

Consultation

Dinorwig-Pentir – Project Assessment

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We are consulting on our project assessment of National Grid Electricity Transmission's (NGET's) Dinorwig-Pentir cable and substation replacement project, and the associated licence modifications required to support the delivery of the project. This is a project under the Large Onshore Transmission Investment (LOTI) re-opener mechanism in the RIIO-2 Price Control Framework. At the project assessment stage, we review and ultimately set revenue and outputs associated with delivery of a LOTI project.

We would like views from people with an interest in the costs of electricity transmission infrastructure, and the transmission owners. We particularly welcome responses from stakeholders impacted by the project. We would also welcome responses from other stakeholders and the public.

This document outlines the scope, purpose and questions of the consultation and how you can get involved. 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

Summary of consultation position

In December 2021, we received a 'Final Needs Case and Project Assessment' submission from National Grid Electricity Transmission (NGET), for its proposed Dinorwig-Pentir cable and substation replacement project (the Dinorwig-Pentir project).

This consultation is seeking stakeholder views on the proposed efficient cost allowances for the Dinorwig-Pentir project, as well as our proposed modifications to NGET's licence to support delivery of the project.

The project will:

- replace two existing cable circuits, and add a new third one between Dinorwig and Pentir in Wales which are coming to the end of their lives,
- replace the existing substation at Dinorwig will be replaced, and extend the existing substation at Pentir to accommodate the new third circuit,
- install a new shunt reactor at the Wylfa substation.

NGET originally submitted £150m in costs for delivering the Dinorwig-Pentir project to Ofgem as part of its RIIO-2 Business Plan in December 2019. However, given the reported status of the cables as healthy and limited cost information presented by NGET, the Dinorwig-Pentir project was not included in NGET's RIIO-2 Final Determinations allowances. Following discussion with NGET, we decided that the project could be re-submitted under the LOTI re-opener mechanism during the RIIO-2 price control, allowing for different project options to be assessed.¹ We allowed £12.8m¹ for the project in NGET's baseline funding within the RIIO-2 Final Determinations to enable NGET to proceed with the project's development.

NGET made the above LOTI re-opener submission in December 2021, with a revised forecast total project cost of £184.2m, including project expenditure in RIIO-T1 and RIIO-T2 baseline funding. During our assessment, NGET revised the costs down to £181.8m and £180.8m in September 2022 and December 2022 respectively.

Existing Project funding

As part of our assessment, in order to avoid double funding of project activities, we reviewed NGET's submitted costs to identify and confirm the existing project funding

¹ Final Determinations NGET Annex REVISED: <https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator>. This value was adjusted down to £11.8m during our RIIO-T2 cost assessment.

(RIIO_T1 spend and RIIO-T2 baseline funding) in the first instance. This comes to £19.1m and leaves the requested additional project funding under the LOTI re-opener (LOTI-Re-opener Funding) at £161.7m. The table below details our view of existing and requested additional funding for the project.

Table 1: Details of existing and requested additional project (LOTI re-opener) funding

Funding Category	Submitted Cost (£m)
Existing Funding	19.1
<i>RIIO-T1 Expenditure</i>	<i>7.3</i>
<i>RIIO-T2 Baseline Funding</i>	<i>11.8</i>
LOTI Re-opener Funding	161.7
Total Project Funding	180.8

LOTI re-opener project funding

The focus of our assessment, therefore, was on the £161.7m of additional requested project funding. Of this, we are minded-to provide an ex-ante allowance of £140.7m (87%) under the LOTI-reopener mechanism. This constitutes an adjustment of £21m (13%) compared to the submitted additional project funding request. This view is result of a careful review of NGET’s submitted costs, and our detailed assessment of NGET’s contracting and risk management strategy.

The proposed reduction is primarily comprised of the following elements:

- NGET Indirect Costs: We are minded to disallow £3.3m of relating to project management and overheads.
- Work Packages: We are minded to disallow £8.7m of costs relating to commodity price inflation and contractor costs.
- Risk and contingency: We are minded to disallow £9m relating to project risk.

The table below provides a summary of our view of economic and efficient costs for project with additional details regarding the proposed cost adjustments in chapter 2 of this document.

Table 2: Summary of proposed cost allowances for the Dinorwig-Pentir

Cost Area	Submitted Cost (£m)	Proposed Adjustment (m)	Proposed Allowance (£m)
NGET Indirect Costs	14.0	-3.3	10.7
Work Packages	129.5	-8.7	120.8
Risk and Contingency	18.2	-9.0	9.2
Total LOTI-Re-opener Funding	161.7	-21.0	140.7

Next Steps

After considering responses to this consultation, we will publish our decision on the cost allowances and modifications to NGET’s electricity transmission licence to support delivery of the Dinorwig-Pentir project.

1. Introduction

What are we consulting on?

- 1.1 This consultation sets out our proposals and seeks stakeholder views on the project assessment of the Dinorwig-Pentir project in the following areas:
- Our assessment of the efficient costs that we are minded to allow NGET to recover from consumers for delivery of the Dinorwig-Pentir project
 - Our proposed outputs and delivery dates for the Dinorwig-Pentir project
 - Our proposed modifications to NGET’s licence required as part of the implementation of the Dinorwig-Pentir project. The notice of the proposed modifications, required in accordance with Section 11A of the Electricity Act 1989 (“the Act”), is provided in Appendix 2.

The proposed modifications include:

- specifying the allowances, outputs, and delivery dates for the project, and
- specifying amendments to the Costs and Output adjustment Event (COAE) and large project delivery (LPD) provisions for the Dinorwig-Pentir project.

