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Socio-Economic

13 SOCIOECONOMICS

13.1 Introduction

Background to the Study

13.1.1 RES UK & Ireland Ltd ('the applicant') commissioned Oxford Economics in the summer of 2021 to undertake a socioeconomic impact report on the proposed Unshinagh Wind Farm, hereafter referred to as 'the proposed wind farm', which is located in the Mid and East Antrim Borough Council area. This information was submitted as part of the original planning application.

13.1.2 This report should be read in conjunction with Chapter 13 of the Environmental Statement, as it is an updated report that reassesses the impact of the proposed wind farm, reflecting the reduction in the overall size of the scheme and responding to comments from the original submission.

13.1.3 The report presents estimates relating to the direct, indirect, and induced benefits that could be generated by the construction and operation of the proposed wind farm. Although some economic benefits would accrue during decommissioning, information relating to this phase is not available at the time of writing and so it has not been assessed. The report also provides an assessment of how the proposed wind farm aligns with national and regional policy objectives, and discusses the recent and future performance of the regional and local economies to provide relevant context.

13.1.4 Specific information related to the proposed wind farm was provided where possible by the applicant. The estimates of the benefits are based on a mix of this information, published data, and reasonable assumptions made by Oxford Economics and agreed with the applicant. Oxford Economics has considerable experience of undertaking similar economic impact reports of local wind farm projects throughout Northern Ireland, having also completed dozens in the UK and Ireland.

13.1.5 The proposed wind farm consists of nine three-bladed turbines, with a planned operational lifespan of 30 years. The total megawatt (MW) capacity of the proposed wind farm is expected to be 37.8 MW, with each turbine having a 4.2 MW capacity. This reflects the latest developments in wind farm construction, with turbine manufacturers typically offering turbines within this capacity range.

About the Applicant

13.1.6 The applicant is the world's largest independent renewable energy company, working across 24 countries and active in wind, solar, energy storage, green hydrogen, transmission, and distribution. Operating for over 40 years, the applicant has delivered more than 29 GW of renewable energy projects across the globe and plans to bring more than 26 GW of new capacity online in the next five years.

13.1.7 As a service provider, the applicant has skills and experience in asset management, operations and maintenance, and spare parts—supporting 45 GW of renewable assets. RES brings to the market a range of purposeful, practical technology-based products and digital solutions designed to maximise investment and deployment of renewable energy.

13.1.8 The applicant has developed, constructed and operated renewable energy projects from its office in Larne, Northern Ireland since the early 1990s, and currently employs 4,500 people. In Northern Ireland, the applicant has developed 30 onshore wind farms totalling in excess of 525 MW and currently operates over 132 MW of wind capacity across the region, including Altahullion near Limavady, and Brackagh in Draperstown.

Structure of the Report

13.1.9 This report is structured as follows:

- Firstly, the estimated quantifiable economic benefits of the construction and operation phases of the proposed wind farm are presented—concentrating on employment, Gross Value Added (GVA),[1] and wages. An assessment of the potential fiscal benefits is also included;
- Secondly, an overview of the socioeconomic conditions, both at the regional and local levels, is provided as context;
- Thirdly, the energy and environmental context is considered, highlighting the contribution the proposed wind farm could make towards emissions targets at both the national and regional levels; and
- Finally, the overall conclusions in respect to the proposed wind farm are set out.

13.1.10 Comments raised in the Economics Branch Consultation reponse are addressed throughout the report. For ease of reference, each comment and the place where its response can be found within the document are set out in the table below.

Comment	Addressed
Comment 1 – Wind farm capacity	See 13.1.5.
Comment 1 – Load factor	See 13.4.9 and footnote 32.
Comment 1 – Housing electricity supply	See 13.4.9. Please note that the updated figure for the number of households reflects the smaller size of the proposed wind farm.
Comment 2 – Energy storage element	See footnote 33.
Comment 3 – Reduction of CO2 emissions	Given the variability of this estimate depending on the factors feeding into it, we have removed an explicit quantification of CO2 emission reductions in this update. Instead, we refer to general energy and environmental benefits in 13.4.
Comment 3 – Carbon abatement	See 13.4.10.
Comment 4 – Rateable value	See 13.2.25 and footnote 16.
Comment 5 – Subsidies or tax credits	See 13.2.26.
Comment 6 – Local tourism employment	See 13.2.27.
Comment 6 – Visual effects	See footnote 19.
Comment 7 – Impact of landscape on wind speeds	See footnote 32.
Comment 8 – Externalities and property values	See 13.2.28.
Comment 9 – Impact of inflation on costs	See footnote 6, and the caveats in 13.6 Annex 1.

[1] Gross Value Added (GVA) measures the value of goods and services produced in an area, industry, or sector of an economy and is equal to output minus intermediate consumption.

Comment 10 – Economies of scale	See 13.2.11. The updated figures are based on estimated jobs for a project of this size, and have not therefore been prorated.
Comment 11 – Decommissioning phase	See 13.1.3.
Comment 12 – Remote or non-local jobs	See 13.2.11 and related footnote.
Comment 13 – Skills mismatch	See 13.3, and specifically 13.3.14.
Comment 14 – Zero displacement assumption	See 13.2.2, 13.2.17, and the section on displacement 13.6 Annex 1.
Comment 15 – Agricultural displacement	See 13.2.3, and the section on displacement 13.6 Annex 1.
Comment 16 – Forecasts	See 13.2.10 and the caveats in 13.6 Annex 1. All of our analysis is based on the latest economic environment at the time of writing, with Oxford Economics' suite of forecasts for the UK's regions and local authorities used when estimating future impacts. These forecasts incorporate the current economic environment, published forecast data from relevant UK statistical authorities, and our judgements as to the future trajectory of the economy.
Comment 17 – Use of NISRA input-output tables	See 13.2.6.
Comment 18 – Methodology	See 13.6 Annex 1 for more information on our methodology.
Comment 19 – Job years	See 13.6 Annex 1. The use of job years is explicitly referred to within the glossary.
Comment 20 – Consumer benefits	See 13.4.11.
Comment 21 – Ballygilbert Wind Farm	This has been amended by the applicant to reflect the updated figures.

13.2 Quantifiable Economic Benefits and Assessed Impacts

13.2.1 This section analyses the estimated quantifiable benefits of the construction and operation phases of the proposed wind farm—concentrating on employment, GVA, and wages, as well as fiscal benefits. All results relate to the benefits at the regional level (Northern Ireland), unless otherwise stated.

13.2.2 All estimates presented are in gross terms, factoring in no job displacement.[2] Zero displacement has been assumed during both the construction and operational phases of the proposed wind farm. The construction phase is estimated to create or sustain 80 direct job years of employment. We have assumed the construction of the proposed wind farm would not lead to displacement of activity in the construction sector as labour demand will amount to less than one percent of the total construction workforce in Mid and East Antrim during the construction phase, and less than the number of jobs Oxford Economics' baseline forecasts estimate will be added in the local construction sector over this period. We therefore

[2] Displacement is the degree to which the effects which produce additional economic activity may lead to consequent reductions in activity elsewhere in the economy that would not have occurred if the intervention had not been made.

conclude that the local labour market has capacity to absorb additional demand, and that the development phase is unlikely to displace construction activity.

13.2.3 Additionally, although the site for the proposed wind farm is currently common land used for grazing, the applicant has informed Oxford Economics that no economic activity would be displaced. This assumption is based on the applicant's vast experience in developments of this type, where agricultural activities typically remain on site and are not impacted. Given the above, and the fact that the proposed wind farm would sustain one job on an annual basis during operations and therefore on-going employment would be limited in number, the estimated benefits arising from the operational phase assume no material displacement of economic or leisure activity.

13.2.4 Renewable energy developments such as onshore wind will collectively and in the long-run displace demand for fossil fuels. However, the UK Government has set a target of achieving clean power by 2030 and accelerating towards net zero carbon emissions, promoting a transition away from fossil fuels towards renewable energy.[3] As such, any potential displacement is consistent with nationally stated policy aims.

