

# Decision

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## Yorkshire GREEN – Decision on the project’s Final Needs Case

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Following our 10 March 2023 Final Needs Case consultation, this document confirms our decision to approve the Final Needs Case for the Yorkshire GREEN energy enablement project under the Large Onshore Transmission Investment mechanism conditional on National Grid Electricity Transmission plc (NGET) subsequently securing all material planning consents thereby demonstrating its readiness to proceed with the subsequent Project Assessment stage.

This document also includes an update on the regulatory delivery model for the Yorkshire GREEN project and an update on the large project delivery arrangements.

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## Executive summary

### Yorkshire GREEN and what this document covers

In March 2023 we consulted<sup>1</sup> on our minded-to position to approve the Final Needs Case (FNC) submission from National Grid Electricity Transmission plc (NGET<sup>2</sup>) regarding the proposed ‘Yorkshire Green Energy Enablement’ (Yorkshire GREEN) project. The project’s Initial Needs Case (INC) was submitted for our assessment under the Large Onshore Transmission Investment (LOTI) mechanism in August 2022.

The project is driven by the need to increase the capability of major boundaries<sup>3</sup> (B7a and B8) within NGET’s network in the North of England. This need is required to manage increasing power flows from the North to the South of England. NGET estimates that the project will cost c.£298m and will provide a boundary uplift of c.1.7GW and 394MW on boundaries B7a and B8 respectively.

In accordance with our RII0-2 price control arrangements, we have been assessing the need for the Yorkshire Green project under our Large Onshore Transmission Investment (LOTI) re-opener mechanism<sup>4</sup>. In December 2022 we published our decision setting out how we will support the accelerated delivery of strategically important electricity transmission upgrades that are needed to meet the Government’s 2030 renewable electricity generation ambitions under our new Accelerated Strategic Transmission Investment (ASTI) framework. As a result of this decision, the Yorkshire Green project will be included within the new ASTI framework rather than the existing LOTI framework<sup>5</sup>. Subject to the outcome of a current statutory consultation<sup>6</sup>, we are planning to implement the changes explained in our ASTI decision into TO licences later this year. Until those changes are in place, we will continue our assessment of this project under the LOTI mechanism but with the transition to the ASTI framework in mind. This

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<sup>1</sup> [Yorkshire GREEN project - Final Needs Case consultation](#)

<sup>2</sup> NGET is a Transmission Owner (TO) and owns and operates the transmission network in England and Wales.

<sup>3</sup> Transmission boundaries split the electricity transmission system. A single boundary splits into two parts which represent pinch points on the network. This split crosses critical circuit paths that carry power between the areas where power flow limitations may be encountered. For more information on boundaries, see the [ESO’s Electricity Ten Year Statement 2020](#)

<sup>4</sup> [Special condition 3.13 of the Electricity Transmission licence](#) and the [LOTI Guidance](#)

<sup>5</sup> [Decision on accelerating onshore electricity transmission investment](#). The Yorkshire GREEN project is listed as project OPN2

<sup>6</sup> [Statutory consultation to modify the special licence conditions in the electricity transmission licences: Accelerated Strategic Transmission Investment](#)

document summarises our confirmed decisions from our FNC assessment and the next steps for the project.

## **Final Needs Case assessment**

We are satisfied that there is sufficient evidence of a clear needs case for the Yorkshire GREEN project regarding the required capability uplift to the relevant boundaries within the context of plausible future generation and demand scenarios. This position is as per our FNC consultation<sup>7</sup>. Having taken into consideration the consultation responses received, we are content that NGET has made the case that its proposed intervention is required.

We consider that the cost benefit analysis (CBA) undertaken by NGET is robust and supports the need for the project. We are also satisfied that the CBA has considered the most relevant technical options and that the preferred option, OPN2, is the optimal option in comparison to the other considered options.

When the changes explained in our ASTI decision are implemented into NGET’s licence, it is intended that the next step of the Yorkshire Green project assessment will then be considered under the ASTI arrangements instead of continuing under the LOTI mechanism.

## **Delivery via a competition model**

The Yorkshire GREEN project falls under the new ASTI regime which states that all ASTI projects will be exempt<sup>8</sup> from consideration for delivery via a competition model. Provided the ASTI regime is implemented as planned, the Yorkshire GREEN project will not be considered for delivery via a competition model.

