Chapter 20: Socio-Economic

Glossary of Terms

Additional economic (employment and GVA) effects	These are the employment and Gross Value Added (GVA) effects accruing from the multiplier effects associated with project activity.
Baseline	A description of conditions existing at a point in time against which subsequent changes can be detected through monitoring. Baseline conditions may not be stable even in the absence of development; there may be decline, improvement or cyclic conditions.
Claimant count unemployment	The claimant count records the number of people receiving unemployment benefits from the government. In the UK, the claimant count currently measures everyone who receives Job Seekers Allowance (JSA).
Displacement	The proportion of project benefits accounted for by reduced benefits elsewhere in the target area.
Gross economic (employment and GVA) effects	These are the employment and Gross Value Added (GVA) effects accruing from an economic activity, prior to the treatment of displacement and multiplier effects.
Full time equivalent (FTE) employment impacts	The number of full time (35 hour per week) permanent (52 week per year) jobs that project expenditure supports.
Gross Value Added (GVA)	The total amount of extra value that project related expenditure contributes to the Scottish economy. This is broadly equivalent to either wages plus profit (i.e. the proportion of value added that goes to the company's employees and the proportion that goes to the company's owners) or to turnover minus cost of sale.
Multiplier effects	Further economic activity (jobs, expenditure or income) associated with additional local income, local supplier purchases and longer term effects.
Net economic (employment and GVA) effects	These are the employment and Gross Value Added (GVA) effects once the treatment of displaced has been taken into account.
Net additional economic (employment and GVA) effects	These are the employment and Gross Value Added (GVA) effects accruing from an economic activity, once the treatment of displacement and multiplier effects have been accounted for.
Person year employment (PYE) impacts	The employment impacts during the construction phase are reported in PYE because the contracts would be for fixed lengths. Person years measures the number of years of full-time employment generated by a project. For example, an individual working on this project for 18 months would be reported as 1.5 PYE.
Scottish Index of Multiple Deprivation (SIMD)	A composite measure combining a number of indicators that cover a range of economic, social and housing issues into a single score to determine relative deprivation across Scotland.
Wider economic benefits	The less tangible and longer term strategic benefits that could accrue as a result of a project.

20 Socio-Economic

20.1 Introduction

20.1.1 This Chapter presents a socio-economic assessment of the Revised Coire Glas Pumped Storage Scheme (The Proposed Development). The assessment has been carried out in line with Scottish Government guidance on 'Net Economic Benefit and Planning'[1]. The guidance highlights how the net economic benefit generated by a proposed development can be assessed as a material consideration in the decision-making process.

20.1.2 MKA Economics has been commissioned to assess the likely effects of The Proposed Development on the economy in both quantitative and qualitative terms. In particular, it considers the effects of The Proposed Development on employment and economic output.

20.1.3 The assessment describes the methods used to assess impact, the socio-economic baseline conditions, and the potential impacts of The Proposed Development during the construction phase and the operational phase. The wider, and less tangible and longer term economic benefits of The Proposed Development are also assessed.

Background

20.1.4 The key components of The Proposed Development are situated on Forestry Commission (Scotland) land to the south west of Laggan Locks, approximately 19 km to the south west of Fort Augustus. The primary function of The Proposed Development is to extract, store and release energy to or from the electricity transmission system as required to help balance supply and demand for power at a national scale.

20.1.5 The Proposed Development would provide a generating capacity of up to 1,500 MW, more than doubling the capacity of the 600 MW scheme that obtained Section 36 consent (Electricity Act 1989) in 2013.

20.1.6 The Proposed Development would operate by transferring water between Loch Lochy and the enlarged Loch a' Choire Ghlais. The Proposed Development would either be operated in the 'generating' mode, when electricity would be generated by releasing water from the upper reservoir through the pump-turbines and into Loch Lochy, or in the 'pumping' mode, when electricity is used to drive water through the pump-turbines in the other direction from Loch Lochy to the upper reservoir.

Assessment Methodology

20.1.7 In terms of economic effects, this assessment has employed appraisal techniques consistent with those outlined in the Scottish Government's guidance on 'Net Economic Benefit and Planning', and also Scottish Enterprise's Economic Appraisal Guidance Note for the appraisal of economic development initiatives[2].

[1] Draft Guidance Net Economic Benefit and Guidance, Scottish Government, 2016 http://www.gov.scot/Resource/0049/00498008.pdf

[2] Economic Appraisal Guidance Note, Scottish Enterprise, 2008

20.1.8 This assessment calculates both construction and operational employment associated with The Proposed Development, and the economic effects this would have on the economy.

20.1.9 This assessment outlines the role The Proposed Development can play in supporting national and regional economic development policies and strategies. It presents an overview of the local economic conditions, assessing them against the Highland, Scottish and Great Britain (GB) situation, to set the development context for the proposal. Finally, it outlines the potential benefits of The Proposed Development on employment, investment, local spending, community development and the local business base, at construction and during mature operation.

Limitations and Assumptions

20.1.10 The assessment examines the effects of The Proposed Development on employment and Gross Value Added (GVA), during both construction and operational stages.

20.1.11 This assessment is based on The Proposed Development, as detailed in Chapter 3: Description of Development. Whilst the strategic effects presented in this assessment relate to the current proposals for consent, it is acknowledged that refinements to The Proposed Development are likely through later detailed stages of design.

20.1.12 This Chapter presents an assessment of the potential socio-economic effects that The Proposed Development could deliver if fully implemented and occupied to the full extent of the 1,500 MW potential.

20.1.13 For the purposes of the assessment of economic effects, the following construction activities have been assumed:

- Dam and Upper Reservoir;
- Upper Control Works;
- Underground Waterway System;
- Underground Cavern Power Station;
- Surge Shaft;
- Ventilation Shaft;
- Lower Control Works;
- Access Tunnels;
- Jetty and Administration Building;
- Access Roads; and
- Spoil Management.

20.1.14 In addition to the construction related effects there would be a range of operational activities and ongoing employment generation. Regular visits would be made to inspect and maintain structures along the following lines:

- Daily visits to the underground cavern power station for routine operational and maintenance purposes;

- Weekly visits to the dam, for routine operational and maintenance purposes;
- Non-routine and scheduled major maintenance tasks would be carried out at longer intervals as required. These tasks could potentially extend to several weeks/months in exceptional circumstances;
- Periodic inspection of the underground tunnel works and statutory inspections of the upper dam and ancillary works; and
- As required maintenance of the access tracks and other infrastructure as noted during routine visits to the site.

20.1.15 This scheme mix is considered to represent a reasonable likely minimum amount of employment-generating activity once The Proposed Development is operational, thereby representing a reasonable 'worst-case' scenario for assessment purposes. Employment estimates, for both the construction and operation and maintenance phases, have been supplied by SSE Renewables and their technical consultants.

20.2 Economic Development Policy

Introduction

20.2.1 This section sets out the relevant economic development policy at the national and local level.

National Economic Policy

20.2.2 The Scottish Government replaced the Government Economic Strategy (GES) in 2015 with Scotland's Economic Strategy[3]. The strategy sets out *'an overarching framework for a more competitive and a fairer Scotland and identifies four broad priority areas where our actions will be targeted to make a difference.'* The strategy is built on two key pillars, namely 'tackling inequality' and 'increasing competitiveness'.

20.2.3 The strategy framework is structured around four broad priority areas, where Scottish Government actions will be targeted; these are (1) investment (2) innovation (3) inclusive growth and (4) internationalisation. Within 'investment' there is a commitment to *'invest in Scotland's infrastructure to help Scottish businesses to grow, innovate, and create good quality employment opportunities'* and also *'to prioritise investment to ensure that Scotland protects and nurtures its natural resources and captures the opportunities offered by the transition to a more resource efficient, lower carbon economy'*.

20.2.4 As a substantial capital investment in a key economic sector, The Proposed Development supports both pillars of the strategy and each of the broad priority areas set out in the new Scotland Economic Strategy.

[3] Scottish Government, Scotland's Economic Strategy, 2015, http://www.gov.scot/Publications/2015/03/5984

20.2.5 The Scottish Government has developed a refreshed Routemap for Renewable Energy[4] which sets policy framework to deliver energy targets by 2020. The updated and expanded Routemap reflects the challenge of the Scottish Government's new target to meet an equivalent of 100% demand for electricity from renewable energy by 2020, as well as the target of 11% renewable heat. The Routemap also identifies the scale of the economic opportunity renewable energy projects can provide and emphasises that Scotland's workforce needs to be prepared to meet the opportunities that will emerge.

20.2.6 Although The Proposed Development is not a renewable energy technology, its operation is an important subsidiary of the renewable sector and an important contributor to the energy mix, with the potential to support current and future renewable energy strategies and policies.

20.2.7 The revised Scottish Planning Policy[5] (SPP) is the latest statement of the Scottish Government's policy on land use planning matters. SPP is founded on sustainable economic growth principles and is governed by the Scottish Economic Strategy, which confirms that the planning system should proactively support development that contributes to sustainable economic growth and to high quality places. One of the core values of the planning system, as set out in SPP is to *'play a key role in facilitating sustainable economic growth, particularly the creation of new jobs and the strengthening of economic capacity and resilience within communities'.*

20.2.8 One of the four overarching outcomes of the new SPP is 'A successful, sustainable place' and to support 'sustainable economic growth and regeneration, and the creation of well-designed, sustainable places'. Another overarching outcome is 'A low carbon place – reducing our carbon emissions and adapting to climate change.' Each of these outcomes are directly related to The Proposed Development.

20.2.9 The SPP (at paragraphs 1 and 24) confirms that the Scottish Government's central purpose is to focus on creating a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth.

20.2.10 Sustainable economic growth is defined as 'Building a dynamic and growing economy that will provide prosperity and opportunities for all, while ensuring that future generations can enjoy a better quality of life too'.