Economic impact of the construction phase

13.2.5 The benefits associated with the construction phase of the proposed wind farm (in terms of employment, wages, and GVA) are presented below.[4] These results are based on data provided by the applicant regarding the expected value of investment to be realised in Northern Ireland as well as the expected levels of employment required for construction, based on previous projects. By assigning this employment and investment data to sectors of the economy, it is possible to estimate the associated direct GVA and wage impacts.

13.2.6 To arrive at our projected impacts, an input-output model is used to estimate the indirect and induced impacts that are likely to flow from a given level of investment/activity. An input-output table provides information on how sectors purchase from one another, and how households spend their income. For the Northern Ireland economy, we've used the input-ouput tables produced by NISRA—please see Annex 1 at the end of this Chapter for further discussion.[5]

13.2.7 The proposed wind farm is estimated to result in a capital spend of approximately £77 million in nominal prices at time of construction.[6] The total capital spend is notably higher than the original estimate, despite the reduction in the proposed wind farm's overall size. This reflects the significant increase in costs for wind farm construction in the last few years, particularly relating to Balance of Plant (BoP). Capital spend estimates are based on information provided by the applicant, relying on its vast experience in developments of this scale, and includes the estimated cost of turbines, BoP, local and miscellaneous spend, grid connection, and professional services.

13.2.8 Only a portion of this investment, however, would be realised in Northern Ireland. The total construction spend realisable within Northern Ireland is approximately £29 million in nominal

[3] UK Government. *Department for Energy Security and Net Zero: About*. Accessed 22nd January 2026.
[4] Please be aware that total values presented throughout this Chapter may not sum due to rounding.
[5] For the original submission, UK input-output tables published by the ONS were adjusted to account for the specific characteristics of the Northern Irish economy. In this update, however, the Northern Irish input-output tables published by NISRA have been utilised for the Northern Ireland economy as they are no longer classified as experimental. For the relevant sectors of the economy for the proposed wind farm, the input-output tables produced by NISRA suggest a much stronger multiplier effect of the applicant's planned investment throughout the regional economy. This results in a larger overall impact than would have been the case using the UK tables. The results for this update and the original submission can therefore not be considered directly comparable.
[6] The nominal cost of the proposed wind farm, provided by the applicant, is an accurate estimate at the time of writing for their expected expenditure at the time of construction. Therefore, while prices are likely to rise in the short term, this is accounted for by these projections based on current estimates for inflation. For our economic impacts, we also isolate the effects of inflation by calculating the economic impact in real terms.

prices at time of construction.[7] This includes, for example, the cost of connection to the electricity grid, as well as a fraction of the estimated cost of turbines through activities such as the use of local haulage and crane companies. Any remaining construction spend not taking place within the region is assumed to be imports. The proportion of total investment realised regionally is comparable to estimates provided in previously published papers relating to onshore wind farms in the UK.[8,9] For modelling purposes, all expenditure information has been converted into 2018 real prices, to ensure consistency with the original application.[10]

13.2.9 For the purposes of this assessment, we assume a constant spend per month over the course of the construction phase. Given a planned commencement date of March 2029, with operations scheduled to begin from July 2030, this results in an assumption of 62.5 percent of total spend being realised in 2029 and the remaining 37.5 percent in 2030.

13.2.10 Given the proposed wind farm would be constructed in the future, Oxford Economics' suite of forecasts for the UK's regions and local authorities have been used in estimating future impacts. These forecasts incorporate the current economic environment, published forecast data from relevant UK statistical authorities, and our judgements as to the future trajectory of the economy.

13.2.11 The applicant has developed 30 onshore wind projects in the UK & Ireland since the early 1990s. Based on this experience, the applicant has provided estimated figures for the total number of employees that would be required for the wind farm's construction, and the estimated length of their employment. In order to conduct the below analysis, these figures have been adjusted into job years terms and split across the relevant sectors of the economy.[11]

Direct construction phase impacts

13.2.12 The proposed wind farm's construction phase is estimated to create or sustain 80 direct job years of employment in Northern Ireland, 76 of which are involved with construction related activities, with the remaining job years in the professional services sector of the economy (Table 13.1). This direct construction phase employment would be likely to create or sustain £3.1 million of direct wages in the Northern Irish economy, generating £7.8 million in GVA.

[7] For this analysis, the total construction phase spend in Northern Ireland is defined as the cost realised regionally for turbines, Balance of Plant (BoP), food, fuel, plant hire, road maintenance, grid connection, and professional services.
[8] RenewableUK (2012). *Onshore Wind: Direct and Wider Economic Impacts*. Accessed 22nd January 2026.
[9] UK Government (2025). *Onshore Wind Taskforce strategy*. Accessed 22nd January 2026.
[10] The construction phase and operational phase benefits presented within this section, which have been estimated using an Economic Impact Model, are expressed in real/constant prices with 2018 as the base year. This is consistent with the reference year used for the original application to ensure comparability. This is not to say 2018 data has been used; the latest available data and the relevant forecast year have been taken in every case. The construction-spend figures provided by the applicant have been adjusted accordingly for consistency.
[11] The nature of employment in the majority of sectors means that the jobs directly sustained by the construction of the proposed wind farm are on-site and based in the local area in which the proposed wind farm is located. The applicant has also informed us that local civil contractors tend to be used for the construction of their developments. Employment in the professional services sector sustained during the construction phase could, however, be located off-site and/or be remote in nature. This is also the case for employment sustained once the proposed wind farm is operational.

Table 13.1: Direct benefits from the construction phase, Northern Ireland

	Job years	Wages (£2018m)	GVA (£2018m)
Construction	76	2.6	7.0
Professional, scientific & technical	4	0.5	0.7
Total	**80**	**3.1**	**7.8**

Source: RES, Oxford Economics. Note: May not sum due to rounding.

Indirect and induced construction phase impacts

13.2.13 The indirect (or supply chain) effects arising from the construction related activity within the region have been estimated using the 2021 Northern Ireland input-output tables. Construction activity typically has strong "backward linkages" with sectors such as building materials, architectural services, legal services, and insurance. These linkages tend to result in the creation of economic activity elsewhere in the local economy. This makes investment in construction particularly effective in fuelling economic growth, typically offering high output multipliers. The proposed investment could offer a regional GVA multiplier of 1.8 (once the indirect and induced effects have been accounted for). This means that for every £100 of GVA directly stimulated in the construction sector in Northern Ireland, an additional £80 of GVA could be supported through indirect and induced impacts.[12]

13.2.14 Indirect GVA impacts in Northern Ireland are therefore estimated to be approximately £4.1 million, creating or sustaining an estimated 80 job years of employment, with associated wages of £2.0 million (Table 13.2).

13.2.15 As both direct and indirect wages generated through the construction phase are spent on goods and services in the wider economy, a further round of benefits would spread through the region. This helps to support activity in sectors like retail and leisure outlets, companies producing consumer goods, and a range of service industries. It is estimated that this induced effect would generate £2.1 million in GVA, supporting wider employment of approximately 40 job years alongside £840,000 of wages. As a result of the numerous rounds of supply-chain and consumer spending that occur in addition to the direct impacts, the total benefits (direct, indirect, and induced) are spread across multiple sectors of the Northern Irish economy (Diagram 13.3).