Context

- 1.2 The GB onshore electricity transmission network is planned, constructed, owned and operated by three transmission owners (TOs): NGET in England and Wales, Scottish Power Transmission (SPT) in the south of Scotland, and Scottish Hydro Electric Transmission (SSEN Transmission) in the north of Scotland. We regulate the onshore TOs through the RIIO (Revenue = Incentives + Innovation + Outputs) price control. For offshore transmission, we appoint Offshore Transmission Owners (OFTOs) following competitive tenders.
- 1.3 Our RIIO-2 Final Determinations published in December 2020² introduced the LOTI re-opener mechanism as a replacement for the Strategic Wider Works (SWW) arrangements in RIIO-1. The mechanism is given effect to in Special

² RIIO-2 Final Determinations published in December 2020 – Core Document: <https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator>

Condition 3.13 of the electricity transmission licences of NGET, SSEN Transmission and SPT.

- 1.4 Under the LOTI re-opener mechanism, we assess large transmission projects deemed necessary during the price control. TOs can seek construction funding for specific projects when they consider the need and costs for those projects has become more certain. When a project is brought forward by a TO, Ofgem considers the needs case for the project. If Ofgem approves the need for a project, it will go on to consider the detailed project delivery costs. Subsequently, if Ofgem concludes positively on all aspects of its assessment, it implements its final decision by proposing modifications to the TO's electricity transmission licence. Further detail of the LOTI arrangements can be found in the relevant TO's licence³ and the LOTI Guidance document.⁴
- 1.5 Our current LOTI re-opener assessment process consists of three main stages:
- Initial Needs Case (INC)⁵: – The usual focus of our assessment at this stage will be to review the technical and/or economic requirement for the Project, the technical options under consideration, and the TO's justification for taking forward its preferred option for further development.
 - Final Needs Case (FNC): After securing all material planning consents for its project (unless we specify alternative timing). The focus of our assessment at this stage will be to confirm the need for the project, by checking that there have been no material changes in technical and/or economic drivers that were established at INC.
 - Project Assessment: If the FNC is approved, the TO will then need to apply for a Project Assessment Direction. The focus of our assessment at this stage will be the assessment of the proposed costs and delivery plan that the TO has in place for the project, with a view to potentially specifying a new LOTI Output, a LOTI Delivery date, and setting the efficient cost allowances that can be recovered from consumers for delivery of the project.
- 1.6 Ofgem considers whether the needs case, technical scope, and timing of delivery of proposed projects are sufficiently well justified and represent long-term value

³ Licences and licence conditions: <https://www.ofgem.gov.uk/industry-licensing/licences-and-licence-conditions>.

⁴ LOTI Guidance: <https://www.ofgem.gov.uk/publications/large-onshore-transmission-investments-loti-re-opener-guidance>.

⁵ NGET's Dinorwig-Pentir project was relieved of this stage via an Ofgem direction: <https://www.ofgem.gov.uk/publications/denorwig-pentir-consultation-projects-final-needs-case-and-suitability-competition>

for money for existing and future consumers. As part of this exercise, Ofgem considers costs submitted by TOs in their Project Assessment submissions. Ofgem does not allow inefficient and unjustified costs.

- 1.7 These costs are subject to the same sharing factor (50% in RIIO-1 and 33% in RIIO-2 for NGET), tax and inflation treatment, incentives, and cost of capital (ie, financing costs) as the rest of the RIIO-2 price control.
- 1.8 The prevailing regulatory arrangements (e.g., incentives, cost of capital etc.) under each price control (eg, RIIO-1, RIIO-2, etc.) will apply to each LOTI re-opener project.

Background

- 1.9 Dinorwig Power Station⁶ in Snowdonia, North Wales, is a pumped storage generation facility owned by Engie, providing energy to the market, system critical response, and balancing services to the system operator. It is located inside a man-made cavern within the mountain of Elidir Fawr.
- 1.10 The Dinorwig-Pentir cable circuits were installed in 1980 and are the only connection between Dinorwig Power Station and the wider transmission network. The Dinorwig-Pentir cable and substation replacement project is NGET's proposed solution for replacing the existing cable assets as they reach their end of life. The Dinorwig-Pentir project will comprise of the following as proposed by NGET and approved in our decision⁷ at the FNC stage in August 2022, following consultation:
 - Construction of a new 400kV Gas Insulated Switchgear (GIS) double busbar substation at Dinorwig Power Station, Gwynedd;
 - Extension of Pentir substation with the existing double busbar, accommodating one additional cable feeder bay for the new third circuit. Modifications to existing bay and associated protection and control measures;
 - Replace two existing cable circuits with three new cross-linked polyethylene (XLPE) cable circuits between Dinorwig Power Station and Pentir substation;

⁶ Dinorwig Power Station will continue to operate for the foreseeable future. The Electricity System Operator's (ESO) [Future Energy Scenarios \(FES\)](#) demonstrates that in all four FES, the power station will remain in operation until 2050.

⁷ Dinorwig-Pentir – Decision on the project's Final Needs Case:
<https://www.ofgem.gov.uk/publications/dinorwig-pentir-decision-projects-final-needs-case>.

