

**Submission on Behalf of the Lancashire Association of Local Councils
Fylde Area Committee Energy Working Group**

To:

The Right Honourable Ed Miliband MP

5 **Secretary of State**

Department for Energy Security and Net Zero (DESNZ)

DESNZ Reference: EN020032

IP Reference: [REDACTED]

22 June 2026

10 Dear Secretary of State,

**PLANNING ACT 2008 AND THE INFRASTRUCTURE PLANNING (EXAMINATION
PROCEDURE) RULES 2010**

15 **Application by Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited
("the Applicants") for an Order Granting Development Consent for the Proposed Morgan
and Morecambe Offshore Wind Farms Transmission Assets ("the Proposed Development")**

Response to the Secretary of State's Request for Information dated 20 May 2026

1. This submission is made on behalf of the Lancashire Association of Local Councils (LALC) Fylde Area Committee Energy Working Group (EWG) in response to the Secretary of State's request for information dated 20 May 2026.
- 20 2. Throughout the Planning Inspectorate examination, the EWG has sought to ensure that the proposed development is assessed against the statutory requirements for an efficient, coordinated and economical system of electricity transmission, while also supporting the Government's objectives of achieving Net Zero, promoting economic growth, and minimising costs to consumers.
- 25 3. The questions raised in the Secretary of State's request appear to reflect a number of significant matters that have remained unresolved throughout the examination process. It remains our view that many of these issues could have been avoided had there been a comprehensive and continuing assessment of all reasonable material alternatives by the relevant parties, including the National Energy System Operator (NESO) and the
30 developers, particularly as new information became available regarding network capacity and connection opportunities. The implications arising from the absence of a clearly identifiable developer for certain Morgan-related elements of the joint application, simply seem to be adding to the complications.
- 35 4. In particular, the EWG continues to contend that significant impacts relating to maritime interests, land use and aviation safeguarding could have been substantially reduced or avoided through the use of existing energy infrastructure associated with the Hillhouse Technology Enterprise Zone (HTEZ) and Stanah area, together with reinforcement of existing 400kV overhead transmission infrastructure.

- 40 5. NESO's Clean Power 2030 advice to Government recognises that underground transmission infrastructure is generally more expensive than overhead transmission infrastructure. Given this principle, it would be reasonable to expect that reinforcement and optimisation of existing overhead transmission assets would be assessed as a priority option before proposing extensive new underground cable routes.
- 45 6. The rationale for such an assessment becomes stronger where multiple generation projects may be capable of sharing existing or reinforced transmission infrastructure, potentially reducing overall costs, environmental impacts and network complexity.
- 50 7. To date, the EWG has not identified evidence demonstrating that a comparative assessment of this nature was undertaken during the Holistic Network Design Review (HNDR) process, for the Morgan, Morecambe, Mooir Vannin EISTP at the time, nor subsequently when information regarding the availability and expansion potential of the adjacent Hillhouse site were highlighted from already publicly available information.
- 55 8. Nor have we identified evidence of a comprehensive comparative assessment between the Applicants' proposed approach and a solution based upon the prioritised use and reinforcement of existing infrastructure. The absence of such an assessment raises questions as to whether the statutory objective of securing an efficient, coordinated and economical electricity transmission system has been fully satisfied.
- 60 9. We note that, in relation to the Heckington Fen Solar Park decision, the Secretary of State recused himself from the determination process. We respectfully suggest that consideration be given to whether a similar approach may be appropriate in the present circumstances.
- 65 10. The EWG continues to believe that substantial opportunities exist to achieve lower consumer costs, support economic growth and reduce environmental impacts through consideration of the HTEZ/Stanah alternative, whilst removing the unacceptable harms of the present approach. Proper evaluation of this option would also provide greater confidence that all reasonable alternatives have been examined before a final decision is made.
- 70 11. As referenced in previous submissions, the owner of the HTEZ site has extended an invitation for decision-makers and relevant stakeholders to visit the site. We understand that this invitation remains open. Such a visit would provide an opportunity to examine directly the site's existing infrastructure, connectivity, available capacity and potential role within a coordinated transmission solution.
- 75 12. For ease of reference, we attach our previous submission, which set out in detail the case for the HTEZ/Stanah alternative. In our view, the issues identified within that submission remain unresolved. As a consequence, project timescales continue to be affected by ongoing uncertainty regarding the most appropriate and economical transmission solution.

75 Conclusion

The EWG respectfully reiterates its invitation for the Secretary of State and relevant officials to consider the HTEZ/Stanah option in greater detail and, if appropriate, undertake a site visit.

