Addendum to the Environmental Impact Assessment Report

NISA

North Irish Sea Array

Volume 2 - Introductory Chapters

Chapter 4
Need for the Proposed Development

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4. Need for Proposed Development

North Irish Sea Array Windfarm Ltd (NISA, hereafter referred to as 'the Developer') has been considering the Request for Further Information (RFI) issued by An Bord Pleanála (now An Coimisiún Pleanála) as well as the third-party submissions received following public consultation. At An Coimisiún Pleanála's behest, the Developer has also continued to consult with stakeholders in respect of the 2024 planning application throughout 2024-2026. The Developer has refined elements of the design to respond to the third-party submissions, the continued public and stakeholder consultation and the RFI. Amendments are therefore required to Chapter 4: Need for Proposed Development of the 2024 Environmental Impact Assessment Report (EIAR). Full details of consultation undertaken can be found in Appendix A1.2 in the Addendum to the EIAR.

The timeframes associated with the RFI means that it is now unlikely that the development will be fully operational by 2030 and hence an updated construction programme timeline for the proposed development has been presented (see Chapter 8 Construction Strategy Offshore), any previous references within this document to delivery aligned with 2030 operational targets should now be interpreted in the context of the revised schedule, under which the project is expected to be well advanced in the construction phase by 2030 rather than be operational by that date. These references should therefore be disregarded as fixed delivery milestones.

Irrespective, the fundamental need for the project has become even more critical since the submission of the 2024 EIAR. In the first instance, despite Irelands re-affirmed commitments to EU targets (see Section 4.2), latest EPA projections (EPA, May 2025) predict that under both the *with existing measures* and *with additional measures scenarios*, Ireland will fall approximately 42% short of our 2030 national reduction targets, when compared to 2005 levels. This underlines the urgent need to deliver the Phase One projects. Added to this, the withdrawal of the Sceirde Rocks project, means that the anticipated capacity from ORESS 1 is diminished, which means that the NISA project is more critical than ever. Against this background, electricity demand across the country continues to grow while in parallel, the current global geopolitical landscape is very starkly demonstrating the need for increased domestic energy security of supply. All of this demonstrates the increased need for the proposed development, and this changed context is reflected herein in this Addendum.

For the purposes of clarity, this document shall be read in conjunction with the Chapter 4 submitted as part of the 2024 EIAR.

Any cross reference to a chapter, section, table, image, figure or appendix within this document is to another location within the Addendum to the EIAR unless explicitly stated otherwise. Any cross reference to anything included in the 2024 EIAR will be clearly labelled as such.

Text in bold is only used throughout this document to indicate where changes are required, and why they are required. Text in italics is text from a section of the 2024 EIAR which is deleted, or quotations from other documents (as explicitly stated). Replacement text is in normal font.

Tables and images which have been updated from the 2024 EIAR, or entirely new tables or images, have been included in the Addendum to the EIAR. These can be identified by the "A" prefix in the caption. Any changes within the updated table, in comparison to tables within the 2024 EIAR, are indicated by grey shading in the relevant cell, column or row, as necessary. The exception here is where a table has been replaced in its entirety.

The sections relevant to Chapter 4 in the RFI are included below.

RFI Section	RFI	Relevance to Chapter
1 (b)	The scientific information provided as part of the planning application documentation should be based on up-to-date survey reports and data. Accordingly, the applicant is requested to confirm/provide justification/verification that the information submitted in support of the planning application remains relevant and appropriate at the point of submitting further information or to update same as required.	The timeframes associated with the RFI have necessitated a review of the datasets previously used in the 2024 EIAR to ensure any necessary updates are captured. Therefore, a review of changes/updates to the drivers framing the need for the Development that have occurred since the 2024 EIAR submission has been completed to comply with RFI 1 (b). The update to this chapter in relation to this, is provided in Sections 4.2, 4.3, 4.4 and 4.7.

4.1 Introduction

There are no changes required to this section. Refer to Section 4.1 of Chapter 4 of the 2024 EIAR.

4.2 Objectives of the Proposed Development

In response to RFI Section 1 (b), a review of relevant policy documentation was undertaken. The change required to this section is the addition of a reference to the Hamburg Declaration. In January 2026, Ireland signed the Hamburg Declaration, which commits to a strong pipeline of offshore wind in the North Seas, with 100GW to be delivered in the coming years and 300GW by 2050, and as such creates a new key objective of the proposed development.