- Installation of a new 200 MVA shunt reactor at Wylfa substation, Newydd; and
 - Decommissioning, removal, and disposal of the two existing 400kV oil filled water cooled circuits.
- 1.11 NGET has advised that the project is currently on schedule to meet its forecast contracted connection date of December 2026. From this date, all three of the new cable circuits will be fully and freely available to the Electricity System Operator (ESO).
- 1.12 NGET originally submitted £150m in costs for delivering the Dinorwig-Pentir project to Ofgem as part of its RIIO-2 Business Plan in December 2019. However, given the reported status of the cables as healthy and limited cost information presented by NGET, the Dinorwig-Pentir project was not included in NGET’s RIIO-2 Final Determinations allowances. Following discussion with NGET, we decided that the project could be re-submitted under the LOTI re-opener mechanism during the RIIO-2 price control to allow time for different project options to be considered and assessed. We allowed £12.8m⁸ for the project in NGET’s baseline funding within the RIIO-2 Final Determinations to enable NGET to proceed with the project’s development. This funding was in addition to £7.3m of NGET expenditure on the project during the RIIO-1 price control period.
- 1.13 We published our decision⁹ to approve the FNC for the Dinorwig-Pentir project in August 2022, following consultation¹⁰. That decision said that:
- “we are satisfied that there is sufficient evidence of a clear needs case for the Dinorwig-Pentir project... we are content that NGET has made the case that its proposed intervention is required”.
 - “we are content that the cost benefit analysis (CBA) undertaken by NGET ultimately considered a broad enough range of potential options” [Option 1 called for the replacing of the cable circuits and substation now, versus Option 2 which would have delayed the project by two years to allow a SF6-free technology option to become commercially available] and “NGET did note that the timing of its preferred option, option 1, addressed the reliability of

⁸ Final Determinations NGET Annex REVISED: <https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator>. This value was adjusted down to £11.8m during our RIIO-T2 cost assessment.

⁹ Dinorwig-Pentir FNC Decision: <https://www.ofgem.gov.uk/publications/dinorwig-pentir-decision-projects-final-needs-case>

¹⁰ Dinorwig-Pentir FNC Consultation: [Dinorwig-Pentir - Consultation on the project’s Final Needs Case and suitability for competition | Ofgem](#)

the cables and offered the most economic and efficient cost to consumers whilst also accelerating the pace of [Sulphur Hexafluoride] (SF₆)¹¹ inventory reduction and leakage at the Dinorwig substation when compared to option 2”.

- “we recognise that the CBA results were finely balanced; however, we are satisfied that NGET’s preferred option is likely to provide the optimal solution. We consider that option 1 better protects the interests of consumers than option 2 as it presents a marginally lower risk”.

1.14 We are now consulting on the additional costs requested under the LOTI re-opener for the project.

Related publications

RIIO-2 Final Determinations for Transmission and Gas Distribution network companies and the Electricity System Operator, December 2020:

<https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator>

Large Onshore Transmission Investments (LOTI) Re-opener Guidance, March 2021:

<https://www.ofgem.gov.uk/publications/large-onshore-transmission-investments-loti-re-opener-guidance>

Dinorwig-Pentir – Consultation on the project’s Final Needs Case and suitability for competition, June 2022:

<https://www.ofgem.gov.uk/publications/dinorwig-pentir-consultation-projects-final-needs-case-and-suitability-competition>

Dinorwig-Pentir – Decision on the project’s Final Needs Case, August 2022:

<https://www.ofgem.gov.uk/publications/dinorwig-pentir-decision-projects-final-needs-case>

¹¹ Sulphur hexafluoride (SF₆) is a highly potent man-made greenhouse gas comprising of one sulphur and six fluoride atoms.

Consultation stages

- 1.15 This consultation will close on 08 March 2023. We will review and aim to publish the responses 10 working days after the consultation closes. We will endeavour to publish our decision in April 2023.

How to respond

- 1.16 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.
- 1.17 We've asked for your feedback in each of the questions throughout. Please respond to each one as fully as you can.
- 1.18 We will publish non-confidential responses on our website at www.ofgem.gov.uk/consultations.

Your response, data and confidentiality

- 1.19 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.
- 1.20 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.
- 1.21 If the information you give in your response contains personal data under the General Data Protection Regulation (Regulation (EU) 2016/679) as retained in domestic law following the UK's withdrawal from the European Union ("UK GDPR"), 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 4.
- 1.22 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

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

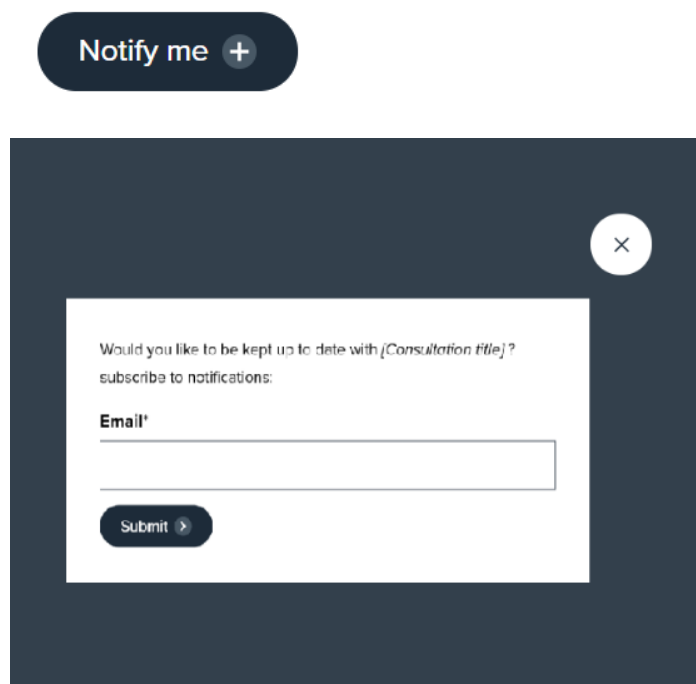
- i) Do you have any comments about the overall process of this consultation?
- ii) Do you have any comments about its tone and content?
- iii) Was it easy to read and understand? Or could it have been better written?
- iv) Were its conclusions balanced?
- v) Did it make reasoned recommendations for improvement?
- vi) Any further comments?