Table 13.2: Total (direct, indirect, and induced) benefits from the construction phase, Northern Ireland

	Job years	Wages (£2018m)	GVA (£2018m)
Direct	80	3.1	7.8
Indirect	80	2.0	4.1
Induced	40	0.8	2.1
Total	**200**	**5.9**	**14.0**

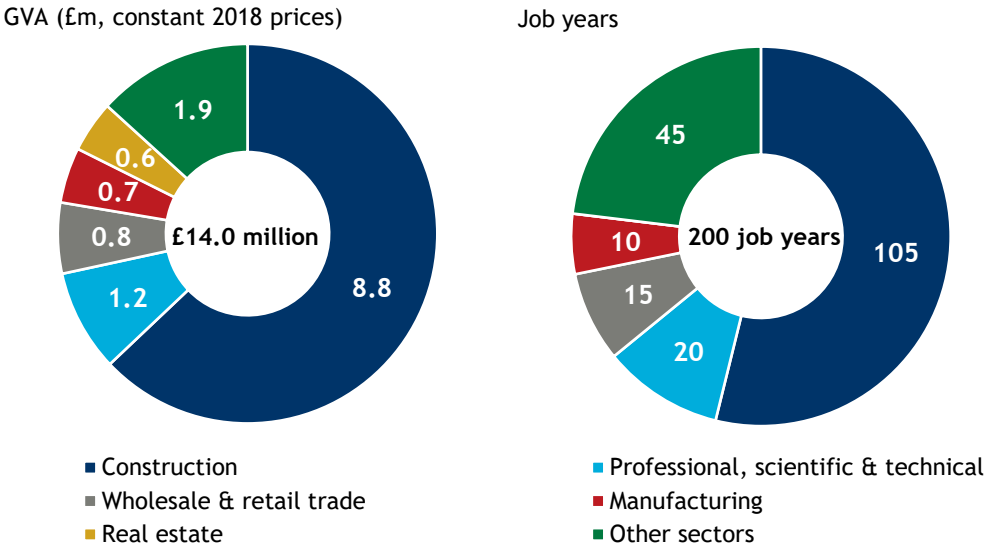
Source: RES/Oxford Economics. Note: May not sum due to rounding.

13.2.16 It is worth reiterating that impacts laid to date in this chapter relate to the regional level. An exact amount attributable to Mid and East Antrim is outside the scope of this report. Invariably it depends on the location of the companies appointed that enjoy the direct benefits and the location of the suppliers who provide them with the materials. However, the applicant has informed Oxford Economics that their previous projects have utilised local contractors wherever possible and it remains their intention to use local suppliers and labour for much of the Balance of Plant (BoP) work. It makes sense, not least in terms of the costs and distance argument, to use local firms. That is, local firms can prove to be more cost

[12] These figures relate to Oxford Economics' estimates of Type II multipliers. Type II multipliers capture direct, indirect, and induced effects.

efficient given the closer proximity to required capital, personnel, and resources. However, even if no local labour was employed by the applicant, those workers engaged in construction would still be operating in the local area, and likely to spend money in the local economy throughout their period of employment. This means that Mid and East Antrim would receive some economic uplift.

Diagram 13.3: Total sectoral (direct, indirect, and induced) GVA and employment benefits from the construction phase, Northern Ireland



Source: RES, Oxford Economics. Note: May not sum due to rounding.

Economic impact of the operational phase

Direct operational impacts

13.2.17 The applicant has informed Oxford Economics that the proposed wind farm would sustain one direct full-time equivalent (FTE) job a year in Northern Ireland once operational in July 2030 (Table 13.4).[13] Using our forecasts for productivity in the electricity, gas, steam and air conditioning sector, the associated direct GVA and wage impacts have been estimated. Given the small scale of the development, we assume zero displacement.

13.2.18 The total direct wage impact is estimated to be £40,300 per year. After applying productivity estimates, the on-going direct employment is expected to generate £410,000 of GVA a year. Given the 30-year lifetime of the proposed wind farm, this equates to a cumulative £1.2 million of direct wages and more than £12 million of direct GVA in Northern Ireland over the entirety of the operational phase.[14]

13.2.19 The electricity industry plays a significant role in enabling other parts of the economy. Electricity, gas, steam and air conditioning is also one of the most productive sectors in Northern Ireland, with output per worker significantly above that of the region overall.

[13] Please note that, in this section, we refer to 'jobs' rather than 'job years' as was the case for the construction phase. This is because the construction phase will require workers for periods of weeks and/or months, rather than being employed on an annual basis. However, for operations, we consider jobs on an annual basis over the course of the proposed wind farm's lifespan. Please see the Annex for more information.
[14] Oxford Economics' productivity forecasts over the operational phase have been taken into account in calculating the cumulative GVA and wage impacts.

Table 13.4: Direct annual benefits from the operational phase, Northern Ireland

	Job years	Wages (£2018m)	GVA (£2018m)
Total	**1**	**0.04**	**0.41**

Source: RES, Oxford Economics. Note: May not sum due to rounding.

Indirect and induced operational impacts

13.2.20 Using input-output tables to identify the supply-chain spending, it is estimated that the proposed wind farm is likely to create or sustain an additional two indirect jobs in the Northern Irish economy each year, with average wages of approximately £25,900 per worker, and GVA of £160,000 per year (Table 13.5). As those employed directly and indirectly spend part of their wages, there could be a further job sustained in the Northern Irish economy, with associated average induced wages per worker of approximately £22,400, with a total induced GVA of £41,700.

13.2.21 Consequently, we estimate the proposed wind farm could support four jobs in Northern Ireland per year with an associated wage bill of £110,000 and GVA contributions of £620,000.

Table 13.5: Total (direct, indirect, and induced) annual benefits from operational phase, Northern Ireland

	Jobs	Wages (£2018m)	GVA (£2018m)
Direct	1	0.04	0.41
Indirect	2	0.05	0.16
Induced	1	0.02	0.04
Total	**4**	**0.11**	**0.62**

Source: RES, Oxford Economics. Note: May not sum due to rounding.

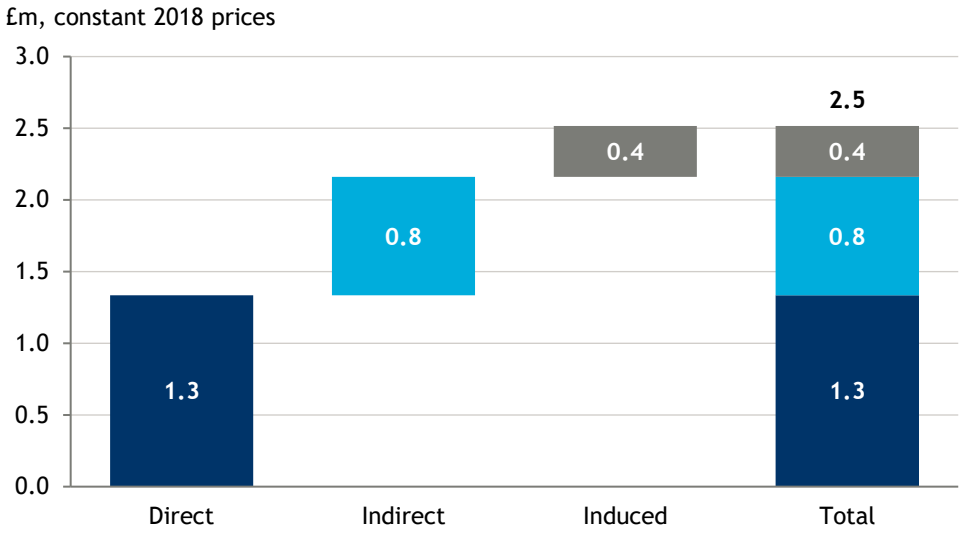
Fiscal benefits

13.2.22 The economic activity arising from the proposed wind farm would also lead to a range of fiscal benefits as a result of the tax receipts that are contributed to the public purse. These tax benefits occur through several channels, including directly through payments of corporation tax, income tax, national insurance contributions (NICs), and other direct taxes. Additionally, further tax revenues would be collected as a result of supply chain (indirect) and wage consumption (induced) effects.[15]

13.2.23 During the construction period of the proposed wind farm, tax receipts could reach £2.5 million (including direct, indirect, and induced impacts). £1.3 million of this would be generated through direct activity, with an additional £820,000 and £360,000 through indirect and induced impacts, respectively.

