baseline allowance for controllable operating costs or decommissioning costs) and inflate cap and floor levels annually; reflect performance relative to Nemo Link's availability targets; assess, at the end of each default 5-year assessment period, actual revenue earned by Nemo Link against the adjusted cap and floor levels, and actual non-controllable operating costs against the baseline level, to determine whether Nemo Link's revenues should be 'topped up' to the floor level or whether excess revenue (above the cap level) should be returned to consumers.

3.7 The decision to split the CFFM into two separate models was driven by the desire to simplify the original model by separating two sets of functions that are different in scope and timing. Once cap and floor levels are finalised through CFFM1 at the point of our PCR decision, they become an input into CFFM2, which is then used during operations.

3.8 We have conducted an internal audit of the NLCFFM1, used to determine the final cap and floor values for the Nemo Link project. This follows on from a previous internal audit, carried out in 2018, and the audit by BDO, an external financial modelling consultancy, which was carried out on earlier versions of the model in 2014 and 2016. After having updated the model to reflect the findings of these audits, it is now deemed to be fit for purpose.

3.9 The NLCFFM2 was developed by Ofgem and independently audited by the Government Actuary's Department (GAD) ahead of this consultation. GAD's audit flagged a number of areas for Ofgem to review to ensure that the CFFM2 is fully accurate in calculating its outputs and compliant with both Nemo Link's licence and best practice.

3.10 In response to these findings, Ofgem has already resolved all areas potentially impacting on the accuracy of the model. There are some minor areas for improvements that we will address before using the model to assess Nemo Link's revenue during operations.

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<sup>25</sup> Special conditions for the electricity interconnector licence held by National Grid North Sea Link Limited: <https://www.ofgem.gov.uk/publications-and-updates/decision-changes-electricity-interconnector-licence-held-national-grid-north-sea-link-limited>

3.11 The NLCFFM1 and NLCFFM2 can be found in Appendix 6 and Appendix 7, respectively. These are published alongside this consultation document. The NLCFFM1 is fully populated with the actual inputs used to determine Nemo Link's cap and floor levels, as presented in this consultation; the NLCFFM2 is partly populated with actual inputs, where these are the same inputs as those used in the NLCFFM1, and partly with purely illustrative figures, where the inputs are introduced in the NLCFFM2 for the first time (i.e. they are not inputs to the NLCFFM1). Therefore, no inference should be made about any future regulatory settlement for Nemo Link beyond PCR based on the figures in the NLCFFM2.

3.12 Further, more detailed information on the design and mechanisms underlying the NLCFFM1 and NLCFFM2 can be found in the associated handbooks in Schedule 6A and Schedule 7A, respectively. These are published alongside this consultation document.

### **Consequential changes to Nemo Link's licence to reflect change in CFFM governance**

3.13 We propose to modify the special licence condition of Nemo Link's licence in the manner described to reflect this change in governance arrangements. Further details on the proposed modifications, including the reasons and effect of the proposed changes, can be found in Appendix 3.

## 4. Proposed modifications to Standard Licence Condition 25 and new Cap and Floor RIGs

### Section summary

This section outlines our proposed modifications to SLC 25 of the electricity interconnector licence and our proposal to issue new Cap and Floor RIGs.

### Questions

**Question 4: Do you agree with our proposed modifications to SLC 25?**

## Proposed modifications to SLC 25 of the electricity interconnector licence

4.1 Alongside this PCR consultation document, we have published a statutory consultation notice setting out proposed modifications to SLC 25 (Appendix 4). Further details on the proposed changes and their effect can be found in Schedule 4A and 4B, respectively.

4.2 SLC 25 establishes the Cap and Floor RIGs. They are the primary means by which we monitor costs and revenues of interconnectors granted a cap and floor regime.

4.3 The Cap and Floor RIGs comprise a guidance document and a cost assessment template and are applicable to all electricity interconnector licensees that are granted a cap and floor regime and in whose licence the condition has effect.<sup>26</sup>

4.4 SLC 25 requires Nemo Link (and other electricity interconnector licensees granted a cap and floor regime) to record a set of information in line with the Cap and Floor RIGs and provide such information to the Authority on the relevant dates.