Please send any general feedback comments to 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)



Consultation: Dinorwig-Pentir – Project Assessment

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:

Upcoming > **Open** > **Closed** (awaiting decision) > **Closed** (with decision)

2. Proposed Cost Allowances for the Dinorwig-Pentir project

Section summary

This section details our views on the main cost areas in NGET’s Project Assessment funding request, including where we are minded-to make adjustments.

Questions

Q1. Do you agree with our proposed cost allowances for the Dinorwig-Pentir project?

- 2.1 Our project assessment approach combined qualitative assessment (of the project assessment narrative document, various supporting documents, and responses to supplementary questions) with quantitative assessment (of cost data submissions, including cost benchmarking against specific comparable project areas in our internal database). These assessments were supplemented with nuanced information from weekly engagement with NGET in meetings and workshops on various project aspects and cost areas.
- 2.2 NGET’s submitted costs for the Dinorwig-Pentir constituted both existing funding for the project and additional funding requested under the LOTI re-opener mechanism. Our treatment of the two broad categories (and relevant sub-categories in each) is set out in this section, together with our proposed adjustments and rationale.

Existing Project Funding

- 2.3 Our assessment of these costs did not seek to adjust them because they are made of project expenditure in RIIO-T1 and RIIO-T2 baseline funding. Our review instead sought to reconcile the submitted costs against our records to ensure that they were accurate and avoid any double funding of project activities. We have set out our view in the table below.

Table 3: Summary of existing project funding as a sub-set of total project funding

Funding Category	Submitted Cost (£m)	Proposed Adjustment (£m)	Proposed View of costs
Existing Funding	18.4	0.7	19.1
<i>RIIO-T1 Expenditure</i>	<i>7.3</i>	<i>0.0</i>	<i>7.3</i>
<i>RIIO-T2 Baseline Funding</i>	<i>11.1</i>	<i>0.7</i>	<i>11.8</i>
LOTI Re-opener Funding	162.4	0.0	161.7
Total Project Funding	180.8	0.7	180.8

2.4 NGET’s total project cost submission of 180.8m includes £18.4m of existing funding made up of RIIO-T1 project expenditure (£7.3m) and T2 baseline funding (£11.1m). This implies an additional funding request of £162.4m under the LOTI re-opener to make up the total projected funding.

2.5 We have reviewed and reconciled the existing funding where appropriate as follows:

- RIIO-T1 project expenditure (£7.3m): These costs were reconciled to our records and NGET’s annual regulatory reports and we have therefore not proposed to make reconciliation adjustments to them.
- RIIO-T2 baseline funding (£11.1m): This funding was found to be £0.7m less than our records of the baseline funding for the project. The £0.7m is attributed to ongoing efficiency agreed with NGET as part of the RIIO-T2 settlement. We therefore adjusted this value up to £11.8m from £11.1m to reflect this.

2.6 The above reconciliation resulted in an updated view of NGET’s existing funding for the project from £18.4m to £19.1m. This implies that the additional funding requested under the LOTI re-opener to make up the total project funding of £180.8m is £161.7m – we detail our assessment of these costs in the following section.

LOTI Re-opener Project funding

Table 2: Summary of proposed cost allowances under the LOTI Re-opener for the Dinorwig-Pentir

Cost Category	Submitted Cost (£m)	Proposed Adjustment (m)	Proposed Allowance (£m)
NGET Indirect Costs	14.0	-3.3	10.7
Work Packages	129.5	-8.7	120.8
Risk and Contingency	18.2	-9.0	9.2
Total LOTI Re-opener Funding	161.7	-21.0	140.7

NGET Indirect Costs

- 2.7 NGET’s submission included £14m of costs for closely associated indirect (CAI) costs split between NGET’s project management (PM) costs (£10.1m) and NGET overhead costs (£3.9m).
- 2.8 We are proposing to allow £10.7m of these costs which are NGET has fully justified.
- 2.9 We are proposing to disallow the remaining £3.3m which is made up of a £0.5m of costs associated with internal NGET land and consents staffing costs, and £2.9m of costs associated with duplicated roles within the PM and overheads costs, and a small proportion of business support costs that we consider are funded under the RIIO-T2 baseline funding¹².

Work Packages

- 2.10 NGET’s submission included contracts to deliver for cables works, substation works and shunt reactor contracts. We have grouped the costs into the “work

¹² RIIO-2 FD Decision – NGET Annex REVISED: [RIIO-2 Final Determinations for Transmission and Gas Distribution network companies and the Electricity System Operator | Ofgem](#)

packages” category and detailed our treatment of costs and disallowances in an unattributable way in recognition of their commercial sensitivity.

- 2.11 Of the £129.5m (excluding the risk and contingency costs embedded in these contracts) requested for the work packages cost category, we are proposing to make an ex-ante allowance of £120.8m under the LOTI re-opener which we consider to be justified. We have separately detailed the treatment of embedded risk and contingency costs in the so-named section below.
- 2.12 We are proposing to disallow the remaining £8.7m which NGET has not been able to justify. We have provided the breakdown and our rationale below.
- 2.13 £3.2m of cable scrap rebate costs that are recoverable from the cable works contractor. NGET included these costs in its funding request and argued that our exclusion of the funding is misaligned with our RIIO-2 FD decision of the disposal of assets¹³ which incentivises TOs to achieve the best sale price for scrap.
- 2.14 We disagree with this argument and consider that where there is a reasonable estimate of scrap value, as is the case for this project, then that estimate should be incorporated ex-ante into the allowance as we are proposing rather than implicitly and incorrectly forecasting zero-value for the scrap. We consider that this treatment still maintains the incentive in paragraph 2.13 above for NGET to achieve the best sale price for scrap as any scrap value above the fixed reasonable estimate in our ex-ante allowances would be shared between NGET and consumers via the Totex Incentive Mechanism (TIM).
- 2.15 Our proposed approach is also consistent with the logic on any totex allowances where, by fixing an ex-ante value, companies are incentivised to deliver more economically and efficiently (or get a better sale price) than the fixed ex-ante value or benchmark.
- 2.16 £1.7m of costs towards the three areas below and the contractor fees associated with them:
- Land rental costs – we are proposing to disallow a proportion of land rental costs for site accommodation which were indicated as having been removed from one of contracts but were included in the submission.

