Skills Development Scotland

The Highlands and Islands Workforce Summit:
Strengthening the Regional Workforce | April 2025

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The Highlands and Islands Workforce Summit

Executive Summary

The Highlands and Islands is facing into a potentially pivotal opportunity that could equate to £100.4 billion of investment in the region[1].

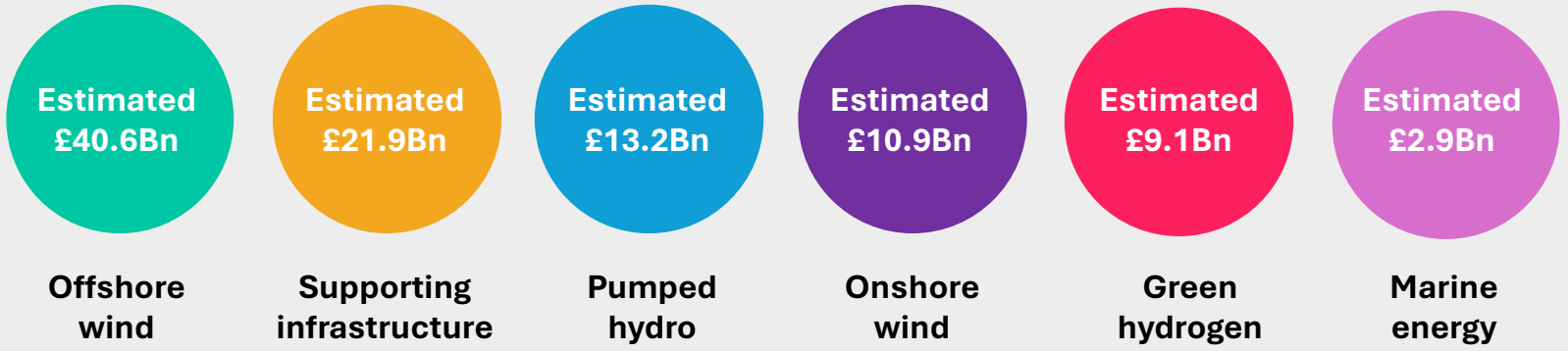
Research undertaken by Highlands and Islands Enterprise (HIE) and the Highlands and Islands Regional Economic Partnership (HIREP) has identified potential investments of up to £100.4 billion over the next 10 to 15 years for the region. This includes significant investments in transmission and distribution, renewable energy sectors such as offshore wind, hydrogen, onshore wind, and marine energy shown below.

The scale of investment has the potential to transform the regional economy, generating £77 billion in Gross Value Added (GVA) and attracting more people to live and work in the region for years to come.

To capitalise on these investments, 16,000 workers are estimated to be required at peak construction periods[2]. It is therefore crucial that the region builds the workforce, achieved through a collaborative co-investment approach from partners in the Highlands and Islands.

Potential Investment Value by Regional Transformational Opportunity (RTO) Area

Source – HIE and HIREP RTO (redrawn)



1 Highlands and Islands Enterprise on behalf of HIREP (2025) Regional Transformational Opportunities in the Highlands & Islands, Summary of research (currently unpublished)
2 Highlands and Islands Enterprise on behalf of HIREP (2025) Regional Transformational Opportunities in the Highlands & Islands, Summary of research (currently unpublished)

Whilst the scale of the opportunity is clear, the workforce challenges of the region are well-known and include an ageing population and depopulation, all creating a shrinking regional workforce. Therefore, developing a new concerted approach to building the required workforce is critical.

To help understand the approach needed to unlock the generational investment opportunity, Skills Development Scotland (SDS) is working with the University of the Highlands and Islands (UHI) and Highlands and Islands Enterprise (HIE) and regional partners to develop emerging co-investment propositions as part of the Workforce North Mission.

An approach that is much more responsive to employer needs, that convenes employers across sectors, fosters deeper collaboration, breaking down barriers and creating genuine co-investment is vital and will enable the development of a regional workforce that is more resilient and better equipped to grasp the opportunities identified, now and in the future.

Engaging with employers, stakeholders, investors, developers and providers has been crucial to this work. SDS undertook an extensive consultation that involved engaging with over 50 regional consultees across key sectors such as offshore and onshore wind, hydrogen, and supporting infrastructure, and energy transmission and distribution (which is one of the most certain areas of investment). The extensive engagement sought to understand current and future workforce demands aligned to investment opportunities, and to gather critical insight to help develop co-investment propositions.