4.5 Whilst the current version of SLC 25 ensures a consistent approach to reporting requirements is applied to all cap and floor interconnector projects, it does not provide sufficient scope for any minor variations to the Cap and Floor RIGs that may be necessary to reflect interconnector specific circumstances.

4.6 We believe that the proposed modifications to SLC 25 provide a balance in ensuring consistency across the cap and floor projects, whilst also allowing for some flexibility for each interconnector's specific circumstances.

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<sup>26</sup> Currently this condition only has effect in the interconnector licences held by Nemo Link and National Grid North Sea Link Limited.

## **Proposed new Cap and Floor RIGs**

4.7 Considering the proposed changes to the CFFM described in Section 3 of this document, we think that the current Cap and Floor RIGs are now outdated and no longer fit for purpose, as they are unable to capture the entirety of the information required to use the CFFM2 during the operational period of an interconnector project.

4.8 We have issued a proposed new cost assessment template to ensure that we are able to capture all of the required information, in addition to the accompanying guidance document, and we are now consulting on those. These new versions of the guidance document and cost assessment template will form the new Cap and Floor RIGs.

4.9 In addition to capturing all of the updated requirements for the CFFM, this updated cost assessment template also allows us to incorporate lessons learned on cost reporting from interconnector projects that we have recently assessed, or are currently assessing. This ensures that costs are reported and reviewed in the most efficient manner possible.

4.10 For further details, please refer to the notice of proposal to issue new the Cap and Floor RIGs (Appendix 5) and the draft updated RIGs guidance and reporting template (Schedules 5A and 5B, respectively) published alongside this consultation document.

## Appendices

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Appendix	Name of Appendix	Page no.
1	Technical appendix on price base and currency conversion	31
2	Privacy notice on consultations	34

## Documents published alongside this consultation

Document	Description
<b>Appendix 3</b>	<p>Notice of statutory consultation on proposed modifications to the special conditions of the electricity interconnector licence held by Nemo Link Limited</p> <p><b>Schedule 3A</b> - Proposed modifications to the special conditions of the electricity interconnector licence held by Nemo Link Limited</p> <p><b>Schedule 3B</b> - Reasons and effects of proposed modifications to the special conditions of the electricity interconnector licence held by Nemo Link</p>
<b>Appendix 4</b>	<p>Notice of statutory consultation on a proposal to modify standard condition 25 of the electricity interconnector licence</p> <p><b>Schedule 4A</b> - Proposed modifications to standard condition 25 of the electricity interconnector licence</p> <p><b>Schedule 4B</b> - Reasons and effects of proposed modifications to standard condition 25 of the electricity interconnector licence</p>
<b>Appendix 5</b>	<p>Notice of proposal to issue new Cap and Floor Regulatory Instructions and Guidance ("Cap and Floor RIGs") in accordance with paragraph 12(a) of Standard Condition 25</p> <p><b>Schedule 5A</b> - Draft updated Cap and Floor RIGs guidance</p> <p><b>Schedule 5B</b> - Draft updated Cap and Floor RIGs reporting template</p>
<b>Appendix 6</b>	<p>NLCFFM1</p> <p><b>Schedule 6A</b> - Cap and Floor Financial Model 1 Handbook (CFFM1H)</p>
<b>Appendix 7</b>	<p>NLCFFM2</p> <p><b>Schedule 7A</b> - Cap and Floor Financial Model 2 Handbook (CFFM2H)</p>

## Appendix 1 - Technical appendix on price base and currency conversion

This appendix outlines our approach to determining the value of the inflation indices and exchange rates used within our assessment of project costs submitted by Nemo Link at the PCR stage.

At this stage, we have reviewed all submitted costs during construction and forecasted costs during operation to assess whether these have been (or would be, in the case of future costs) economically and efficiently incurred. Under our cap and floor regime, these costs play a key role in the building blocks approach that we use to determine the cap and floor levels for an interconnector project.