80 Our principal concern remains that neither the Applicants nor NESO have provided evidence
demonstrating that the proposed development represents the most efficient, coordinated and
economical transmission solution when compared with the reinforcement and utilisation of existing
infrastructure. In particular, no comparative assessment has been presented between the proposed
approach—which involves extensive new underground cable routes—and a solution based on the
enhancement of existing transmission assets.

85 In the absence of such an assessment, the HTEZ/Stanah proposal remains, in our view, an obvious
material alternative that has not been adequately evaluated.

Accordingly, we respectfully submit that:

- a) further assessment of the HTEZ/Stanah alternative should be undertaken before any
determination is made; and
- b) if such assessment is not undertaken, the Secretary of State should carefully consider whether the
90 Applicants' proposal demonstrates that its benefits outweigh its adverse impacts and whether the
requirements of an efficient, coordinated and economical transmission system have been satisfied.
If not then a refusal is required, and the obvious material alternative remains.

Yours sincerely,

P. Collins

95 Chair

Lancashire Association of Local Councils

Fylde Area Committee Energy Working Group

Attachment 1
Submission on Behalf of

Lancashire Association of Local Councils Fylde Area Committee Energy Working Group

To:

The Right Honourable Ed Miliband

Secretary of State

Department for Energy Security & Net Zero (DESNZ)

DESNZ Reference: EN020032

IP Reference: [REDACTED]

Date: 13 April 2026

Dear Rt. Hon. Secretary of State,

**PLANNING ACT 2008 AND THE INFRASTRUCTURE PLANNING (EXAMINATION
PROCEDURE) RULES 2010**

**APPLICATION BY MORGAN OFFSHORE WIND LIMITED AND MORECAMBE
OFFSHORE WINDFARM LIMITED (“THE APPLICANTS”) FOR AN ORDER**

GRANTING DEVELOPMENT CONSENT FOR THE PROPOSED MORGAN AND

**MORECAMBE OFFSHORE WIND FARMS TRANSMISSION ASSETS (“THE PROPOSED
DEVELOPMENT”)**

RESPONSE TO 12 MARCH 2026 REQUEST FOR INFORMATION

1. This submission responds to your 12 March 2026 request for information on behalf of the Lancashire Association of Local Councils Fylde Area Committee Energy Working Group (EWG).
2. The EWG has engaged extensively in the Planning Inspectorate examination to ensure that this development aligns with the legislative framework and Government objectives of minimizing consumer costs, achieving Net Zero targets, and promoting economic growth.
3. The Applicants’ letter of 30 January 2026 raises points regarding transmission asset location and routing via the Hillhouse Technology Enterprise Zone (HTEZ) and adjacent National Grid PLC Stanah Substation. From the concept outset and throughout the planning life cycle to date, it has remained entirely possible and appropriate to develop and examine alternative - lower unacceptable harm and higher benefit balance - proposals of the obvious material alternative that includes a route to Penwortham via HTEZ/Stanah, and this remains the case. HTEZ already hosts transmission infrastructure for the Walney 2 offshore wind farm and the adjacent National Grid PLC Stanah substation, which connects with Heysham and Penwortham substations and the wider network. Our submission Rep7-047 (attached) addresses these points in detail, and the Applicants have not provided evidence to refute it.
4. The HNDR is clear that its conclusions relied upon the Applicants’ joint proposal for a shared cable corridor, a shared single substation and a single export cable, reducing the number of connections and environmental impacts. This has not been delivered in the

Applicants' submissions, nor reassessed. The Mooir Vannin project proposal, though contemporaneous to the HNDR, was not included in the HNDR and has not been assessed with the Morgan and Morecambe proposals in a coordinated way to ensure that costs are minimised for the consumer and that the proposals are efficient. The proposals do not adopt NESO's advice to Government for Clean Power 2030 to prioritise the reinforcement of existing infrastructure. The construction of three completely independent cable routes, some 30km inland without a consistent comparative assessment of reinforcing the coastal connection infrastructure is in conflict with that advice. The HNDR appears to have ignored the criteria to avoid military airfield activity and so the bird-strike issue and its risk of severe consequences of death and impact on critical national infrastructure in the vicinity continue. Similarly the proposals conflict with land and marine environmental protection zones. The HNDR also does not seem to have recognised the obvious value of utilising the provision of sites to support energy sector development in local development and growth plans, such as the nationally designated Hillhouse Technology Enterprise Zone.

5. Since the October 2025 closing statements, the Proposed Development's character has changed: the Morgan element now appears "zombie" in status, while the Morecambe element remains adopting a complex land route for a reduced assured total proposed development output. National Grid's prior assessment overlooked HTEZ/Stanah as a viable site for both Morgan and Morecambe infrastructure & network connectivity, which it now recognizes as eligible (see Rep7-047 Annex 3). Concurrent discussions with NESO and National Grid PLC regarding Orsted Mooir Vannin's interest in the benefits of connecting via HTEZ/Stanah, illustrate opportunities to reinforce HTEZ/Stanah, delivering cost, growth, and environmental benefits that the Applicants' current approach fails to realize.