## **Large project delivery**

If the project were to remain under LOTI, we would consider the application of a Project Delivery Charge (PDC) at the Project Assessment (PA) stage. However, as explained earlier, it is intended that the Yorkshire Green assessment will transition from the LOTI mechanism to the ASTI regime. Under the ASTI regime, we will consider the application

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<sup>7</sup> [Yorkshire GREEN project - Final Needs Case consultation](#), paragraphs 2.18-2.19

<sup>8</sup> [Decision on accelerating onshore electricity transmission investment](#), table 4. Please note that the Yorkshire GREEN project is listed as project OPN2

of an Output Delivery Incentive (ODI)<sup>9</sup> that rewards/penalises NGET for delivery against target delivery dates.

### **Decision and next steps**

**This document confirms our approval of NGET’s FNC for the Yorkshire GREEN project under the LOTI mechanism, conditional on NGET securing all material planning consents<sup>10</sup>. NGET has indicated that they will secure these consents by February 2024. We expect NGET to inform us as soon as the consents are secured.**

It is intended that the next phase of the Yorkshire GREEN project assessment will be the ASTI PA stage.

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<sup>9</sup> [Decision on accelerating onshore electricity transmission investment](#), chapter 7, table 10. Please note that the Yorkshire GREEN project is listed as project OPN2

<sup>10</sup> In accordance with Special Condition 3.13.14, we issued a direction relieving NGET of the need to secure all material planning consents prior to seeking approval to submit its FNC. See [Direction - Yorkshire GREEN Final Needs Case submission](#)

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## 1. Introduction

### Context

- 1.1 Great Britain’s (GB) onshore electricity transmission network is currently planned, constructed, owned, and operated by three Transmission Owners (TOs): National Grid Electricity Transmission (NGET) in England and Wales, Scottish Power Transmission (SPT) in the south of Scotland, and Scottish Hydro Electric Transmission (SHET) in the north of Scotland. We regulate these TOs through the RIIO (Revenue = Incentives + Innovation + Outputs) price control framework. For offshore transmission, we appoint Offshore Transmission Owners (OFTOs) using competitive tenders.
- 1.2 The incumbent onshore TOs are currently regulated under the RIIO-2 price control which started on 1 April 2021 and will run for 5 years. Under this price control we developed a mechanism for assessing the need for, and efficient cost of, large electricity transmission reinforcement projects. This mechanism is called ‘Large Onshore Transmission Investment’ (LOTI). Once the need for and the costs of projects have become more certain, the TOs submit construction proposals and seek funding for them. As explained in chapter 9 of the RIIO-2 Final proposals – Core Document<sup>11</sup> (REVISED), all projects that come forward for assessment via the LOTI re-opener mechanism during the RIIO-2 period will be considered for their suitability for delivery through one of the late competition models.
- 1.3 Network investment is informed by the Future Energy Scenarios (FES)<sup>12</sup> and the Network Options Assessment (NOA)<sup>13</sup> which are developed and published annually by the Electricity System Operator (ESO). A key focus of the FES 2020 is the inclusion of the Government’s ambition<sup>14</sup> to deliver up to 50GW by 2030 and the legally binding<sup>15</sup> UK Government Net Zero targets which are to be achieved by 2050. The transition to a Net Zero economy will see increased demand on transmission boundary capability which will need to be facilitated by critical network reinforcements.

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<sup>11</sup> [RIIO-2 Final Determinations](#), Core Document (REVISED), chapter 9

<sup>12</sup> ESO [Future Energy Scenarios \(FES\)](#)

<sup>13</sup> ESO [Network Option Assessment \(NOA\)](#)

<sup>14</sup> Government’s [British energy security strategy](#)

<sup>15</sup> [The Climate Change Act 2008 \(2050 Target Amendment\) Order 2019](#)

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## **Overview of LOTI re-opener mechanism**

- 1.4 The LOTI re-opener mechanism provides TOs with a route to apply for funding for large investment projects that can be shown to deliver benefits to consumers, but that were uncertain or not sufficiently developed at the time we set costs and outputs for the RIIO-2 price control period. The LOTI mechanism provides a robust assessment process through which we can ensure that TO proposals represent value for money for existing and future consumers.
- 1.5 To qualify for the LOTI mechanism, TO proposals must meet the following criteria:
- a) be expected to cost £100m or more of capital expenditure; and
  - b) be, in whole or in part, load related<sup>16</sup>.
- 1.6 We are satisfied that the Yorkshire GREEN project meets the criteria and is eligible<sup>17</sup> as a LOTI project. We are therefore assessing the Yorkshire GREEN project in accordance with the LOTI mechanism as detailed in the LOTI Guidance<sup>18</sup>.