Depending on the nature of the costs, i.e. construction costs already incurred or forecasted operational costs, the costs submitted at this stage are denominated in euro (EUR) and expressed in either real or nominal terms for the year in which those costs have been incurred (or are expected to be incurred).

The cap and floor levels for the Nemo Link project have to be denominated in pounds sterling (GBP) and in real 2013-14 prices<sup>27</sup>; therefore we had to convert both construction and operational costs into GBP and 2013-14 prices.

### Costs during construction

Nemo Link's cost submission for PCR includes costs incurred during the construction period of the project, which lasted from 2008 to 2019.<sup>28</sup> These costs are expressed in EUR and in nominal terms following bilateral agreement between us and Nemo Link. Hence, they had to be converted as described above.

The conversion from nominal to real terms was achieved through the PPPI factor, which applies UK RPI inflation to half of the project's total costs and Belgian CPI inflation, adjusted to reflect changes in the exchange rate during the relevant reference period in order to achieve purchasing power parity (PPP), to the other half of the project's total costs.<sup>29</sup> The conversion from EUR to GBP was achieved using the XUMAERS exchange rate<sup>30</sup>.

For those costs incurred during the 2008-2018 period, historical 12-month averages of inflation indices (UK RPI and Belgian CPI) and exchange rate (XUMAERS) were used to achieve the two conversions described above, as monthly figures were available for each month during the 2008-2018 period and historical 12-month averages could be calculated for each parameter in each year based on those figures.

For those costs incurred during 2019, the values of the relevant inflation indices and exchange rate used for the conversion from EUR 2019 to GBP 2013-14 were estimated as follows:

- Exchange rate: 7-month average XUMAERS between January and July 2019 (1.1407); and

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<sup>27</sup> As per our 2014 decision on the cap and floor regime for the Nemo Link's project:

[https://www.ofgem.gov.uk/sites/default/files/docs/2014/12/final\\_cap\\_and\\_floor\\_regime\\_design\\_for\\_nemo\\_master\\_-\\_for\\_publication\\_1.pdf](https://www.ofgem.gov.uk/sites/default/files/docs/2014/12/final_cap_and_floor_regime_design_for_nemo_master_-_for_publication_1.pdf)

<sup>28</sup> These include development expenditure (devex), capital expenditure (capex) and cost of spares.

<sup>29</sup> The formula used to calculate the PPPI factor is provided in the Cap and Floor Financial Model 1 Handbook (CFFM1H).

<sup>30</sup> XUMAERS is the monthly exchange rate for Euro to Sterling conversion as identified by the Bank of England.

- Inflation indices: 7-month average UK RPI and Belgian CPI inflation rates between January and July 2019 (2.7403% and 1.9443% respectively)<sup>31</sup> were applied to the 12-month average of UK RPI and Belgian CPI indices in 2018 (281.5833 and 131.2608 respectively) to derive estimates of 289.2995 and 133.8129 for 2019 UK RPI and Belgian CPI respectively.<sup>32</sup>

In estimating the values of the relevant inflation indices and exchange rate in 2019, we selected the approach outlined above because we considered it the most consistent with the approach used for previous years (for which historical data is fully available) and the most reflective of actual economic conditions observed between the start of the year and the time of this consultation.

### **Costs during operations**

In Nemo Link's PCR submission, costs during operations<sup>33</sup> are expressed in EUR and in real terms (2018 prices), and will be incurred during the 25-years of the regime, between 2019-2043.

As for costs during construction, the conversion to real terms (2013-14 prices) was achieved through the PPPI factor, although in this case the costs converted were originally expressed in real terms (2018 prices) rather than nominal terms. Therefore, 12-month average UK RPI, Belgian CPI and XUMAERS in 2018 (January to December) and 2013-14 (April 2013 to March 2014) were used.

The conversion from EUR to GBP was achieved using the XUMAERS exchange rate (1.1352) underpinning the process of estimating the operational cost projections that were provided by Nemo Link in their PCR submission, which were expressed in EUR and 2018 prices.

