

Connection End to End review

Offshore Energies UK (OEUK) is the leading trade body for the UK's integrating offshore energy industry. Our membership includes over 400 organisations with an interest in offshore oil, gas, carbon capture and storage (CCS), hydrogen, and wind. From operators to the supply chain and across the lifecycle from production to decommissioning, they are safely providing cleaner fuel, power, and products to the UK. Working with our members, we are a driving force supporting the UK in ensuring the security of energy supply while helping to meet its net zero commitments.

OEUK and our members are committed to working, together with the UK Government, industry, and regulators, to help deliver net zero by 2050 in an efficient, affordable, and timely manner. As a sector, we are equally committed to producing the oil and gas that the UK will continue to need in the decades to 2050, and beyond – with lower emissions than imported options. Achieving this will bring huge economic and environmental benefits across the breadth of the UK.

The offshore energy industry is a fundamental pillar of the UK economy supporting hundreds of thousands of jobs and contributing billions of pounds to the exchequer annually whilst powering homes and businesses across the breadth of the country. Our sector has the potential to spend almost £200 billion over this decade in the energy sector and continue to support hundreds of thousands of jobs across the UK. The majority of this could be spent in offshore wind, CCS, and hydrogen in the right investment environment. The companies investing in and supporting nascent opportunities like floating offshore wind and CCS will require the cash flow from a stable and predictable oil and gas business to help fund these opportunities.

The UK has a significant opportunity to be an energy transition leader, whilst retaining its core function of supporting energy security. To do this though, we need a long-term stable and competitive policy that gives investors, companies, and supply chain the confidence to commit to the UK.

Connections End to End review

Offshore Energy UK supports the need for better visibility and accuracy in connections data, advocating for a centralized digital tool, clear data standards, and improved transparency, while also calling for legal solutions to share sensitive data. OEUK agree with proposals to enhance customer service standards, focusing on predictable timelines, improved documentation, and performance accountability. OEUK stresses the importance of network operators meeting connection dates, supporting both strengthened license conditions and financial recourse for delays. OEUK recommend clear, high-quality connection offers, emphasizing transparency and realistic timelines, particularly for offshore projects. OEUK also support streamlined processes for minor connections and stronger oversight to ensure timely delivery. Furthermore, OEUK supports the review of connection determination guidance to accommodate offshore wind needs and favours a combination of financial incentives and penalties to ensure timely connection delivery in the RIIO T3 framework. Overall risk should be assigned to the entity best equipped to handle it.

In addition to the above, please find below our response to specific questions.

Theme 1 – Visibility and Accuracy of Connections Data and Network Capacity

Question 1a:

OEUK agree with the issues highlighted regarding the visibility and accuracy of connection data and network capacity. In particular, the lack of real-time data on network availability is a significant barrier for offshore wind developers. Additionally, the current data often does not reflect the complexity of offshore energy projects, where multiple stakeholders and interconnected systems must be considered. An improvement in the quality and availability of this data is essential to support efficient planning and integration of offshore wind into the grid. We would also recommend considering the integration of forecasts for offshore wind generation to better align with network capacity and demand.

Question 1b:

We fully support the proposal for a single digital view tool. A centralised, accessible platform with up-to-date network and connection data would be invaluable for offshore wind developers. This tool should allow for real-time updates on grid capacity, connection status, and planning timelines. To implement this effectively, we recommend close collaboration with offshore developers to ensure the tool captures all relevant data, such as environmental and technical constraints, as well as grid readiness. It is important that demand connection information also be covered.

Question 1c:

We support the proposal for creating guidance and standards for data visualisation tools. Clear, standardised visual representations will ensure that stakeholders can easily interpret network capacity and connection availability. Implementation could involve setting up industry workshops with developers, transmission system operators, and data providers to develop the standards. This would ensure that the tools are not only user-friendly but also aligned with the technical needs of offshore wind projects.

Question 1d:

We support the requirement to provide connection data with relevant granularity. For offshore wind developers, having access to comprehensive, accurate, and timely connection data is crucial for project planning and coordination. To implement this, the data should be provided in a format that allows easy integration into existing planning tools used by developers. Transparency about the availability of grid capacity is key to avoiding delays.

Question 1e:

The completeness and discoverability of connections data is a critical issue. Currently, the existing resources do not always provide enough detail on long-term grid capacity, nor are they easily accessible or user-friendly. Offshore wind developers need better access to both real-time and historical data on network performance and constraints. Clearer and more complete data would facilitate smoother project planning and reduce uncertainties around connection feasibility.

Question 1f:

There are indeed legal barriers preventing the publication of more granular connections data, particularly data that could reveal sensitive operational or financial information. However, we believe solutions such as data aggregation, anonymisation, or summarising information at a regional or national level could enable better data sharing. Offshore wind developers would

benefit from more detailed, aggregated data to improve decision-making and planning processes.