20.2.11 Achieving sustainable economic growth requires a planning system that enables the development of growth enhancing activities across Scotland, and protects the quality of the natural and built environment as an asset for that growth.

20.2.12 The new SPP recognises that good planning plays an important role in 'creating opportunities for people to contribute to a growing, adaptable and productive economy'. It also notes that allocating 'sites and creating places that are attractive to growing economic

[4] Scottish Government, 2020 Routemap for Renewable Energy in Scotland, 2011, http://www.scotland.gov.uk/Publications/2011/08/04110353/0 updated in 2013 http://www.gov.scot/Topics/Business-Industry/Energy/RoutemapUpdate2013 and 2015 http://www.gov.scot/Topics/Business-Industry/Energy/RoutemapUpdate2015

[5] Scottish Government, Scottish Planning Policy, 2014, http://www.gov.scot/Topics/Built-Environment/planning/Policy

sectors, and enabling the delivery of necessary infrastructure, planning can help provide the confidence required to secure private sector investment, thus supporting innovation, creating employment and benefiting related businesses'.

20.2.13 The Proposed Development has been developed and designed in line with the SPP, as outlined in The Proposed Development's Planning Support Statement. The Proposed Development can directly support two of the four overarching outcomes of the SPP, notably around creating economic wealth and prosperity but also supporting the drive for Scotland to be a low carbon economy.

20.2.14 Scottish Planning Policy (SPP, 2014) also makes clear the Ministers desire to see net economic benefit realised. Paragraphs 28 and 29 state *'The planning system should support economically, environmentally and socially sustainable places by enabling development that balances the costs and benefits of a proposal over the longer term. The aim is to achieve the right development in the right place; it is not to allow development at any cost. This means that policies and decisions should be guided by the following principles…. giving due weight to net economic benefit'*.

20.2.15 Similarly, Paragraph 169 states 'Proposals for energy infrastructure developments should always take account of spatial frameworks for wind farms and heat maps where these are relevant. Considerations will vary relative to the scale of the proposal and area characteristics but are likely to include… net economic impact, including local and community socio-economic benefits such as employment, associated business and supply chain opportunities'.

20.2.16 Following publication of the revised SPP, Scottish Ministers have committed to developing further guidance to assist in assessing and giving due weight to the net economic benefit of proposed planning applications which may be contrary to the Local Development Plan[6]. The new guidance outlines the importance of demonstrating the net economic benefit of a proposed scheme, highlighting the importance of taking economic benefits into account when determining a planning decision.

20.2.17 The guidance states, 'where net economic benefit is likely to be a material consideration in the decision, the onus will be on the developer to provide the relevant information in support of the planning application. The planning authority will evaluate the assessment of net economic benefit provided by the applicant.'

20.2.18 This Chapter has been produced in line with the new guidance on measuring net economic benefits with a view to enabling the net economic benefit to be assessed. The onus is on SSE Renewables to demonstrate such benefits.

20.2.19 The National Tourism Strategy[7] confirms the importance of tourism to Scotland's economy by recognising tourism as one of Scotland's *'key economic contributors'*. The strategy emphasises the resilience of the sector in recent times but also cautions that Scotland must remain competitive, by developing and changing, to retain visitors in order to prevent

[6] Scottish Government, Draft Advice Note on Economic Benefit and Planning, 2016, http://www.gov.scot/Resource/0049/00498008.pdf

[7] Scottish Tourism Alliance, Tourism Scotland 2020, 2012, http://www.gov.scot/Topics/Business-Industry/Tourism

losing visitors to other tourism destinations. The mission is for the industry to achieve an overnight visitor spend of between £5.5bn and £6.5bn by 2020, generating an additional £1bn.

20.2.20 A Tourism Development Framework for Scotland[8] has been developed to set out the framework to assist and promote growth in Scotland's visitor economy to 2020 and it supports the national tourism strategy by the Scottish Tourism Alliance. The framework sets out a much broader development strategy and proposals across a wider agenda, highlighting the important role played by local partners, notably Area Tourism Partnerships (such as the Highland Area Tourism Partnership), local authorities (The Highland Council), destination management organisations (Destination Loch Ness) and business improvement districts (Inverness and Loch Ness Tourism Business Improvement District).

20.2.21 Tourism is a key economic sector, even more so in the Scottish Highlands than at the national level as a whole. As requested in the Scoping Opinion (July 2017), this Chapter (and other Chapters of the EIA) assess the impact The Proposed Development will have on the tourism economy.

20.2.22 The Highland Economic Forum created 'An Action Plan for Economic Development in Highland' in 2012. The main thrust of the Action Plan is to generate new employment in the private sector and social economy to compensate for employment and earnings reductions through national public sector cuts, whose impacts are particularly severe in Highland, which has a relatively high dependence on public sector employment and spending.

20.2.23 The principal themes of the Action Plan are:

- To stimulate and support indigenous business growth (including new business formation, diversification, internationalisation and collaborations);
- To help maximise the impacts of the UHI and attract national and international research funding into the area;
- To ensure that the workforce, sector by sector, has the skills to enable the region and its businesses to capitalise on opportunities;
- To address the growing problem, shared with other parts of the UK, of youth unemployment, and to attract back those with family connections with the region to help fill new job opportunities in renewables, tourism, life sciences, IT;
- To focus on job creation that will help raise the region's relatively low average earnings in the private sector; and
- Whilst creating jobs in the short term to compensate for public sector cuts and maintain the region's growth momentum, to take a long term strategic approach to growing the business base and creating career opportunities.

[8] Visitscotland, A Tourism Development Framework for Scotland, 2013, http://www.visitscotland.org/pdf/Tourism%20Development%20Framework%20-%20FINAL.pdf

20.2.24 Specific initiatives being taken forward by the Forum's Working Groups include:

- Working with HIE and the private sector provider to maximise the provision of superfast broadband in the region and the economic benefits from broadband;
- Ensuring that the region's workforce benefits to the maximum from renewable energy and related developments;
- Fostering the development of research institutes to attract national and international funding into the area, provide well paid employment, and generate commercial spin-offs;
- Improving the provision of tourism-related training, and promoting tourism and hospitality as a career;
- Encouraging business development, e.g. through collaborations, that will increase the spend of tourist visitors;
- Increasing the provision of outsourced services to regional and national organisations by Highland private sector businesses and social enterprises;
- Facilitating an increase in homeworking opportunities throughout the region;
- Exploring ways, within statutory guidelines, in which local benefit considerations can be introduced into public procurement contracts;
- Identifying and supporting small businesses with high growth potential and encouraging new business starts that will create significant new employment (including encouraging public sector staff to consider self-employment that builds on their expertise and experience);
- Best practice from other areas is being drawn upon in shaping new initiatives, and job creation targets are being developed for each new initiative. Employment measures are being promoted by Highland Works - a partnership between Highland Council, JobCentre Plus and Skills Development Scotland; and
- Whilst the focus is on the generation of new jobs through the private sector, pressure will be maintained on the Government to improve external road, rail and air links nationally and internationally.

20.2.25 The Proposed Development supports a range of the aspirations and aims of the regional economic action plan, notably around attracting new investment to creating new employment in key sectors, particularly in the energy sector.

20.2.26 The Highland Council has developed a new 'City-Region Deal' vision for Inverness and Highland. The 'City-Region Deal' is to position Inverness and the Highlands as a region of digital opportunity. This vision was turned into reality in 2017 when the Inverness and Highland City Region Deal was signed off at a ceremony in Invergordon. This formalised the commitment of £315 million worth of funding - £135 million from the Scottish Government, supported by £127 million from The Highland Council and its partners, and another £53m from the UK Government. The City-Region Deal is designed to deliver the following outcomes:

- Over 1,000 direct jobs as a result of City-Region Deal projects with a further 2,200 additional jobs in the construction sector;
- A skilled labour market moving towards a high skilled high wage economy;

- A centre of excellence in rural and digital healthcare with sufficient mass to attract research and investment and fully exploit the commercial opportunities;
- Business growth through effective digital connectivity and promotion of innovation;
- Improved productivity and real wages, which are estimated to increase by almost 1.3 per cent and bring £100 million per annum to the regional economy;
- A rebalanced population with the aim of retaining and/or attracting 1,500 young people in the 18-29 age group over the initial 10-year deal period;
- 6,000 new houses over 20 years of which 1,800 will be affordable homes; and
- Private sector leverage from housing building and, through opening up land for commercial development, would see a return over a 20-year period of around £800 million being invested in the economy of the city and region.

20.2.27 The Proposed Development can support the City-Region Deal with its focus to creating new higher value employment and growing a key sector which will support the aim to create jobs, notably amongst young people, and also increase wages.

20.2.28 The Highland Area Tourism Partnership (ATP) comprises representatives from the tourist industry and key public bodies involved in delivering tourism in the Highlands, including Visit Scotland, Highland Council, the Highlands and Islands Enterprise network, Scottish Natural Heritage, Forestry Commission Scotland, Cairngorms National Park Authority and Hi-Trans.

20.2.29 The Highlands ATP developed a Highland Area Tourism Partnership Plan[9] to replace the previous Area Tourism Strategy. The Plan describes some of the key issues that need to be addressed in order to grow tourism in the Highlands, and to contribute to the national vision and aspiration.

20.2.30 The overarching vision of growing the visitor economy across the Highlands has a number of key aims, these being:

- Position the Highlands as a prime destination within Scotland that competes successfully with other countries in the global marketplace;
- Develop the Highlands as a world-class product that delivers a consistently high-quality visitor experience at value for money prices, with high standards of facilities, customer service, career opportunities and income levels;
- Develop a competitive industry that is economically, socially and environmentally sustainable and that supports and builds on the history, culture, environment and hospitality of its people and communities;
- Encourage the dispersal of visitors throughout the Highlands, so that communities in remote rural areas can share in the benefits of tourism; and
- Ensure that everyone living and working within the Highlands understands the value of tourism to the local economy and actively get involved in growing tourism.

