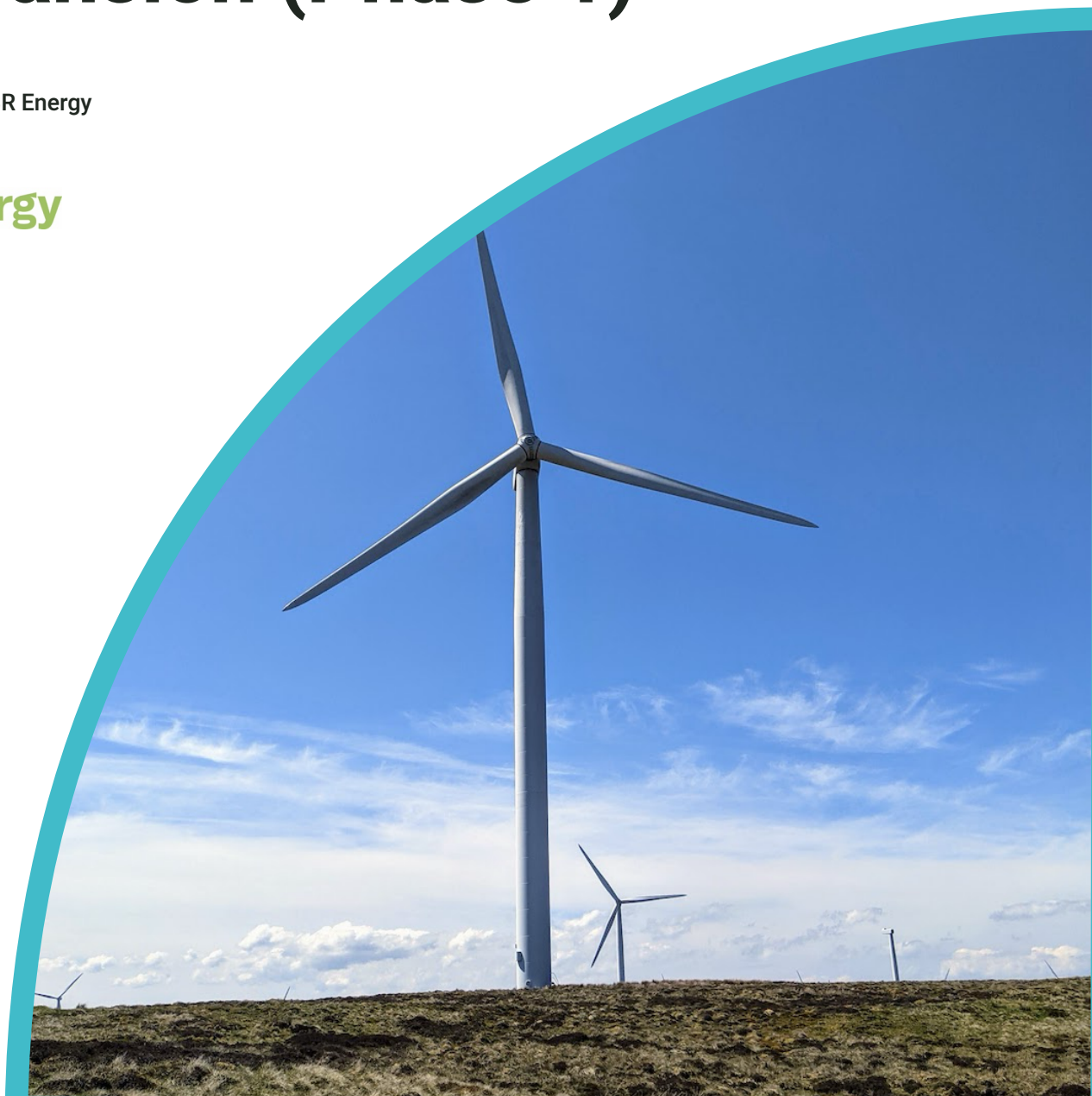
BiGGAR Economics

Economic and Community Impact Report of Hagshaw Energy Cluster – Western Expansion (Phase 1)

A report to 3R Energy
March 2025

3R Energy



BiGGAR Economics

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1. Executive Summary

BiGGAR Economics was commissioned by 3R Energy, to assess the economic impact of Hagshaw Energy Cluster – Western Expansion Phase 1 (the Proposed Development).

The assessment focuses on evaluating whether the Proposed Development meets the requirements of the fourth National Planning Framework (NPF4) to maximise net economic impact.

The Proposed Development site is located within South Lanarkshire and East Ayrshire, Scotland. 3R Energy is a local company with a track record in developing renewable energy projects that provide a range of local economic and community impacts and is committed to ensuring that the Proposed Development delivers further benefits to the economy and local communities.

The current socio-economic structure of South Lanarkshire and East Ayrshire, and projected future declines in the working age population, highlight the need for the creation of job opportunities. The Proposed Development's development and construction activity could generate:

- £19.4 million Gross Value Added (GVA) and support c.217 job years in South Lanarkshire and East Ayrshire (with peak employment of 115 jobs); and
- £54.6 million GVA and c.646 job years across Scotland (with peak employment of 297 jobs).

The expenditure required for the operations and maintenance of the Proposed Development could generate each year:

- £2.0 million GVA and support c.14 jobs in South Lanarkshire and East Ayrshire; and
- £4.5 million GVA and support c.36 jobs across Scotland.

The Proposed Development is expected to support the **provision of local public services and the investment priorities of local communities**. During its operations, it is expected to generate approximately £4.7 million in non-domestic rates yearly.

The Proposed Development could make a material, positive impact to the local area. The Applicant has committed to prioritising local companies for contracts and promoting these opportunities to local suppliers to achieve **high local content**.

The **community benefit fund** which is expected to provide an annual contribution of £668,000 supporting up to 9 jobs yearly, **local supply chain building and the opportunities for local employment**, **capital investment** and **skills development.**

Initiatives such as the local electricity discount scheme option, shared ownership opportunities, community wealth building concept, tourism, recreation and habitat management initiatives demonstrate the Applicant's flexible and **innovative approach**. The habitat management activities are expected to generate at least £2.8 million GVA and 36 job years whereas related maintenance works could generate at least £0.3 million GVA and 8 jobs per year for the first 15 years. The Applicant is committed to continue **working collaboratively with the local community and stakeholders** to ensure targeted and relevant support, building on the success of the Hagshaw Energy Cluster Development Framework.

The assessment has also considered impacts on the local tourism economy, in particular tourism assets within 15 km of the Proposed Development. It found that the Proposed Development is not expected to have any adverse impacts on local accommodation providers, recreational activities, and tourism attractions.

Based on the community and economic benefits expected, it can be concluded that the Proposed Development meets the requirements of the NPF4 Policy 11(c) to **maximise net economic impact**.

2. Introduction

BiGGAR Economics was commissioned by 3R Energy to assess the potential socio-economic impacts from the construction and operation of the Hagshaw Energy Cluster – Western Expansion (Phase 1).

2.1 The Existing Hagshaw Energy Cluster

The Hagshaw Energy Cluster is a leading example of how economies historically reliant on coal mining can transform into renewable energy hubs and provide new economic opportunities.

The Hagshaw Energy Cluster is comprised of onshore wind farms which are expected to generate over 584 MW in the coming years (operational and consented developments). There is also the potential of a further 1 GW from wind farm repowering and extensions, battery storage, solar PV generation and green hydrogen production. This will play a crucial role in the increase of renewable energy capacity required to meet Scotland's Net Zero targets and those of the UK Government as set out in the recent Clean Power 2030 Action Plan (the CP30 Action Plan).

These developments position the Hagshaw Energy Cluster as a model for a Just Transition, transforming the region's coal-intensive past into a sustainable future. By aligning renewable energy production with job creation, skills development, and circular economy principles, the Hagshaw Energy Cluster supports Scotland and the UK's clean energy ambitions while delivering long-term economic and social benefits to local communities.

2.1.1 3R Energy

The Applicant for the Proposed Development is Spirebush Ltd, a company established by 3R Energy for the purpose of taking forward the Proposed Development. 3R Energy is a local developer of renewable energy projects based in South Lanarkshire. 3R Energy is part of a family group of companies which also includes: Mitchell Energy Ltd, Mitchell Farming Partnerships and William Mitchell & Sons (WMS) Ltd, based at Newtonhead Farm Rigside and Hazelside Farm Douglas respectively, which manage the farming assets of the Group. Together the Group:

- owns and manages 3,500 acres of land in the Douglas Valley;
- has farmed the land for over 120 years;
- generates a combined annual turnover of c. £6 million; and
- employs 15 people as a direct result of its renewable energy and farming operations within the Hagshaw Energy Cluster.

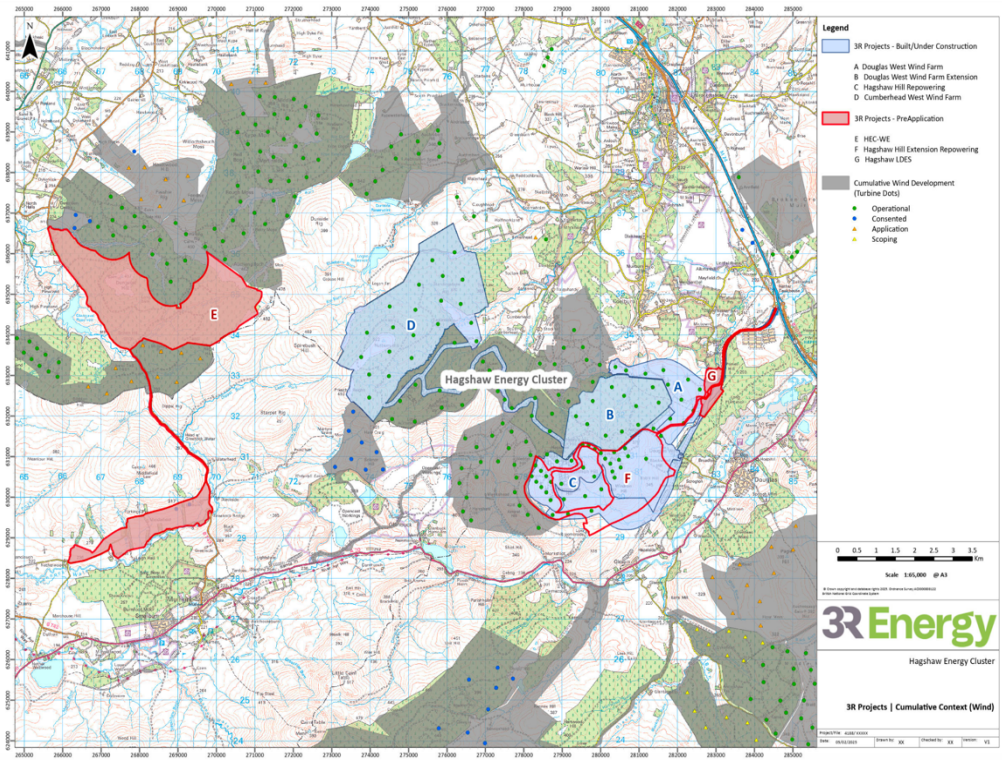
As a local company, 3R Energy is committed to working with the communities closest to the Hagshaw Energy Cluster for the long term to develop and deliver successful projects which create significant and tangible benefits for the local area.