Question 1g:

One additional issue to consider is the need for better coordination across the various planning and permitting stages, especially where offshore wind farms are concerned. Often, network connection points are still evolving, and delays in one area can lead to cascading impacts on project timelines.

Theme 2 – Improved Standards of Service Across the Customer Journey

Question 2a:

We agree with the issues set out, particularly the need for consistent and predictable service standards throughout the customer journey. In the case of offshore wind projects, delays can be especially disruptive due to the long lead times required for offshore construction. It is crucial to set standards that support timely and efficient connections and ensure that all stakeholders involved are aligned on timelines and expectations.

Question 2b:

We support the proposal for a general principles-based license condition. Offshore developers require flexibility, but the principles should be clear to ensure timely, efficient service across the customer journey. This could include consistent timelines for responses to connection requests, transparent communication, and a commitment to resolving issues promptly.

Question 2c:

We are in favour of prescriptive conditions where they will help drive better performance. For offshore wind projects, a focus on key milestones, such as confirmation of connection dates and the timely provision of network upgrades, would be beneficial. We recommend that specific standards be introduced for major infrastructure projects, ensuring that delays and capacity issues are addressed proactively.

Question 2d:

We believe that some of the existing standards of service should be updated to better reflect the complexities of offshore wind connections. For example, the current framework does not always account for the extended planning and approval processes involved in offshore projects. It may also be useful to consolidate overlapping regulatory requirements to avoid unnecessary bureaucracy and streamline the process.

Question 2e:

One issue that could be considered is the lack of a clear path for offshore wind developers to appeal decisions made during the connection process. This would provide greater transparency and fairness, particularly in instances where network operators or regulators impose unreasonable delays or constraints.

Theme 3 – Requirement on Networks to Meet Connection Dates in Connection Agreements

Question 3a:

We strongly agree with the emphasis on networks meeting connection dates. For offshore wind developers, delays in connection dates can result in significant financial losses and project delays. It is essential that there is a robust regulatory framework to ensure that networks are held accountable for meeting agreed-upon dates.

The UK is one of the only mature markets without risk sharing provisions around grid and connection delays. Generation project developers have no commercial protection should TOs fail to meet the connection dates states in developers' contracts with NESO. Instead, developers are left to cover the cost of construction and commissioning delays while simultaneously losing generation revenue. This has serious implications in this early stage of a project's life. If this continues to go unaddressed, it will have cost of capital and investment implications that will hinder projects from taking investment decisions and push the associated cost of these risks through to the consumer via CfD bids.

Developers are completely unable to influence delivery timelines for transmission projects, making it costly and illogical to place the burden of delay risk solely on developers. Investors require assurance that the necessary infrastructure will be delivered on time. If delays occur, developers should receive appropriate compensation for costs incurred during construction and for generation lost due to grid delays. Generation project developers can face significant financial losses from such delays, yet TOs have limited incentives to prevent or mitigate them. In most large capital projects, liquidated damages (LDs) or similar mechanisms are standard practice when coordinating interfacing works, making their absence in this context a notable anomaly. Without these protections, the financial viability of projects could be jeopardised, and the cost of this uncertainty and risk will be passed on to consumers.

This is not a new issue. However, with the network buildout that is required to meet 2030 and 2050 clean energy targets, the risk profile for delays is exponentially growing and changing quite materially. Given the timeliness of this issue regarding delivering clean power for the UK, it is critical that a new and more bankable connections approach is taken.

Question 3b:

We support a strengthened principles-based license condition. However, taking a principles-based approach alone is insufficient to deliver the investor certainty needed for developers.

The wording should explicitly define the consequences of failing to meet connection dates, including penalties or compensation. Offshore wind developers often face financial penalties for delays, and it is only fair that network operators are similarly incentivised to meet their commitments.

Question 3c:

Minimum standards for meeting connection dates would be a welcome addition. Offshore wind projects have long timelines, so certainty around connection dates is essential. We suggest implementing specific SLAs for connection dates for offshore projects, with clear recourse options if these deadlines are missed.

To ensure effectiveness, we suggest incorporating milestones for each network project, like the queue management milestones that generators must adhere to in the connections process.

Question 3d:

The proposal for a financial instrument to offer recourse to customers is a positive one. It would ensure that offshore wind developers can recover losses caused by delays in connections. The instrument should be designed to reflect the scale of the project and the fiscal impact of delays, with a straightforward process for claiming compensation.

Developers have no ability to influence network planning and construction timelines and thus should not be liable for 100% of the risk of delays. Developers currently must carry CAPEX impacts of delays and loss of revenue with no means of compensation or redress. As such, it is insufficient to simply penalise to incentives on-time delivery by TOs – there must be compensation for developers.