Therefore, in addition to the objectives of the proposed development listed in the 2024 EIAR, the following objective shall be added at the end of the list in Section 4.2 of Chapter 4 of the 2024 EIAR:

- Contributing to the ambitions of the Hamburg Declaration (2026) of which Ireland is a signatory of reaching 300GW of offshore wind capacity by 2050 within the North Seas

In addition, since the submission of the 2024 EIAR chapter, the Climate Action Plan 2025 (CAP 25) has been published. Therefore, the following section of the end paragraph of Section 4.2 of Chapter 4 of the 2024 EIAR shall be deleted:

"The proposed development is a pivotal component of the Programme for Government and the Climate Action Plan 2024 and reflects ambitions outlined in Offshore Renewable Energy Development Plan (OREDP) in 2014. In the absence of the proposed development, there is no plausible mechanism by which Ireland can meet binding climate and environmental targets for 2030 and beyond. With the urgency surrounding the climate crisis, it is imperative that these targets are achieved. As an essential contributor to achieving Ireland's offshore wind commitments, the need for the proposed development is clear and demonstrable"

And replaced with:

The proposed development is a pivotal component of the Programme for Government and the Climate Action Plan 2024 and 2025 and reflects ambitions outlined in Offshore Renewable Energy Development Plan (OREDP) in 2014. In the absence of the proposed development, there is no plausible mechanism by which Ireland can meet binding climate and environmental targets for 2030 and beyond. With the urgency surrounding the climate crisis, it is imperative that these targets are achieved. As an essential contributor to achieving Ireland's offshore wind commitments, the need for the proposed development is clear and demonstrable.

There are no other changes required to this section. Refer to Section 4.2 of Chapter 4 of the 2024 EIAR.

4.3 The Role of Renewable Energy

4.3.1 The Role of Renewable Electricity in Energy Mix to Achieve GHG Emission Targets

Since the submission of the 2024 EIAR, the Climate Action Plan 2025 (CAP25) was published on the 15th April 2025. The text in 4.3.1 remains valid and accurate but is now reflected in CAP 25 instead of CAP 24. To avoid unnecessary duplication, the text has not been repeated in this addendum.

In April 2025, Sceirde Rocks announced that it will no longer be progressing with its proposed development. Sceirde Rocks was a successful ORESS 1 Phase 1 project, and its withdrawal emphasises the need for the remaining Phase One projects and ORESS contract holders to progress. To capture this change, the following text shall be added from Section 4.3.1 of Chapter 4 of the 2024 EIAR:

The proposed development was one of the four successful offshore wind farm developments awarded a contract through ORESS 1 and will subsequently deliver a large proportion of affordable renewable electricity to Irish consumers. Sceirde Rocks, one of the Phase One projects which was successful in ORESS 1 in June 2023, and with a proposed capacity of 450MW, announced in April 2025 that it will not be progressing with the development of its windfarm. The withdrawal of Sceirde Rocks, means that the capacity that can be delivered by the remaining three successful ORESS 1 contract holders reduces to 2.6GW.

This in turn reduces the total Phase One capacity from 4.3GW to approximately 3.8GW, which is a significant shortfall against the 5GW target. This only further highlights the critical need to advance the remaining Phase One projects to ensure the security of the energy supply to Ireland in addition to supporting the delivery of affordable electricity for the consumer. More fundamentally, there are limited suitable fixed-bottom offshore wind sites available in Irish waters, while a substantial proportion of Ireland's remaining offshore wind potential depends on floating offshore wind technology, which is not yet sufficiently mature or economically proven at commercial scale in Ireland. Accordingly, if the proposed development does not proceed, there is no clear or credible pathway by which Ireland is likely to exceed 5GW of operational offshore wind capacity for more than a decade.

In addition, in response to RFI Section 1 (b), a review of relevant datasets was undertaken. Since the submission of the 2024 EIAR, Eurostat, the statistical office of the EU, has published a new set of Renewable Energy Statistics (2025), highlighting the need for each member state to intensify efforts to comply with the 2030 targets.

Therefore, the following text shall be added to the end of Section 4.3.1 of Chapter 4 of the 2024 EIAR:

The lowest shares of renewables in terms of gross final energy consumption within the EU in 2024 were recorded in Belgium (14.3%), Luxembourg (14.7%), and Ireland (16.1%).