¹³ [RIIO-2 Final Determinations – Finance Annex \(REVISED\) \(ofgem.gov.uk\)](#), page 122, Disposal of assets.

- Cables spares costs – we are proposing to disallow cable spares costs as we consider that they are provided for under the RIIO-2 baseline funding¹⁴.
- Inefficient working costs – we are proposing to disallow an unjustified proportion of these costs associated with the uplift in costs for worker sustenance pay and travel expenses in the North Wales area. The remaining costs in this category are associated with workers having to travel between operational sites and welfare facilities whilst on-shift.

2.17 £3.8m of costs associated with the forecast difference between our annual consumer price index adjustment to allowances and NGET’s forecast of costs on specific commodities and labour over the course of the project’s delivery. This is a proportion of the £5.1m of costs associated with commodity price inflation in NGET’s submission.¹⁵ We acknowledge that there may be differences between the two forecasts, but NGET has not justified its £3.8m funding requested associated with these potential differences. We will consider any additional evidence to justify these costs as part of our decision.

2.18 We are proposing to allow the remaining £1.3m of costs associated with commodity price true-up at contract signing in April 2022 as these are legitimately incurred costs.

2.19 We note that within its Project Assessment submission, NGET requested [redacted] in allowances for updates to its operational telecommunications (Optel) network infrastructure. We propose to allow this funding request in full. However, we also note that following the issuance of the RIIO-2 Final Determination outcomes in December 2020, it is expected that NGET will pursue further Optel refresh schemes across its network from 2023. For the avoidance of doubt, any future Optel funding requests must exclude works funded under the Dinorwig-Pentir project to avoid the double-recovery of costs.

Risk and Contingency

General project risk

2.20 NGET’s submission included £18.2m of risk and contingency costs. This is combination of risks NGET is responsible for and ones it has passed on to contractors within the main works contracts.

¹⁴ [RIIO-2 Final Determinations for Transmission and Gas Distribution network companies and the Electricity System Operator | Ofgem](#), Final Determination NGET Annex REVISED.

¹⁵ 2.15 We note that this value was revised down to £5.1m following challenge from us - from the initially submitted £10.3m labelled as Real Price Effects (RPEs) costs.

- 2.21 We are proposing to make an allowance of £9.2m for risk and contingency. This is a top-down approach based on NGET’s RIIO-T2 settlement where risk and contingency allowance for a typical project was set at 7.5% of the direct capex as applied to NGET’s Bengeworth Road GSP project¹⁶. Applying this approach results in a reduction of £9m to NGET’s funding request.
- 2.22 We consider that a combination of above allowances, NGET’s insurance arrangements and liquidated damages arrangements provide sufficient risk and contingency coverage for a project of this size and complexity. Any overspend outside this coverage would be treated through the RIIO totex sharing factor¹⁷ (i.e., split 33% to 67% respectively between NGET and consumers).
- 2.23 We remain open to the exploration of a qualitative bottom-up assessment of the project’s risk register. This would entail a detailed review of the listed risks to exclude items that we consider to be ineligible for consumer funding. These can be broadly grouped into the following:
- risks relating to interfaces between NGET’s contractors,
 - risks which we consider have sufficient coverage within minded-to allow costs,
 - risks that should be borne by parties other than the consumer, such as contractors, and
 - risks that no longer apply, such as those relating to an event which has passed.
- 2.24 As the risk register is a live document, we would also complete a further review in advance of our decision as the uncertainty on risk reduces with the progress of construction activities on the project.

Pain-share of contract risk

- 2.25 NGET’s submission included £2.8m of costs associated with pain-share arrangements with two of its main works contractors. This represents the costs NGET could potentially incur on these contracts in case of overspend.
- 2.26 These costs are included in our £9m disallowance of risk and contingency costs as we do not consider it appropriate to fund this risk in upfront allowances. We are

¹⁶ Decision on NGET’s Bengeworth Road GSP project: [National Grid Electricity Transmission \(NGET\) Bengeworth Road Grid Supply Point \(GSP\) Project | Ofgem](#)

¹⁷ [RIIO-2 Final Determinations for Transmission and Gas Distribution network companies and the Electricity System Operator | Ofgem](#), Final Determination NGET Annex REVISED – page 40.

instead proposing two options for the treatment of these costs as follows below, and welcome stakeholder feedback to inform our decision on which option to apply:

- Option 1: We disallow these costs and any resulting costs from NGET’s exposure to the pain-share of risk is dealt with through the TIM sharing factor in paragraph 2.2 above. This is consistent with NGET’s proposal on the treatment of any resulting gain-share from its contractual arrangements.
- Option 2: NGET can recover justified and efficiently incurred future pain-share costs through a new, no-threshold, ringfenced part of the Cost and Output Adjusting Event (COAE). We have provided additional information on this in paragraph 2.28 of this document.