[9] Highland Area Tourism Partnership Plan, Highland Area Tourism Partnership, 2006, http://www.visitscotland.org/pdf/highland_strategy_final.pdf

20.2.31 In March 2014 tourism businesses in Inverness, Loch Ness and the surrounding area backed the plans to establish the UK's first Tourism Business Improvement District (BID). The Inverness and Loch Ness Tourism BID – now called Visit Inverness Loch Ness - was developed to strengthen the destination credentials of both Inverness and Loch Ness.

20.2.32 The BID has worked in partnership with VisitScotland to maximise the benefit from regional and national events and the following objectives of the BID have been established:

- Increase visitor numbers;
- Increase length of stay;
- Increase visitor spend;
- Help sustainability of tourism businesses; and
- Create jobs.

20.2.33 It is known that Visit Scotland is supportive of renewable energy developments on the basis that they are suitably positioned and do not adversely affect tourism assets and activities. A review of tourism assets and activities in the area is presented later in the Chapter, and impact is based on the visual and operational impacts on these assets.

Summary

20.2.34 The Proposed Development has the potential to support both national and regional economic strategies and policies. It is of a scale which suggests the employment generating potential will not only benefit the Highland region but other areas in Scotland.

20.2.35 As a significant capital investment, The Proposed Development will create opportunities for supply chain benefits and the 'ripple effect' of the development is likely to support a range of local businesses, and potential support for new business activity.

20.2.36 Although The Proposed Development is not a renewable energy technology, its operation is an important subsidiary of the renewable sector and an important contributor to the energy mix. As such, it can therefore support the national objective of creating a low carbon economy. It also supports the regional drive for more jobs and investment in the energy sectors.

20.2.37 There are features of the new Scottish Planning Policy which are pertinent to the socio-economic impact assessment, notably around valuing the economic benefit of the proposal – where the onus is on the developer to present the net economic benefits of the scheme. In doing so, indicating the employment and GVA impacts of The Proposed Development, their nature, scale and duration. This assessment is structured to provide these net economic benefits.

20.3 Socio-Economic Baseline

Introduction

20.3.1 This section presents an overview of the regional (Highland) economy, and compares it against the Scottish and Great Britain (GB) economic situation. The assessment covers population, economic activity and inactivity, employment and unemployment,

worklessness and inactivity, employment sectors, education attainment, earnings and has a particular focus on the tourism sector.

Socio-Economic Baseline

Population

20.3.2 The Highland Council area has a population of almost 235,000 residents and witnessed an increase of 6.3% over the period 2006 to 2016 – compared to 5.3% increase at the Scottish level and an 8.0% rise at the GB level. Although the area has witnessed a population increasing faster than the Scottish rate, the increase has been below the GB rise (see Table 20.1).

Table 20.1: Total Population (2016)

Total population (2016)			
	Highland (numbers)	Scotland (numbers)	Great Britain (numbers)
All people	234,700	5,404,700	63,786,000
Males	114,800	2,627,500	31,462,500
Females	119,900	2,777,200	32,323,500
Source: ONS Population estimates - local authority based by five year age band			

20.3.3 In terms of the working age population, 61.6% of the regional population is of working age, compared to 64.6% and 63.1% at the Scottish and GB levels respectively. This indicates that the area has a lower proportion of people of working age, which can be seen to be an economic challenge in terms of securing future economic prosperity (see Table 20.2).

Table 20.2: Population aged 16-64 (2016)

Population aged 16-64 (2016)				
	Highland (numbers)	Highland (%)	Scotland (%)	Great Britain (%)
All people aged 16-64	144,700	61.6	64.6	63.1
Males aged 16-64	71,400	62.2	65.3	63.8
Females aged 16-64	73,300	61.1	63.9	62.4
Source: ONS Population estimates - local authority based by five year age band				
Notes: % is a proportion of total population				

Economic Activity

20.3.4 The table below highlights that the Highlands has a higher proportion of working age people who are economically active, when compared to the Scottish and GB levels. The level of economic activity is higher regionally than nationally for both males and females. The regional area also has a higher proportion of self-employed people than recorded nationally (see Table 20.3).

Table 20.3: Employment and Unemployment (July 2016 – June 2017)

Employment and unemployment (Jul 2016-Jun 2017)				
	Highland (numbers)	**Highland (%)**	**Scotland (%)**	**Great Britain (%)**
All people				
Economically active†	122,300	81.9	76.9	78
In employment†	117,500	78.7	73.4	74.4
Employees†	100,400	68.9	64.5	63.4
Self employed†	15,400	9.1	8.6	10.6
Unemployed (model-based)§	4,600	3.8	4.5	4.6
Males				
Economically active†	64,200	84.7	81	83.2
In employment†	61,400	81	77	79.2
Employees†	50,900	69.5	65.2	64.7
Self employed†	9,900	11.3	11.4	14.2
Unemployed§	2,900	4.5	4.9	4.7
Females				
Economically active†	58,100	79.1	73	72.9
In employment†	56,100	76.3	70	69.6
Employees†	49,500	68.3	63.8	62.1
Self employed†	5,500	6.8	5.8	7.1
Unemployed§	#	#	4.1	4.4
Source: ONS annual population survey				
† - numbers are for those aged 16 and over, % are for those aged 16-64				
§ - numbers and % are for those aged 16 and over. % is a proportion of economically active				
# - Sample size too small for reliable estimate				

20.3.5 Model based unemployment for June 2017 indicates that the region has lower rates of unemployment than both the Scottish and GB situation.

20.3.6 This suggests that although the region has fewer people of working age, those who are of working age are more economically active than recorded nationally and at the GB level. This is an economic strength and one which can help secure future economic wealth.

20.3.7 A more detailed assessment of unemployment is set out later in this section.

Economic Inactivity

20.3.8 Corollary to higher economic activity rates the Highlands has a lower rate of economic inactivity, as shown in Table 20.4.

Table 20.4: Economic Inactivity (July 2016 – June 2017)

Economic inactivity (Jul 2016-Jun 2017)				
	Highland (level)	Highland (%)	Scotland (%)	Great Britain (%)
All people				
Total	25,500	18.1	23.1	22
Student	4,300	16.9	25	26.8
looking after family/home	5,200	20.2	19.2	24.5
temporary sick	~	~	2.7	1.9
long-term sick	7,500	29.3	27.9	22
discouraged	#	#	0.4	0.4
retired	3,900	15.5	15.4	13.5
other	3,200	12.7	9.4	10.9
wants a job	8,800	34.6	24.6	23.5
does not want a job	16,700	65.4	75.4	76.5
Source: ONS annual population survey				
# Sample size too small for reliable estimate				
~ Estimate is not available since sample size is disclosive				
Notes: numbers are for those aged 16-64.				
% is a proportion of those economically inactive, except total, which is a proportion of those aged 16-64				

20.3.9 It is worth noting that of those economically inactive, the region has a higher proportion of people who 'want a job' (34.6%) compared to the Scottish (24.6%) and GB (23.5%) levels. This suggests there is more of a desire to find work in the Highlands than recorded nationally.

Workless households

20.3.10 In terms of worklessness, there are fewer households in the region, compared to the Scottish level, that are workless households. However, the rate is slightly higher than the GB rate (see Table 20.5).

Table 20.5: Workless Households (Jan-Dec. 2016)

Workless Households (Jan-Dec 2016)			
	Highland	Scotland	Great Britain
Number of Workless Households	9,800	330,000	3,043,300
Percentage of Households that are Workless	15.7	18.3	15.1
Number of children in Workless Households	#	109,100	1,353,400
Percentage of children who are in Households that are Workless	#	12.5	11.4
Source: ONS annual population survey - households by combined economic activity status			
# Sample size too small for reliable estimate			
Notes: Only includes those households that have at least one person aged 16 to 64.			
Children refers to all children aged under 16.			

Claimant Count Unemployment

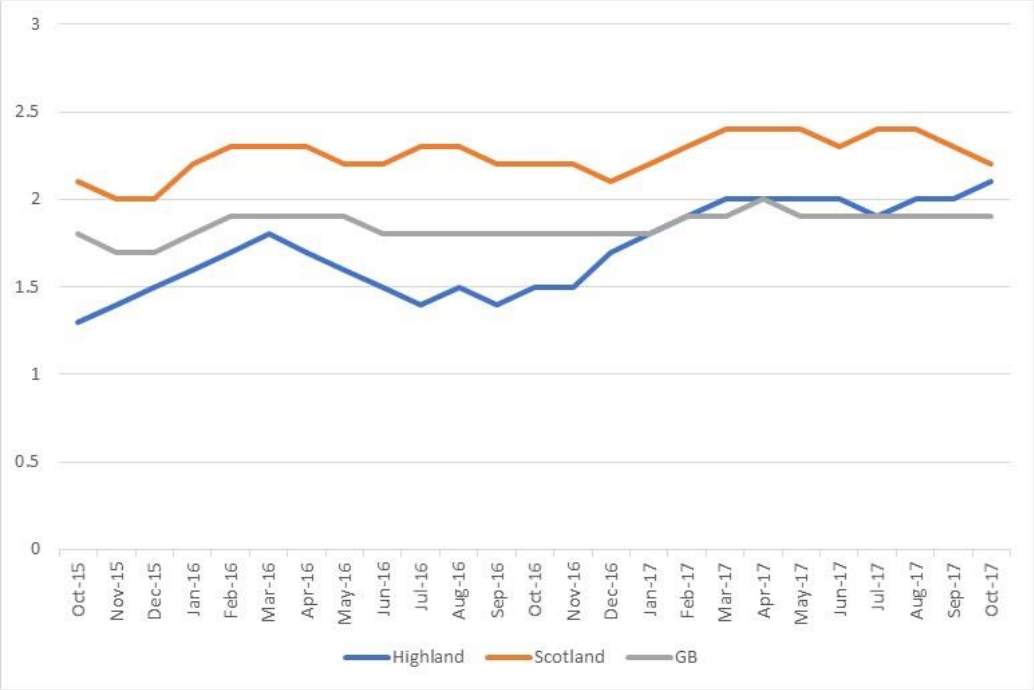
20.3.11 The latest claimant count unemployment rate for October 2017 highlights that although the region has a lower rate than the Scottish rate, the unemployment rate is above the GB average (see Table 20.6).