SDS also commissioned research to understand the empirical data around workforce supply and demand in the key opportunity sectors. The consultations and research found workforce gaps exist, with the need to grow the workforce required to respond to the investment opportunities identified. In particular:

- Some renewable energy employers are currently struggling to recruit. Aligned to this, significant workforce gaps around key occupations associated with the energy transition were identified, for example, construction skills, and in particular welding skills.
- These future workforce gaps are likely to emerge in line with the timelines of larger projects in the region, with insight suggesting this will be most acute from 2027 onwards.
- Before considering significant investment opportunities, it is projected that the Highlands and Islands region will require 93,500 workers by 2034 to fill job vacancies. Replacement demand, primarily due to retirement, constitutes the vast majority of this requirement (97.7% of the total). This demand is anticipated across critical sectors such as Construction, Health and Social Care and Engineering[3].

23 employers

11 investors / developers

7 providers

11 stakeholders

3 Oxford Economics

- These workforce issues, along with the existing regional context, pose significant challenges if they remain unaddressed and risk the opportunity for regional transformation.

The Highlands and Islands Workforce Summit has been organised to galvanise this work, bringing together key strategic players to help the region capitalise on the investment opportunities and most importantly translate our collective insights into practical actions.

The insight from the consultations and evidence gathered, has allowed emerging co-investment propositions to be developed under three themes. These are set out below and are for further discussion at the Workforce Summit. Participation from employers and all stakeholders in the region will be crucial in further developing these propositions and co-designing how they might be implemented, to support building the workforce for the region to seize the opportunities presented.

Co-investment	Responding to issues	Unlocking opportunities
Proposition 1: Investing in our Communities and Schools	Retaining talent Sector attractiveness Reliance on transient labour	• **Major family and school campaign** driven by economic opportunities. • **All age school engagement** aligned to campaign. • **Enhanced school vocational programmes** including large scale Foundation Apprenticeship (FA) programme aligned to workforce needs.
Proposition 2: Investing to Develop our Workforce	Demographics Sector attractiveness Reliance on transient labour Equality of access Reducing risk of investment	• **New group schemes** delivering expanded apprenticeships, upskilling retraining and critical workforce academies. • **Increase capacity, expand construction and engineering** provision. • **Investment in technology** to improve delivery **and diversify in new specialist** skills.
Proposition 3: Attracting Working Age Families to the Region	Attracting talent Demographics Sector attractiveness Reliance on transient labour	• **Attraction of working age families through UK campaign and international campaigns.** • **Promotion and co-ordination of 'visa' application** process and develop advanced programme to attract critical skills. • **MSc PhD Programmes.**

Acknowledgments

We recognise the uniqueness of the Highlands and Islands region and the individual and regional variations across islands, the mainland, and very remote and coastal communities.

This mission seeks to build upon the extensive work undertaken by the leaders and executive officers across the Convention of the Highlands and Islands (CoHI) local authority partners, the full range of industry, enterprise and economic development bodies, training providers including private providers and UHI colleges as well as the rich network of third sector and community organisations. Operating within the existing governance and leadership structures of CoHI and the Regional Economic Partnership, we will look to customise actions and activities to reflect the uniqueness of the business and communities we serve.

Thank you to the consultees who contributed their time and insights to this project. Without this insight, the level of depth and richness of data that we were able to achieve in Workforce North would not have been possible.

A list of consultees is included in Appendix 3.

1 Background

The Highlands and Islands is facing several once-in-a-generation opportunities in the coming years – prospects of a scale and potential to transform the region, largely driven by the net zero economy, asset renewal and expansion. Research from Highlands and Islands Enterprise (HIE) on behalf of the Highlands and Islands Regional Economic Partnership (HIREP) identified around 250 transformational projects in the region with a total potential investment of £100.4 billion between 2025-2040[4].

Partners in the region recognise the importance of building a workforce that can respond to the economic opportunities presented, ensuring the skills system is preparing the workforce for the jobs of tomorrow[5]. To explore this further, Skills Development Scotland (SDS) is working with the University of the Highlands and Islands (UHI) and HIE to consider co-investment opportunities between skills and workforce. As part of this work, SDS has undertaken extensive stakeholder consultation to gather insight about the current and future workforce needs of the region.

The Highlands and Islands Workforce Summit has been organised to galvanise this work, bringing together key players in the region to discuss three emerging propositions for co-investment, which are outlined later in this paper. This paper provides context for the summit and briefly explains the work to date.

This paper outlines:

- Aim and approach to the project (known as Workforce North).
- Economic opportunities and workforce demand.
- Regional demographics and labour supply considerations.
- Workforce challenges.
- Key issues that co-investment propositions should consider.
- Emerging co-investment propositions.