High impact, low probability (HILP) and difficult to quantify risks

2.27 We consider that risks which are highly unlikely to occur, but that would have a high-cost impact if they did, and certain risks that are difficult to quantify up-front, should not be included in the up-front cost allowances we set at Project Assessment. We consider that if these risks occur, they should be considered for funding through a specific and targeted cost reopener mechanism. This approach serves two purposes:

- It prevents consumers unnecessarily paying for risks which are highly unlikely to occur or are difficult to robustly quantify before they occur.
- It provides NGET with comfort that if a high cost risk occurs, that is beyond its control and that has a material impact on overall project cost, it would be funded for the efficient costs that it incurs relating to that risk.

2.28 NGET’s licence already includes a Cost and Output Adjusting Event (COAE) provision within the LOTI re-opener condition¹⁸ that allows it to recover costs associated with some HILP risks for a LOTI re-opener project. We are proposing to modify this provision to reduce the COAE threshold for the Dinorwig-Pentir project from 20% of total project capex provided for in the licence, to 10%. We consider that this provides a reasonable equivalent capital threshold for a project of this size. This approach is consistent with the 10% COAE threshold we set on NGET’s Hinkley Seabank project, NGET/SPT’s Western HVDC project and the SSEN Transmission’s Shetland HVDC link project.

¹⁸ NGET Electricity transmission licence - Special Condition 3.13, Part G: [National Grid Electricity Transmission plc - Special Conditions Consolidated - Current Version.pdf](https://www.ofgem.gov.uk/publications-and-statistics/publications/nget-electricity-transmission-plc-special-conditions-consolidated-current-version) (ofgem.gov.uk)

- 2.29 The effect of this change would be that if one or more relevant qualifying risks occurred during the construction period for the Dinorwig-Pentir Project, and the total cumulative cost impact was 10% or above of total project cost allowance under the LOTI re-opener, NGET would receive full funding for its efficient costs in relation to addressing those risks.
- 2.30 If we decide to proceed with option 2 in paragraph 2.26 above, we also propose to modify the COAE provision for the Dinorwig-Pentir to include a ringfenced no-threshold section for pain-share costs as we recognise that the contract terms under which these arrangements represent value for consumers but the associated potential pain-share cost of £2.8m remains uncertain. Any proportion of these costs would be reviewed to ensure that they are economic and efficient.

3. Proposed Output and Delivery Date for the Dinorwig-Pentir project

Section summary

This section details our views on the output and delivery date of the Dinorwig-Pentir project and our proposed implementation of the Large Project Delivery mechanisms.

Questions

Q2. Do you agree with our proposed output and delivery date for this project?

Q3. Do you agree with our view on the implementation of the Large Project Delivery (LPD) mechanisms – Re-Profiling and Project Delay Charge – on this project? In particular, do you have a view on our proposal not to apply a Project Delay Charge?

Outputs and Delivery Date

3.1 We propose two outputs and associated delivery dates for the Dinorwig-Pentir project as follows:

- Dinorwig-Pentir circuits: This output includes the timely delivery of the following components of the project:
 - Construction of a new 400kV Gas Insulated Switchgear (GIS) double busbar substation¹⁹ at Dinorwig Power Station, Gwynedd;
 - Extension of Pentir substation with a new double busbar, accommodating one additional cable feeder bay for the new third circuit, and modifications to existing bay and associated protection and control measures;
 - Replacement of two existing oil-filled cable circuits with three new cross-linked polyethylene (XLPE) cable circuits between Dinorwig Power Station and Pentir substation;
 - Installation of a new 200 MVA shunt reactor at Wylfa substation, Newydd; and

¹⁹ The GIS substation replacement will consist of six generator bays, three Pentir feeder bays, one main busbar section, one unpopulated reserve busbar section and, one new busbar coupler.

- Dinorwig-Pentir decommissioning: This output includes the timely decommissioning, removal, and disposal of all primary and ancillary assets in the scope of the Dinorwig-Pentir project.
- 3.2 NGET has confirmed that the programme of works has been sequenced to ensure that two circuits remain in service during the construction period. The sequence of works will incorporate three outage windows, one for each circuit between April and June in 2024, 2025 and 2026.²⁰
- 3.3 NGET has proposed a scheduled delivery date of December 2026 for the completion of the Dinorwig-Pentir connect with the decommissioning works to be completed in 2028. We are minded to set the delivery dates for the outputs as follows:
- Dinorwig-Pentir circuits output: 31 December 2026 – the last day of the period proposed by NGET.
 - Dinorwig-Pentir decommissioning output: 31 March 2028 - the last day of the 2027/2028 financial year.

This will provide a firm and specific dates at which delivery can be assessed.

- 3.4 We propose that delivery of the Dinorwig-Pentir circuits output, for the purposes of satisfying the LOTI delivery date, will be taken at the point the link is made fully and freely available to the Electricity Transmission System Operator.
- 3.5 The outputs and delivery dates will feed into our proposed implementation of the Large Project Delivery framework discussed below.

Large Project Delivery (LPD) framework

- 3.6 We introduced the LPD framework through our RIIO-2 Final Determinations²¹ to incentivise timely delivery and minimise the detriment to consumers of late project delivery. The framework consists of the Re-profiling, Milestone-Based Approach and Project Delay Charge mechanisms. Additional information on the LPD framework is provided in the LOTI re-opener guidance.²²

²⁰ The programme of works will result in two generator bays and one feeder bay being replaced during each outage window. Furthermore, the main busbar and busbar coupler are due to be replaced in 2025 and the reserve busbar in 2026.

²¹ [RIIO-2 Final determinations et annex revised.pdf](#), page 32.