## **Stages of our LOTI assessment**

- 1.7 Following the approval of eligibility, our LOTI mechanism is made up of three main stages:
1. **Initial Needs Case (INC)** – The usual focus of our assessment at this stage is to review the technical and/or economic need for the project, the technical options under consideration, and the TOs justification for taking forward its preferred option for further development.
  2. **Final Needs Case (FNC)** – Following the securing of all material planning consents for the project (unless we direct that the licensee can be relieved of this requirement, which was the case with Yorkshire GREEN)<sup>19</sup>, the TO will then need

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<sup>16</sup> Part (b) of this criterion used to be either “wholly or partly load related” or “shared-use or sole-use generator connection project related”. As a result of a licence modification, which came into effect on 24 July 2021, the “shared-use or sole-use generator connection project” criterion no longer applies. However, this does not impact the project as this is in part a load related project. For further information on the licence modification, see the [Decision on the proposed modifications to the RIIO-2 Transmission, Gas Distribution and Electricity System Operator licence conditions](#)

<sup>17</sup> [RIIO-2 Final Determinations](#), NGET Annex (REVISED), section 3.60

<sup>18</sup> [Large Onshore Transmission Investments \(LOTI\) Re-opener Guidance](#)

<sup>19</sup> [Direction - Yorkshire GREEN Final Needs Case submission](#)

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to submit a FNC. The focus of our assessment at this stage is 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 in the INC.

**3. Project Assessment (PA)** – If the FNC is approved, the TO will then need to apply for a PA direction. The focus of our assessment at this stage is the assessment of the proposed costs and delivery plan that the TO has in place for the project. It is intended that for the Yorkshire Green project, the PA stage will be considered under the ASTI regime.

### **Related publications**

- 1.8 RIIO-2 Final Determinations – Core Document and NGET Annex – both REVISED: [Ofgem.gov.uk/publications-and-updates/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator](https://www.ofgem.gov.uk/publications-and-updates/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator)
- 1.9 LOTI Re-opener Guidance document: [Ofgem.gov.uk/publications-and-updates/large-onshore-transmission-investments-loti-re-opener-guidance](https://www.ofgem.gov.uk/publications-and-updates/large-onshore-transmission-investments-loti-re-opener-guidance)
- 1.10 Decision on accelerating onshore electricity transmission investment (ASTI): [Ofgem.gov.uk/publications/decision-accelerating-onshore-electricity-transmission-investment](https://www.ofgem.gov.uk/publications/decision-accelerating-onshore-electricity-transmission-investment)
- 1.11 Statutory consultation to modify the special licence conditions in the electricity transmission licences: Accelerated Strategic Transmission Investment: [Ofgem.gov.uk/publications/statutory-consultation-modify-special-licence-conditions-electricity-transmission-licences-accelerated-strategic-transmission-investment](https://www.ofgem.gov.uk/publications/statutory-consultation-modify-special-licence-conditions-electricity-transmission-licences-accelerated-strategic-transmission-investment)
- 1.12 Yorkshire GREEN project – Final Needs Case consultation: [Ofgem.gov.uk/publications/Yorkshire-green-project-final-needs-case-consultation](https://www.ofgem.gov.uk/publications/Yorkshire-green-project-final-needs-case-consultation)

## 2. Yorkshire GREEN Final Needs Case assessment

### Section summary

This chapter summarises our March 2023 consultation position regarding the design choices NGET has made to date and the CBA underpinning the need and design of the project, as well as the consultation responses and our updated view following the consultation.

### Overview of NGET’s proposal

2.1 NGET proposes to reinforce the B7a and B8 boundaries in the North of England to facilitate the anticipated increase in the North to South power transfers due to proposed renewable power generation in Scotland and the North Sea. The project is also important in maximising the benefits of the Eastern HVDC link (E2DC<sup>20</sup>) project and in facilitating the safe connection of offshore wind generators as part of the ESO’s Holistic Network Design (HND)<sup>21</sup>.