[15] Wages that would be generated directly from the operations of the proposed wind farm would be subject to income tax and national insurance contributions (NICs). In modelling labour tax revenues that could be collected by the Treasury, we use the latest income tax and NIC rates, thresholds, and personal allowance information, and apply these to the expected sectoral earnings by decile.

Diagram 13.6: Total fiscal impact of the proposed wind farm's construction phase, UK



Source: RES, Oxford Economics. Note: May not sum due to rounding.

13.2.24 In addition, the operational phase could provide fiscal revenues of £180,000 per year from taxes. Over the course of the project's 30-year lifetime, this could lead to a cumulative £5.4 million in tax revenue.

13.2.25 Alongside increased tax revenue throughout the operation of the proposed wind farm, the development will generate increased rates revenue for government over the lifespan of the project. To estimate rates, we have used information provided by the applicant regarding the rateable value of the proposed development, alongside guidance from the Department of Finance on business rates for wind farms and turbines as part of Reval2023.[16] With an estimated rateable value of £723,300 per annum, the proposed wind farm would provide total rates of over £518,600 per annum, or £15.6 million over the course of its lifetime.[17] These figures, however, are likely to be an underestimate, with Reval2026 set to increase rates on wind farms.

13.2.26 The fiscal benefits presented above are in gross terms, and do not factor in any potential subsidies or tax credits. The recently announced Renewable Energy Price Guarantee (REPG) scheme could potentially provide the applicant with funds as it seeks to incentivise investment in renewable energy projects in Northern Ireland. However, at the time of writing, the full design has yet to be announced and so is unable to be accounted for in this report. For further information on the REPG scheme and how it relates to the proposed wind farm, please see section 13.4.6.

Non-quantified impacts

13.2.27 A range of literature exists exploring the impacts of wind farms on tourism. The professional and academic research carried out to date has not presented definitive evidence that wind farm development is harmful to tourism. A 2021 study conducted by BiGGAR Economics analysed 44 wind farm case studies across Scotland, finding no evidence of a link between

[16] Department for Finance. *Guidance for Reval2023*. Accessed 19th January 2026. The rateable value is provided by the applicant based on the methodology used for the 2023 Reval. This methodology looks at estimated output based on the installed capacity (37.8MW) and P90 capacity factors to arrive at an estimated yield/output.

[17] To arrive at this figure, we take the rateable value for the proposed wind farm and multiply it by the projected lifespan of 30 years. Using poundage rates for the Mid and East Antrim Council area, provided by the Department for Finance, we can then arrive at the total estimated rates payable. Poundages are available here: *https://www.finance-ni.gov.uk/articles/rate-poundages*.

wind farm development and trends in tourism employment. Their research also analysed trends in tourism employment in the immediate vicinity of 16 wind farm developments with a capacity of at least 10 MW that became operational between 2015 and 2019, with 11 of the 16 areas experiencing more growth in tourism than on average across the region. In fact, for 12 of the wind farms, tourism employment in the locality had outperformed their respective local authorities.[18] Even in studies where modest negative economic impacts are presented at the local level, emphasis is placed to not consider these estimates in isolation. Instead, the number of jobs and income arising in the construction and operation of each development should be considered when assessing the net impact of a proposed wind farm on a local economy. Additionally, the authors contend that the presence of a wind farm is only likely to affect the decision of a negligible fraction of tourists as to whether to return to an area.[19] Whereas it is possible that there is an element of self-selection involved, whereby wind farms do not receive approval in areas where impacts may be most detrimental, the evidence also shows that the vast majority of tourists are not deterred from visiting a particular location because of the presence of wind turbines.[20]

13.2.28 Residents in the local area may also be concerned regarding the potential negative impact of the proposed wind farm on house prices, with evidence suggesting a reduction of five to six percent for housing with a visible wind farm of average size (11 turbines) within two kilometres of the site.[21] However, the evidence on the magnitude of this effect in the UK is mixed. A study by the Centre for Economics and Business Research in 2014 examined Land Registry data covering more than 82,000 property transactions from 1995 to 2013, all within five kilometres of wind farms across England and Wales, finding that local house prices continued to perform as would have been expected in the absence of the wind farms. Instead, the evidence suggests that the local housing market is driven more by macroeconomic and county-wide trends rather than the presence of wind farms.[22] Moreover, a 2023 meta-regression analysis of wind turbines and property values across 720 estimates from 250 hedonic pricing studies globally found an average reduction in property values of 0.68 percent for properties 1.89 miles away, which turns to zero beyond 2.8 miles.[23]

13.2.29 The evidence for impacts on both house prices and tourism is mixed, with any negative impacts limited in scale. However, this contrasts to the estimated strong positive economic impacts associated with developments such as the proposed wind farm, and the general need for greater levels of renewable electricity generation in order to meet national, regional, and local climate targets. For more on how the proposed wind farm contributes to these targets, please see section 13.4.

13.3 Socioeconomic Context

13.3.1 This section considers the current economic envionment at the regional and local levels. This is important in helping us to understand the relative performance of the Northern Ireland and Mid and East Antrim economies, and placing the proposed wind farm in this context. In

[18] BiGGAR Economics (2021). *Wind Farms & Tourism Trends in Scotland*. Accessed 23rd January 2026.
[19] Scottish Government. *Economic impacts of wind farms on Scottish tourism: research findings*. Accessed 22nd January 2026. This research also assumed perfect visibility of wind farms in calculating its estimates. The authors also note that their estimates are a worst-case scenario, and do not factor in the possibility for wind farms to be a tourist attraction. For the proposed wind farm, a Landscape and Visual Impact Assessment (Chapter 4) has been carried out that, we understand, outlines the potential visual impacts of the proposed scheme and assesses the potential effects. These effects have been considered proportionately within the overall cost-benefit balance of the scheme. We understand that the assessment has also been carried out to minimise visual effects that may impact on cultural and natural heritage assets, thereby reducing any potential negative tourism effects.
[20] A study into visitor attitudes to wind farms conducted in 2011 by Mintel on behalf of the (then) Northern Ireland Tourism Board found that only 5% of tourists would avoid returning to an area with wind farms.
[21] Gibbons, S (2013). *Gone with the wind: valuing the local impacts of wind turbines through house prices*.
[22] Renewable UK. *Do wind farms affect house prices?*. Accessed 23rd January 2026.
[23] Schütt, M. (2024). *Wind Turbines and Property Values: A Meta-Regression Analysis*.

discussing GDP growth and the labour market, these have relevance for private sector development, job creation, and renewable energy development.

Regional trends

13.3.2 The Northern Ireland labour market has experienced moderate growth over the past decade to 2025, despite the difficult economic climate caused by the Covid-19 pandemic and high inflation rates. Across the region, GVA and jobs grew by 2.1% and 1.3%, respectively, on average over this period, outperforming the UK's average growth rates for GVA (1.5%) and jobs (0.8%).

13.3.3 Northern Ireland's ILO unemployment is also low relative to the UK's other regions, with the regional unemployment rate sitting at 2.1% in 2025, well below the UK average of 4.7%. However, this is disguising the more engrained economic challenge of persistently high economic inactivity levels within the regional economy, with an estimated 26.4% of the working age population being counted as economically inactive at the most recent estimate.

13.3.4 Despite the above average growth over the decade, productivity levels grew at 0.8%, broadly in line with the national average of 0.7%, meaning another long-standing economic challenge for Northern Ireland of a persistent productivity gap relative to the UK remains. The productivity gap between Northern Ireland and the UK has largely remained the same over the past decade, standing at £8,600 per worker in 2025. This productivity gap can be partially explained by the region's sectoral makeup, as it has a high relative employment share of typically lower value adding sectors such as wholesale & retail, human health, and agriculture. It is also relatively less specialised in typically higher productive industries such as information & communication and professional services.

13.3.5 Northern Ireland's productivity gap with the UK is expected to increase to £9,300 by 2035 as the economic outlook for the region is weaker over this period than the previous decade. While we forecast that jobs will still increase, the annual growth rate is predicted to slow to 0.7%, lagging the forecast for the UK as a whole (0.8%). GVA growth is forecast to remain relatively stable at 1.7% over the period, while the UK is forecast to see an improvement in its growth rate to 1.8%.