Table 20.6: Claimant Count by Sex (October 2017)

Claimant count by sex - not seasonally adjusted (October 2017)				
	Highland (numbers)	Highland (%)	Scotland (%)	Great Britain (%)
All people	3,030	2.1	2.2	1.9
Males	1,970	2.8	3	2.3
Females	1,060	1.4	1.4	1.5
Source: ONS Claimant count by sex and age				
Note: % is the number of claimants as a proportion of resident population of area aged 16-64 and gender				

20.3.12 Although regional unemployment is below the national unemployment rate, the following figure indicates that regional unemployment has increased from 1.3% to 2.1% over the period from October 2015, whereas Scottish and GB rates have both remained relatively stable over the same two year period (see Table 20.7).

Table 20.7: Unemployment October 2015 - 2017



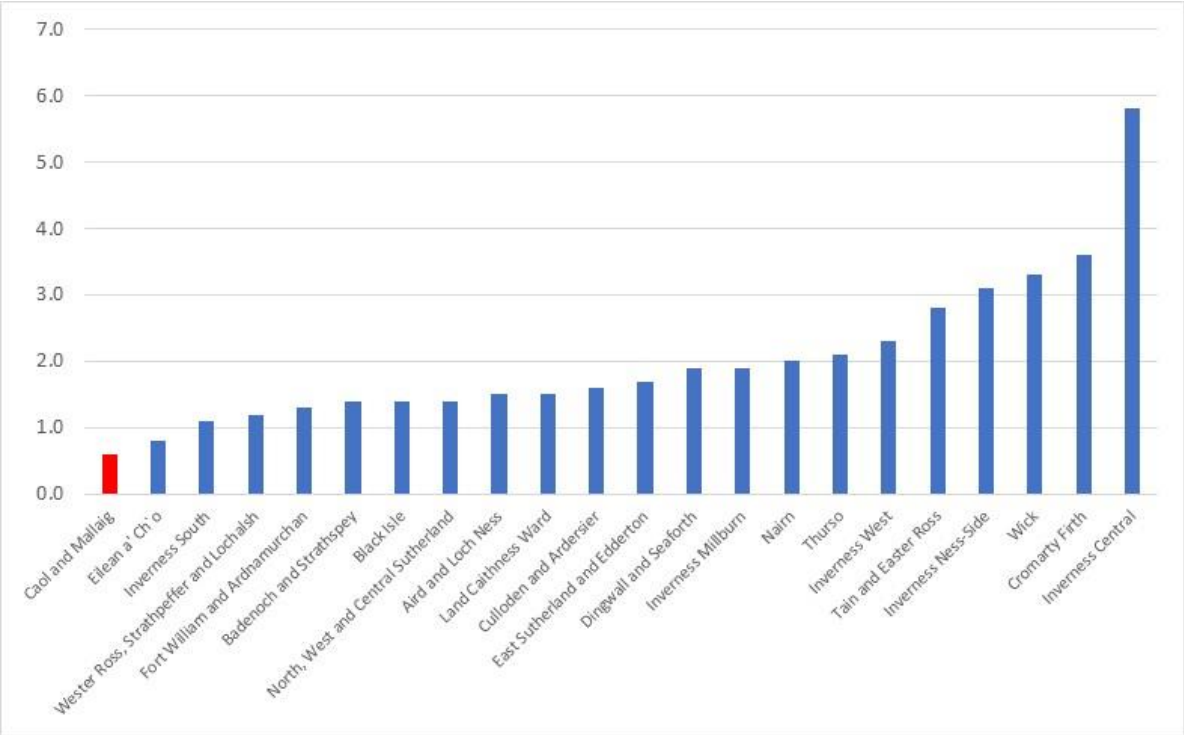
20.3.13 In terms of unemployment by age range, the regional position is better than the Scottish situations across most age ranges, with the exception of those aged 16 and 17 years old where the Highlands has an average above both the Scottish and GB levels (see Table 20.8).

Table 20.8: Claimant County by Age (October 2017)

Claimant count by age - not seasonally adjusted (October 2017)				
	Highland (level)	Highland (%)	Scotland (%)	Great Britain (%)
Aged 16+	3,030	2.1	2.2	1.9
Aged 16 to 17	25	0.5	0.2	0.1
Aged 18 to 24	535	3.2	3.3	2.8
Aged 18 to 21	315	3.3	3.7	3
Aged 25 to 49	1,615	2.3	2.3	1.9
Aged 50+	855	1.6	1.7	1.6
Source: ONS Claimant count by sex and age				
Note: % is number of claimants as a proportion of resident population of the same age				

20.3.14 Table 20.9 below provides a breakdown of unemployment across all Highland Council Wards, and highlights that Caol and Mallaig (the Ward in which The Proposed Development is located) has the lowest rate across all 22 Highland Council Wards.

Table 20.9: Unemployment by Highland Council Ward October 2017



20.3.15 In terms of benefit claimants by type, the area has a lower rate of job seeker allowance claimants and lone parent claimants (see Table 20.10).

Table 20.10: Main Benefit Claimants (November 2016)

Working-age client group - main benefit claimants - not seasonally adjusted (November 2016)				
	Highland (numbers)	**Highland (%)**	**Scotland (%)**	**Great Britain (%)**
Total claimants	15,040	10.4	13	11
By statistical group				
Job seekers	1,110	0.8	1.4	1.1
ESA and incapacity benefits	8,740	6	7.8	6.1
Lone parents	920	0.6	0.9	1
Carers	2,250	1.6	1.7	1.7
Others on income related benefits	220	0.2	0.2	0.2
Disabled	1,430	1	0.9	0.8
Bereaved	370	0.3	0.2	0.2
Main out-of-work benefits†	10,990	7.6	10.2	8.4
Source: DWP benefit claimants - working age client group				
† Main out-of-work benefits includes the groups: job seekers, ESA and incapacity benefits, lone parents and others on income related benefits. See the **Definitions and Explanations** below for details				
Notes: % is a proportion of resident population of area aged 16-64				
Figures in this table do not yet include claimants of Universal Credit				

20.3.16 Overall, in terms of 'main out of work benefits' the Highlands has a lower proportion of claimant than recorded at the Scottish and GB levels.

Employment by Occupation

20.3.17 The table highlights the type of employment at the Highlands, Scottish and GB levels. It indicates that the region has a higher proportion of skilled trade, caring leisure and service, process plan and machine and elementary occupations than the Scottish and GB levels (see Table 20.11).

Table 20.11: Employment Occupation (July 2016 to June 2017)

Employment by occupation (Jul 2016-Jun 2017)				
	Highland (numbers)	**Highland (%)**	**Scotland (%)**	**Great Britain (%)**
Soc 2010 major group 1-3	40,600	34.8	43	45.5
1 Managers, directors and senior officials	10,700	9.1	8.6	10.7
2 Professional occupations	19,400	16.5	20.9	20.3
3 Associate professional & technical	10,500	8.9	13.3	14.3
Soc 2010 major group 4-5	31,300	26.8	21.1	20.7
4 Administrative & secretarial	11,900	10.2	10	10.3
5 Skilled trades occupations	19,400	16.5	11	10.3
Soc 2010 major group 6-7	20,500	17.6	18.2	16.8
6 Caring, leisure and Other Service occupations	12,700	10.8	9.6	9.2
7 Sales and customer service occs	7,800	6.7	8.6	7.5
Soc 2010 major group 8-9	24,400	20.9	17.7	17
8 Process plant & machine operatives	7,900	6.7	6.3	6.3
9 Elementary occupations	16,500	14	11.3	10.6
Source: ONS annual population survey				
Notes: Numbers and % are for those of 16+				
% is a proportion of all persons in employment				

20.3.18 Regionally there are few people employed in professional, associate professional and technical, sales and customer service occupations.

Jobs

20.3.19 The region has a lower proportion of full-time jobs and more part-time jobs than the Scottish and GB levels.

20.3.20 In terms of industry of employment, the Highlands have higher rates of water related posts, construction jobs, accommodation and food service occupations, health and social work jobs and arts, entertainment and recreation posts. The construction sector is well represented at the Highlands level, suggesting the local area is well positioned to benefit from aspects of The Proposed Development (see Table 20.12).

Table 20.12: Employment Jobs (2016)

Employee jobs (2016)				
	Highland (employee jobs)	**Highland (%)**	**Scotland (%)**	**Great Britain (%)**
Total employee jobs	111,000	-	-	-
Full-time	69,000	62.2	66.7	67.8
Part-time	42,000	37.8	33.3	32.2
Employee jobs by industry				
B : Mining and quarrying	350	0.3	1.3	0.2
C : Manufacturing	6,000	5.4	7.2	8.1
D : Electricity, gas, steam and air conditioning supply	800	0.7	0.8	0.4
E : Water supply; sewerage, waste management and remediation activities	2,000	1.8	0.7	0.7
F : Construction	7,000	6.3	5.5	4.6
G : Wholesale and retail trade; repair of motor vehicles and motorcycles	17,000	15.3	14.5	15.3
H : Transportation and storage	5,000	4.5	4.3	4.9
I : Accommodation and food service activities	12,000	10.8	7.4	7.5
J : Information and communication	2,250	2	3	4.2
K : Financial and insurance activities	900	0.8	3.5	3.6
L : Real estate activities	1,500	1.4	1.4	1.6
M : Professional, scientific and technical activities	6,000	5.4	6.9	8.6
N : Administrative and support service activities	5,000	4.5	7.5	9
O : Public administration and defence; compulsory social security	6,000	5.4	6.3	4.3
P : Education	8,000	7.2	7.7	8.9
Q : Human health and social work activities	22,000	19.8	16.5	13.3
R : Arts, entertainment and recreation	5,000	4.5	3.1	2.5
S : Other service activities	2,250	2	2.1	2.1

Source: ONS Business Register and Employment Survey : open access

- Data unavailable

Notes: % is a proportion of total employee jobs excluding farm-based agriculture

Employee jobs excludes self-employed, government-supported trainees and HM Forces

Data excludes farm-based agriculture

20.3.21 The region has a lower proportion of mining and quarrying roles, manufacturing employment, ITC roles, financial service posts, professional services and education related jobs. The manufacturing sector is under represented which may affect the regions ability to benefit from The Proposed Development.