EU Directive 2023/2413 on the promotion of the use of energy from renewable sources has revised upwards the EU's 2030 renewable energy target from 32% to 42.5% (with an aim to increase it to 45%). Therefore, EU countries need to intensify their efforts to collectively comply with the EU target for 2030, which requires increasing the share of renewable energy sources.

There are no other changes required to this section. Refer to Section 4.3.1 of Chapter 4 of the 2024 EIAR.

4.3.2 Rising Demand of Electricity

Since the submission of the 2024 EIAR, CAP25 was published on the 15th April 2025. CAP25 presents an update on the measures established by CAP 24 in order to meet the challenge of network demand for electricity and re-emphasises the challenge the electricity sector faces.

Therefore, the following text shall be added to Section 4.3.2 of Chapter 4 of the 2024 EIAR:

CAP 25 highlights that although considerable progress has been made to decarbonise the electricity sector, it still faces an immense challenge in balancing a reduction in emissions and a growing electricity demand:

"*the electricity sector has one of the smallest carbon budgets, with a ceiling of 40 MtCO2eq. for the first budget period (2021–2025), equating to an average of 8 MtCO2eq. per annum and the steepest decline trajectory (-75%) across all sectors. This represents an immense challenge as the sector not only has a*

requirement to reduce emissions, but also to meet the increasing electricity demand required for our economy, ensuring the energy security of the State, and supporting those sectors which are decarbonising through electrification".

There are no other changes required to this section. Refer to Section 4.3.2 of Chapter 4 of the 2024 EIAR.

4.3.3 Security of Supply

In response to RFI Section 1 (b), a review of relevant datasets was undertaken. Since the submission of the 2024 EIAR, the SEAI has published the Energy in Ireland 2025 Report, which provides updated definitive data on Ireland's energy supply, demand and related emissions. The data from this report provides a more recent depiction of Ireland's security of supply than the data provided in SEAI's Energy in Ireland Report 2023.

Therefore, the following paragraphs from Section 4.3.3 of Chapter 4 of the 2024 EIAR shall be deleted:

"Energy security of supply is considered to be the uninterrupted availability of energy at an affordable price. The SEAI's Energy in Ireland Report 20237 notes that Ireland imported 81.6% of its total primary energy requirement in 2022, whereas the average energy import dependency of all EU member states in 2020 was 57.5%. Ireland has a high energy import dependency because it imported all of its coal and oil products and 74% of its natural gas supplies. However, its import dependency on renewable energy is low, importing only 8.8% of renewable energy in 2022, most of which was biodiesel. As the SEAI report also details. Ireland was highly dependent on fossil fuels in 2022. In that year, 85.8% of energy came from oil, natural gas, coal, and peat. In relation to renewables, 13% of Ireland's energy requirement in 2022 came from renewables. The remaining 1.2% of energy came from the use of non-renewable wastes and imported electricity across international interconnectors. Ireland's total energy demand in 2022 was 4.7% higher than in 2021, however, energy-related emissions were 1.7% lower"

And replaced with:

Energy security of supply is considered to be the uninterrupted availability of energy at an affordable price. Energy imports dependency is one of the simplest and most widely used indicators of a country's energy security, with indigenous energy sources generally considered to be more secure then imported energy. The SEAI's Energy in Ireland Report 2025 notes that Ireland imported 79.5% of its total primary energy requirement in 2024, which is an increase from 78% in 2023. According to Eurostat Energy in Europe 2026 Editon, the energy imports dependency rate in the EU was 57%, meaning Ireland is 22.5% above EU average. This overall trend reflects the fact that Ireland does not have significant indigenous fossil fuel resources and has only in recent years begun to harness significant quantities of renewables.

In 2024, 41.8% of Ireland's gross electricity supply came from natural gas, followed by 32.1% from wind generation, and 13.9% from the net-import of electricity from Northern Ireland and Great Britian. Combined these three sources accounted for 87.9% of Ireland's electricity supply. In total, fossil fuel generation accounted for 45.3% of the electricity supply in 2024 – the lowest level on record - with renewable generation accounting for 40.0% of electricity supply. Other sources, consisting of net-imports of electricity across international interconnectors and generation from non-renewable wastes, accounted for the remaining 14.8%. On a percentage basis, Ireland has never used more net-imported electricity.