3R Energy is also a founding partner of the award-winning Hagshaw Energy Cluster Development Framework[1] which represents an ambitious vision for the future of the Hagshaw Energy Cluster and surrounding area, identifying opportunities to enhance and invest in the local environment, communities and place.

3R Energy has worked with local stakeholders and regulators to develop larger-scale projects and has now consented over 330 MW of onshore wind developments in the Hagshaw Energy Cluster. The existing projects developed by 3R Energy comprise of:

- Douglas West Wind Farm (45 MW total capacity);
- Douglas West Extension (78 MW total capacity);
- Hagshaw Hill Wind Farm Repowering (84 MW total capacity); and
- Cumberhead West Wind Farm (126 MW total capacity).

Figure 2-1: 3R Energy Projects and the Hagshaw Energy Cluster



Source: 3R Energy (2025).

Based on the EIA reports[2], the construction and development phases of these projects have generated/ are generating approximately £169 million GVA and c.1,800 job years in Scotland as a whole, and the operational phase will generate around

[1] LUC (2023), A Development Framework for the Hagshaw Energy Cluster: Planning for Net Zero.
[2] 3R Energy (2024), Application Documents Downloads. Available at: https://3renergy.co.uk/downloads/ .

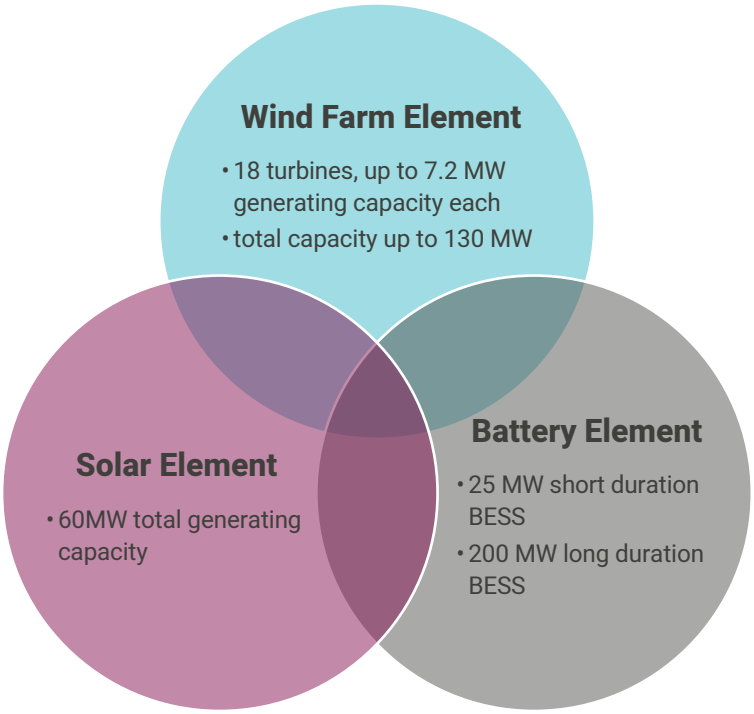
£1.67 million per annum in community benefits[3]. 3R Energy also has three new projects (including this one) in development which have a total generating/ storage capacity of up to 1 GW and are expected to deliver additional community benefit funding in the region of £1.1 million per year.

The projects developed by 3R Energy, as well as the other developments in the Hagshaw Energy Cluster, collectively make significant contributions to Scotland and the UK's climate change goals, helping to reduce carbon emissions but also address economic challenges, creating jobs and providing opportunities in an area with relatively high deprivation and limited opportunities for young people since the end of the mining operations.

2.2 The Western Expansion (Phase 1)

The Proposed Development is located to the west of the existing cluster across the border of South Lanarkshire and East Ayrshire. It is proposed that the Proposed Development would be comprised of wind, solar and battery energy storage system (BESS) elements (Figure 2-2).

Figure 2-2: Proposed Development Elements



[3] Although some of these developments may currently have different generating capacity to the figures stated in the EIA reports, the order of magnitude is expected to be the same.

2.3 Report Structure

The remainder of this report is structured as follows:

- section 3 places the Proposed Development in the context of national, regional, and local economic strategies;
- section 4 considers the socio-economic context for the Proposed Development;
- section 5 outlines the assessment methodology;
- section 6 sets out the economic impact of the construction and operation of the Proposed Development;
- section 7 gives details on the wider benefits considering the commitments of the Applicant as a part of the Proposed Development;
- section 8 outlines the tourism sector of the area and considers the relationship between the Proposed Development and the local tourism economy; and
- section 9 contains a conclusion on net economic impacts.

3. Strategic Context

This section considers national, regional, and local strategies and how the Proposed Development supports their delivery.

3.1 National Strategic Context

3.1.1 National Planning Framework 4

The Fourth National Planning Framework (NPF4)[4] is Scotland's national spatial strategy, setting out the principles to be applied to planning decisions, regional priorities and national developments.

The first of the six spatial principles to be applied is a just transition that ensures the transition to Net Zero is fair and inclusive, as is rural revitalisation, supporting sustainable development in rural areas. Applying these and other principles is intended to support the planning and delivery of sustainable places, where emissions are reduced, and biodiversity is restored and better connected.

As part of the Policy 11(a), all forms of renewable technologies will be supported. This is subject to the test outlined in Policy 11(c), which states that: "*the development proposals will only be supported where they maximise net economic impact, including local and community socio-economic benefits such as employment, associated business and supply chain opportunities*".

The Proposed Development will support employment and create opportunities for local businesses at both the construction, and operation and maintenance phases.

This report includes an assessment of whether the Proposed Development maximises net economic impact in the context of NPF4 Policy 11(c) (see section 9).

Policy 11(e) also sets out a range of impacts that should be addressed during project design and mitigation. That list does not include tourism. Whilst not required by NPF4, section 8 of this report does consider whether there could be any implications for tourism.

[4] Scottish Government (2023). National Planning Framework 4.

3.1.2 Scotland's National Performance Framework

The purpose of the National Performance Framework[5] is:

> **"To focus on creating a more successful country with opportunities for all of Scotland to flourish through increased wellbeing, and sustainable and inclusive economic growth."**

The National Performance Framework is designed to provide a more complete view of development in Scotland beyond the traditional metrics of Gross Domestic Product (GDP) growth with the purpose to:

- create a more successful country;
- give opportunities to all people living in Scotland;
- increase the wellbeing of people living in Scotland;
- create sustainable and inclusive growth; and
- reduce inequalities and give equal importance to economic, environmental and social progress.

The National Performance Indicator sets out 11 national outcomes:

- **children and young people**: grow up loved, safe and respected so that they realise their full potential;
- **communities**: live in communities that are inclusive, empowered, resilient and safe;
- **culture:** are creative and their vibrant and diverse cultures are expressed and enjoyed widely;
- **economy**: have a globally competitive, entrepreneurial, inclusive and sustainable economy;
- **education**: are well educated, skilled and able to contribute to society;
- **environment**: value, enjoy, protect and enhance the environment;
- **fair work and business**: have thriving and innovative businesses, with quality jobs and fair work for everyone;
- **health**: are healthy and active;
- **human rights**: respect, protect and fulfil human rights and live free from discrimination;
- **international**: are open, connected and make a positive contribution internationally; and
- **poverty**: tackle poverty by sharing opportunities, wealth and power more equally.

The Proposed Development would contribute to the achievement of the national outcomes. Investment in renewable energy can increase productivity in the economy

[5] Scottish Government (2023), Scotland's National Performance Framework.

and by creating jobs in the local area the Proposed Development can contribute to inclusive growth. It also supports environmental progress by increasing the generation and storage capacity of renewable energy.

3.1.3 Scotland's National Strategy for Economic Transformation

In March 2022, the Scottish Government published the National Strategy for Economic Transformation[6], which set out its ambition for Scotland's economy over the next decade. The strategy lays out how it intends to deliver economic growth that makes Scotland prosperous, productive, and internationally competitive. Of particular importance is the ambition to be greener, through a Just Transition to Net Zero, a nature-positive economy, and rebuilding natural capital.

To deliver its vision, five programmes of action have been identified (with a sixth priority of creating a culture of delivery), including:

- establishing Scotland as an entrepreneurial nation;
- strengthening Scotland's position in new markets and industries, generating new, well-paid jobs from a transition to Net Zero;
- making Scotland's businesses, industries, regions, communities, and public services more productive and innovative;
- ensuring that people have the skills they need to meet the demands of the economy, and that employers invest in their skilled employees;
- reorienting the economy towards wellbeing and fair work.

The strategy notes that Scotland has substantial energy potential and that it has developed a growing green industrial base. This provides a strong foundation for securing new market opportunities arising from the transition to Net Zero and will need continued investment and support. Renewable energy also has a role to play in supporting productive businesses and regions across Scotland. The Proposed Development contributes to the continuing development of the renewable energy sector.

3.1.4 Onshore Wind Policy Statement

The Onshore Wind Policy Statement[7] published by the Scottish Government in 2022 set a target to deploy 20 GW of onshore wind energy in Scotland by 2030. The Policy Statement outlines a framework of considerations the Scottish Government will take when striving to achieve its onshore wind targets, these include:

- environment: ensure access to renewable energy whilst tackling climate crises;
- communities: abide by the just transition principles to guarantee communities across Scotland benefit from the transition to a net zero economy;
- Scotland: support opportunities in the supply chain, skills and tourism;
- aviation: evaluate and mitigate impact on aviation operations;
- technical considerations: including abnormal loads and seismological monitoring; and

[6] Scottish Government (2022), Scotland's National Strategy for Economic Transformation
[7] Scottish Government (2022). Onshore Wind Policy Statement 2022.

- energy systems and regulations: work with relevant stakeholders to develop electricity infrastructure.

The Policy Statement sets an expectation that onshore wind energy developments will support supply chains and develop workforce skills ensuring that the transition to Net Zero creates employment, growth and benefits to the local communities across Scotland. This report sets out how the Applicant proposes to meet these expectations with the Proposed Development.

3.1.5 Onshore Wind Sector Deal

The Onshore Wind Sector Deal[8], published in September 2023, establishes a series of commitments between the Scottish Government and the onshore wind industry to achieve Net Zero targets through a collaborative approach. This partnership aims to deliver 20 GW of onshore wind capacity by 2030, whilst maximising the economic benefits for Scotland and prioritising community involvement and benefit.

The Onshore Wind Sector Deal highlights what the sector can do collectively and in partnership with the Scottish Government.

Under supply chain, skills and the circular economy commitments, the onshore wind sector commits to address skills gaps by committing to apprenticeships, training opportunities, and skilled job creation across related industries for the duration of the sector deal. An onshore wind pipeline data will be used to identify geographic clusters for operations and maintenance, encouraging co-investment in facilities and infrastructure in Scotland to deliver local economic benefits.

The sector commitments also include publishing data on local content in supply chains and in operations and strategic action to promote supply chain opportunities and enhance local content.

The sector commits to early engagement with communities, ensuring agreements on benefits align with local priorities and are established before key financial decisions. Transparency in community benefit fund management and reporting is prioritised and efforts to encourage and simplify shared ownership models are also a key focus.

The Applicant is committed to contributing to these commitments, during the construction and operation of the Proposed Development and as an active contributor to the Hagshaw Energy Cluster collaboration pilot project.