Businesses

20.3.22 In terms of the business base, the Highlands has a higher proportion of micro enterprise and smaller business units (in terms of employment numbers) than witnessed at the national (Scottish) level. The incidence of larger businesses is lower in the regional level than recorded nationally (see Table 20.13).

Table 20.13: UK Business Counts (2017)

UK Business Counts (2017)				
	Highland (numbers)	**Highland (%)**	**Scotland (numbers)**	**Scotland (%)**
Enterprises				
Micro (0 to 9)	9,575	89.1	153,645	88
Small (10 to 49)	1,020	9.5	17,560	10.1
Medium (50 to 249)	130	1.2	2,730	1.6
Large (250+)	20	0.2	690	0.4
Total	10,750	-	174,625	-
Local Units				
Micro (0 to 9)	11,410	83.1	180,485	81.4
Small (10 to 49)	1,985	14.5	33,710	15.2
Medium (50 to 249)	315	2.3	6,520	2.9
Large (250+)	30	0.2	1,050	0.5
Total	13,735	-	221,760	-
Source: Inter Departmental Business Register (ONS)				

Qualifications

20.3.23 In terms of education attainment levels, the region has fewer higher qualified residents but also has fewer residents with no qualifications than recorded at the Scottish level (see Table 20.14).

Table 20.14: Qualifications (Jan. 2016 to Dec. 2016)

Qualifications (Jan 2016-Dec 2016)				
	Highland (level)	Highland (%)	Scotland (%)	Great Britain (%)
Individual levels				
NVQ4 and above	58,500	42	43.7	38.2
NVQ3 and above	83,100	59.6	60	56.9
NVQ2 and above	108,300	77.7	75.5	74.3
NVQ1 and above	119,800	85.9	84.1	85.3
Other qualifications	7,600	5.5	6.1	6.6
No qualifications	12,000	8.6	9.9	8
Source: ONS annual population survey				
Notes: For an explanation of the qualification levels see the definitions section.				
Numbers and % are for those of aged 16-64				
% is a proportion of resident population of area aged 16-64				

Scottish Index of Multiple Deprivation

20.3.24 The Scottish Index of Multiple Deprivation[10] (SIMD) ranks all of the 6,976 data zones across Scotland. The data zones are ranked from 1 (most deprived data zone) to 6,976 (least deprived).

20.3.25 The ranking is based on a number of indicators across seven categories: income, employment, health, education, skills and training, housing, geographic access and crime. Data zones ranked between 1 and 1,185 are the most deprived 15% of data zones and those ranked between 1 and 1395 are the most deprived 20%.

20.3.26 The Highland Council has 21 datazones (from a total of 312 Highland datazones) designated within the most deprived 20% in Scotland, this is an increase from SIMD 2012 when the local authority had 17 wards designated within the most deprived 20% in Scotland. Although the Highlands cannot be deemed to be an area of deprivation, there remain pockets of deprivation, largely in and around Inverness, and this position has worsened over the last five years.

Tourism Economy

20.3.27 At the national level tourism is an important element in the social, economic, environmental and cultural well-being of Scotland, from major cities to rural areas, many of which depend on the industry for jobs and infrastructure. In 2016, almost 15 million overnight tourism trips were taken in Scotland, for which visitor expenditure totalled almost £6.1 billion[11].

[10] Scottish Index of Multiple Deprivation, Scottish Government, 2016, http://www.gov.scot/Topics/Statistics/SIMD

[11] Tourism in Scotland, Visitscotland, 2017, http://www.visitscotland.org/pdf/Tourism_in_Scotland_2016.pdf

20.3.28 According to Scottish Annual Business Statistics[12] the sustainable tourism sector was valued at £3.7 billion in Gross Value Added (GVA) terms in 2014, which is 42% greater than the £2.6 billion reported in 2008. The sector employed 184,000 people in 2014, which represented 11% of the Scottish workforce, and which is 4% greater than the 176,000 reported in 2008.

20.3.29 GVA per employee in the sustainable tourism sector was £19,274 in 2014, compared to the national GVA per employee across all sectors of £50,163. Although a key sector in terms of employment, the economic value of the sector is not as significant, especially when assessing GVA per head.

20.3.30 Almost 2.5 million trips were made to the Highlands and Islands in 2016[13]. According to the Scottish Annual Business Statistics[14], at the Highland Council level, the sustainable tourism sector was valued at £197 million in GVA terms in 2014. Over the period 2008 to 2014 the sector's GVA therefore increased by 11%. The sector employed 13,100 people in the Highland Council area in 2014, which represented an 11% increase on 2008 levels. As witnessed at the national level, the sector has continued to grow over the 2008 to 2014 period.

20.3.31 GVA per employee in the Highlands tourism sector was £20,406 in 2014, compared to the national GVA per tourism employee of £19,274 in 2014. The average GVA per employee across all sectors in the Scottish Highlands in 2014 was £36,325. This indicates that although the tourism sector is important in employment terms, the level of economic output (in GVA per head terms) is not as significant.

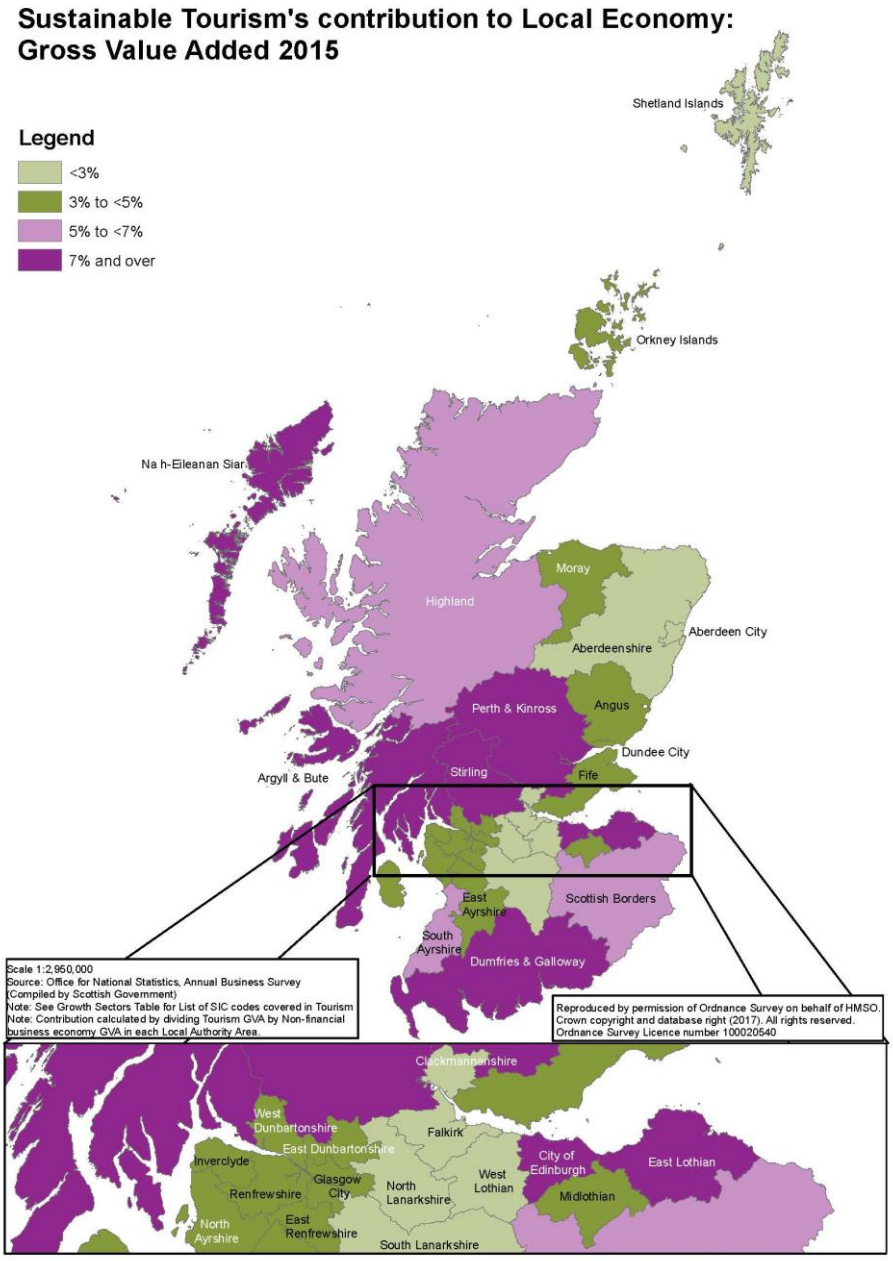
20.3.32 Tourism is the second largest of the growth sectors in employment terms in the Highlands; however when compared to the other growth sectors the tourism sector generates the lowest level of GVA per employee of the growth sectors. The sector has continued to grow over the eight years, suggesting the sector has not been adversely affected by the growth in renewable energy infrastructure as is sometimes suggested.