13.3.6 Private sector investment in the region is required if Northern Ireland is to experience faster employment and GVA growth. It will also be required if the region is to close the productivity gap with the rest of the UK.

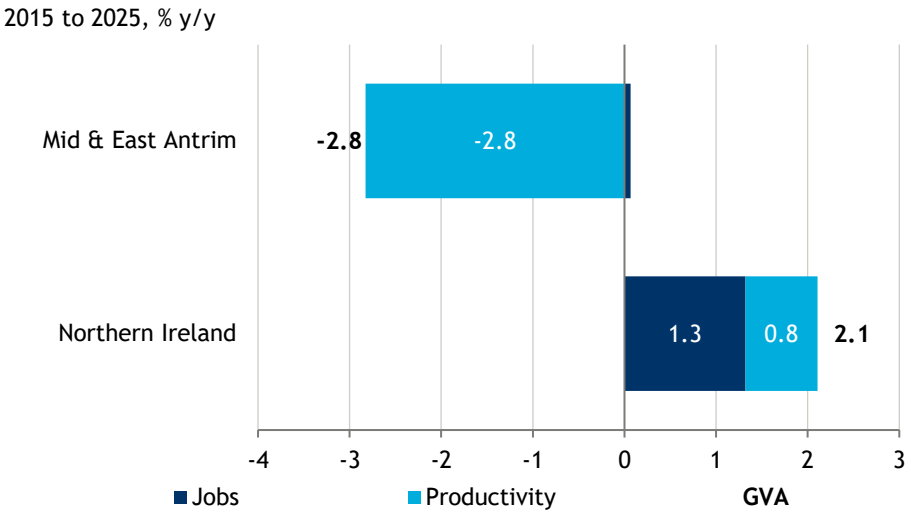
Local trends

13.3.7 This section provides a brief overview of the social and economic trends affecting the Mid and East Antrim Council area. As discussed below, the local economy has underperformed relative to Northern Ireland over the last ten years, and development and investment in the area is required to better utilise the underemployed and create demand for higher skilled jobs locally.

13.3.8 In the decade from 2015 to 2025 economic growth in Mid and East Antrim has underperformed relative to the Northern Ireland average in terms of both GVA and employment growth. Mid and East Antrim has experienced an average annual contraction in GVA of 2.8% per year, driven by a sharp decline in GVA contributions from manufacturing. The manufacturing sector experienced an average contraction of GVA of 12.6% per year, causing its share of total GVA in the area to fall from 49% to 18% over the period.

13.3.9 This sharp decline in GVA has resulted in falling productivity in Mid and East Antrim of 2.8% per year in the decade from 2015. GVA per worker has fallen from £83,800 to £62,900 in 2025, whereas productivity across the broader region has risen from £55,600 to £60,200. Therefore, both the local and regional economies have productivity below the UK average of £68,700.

Diagram 13.7. Jobs, productivity, and GVA growth, Northern Ireland and Mid and East Antrim, 2015-2025



Source: ONS, Oxford Economics

13.3.10 Mid and East Antrim's poor productivity performance is partially explained by its lack of representation in the sectors of the economy that are driving economic growth in Northern Ireland and the rest of the UK. For example, the highly productive information & communication sector accounts for less than 1% of all jobs, while wholesale & retail accounts for a much larger share of the local labour market, at 18%. The wholesale & retail trade sector is expected to see minimal jobs growth in the coming years due to the increasingly digitized nature of retail trade which, given its relative importance to the local economy, limits its potential for jobs growth. Another key sector of the local economy, manufacturing, is expected to continue to contract in the coming years, losing more than 1,200 jobs over the coming decade.

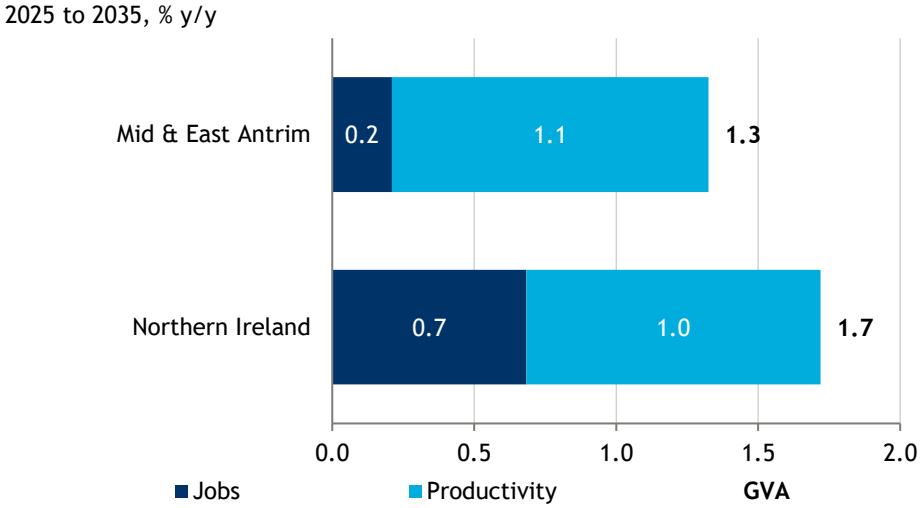
13.3.11 An analysis of wages in the local area also suggests a degree of out-commuting by local residents in search of better paid work. Residence-based wages within Mid and East Antrim have consistently outperformed that of workplace-based wages, and the gap is expected to widen in the coming decade. Census data from 2021 revealed that almost one in five workers travelled at least 20 kilometres to work, notably above the average for the region (14.2%).

13.3.12 Data from NISRA on the number of "good jobs" in Mid and East Antrim appears to corroborate this finding. A "good job" according to NISRA is one in which the worker has a permanent contract, a non-zero hour contract, and is earning the real living wage. The "good job" rate in Mid and East Antrim in 2025 was 66.6%, below the Northern Ireland average (69.0%) and well below the rate in the highest performing council area of Belfast (74.8%).[24]

13.3.13 In the coming decade, the above factors will cause jobs growth in Mid and East Antrim to slow, trailing the regional average. Productivity and GVA growth are expected to pick up compared to the previous decade, but will still trail the Northern Ireland average. As a result, a wide productivity gap between the local economy and the rest of the UK will remain in place.

[24] NISRA. *Good jobs by LGD*. January 2026.

Diagram 13.8. Jobs, productivity, and GVA growth, Northern Ireland and Mid and East Antrim, 2025-2035



Source: ONS, Oxford Economics

13.3.14 The above analysis has shown that the local economy faces some significant short and long-term economic challenges. Additionally, the muted employment outlook is likely to make it more challenging for the Council to address economic needs and development. Therefore, it is important to ensure continued investment into the economy so as to promote opportunities and economic growth prospects. Although wind farm construction provides a number of highly skilled job opportunities, there are also considerable opportunities for general trade roles that would promote opportunities for local employment.

13.3.15 Indeed, investment into local climate change assets would help to support employment within the Council area, but also more widely via multiplier effects. Investment in such projects would also strengthen the UK's overall energy networks, helping to achieve the UK Government's target of becoming a clean energy superpower, and reducing the UK's reliance on energy imports. In doing so, the proposed wind farm would also help to mitigate against rising energy costs and instability in the energy market.

13.4 Energy and environmental benefits

13.4.1 Although the proposed wind farm would bring positive economic benefits to the local and regional economies, its key role should be seen as its contribution towards achieving governmental environmental targets.