4 Highlands and Islands Enterprise on behalf of HIREP (2025) Regional Transformational Opportunities in the Highlands & Islands, Summary of research (currently unpublished)
5 Scottish Government 2024, Minute of the Convention of Highlands and Islands October 2024 - accessed 05/03/2025

2 Aim and approach

This work has been led by SDS, with support from key stakeholders, to identify opportunities for co-investment and collaboration to ensure the workforce in the Highlands and Islands can respond to the opportunities presented. Building on research on regional transformational opportunities (RTO) undertaken by HIE and HIREP, and on evidence gathered by SDS, this paper aims to:

- Provide an overview of the current and future workforce demands reported by employers in the region, gained through commissioned research and extensive stakeholder consultation.
- Set out three emerging propositions for discussion at the Highlands and Islands Workforce Summit, planned for the 4th of April. These propositions have been designed to respond to identified workforce issues and unlock opportunities for employers in the region.

Figure 1 – Approach to identifying options for co-investment

Analysis of evidence to provide insight into economic and labour market conditions in the region.

Extensive consultation with a mix of approximately 50 employers, providers, investors/developers and key stakeholders to understand current and future skills demand.

Identify emerging themes Analysis of consultations to identify key findings and develop emerging co-investment propositions for consideration at the Summit.

Test findings and assess appetite for co-investment propositions Use emerging propositions as a basis for workshop discussion at the Summit.

3 Scale of economic opportunities and workforce demand

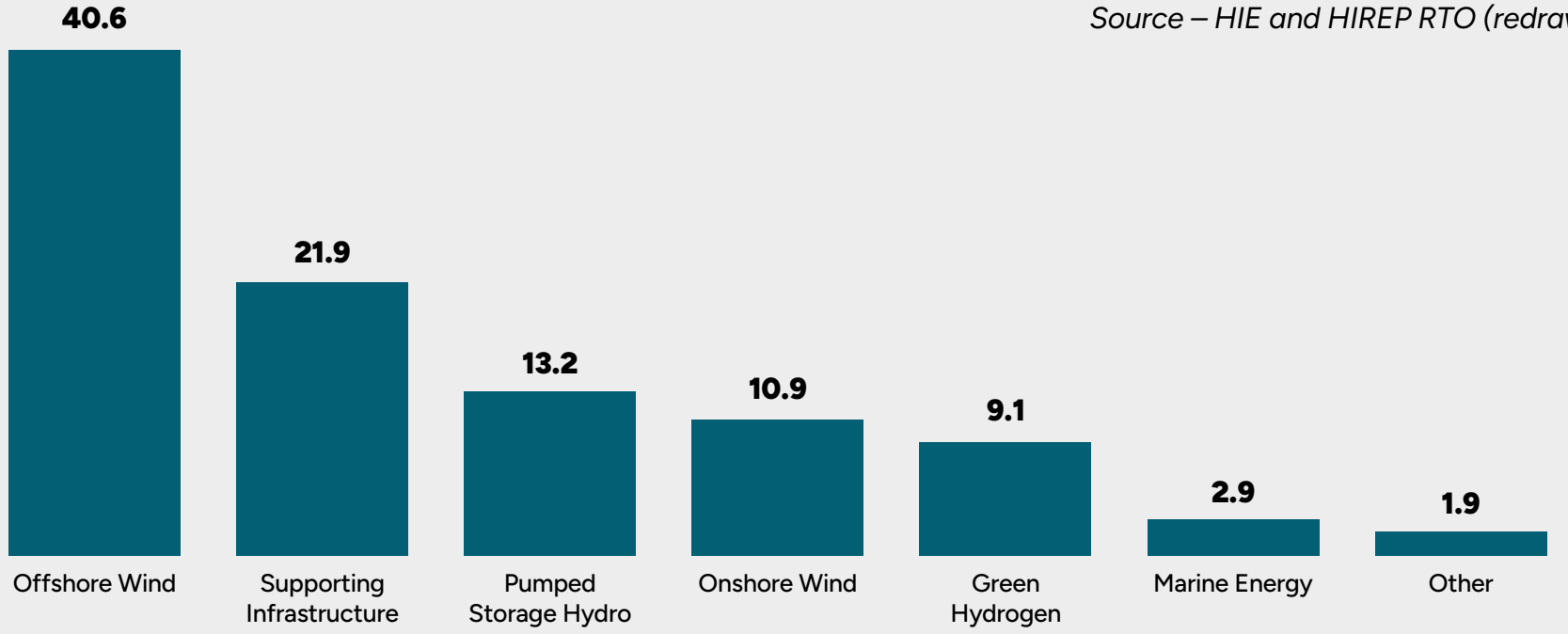
The Highlands and Islands region is on the cusp of a major transformation with over 250 proposed investments, amounting to a potential £100.4 billion over the next 10 to 15 years[6]. This includes significant investments in renewable energy sectors such as offshore wind, hydrogen, onshore wind, and marine energy. The breakdown of investment across sectors from the HIE and HIREP research on RTOs is shown below in Figure 2.