20.3.33 The figure below highlights that tourism is important to the Highlands economy, although there are other areas in Scotland that are more reliant on tourism than the Highlands.

[12] Scottish Annual Business Statistics, Scottish Government, 2015, http://www.gov.scot/Topics/Statistics/Browse/Business/SABS/Sectors

[13] Tourism in Scotland's Regions, Visitscotland, 2017, http://www.visitscotland.org/pdf/Tourism_in_Scotland_Regions_2016.pdf

[14] Scottish Annual Business Statistics, Scottish Government, 2015, http://www.gov.scot/Topics/Statistics/Browse/Business/SABS/Sectors



20.3.34 The following EIA Chapters present an assessment on relevant tourism and recreational features within the vicinity of The Proposed Development:

- Chapter 9 (Visual Amenity): Sections on 'Views from footpaths and other identified walking routes';
- Chapter 15 (Cultural Heritage): Sections outlining more detail on scheduled monuments, listed buildings, designated battlefields and recorded and unrecorded archaeological sites – which may in part be identified as tourism assets; and
- Chapter 19 (Land Use and Recreation): Sections which outline the baseline and assessment of effect across walking, cycling, fishing, canoeing and rafting, boating and visitor attractions and activities.

Summary

20.3.35 Although economic activity levels are high in the Highlands, and the area has low unemployment rates, the region continues to face a number of economic challenges. The economic successes of low unemployment and high economic activity rates, hide the challenge that the area has a low level of working age residents, as a result of an ageing population and population migration amongst young people.

20.3.36 The construction sector is well represented at the Highlands level, suggesting the local area is well positioned to benefit from aspects of The Proposed Development. The manufacturing sector is under represented which may affect the regions ability to benefit from The Proposed Development.

20.3.37 Similarly, the economy is characterised by lower value economic sectors, such as tourism, which although generates a high volume of employment and has grown in recent years are generally lower value and seasonal in nature. Wages and salaries are depressed and the recent Highland City-Region Deal has been developed to create higher value jobs and increase real wages. The energy sector is characterised as a high value sector and one which has a heritage and track record in the Highlands, notably around hydro power and pumped storage.

20.3.38 The Proposed Development can help create higher value jobs, both during construction and at mature operation. The Proposed Development can also act as a catalyst for further development as well as supporting other sectors through its supply chain.

20.4 Socio-Economic Impact

Introduction

20.4.1 This section presents the predicted socio-economic impacts of The Proposed Development. Rather than utilising industry standards and forecast modelling to estimate the socio-economic impacts, the impact assessment is based on estimated employment information provided by SSE Renewables and technical consultants to provide a more accurate assessment of employment generation.

20.4.2 SSE has developed, constructed and operated a number of similar developments, and this assessment is based on previous experience, and that of their technical team, in estimating predicted impacts at this ex-ante appraisal stage. This information has been provided to MKA Economics as core assumptions, which have been assessed according to economic impact guidance and proxies to convert employment to GVA estimates.

Socio-Economic Impact

Construction Employment

20.4.3 The total development and construction employment were estimated by SSE Renewables and their technical advisers. These total employment impacts associated with the construction phase, by type, are outlined in the table below. This shows that it is estimated that there will be on average 500 people deployed each year of the seven-year core construction period, resulting in 3,500 person years employment (PYE) over the seven year period.

20.4.4 The employment impacts during the construction phase are reported in PYE because the contracts would be for fixed lengths. Person years measures the number of years of full-time employment generated by a project. For example, an individual working on this project for 18 months would be reported as 1.5 person years. Table 20.15 summarises the breakdown of PYE across the seven-year core construction period.

Table 20.15: Construction Employment Impacts by Type

Construction Tasks	Person Year Employment
Site Establishment / Access Roads	210
Upper Dam Construction	630
Main Underground Works	1,680
Lower Control Works	280
Turbine Manufacture / Installation	280
Above Ground Buildings	210
Testing and Commission	210
Total	**3,500**

Source: SSE Renewables

20.4.5 In addition to presenting the employment impacts according to main construction activity areas, SSE Renewables and advisors presented an estimate on the expected origin of the predicted employment benefits, these assumptions are presented below (see Table 20.16).

Table 20.16 Construction Employment Impacts by Area

Construction Tasks	Percentage Split by Area			
	Highland	Scotland	UK	Overseas
Site Establishment / Access Roads	90%	10%	0%	0%
Upper Dam Construction	30%	60%	5%	5%
Main Underground Works	20%	40%	20%	20%
Lower Control Works	40%	40%	20%	0%
Turbine Manufacture / Installation	0%	10%	20%	70%
Above Ground Buildings	70%	20%	10%	0%
Testing and Commission	0%	10%	20%	70%

Source: SSE Renewables

20.4.6 The resultant impacts of the above assumptions present the following direct construction related impacts across each spatial area across the seven-year core construction period (see Table 20.17).

Table 20.17 Total Direct Construction Employment Impacts

Construction Tasks	Average Number of PYEs	Person Year Employment Split by Area			
		Highland	Scotland	UK	Overseas
Site Establishment / Access Roads	210	189	21	0	0
Upper Dam Construction	630	189	378	31.5	31.5
Main Underground Works	1,680	336	672	336	336
Lower Control Works	280	112	112	56	0
Turbine Manufacture / Installation	280	0	28	56	196
Above Ground Buildings	210	147	42	21	0
Testing and Commission	210	0	21	42	147
Total	**3,500**	**973**	**1,274**	**542.5**	**710.5**

Source: SSE Renewables

20.4.7 Of the 3,500 construction related years of employment supported across the seven-year core construction period, 973 PYE are expected to benefit the regional (Highland) economy, 1,274 PYE at the Scottish level, 542.5 PYE nationally and 710.5 PYE benefiting non-UK areas.

20.4.8 A high proportion of the economic and employment impacts would come from the upper reservoir works, additional earthworks and creation of underground tunnels and cavern powerhouse, which require extensive digging and support work. Information provided by SSE Renewables confirms that the types of staff likely to be employed in construction include:

- Project Manager;
- Quantity Surveyor;
- Site Engineer;
- Technician;
- Crane Operator;
- Steel Fixer;
- Driller;
- Welders;
- Drivers / Barge Operators; and
- Labourers.

20.4.9 In order to calculate the economic effect of new jobs, the GVA per head for civil engineering related projects in the Highlands and Scotland are utilised, in this case £78,934 and £84,931 respectively. These figures are also drawn from the Scottish Annual Business Statistics[15] The resultant economic impact at the Highlands and Scottish levels across the seven-year core construction period are shown in Table 20.18.

Table 20.18 Gross Employment and GVA Impacts of Construction at Highland and Scottish level

Location	Number of PYE	GVA per PYE	Total GVA
Highlands	973	£78,934	£76,802,782
Scotland	1,274	£84,931	£108,202,094

Source: SSE Renewables / MKA Economics

20.4.10 Economic impact assessments must also consider the effects of displacement as a result of The Proposed Development having an adverse effect on other economic assets and activities. Displacement occurs when The Proposed Development takes labour, land and/or capital from other firms / projects within the area being assessed.

20.4.11 Due to the unique nature of The Proposed Development, displacement levels are not expected to be significant. However, there is expected to be some displacement and for the purposes of accounting for displaced activity it is assumed that displacement would be 25% at both the regional and national levels. Table 20.19 highlights the net employment and GVA impacts after the effects of displacement.

Table 20.19: Net Employment and GVA Impacts of Construction at Highland and Scottish level

Location	Number of PYE	GVA per PYE	Total GVA
Highlands	730	£78,934	£57,621,820
Scotland	956	£84,931	£81,194,036

Source: SSE Renewables / MKA Economics

20.4.12 Evidence has shown that investment in construction projects can have strong 'multiplier effects'. This is where output in a certain part of the economy generates economic activity in other areas of the economy. Multipliers can measure how new capital investment in energy projects can generate additional income across the economy, including for people who live nearby developments.

20.4.13 Economic assessments must consider multiplier effects, which are the further economic activity associated with additional income and supplier purchases. An increase in 'final demand' for a product and an associated increase in the output of that product, where other producers of goods and services respond to this increased demand, is known as the

[15] http://www.gov.scot/Topics/Statistics/Browse/Business/SABS

'direct effect'. This can run right through the supply chain, known as the 'indirect effect'. As employment increases so too do levels of household income, some of which is spent on other goods and services, and this is known as the 'induced' effect.

20.4.14 Multiplier effects for different Scottish industries are provided by the Scottish Government[16], with 'Construction' having a Type II multiplier of 1.9. There are no regional level multipliers in Scotland and therefore the national level Type II multipliers are used to assess the indirect and induced impacts for both the regional and national economies. Type I multipliers only allow indirect effects to be calculated. The GVA per head presented for the net economic assessment is that for the entire Highlands (£36,325) and Scottish (£49,708) economies in 2015. The resultant impact of multiplier effects is shown in Table 20.20.

Table 20.20: Additional Employment and GVA Impacts of Construction at Highland and Scottish level

Location	Number of Additional PYEs	GVA per PYE	Total GVA
Highlands	657	£36,325	£23,865,525
Scotland	860	£49,708	£42,748,880

Source: SSE Renewables / MKA Economics

20.4.15 The following table presents the final net additional effects across the seven-year core construction period, having taken account of both displacement and multiplier effects (see Table 20.21).

Table 20.21: Net Additional Employment and GVA Impacts of Construction at Highland and Scottish level

Location	Number of Net Additional PYE	Net Additional GVA
Highlands	1,387	£81,487,345
Scotland	1,816	£123,942,916

Source: SSE Renewables / MKA Economics

20.4.16 Overall, taking account of displacement and multiplier effects, The Proposed Development is expected to generate 1,387 PYE in the Highlands and 1,816 at the Scottish level. This equates to a GVA impact of £81.5 million to the Highlands and £123.9 million at the Scottish level over the seven-year core construction period.