While this would alter the risk profile for TOs and other stakeholders and need to get priced into their business plans, the alternative is that developers continue to bear the entirety of this risk. Developers typically face a higher cost of capital which is not in the best interest of consumers.

As the UK is alone in the lack of redress for developers in the event of grid delays, we recommend exploring the treatment of this issue in other similar geographies (including those with similar treatment of OFTO assets).

United States (ISO New England)

In the ISO New England region (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont), Article 5.3 of the pro forma interconnection agreement¹ (IA) provides protections to the interconnection customer in the form of liquidated damages in the event the Transmission Owner's interconnection facilities or network upgrades are not completed by the dates designated in the IA.

Specifically, the liquidated damages shall be an amount equal to 0.5% percent per day of the actual cost of the Transmission Owner's interconnection facilities or network upgrades, for which Interconnecting TO has assumed responsibility to design, procure and construct. However, this is capped at 20% of total upgrades cost. No liquated damages will be paid if the interconnection customer is not ready to commence use of the interconnection facilities or network upgrades, even if the required upgrades are late.

France

In France, the Energy Code addresses the issues of delays and indemnities related to grid connections.

¹ ISO NE Large Generator Interconnection Agreement: <https://www.iso-ne.com/static-assets/documents/2017/11/oatt-schedule-22-appendix-6-large-generator-lgip-interconnection-agreement.pdf>

In this regard, the French Energy Code requires the Transmission and System Operator to pay compensation for delays in accessing the grid that are caused by setbacks in their enabling works for offshore wind facilities.² Such compensation is owed when:

- The delay in grid connection is not caused by a force majeure event or by an event for which the producer is responsible that significantly affects the connection work; and
- The delay forces the producer to postpone the anticipated start date of the Contract for Difference and results in a well-substantiated loss for the Producer.

The compensation is calculated for the period between the projected date and the actual date on which the CfD or the Feed-in-Tariff contract comes into effect. This period is limited to the time between the deadline for the availability of all connection facilities and the actual date these facilities are made available. This period cannot exceed three years. If there is a delay of three years in providing all connection facilities for an offshore production facility, the System Operator and the Producer must meet as soon as possible to find a solution that allows the project to proceed.

The payment compensates power producers for delays in grid connection by estimating lost revenue based on the operational capacity of their facility, expected annual runtime, contractual electricity tariff, and the proportion of the promised grid connection that has been made available.

Ireland

In Ireland, Grid Delay Compensation considerations are defined in the Terms and Conditions ORESS Tonn Nua Offshore Wind Auction ([gov.ie - ORESS Tonn Nua Offshore Wind Auction](https://www.gov.ie/en/publications/68800-oresstonn-nua-offshore-wind-auction-terms-and-conditions)). A Grid Delay Compensation event will accrue to the Generator on and from the first date on which the Generator demonstrates (to the Minister's satisfaction) that all the following conditions have been satisfied:

- (a) The Fixed Grid Date has occurred; (date on which the grid should have been delivered)
- (b) The Longstop Date has not occurred; (the max CfD activation date has not passed)
- (c) Grid Delivery has not occurred; and (the grid has not been delivered)
- (d) The ORESS Tonn Nua Project has achieved an Installed Renewable Capacity, installed and onsite, equal to or greater than the Minimum Installed Renewable Capacity (90% of total target capacity)

The Grid Delay Compensation will be calculated monthly using a methodology set by the Regulatory Authority. The amount will be based on the Grid-Delayed Quantity for each relevant

² French Energy Code Article D342-4-12:
https://www.legifrance.gouv.fr/codes/article_lc/LEGIARTI000045302526

day, adjusted by an appropriate capacity factor (based on P50) and multiplied by 100% of the Strike Price, subject to any adjustments outlined in the Terms and Conditions. Transmission and distribution losses will be factored into the calculation, and any revenues earned in relation to the Grid-Delayed Quantity will be deducted to avoid overcompensation.

Compensation will be paid monthly, providing financial relief in a timely manner to help mitigate the impact of grid delays on affected projects.

Question 3e:

One additional point is that connections in offshore wind projects often involve multiple parties (e.g., transmission operators, developers, regulators). Ensuring that all parties are incentivised to meet deadlines and obligations is key to preventing delays.

Theme 4 – Quality of Connection Offers and Associated Documentation

Question 4a:

We agree with the issues highlighted, especially regarding the clarity and quality of connection offers. Offshore wind developers require detailed, transparent offers with clear information about any potential network upgrades or constraints that may impact the project timeline. Incomplete or unclear documentation often leads to confusion and project delays.

Question 4b:

We support a principles-based license condition on the completeness and quality of offers. The offer should include all relevant information about the connection process, potential delays, required upgrades, and costs. The language should be clear and understandable, without technical jargon that may confuse non-expert stakeholders.