6. The Applicants have not countered the EWG's evidence demonstrating that the Morgan and Morecambe energy can be delivered in a manner that:

a. Complies fully with planning policies, mitigating harms to air, land, and marine environments, including bird-strike risks of death and to critical national infrastructure (e.g. BAE Systems Warton and Westinghouse Springfields), whereas HTEZ/Stanah is outside identified bird-strike risk zones.

b. Aligns with NESO's Clean Power 2030 guidance to prioritize reinforcement of existing infrastructure, which is achievable at HTEZ/Stanah.

c. Minimizes consumer costs. The Applicants' proposal would incur nearly £1.5bn of avoidable expenditure and costs to consumers across the three windfarm projects due to proposed independent, ~30 km inland cable routes to Penwortham. National Grid PLC (rep1-089) also submitted that Penwortham requires substantial substation upgrades and potential greenbelt compulsory land acquisition. In contrast, coordinating via HTEZ/Stanah would realize significant consumer cost and emissions savings.

7. Your public statements on energy costs and the Clean Energy Economy emphasize growth, Net Zero delivery, and minimising consumer costs. The Applicants' current plan fails on all three, whereas HTEZ/Stanah achieves these objectives.

- 180 8. As of 11th April, NESO Transmission Entry Capacity registers indicate Morecambe and Morgan are scheduled for June and November 2029 completion and connection to the grid network, respectively. Reinforcing existing infrastructure at HTEZ/Stanah is clearly achievable within this engineering timeframe, with risk and schedule benefits from negating the creation of 90km of undergrounded cable routes.
- 185 9. To avoid disadvantaging developers by process constraints, the HTEZ/Stanah could serve as a regulatory sandbox innovation zone, complementing initiatives like Ofgem's Anticipatory Investment Policy (AIP) and National Grid Electricity Transmission Partnership (ETP), facilitating coordinated, cost-effective, and timely development in alignment with government objectives as well as the business cases of developers and investors.
10. Supporting evidence, including the EWG Closing Statement to the Examining Authority (Rep7-047) attached, remains unchallenged. Site visits were invited but not undertaken by the Examining Authority.

Conclusion:

190 We invite you to visit HTEZ/Stanah to witness a development solution that aligns with Net Zero targets, fosters local economic growth, and minimizes consumer costs. We urge assessment and implementation of this approach prior to determination. If this is not adopted, the Applicants' proposal presents an imbalance of harms over benefits and should be refused, with the HTEZ/Stanah option as the unassessed Obvious Material Alternative.

195 Yours sincerely,

P. Collins

Chair

Lancashire Association of Local Councils

Fylde Area Committee Energy Working Group

Appendix 1

Copy of Examining Authority Submission Rep7 -047

Submission on Behalf of the LALC FAC ENERGY WORKING GROUP

**REPRESENTATION ON THE PROPOSED MORGAN AND MORECAMBE OFFSHORE
WIND FARMS TRANSMISSION ASSETS DEVELOPMENT CONSENT ORDER**

PLANNING INSPECTORATE REFERENCE NUMBER: EN020028

Closing Statement –

***The Imbalance of Harms over Benefits
and***

Failure to Assess the Obvious Material Alternative

This submission is the closing statement of Lancashire Association of Local Councils, Fylde Area Committee Energy Working Group (EWG). It focuses on the imbalance of harms over benefits and the failure to assess the Obvious Material Alternative route, such that the Development Consent Order Application should be refused or the Applicants should be directed to assess the generators to consumers route via Stanah/Hillhouse Technology Enterprise Zone (HTEZ) and the 400kV Heysham Ring.

The Applicants could have avoided their current difficulties with fulfilling the requirements of the Electricity Act 1989 (sections 3A & 9), which mandates the development and maintenance of an efficient, coordinated, and economic system for electricity transmission and distribution (as specified in the Electricity Networks National Policy Statement – EN-5 section 2.2.10). They had—and still have—the option to propose connecting consumers via the Obvious Material Alternative route through Stanah, HTEZ, and the National Grid using the 400kV Heysham Ring by upgrading existing infrastructure.

Adopting this route would be faster, more efficient, and approximately £1.5 billion less expensive than the combined proposals from the Morgan, Morecambe, and EISTP Mooir Vannin projects. The supporting cost data is detailed Annex 1. This nationally significant saving represents the net benefit of a coordinated approach across these projects. It is noted that despite having been given the opportunity to refute the order of these savings, neither the Applicants nor NGET have offered alternatives.