[8] Scottish Government (2023). Onshore Wind Sector Deal.

3.2 Regional Strategic Context

3.2.1 Ayrshire Regional Economic Strategy

The Ayrshire Regional Economic Strategy[9] is focused on creating a thriving, inclusive, and sustainable economy in the region. The strategy outlines six priorities:

- **support for enterprise**: a region where businesses can grow both domestically and globally;
- **fair work**: a region which offers all individuals an effective voice, opportunity, security, fulfilment and respect in work;
- **innovation**: a region where enterprises and the public sector adopt innovative solutions to address economic problems;
- **good health and wellbeing**: a region where people of all ages have the access to resources to live a healthy, full, and purposeful life;
- **stronger places and communities**: where local economies can sustain thriving communities and deliver good public and private services; and
- **enhancing natural capital**: preserving and enhancing Ayrshire's natural capital and to meet Scotland's commitments to Net Zero.

The strategy highlights several challenges towards delivering a prosperous region including an ageing workforce, a high level of employment in lower paying sectors and a higher incidence of deprivation.

The Proposed Development, by creating higher paid jobs in the region, would address the challenges of incentivising and retaining working age population to work in East Ayrshire as well as to increase the overall quality of life of residents also through community benefits offered. It would also contribute towards the strategy's ambition towards Net Zero.

3.2.2 South Lanarkshire Economic Strategy (2022-2027)

The South Lanarkshire Economic Strategy[10] outlines the ambitions, context and actions the South Lanarkshire Council will take to drive prosperity in the region. The strategy's vision is to make South Lanarkshire a "*flourishing, green, dynamic and equitable place for all*". The strategy focuses on three areas:

- **people**: support fair work opportunities, inclusive and sustainable growth, and address poverty and inequality within the community;
- **places**: develop town centres, support business locations, grow the visitor and tourism economy; and
- **business**: increase business survival rate, support the transition to Net Zero, improve digital confidence, strengthen local supply chains, and link fair work to improved productivity.

[9] East Ayrshire Council (2023). Ayrshire Regional Economic Strategy.
[10] South Lanarkshire Council (2022). South Lanarkshire Economic Strategy 2022 – 2027.

The strategy emphasises the need to drive inclusive growth, noting that "*young people and citizens who live in deprived areas are more likely to be in less secure, low wage jobs that are more at risk*" whilst also taking actions to transition the economy towards Net Zero. The strategy outlines the need to minimise unemployment and underemployment in disadvantaged communities.

The Proposed Development will help drive inclusive growth by stimulating higher paid job creation in the renewable energy supply chain, jobs which could help reduce inequalities and tackle local poverty in the long run.

3.3 Local Strategic Context

There are a number of local strategies and community action plans[11] that apply to the communities surrounding the Proposed Development. Whilst some of these are now dated, they include longer term objectives and so provide an indication of the aspirations and priorities of communities. There are several consistent objectives highlighted:

- **economic diversification**: create new opportunities to offset the decline of traditional industries;
- **tourism and heritage**: use natural landscape and local heritage to drive growth;
- **infrastructure and connectivity**: improve transport links and address vacant properties;
- **community led development**: encourage local participation to drive change;
- **enhancing public spaces**: revitalise town centres and invest in community facilities and events; and
- **retaining and attracting young people**: develop affordable housing and create more opportunities to retain younger generations.

The Proposed Development will create high quality job opportunities and support the local economies, whereas the community benefits offered align well with the abovementioned objectives, indicating the major contribution of this Proposed Development to the local communities.

3.4 Summary of Strategic Context

The Proposed Development is expected to have various socio-economic benefits in line with national and regional strategic policy documents. Through the generation of renewable energy, it will contribute to the decarbonisation of the Scottish economy and towards Scotland's Net Zero target, whilst delivering economic benefits for Scotland and local communities.

[11] Rigside & Douglas Water Community Action Plan 2018 – 2023; Lesmahagow, Brocketsbrae and Hawksland: A Community Led Action Plan 2019-2024; Coalburn, Douglas and Glespin: Community Action Plans; Muirkirk Community Action Plan; Sandford & Upper Avondale Community Action Plan 2020.

4. Socio-Economic Context

This section considers the socio-economic context for the Proposed Development.

The socio-economic context for the Proposed Development focuses on East Ayrshire and South Lanarkshire and Scotland. Where data is available, the analysis also considers a local area in the immediate vicinity of the Proposed Development (the electoral wards Ballochmyle, Avondale and Stonehouse and Clydesdale South[12]).

4.1 Demographics

4.1.1 Population Estimates

East Ayrshire and South Lanarkshire had a combined population of 444,600 in 2022, 8% of the total Scottish population. The proportion of that population in the 16-64 group (an approximation of the working age population), is slightly lower than the Scottish average.

For the local area, the population structure has an even lower proportion in the 16-64 age group than the local authority areas. If the working age population of the local area were the same proportion as the Scottish average, there would be an additional 1,300 people of working age. This is an indicator that the local area has lost working age people, perhaps in search of economic opportunities elsewhere.

Table 4-1 Population Estimates, 2022

Age Group	Local area	East Ayrshire and South Lanarkshire	Scotland
Total	46,360	444,600	5,479,900
0-15	17.4%	17.2%	16.6%
16-64	61.0%	62.6%	63.8%
65+	21.6%	20.3%	19.6%

Source: ONS (2023), Population Estimates – Local authority based five-year age band. Note: 2022 data most recent year available for local areas at time of writing, February 2025

4.1.2 Population Projections

Over the period between 2022 and 2043, the population East Ayrshire and South Lanarkshire is expected to decrease by 0.6%, compared to an increase of 1.7% for Scotland as a whole.

The proportion of the population in the 16-64 age group in East Ayrshire and South Lanarkshire is projected to decrease from 62.6% to 58.0%. This is equivalent to a

decline of over around 22,000 in the working-age population, a decrease of 8%. This is double the 4% decrease in the working-age population projected for Scotland as a whole.

If the local area were to experience the same level of decline in the 16-64 age group as the wider local authorities area, that would imply a reduction in working age people of around 2,200 over the period.

Table 4-2 Population Projections, 2022 to 2043

	East Ayrshire and South Lanarkshire		Scotland	
	2022	2043	2022	2043
Total	**444,600**	**441,793**	**5,479,900**	**5,574,819**
0-15	17.2%	15.5%	16.6%	14.8%
16-64	62.6%	58.0%	63.8%	60.3%
65+	20.3%	26.5%	19.6%	24.9%

Source: ONS (2023), Population Estimates – Local authority based five-year age band, National Records of Scotland (2020), Population Projections for Scottish Areas (2018-based).

4.2 Industrial Structure

As highlighted in the economic impact assessment in this report (see section 6), the greatest opportunities for the local economy during the development and construction stage of the Proposed Development are likely to be in the construction sector, which accounts for a higher proportion of employment in East Ayrshire and South Lanarkshire (8%) compared with Scotland as a whole (5%).

Table 4-3: Sectoral Employment

	East Ayrshire and South Lanarkshire	Scotland
Human health and social work	20%	16%
Wholesale and retail trade	16%	13%
Manufacturing	8%	7%
Accommodation and food	8%	9%
Construction	8%	5%
Education	7%	8%
Administrative and support	6%	7%
Public administration and defence	6%	6%
Professional, scientific and technical	5%	7%
Transportation and storage	5%	5%
Arts, entertainment and recreation	3%	3%
Agriculture, forestry and fishing	3%	3%
Other service activities	2%	2%
Water supply; sewerage, waste management	1%	1%
Financial and insurance	1%	3%
Information and communication	1%	2%
Real estate	1%	1%
Electricity, gas, steam, air conditioning supply	1%	1%
Total employment	164,000	2,656,000

Source: ONS (2024), Business Register and Employment Survey, 2023

4.3 Labour Market Indicators

Based on common labour market indicators: the economic activity rate (the proportion of the working age population that is economically active), the unemployment rate (the proportion of the economically active population that is unemployed) and median earnings (the gross wages of full-time employees are the mid-point in the distribution of earnings), the combined East Ayrshire and South Lanarkshire area, is similar to Scotland as a whole.

Table 4-4 Economic Activity

	East Ayrshire and South Lanarkshire	Scotland
Economically Active (%)	76.2%	76.6%
Unemployment Rate (%)	3.0%	3.3%
Median Annual Gross Wage (residents)	£38,480	£38,170

Source: ONS (2025), Annual Population Survey Oct 2023-Sept 2024; ONS (2024), Annual Survey of Hours and Earning – resident analysis Oct 2023-Sept 2024.

4.4 Education

The workforce in East Ayrshire and South Lanarkshire has lower levels of qualifications than the wider Scottish population: 50% of the population has achieved at least a Scottish Credit and Qualifications Framework (SCQF) qualification, equivalent to a higher education certificate (first year of a university undergraduate degree), compared with the national average of 55%. The proportion of people who have achieved no qualification in the regional area is higher (11%) than across Scotland as a whole (8%).

Table 4-5 Education Levels

	East Ayrshire and South Lanarkshire	Scotland
% with SCQF7+	50%	55%
% with SCQF6+	69%	74%
% with SCQF5+	85%	87%
% with SCQF1+	86%	88%
% with other Qualifications	3%	4%
% with no Qualifications	11%	8%

Source: ONS (2023), Annual Population Survey Jan 2022 – Dec 2022. Note: The equivalent levels under the Scottish Credit and Qualifications Framework (SCQF) were used based on the Regulated Qualifications Framework (RQF) figures.

4.5 Summary of Local Economic Context

Based on common labour market indicators, the combined East Ayrshire and South Lanarkshire area, is similar to Scotland as a whole. However, the population statistics reveal that the working age population accounts for a smaller share of the population in East Ayrshire and South Lanarkshire, in particular in the local area in the vicinity of the Proposed Development, compared to Scotland as a whole. Over the

next two decades the working age population is projected to decline at double the rate as for Scotland as a whole.

This population structure and trend are indicators that the local area and the wider region are losing working age people, perhaps in search of economic opportunities elsewhere.

This highlights the need to create well-paid employment in the local area, to retain and attract working-age people. Initiatives that improve the quality of life for communities could also contribute to addressing these demographic trends.

The construction sector makes a larger contribution to employment in East Ayrshire and South Lanarkshire than for Scotland as a whole, and so the local economy is well placed to benefit from the activities of the Proposed Development related to construction.

5. Assessment Methodology

This section describes the methodology used to assess the economic impact from the Proposed Development as well as the contribution to the maximisation of net economic benefits.

5.1 Economic Impact Methodology

5.1.1 Modelling the Economic Impact of Onshore Wind Farm Developments

The methodology employed to assess the economic impact of onshore wind developments adheres to industry best practice. It leverages research, conducted by BiGGAR Economics in 2015 on behalf of RenewableUK[13], on the construction and operational costs from numerous onshore wind farm projects across the UK. Furthermore, the approach draws on more recent evidence gathered from a multitude of case studies of construction and operational costs in the sector.