[16] Type II Output, Income, Employment and GVA Multipliers, Scottish Government, 2014, http://www.gov.scot/Topics/Statistics/Browse/Economy/Input-Output

Operational Employment

20.4.17 The mature operation employment levels were provided by SSE Renewables. The employment impacts associated with the mature operation phase, by type, are outlined in the table below. This shows that it is estimated that 20 full time jobs will be created once The Proposed Development is fully operational (see Table 20.22).

Table 20.22: Operation and Maintenance Employment Impacts by Type

Posts	**Average Number of Full Time Jobs**
Operation and Maintenance	20
Total	**20**

Source: SSE Renewables

20.4.18 SSE Renewables and advisors presented an estimate on the expected origin of the predicted employment benefits, these assumptions are presented in Table 20.23.

Table 20.23: Operation and Maintenance Employment Impacts by Area

	Percentage Split by Area			
	Highland	Scotland	UK	Overseas
Operation and Maintenance	80%	20%	0%	0%

Source: SSE Renewables

20.4.19 The resultant impacts of the above assumptions present the following direct operational related impacts across each spatial area (see Table 20.24).

Table 20.24: Total Direct Operation and Maintenance Employment Impacts

Construction Tasks	**Average Number of Full Time Jobs**	**Employment Split by Area**			
		Highland	Scotland	UK	Overseas
Operation and Maintenance	20	16	4	0	0
Total	**20**	**16**	**4**	**0**	**0**

20.4.20 Of the 20 full time operation and maintenance jobs, 16 are expected to benefit the regional (Highland) economy and four at the Scottish level. Information provided by SSE Renewables confirms that the types of staff likely to be employed once fully operational include:

- Station Manager;
- Assistant Station Manager;
- Civil Engineer;
- Electrical Engineer;
- Mechanical Engineer;

- Electrical/Mechanical Fitter;
- Admin;
- Cleaner; and
- Security.

20.4.21 In order to calculate the economic effect of new jobs, the GVA per head for civil professional, scientific and technical work in the Highlands and Scotland are utilised, in this case £53,234 and £70,013 respectively. These figures are also drawn from the Scottish Annual Business Statistics[17].The resultant economic impact at the Highlands and Scottish levels are shown in Table 20.25.

Table 20.25: Gross Employment and GVA Impacts of Operation at Highland and Scottish level

Location	Number of Full Time Jobs	GVA per Employee	Total GVA
Highlands	16	£53,234	£851,744
Scotland	4	£70,013	£280,052

Source: SSE Renewables / MKA Economics

20.4.22 As noted in the construction phase, economic impact assessments must also consider the effects of displacement. For The Proposed Development, displacement levels are not expected to be as significant as the construction related activity and it is assumed that displacement would also be around 10% during operation and maintenance at both the regional and national levels. Table 20.26 highlights the net employment and GVA impacts after the effects of displacement.

Table 20.26: Net Employment and GVA Impacts of Operation at Highland and Scottish level

Location	Number of Full Time Jobs	GVA per Employee	Total GVA
Highlands	14	£53,234	£745,276
Scotland	4	£70,013	£280,052

Source: SSE Renewables / MKA Economics

20.4.23 Multiplier effects (as outlined above) for different Scottish industries are provided by the Scottish Government[18], with 'Repair and Maintenance' having a Type II multiplier of 1.7. The GVA per head presented for the net economic assessment is that for the entire Highlands (£36,325) and Scottish (£49,708) economies. The resultant impact of multiplier effects (the additional employment generated) is shown in Table 20.27.

[17] http://www.gov.scot/Topics/Statistics/Browse/Business/SABS

[18] Type II Output, Income, Employment and GVA Multipliers, Scottish Government, 2014, http://www.gov.scot/Topics/Statistics/Browse/Economy/Input-Output

Table 20.27: Additional Employment and GVA Impacts of Operation at Highland and Scottish level

Location	Number of Additional Jobs	GVA per Employee	Total GVA
Highlands	10	£36,325	£363,250
Scotland	3	£49,708	£149,124

Source: SSE Renewables / MKA Economics

20.4.24 Table 20.28 presents the net additional effects, having taken account of both displacement and multiplier effects.

Table 20.28 Net Additional Employment and GVA Impacts of Operation at Highland and Scottish level

Location	Number of Net Additional Full Time Jobs	Net Additional GVA
Highlands	24	£1,108,526
Scotland	7	£429,176

Source: SSE Renewables / MKA Economics

20.4.25 Overall, taking account of displacement and multiplier effects, The Proposed Development is expected to generate 24 operational jobs per annum in the Highlands and a further seven in the rest of Scotland per annum. This equates to a GVA impact of £1.1 million to the Highlands and £429,000 to the rest of Scotland per annum.

Wider Economic Benefits

20.4.26 In addition to the stated economic opportunities at the construction and operational phases, there is also a variety of wider economic impacts which are excluded from the construction and operational economic impact assessment. The wider impacts which should also be noted as having positive effects on the regional and national economies include:

20.4.27 ***Supporting policy objectives;*** The Proposed Development can play an important role in supporting regional and national policy objectives. Importantly The Proposed Development can support the ambitions set out in the national and regional economic strategies as set out earlier in this Chapter, notably a new and significant capital investment, whilst supporting the area's green credentials, supporting local business through supply chain opportunities and thereby creating jobs and offering skills development. Furthermore it will do so over the lifetime of The Proposed Development therefore providing a role in supporting the drive for high value sector growth, increasing wages and reducing the migration of young people.

20.4.28 ***Local supply chain opportunities;*** although economic multiplier effects have been included in the economic assessment it is worth noting the wide range and scale of potential 'ripple effects' notably around the expenditure of workers who visit the local area who will benefit

the accommodation and food service sector. The wider 'knock-on' effects can in turn support the supply chain of other activities such as the spending habits of retail operations and accommodation providers. There will be considerable supply chain impacts associated with the proposed worker camps which will be established during the construction phase. In addition there will be project staff requiring other local serviced and non-serviced accommodation on a regular basis. Worker expenditure will support the local and regional economies throughout the seven-year core construction period and over the duration of the project lifetime.

20.4.29 ***Pre-development effects;*** these have not been assessed in this Chapter but considerable pre-development costs have been borne by SSE Renewables and have benefitted local and national firms. Pre-development activities include; technical consultancy and technical testing and analysis, legal and accounting activities and project management including management consultancy activities and civil engineering. Additional impacts related to accommodation of technical staff and their local spending habits can also be claimed as a pre-development effect.

20.4.30 ***Income effects;*** the economic analysis has focused on the GVA impact of generated employment as this is the 'real' impact on the economy. However, it is worth noting that new employment will generate additional wages and salaries, much of which will be spent in the UK.

20.4.31 ***Exchequer impacts;*** the analysis has not attempted to estimate the additional exchequer impacts as a result of taxes borne (Corporation Tax, Employer National Insurance and Irrecoverable VAT) and taxes collected (Income Tax, Employee National Insurance and non-domestic business rates). These are additional financial benefits which will support the regional and national economies.

20.4.32 ***Perception benefits;*** the employment, economic and financial impacts are enhanced through wider strategic impacts associated with strengthening the perception of the area as a place to live, work, visit and invest.

20.4.33 ***Community benefits;*** SSE Renewables are committed to contributing to the local community, and their track record in this area are presented in the following section.

SSE Economic Impact Credentials

20.4.34 SSE has a long track record in supporting economic and community development throughout Scotland. SSE has played, and continues to play, a valuable role in support of sustainable economic growth. This sub-section sets out some examples of SSE's experience in delivering and supporting economic development in Scotland. The information has been supplied to MKA Economics. MKA Economics have presented aspects which are pertinent to the socio-economic assessment of The Proposed Development.

SSE Economic Contribution at UK and Scottish Level

20.4.35 In 2017, SSE contributed £9.26bn to UK GDP and supported 103,720 jobs in the UK[19]. This represented 0.4% and 0.5% of the UK total GDP and employment for that year, respectively. In 2017, SSE contributed £1,899m to Scottish GDP and supported 17,000 jobs. This represented 1.4% and 0.7% of the UK total GDP and employment for that year, respectively. In 2017, for every person directly employed by SSE, another 4.1 people were employed elsewhere in the UK.

Economic Impact of SSE's Supply Chain Living Wage Policy

20.4.36 In September 2013, SSE became an accredited Living Wage employer. At the time, it was the largest company in the FTSE 100 and the only energy company to meet the Living Wage Foundation's criteria for accreditation.

20.4.37 As part of its Living Wage accreditation, SSE is phasing in the Living Wage across its multibillion pound supply chain (total procurement expenditure in 2016/17 was circa £3bn).

20.4.38 In April 2014, SSE introduced the 'Living Wage Clause' in its new supplier contracts, requiring that its suppliers pay all staff: *"… who are directly employed by the Supplier…not less than the Living Wage for the terms of the contract …"* provided the work undertaken meets the Living Wage eligibility criteria.

20.4.39 In 2016/17, SSE's £3 billion annual global supply chain covered the procurement of a wide range of goods and services from suppliers across a broad range of sectors, from the manufacturers providing the blades for turbines at its windfarms to cleaners providing services at construction sites.

20.4.40 When SSE signed up as a Living Wage employer, it committed to pay its nearly 20,000 direct employees a wage at least high enough to cover the basic cost of living. SSE estimates that 158 of its employees benefited from an increase in their salary to the Living Wage rate as a direct result.

20.4.41 Through extending its commitment through its supply chain, by 2020, when all of SSE's contracts are expected to contain the Living Wage Clause, approximately 800 full-time workers will have received a salary increase – around five times more than SSE's direct employees who benefitted from the pay rise in April 2015[20]. For employees benefiting in 2014/15 this was £1,030. It is worth noting that since this analysis was undertaken, SSE has extended the Living Wage eligibility conditions in its supply chain further so it will now cover more people.