The investments are expected to generate almost £77 billion in Gross Value Added (GVA) and the peak employment during the construction phase is anticipated to be around 16,000 jobs annually[7].

Drawing on a wide range of evidence, including the HIE and HIREP study and evidence baselining work undertaken by SDS as part of Workforce North, the information below provides a summary of the significant investment in the region for key areas, including the scale of demand for jobs across Scotland[8].

Figure 2 – Potential Investment Value (£billions) by Regional Transformational Opportunity (RTO) Area

Source – HIE and HIREP RTO (redrawn)



6 Highlands and Islands Enterprise on behalf of HIREP (2025) Regional Transformational Opportunities in the Highlands & Islands, Summary of research (currently unpublished)
7 Highlands and Islands Enterprise on behalf of HIREP (2025) Regional Transformational Opportunities in the Highlands & Islands, Summary of research (currently unpublished)
8 National job numbers are provided where regional estimates were not available

- **Power and transmission:** This area is one of the most advanced and certain areas of investment. To support the transition to net zero, SSEN will invest £20 billion in the transmission network in the north of Scotland[9]. Jobs will be created across SSEN and contracted companies, with the majority of construction carried out by contracted construction companies[10] expected to support 9,250 jobs across Scotland by 2030[11].

- **Offshore wind:** The 2022 ScotWind leasing round resulted in 20 expected projects. HIE estimate that £40.6 billion will be invested over the next 10-15 years in the region to deliver offshore wind projects[12]. It is estimated that between 2024 and 2029 the Offshore Wind sector workforce will grow from around 9,000 people to around 40,000, a significant increase.[13]

- **Onshore wind:** Onshore wind is the largest current source of renewable energy in Scotland[14]. There are currently five onshore wind farms under construction in the Highlands and Islands with a further 50 awaiting construction[15]. The Highlands and Islands region is central to the onshore wind industry nationally, and 3,736 annual full-time equivalents (FTEs) are expected in 2030 in the region[16]. Across Scotland, there will be an estimated 8,803 - 8,822 annual FTEs in 2035, and 5,013 - 6,510 annual FTEs by 2040[17].

- **Tidal and wave:** Most sources of operational and planned energy sources are located across Shetland and Orkney, with other pipeline projects planned for the Highlands and Argyll and Bute[18]. The vast majority of current projects are related to tidal steam which will peak in 2030, while development in wave energy is expected to peak in 2040[19].

- **Pumped hydro:** Five new pumped hydro facilities and an expansion of an existing site are planned in the Highlands and Islands in the next 10 years. There is an expected workforce demand of 5,960 annual FTEs from 2023–29, 10,680 annual FTEs from 2030-34 and 9,940 FTEs from 2040-44[20].

- **Hydrogen:** There are currently 98 hydrogen projects in active development across Scotland[21]. As the production of hydrogen requires significant amounts of energy, there is an incentive to construct production facilities near to existing renewable energy generation points, such as wind farms, presenting a clear opportunity for hydrogen projects to base themselves in the Highlands. The region's background in exporting oil and gas, and existing pipeline infrastructure makes it well placed to become a global exporter of Green Hydrogen.

9 Scottish and Southern Electricity Networks (2023) SSEN Transmission's £10bn networks investment to support over 20,000 jobs throughout UK
10 Scottish & Southern Electricity Network (2023) Another significant milestone reached in delivery of key contracts for 2030 Scottish electricity onshore transmission network plans - SSEN Transmission
11 Biggar Economics (2023) Economic Impact of the SSENT Pathway 2030 Investment Programme
12 Highlands and Islands Enterprise on behalf of HIREP (2025) Regional Transformational Opportunities in the Highlands & Islands, Summary of research (currently unpublished)
13 Opergy (2024) Energy Skills Intelligence Hub
14 Scottish Government (2024) Green industrial strategy - gov.scot
15 SQW analysis of DESNZ Renewable Energy Planning Database (October 2024)
16 CXC (2024) Mapping the current and future workforce and skills requirements in Scotland's onshore wind industry
17 Scottish Enterprise (2024) Economic Impact Scenarios for Scotland's Energy Transition
18 Highlands and Islands Enterprise (2024) Baselining Inventory for Greenhouse Gas Emissions in the Highlands and Islands
19 Offshore Renewable Energy Catapult (2018), Tidal stream and wave energy cost reduction and industrial benefit
20 Biggar Economics (2023) The Economic Impact of Pumped Storage Hydro
21 Unpublished figure provided by Scottish Enterprise in March 2025 and is accurate until February 2025