We believe that proposal 4b may be more appropriate here as it would be easier to administer if there is specific guidance rather than a “principle” – i.e. if an offer is deficient, we would like to be able to point to a clear standard that has been breached rather than debate whether the principle has been followed.

Question 4c:

We also support minimum standards for connection offers. These should outline a clear timeline for the offer process, define what constitutes a “complete” offer, and include standardised documentation templates to ensure consistency. Offshore developers need to know exactly what to expect when submitting a connection request.

Question 4d:

A “high-quality offer” should include clear, accurate information on connection timelines, costs, technical requirements, and any potential network upgrades or constraints. It should be accompanied by a transparent explanation of the process, outlining each stage from initial application to final connection.

Question 4e:

An additional concern is the lack of transparency around the availability of grid capacity in

certain regions. A high-quality offer should make it clear whether the capacity is available or when it will be available, as this has a significant impact on project planning and scheduling.

Theme 5 – Ambition of Connection Offers

Question 5a:

We agree with the emphasis on offering the earliest achievable connection dates. However, for offshore wind developers, this must be done with a realistic understanding of technical and regulatory constraints. Developers need to be able to rely on these connection dates to avoid costly delays in project timelines.

With the significant scope of network upgrade projects required to deliver CP30 and beyond, conservative connection dates could be a barrier to delivery. It is important that Ofgem strike the right balance between holding network companies accountable for on-time project delivery and offering redress to developers in the case of delays. Without both elements, network delays and project delays are a risk to the rapid expansion of clean energy that is needed to reach clean energy targets over the coming years.

The lack of a standardised method for calculating Earliest in Service Dates (EISDs) is important in the context of the ongoing discussions regarding the transitional Centralised Strategic Network Plan 2 (tCSNP2) in the UK. Ofgem has identified the need for clearer and more consistent methodologies for calculating EISDs across TOs. Currently, without a NESO/Ofgem-approved approach, discrepancies in how EISDs are calculated by different network companies can lead to significant planning and financial uncertainties for developers. The tCSNP2 funding framework, discussed in recent Ofgem decisions³, calls for better planning, transparency, and alignment on project timelines. One of the proposals that has emerged is for a more unified approach to these calculations to ensure that all TOs are working from a common standard, which would help mitigate risks associated with delayed connections.

Question 5b:

We support the proposal for a strengthened principles-based license condition. The focus should be on offering the earliest possible connection dates while recognising that these dates must be based on realistic technical assessments of network capacity and availability.

We also recognise the positive intent behind the suggestion of revising offers post-agreement if an earlier connection date becomes possible. However, for projects with long development timescales—such as offshore wind—connection date accuracy is crucial. Many of these projects cannot always react to updated offers due to their complex planning, permitting, and financing structures. Therefore, while flexibility is valuable, a stable and reliable connection date, and the opportunity for redress in the event of delays, remains essential for effective delivery and to maintain investor confidence.

³ https://www.ofgem.gov.uk/sites/default/files/2024-12/tCSNP2_decision.pdf

Question 5c:

A further issue could be that connection offers should consider the growth potential of offshore wind projects. Developers may need future capacity upgrades that should be included in the offer from the outset to avoid delays later.

Theme 6 – Minor Connections**Question 6a:**

For minor connections, the key issue is ensuring that the process is streamlined and efficient. Offshore wind developers often need small-scale connections to test equipment or connect temporary facilities. Ensuring that these connections are processed quickly and efficiently is critical.

Question 6b:

We support proposals that simplify the process for minor connections. A clear, transparent process will help offshore wind developers avoid delays in the preliminary stages of project development, ensuring that minor connections do not become a bottleneck.

Question 6c:

Addressing poor performance in minor connections is important, as delays here can cascade into larger project delays. Stronger oversight and penalties for delays in these cases are crucial to ensuring that the development process remains on track.

Theme 7 – Provisions and Guidance for Determinations**Question 7a:**

We agree with the proposal to review the guidance for connection determinations. Offshore wind projects are complex, and the guidance must reflect the specific needs and challenges of this sector.

Question 7b:

We believe that the current guidance could be updated to reflect the increasing complexity of offshore wind projects, particularly around integration with the transmission network and the coordination of multiple stakeholders.

Question 7c:

It would also be helpful to introduce clear, enforceable timelines for determination processes to avoid delays in project approvals and development.

RIO T3 – Electricity Transmission Network Incentivisation**Question 8a:**

We believe that each of the three ideas presented has merit, but we favour a combination of options that incorporate both financial incentives for transmission owners and stricter performance standards to ensure connections are delivered on time.

Question 8b:

Incentivising Transmission Operators (TOs) to deliver faster connection times is crucial. We would recommend introducing financial penalties for TOs if they fail to meet deadlines, along with rewards for early or on-time completions. A structured penalty and reward system would help drive the necessary behaviour to ensure timely connections, which is essential for offshore wind projects.