13.4.2 The UK Government has set out its plan to make Britain a clean energy superpower on its way towards achieving net zero.[25] In this context, the current Labour government's Industrial Strategy placed clean energy as a central component of UK government policy for the coming decades, with removing barriers to onshore wind farms an important factor in harnessing the UK's clean energy potential. The UK currently lags its European peers in key green metrics; Germany has almost twice as many renewable jobs per head of population as the UK, Sweden almost three times and Denmark almost four times as many. Many countries offer sizable subsidies and incentives to secure these internationally mobile investments, but the drive for clean energy presents considerable opportunities for UK manufacturing investment if it can be harnessed. The Climate Change Committee estimates that, by 2030, up to 725,000 jobs could be created in low carbon sectors and that moving to clean homegrown sources of electricity will reduce the UK's dependence on volatile fossil fuel imports, improving energy security and helping to protect billpayers from rising and volatile energy prices.[26]

[25] UK Government. *Make Britain a Clean Energy Superpower*. Accessed 14th January 2026.
[26] UK Government. *Invest 2035: the UK's Modern Industrial Strategy*. Accessed 23rd January 2026.

13.4.3 For their part, the Northern Ireland Assembly published its 'Path to Net Zero' energy strategy in 2021, setting out the region's pathway to achieving net zero energy by 2050. Renewable energy will clearly have a huge role to play in meeting these goals, with the Northern Irish Assembly setting a target to achieve 80 percent of electricity demand being met from renewable electricity sources by 2030. Northern Ireland steadily increased its renewable energy usage up to a peak of 51.6 percent of total energy usage in the 12-month period to November 2022. However, since then, renewable energy usage has declined steadily, falling to 44.2 percent for the most recent 12-month period (October 2024 to September 2025).[27]

13.4.4 Wind power is overwhelmingly the most important source of renewable energy in Northern Ireland, with 82.2 percent of all renewable electricity generation over the 12-month period to September 2025 coming from wind. Onshore wind is already being utilised to support the net zero transition across the regional economy, with the Department for Infrastructure funding electric buses powered by hydrogen produced through local renewable wind energy.[28]

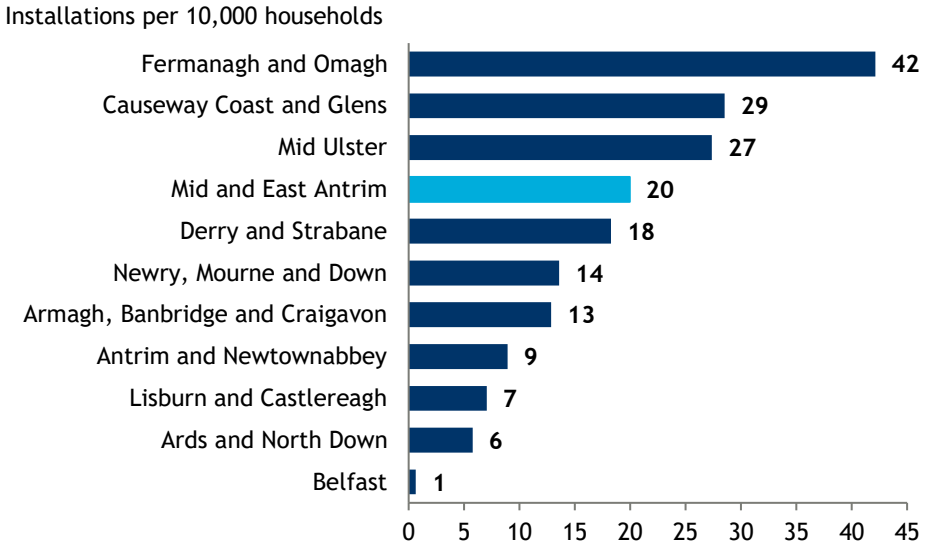
13.4.5 Due to the strength of Northern Ireland's wind energy resources, it is important that its potential is maximised in order for the region to meet its targets for renewable energy usage, and net zero more broadly. As the National Grid anticipates electricity demand to increase by 50% by 2035, and to double by 2050, as we decarbonise the energy that is used for things like heating and transport, it is important to continue to build on the UK's renewable energy generation to meet these challenges.[29]

13.4.6 Northern Ireland's Department for the Economy also announced the introduction of a Renewable Energy Price Guarantee (REPG) scheme in 2025 that seeks to incentivise increased renewable electricity generation in the region, and position Northern Ireland as a competitive and attractive destination for investment. The scheme aims to deliver more stable and predictable energy prices and is a critical step towards achieving 80 percent renewable electricity consumption by 2030, as achieving this target relies on the availability of a sufficient pipeline of renewable projects. Although the final design is yet to be announced, the scheme is initially to be targeted to well-established technologies that are capable of delivering clean electricity at the lowest possible cost to consumers, and will be open to developers who have planning permission and will provide at least 5 MW of renewable energy capacity. For onshore wind farms that are part of the scheme, discounted electricity bills for those living close to REPG sites are to be explored by the Department for the Economy.[30]

13.4.7 At the local level, the Mid and East Antrim Borough Council set out its Climate and Sustainability Action Plan for 2023-2027, considering how the Council plans to address climate change in the borough and plans for delivering on its climate and sustainability commitments. This includes a number of targets, including supporting the borough to reach net zero by 2050 as it seeks to safeguard the future of the economy, society, and envrionmental assets. The Council's targets are to be delivered across six key themes, one of which refers to buildings and energy, whereby the Council aims to promote the use of renewable energy.[31]

[27] Department for the Economy. *Electricity consumption and renewable generation statistics*. Accessed 20th January 2026.
[28] Department for the Economy. *Energy Strategy - Path to Net Zero Energy*. Accessed 20th January 2026.
[29] National Grid. *The Great Grid Upgrade*. Accessed 23rd January 2026.
[30] Department for the Economy. *REPG*. Accessed 23rd January 2026.
[31] Mid and East Antrim Borough Council. *Climate and Sustainability Action Plan 2023-2027*. Accessed 23rd January 2026.

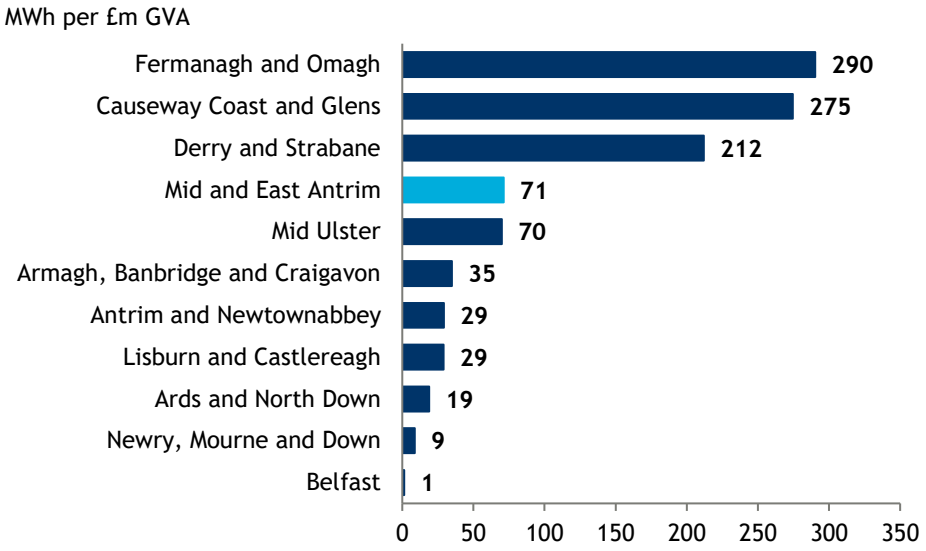
Diagram 13.9. Local authority onshore wind installations per 10,000 households, 2024



Source: ONS, Oxford Economics

13.4.8 The Council aims to lead by example in its sustainability commitments, and it does perform above average across the region in terms of the number of onshore wind installations per 10,000 households (Diagram 13.9) and in renewable energy generation relative to the size of the local economy (Diagram 13.10). However, it is notably behind the local authority leaders for both metrics, with less than half the number of installations per 10,000 households as in Fermanagh and Omagh, and less than a quarter of its renewable energy generation relative to the size of its economy.