2.2 Figure 1 presents Yorkshire GREEN’s scope of work which consists of:

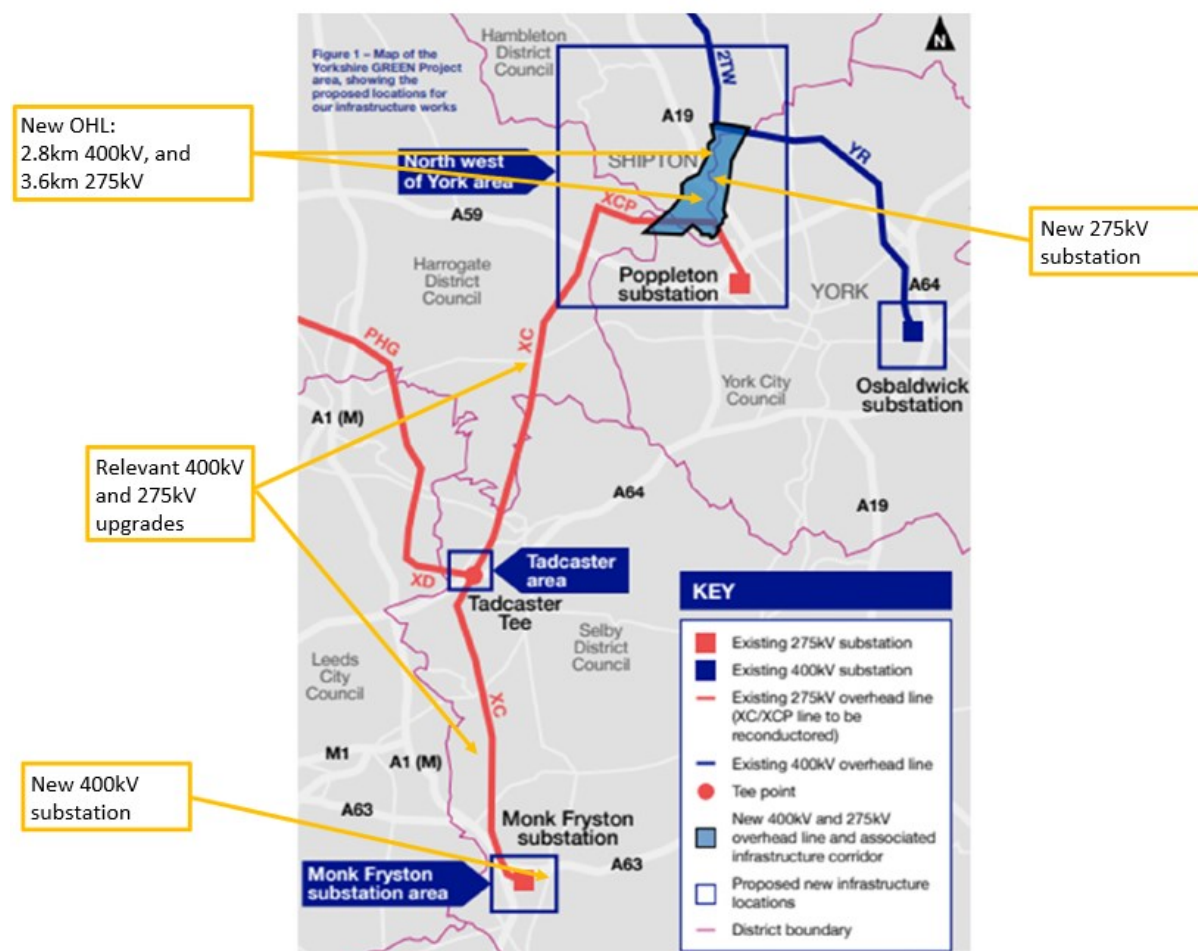
- New 400kV substation extension at Monk Fryston, inclusive of protection and control of transformers to connect back into the existing 275kV substation;
- New 275kV substation to be installed at Overton, inclusive of transformers, protection, and control sited off the existing XCP overhead lines (OHL) route. XCP OHL shall be renamed to XC (west of Overton) and SP (East of Overton);
- c.6.4km of new OHL, 2.8km at 400kV and 3.6km at 275kV, connecting the existing YR OHL with Overton substation, and Overton substation to the existing 275kV OHL; and
- Relevant 400kV and 275 kV upgrades.

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<sup>20</sup> The E2DC project is a £1.3bn 2GW capacity subsea link from Torness to Hawthorn Pit. [Eastern HVDC – Conditional Decision on the projects’ Final Needs Case](#) – see E2DC

<sup>21</sup> [The Pathway to 2030 Holistic Network Design](#)

Figure 1: Scope of preferred option, OPN2, for Yorkshire GREEN



2.3 Our March 2023 FNC consultation<sup>22</sup> explains why the project has been brought forward, how NGET arrived at its preferred option, and the options that were considered in the CBA. The CBA results along with justification for NGET’s preferred option were also explained.