In light of recent and ongoing global geopolitical events, an additional paragraph has been added to further reaffirm the need for security of supply.

Therefore, the following text shall be added to Section 4.3.3 of Chapter 4 of the 2024 EIAR:

Europe's energy system remains highly exposed to geopolitical instability, as a significant share of global oil and Liquidised Natural Gas (LNG) supply transits key maritime chokepoints vulnerable to disruption. This causes uncertainty in both the supply and cost of energy. International assessments further highlight that such chokepoints expose the inherent vulnerability of global fuel markets, reinforcing the need for Europe to accelerate its shift towards secure, domestically generated clean energy (IEA, 2026). The proposed development will strengthen the domestic

energy supply and reduce our dependency on the volatile international energy market. This need is heightened by the fact that there are limited suitable fixed-bottom offshore wind sites available in Irish waters, while much of the remaining offshore resource is dependent on floating offshore wind technology that is not yet sufficiently mature or economically proven at commercial scale in Ireland.

There are no other changes required to this section. Refer to Section 4.3.3 of Chapter 4 of the 2024 EIAR.

4.3.4 The Need for Affordable Energy

As previously acknowledged Sceirde Rocks announced in April 2025 that it will no longer be progressing with its proposed development. Sceirde Rocks was a successful ORESS 1 Phase 1 project, and its withdrawal emphasises the need for the remaining Phase One projects and ORESS contract holders to progress in order to deliver affordable renewable electricity to Irish consumers. To capture this change, the following text shall be deleted from section 4.3.4 of Chapter 4 of the 2024 EIAR:

"The proposed development was one of the four successful offshore wind farm developments awarded a contract through ORESS 1 and will subsequently deliver a large proportion of affordable renewable electricity to Irish consumers".

And replaced with:

The proposed development was one of the four successful offshore wind farm developments awarded a contract through ORESS 1 and will subsequently deliver a large proportion of affordable renewable electricity to Irish consumers. As previously mentioned, Sceirde Rocks, which was one of the successful ORESS 1 project and had an anticipated capacity of 450MW, confirmed in April 2025 that it would not advance to construction. The discontinuation of this project has reduced the combined capacity of the remaining ORESS 1 developments to approximately 2.6GW. Consequently, overall Phase One offshore wind capacity has decreased from 4.3GW to roughly 3.8GW, leaving a material gap relative to the national target of 5GW In this context, the proposed Tonn Nua development would increase the total expected capacity to approximately 4.7GW; however, there remains considerable uncertainty as to whether additional offshore wind capacity beyond this can be delivered in advance of 2040, given the limited number of suitable fixed-bottom offshore wind sites available in Irish waters and the fact that much of Ireland's remaining offshore wind potential is dependent on floating offshore wind technology, which is not yet sufficiently mature or economically proven at commercial scale in Ireland. Accordingly, if the proposed development does not proceed, there is no clear or credible pathway by which Ireland is likely to exceed 5GW of operational offshore wind capacity for more than a decade.

This reduction in available capacity reinforces the importance of enabling the remaining Phase One projects to proceed without delay. In this context, the Proposed Development helps safeguard Ireland's energy security while underpinning the long-term supply of affordable, renewable electricity to consumers.

In addition, In response to RFI Section 1 (b), a review of relevant datasets was undertaken, and since the submission of the 2024 EIAR, recent analysis undertaken by Baringa for Wind Energy Ireland (WEI), published in "Good for you Pocket: How Renewable Energy Helps Irish Electricity Consumers" (2025), provides robust quantitative evidence demonstrating that continued is essential for consumer protection and energy security.

Therefore, the following text shall be added to the end of Section 4.3.4 of Chapter 4 of the 2024 EIAR.

Independent analysis by Baringa for Wind Energy Ireland, published in the "Good for your Pocket: How Renewable Energy Helps Irish Consumers" (2025), shows that renewable energy deployment has already delivered €840 million in consumer savings by displacing higher-cost fossil-fuel generation. Achieving Ireland's 80% renewable electricity target could provide a further €610 million in annual savings, demonstrating a clear economic need for continued renewable energy development.