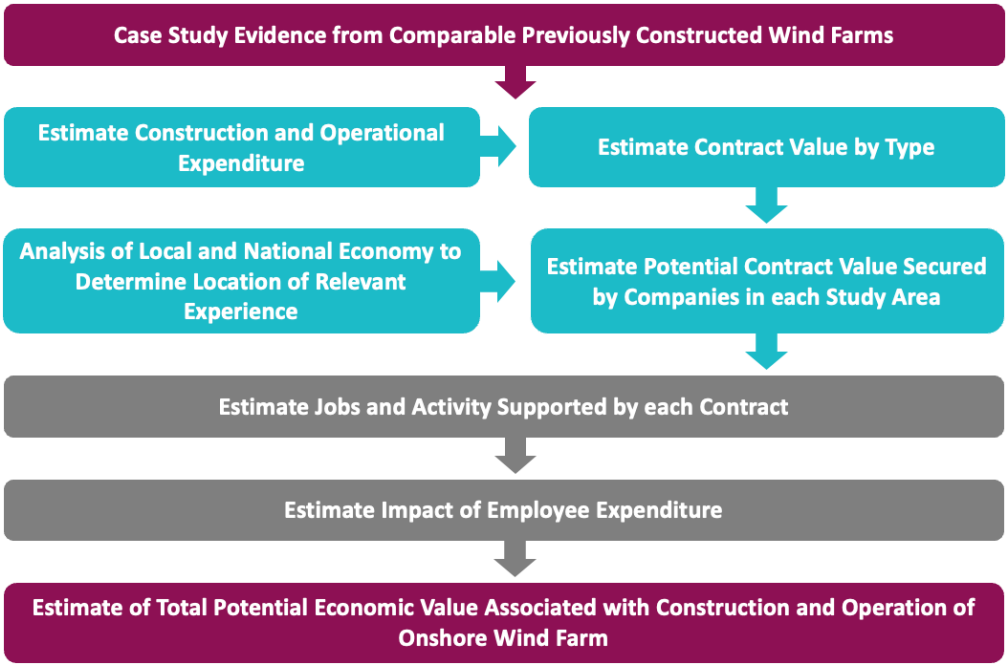
The methodology has now been used to assess the economic impact associated with numerous onshore wind developments across Scotland, and the UK. The economic modelling methodology comprises the following stages:

- Development and planning;
- Turbine;
- Balance of plant; and
- Grid connection.

The economic impact methodology adjusts the assumptions to account for varying capacities of businesses throughout Scotland to fulfil onshore wind contracts.

[13] RenewableUK (2015), Onshore Wind: Economic Impacts in 2014.

Figure 5-1 Approach to Economic Impact – Onshore Wind Farms

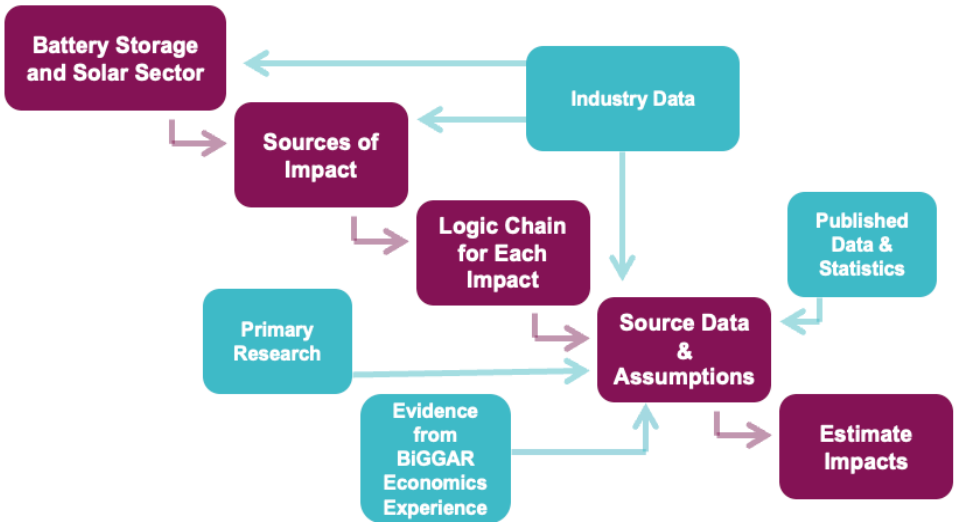


Source: BiGGAR Economics.

5.1.2 Modelling the Economic Impact of Solar PV and BESS

This analysis draws on a mix of qualitative and quantitative methods to consider the economic impact of solar energy and battery storage projects in Scotland and the UK. The overall approach followed in estimating impacts is set out in Figure 5-2.

Figure 5-2 Approach to Economic Impact – BESS & Solar PV



Source: BiGGAR Economics.

The economic analysis relies on the identification of several sources of impact through which battery storage and solar energy affect economic activity. Logic

chains are then developed establishing clear connections between activity and impacts.

A range of sources including publicly available data, industry data, BiGGAR Economics experience with similar assessments and conservative estimates from UK-wide developers, form the evidence base informing the Input-Output economic modelling.

5.1.3 Measures of Economic impact

The economic impacts are reported with respect to the following measures:

- **Gross Value Added (GVA)**: a commonly used measure of economic output, GVA captures the contribution made by an organisation to national economic activity. This is usually estimated as the difference between an organisation's turnover and its non-staff operational expenditure; and
- **Employment**: this is expressed as years of employment (e.g. a job that lasts for 18 months would support 1.5 years of employment) for construction activity and as annual jobs for operations and maintenance contracts.

5.1.4 Sources of Economic Impact

The assessment will consider the following sources of economic impact:

- **direct impacts**: the economic value generated through the contracts associated with the Proposed Development;
- **indirect impacts**: the impact from the spending of contractors within their supply chains; and
- **induced impacts**: the impact from the spending of those workers carrying out contracts for the Proposed Development and on behalf of its contractors.

All figures included in this assessment are based on 2024 prices.

5.1.5 Study Areas

The assessment of economic impacts considered the following study areas:

- East Ayrshire and South Lanarkshire; and
- Scotland.

5.2 Maximisation of Net Economic Impact

5.2.1 Approach

There is no specific legislation, policy or guidance available on the methods that should be used to assess the socio-economic impacts of a proposed renewable energy development. The assessment focuses on evaluating whether the Proposed Development meets the specific requirements outlined in NPF4 Policy 11(c) concerning the maximisation of net economic impacts (see Section 3.1.1).

However, there is also no guidance on maximising net economic impact in the context of the NPF4. The structured approach provided below ascertains the net economic impact of the onshore wind development through the following aspects:

- **alignment with policy statements**: Clarity on the desired outcomes can be obtained from other policies such as Onshore Wind Policy Statement and the Onshore Wind Sector Deal for Scotland which identify the collective vision to use the rapid development of the onshore wind sector to drive long-term economic growth, create high-quality supply chain opportunities, reduce carbon emissions, and ultimately benefit the communities in Scotland.
- **evaluation of applicant commitments**: Commitments made by the Applicant regarding economic contributions, including investments, job creation, and support for local businesses and communities, form an important component of the evaluation process.
- **consideration of applicant control**: There are factors within and outside the control of the applicant that may affect the realisation of the socio-economic benefits. For example, benefits from Applicant's commitments to the local suppliers will only be realised if local suppliers utilise the opportunities provided.

Based on the above, the following criteria are considered for the maximisation of the net economic benefits from onshore wind development:

- **collaborative approach** to achieve rapid deployment of projects needed to deliver Scotland's 20GW target of onshore wind installed capacity by 2030;
- **high local supply chain content** to maximise the value of local expenditure;
- **bespoke opportunities for local employment and skills development** that reflect the characteristics of the local labour market;
- **fair contributions to the cost for enabling infrastructure** and other interventions necessary to support the sector;
- **fair community benefit packages** that generate tangible benefits for the host community while remaining affordable for the developer; and
- **innovative approach** to support the process of continuous improvements, including opportunities for community ownership, recreational use of site infrastructure, electricity discount schemes, non-cash benefits, training.

The assessment concludes on whether the Proposed Development maximises the net economic impact in the context of NPF4 Policy 11(c) based on these criteria.

6. Economic Impacts

This section sets out the expected economic impacts related to construction and operation of the Proposed Development.

6.1 Development and Construction

6.1.1 Wind Element

The wind element of the Proposed Development comprises 18 turbines with a combined operational capacity of around 130 MW. It was estimated that the total development and construction expenditure would be expected to amount to £178.4 million at 2024 prices.

The expenditure was split into four main categories:

- development and planning;
- balance of plant;
- turbines; and
- grid connection.

The greatest expenditure component will be associated with turbines, equivalent to £127.2 million, or 71% of the total development and construction spend. The second largest expenditure will be associated with the balance of plant, accounting for 15% of spending, development and planning for 7% of spending, with grid connection accounting for 7% of total expenditure.

Table 6-1 Value of CAPEX Contracts

	% of Capex	Value (£m)
Development and Planning	7%	12.4
Turbines	71%	127.2
Balance of Plant	15%	25.9
Grid Connection	7%	12.9
Total	**100%**	**178.4**

Source: BiGGAR Economics Analysis of case study evidence from comparable previously constructed wind farms. Note: Totals may not sum due to rounding.

In assessing the economic impacts arising from the development and construction of the wind element of the Proposed Development, it was necessary to make assumptions on the ability of businesses within each study area to carry out contracts.

Based on the evidence from similar developments within East Ayrshire and South Lanarkshire, and the Applicant's established work on previous projects, it was estimated that approximately 30% of the Proposed Development's contracts will be carried out by Scottish businesses, with a value of £53.8 million. It was estimated that spending on businesses based in East Ayrshire and South Lanarkshire would be approximately £21.0 million equivalent to 12% of the total development and construction expenditure.

The greatest opportunity for Scottish businesses is expected to be in contracts associated with the balance of plant, which could be worth £23.0 million. Balance of plant contracts (and associated sub-contracts) are also likely to be the largest opportunity for businesses in East Ayrshire and South Lanarkshire, worth £8.9 million.

Table 6-2 Development and Construction Expenditure by Study Area

	East Ayrshire and South Lanarkshire		Scotland	
	%	£m	%	£m
Development and Planning	34%	4.2	75%	9.3
Turbines	3%	3.2	10%	12.2
Balance of Plant	34%	8.9	89%	23.0
Grid Connection	37%	4.8	73%	9.4
Total	**12%**	**21.0**	**30%**	**53.8**

Source: BiGGAR Economics Analysis. Note: Totals may not add up due to rounding.

Having estimated the size of the contracts that could benefit each of the study areas, it was possible to estimate the GVA and years of employment that these are likely to support. This was done by splitting each contract category into its component contracts and assigning each to an industrial sector, based on its Standard Industrial Classification (SIC)[14] code. Direct GVA was then estimated by applying the relevant turnover per GVA from the UK Annual Business Survey (ABS)[15].

On this basis, it was estimated that the development and construction phase could generate £12.2 million GVA in the East Ayrshire and South Lanarkshire, and £28.4 million GVA in Scotland.

[14] Office for National Statistics (2009), Standard Industrial Classification of industrial Activities (SIC 2007).

[15] Office for National Statistics (2020), Annual Business Survey 2018 - Revised.

Table 6-3 Wind Development and Construction Direct GVA by Study Area and Contract Type (£m)

	East Ayrshire and South Lanarkshire	Scotland
Development and Planning	3.2	6.0
Turbines	1.7	6.2
Balance of Plant	5.0	11.4
Grid Connection	2.4	4.8
Total	**12.2**	**28.4**

Source: BiGGAR Economics Analysis. Note: Totals may not add up due to rounding.