[19] http://sse.com/media/467700/SSE-economic-impact-assessment-FY17_FINAL.PDF

[20] http://sse.com/beingresponsible/reporting-and-policy/

SSE Sustainability Ethos

20.4.42 SSE is, above all, a long-term business. Its heritage is rooted firmly in the hydro-electric revolution of the 1940s and 50s, an energy transformation that changed lives and built livelihoods. It has power stations that are more than 70 years old and is building electricity transmission networks today that will last another 50 years.

20.4.43 Following the UK's Climate Change Act 2008, SSE set itself a challenging target to halve the carbon intensity of its electricity generation output by 2020, compared with 2006 levels. At the time, this target represented a commitment to fundamentally change the shape of SSE's electricity generation portfolio. In 2016/17, the average carbon intensity of a kilowatt hour of electricity generated by SSE was 304g of carbon dioxide equivalent. This is less than half it was in 2006. This change came about through the sustained investment in new renewable sources of electricity generation every year between 2009 and 2016, combined with a significant reduction of output from SSE's coal-fired power stations.

Community Investment

20.4.44 SSE is one of the largest energy companies in the UK with a substantial portfolio of renewable energy generation projects. SSE's generation business makes funds available to the communities close to its renewable energy developments. It provides £5,000/MW of installed capacity for wind farms developed since January 2012.

20.4.45 SSE operates 27 community investment funds across GB, which supported 402 projects with grants of over £4.9m in 2016/17. This resulted in an average award value of £12,363. Fund leverage, the amount of match funding from other sources enabled by SSE's grants, rose to an average of £5.26 for every £1 spent. Fund demand was also encouraging with an average of 116% across the programme.

20.4.46 As part of this funding arrangement, SSE has established a regional Sustainable Development Fund (SDF) open to communities across the wider local authority areas where SSE has developed a wind farm. The SDF is designed to support projects which take a longer-term view by delivering transformational social, economic and/or environmental changes in the community. SSE is the only developer to have taken a more regional approach to funding, allowing the benefit from its community funds to be spread more widely.

20.4.47 Through SSE's Highland SDF and its other community funds in the region, SSE granted over £2.2 million to community projects in the Highlands in 2016/17 alone. Given this growing portfolio, SSE has been improving the understanding of the impact that its funds are having in communities. Working in collaboration with NEF Consulting, the consultancy arm of the New Economics Foundation, SSE assessed the impact of one of the newest funds – the Beatrice Partnership Fund. The assessment has projected that for every £1 to be spent by the Beatrice Partnership Fund, the community projects are expected to generate £3.21 in wider value. The £6m Beatrice Fund could create nearly £20m of social value when fully distributed.

SSE's Track Record of Delivering Economic Benefits through Infrastructure Investment

20.4.48 SSE has successfully designed, developed and operated a range of other significant infrastructure investments in Scotland, such as the Beauly Denny Overhead Transmission project and the Beatrice Offshore Wind Farm (BOWL) project.

20.4.49 In terms of BOWL, which at £2.6bn project is one of the largest ever private infrastructure investments in Scotland, SSE estimated that the construction of the project will add approximately £1.13bn of value to UK GDP, of which around £530 million will be contributed to the Scottish economy[21].

20.4.50 The impact on UK and Scottish jobs was also substantial, with BOWL construction investment supporting more than 18,100 years of full-time employment in the UK, of which around 5,800 years of employment were estimated to be in Scotland. A range of locations and businesses are benefitting from the project, including Wick Harbour. Wick Harbour was identified as the operational base for BOWL with two historic derelict Thomas Telford buildings on Wick's harbour front purchased by BOWL for restoration and development into the operational headquarters. The approximate £10m investment transformed the buildings and returned to maritime use. Around 90 employees will be based in the buildings once complete.

20.4.51 **The Beatrice Community Benefit Fund**: Worth a total of £34m over the lifetime of the wind farm. June 2017 saw the announcement of the first round of grant awards from the £3m Partnership Fund element of the Beatrice Fund. Awards totalling £378,000 were made to 14 different projects across the north of Scotland, including £40,000 to the community-owned Covesea Lighthouse in Moray for example.

20.4.52 In addition, SSE actively promote business opportunities as part of their procurement process and track their impact on the supply chain through their 'Open4Business' initiative. This initiative has resulted in the following results since its inception in 2012:

- Over £174 million in contract awards;
- Over £76 million of the total awards to companies in Scotland;
- Over 500 opportunities awarded;
- Over 750 opportunities posted; and
- Over 2,350 suppliers registered from all over Scotland.

Delivery of Economic Effects

20.4.53 In order to review economic impacts predicted in this Section it is recommended that SSE monitor the level of local and national impact associated with all activities during the development and operation of The Proposed Development. There are a range of mitigation measures which can be deployed to maximise local economic opportunities, such as local information exchange and 'Meet the Buyer' events' to promote local

[21] http://sse.com/media/475202/Beatrice-Socio-economic-impact-report-v2_BMF_FINAL_200717.pdf

procurement opportunities and to encourage regional and national firms to tender for high value aspects of the development.

20.4.54 There is also scope to deploy local labour agreements to encourage local procurement through main contracts, which can aid skills development, employability and encourage partnership working on other schemes. There is also scope to encourage significant community and tourism activity through community benefit mechanisms.

Summary

20.4.55 Overall, taking account of displacement and multiplier effects, The Proposed Development is expected to generate 1,387 PYE in the Highlands and 1,816 at the Scottish level. This equates to a GVA impact of £81.5 million to the Highlands and £123.9 million at the Scottish level over the seven-year core construction period.

20.4.56 In terms of operational employment, The Proposed Development is expected to generate 24 full time jobs in the Highlands and a further seven in the rest of Scotland per annum. This equates to a GVA impact of £1.1 million to the Highlands and £429k to the rest of Scotland per annum.

20.4.57 There are a wide range of harder to measure strategic economic benefits associated with The Proposed Development, including, supporting policy objectives, local supply chain opportunities, pre-development effects, income effects, exchequer impacts, perception benefits and community benefits.

20.4.58 SSE also bring an enviable track record in support of economic development across Scotland, and can use this experience to ensure The Proposed Development offers sustainable economic benefits across the Highlands and Scotland.

20.5 Summary

The Study

20.5.1 This Chapter presents socio-economic assessment of the Revised Coire Glas Pumped Storage Scheme (The Proposed Development).

20.5.2 The assessment has been carried out in line with Scottish Government guidance on 'Net Economic Benefit and Planning'[22]. The guidance highlights how the net economic benefit generated by a proposed development can be assessed as a material consideration in the decision-making process.

The Policy

20.5.3 The Proposed Development has the potential to support both national and regional economic strategies and policies. It is of a scale which suggests the employment generating potential will not only benefit the Highland region but other areas in Scotland.

[22] Draft Guidance Net Economic Benefit and Guidance, Scottish Government, 2016 http://www.gov.scot/Resource/0049/00498008.pdf

20.5.4 As a significant capital investment, the proposal will create opportunities for supply change benefits and the 'ripple effect' of the development is likely to support a range of local businesses, and potential to support new business activity.

20.5.5 Although The Proposed Development is not a renewable energy technology, its operation is an important subsidiary of the renewable sector and an important contributor to the energy mix. It therefore supports the national objective of creating a low carbon economy. It also supports the regional drive for more jobs and investment in the energy sectors.

20.5.6 There are features of the new Scottish Planning Policy which are pertinent to the socio-economic impact assessment, notably around valuing the economic benefit of the proposal – where the onus is on the developer to present the net economic benefits of the scheme. In doing so indicating the employment and GVA impacts of The Proposed Development, their nature, scale and duration. This assessment is structured to provide these net economic benefits.

The Economy

20.5.7 Although economic activity levels are high in the Highlands, and the area has low unemployment rates, the region continues to face a number of economic challenges. The economic successes of low unemployment and high economic activity rates hide the challenge that the area has a low level of working age residents, as a result of an ageing population and population migration amongst young people.

20.5.8 The construction sector is well represented at the Highlands level, suggesting the local area is well positioned to benefit from aspects of The Proposed Development. The manufacturing sector is under represented which may affect the regions ability to benefit from The Proposed Development.

20.5.9 Similarly, the economy is characterised by lower value economic sectors, such as tourism, which although generates a high volume of employment and has grown in recent years are generally lower value and seasonal in nature. Wages and salaries are depressed and the recent Highland City-Region Deal has been developed to create higher value jobs and increase real wages. The energy sector is characterised as a high value sector and one which has a heritage and track record in the Highlands, notably around hydro power and pumped storage.

20.5.10 The Proposed Development can help create higher value jobs, both during construction and at mature operation. The Proposed Development can also act as a catalyst for further development as well as supporting other sectors through its supply chain.

The Impact

20.5.11 Overall, taking account of displacement and multiplier effects, The Proposed Development is expected to generate 1,387 PYE in the Highlands and 1,816 at the Scottish level. This equates to a GVA impact of £81.5 million to the Highlands and £123.9 million at the Scottish level over the seven-year core construction period.

20.5.12 In terms of operational employment, The Proposed Development is expected to generate 24 full time jobs in the Highlands and a further seven in the rest of Scotland per annum.

This equates to a GVA impact of £1.1 million to the Highlands and £429k to the rest of Scotland per annum.

20.5.13 There are a wide range of harder to measure strategic economic benefits associated with The Proposed Development, including, supporting policy objectives, local supply chain opportunities, pre-development effects, income effects, exchequer impacts, perception benefits and community benefits.

20.5.14 SSE bring an enviable track record in support of economic development across Scotland, and can use this experience to ensure The Proposed Development offers sustainable economic benefits across the Highlands and Scotland.