Ireland currently spends €1 million per hour on imported fossil fuels, leaving consumers exposed to international price fluctuations. Renewable generation has reduced fossil-fuel spend by €7.4 billion since 2000, with wind energy responsible for 98% of the net consumer savings identified. The findings of this report demonstrate that additional large-scale wind capacity is essential in reducing electricity prices,

meeting climate targets, and lowering fossil-fuel dependence. Given Ireland's significant offshore wind potential and national policy commitments, offshore wind projects such as the proposed development is clearly aligned with the report's conclusions on the need for wind deployment to lower consumer costs.

There are no other changes required to this section. Refer to Section 4.3.4 of Chapter 4 of the 2024 EIAR.

4.4 Additional Project Benefits

There are no changes to the introductory text of this section. Refer to Section 4.4 of Chapter 4 of the 2024 EIAR.

4.4.1 Socio-Economic Overview

Since the submission of the 2024 EIAR, the EU Blue Economy Report 2025 has been published, and its findings have been incorporated into this chapter.

Therefore, the following text shall be added to Section 4.4.1 of Chapter 4 of the 2024 EIAR:

Offshore wind is now one of the fastest-growing sectors in Europe's blue economy, creating new jobs and supporting long-term economic growth. The EU Blue Economy Report 2025 shows that offshore wind has expanded by more than 1,000% since 2013, making it one of the strongest performers across all ocean-based industries. The sector now provides 18.9 GW of clean energy across the EU—enough to power over six million homes—and continues to attract significant investment each year. As part of this wider growth, the proposed development will support new employment opportunities, strengthen local supply chains, and contribute to Ireland's participation in a rapidly expanding European clean-energy industry.

There are no other changes required to this section. Refer to Section 4.4.1 of Chapter 4 of the 2024 EIAR.

4.5 Fulfilling Regional Demand

There are no changes to this section. Refer to Section 4.5 of Chapter 4 of the 2024 EIAR.

4.5.1 Shaping Our Electricity Future

There are no changes to this section. Refer to Section 4.5.1 of Chapter 4 of the 2024 EIAR.

4.5.2 Tomorrow's Energy Scenario

There are no changes to this section. Refer to Section 4.5.2 of Chapter 4 of the 2024 EIAR.

4.6 Conclusion

Based on the updates to this chapter, the following text shall be added to Section 4.6 of Chapter 4 of the 2024 EIAR:

Since the submission of the 2024 EIAR, the context underpinning the need for the proposed development has become more acute. Updated policy and market evidence further reinforce that need. Ireland has reaffirmed its offshore wind ambitions through Climate Action Plan 2025 and the Hamburg Declaration, while recent EPA projections indicate that, under both the with existing measures and with additional measures scenarios, Ireland is expected to remain substantially short of its 2030 national emissions reduction target. At the same time, the withdrawal of Sceirde Rocks has reduced expected Phase One offshore wind capacity to approximately 3.8GW, leaving a material gap relative to the 5GW national target.

Recent evidence also shows that the need for the proposed development extends beyond climate compliance alone. Ireland remains heavily dependent on imported energy and exposed to international market and geopolitical volatility, underlining the importance of secure, domestically generated renewable electricity. Continued renewable deployment is also associated with significant consumer savings and wider socio-economic benefits, including support for employment, investment, and supply-chain development. There remains significant uncertainty as to whether additional offshore wind capacity can be delivered before 2040, given the limited number of suitable fixed-bottom offshore wind sites in Irish waters and the dependence of

much of Ireland's remaining offshore wind potential on floating offshore wind technology, which is not yet sufficiently mature or economically proven at commercial scale in Ireland. In that context, the proposed development is not simply beneficial but necessary, and if it does not proceed there is no clear or credible pathway by which Ireland is likely to exceed 5GW of operational offshore wind capacity for more than a decade.

4.7 References

The change required to this section is the addition of references used in the updating of Chapter 4 of the 2024 EIAR.

Therefore, the following additional references are added:

Baringa (2025) Good for your Pocket: How renewable energy helps Irish electricity consumers.

Department of the Environment, Climate and Communications (2025) Climate Action Plan 2025

European Commission (2025) EU Blue Economy Report 2025

European Commission and North Sea Countries (2026) Hamburg Declaration

Eurostat (2025) Renewable energy statistics. European Commission.

International Energy Agency (2026) Electricity 2026

Sustainable Energy Authority of Ireland (SEAI) (2025) Energy in Ireland

There are no other changes required to this section. Refer to Section 4.7 in Chapter 4 of the 2024 EIAR for the complete list of references pertaining to the chapter.