### Consultation position, responses, and updated view

2.4 Two stakeholders, NGET and the ESO, responded to our FNC consultation<sup>23</sup>. All responses were non-confidential.

2.5 The remainder of this chapter sets out our consultation position, stakeholder responses, and our decision on the project’s drivers, optioneering, and CBA.

<sup>22</sup> [Yorkshire GREEN project - Final Needs Case consultation](#), chapter 2

<sup>23</sup> Ibid. – see ‘Response documents’ – Yorkshire GREEN FNC consultation responses

## **Project drivers**

### *Consultation position*

- 2.6 We agreed with NGET’s position that there is a need for reinforcement on the B7a and B8 boundaries to ensure that the electricity generated by anticipated new renewable energy to achieve Net Zero can be transferred efficiently to where it is needed without being constrained.
- 2.7 We also agreed with NGET that the Yorkshire GREEN project is part of the enabling works to fully realise the benefits of the Eastern HVDC link (E2DC).

### *Consultation responses and our views on them*

- 2.8 Both respondents agreed with our consultation position.

### *Updated view*

- 2.9 We remain satisfied that the project drivers underpin the need for the project.

## **Options considered**

### *Consultation position*

- 2.10 We considered that NGET provided a clear account of the options considered. We also noted that NGET responded to NOA network investment signals in a reasonable manner to ensure that appropriate options could be assessed, and that NGET set out its most realistic delivery dates which are an important element for this project.
- 2.11 We stated that we are satisfied that NGET’s realignment of their preferred option has resulted in costs savings of c.£94m, reducing the project’s cost from £392m down to £298m. We also noted that NGET has further demonstrated that their technical design choice results in OPN2 continuing to remain the optimal solution.

### *Consultation responses and our views on them*

- 2.12 Both respondents agreed with our consultation position.

### *Updated view*

- 2.13 We remain satisfied that the optioneering phase considered a suitable range of technical options and that OPN2 continues to be the optimal solution.

## **CBA results**

### *Consultation position*

- 2.14 We agreed with NGET that the CBA supports the need for investment on this part of the network and that it justifies NGET’s progression of OPN2 as the preferred option. We also noted that we expect NGET to continue to progress the project in a timely manner given that the benefits are largely driven by timely delivery.
- 2.15 We also stated our comfort that OPN2 remains the most appropriate option under a reasonable range of tested sensitivities.

### *Consultation responses and our views on them*

- 2.16 Both respondents agreed with our consultation position.

### *Updated view*

- 2.17 We remain satisfied that an appropriate range of viable options and sensitivities were tested in the CBA.

### 3. Delivery via a competition model

#### Section summary

This chapter summarises our March 2023 consultation position, consultation responses regarding whether to apply a late competition model, and our updated view following the consultation.

#### Background

- 3.1 Competition in the design and delivery of energy networks is a central aspect of the RIIO-2 price control. Competition can have a key role to play in driving innovative solutions and efficient delivery that can help meet the decarbonisation targets at the lowest cost to consumers. We set out in our Final Determinations<sup>24</sup> for RIIO-2 that during the RIIO-2 period, all projects that meet the criteria for competition and are brought forward under an uncertainty mechanism<sup>25</sup> will be considered for potential delivery through a late competition model.
- 3.2 Most of the Yorkshire Green project meets the criteria for late model competition under the LOTI regime and these elements could be separated into a ‘repackaged’ project that could be considered for late model competition. This is in line with the ESO’s view as per their published NOA<sup>26</sup> 2021/22 Refresh. The ESO’s approach also aligns with our own principles for ‘project packaging’ as set out in previous competition policy decisions.

#### Consultation position, responses, and updated view

##### *Consultation position*

- 3.3 We decided that all projects within the ASTI regime, which includes the Yorkshire Green project, will be exempt from consideration for delivery via a competition model<sup>27</sup>. On that basis, we have not assessed the project’s suitability for competition under the LOTI regime.