Similarly, it was possible to estimate the number of direct jobs supported by spending in construction and development contracts. This was achieved by dividing the expenditure in each contract by the turnover per job ratio for the relevant sector.

In this way, it was estimated that the development and construction phase of the wind element could directly support 137 job years in the East Ayrshire and South Lanarkshire, and 348 job years in Scotland.

Table 6-4 Development and Construction, Direct Employment by Study Area, and Contract Type (Years of Employment)

	East Ayrshire and South Lanarkshire	Scotland
Development and Planning	8	45
Turbines	31	100
Balance of Plant	65	138
Grid Connection	34	65
Total	**137**	**348**

Source: BiGGAR Economics Analysis. Note: Totals may not add up due to rounding.

Expenditure in development and construction contracts is also expected to generate 'knock-on' effects across the economy. Specifically, it will be associated with further rounds of expenditure along the supply chain and with the spending of the wages and salaries of those involved in the development and construction of the Proposed Development. These are referred to as 'indirect' and 'induced' impacts.

To estimate indirect and induced impacts, it was necessary to apply the relevant Type 1 and Type 2 GVA and employment multipliers from the Scottish Government Input-Output Tables[16] to direct GVA and direct employment. Since the multipliers

[16]Scottish Government (2020), Supply, Use and Input-Output Tables.

refer to sectoral interactions occurring at the level of the Scottish economy, it was necessary to adjust them when considering impacts taking place in East Ayrshire and South Lanarkshire.

The total economic impact of the wind element of the Proposed Development was estimated by adding together the direct, indirect and induced impacts together. The total combined impact was estimated to be:

- £15.1 million GVA and 167 job years in East Ayrshire and South Lanarkshire; and
- £45.2 million GVA and 534 job years in Scotland.

Table 6-5 Economic Impact GVA of Development and Construction (£m)

	East Ayrshire and South Lanarkshire	Scotland
Direct	12.2	28.4
Indirect	1.1	9.6
Induced	1.8	7.2
Total	**15.1**	**45.2**

Source: BiGGAR Economics Analysis *totals may not add up due to rounding

Table 6-6 Employment Impact of Development and Construction (job years)

	East Ayrshire and South Lanarkshire	Scotland
Direct	137	348
Indirect	12	116
Induced	17	70
Total	**167**	**534**

Source: BiGGAR Economics Analysis *totals may not add up due to rounding

6.1.2 Solar Element

The Proposed Development will include a solar PV array, with an indicative capacity of around 60 MW.

The first step in estimating the economic impact from the construction and development phase requires the estimation of the total construction and development costs. These were estimated by multiplying the expected installed capacity by the cost per MW of the elements and services required during development and construction. The breakdown of costs was based on BiGGAR Economics' previous experience on the sector in the UK.

On this basis, it was estimated that the construction and development phase could cost £45.2 million. It was estimated that £18.4 million (41%) of capital expenditure

could be on balance of system, £12.3 million (27%) could be on grid costs, £8.8 million (19%) on panels, £4.4 million on inverter supply (10%) and £1.4 million (3%) on development.

Table 6-7 Solar Construction and Development Spend by Contract Category

	% of Capex	Value (£m)
Development	3%	1.4
Panels	19%	8.8
Inverter Supply	10%	4.4
Grid Costs	27%	12.3
Balance of System	41%	18.4
Total	**100%**	**45.2**

Source: BiGGAR Economics Analysis. Note, totals may not sum due to rounding.

It was necessary to estimate the proportion of each type of contract that might be secured in each of the study areas. The geographical content assumptions were also based on BiGGAR Economics' previous experience in the solar sector.

To estimate the expenditure for each contract in each of the study areas, the proportions of contract type that might be secured in each area were multiplied by the estimated expenditure on each of the contracts.

On this basis, it was estimated that East Ayrshire and South Lanarkshire could secure contracts worth up to £1.9 million, equivalent to 4% of total capital expenditure. The largest opportunities would be the contracts related to balance of system, as companies in the area could secure up to £1.0 million of that spending (equivalent to 6%).

Scotland (including East Ayrshire and South Lanarkshire) was estimated to secure £5.5 million, equivalent to 12% of total capital expenditure. The largest opportunity would be balance of system, worth around £3.2 million (17% of the total spending).

Table 6-8 Solar Construction and Development Spend by Study Area

	East Ayrshire and South Lanarkshire		Scotland	
	%	£m	%	£m
Development	17%	0.2	50%	0.7
Panels	0%	-	0%	-
Inverter Supply	0%	-	0%	-
Grid Costs	5%	0.6	13%	1.6
Balance of Systems	6%	1.0	17%	3.2
Total	**4%**	**1.9**	**12%**	**5.5**

Source: BiGGAR Economics Analysis. Note: Totals may not add up due to rounding.

Given the share of contracts in each study area, as well as the sectors that they take place in, the direct economic impact was estimated in terms of GVA and job years supported following a similar approach to the wind element.

On this basis, it was estimated that development and construction contracts could directly generate £0.8 million GVA and 10 years of employment in East Ayrshire and South Lanarkshire and £2.4 million GVA and 30 years of employment in Scotland.

Table 6-9 Solar Development and Construction Direct GVA by Contract Type and Study Area (£m)

	East Ayrshire and South Lanarkshire	Scotland
Development	0.1	0.4
Panels	-	-
Inverter Supply	-	-
Grid Costs	0.3	0.7
Balance of Systems	0.4	1.3
Total	**0.8**	**2.4**

Source: BiGGAR Economics Analysis. Note: Totals may not add up due to rounding

Table 6-10 Solar Development and Construction Direct Employment by Contract Type and Study Area (Years of Employment)

	East Ayrshire and South Lanarkshire	Scotland
Development	2	6
Panels	-	-
Inverter Supply	-	-
Grid Costs	2	4
Balance of Systems	5	16
Total	**10**	**30**

Source: BiGGAR Economics Analysis. Note: Totals may not add up due to rounding

There would also be multiplier effects associated with spending in the supply chain and from spending by employees in the local economy. Similarly to the wind element, the indirect and induced effects were captured using economic multipliers.

The total economic impact was estimated by adding together the direct, indirect and induced impacts together. The total combined impact for the solar elements was estimated to be:

- £1.1 million GVA and 13 job years in East Ayrshire and South Lanarkshire; and
- £4.2 million GVA and 50 job years in Scotland.

Table 6-11 Solar Development and Construction GVA Impacts by Study Area (£m)

	East Ayrshire and South Lanarkshire	Scotland
Direct	0.8	2.4
Indirect	0.1	1.1
Induced	0.2	0.7
Total	**1.1**	**4.2**

Source: BiGGAR Economics Analysis. Note: Totals may not add up due to rounding.

Table 6-12 Solar Development and Construction Employment Impacts by Study Area (Years of Employment)

	East Ayrshire and South Lanarkshire	Scotland
Direct	10	30
Indirect	1	13
Induced	2	7
Total	**10**	**50**

Source: BiGGAR Economics Analysis. Note: Totals may not add up due to rounding.

6.1.3 Battery Element

The Proposed Development will include a battery storage component, with an indicative capacity of 200 MW long duration and 25 MW short duration BESS.

The first step in estimating the economic impact from the development and construction phase requires the estimation of the total costs, following a similar approach to the wind and solar components considered in previous sections.

The average expenditure on development and construction of battery storage sites can be estimated based on the average spend per MW. Industry data[17] and previous experience in the UK sector suggest an average capital spending (including development) of around £500,000 per MW. On this basis, the total costs were estimated to be approximately £110.9 million at 2024 prices.

The expenditure was split into five main contract categories. As shown in Table 6-13, it was estimated that £82.5 million (74%) of capital expenditure could be on battery unit contracts, £18.8 million (17%) could be on grid connection, £0.9 million (1%) on development and £8.5 million (8%) on other expenditure[18].

[17] RegenSW (2019) Energy Storage - Towards a Commercial Model - 2nd Edition

[18] Including interest during construction; legal & tax advisory; guarantee & letter of credit fees; other concept & structure costs; sales transaction fees and travel expenses.

Table 6-13 Battery Construction and Development Spend by Contract Category

	% Capex	Value (£m)
Development	1%	0.9
Battery System	74%	82.5
Balance of Plants#	<1%	<0.1
Grid connection	17%	18.8
Other	8%	8.5
Total	**100%**	**110.9**

Source: BiGGAR Economics Analysis. Note: Totals may not add up due to rounding. # including inverters and electric balance of plants

It was necessary to estimate the proportion of each type of contract that might be secured in each of the study areas. The assumptions were based on BiGGAR Economics' previous experience in the BESS sector.

To estimate the expenditure for each contract in each of the study areas, the proportions of contract type that might be secured in each area were multiplied by the estimated expenditure on each of the contracts. On this basis, it was estimated that East Ayrshire and South Lanarkshire could secure contracts worth up to £4.8 million, equivalent to 4% of total capital expenditure and Scotland (including East Ayrshire and South Lanarkshire) £6.6 million, 6% of total capital expenditure.

Table 6-14 Battery Development and Construction Spend by Study Area

	East Ayrshire and South Lanarkshire		Scotland	
	%	£m	%	£m
Development	9%	0.1	50%	0.5
Battery System	0%	-	0%	-
Balance of Plants	0%	-	17%	<0.1
Grid connection	6%	1.1	13%	2.4
Other	43%	3.7	43%	3.7
Total	**4%**	**4.8**	**6%**	**6.6**

Source: BiGGAR Economics Analysis. Note: Totals may not add up due to rounding.

Given the share of contracts in each study area, as well as the sectors that they take place in, the direct economic impact was estimated in terms of GVA and job years supported.

On this basis, it was estimated that development and construction contracts could directly generate £2.4 million GVA and 30 years of employment in East Ayrshire and South Lanarkshire, and £3.2 million GVA and 40 years of employment in Scotland, as shown in Table 6-15 and Table 6-16.

Table 6-15 Battery Direct GVA by Contract Type and Study Area (£m)

	East Ayrshire and South Lanarkshire	Scotland
Development	<0.1	0.3
Battery System	-	-
Balance of Plants	-	<0.1
Grid connection	0.4	1.0
Other	1.9	1.9
Total	**2.4**	**3.2**

Source: BiGGAR Economics Analysis. Note: Totals may not add up due to rounding

Table 6-16 Battery Development and Construction Direct Employment by Contract Type and Study Area (Years of Employment)

	East Ayrshire and South Lanarkshire	Scotland
Development	<0.1	3
Battery System	-	-
Balance of Plants	-	<0.1
Grid connection	6	13
Other	22	22
Total	**30**	**40**

Source: BiGGAR Economics Analysis. Note: Totals may not add up due to rounding

There would also be multiplier effects associated with spending in the supply chain and from spending by employees in the local economy. Similarly to the wind and solar elements, the indirect and induced effects were captured using economic multipliers.

The total economic impact was estimated by adding together the direct, indirect and induced impacts together. The total combined impact for the battery elements was estimated to be:

- £3.2 million GVA and 40 job years in East Ayrshire and South Lanarkshire; and
- £5.2 million GVA and 60 job years in Scotland.

The construction and development phase is expected to take approximately two years and the impacts will occur during this time period. Therefore, it is expected that the battery elements generate 20 jobs in East Ayrshire and South Lanarkshire during each year of construction and 30 jobs in Scotland.