This proposal directly aligns with NESO's recommendations to the Government in "Clean Power 2030: Advice on Achieving Clean Power for Great Britain by 2030," particularly section 5.2:

<https://www.neso.energy/document/346651/download>

"The proposed plans in this report minimise new onshore infrastructure. We are prioritising reinforcement of existing infrastructure and have identified some marine cabling by 2030. This was a core part of the network plans that form the basis for proposals in this report: those plans consider ways to maximise and upgrade the existing network first, and only once this reaches a limit are new lines considered."

Annex 2 of this closing statement includes section 5.2 in full and expands on the benefits and reduced harms that come from prioritising reinforcement of existing infrastructure—demonstrating the fundamental logic for NESO's commitment to this strategy.

Therefore, it is logical, nay obvious, to prioritise the use and improvement of current infrastructure.
255 The Applicants have chosen not to pursue this Obvious Material Alternative path, though they still could.

On October 27th, Fylde's MP Mr Andrew Snowden released correspondence from National Grid. In
a letter dated September 26th, 2025 (see Annex 3), National Grid's Director of Customer and
260 Network Development confirmed that Stanah/Hillhouse "could provide a potential location for a new substation," although it has yet to be evaluated.

"Linked to this, whilst the adjacent Hillhouse land could provide a potential location for a new substation, our regulatory framework requires such a choice to be evidenced. As such,
265 NGET would have to carry out an extensive selection study, to determine the most appropriate site, according to the principles of cost and efficiency."

Our submission REP1-083 details the references evidencing Stanah's repeated shortlisting for Irish Sea shoreline projects. These include the National Grid input to the Offshore Energy Strategic
270 Environmental Assessment, (SEA) Celtic Array, Moorside, Walney Extension, and Walney 2 proposals. As far back as 2008, National Grid in their input to the Offshore Energy SEA (Table 40) recognised that what is now the HTEZ site could host onshore transmission infrastructure associated with the Stanah connection point. Since 2012, the offshore transmission infrastructure for Walney2 has used the HTEZ site and connected to the National Grid via the Stanah point. HTEZ
275 also provides a direct 2km access corridor to the Irish Sea shore, allowing efficient and coordinated connections between generators and consumers. The site's benefits and feasibility are obvious.

ExA members could have verified this themselves by accepting NPL's invitation (the HTEZ site owner, see REP1-187).
280

It is welcomed, however, that the ExA has publicised their investment of time to personally see the compliant, open space access to HTEZ from Rossall Beach and the established infrastructure from Stanah via the Heysham Ring lines. From that investment, it therefore appears that the ExA agrees that this is an Obvious Material Alternative worthy of assessment. It removes all the harms of the
285 Applicants' proposals and offers extra benefits such as quicker construction and lower costs. This is achieved by strengthening existing infrastructure and avoiding many tens of kilometres of disruptive all new underground cabling, avoidable destructive Greenbelt development and unnecessary compulsory acquisition of land. With this alternative route, there are no "Very Special Circumstances" or unique reasons to require compulsory Acquisition procedures and so in conflict
290 with the Local and National Planning and regulatory frameworks.

Moreover, NGET's submissions to the ExA (REP1-089) indicate that the Penwortham site currently lacks capacity and physical space for three new connections alongside other projects, necessitating compulsory purchase of South Ribble Greenbelt land. With Hillhouse now acknowledged by
295 National Grid PLC as a possible substation location, NGET could face challenges and delays if pursuing compulsory acquisition near Penwortham without considering Stanah/HTEZ.

Although Applicants claim Stanah/HTEZ was assessed, the NESO Holistic Network Design Review (HNDR - <https://www.neso.energy/document/262681/download>) does not mention Stanah or Stanah/HTEZ, nor display assessment data (verifiable by searching "Stanah" in the report). This
300 omission persists despite Walney 2's infrastructure being hosted at HTEZ and connected to

consumers via the National Grid network and Stanah connection point. This is known to NGET and the energy sector, published on network maps e.g. Open Infrastructure Map link : <https://openinframap.org/#8.14/53.763/-2.927>

The HNDR report states new substation locations were considered but it did not identify any in the North West or note their advantages—even where environmental issues were flagged. These include unnecessary conflict with the Ribble & Alt marine SPA, Greenbelt destruction, Compulsory Purchase of land, Excess Emissions from cable installation, and neglecting passenger/military operations at Warton and Blackpool with the associated Bird-Strike Risk to Life. According to HNDR’s BRAG ratings, if there was a solution which addressed these harms, air operations should be rated RED. Since no rating exists for Warton, the St Annes/Penwortham route should logically have been rated BLACK, undermining its fundamental suitability. It is apparent that from the statements in the HNDR excerpt below, that even now, with emergent knowledge, the inadequacy of the initial assessments undertaken have not been reconsidered.