²² [Large Onshore Transmission Investments \(LOTI\) Reopener Guidance | Ofgem](#), paragraphs 7.13 – 7.26.

- 3.7 We propose to apply Re-profiling of allowances to the Dinorwig-Pentir project, which would remove any financial benefit to NGET from delayed project delivery.
- 3.8 We do not propose to apply the Milestone-Based Approach to the project because this would introduce additional delay-risk due to the contracting and expected delivery timeline for the project. Additionally, we can apply either re-profiling or Milestone-Based Approach, but not both.
- 3.9 We have also considered whether to apply a Project Delay Charge (PDC) should the Dinorwig-Pentir project be delayed beyond the proposed delivery date. As a result of the construction and delivery approach of the project detailed in paragraph 3.2 above, we consider that a delay beyond the proposed delivery date would result in little to no detriment to consumers. We are therefore proposing not to apply a PCD to the Dinorwig-Pentir project.
- 3.10 The LPD mechanism will be applied consistently for both proposed outputs and associated delivery dates in paragraph 3.3 above.

4. Proposed Licence Modifications for Delivery of the Dinorwig-Pentir project

Section summary

This section details the proposed licence modifications we consider necessary to support delivery of the Dinorwig-Pentir project in line with the proposals set out in the earlier sections of this document, including our reasons for the proposed modifications and their effect. Notice of the proposed modifications is provided in Appendix 2.

Questions

Q4. Do you agree with our proposed modifications to Special Condition 3.13 of NGET's electricity transmission licence?

4.1 We are proposing to make all of the modifications required to give effect to the project as statutory modifications under section 11A of the Act. Notice of and the full text of the proposed modifications are provided in Appendix 2 of this document.

Proposed modifications to Special Condition 3.13 of NGET's licence

4.2 We are proposing to modify Special Condition 3.13 to include the delivery of the Dinorwig-Pentir project. The reason for the proposed modification is that, currently, the Dinorwig-Pentir project is not specified as an output for NGET. This is necessary to ensure that NGET has clear outputs for the delivery of this project in its licence. The effect of the proposed modifications will be that the Dinorwig-Pentir project is a clear deliverable within NGET's licence. In accordance with the licence, following this consultation, we will specify the outputs, delivery date and allowances for the Dinorwig-Pentir cable replacement shown at Appendix 2 of Special Condition 3.13.

4.3 We are proposing to make modifications to the existing COAE provisions in Special Condition 3.13 of NGET's licence. The reasons and effects for the modifications to the existing COAE provisions of Special Condition 3.13 are provided in paragraphs 2.26 to 2.27 of this document.

4.4 We are also proposing to introduce a new Part I in Special Condition 3.13 of NGET's licence. The reasons and effects for this introduction are provided in paragraphs 3.7 of this document.

5. Next steps

- 5.1 We welcome your responses to this consultation, both generally, and in particular on the specific questions in Chapters 2, 3 and 4. Please send your response to: riioelectricitytransmission@ofgem.gov.uk. The deadline for responses is 08 March 2023.
- 5.2 Having considered responses to this consultation, we will publish our decision on the project assessment of the Dinorwig-Pentir project. We will endeavour to publish this decision in April 2023.
- 5.3 As part of our decision, we will also publish our decision on the proposed modifications to Special Condition 3.13 of NGET's licence.

Appendices

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Appendix 1 – Consultation Questions

Chapter 2: Proposed Cost Allowances for the Dinorwig-Pentir project

Question 1: Do you agree with our proposed cost allowances for the Dinorwig-Pentir project?

Chapter 3: Proposed Output and Delivery Date for the Dinorwig-Pentir project

Question 2: Do you agree with our proposed output and delivery date for this project?

Question 3: Do you agree with our view on the implementation the Large Project Delivery (LPD) mechanisms – Re-Profiling and Project Delay Charge – on this project? In particular, do you have a view on our proposal not to apply a Project Delay Charge?

Chapter 4: Proposed Licence Modifications for the Delivery of the Dinorwig-Pentir project

Question 4: Do you agree with our proposed modifications to Special Condition 3.13 of NGET’s electricity transmission licence?

Appendix 2 – Notice of Statutory Consultation on Proposed Licence Modifications

To:

National Grid Electricity Transmission Plc

Electricity Act 1989

Section 11A(2)

Notice of statutory consultation on a proposal to modify the Special Conditions of the electricity transmission licence held by the above licensee

1. The Gas and Electricity Markets Authority ('the Authority')²³ proposes to modify the electricity transmission licence held by the above licensee ("the licensee"), granted or treated as granted under 6(1)(b) of the Electricity Act 1989 by amending Special Condition 3.13 (Large onshore transmission investment Re-opener (LOTIA and LOTIREt)).
2. Further detail on the reasons and effects of the proposed modifications can be found in paragraphs 4.2 to 4.4 of chapter 4 for proposed modifications to Special Condition 3.13. Alternatively they are available from foi@ofgem.gov.uk. The full text of the proposed modifications to Special Condition 3.13 are set out below. Any representations with respect to the proposed licence modifications must be made on or before 08 March 2023 to: Peter Tuhumwire, Office of Gas and Electricity Markets, 10 South Colonnade, Canary Wharf, London, E14 4PU or by email to rioelectricitytransmission@ofgem.gov.uk.
3. We normally publish all responses on our website. However, if you do not wish your response to be made public then please clearly mark it as not for publication. We prefer to receive responses in an electronic form so they can be placed easily on our website.

²³ The terms "the Authority", "we" and "us" are used interchangeably in this document.

4. If we decide to make the proposed modifications, they will take effect not less than 56 days after the decision is published.

.....