Table 6-17 Battery Development and Construction GVA Impacts by Study Area (£m)

	East Ayrshire and South Lanarkshire	Scotland
Direct	2.4	3.2
Indirect	0.3	1.1
Induced	0.5	0.9
Total	**3.2**	**5.2**

Source: BiGGAR Economics Analysis. Note: Totals may not add up due to rounding.

Table 6-18 Battery Development and Construction Employment Impacts by Study Area (Years of Employment)

	East Ayrshire and South Lanarkshire	Scotland
Direct	30	40
Indirect	3	14
Induced	4	8
Total	**40**	**60**

Source: BiGGAR Economics Analysis. Note: Totals may not add up due to rounding.

6.1.4 Total

The total economic impact associated with the construction and development of the Proposed Development, based on a total cost of around £334.5 million, was estimated to be:

- £19.4 million GVA and 217 job years in East Ayrshire and South Lanarkshire; and
- £54.6 million GVA and 646 job years in Scotland.

Table 6-19 Total Construction and Development Expenditure by Study Area, GVA (£m)

	East Ayrshire and South Lanarkshire	Scotland
Wind	15.1	45.2
Solar	1.1	4.2
Battery	3.2	5.2
Total Impact	**19.4**	**54.6**

Source: BiGGAR Economics Assumptions

Table 6-20 Total Construction and Development Expenditure by Study Area, Employment (job years)

	East Ayrshire and South Lanarkshire	Scotland
Wind	167	534
Solar	10	50
Battery	40	60
Total Impact	**217**	**646**

Source: BiGGAR Economics Assumptions

6.2 Operation

6.2.1 Wind Element

The initial stage in determining the economic impact stemming from the operations and maintenance of the Proposed Development involved assessing the annual total expenditure necessary for its operation. Based on the number of turbines and the Proposed Development's capacity, it was estimated that the annual cost of operations and maintenance (OPEX) is likely to amount to approximately £4.9 million.

It was further assumed that businesses in East Ayrshire and South Lanarkshire could benefit from a total £2.0 million in operations and maintenance contracts (42% of OPEX) annually, and that annual expenditure in Scottish contractors could be up to £4.1 million (83% of OPEX).

Table 6-21 Value of OPEX Contracts by Study Area

	East Ayrshire and South Lanarkshire		Scotland	
	%	£m	%	£m
Operations and Maintenance	42%	2.0	83%	4.1

Source: BiGGAR Economics Analysis. Note: Totals may not sum due to rounding.

As with the construction phase, the contract values awarded in each of the study areas represent an increase in turnover in those areas. The economic impact of the increase in turnover on GVA and employment estimated in the same way as the construction expenditure, using the Annual Business Survey.

In this way, it was estimated the operation and maintenance could directly support £1.2 million GVA and 7 jobs in East Ayrshire and South Lanarkshire and £2.1 million GVA and 17 jobs in Scotland.

Table 6-22 Operations and Maintenance Direct Impact by Study Area

	East Ayrshire and South Lanarkshire	Scotland
Direct GVA (£m)	1.2	2.1
Direct Employment (Jobs)	7	17

Source: BiGGAR Economics Analysis. Note: Totals may not sum due to rounding.

There would also be indirect and induced impacts during the operation and maintenance phased, which were estimated using the same method as for the development and construction phase.

Adding together the direct, indirect and induced impacts, it was estimated that the total annual economic impact would be:

- £1.4 million GVA and 9 jobs in East Ayrshire and South Lanarkshire; and
- £3.3 million GVA and 27 jobs in Scotland.

Table 6-23 Economic Impact of Operations and Maintenance by Study Area

	East Ayrshire and South Lanarkshire	Scotland
GVA (£m)	1.4	3.3
Jobs	9	27

Source: BiGGAR Economics Analysis. Note: Totals may not sum due to rounding.

6.2.2 Solar Element

Similar to the wind element, the solar installation is expected to be in operation over a period of 40 years. Similarly to the development and construction phase, it was estimated that the annual cost of operations and maintenance would be about £1.0 million.

As with the development and construction impact, it was necessary to make an assumption about the expenditure that could be secured in each study area. It was assumed that 44% of contracts will be secured in East Ayrshire and South Lanarkshire worth £0.4 million, and 62% in Scotland equivalent to £0.6 million.

Table 6-24 Operations and Maintenance Expenditure by Contract

	East Ayrshire and South Lanarkshire		Scotland	
	%	£m	%	£m
Operations and Maintenance	44%	0.4	62%	0.6

Source: BiGGAR Economics Assumptions

Relevant sector ratios and economic multipliers were applied to estimate the annual economic impact. A part of the impact in the local area will relate to rental payments to the owners of the land, and therefore the associated economic impact will be contingent on the money being reinvested in the local economy.

It was estimated that the impact would be £0.3 million GVA and 3 jobs in East Ayrshire and South Lanarkshire, and £0.5 million GVA and 5 jobs in Scotland.

Table 6-25 Economic Impact of Operation and Maintenance by Study Area

	East Ayrshire and South Lanarkshire	Scotland
GVA	0.3	0.5
Jobs	3	5

Source: BiGGAR Economics Assumptions

6.2.3 Battery Element

Similar to the other elements, the battery installation is expected to be in operation over a period of 40 years. Similarly to the development and construction phase, it was estimated that the annual cost of operations and maintenance would be about £2.6 million.

As with the development and construction impact, it was necessary to make an assumption about the expenditure that could be secured in each study area. It was assumed that 21% of contracts will be secured in East Ayrshire and South Lanarkshire worth £0.6 million, and 39% in Scotland equivalent to £1.0 million.

Table 6-26 Operations and Maintenance Expenditure by Contract

	East Ayrshire and South Lanarkshire		Scotland	
	%	£m	%	£m
Operations and Maintenance	21%	0.6	39%	1.0

Source: BiGGAR Economics Assumptions

Relevant sector ratios and economic multipliers were applied to estimate the annual economic impact. A part of the impact in the local area will relate to rental payments to the owners of the land, and therefore the associated economic impact will be contingent on the money being reinvested in the local economy.

It was estimated that the impact would be £0.4 million GVA and 3 jobs in East Ayrshire and South Lanarkshire, and £0.7 million GVA and 5 jobs in Scotland.

Table 6-27 Economic Impact of Operation and Maintenance by Study Area

	East Ayrshire and South Lanarkshire	Scotland
GVA	0.4	0.7
Jobs	3	5

Source: BiGGAR Economics Assumptions

6.2.4 Total

The total economic impact associated with the operation and maintenance of the Proposed Development was estimated to be:

- £2.0 million GVA and 14 jobs in East Ayrshire and South Lanarkshire; and
- £4.5 million GVA and 36 jobs in Scotland.

Table 6-28 Total Economic Impact of Operations and Maintenance by Study Area, GVA (£m)

	East Ayrshire and South Lanarkshire	Scotland
Wind	1.4	3.3
Solar	0.3	0.5
Battery	0.4	0.7
Total Impact	**2.0**	**4.5**

Source: BiGGAR Economics Assumptions

Table 6-29 Total Economic Impact of Operations and Maintenance by Study Area, Employment (Jobs)

	East Ayrshire and South Lanarkshire	Scotland
Wind	9	27
Solar	3	5
Battery	3	5
Total Impact	**14**	**36**

Source: BiGGAR Economics Assumptions

6.3 Impact over Lifetime

Over a 40-year operational life, the expenditure associated with the Proposed Development is expected to be £673 million across the development, construction and operational phases. Of the total, 22% could be spent in East Ayrshire and South Lanarkshire and 44% in Scotland as a whole.

The Proposed Development could generate £334.1 million GVA, of which £101.2 million could be in East Ayrshire and South Lanarkshire and £232.9 million in Scotland as a whole.

6.4 Non-Domestic Rates

The Proposed Development is expected to generate a stream of revenue to East Ayrshire and South Lanarkshire through the annual payment of non-domestic rates. The Proposed Development would be liable for non-domestic rates, the payment of which would contribute directly to public sector finances and infrastructure investments.

In 2023, the Scottish Assessors Association (SAA) published guidance on the valuation of onshore wind[19] and solar PV developments[20]. The rateable value of the onshore wind element was calculated using the expected income per MW, the expected annual net yield, the cost of equipment per MW and the decapitalisation rate. A similar approach was followed for the battery element. For the solar element, the unaccredited rateable value per MW was applied for the calculations. The annual liability of the Proposed Development was then calculated by multiplying the estimated rateable value by the Scottish Higher Property Rate of 55.9 pence[21].

[19] Scottish Assessors Association (2023), Practice Note 2: Valuation of On-shore Wind Turbines.
[20] Scottish Assessors Association (2023), Practice Note 3: Valuation of Photovoltaic Electricity Generators.
[21] Scottish Government (2024), Non-domestic rates guidance.

Using this approach, it was projected that over its operational period, the Proposed Development could make a total annual contribution of approximately £4.7 million to public finances. Across its 40-year operational lifespan, this contribution towards non-domestic rates is anticipated to accumulate to around £186.5 million.

Demand for public services has been increasing whereas the funding has been reduced in recent years and South Lanarkshire and East Ayrshire Council expect the budget gap for 2024/25 to be over £20 million[22] and about £10 million[23], respectively. The Proposed Development would strengthen the financial position of local government, supporting additional spending on public services, though in practice not all the income would necessarily go to the two Councils since the distribution of non-domestic rate revenues are determined nationally.

[22] South Lanarkshire (2024), Budget consultation. Available at: https://www.southlanarkshire.gov.uk/budget-consultation#:~:text=The%20budget%20gap%20for%202024,will%20make%20the%20final%20decisions.
[23] East Ayrshire Council (2024), Budget looks to the long-term with £40m investment. Available at: https://newsroom.east-ayrshire.gov.uk/news/budget-that-looks-to-the-long-term-with-gbp-40m-investment .

7. Wider Benefits

This section considers the approach of the 3R Energy to maximise net economic impact for the local communities.

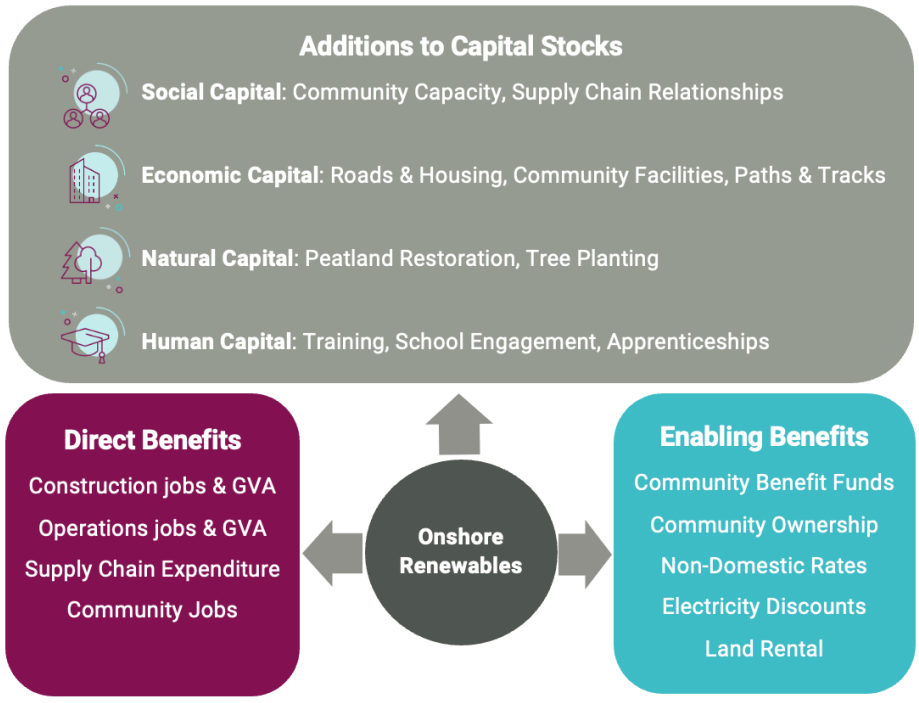
7.1 Context

Figure 7-1 shows the categories of benefits from onshore developments and provides relevant examples. In the previous chapters, direct economic benefits of the Proposed Development were considered, including GVA and jobs generated. Maximising benefits requires consideration of other wider benefits as well as[24]:

- innovation and creativity;
- bespoke benefit packages; and
- a collaborative approach to delivery.