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<sup>24</sup> [RIIO-2 Final Determinations](#), Core Document (REVISED), chapter 9

<sup>25</sup> [Large Onshore Transmission Investments \(LOTI\) Re-opener Guidance](#), pages 9-11

<sup>26</sup> [Network Options Assessment \(NOA\)](#), see “Read NOA 2021/22 Refresh report”, page 26. Please note that the Yorkshire GREEN project is listed as project OPN2

<sup>27</sup> [Decision on accelerating onshore electricity transmission investment](#), table 4. Please note that the Yorkshire GREEN project is listed as project OPN2

*Consultation responses and our views on them*

- 3.4 One respondent agreed with our consultation position. The other did not express a view.
- 3.5 The ESO stated that in July 2022 they published the Pathway to 2030 Holistic Network Design<sup>28</sup> which provided a coordinated offshore and onshore network design to facilitate the Government’s ambition to connect 50GW of offshore wind. They also published the NOA refresh<sup>29</sup> in July 2022 which recommended the Yorkshire Green project (OPN2) as essential to meet the above ambition. As a result, the Yorkshire GREEN project became one of our ASTI projects.

*Updated view*

- 3.6 We remain satisfied that the Yorkshire GREEN project should be exempt from consideration for delivery via a competition model.

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<sup>28</sup> [The Pathway to 2030 Holistic Network Design](#)

<sup>29</sup> [Network Options Assessment \(NOA\)](#)

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## 4. Large project delivery

### Section summary

This chapter summarises our March 2023 consultation position and consultation responses regarding large project delivery options. We also set out our updated view.

### Background

- 4.1 In the RIIO-2 Final Determinations<sup>30</sup>, we set out our approach to late delivery of large projects (i.e. >£100m). The aim of this approach is to ensure that a network company does not benefit financially from a delay to project delivery.
- 4.2 We aim to ensure that consumers are protected from any delay in delivery. To this end, we consider setting a Project Delivery Charge (PDC) for each day a project is delivered late.

### Consultation position, responses, and updated view

#### *Consultation position*

- 4.3 We decided that all projects within the ASTI regime, which includes the Yorkshire Green project, will be subject to an ODI<sup>31</sup> that rewards/penalises the TO for delivery against target delivery dates. Based on this, we have not assessed the application of a PDC to the Yorkshire Green project.

#### *Consultation responses and our views on them*

- 4.4 Neither respondent expressed a view in response to the Yorkshire Green FNC consultation. However, NGET did respond with comments related to the ODI mechanism within the ASTI framework through two separate consultations<sup>32</sup>. NGET’s comments have been considered within the context of the ASTI framework in a broad sense as well as specially for the Yorkshire Green project.

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<sup>30</sup> [RIIO-2 Final Determinations](#), ET Annex (REVISED), page 32 onwards

<sup>31</sup> [Decision on accelerating onshore electricity transmission investment](#), chapter 7, table 10. Please note that the Yorkshire GREEN project is listed as project OPN2

<sup>32</sup> [Consultation on accelerating onshore electricity transmission investment](#), ‘Response documents’ – Consultation responses (ZIP), and [Statutory consultation to modify the special licence conditions in the electricity transmission licences: Accelerated Strategic Transmission Investment](#), ‘Response documents’ – Consultation responses (ZIP)



## **Decision** – Yorkshire GREEN – Decision on the project’s Final Needs Case

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As explained earlier, the benefits associated with option OPN2 is primarily driven by the option’s timely delivery and on this basis an ODI is important in delivering consumer benefit.

### *Updated view*

4.5 We remain satisfied that the Yorkshire GREEN project be subject to an ODI.

## 5. Next steps

### Section summary

This chapter sets out the next steps in our assessment of the Yorkshire GREEN project.

- 5.1 Subject to the outcome of the statutory consultation in relation to the proposed modifications to NGET’s electricity transmission licence special conditions, which will implement the ASTI regime, the next phase of our assessment will be the ASTI PA stage.
- 5.2 We understand that NGET’s procurement of key equipment, such as the eight super grid transformers, is progressing. NGET may apply for an ASTI Early Construction Funding (ECF) decision under Part C of the new proposed Special Condition 3.41 as implemented<sup>33</sup>.
- 5.3 NGET has indicated that they will secure all material planning consents by February 2024. We expect NGET to inform us as soon as the consents are secured.

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<sup>33</sup> Proposed drafting is set out at [Statutory consultation to modify the special licence conditions in the electricity transmission licences: Accelerated Strategic Transmission Investment](#), ‘Subsidiary documents’ – Proposed ASTI special conditions - NGET