In estimating costs during operations, Nemo Link combined two sets of costs:

- costs that will be incurred in EUR (and were therefore estimated in EUR); and
- costs that will be incurred in GBP (and were therefore estimated in GBP).

In order to provide an estimate of total costs during operation to be expressed in EUR, they had to convert those costs that will be incurred in GBP (and were therefore estimated in GBP) from GBP to EUR.

This conversion, and the resulting aggregation of the two sets of costs into a total amount expressed in EUR 2018 prices, was carried out using the latest XUMAERS exchange rate available at the time the cost estimate was finalised and included in Nemo Link's PCR submission, i.e. the November 2018 XUMAERS exchange rate (1.1352).

We have decided that the value underpinning Nemo Link's PCR submission (1.1352) remains an appropriate value to use to convert Nemo Link's estimate of costs during operations from EUR to GBP.

Considering the forward-looking nature of these costs and the inherent difficulty in determining an accurate forecast of future exchange rates, updating the value of the XUMAERS exchange rate used in the PCR submission (November 2018: 1.1352) to reflect the latest reading available

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<sup>31</sup> Derived as 7-month average index in January-July 2019 divided by 7-month average index in January-July 2018 minus one.

<sup>32</sup> All figures in this bullet point are rounded for presentational purposes only (the figures input in the NLCFFM1 to calculate revised cap and floor levels and PCA adjustments were not rounded).

<sup>33</sup> These include controllable and non-controllable operating expenditure (opex), replacement expenditure (repex) and decommissioning costs.



at the time of publishing the PCR consultation (July 2019: 1.1118) would not guarantee achieving a more accurate forecast of the level that the XUMAERS exchange rate will average over the operational period (2019 to 2043).

Additionally, updating this value for the purpose of our PCR consultation would require a re-submission from Nemo Link of their estimate for costs during operations, adjusted to reflect the use of an updated exchange rate to convert costs that will be incurred in GBP from GBP to EUR.

Finally, since the time of Nemo Link's PCR submission, the average XUMAERS exchange rate has not diverged significantly from the value underpinning that submission:

- November 2018: 1.1352; and
- Average between November 2018 and July 2019: 1.1370.

## Appendix 2 – Privacy notice on consultations

### Personal data

The following explains your rights and gives you the information you are entitled to under the General Data Protection Regulation (GDPR).

Note that this section only refers to your personal data (your name address and anything that could be used to identify you personally) not the content of your response to the consultation.

### 1. The identity of the controller and contact details of our Data Protection Officer

The Gas and Electricity Markets Authority is the controller, (for ease of reference, "Ofgem"). The Data Protection Officer can be contacted at [dpo@ofgem.gov.uk](mailto:dpo@ofgem.gov.uk)

### 2. Why we are collecting your personal data

Your personal data is being collected as an essential part of the consultation process, so that we can contact you regarding your response and for statistical purposes. We may also use it to contact you about related matters.

### 3. Our legal basis for processing your personal data

As a public authority, the GDPR makes provision for Ofgem to process personal data as necessary for the effective performance of a task carried out in the public interest. i.e. a consultation.

### 3. With whom we will be sharing your personal data

We will not be sharing your personal data with any other organisation.

### 4. Your rights

The data we are collecting is your personal data, and you have considerable say over what happens to it. You have the right to:

- know how we use your personal data
- access your personal data
- have personal data corrected if it is inaccurate or incomplete
- ask us to delete personal data when we no longer need it
- ask us to restrict how we process your data
- get your data from us and re-use it across other services
- object to certain ways we use your data
- be safeguarded against risks where decisions based on your data are taken entirely automatically
- tell us if we can share your information with 3<sup>rd</sup> parties
- tell us your preferred frequency, content and format of our communications with you
- to lodge a complaint with the independent Information Commissioner (ICO) if you think we are not handling your data fairly or in accordance with the law. You can contact the ICO at <https://ico.org.uk/>, or telephone 0303 123 1113.

### 5. Your personal data will not be used for any automated decision making.

**6. More information** For more information on how Ofgem processes your data, click on the link to our [Ofgem privacy promise](#).