By committing to a number of initiatives, 3R Energy can maximise the benefits of the Proposed Development, in line with NPF4 Policy 11(c).

Figure 7-1: Understanding the Benefits of Onshore Renewables



Source: BiGGAR Economics.

[24] Scottish Government (2023). Onshore Wind Sector Deal.

7.2 A Collaborative Approach

7.2.1 Hagshaw Energy Cluster Development Framework

The Hagshaw Energy Cluster Development Framework[25] is a non-statutory planning guide designed collaboratively between developers (including 3R Energy), councils, NatureScot and other stakeholders to coordinate renewable energy development within the Hagshaw Energy Cluster, supporting Scotland's Net Zero goals.

This inclusive process involved virtual public exhibitions and online questionnaires, encouraging local communities and stakeholders to contribute ideas and aspirations that informed the framework's vision and objectives.

The framework focuses on maximising social, economic, and environmental benefits, supporting a Just Transition to a low-carbon future, and minimising adverse impacts on local communities. It emphasises collaboration as a key driver for the delivery of sustainable energy solutions, increase of renewable energy generation, creation of green jobs, stimulation of economic growth, and enhancement of environmental resilience.

7.2.2 Community Engagement

In alignment with the Development Framework, the Applicant is committed to engaging with communities close to the Proposed Development. Early consultation events have been organised in Sandford, Muirkirk, Douglas and Strathaven to inform residents about the Proposed Development, seek feedback, and gather ideas for initiatives that could benefit the local areas. This approach reflects Applicant's commitment to open communication and collaboration, ensuring that local voices continue to help shape developments within and around the Hagshaw Energy Cluster.

An example of Applicant's contribution and existing collaboration with the local communities is the commitment to covering the annual costs of the insurance and inspection for a proposed children's play park at Dungavel/ Hamilton Drive, for a period of 25 years from construction of the park. This would be around £2,000 per year.

7.3 Promoting Local Supply Chain Opportunities

In 2014, RenewableUK published the "Local Supply Chain in Onshore Wind, Good Practice Guide"[26], which includes guidance for onshore wind developers on how to maximise local content. Whilst that report is now more than a decade old, it can still be considered to provide useful good practice advice, including:

- **maximise your local presence and begin early**: start identifying potential suppliers early by being active and visible locally;

[25] LUC (2023), A Development Framework for the Hagshaw Energy Cluster: Planning for Net Zero.
[26] RenewableUK (2014), Local supply chain in onshore wind, good practice guide.

- **partnerships work**: look for partnerships with business groups and local authorities;
- **the developer's role is that of an enabler**: use information on potential suppliers to ensure primary contractors maximise local opportunities;
- **provide the right information, at the right time**: consider adopting an iterative process when communicating with businesses and leave them time to learn and adjust;
- **communicate technical requirements early**: this will give the opportunity for upskilling or the emergence of consortia to occur; and
- **if you can, demonstrate local content in planning**: where possible include a demonstrable commitment to local content in planning and carry out ex-post auditing.

In line with these suggestions, the Applicant has committed to prioritising local companies in the provision of contracts during the development and construction and operational phases whilst observing procurement rules. The Applicant will promote these opportunities available to local suppliers.

The Applicant's **Responsible Contracting Policy,** which aims to ensure that local and regional businesses have greater access to tender opportunities, would contribute to these commitments.

The Applicant has previously worked with local suppliers in the Hagshaw Energy Cluster. This involvement has benefited those businesses and contributed to their development.

The supply chain for renewable energy projects is not always visible in local communities, even when the suppliers are local companies. This is because companies will supply a wide range of goods and services and will usually describe themselves based on what they supply rather than the sector they supply to.

However, the renewable energy sector is an important driver of growth for many companies. Once a supplier has established a reputation in the sector, and good working relationships with lead contractors, that will generally lead to future opportunities in the sector. These opportunities can be local or elsewhere in the country, and so provide a way for supply chain companies to expand the geographic areas in which they operate.

A case study of a south of Scotland company that has already working in the Hagshaw Energy Cluster is included below.

Grange Quarry and Concrete

30% of Grange's turnover is originated from wind farm projects

Grange Quarry and Concrete Products is a family run business founded in 2000, with a number of sites across the south of Scotland.

The company has around 80 employees and has supplied concrete for turbine bases on several wind farm projects including Cumberhead West and Douglas West. The nature and scale of the work means that Grange has operated on-site mobile concrete plants at Hagshaw. The on-site operation can range from six weeks to 12 months, depending on the scale of the development. Where possible the company will recruit locally, particularly for larger, longer-term contracts. The jobs include the operation of the mobile concrete plants as well as specialist drivers.

The company works across a number of sectors including civil engineering, agriculture, forestry, nuclear, highways and railways. The company highlighted that wind farm projects now account for approximately 30% of Grange's turnover and has fuelled expansion from one to four mobile concrete plants.

Grange often competes against larger national companies and considers its competitive advantage to be the quality of its customer service. For wind farm projects, Grange will usually be a subcontractor to the main balance of plant contractor. Once it has developed a good working relationship with a lead contractor, this will lead to future opportunities on other projects.

7.4 Community Benefit Funds

Community benefits, an annual payment that is made by the Applicant to those communities in the proximity of a wind farm, have become a common practice to support local ambitions and needs. While they do not constitute a material consideration at the planning stage, commitment to a comprehensive package of community benefits has a role in fostering a good relationship between the Applicant and the community hosting the development.

To provide a framework on how to deliver community benefits, in 2019 the Scottish Government published its 'Good Practice Principles for Community Benefits from Onshore Renewable Energy Developments'[27], which updated previous guidance issued in 2015. The Scottish Government recommends onshore wind developers to

[27] Scottish Government (2019), Scottish Government Good Practice Principles for Community Benefits from Onshore Renewable Energy Developments.

deliver community benefit funding worth £5,000 per MW of installed capacity. The document also encourages developers to engage in holistic ways to maximise benefits locally, going beyond a purely monetary approach.

Following this recommendation, the Applicant is proposing a tailored package of benefits for the community from the Proposed Development and according to the current layout design and installed wind capacity of 129.6 MW (18 turbines x 7.2 MW), and a community benefit contribution of £5,000 per MW of installed wind energy capacity, this could equate to community benefit funding for the local area worth £648,000 annually, which is equivalent to £25.9 million over the project's lifetime.

This would be expected to directly support 9 jobs per year in the local communities. The Applicant is also committed to offering up to an additional £20,000 per year on the 200 MW Long Duration Energy Storage element over the 40-year operational life, equivalent to £800,000 over the project's lifetime.

This could support local aspirations and projects and generate economic impacts. The local needs and priorities can be identified from the community consultations taking place. The presence of the Proposed Development would provide local communities with additional funding, which could be used to deliver short-term and long term strategic, large–scale projects/initiatives which create tangible and lasting benefits for local communities.

The Community Action Plans[28] describe investments in a variety of areas which could benefit from such funding, including:

- skills development;
- community organisations;
- leisure centre development;
- physical regeneration; and
- community activities.

7.5 Shared Ownership

To maximise the participation in the economic benefits from onshore wind, the Scottish Government encourages shared ownership schemes. These provide local communities with a stake in an onshore wind development and a corresponding share of the profits, whenever these are realised.

The Scottish Government is committed to similar schemes as ways to empower local communities and ensure that they benefit from the renewable energy produced in their area. As part of this commitment, it has a target of 2GW in community-owned

[28] Community Enterprise, South Lanarkshire & Zero Waster Scotland (2024), Hagshaw Cluster and the Circular Economy Research Report.

energy by 2030[29]. Focus on shared ownership is also in line with the Government's increased consideration of opportunities for community wealth building.

The guidance document sets out at which stages of a wind farm's development and construction a shared ownership agreement can be struck and how developers and communities can foster trust when information is uncertain and commercially sensitive. It also describes the three most popular commercial models:

- **joint venture model:** this involves the creation of a joint venture vehicle where both the community and the developer have a share;
- **shared revenue model:** the developer owns the development, and the community buys the right to a share of the revenue; and
- **split ownership model:** the development is split into two and owned discreetly by the developer and the local community.

The Applicant has consulted on the opportunity for local community groups to explore the potential to obtain a stake in the project via a shared ownership initiative. To date, no local groups have come forward to explore shared ownership potential.

7.6 Local Electricity Discount Scheme

As part of the community benefit offering, the Applicant has consulted on the option of a proportion of the community benefit funding being used to reduce the energy bills of households proximate to the Proposed Development, based on a similar scheme now running in the village of Douglas, South Lanarkshire. Further details on how this scheme could be implemented will be subject to consultation with the closest communities at a later date.

The practical effect of these discounts will be to enable the households affected to spend more on other goods and services such as food, clothing, transport, and leisure. The value of the energy discounts therefore represent additional turnover for the sectors that benefit from household expenditure, the money spent by households to meet their everyday needs.

Household spending patterns[30] show that those with higher incomes spend a greater proportion of their total expenditure on recreation and hospitality. By enabling residents to spend more on leisure, the provision of support with energy bills for the local community is therefore likely to generate economic benefits and support jobs in the local hospitality and leisure sectors.

[29] Scottish Government (2017), The future of energy in Scotland: Scottish energy strategy.

[30] ONS (2024), Family spending in the UK: April 2022 to March 2023.

7.7 Other Initiatives

7.7.1 Enhanced Connectivity, Tourism & Recreation

The Applicant is committed to the priorities set out in the Hagshaw Energy Cluster Development Framework which aim to enhance local tourism and recreation potential, and existing infrastructure to create accessible links between communities.

The Proposed Development would contribute to the enhancement of the outdoor recreation offering in the local area through the upgrading of existing, and creation of new tracks within Dungavel Forest, which will be able to be used for activities such as walking, running, mountain biking, and e-biking. New parking provision at site entrances on the B743 will be created to improve accessibility. These access improvements can be linked with the wider recreation initiative being taken forward by the Hagshaw Energy Cluster Development Framework to help establish a local tourism identity, attract visitors, and create employment opportunities for the communities, transforming the former mining landscape into a vibrant destination.