Diagram 13.10. Local authority renewable electricity generation per £m GVA, 2024



Source: ONS, Oxford Economics

13.4.9 The proposed wind farm has a 37.8 MW capacity, consisting of nine turbines with a capacity of 4.2 MW each. Using an estimated load factor of 0.46 for the site provided by the applicant,

which is comparable to estimates given by the Department for Energy Security and Net Zero,[32] we estimate that the amount of electricity that could be produced by the proposed wind farm is greater than 152 GWh per year.[33] This is equivalent to the electricity needs of over 45,000 homes each year,[34] or more than 70 percent of the estimated current housing stock in Mid and East Antrim.[35]

13.4.10 In addition to providing a valuable contribution to meeting electricity demand in the region, the proposed wind farm will also aid in the reduction of fossil fuels from the energy mix, an essential component of the region's clean energy strategy. While the proposed wind farm will reduce carbon emissions, it is acknowledged that the construction of wind farms would also produce emissions. Current literature shows that the carbon payback period—the time frame needed for a turbine to offset the carbon emissions generated throughout its life cycle—is relatively short for onshore wind farms. A study which focused largely on onshore wind farms in Northwestern Europe finds that the payback period of wind turbines across the region averaged 5.3 months.[36] In addition, the Director of Centre for Energy and the Environment at the University of Exeter said that the carbon payback for onshore wind farms reduces with turbine size. He states that "[y]ou can achieve this payback with a small turbine and as the turbine size increases the payback is shorter. For large three-megawatt turbines we are talking about a 75-day payback. That is very quick".[37]

13.4.11 As renewable energy usage increases, and its costs come down, the generation of electricity through wind could have financial benefits in addition to its obvious climate effects. A recent study by academics at Univeristy College London (UCL) modelled the long-term financial benfits of UK investment in wind energy generation. From 2010 to 2023, they find that wind power delivered a net benefit of £104.3 billion to UK consumers—£14.2 billion from lower electricity prices and £133.3 billion from reduced natural gas prices, partially offset by £43.2 billion in wind energy subsidies.[38] Given the costs of fossil fuel shocks to households, businesses, and the Exchequer in recent years, a Climate Change Committee report in the UK also found that Net Zero is a more cost-effective path for the UK economy than continued reliance on fossil fuels.[39]

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[32] According to RES, wind turbine efficiency has significantly increased over the last years, and average capacity factors of older projects cannot be compared to modern wind farm designs. Furthermore, as projects age, their performance will degrade further, thus reducing the average capacity factor even more. In fact, onshore wind capacity factors are increasing year on year due to technological innovation. This is recognised by the Department for Energy Security and Net Zero who in their CfD (Standard Terms) Regulations document assume an onshore wind capacity factor (>5MW) of 44.8% for new build projects (delivery years 2026-2029): *https://assets.publishing.service.gov.uk/media/65e85ee662ff48001a87b243/cfd-ar6-standard-terms-notice.pdf*. Topographic and landcover features such as hills, ridgelines and forestry can influence local wind resource, turbulence intensity and wake behaviour. Whether they materially reduce wind speeds, and therefore capacity factor/load factor, depends on the specific turbine layout, hub height, rotor diameter, prevailing wind directions and micro-siting. Wind farm siting involves balancing multiple objectives: energy yield, grid connection, environmental effects, planning policy, aviation/radar constraints, ecology, cultural heritage and landscape/visual considerations.

[33] Energy storage can help mitigate short-term variability and improve the alignment between generation and demand, which in turn may enhance the effective utilisation of the electricity generated by the wind farm. In terms of displacement of fossil fuel generation, this is influenced not only by the performance of the co-located storage but also by wider grid conditions, including demand patterns, availability of other generation sources, interconnection, and system operator dispatch decisions. As such, the relationship between installed renewable capacity (with storage) and the amount of fossil generation displaced is not necessarily one-to-one.

[34] Multiplying the proposed wind farm's load factor and overall capacity by the number of hours in a standard year (8,760) provides an estimate for electricity generation. The UK average domestic household electricity consumption (temperature adjusted) is taken from figures published by the Department for Energy Security and Net Zero: *https://www.gov.uk/government/statistics/energy-consumption-in-the-uk-2025.*

[35] Estimated housing stock is taken from Oxford Economics internal forecasting database.

[36] Dammeier et al (2019). *Space, Time, and Size Dependencies of Greenhouse Gas Payback Times of Wind Turbines in Northwestern Europe*. Environmental Science Technology. Volume 53, Issue 15, p. 9289-9297.

[37] Devon Climate Emergency. *Devon can become the heart of a 'Southwest powerhouse' fuelled by onshore wind*. Accessed 23rd January 2026.

[38] O'Shea, C., Horne, P., and Maslin, M. (2025). *Modelling the long-term financial benefits of UK investment in wind energy generation*. UCL Open Environment.

[39] Climate Change Committee. (2026). *Supplementary analysis of the Seventh Carbon Budget.*

13.5 Conclusions

13.5.1 The proposed wind farm would aid the Northern Ireland Assembly in meeting its climate target of 80 percent of electricity demand being met by renewable energy by 2030. With an estimated annual electricity production of 152 GWh, the proposed wind farm could provide electricity equivalent to the needs of over 45,000 homes each year, or more than 70 percent the current housing stock in Mid and East Antrim.

13.5.2 The proposed wind farm would also provide an economic boost to both the local and regional economies, creating employment and stimulating economic activity during its construction and operational phases. There is a strong likelihood of local labour involvement during the construction of the proposed wind farm, providing an economic boost to the local areas.

13.5.3 The local and regional economy both face muted economic growth prospects, and a persistent productivity gap relative to the UK economy more broadly. Investment of the type and scale of the proposed wind farm could provide benefits across the region, helping to support employment opportunities that would not otherwise have existed. It can also bring about catalytic benefits which can in turn attract further investment into Northern Ireland. For example, the knowledge, expertise and skills accumulated can act as a contributing factor to future investments in the area. Funding for such developments is usually project specific and involves considerable sunk costs. Therefore, if the proposed wind farm does not take place, the benefits, including the catalytic impact, are unlikely to be realised elsewhere in the Northern Irish economy.

13.5.4 The proposed wind farm is estimated to involve a capital spend of approximately £77 million in nominal prices at the time of construction. Of this total, £29 million would be realised within the regional economy. The projected construction phase is estimated to create or sustain 200 total (direct, indirect and induced) job years of employment, £5.9 million of wages, and £14.0 million of GVA to the Northern Irish economy.

13.5.5 The estimated total (direct, indirect, and induced) annual benefits realised in Northern Ireland by the operational phase of the proposed wind farm includes four jobs, £110,000 of wages, and £620,000 in GVA.

13.5.6 The proposed wind farm is also expected to provide a fiscal injection in terms of increased tax revenues. Estimated tax revenues over the construction phase are estimated to be £2.5 million, with an additional £180,000 expected in tax revenues for each year of operation. Additionally, annual business rates for the proposed wind farm are estimated at over £518,600.

13.6 Annex 1

Glossary of definitions

Backward linkages: refers to the channels through which money, materials, or information flows between a company and its suppliers, creating a network of economic interdependence. In terms of this study, it refers to the fact that the construction phase of the proposed wind farm would require the purchase and use of raw materials from sectors like building materials, steel, architectural services etc., which themselves would create supply-chain jobs in the economy.

Full-time equivalents (FTE): all the modelling completed by Oxford Economics, and all the effects associated with this modelling, assumes that employment is expressed in terms of FTE, which is important given the prevalence of part-time working especially in the construction sector. Accordingly, two part-time workers make up one full-time equivalent worker.

Gross value added (GVA): measures the value of goods and services produced in an area, industry or sector of an economy and is equal to output minus intermediate consumption.

Direct impact: defined as the economic activity and number of people employed by the proposed wind farm (both in construction and in on-going roles).

Indirect impact: defined as economic activity that is supported because of the procurement of goods and services during construction and operations, throughout the economy. It includes not just purchases by occupiers of the proposed wind farm, but subsequent rounds of spending throughout the supply chain.