From the HNDR Report, page 152 (<https://www.neso.energy/document/262681/download>) – author’s underlining:

“Potential interface point sites were initially ranked in terms of potential capacity (including planned capacity) to accept new generation inputs using information provided by the Transmission Owners (TOs).

This exercise included all existing and planned substations on the 400kV and 275kV network in the region and the study area was based on TO network information and the economic advantages of connecting close to the coast where possible. This did not preclude potential interfaces at new substation sites. It was noted at the outset that no new planned or potential substation locations were identified, and that these could be added if constraints to existing substations, or merits of potential new locations, warranted the consideration of new interface points.

The principal constraints in the North West Region were the environment constraints on the offshore transmission cable routes and landfalls, and no distinct advantages of new substation locations were identified. The interface points considered therefore remained focused only on existing substation sites in the region.

These locations, and all other potential interface points, were considered at a ‘high level’ (i.e. principal considerations) in a workshop in terms of deliverability (Objective 2) and environment and community constraints (Objectives 3 and 4). Environmental and community constraints were presented to focus on the highest level (Red in the BRAG dataset) at this stage, although information on characteristics behind these constraints, and other constraints, were also available.

The interface sites selected for further consideration for both the radial and coordinated designs in the North West Region were Middleton, Penwortham, Bodelwyddan and Pentir."

The HNDR required delivery by 2030 (HNDR Executive Summary Section 1.1 - “Commitments from the TOs to accelerate delivery of their reinforcement projects once detail of the changes set out in the BESS are confirmed, with the aim of delivering all necessary infrastructure by 2030”).

350 and assumed shared cable corridors, substations, and export cables from applicants (HNDR Section
5.1.16 “Following stakeholder feedback, the design for R4_5 and R4_6 was changed from a
coordinated design with electrical integration offshore, to radial connections with a shared cable
corridor. The connections would share a land substation site, landfall, and cable corridors. The
355 developers had proposed this solution as an alternative to our proposed coordinated design”) —
but neither of these approaches is being followed. The Applicants have insisted on retained project
delivery schedules that result in completions in 2036/37 and construction of two independent cable
corridors and two independent substations and export cabling. No reassessment has been published,
360 further undermining the sustainability of the duty of efficiency, coordination and economy.
Moor Vannin was excluded from HNDR’s scope. This exclusion occurred even as Orsted has
indicated their concurrent engagement with NGESO/NGET. This is reported in their East Irish Sea
Transmission Project Environmental Impact Assessment (EIA) Scoping Report August 2025 in
365 section 4.3.1.2 (link - <https://eastirishseatransmissionproject.co.uk/documents>) . Coordination
opportunities to enhance efficiency, economy and reduce cumulative harm and emissions from
further inland trenching rather than reinforcing existing or sharing new infrastructure have been
missed. No reassessment of HNDR has since occurred, even though its assumptions and intended
scope to ensure efficiency, coordination, and economy are now outdated.
370 NESO states, “The current connections queue currently holds over 750GW of projects — four times
what we need for 2030 and twice what we need for 2050.
(See:[https://www.neso.energy/news/reforming-connections-unlock-great-britains-economic-growth-
and-clean-power-potential](https://www.neso.energy/news/reforming-connections-unlock-great-britains-economic-growth-and-clean-power-potential)).
375 The Applicants’ proposed maximum contributions represent just 0.064% to 0.19% of this queue, so
these cannot reasonably be considered critically significant programs nationally. Their impact on
achieving Net-Zero is marginal, and given the insisted four-year gap between projects, they do not
credibly help reach 2030 targets. The benefits claimed for these projects in the national context do
not outweigh the harms that arise from the approach that the Applicants have chosen to adopt.
380 Given the clear imbalance of unresolved, unacceptable harms versus minimal benefits—and the
failure to assess the obvious alternative of reinforcing existing infrastructure via Stanah/HTEZ and
Heysham Ring—these applications should be refused or withdrawn. This would allow adoption of
the compliant, obviously viable alternative route to achieve a faster, smarter, and £1.5bn cheaper
385 transition to Net-Zero, supporting government targets and consumer interests.