Phillip Heyden

Head of Offshore Cost Assessment

Duly authorised on behalf of the

Gas and Electricity Markets Authority

27/01/2023

Proposed modifications to Special Condition 3.13 of NGET’s licence

As referred to in paragraph 4.3, we are proposing to make the following modifications to Special Condition 3.13 of NGET’s licence. The proposed changes are shown in below in **bold and highlight text**.

(i)- The amendment of part G of Special condition 3.13

3.13.14 The licensee may apply to the Authority for a direction adjusting the LOTI Output, the delivery date or associated allowances in Appendix 2 where:

- (a) there has been one or more Cost And Output Adjusting Events; and*
- (b) if the following requirements are met:*
- (c) the licensee could not have reasonably foreseen the event or events;*
- (d) the licensee could not have economically and efficiently planned a contingency for the event or events;*
- (e) expenditure has been caused to increase or decrease by at least the percentage specified in, or in accordance with, paragraph 3.13.15, calculated before the application of the Totex Incentive Strength, relative to the relevant allowance in Appendix 2 by the event, or, if there has been more than one event;*
- (f) by each event;*
- (g) by any one or more events that the Authority has directed may count cumulatively towards the percentage threshold; or*
- (h) for the purposes of the LOTI Output beginning with the words ‘Hinkley – Seabank’, by any one or more events; and*
- (i) the increase or decrease in expenditure is expected to be efficiently incurred or saved.*

3.13.15 The percentage referred to in paragraph 3.13.13 is:

- (a) 20%;*
- (b) such other percentage as the Authority may specify by direction; or*
- (c) for the purposes of the LOTI Output beginning with the words ‘Hinkley – Seabank’, 10%.*

(d) for the purposes of the LOTI Output beginning with the words ‘Dinorwig-Pentir’

(i) 10% for other costs or

(ii) 0% for pain-share risk up to a cap of £2.8m

3.13.16 Unless the Authority otherwise directs, the licensee must make any application not later than before the end of the period of three months beginning with the delivery date for the LOTI Output.

3.13.17 An application under paragraph 3.13.14 must be made in writing and must:

(a) include detailed supporting evidence that a Cost And Output Adjusting Event meeting the requirements set out in paragraph 3.13.14 has occurred;

(b) set out any amendments requested to the LOTI Output, the delivery date or associated allowances in Appendix 2;

(c) explain the basis of the calculation for any proposed adjustment to the allowances in Appendix 2, which must be designed to keep, so far as is reasonably practicable, the financial position and performance of the licensee the same as if the Cost And Output Adjusting Event had not occurred; and

(d) include a statement from a technical adviser, who is external to and independent from the licensee, whether, considered in the context of the value of the LOTI Output, the proposed adjustments to the LOTI Output, the delivery date or associated allowances fairly reflect the effects of the Cost And Output Adjusting Event.

(ii) - The insertion of part I into Special Condition 3.13

Part I: Large project delivery adjustments

3.13.29 In relation to the Dinorwig-Pentir project, where the LOTI Outputs is not delivered in full before the delivery dates specified in Appendix 2, the Authority will make modifications to the special conditions of this licence to reprofile allowances.

3.13.30 Any modifications under paragraph 3.13.30 will be made under section 11A of the Act.

(iii) - The insertion of a new column, outputs, delivery date and allowances to Appendix 2

Appendix 2

LOTI Outputs, delivery dates and allowances (£m)

LOTI Output	Delivery date	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
Hinkley – Seabank, as specified in Table 5 of Special Condition 6I (Specification of Baseline Wider Works Outputs and Strategic Wider Works Outputs and Assessment of Allowed Expenditure) of this licence as in force on 31 March 2021.	31 December 2024	Have the values given in the NGET Redacted Information Document						
Construct, energise and make freely and fully available to the ESO the Dinorwig-Pentir circuits	31 December 2026	7.2	21.5	29.4	30.7	26.3	0.0	0.0
Decommissioning, removal, and disposal of all primary and ancillary assets in the scope of the Dinorwig-Pentir project	31 March 2028	0.0	0.0	0.0	0.0	0.0	19.0	6.6

Appendix 3 – 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

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.

4. With whom we will be sharing your personal data

(Include here all organisations outside Ofgem who will be given all or some of the data. There is no need to include organisations that will only receive anonymised data. If different organisations see different set of data then make this clear. Be a specific as possible.)

5. For how long we will keep your personal data, or criteria used to determine the retention period.

Your personal data will be held for ***(be as clear as possible but allow room for changes to programmes or policy. It is acceptable to give a relative time e.g. 'six months after the project is closed')***

6. 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:

Appendix 4 know how we use your personal data
Appendix 5 access your personal data
Appendix 6 have personal data corrected if it is inaccurate or incomplete
Appendix 7 ask us to delete personal data when we no longer need it
Appendix 8 ask us to restrict how we process your data
Appendix 9 get your data from us and re-use it across other services
Appendix 10 object to certain ways we use your data
Appendix 11 be safeguarded against risks where decisions based on your data are taken entirely automatically
Appendix 12 tell us if we can share your information with 3rd parties
Appendix 13 tell us your preferred frequency, content and format of our communications with you
Appendix 14 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.

7. Your personal data will not be sent overseas (Note that this cannot be claimed if using Survey Monkey for the consultation as their servers are in the US. In that case use “the Data you provide directly will be stored by Survey Monkey on their servers in the United States. We have taken all necessary precautions to ensure that your rights in term of data protection will not be compromised by this”.

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

9. Your personal data will be stored in a secure government IT system. (If using a third party system such as Survey Monkey to gather the data, you will need to state clearly at which point the data will be moved from there to our internal systems.)

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