7.7.2 Habitat Management & Peatland Restoration

The Applicant is preparing a Habitat Management and Enhancement Plan (HMEP) for the Proposed Development site, to be implemented during the 40-year operational phase.

This HMEP will deliver 56 ha of forest-to-bog peatland restoration within the forestry plantation in the northern development area. The aim is to enhance habitat quality and increase opportunities for protected species.

The HMEP will also deliver 147 ha of land managed for wading bird species around the southern development area, and fund the delivery of a long-term pilot project across an area of c.592 ha of land within the Muirkirk and North Lowther Uplands Special Protection Area (SPA) and Site of Special Scientific Interest (SSSI) to improve habitat and foraging conditions for hen harrier (and other SPA qualifying species).

These activities are expected to generate further economic impact. The capital expenditure is anticipated to be between £3.2 and £6.4 million. This would result in at least £2.8 million GVA and 36 job years. For the first 15 years, maintenance works will also be carried out which are anticipated to generate at least £0.3 million GVA and 8 jobs annually.

8. Tourism and Recreation

This section sets out the tourism context, including the size of the tourism economy and a baseline of attractions in the area, and considers the potential of the Proposed Development to impact on tourism and recreation.

8.1 Wider Tourism Context

8.1.1 Tourism GVA and Employment

In 2022, around 12,000 people were employed in tourism in East Ayrshire and South Lanarkshire, equivalent to approximately 5% of the total employment in the sector across Scotland (229,000). It was estimated that the sector generated £4.8 billion GVA across Scotland, including £148.3 million GVA in East Ayrshire and South Lanarkshire (3% of the Scottish total)

Given that East Ayrshire and South Lanarkshire account for 8% of the Scottish population (see section 4.1.1), it can be concluded that tourism is less important to the economy than for Scotland as a whole.

Table 8-1 Tourism: Employment and GVA, 2022

	East Ayrshire and South Lanarkshire	Scotland
GVA (£m)	148.3	4,803.3
Employment	12,000	229,000

Source: Scottish Government (2023), Growth Sectors Database.

8.1.2 Day Visitors, Domestic Overnight Visitors, and International Visitors

The publication of tourism statistics was disrupted during the Covid-19 pandemic and data on recent tourism performance in local areas is still not available. This section therefore summarises the data available for 2019, immediately prior to the impact of the pandemic.

In 2019, it was estimated that 5.3 million day-visitors spent time in East Ayrshire and South Lanarkshire, spending on average almost £23 per visit, which is lower than the average spend per day visit of visitors to Scotland (£36 per visit). In the wider area, there were around 148,000 visits from international visitors, contributing £136 million in spending. Domestic overnight visitors on average spent £177 per visit, equivalent to a total £36.3 million over 2019.

Table 8-2 Visits by Visitor Type

	East Ayrshire and South Lanarkshire	Scotland
Visitor Numbers (millions)		
Day Visitors	5.4	144.9
Domestic Overnight Visitors	<1	12.4
International Overnight Visitors	<0.1*	3.5
Spend (£ millions)		
Day Visitors	124.8	5,186.6
Domestic Overnight Visitors	36.3	2,989.3
International Overnight Visitors	136*	2,538

Source: Kantar (2020), Great Britain Day Visitor Survey; Kantar (2020), Great Britain Tourist Survey; Visit Scotland (2021), Insight Department: Dumfries and Galloway Factsheet 2019. *These figures refer to the Greater Glasgow and Clyde Valley and Ayrshire & Arran as no data was available for East Ayrshire and South Lanarkshire.

8.1.3 Local Tourism Sector

The activities surrounding the local area include:

- cycling;
- camping and caravanning;
- golfing;
- angling;
- bowling;
- walking

A search on Visit Scotland (2025) for activities within a 15 km radius of Muirkirk reveals the following 15 attractions:

- Glenbuck Heritage Village (Muirkirk);
- Avon Valley Falconry (Sandford);
- Cameronian's Regimental Memorial (Douglas);
- Baby Blue Bee Bunnies (Douglas);
- Turlood Equestrian Centre (Uddington);
- Newmilns Snow and Sports Complex Limited (Newmilns);
- Stormcloud Alpacas (Strathaven);
- Strathaven Leisure Centre (Strathaven);
- Say It Gifts (Strathaven);
- Edge Climbing and Mountaineering Instruction (Strathaven);
- St. Bride's Community Centre (Douglas);
- Beeches Cottage Nursery (Lanark);
- MYB Textiles Ltd (Newmilns);
- Craignethan Castle (Lesmahagow); and

- Black Hill monuments and ruins (Kirkfieldbank).

Similarly, a search on Visit Scotland (2025), Google Maps (2025) and Booking.com (2025) for local accommodation providers resulted in:

- The Strathaven Hotel;
- Strathaven Holiday Park;
- A 2-bedroom static caravan (Muirkirk);
- Inviting 2-bed barn with hot tub (Muirkirk);
- Four B&Bs and guesthouses; and
- Nine self-catering accommodation providers near Strathaven, Muirkirk and Darvel.

The local area features several recreational trails that form a part of its walking and cycling infrastructure, including:

- John Brown's Memorial walk;
- River Ayr Way 1: Glenbuck to Sorn;
- Loudon Hill (Drumclog);
- Local core path network within and around the site;
- Old Railway Walk, near Muirkirk;
- Cairn Table, near Muirkirk; and
- Twa' Brigs Walk, Muirkirk.

There are also approximately 320 core paths within 15 km from the Proposed Development, the ones that pass through the site being EK/1456 Dungavel Hill, EK/5843 Dungavel Auchengilloch and EK/5841 Dungavel. Compared to recreational trails, which form part of the tourism offering of the local area, core paths tend to be used as walking routes by residents. On this basis, motivations to use those paths are unlikely to be affected by the Proposed Development.

The Proposed Development is not expected to have a significant impact on the local tourism sector, since there is no evidence that existing developments in the Hagshaw Energy Cluster, or surrounding area, have caused any adverse effects. In addition, the area has a limited number of tourism assets, minimising the likelihood of any disruption.

8.1.4 Tourism and Recreation Enhancement

While the local area does not currently have a tourism sector that significantly contributes to the local employment compared to the national average, the Proposed Development presents an opportunity to enhance the area's assets, making it more attractive for recreation.

Both East Ayrshire and South Lanarkshire Councils have adopted a non-statutory Development Framework[31] to guide the delivery of positive benefits to surrounding communities (see more details in Section 7.2), amongst other matters. The

[31] LUC (2023), A Development Framework for the Hagshaw Energy Cluster: Planning for Net Zero.

Proposed Development is expected to align with this aspect of the Framework, contributing towards local recreational improvements.

Therefore, it will contribute to enhancing the recreational potential around the Hagshaw Energy Cluster which could, when coupled with wider tourism objectives within the Development Framework, create jobs and change the perceptions of this former mining region[32].

[32] 3R Energy. (2022). Hagshaw Energy Cluster Western Expansion: More for People, More for Climate, More for Nature.

9. Conclusion on Net Economic Impact

The Proposed Development delivers a comprehensive package of economic and wider benefits and, in this way, maximises net economic impacts for local communities.

This report assesses the potential socio-economic and community effects of the Proposed Development in the context of the NPF4 Policy 11(c) requirement to maximise net economic impact.

The socio-economic structure of the local area and East Ayrshire and South Lanarkshire highlights the need for the creation of job opportunities. This is reflected in the local demographic profile, with older population structures and worse labour market outcomes than Scotland. Future demographic pressures are expected to exacerbate these trends making job creation a priority to retain the existing population and attract more working age people to the area.

During the development and construction phase it is estimated that the Proposed Development could generate:

- £19.4 million GVA and support c.217 job years in East Ayrshire and South Lanarkshire (with peak employment of 115 jobs); and
- £54.6 million GVA and c.646 job years across Scotland (with peak employment of 297 jobs).

The expenditure required for the operations and maintenance of the Proposed Development could generate each year:

- £2.0 million GVA and support c.14 jobs in East Ayrshire and South Lanarkshire; and
- £4.5 million GVA and support c.36 jobs across Scotland.

The Proposed Development is expected to support the **provision of local public services and the investment priorities of local communities**. During its operations, it is expected to generate approximately £4.7 million in non-domestic rates yearly.

Other commitments by the Applicant set out in this report include:

- Up to £668,000 annual community benefit fund[33], supporting 9 jobs in local communities;
- Community engagement, in line with the Development Framework approach;
- Responsible Contracting Policy;
- Local Electricity Discount Scheme Option;
- Shared Ownership potential;
- Enhanced local recreation opportunities; and
- Habitat Management and Enhancement Plan, generating at least £2.8 million GVA and supporting 36 job years from habitat management activities, and at least £0.3 million GVA and 8 jobs annually from maintenance works over the first 15 years.

The socio-economics assessment focuses on evaluating whether the Proposed Development meets the requirements outlined in NPF4 Policy 11(c) regarding the maximisation of the net economic impact.

The conclusion has been based on an assessment of whether the Proposed Development maximises net economic impact, based on the following criteria:

- **collaborative approach** to achieve rapid deployment of projects needed to deliver Scotland's 20GW target of onshore wind installed capacity by 2030;
- **high local supply chain content** to maximise the value of local expenditure;
- **bespoke opportunities for local employment and skills development** that reflect the characteristics of the local labour market;
- **fair contributions to the cost for enabling infrastructure** and other interventions necessary to support the sector;
- **fair community benefit packages** that generate tangible benefits for the host community while remaining affordable for the developer; and
- **innovative approach** to support the process of continuous improvements, including opportunities for community ownership, recreational use of site infrastructure, electricity discount schemes, non-cash benefits, training.

The table below is mapping the benefits that the Proposed Development is expected to offer against criteria for maximising net economic impact as required by NPF4 Policy 11(c).

[33] Community benefit fund figure is based on an estimated installed wind energy capacity of 129.6 MW (18 turbines x 7.2 MW) and a community benefit contribution of £5,000 per MW of installed wind energy capacity, plus an additional £20,000 per year for the long duration BESS.

Table 9- 1: Contribution to the Maximisation of the Net Economic Impact

	Collaborative Approach	High Local Content	Local employment and skills development	Infrastructure and other interventions	Community Benefit Package	Continued Innovation
Construction and Operations Impacts						
GVA and jobs generated in Region		✓	✓			
£4.7 million annual payment of non-domestic rates				✓		
Applicant Commitments						
£668,000 annual community benefit fund[34] and 9 jobs per year			✓		✓	✓
Development Framework & community engagement	✓	✓	✓			✓
Responsible Contracting Policy		✓	✓			
Local Electricity Discount Scheme Option		✓				✓
Shared Ownership potential						✓
Enhanced local recreation opportunities		✓		✓		✓
Habitat Management and Enhancement Plan and the corresponding GVA and jobs	✓	✓		✓		✓

Source: BiGGAR Economics Analysis.

Based on these community and economic benefits expected, it can be concluded that the Proposed Development **maximises net economic impact** meeting the requirement for renewable energy proposals set out in Policy 11(c) of NPF4.

[34] Community benefit fund figure is based on an estimated installed wind energy capacity of 129.6 MW (18 turbines x 7.2 MW) and a community benefit contribution of £5,000 per MW of installed wind energy capacity, plus an additional £20,000 per year for the long duration BESS.

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