Annex 1

Assessment of Comparative Costs of Utilising Established and Creating All New Infrastructure Between Fylde Coast & Penwortham NGET Substation

Total for Morgan, Morecambe and Mooir Vannin OWE projects

*Electricity Act 1989 - Section 9 :General Duties of Licence Holders:
“to develop and maintain an efficient, co-ordinated and economical system of electricity transmission”*

Uses costings provided in [IET A Comparison of Electricity Transmission Technologies: Costs and Characteristics](https://www.theiet.org/media/axwkktkb/100110238_001-rev-j-electricity-transmission-costs-and-characteristics_final-full.pdf) 2025
link - https://www.theiet.org/media/axwkktkb/100110238_001-rev-j-electricity-transmission-costs-and-characteristics_final-full.pdf

Connecting Fylde Coast to Penwortham		Total	Net Savings
1	Costs of All New Cable Under-grounding between Fylde Coast and Penwortham (30km)	£1,698 m	
2	Costs of Northern HTEZ/Stanah Cable Route utilising established infrastructure		
a	Costs connecting Fylde Coast (RB) with Stanah via HTEZ	£181m	
bi	Re-conductoring established 400kV OHL between Stanah & Penwortham	£28m	
2i	Total Established Infrastructure, including reconductoring, connecting RB to Penwortham	£209m	£1,489 m
bii	Additional New 400kV OHL between Stanah & Penwortham	£59m	
2ii	Total Established Infrastructure + New 400kV OHL, connecting Fylde Coast to Penwortham	£240m	£1,458 m

Note :

- **1. Northern Route** – For All three OWE projects (Mooir Vannin, Morgan & Morecambe) utilising established Infrastructure between
 - Rossall Beach (RB) - Hillhouse Technology Enterprise Zone (HTEZ) – Stanah – Penwortham
 - a) Underground between RB – HTEZ boundary (2km),
 - b) Underground into HTEZ (0.6km)
 - c) OHL Across Hillhouse before Converter Substation (0.85km)
 - d) OHL Across Hillhouse after Converter Substation (0.85km)
 - e) Developer & NGET Substation Infrastructure Hosted on HTEZ
 - f) Reconductoring Established 400kV Overhead Line Stanah to Penwortham (23.5km); or
 - g) Additional 400kV Overhead Line Stanah to Penwortham (23.5km)

Annex 1 continued :-

Assessment of Comparative Costs of Utilising Established and Creating All New Infrastructure Between Fylde Coast & Penwortham NGET Substation

405 Uses costings provided in [IET A Comparison of Electricity Transmission Technologies: Costs and Characteristics 2025](#)

1						Costs : Total	Net Savings
2	Costs of All New Cable Under-grounding between Fylde Coast and Penwortham (30km)						
3	Mooir Vannin	1.32 GW	£653m				
4	Morgan	1,5 GW		£653m			
5	Morecambe	0.48 GW			£392m		
6						£1698m	
7	Costs of Northern HTEZ/Stanah Cable Route Costs utilising established infrastructure between Fylde Coast and Stanah						
8						sub-total	
9	Mooir Vannin	1.32 GW	£69m				
10	Morgan	1,5 GW		£69m			
11	Morecambe	0.48 GW			£43m		
12						£181m	
13							
14	Costs of Upgrade of established 400kV link between Stanah & Penwortham (23.5km)						
15						sub-total	Net Savings
16	Re-conductoring established 400kV Overhead Line					£28m	£209m
17	Additional New 400kV Overhead Line					£59m	£240m

Note :

- **1. Northern Route** – For All three OWE projects (Mooir Vannin, Morgan & Morecambe) utilising established Infrastructure between
 - Rossall Beach (RB) - Hillhouse Technology Enterprise Zone (HTEZ) – Stanah – Penwortham
 - a) Underground between RB – HTEZ boundary (2km),
 - b) Underground into HTEZ (0.6km)
 - c) OHL Across Hillhouse before Converter Substation (0.85km)
 - d) OHL Across Hillhouse after Converter Substation (0.85km)
 - e) Developer & NGET Substation Infrastructure Hosted on HTEZ
 - f) Reconductoring Established 400kV Overhead Line Stanah to Penwortham (23.5km); or
 - g) Additional 400kV Overhead Line Stanah to Penwortham (23.5km)
- **Further Examples of Options of Resilience Measures**
 - Reconductor established 400kV Overhead Line Stanah to Heysham
 - Create separate connections to Heysham and Penwortham
 - Upgrade DNO 132kV links between Stanah & Penwortham
 - Add green Hydrogen generation, storage and distribution
 - Add further BESS & Gas Peaking Plants at HTEZ
 - Flow Control Devices
 - Substation equipment – Upgrades at Stanah replaces Upgrades at Penwortham
 - Other Options?