Induced impact: defined as economic activity and employment supported by those directly or indirectly employed spending their wage income on goods and services in the wider UK economy.

Job years: any references to the employment benefits from the construction phase of the proposed wind farm are expressed in terms of "job years". This is necessary given that construction phase activity normally spans more than a single year. A job year does not necessarily mean one job. Instead, it refers to the amount of activity that is required. For example, two people could be employed for six months—this would equate to one job year of work. Alternatively, one person could be employed for two years—this would equate to two job years of employment. The term job years is not needed when talking about the on-going phase, as these benefits are all expressed in per annum terms.

Nominal prices: those which reflect the current situation and are not adjusted for seasonality or inflation.

Real prices (2018 prices): refers to values that have been adjusted to remove the effects of inflation and are thus measured in terms of the general price level in some base reference year. In this case, 2018 is the base year as it is consistent with the original submission.

Understanding economic impact assessments

Introduction

Economic impact modelling is a standard tool used to quantify the economic contribution of an investment or series of investments in an economy. As set out earlier in the report, the economic impact analysis outlined here estimates the contribution of the proposed wind farm through three channels (direct, indirect, and induced impacts).

These three channels form the estimates of the quantifiable economic benefits of the proposed wind farm. However, in practice there may be a range of wider economic benefits that occur as other economic agents respond 'dynamically' to the investment and operations of the proposed wind farm. While not typically quantifiable, these benefits nevertheless form an important part of the economic benefits of the proposed wind farm. These effects can include for instance the proposed wind farm acting as a catalyst for further clustering and agglomeration effects, providing employment opportunities for local residents, and unlocking additional growth in particular sectors.

Direct impacts

The applicant has provided Oxford Economics with the expected capital expenditure for the construction phase and provided estimates of the direct employment the proposed wind farm would create once fully operational.

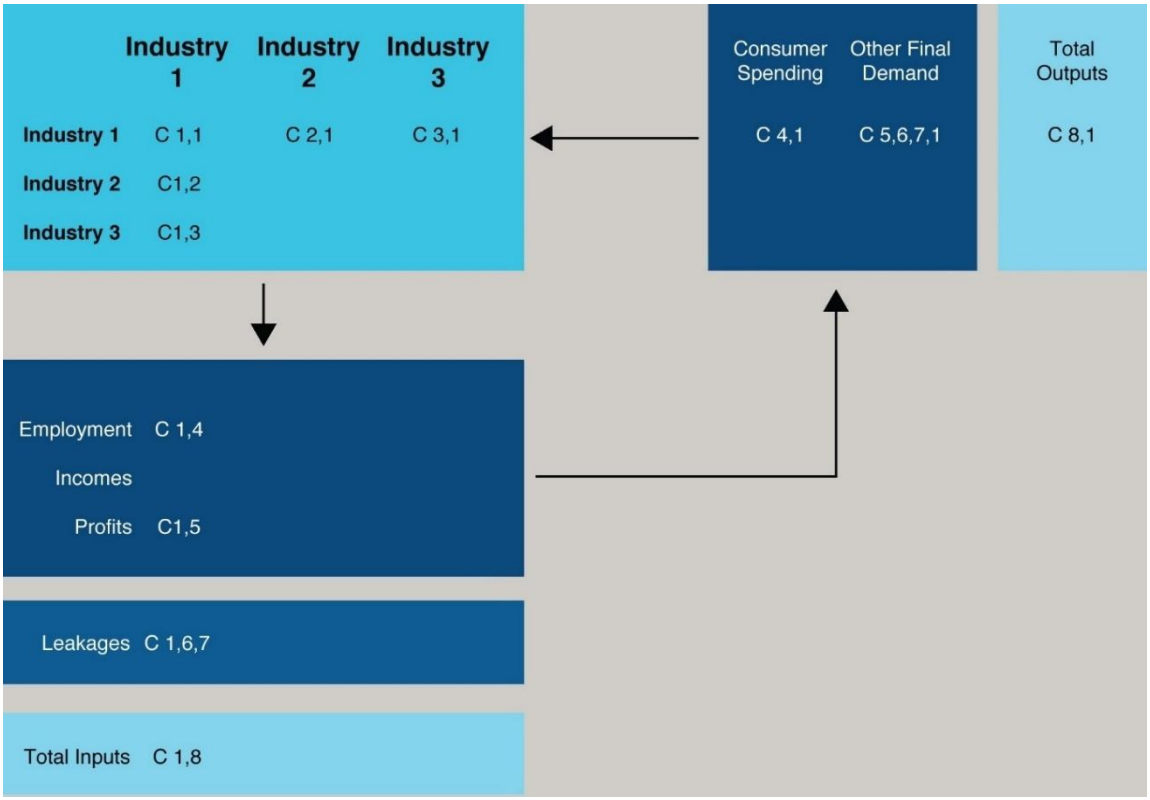
The economic output produced in these sectors is translated to GVA, jobs (using local, regional, or national productivity, where appropriate), and wages, using data from published input-output tables. Oxford Economics' forecasts of sectoral productivity are also used at the national, regional and/or local level.

Indirect and induced impacts

Indirect and induced impacts were estimated using an input-output model. An input-output model gives a snapshot of an economy at any point in time. The model shows the major spending flows from: final demand (i.e., consumer spending, government spending, investment, and exports to the rest of the world); intermediate spending patterns (i.e., what each sector buys from every other sector—the supply chain in other words); how much of that spending stays within the economy; and the distribution of income between employment and other forms such as corporate profits. Diagram 13.11 provides an illustrative guide to a stylised input-output model. In building the impact model, the latest input-output tables published by the Northern Ireland Statistics and Research Agency (NISRA) for the Northern Irish economy have been adopted.[40]

[40] Northern Ireland Statistics and Research Agency (NISRA) (2026). *The Analytical Input-Output tables | Northern Ireland Statistics and Research Agency*. Accessed 7th January 2026.

Diagram 13.11: A stylised input-output model



Source: Oxford Economics

Displacement

Displacement can be defined as the proportion of impacts generated by the proposed wind farm which are offset by reductions in economic activity elsewhere.

In order to consider the potential for displacement in the construction sector, the outlook for employment in the sector was reviewed. This analysis indicates that the sector would have capacity to absorb the additional activity arising from the proposed wind farm, which is unlikely to result in a significant degree of displacement when placed into context of the sizeable construction sector. It is therefore assumed that no displacement occurs within the construction phase.

Similarly, the analysis of recent trends across the Northern Irish economy indicate that the operational phase is not likely to result in significant displacement effects. Displacement is unlikely to occur when considering the scale of the proposed wind farm in relation to the size of the broader regional economy. Additionally, the current site at the proposed wind farm is common land used for grazing and, based on the applicant's vast experience with similar developments of this type, it is assumed that no economic activity would be affected by the proposed wind farm. It is therefore assumed that no displacement occurs within the operational phase.

Caveats

Specific information relating to the proposed wind farm was provided where possible by the applicant. The estimated benefits are based on a mix of this information, published data, and reasonable assumptions.

The cost of construction could inflate or deflate depending on movements in variables such as exchange rates, demand for wind turbines, and the price of relevant goods and services. As such, the information is the best current estimate at the time of writing.

This economic impact study has been developed to form part of the environmental information to be provided as part of the planning application. Therefore, if and when the time comes that the proposed wind farm is granted full planning permission and has been built, the economic environment may look different. The analysis also assumes all facilities contained on the site are fully developed.

There is no analysis within the report focusing on how the proposed wind farm would affect income distribution and deprivation levels in the area. This is outside of the scope of this piece of work.

The quantifiable impacts calculated by Oxford Economics and outlined in this report come from an Economic Impact Model which uses an input-output framework, standard economic underpinnings, published data, and a few clearly documented reasonable working assumptions. The modelling presented here does not factor in industry support mechanisms.