Annex 1 continued :-

The Following tables are also presented in REP2-0264

Table 1 : Comparative Assessment of Costs Between Northern Route via Hillhouse Stanah and the Morgan & Morgan Applicants' (M&M) Proposals

IET 2025 Report Link – Costings below use data from this report -

A Comparison of Electricity Transmission Technologies: Costs and Characteristics An independent report by Mott MacDonald in conjunction with the IETLink -
https://www.theiet.org/media/axwkkkb/100110238_001-rev-j-electricity-transmission-costs-and-characteristics_final-full.pdf

1	Route	Trenches/ Pylon Lines	km		Transmission Mode	IET 2025		Cost £m / km	Total Cost £m	Cum Cost £m	Ref	Morecambe £m	Morgan £m
2	Northern Route – Penwortham-Stanah-Hillhouse- Irish Sea												
3	Irish Sea- RB-Hillhouse Boundary - Morecambe	1	2	Low	Underground	£44.32	3	£14.77	£29.55		C	£29.55	
4	Irish Sea- RB-Hillhouse Boundary – Morgan	1	2	Med	Underground	£73.84	3	£24.61	£49.23		D		£49.23
5	into Hillhouse – Morecambe	1	0.6	Low	Underground	£44.32	3	£14.77	£8.86		C	£8.86	
6	into Hillhouse – Morgan	1	0.6	Med	Underground	£73.84	3	£24.61	£14.77		D		£14.77
7	Across Hillhouse before Converter – Morecambe	1	0.85	Low	Overhead	£7.73	3	£2.58	£2.19		A	£2.19	
8	Across Hillhouse before Converter – Morgan	1	0.85	Med	Overhead	£9.17	3	£3.06	£2.60		B		£2.60
9	Across Hillhouse after Converter – Morecambe	1	0.85	Low	Overhead	£7.73	3	£2.58	£2.19		A	£2.19	
10	Across Hillhouse after Converter – Morgan	1	0.85	Med	Overhead	£9.17	3	£3.06	£2.60		B		£2.60
11										£111.98			
12	Stanah to Penwortham	1	23.5		Reconductor	£89.90	75	£1.20	£28.17		G		£28.17
13										£140.15			
14													
15	Hambleton – Heysham	1	25.9		Reconductor	£89.90	75	£1.20	£31.05		G		
16										£171.20			
17													
18	M&M Proposal												
19													
20	St Annes to Penwortham – Morecambe	1	30		underground	£195.80	15	£13.05	£391.60		E	£391.60	
21	St Annes to Penwortham – Morgan	1	30		underground	£326.51	15	£21.77	£653.02		F		£653.02
22										£1,044.62			
24										£m 2 trench sets			
25	Irish Sea-RB-HTEZ-Penwortham – NO Reconductoring									£932.64		£348.81	
26	Saving Irish Sea-RB-HTEZ-Penwortham incl Reconductoring Stanah-Penwortham									£904.47			£555.66
27	Irish Sea-RB-HTEZ-Penwortham incl Reconductoring Stanah-Penwortham & Hambleton-Heysham									£873.42			
											checksum		£904.47

Table 2 : References for Data Extracted from IET Document and used as analogues in the Morgan & Morecambe routing cost comparison assessment above.

Ref	IET Page		Ref	Total Build Cost			Analogue
				£m	km	'£m/km	
Overhead							
A	Page 40	Overhead Line – 3 km – Low Rating (2,494 MW)	A	£7.73	3	£2.58	Across HTEZ
B	Page 41	Overhead Line – 3 km – Medium Rating (4,988 MW)	B	£9.17	3	£3.06	Across HTEZ
Underground							
C	Page 51	Underground Cable Buried – 3 km – Low Rating (2,494 MW)	C	£44.32	3	£14.77	Irish Sea-RB-HTEZ
D	Page 52	Underground Cable Buried – 3 km – Medium Rating (4,988 MW)	D	£73.84	3	£24.61	Irish Sea-RB-HTEZ
E	Page 54	Underground Cable Buried – 15 km – Low Rating (2,494 MW)	E	£195.80	15	£13.05	St Annes-Penwortham
F	Page 55	Underground Cable Buried – 15 km – Medium Rating (4,988 MW)	F	£326.51	15	£21.77	St Annes-Penwortham
Reconductoring							
G	Page 106	Reconductoring Using HTLS – 75 km – Additional Capacity of 2,494 MW	G	£89.90	75	£1.20	Stanah-Penwortham

Annex 2

Clean Power 2030

410 <https://www.neso.energy/document/346651/download>

5.2 Wider environmental and local community impacts

Impacts of building clean power infrastructure

415

Power projects have significant impacts on the wider environment and local communities, making it crucial to consider these factors in their development. Conducting thorough environmental impact assessments, engaging with stakeholders and affected local communities and implementing mitigation measures can help minimise negative impacts and enhance projects' sustainability. The planning and consenting process for new generating sites and infrastructure development covers local environmental factors such as noise, vibration, visual impact, flood risk, heritage, ecology and waste management.

420

425

In a clean power system, more power needs to be transported over greater distances from generation sites to areas of demand. This requires various technologies, such as overhead lines, underground lines and subsea cables. Each technology has distinct technical characteristics and environmental impacts:

430

- Overhead lines are usually the cheapest to build but have a visual impact through pylons and wires.
- Undergrounding is more expensive and involves environmental disturbance and potential damage during installation.
- Subsea cables are also costly and require connections to the onshore network, while posing challenges in the marine environment.
- Furthermore, long-term energy infrastructure may occupy valuable sites that could be used for other purposes.

435

However, it is possible to minimise and mitigate these impacts. Having a clear plan for clean power allows for considering the environment holistically across the programme, making choices that collectively minimise potential negative impacts to the environment and communities and can support solutions that are positive for nature overall.

440

The proposed plans in this report minimise new onshore infrastructure. We are prioritising reinforcement of existing infrastructure and have identified some marine cabling by 2030. This was a core part of the network plans that form the basis for proposals in this report: *those plans consider ways to maximise and upgrade the existing network first and only once this reaches a limit are new lines considered*. Strengthened engagement between developers, local authorities and communities is vital for building trust, addressing community concerns and incorporating them into network plans to minimise overall impact on local people.

445

Annex 3

450 On the 27th of October Fylde's MP Mr Andrew Snowden released correspondence from National Grid's Director of Customer and Network Development in their letter dated 26th September 2025

Name & signature of sender is redacted.

455

1-3 Strand
London WC2N 5EH

T: +44 (0) 207 004 3021
www.nationalgrid.com

nationalgrid

460

Andrew Snowden MP
Member of Parliament for Fylde
House of Commons,
London
SW1A 0AA

26/09/2025

Dear Mr Snowden,

RE: Connection point for Morgan, Morecambe and Mooir Vanin offshore wind farm projects

Thank you for including us in your recent letter to Ofgem regarding the use of Stanah substation as a connection point for offshore wind farm projects in the Irish Sea. I am responding to you on John Pettigrew's behalf, in my capacity as the Director of Customer and Network Development within National Grid Electricity Transmission (NGET).

To open, I wanted to stress that, at National Grid, we are very mindful that the cost of maintaining and upgrading the transmission network is recouped through household energy bills and, as such, do our utmost to ensure that our work provides value for consumers across England and Wales. This principle is also central to the way in which we are regulated, with the Electricity Act of 1989 requiring us to develop proposals that are efficient, co-ordinated and economical.

To that end, when planning our work, National Grid assesses each of our projects on their own merits to ensure that we are enacting solutions that strike an appropriate balance between the three aforementioned factors. Each project must also be aligned to the strategic network planning stipulations set out by the National Energy System Operator (NESO), who own the contract with the connecting party, and approved by Ofgem to ensure that it offers value for consumers.

In looking at the specific instance at hand, Penwortham substation was chosen as the point of connection for the Morgan, Morecambe and Mooir Vanin offshore wind projects as a result of the strategic planning process, which was published as part of the NESO's Holistic Network Design (HND) in 2022. As such, I would suggest that NESO should be included in any further discussions on this topic.

I can, however, provide some insight into why Stanah substation was considered and not deemed an appropriate point of connection.

The first key factor is rooted in the site itself. In essence, Stanah is a small site that was built specifically to supply the lower voltage distribution network in the local area. As such, in its current form, it would not be able to accommodate an offshore wind connection.

In addition, as a result of the homes surrounding the site, it would not be possible to re-configure the existing substation to the appropriate degree to provide any further points of connection to the transmission network. This, therefore, would necessitate the construction of an entirely new substation, which would incur significant cost and potentially delay the aforementioned projects by a number of years.

Linked to this, whilst the adjacent Hillhouse land could provide a potential location for a new substation, our regulatory framework requires such a choice to be evidenced. As such, NGET would have to carry out an extensive selection study, to determine the most appropriate site, according to the principles of cost and efficiency.

Finally, as a result of the way in which the regional network is configured, in addition to building a new substation in the area, we would also have to construct a new overhead line to link the new site back to Penwortham. As such, the cumulative impact for building this new infrastructure, would therefore be significantly greater than the current proposed course of action.



I hope the above is helpful both in underlining National Grid's commitment to providing value for consumers and outlining the thinking that has driven the existing solution. If you have any further questions please do not hesitate to contact my team – I would be more than happy to meet with you, alongside appropriate representatives from Ofgem and NESO, for a detailed discussion.

Yours sincerely,

Director of Customer and Network Development,
National Grid Electricity Transmission