- **Solar:** A total of £4,794 million investment is expected in the Scottish solar sector between 2020 and 2050[22]. The 2022 Scottish Power Renewables (SPR) solar portfolio includes four Scottish solar projects – two of which are in Moray[23]. Overall, there is expected demand for between 903 - 2,318 annual FTEs in 2030, 636 - 1,945 annual FTEs in 2035 and 404 - 1,655 annual FTEs by 2040[24].

- **CCUS:** Investment in Scottish carbon capture, use and storage (CCUS) is estimated to be around £4,503 million from 2020-2050[25] and CCUS is expected to increase steadily until the mid-2040s[26]. The number of jobs created is anticipated to be in the region of 1,016 - 1,425 annual FTEs in 2030, 760 - 934 annual FTEs in 2035 and 1,436 - 2,499 annual FTEs in 2040[27].

- **Oil and gas:** A share of oil and gas decommissioning investment will be concentrated on efforts in the North Sea. The Central North Sea (CNS) area is located off the Aberdeenshire coast, and reaches north towards some sections of the Highlands and Islands. The Northern North Sea (NNS) and West of Shetland (WoS) areas are more firmly in Highlands and Islands territory.

The estimated size and type of opportunities arising across the Highlands and Islands in the coming years are detailed further in Appendix 1[28, 29], and timelines are set out in Appendix 2[30].

22 Scottish Enterprise (2024) Economic Impact Scenarios for Scotland's Energy Transition
23 Scottish Power Renewables (2024) Solar PV - Scottish Power Renewables
24 Scottish Enterprise (2024) Economic Impact Scenarios for Scotland's Energy Transition
25 Scottish Enterprise (2024) Economic Impact Scenarios for Scotland's Energy Transition
26 DNV (2024), Energy Transition Outlook UK 2024
27 Scottish Enterprise (2024) Economic Impact Scenarios for Scotland's Energy Transition
28 Where possible figures have been given for the Highlands and Islands region, although this is not available in the source documents for all sectors
29 SQW analysis undertaken as part of the Workforce North project, unpublished (2025)
30 As there are no planned CCUS projects in the region it has been omitted from the diagram

Workforce demand in priority areas

Almost all sectors anticipate an increase in demand, but it is particularly marked for offshore wind and tidal. In summary:

- Generally, employment is higher in the construction phase than in the operational phase, though operational jobs are longer-term.
- The bulk of construction employment will be in manual construction roles, though there will also be demand for skilled construction roles, particularly for people with higher level mechanical or electrical skills. These will be supplemented by those employed in the design and planning of projects with a need for civil, mechanical and electrical engineers, project managers and specialist consultants.
- Operational employment will be more sector specific. Employment opportunities will broadly be for specialised skilled technical roles including wind turbine technicians and hydrogen engineers.
- The geographic specificity of job number estimates varies across sectors, with figures often only available at a Scotland level. For some sectors, the level of employment in the Highlands and Islands can be estimated with some level of confidence, such as pumped hydro, offshore wind and onshore wind, and wave and tidal, where a number of confirmed projects are taking place in the Highlands and Islands, making it highly likely that there will be opportunities for jobs in the region. A large share of Scotland's total activities around these sectors appears focussed on the Highlands and Islands.
- As an example, the consultations carried out as part of Workforce North suggested that the extension of Ardersier Energy Facility will enable new tenants to employ between 1,500 and 2,000 people in manufacturing, construction and assembly by the end of the decade[31]. In addition, Ardersier Port and their new tenants are also expected to create up to 250 people in professional and technical occupations and other related port occupations such as marine roles.

Current and future workforce demand

The region's natural attributes are a critical component to realising the economic opportunities that could potentially be available in the Highlands and Islands in the next 10 to 15 years. Realising these opportunities requires access to a workforce with the relevant skills to meet demand.

Insight from the consultations suggests that current workforce demand is concentrated across certain occupational areas. For example, welding was highlighted by many employers as an area for both current and future workforce demand. Given that welding skills are strongly associated with the energy transition, this correlates with the potential opportunities for the region.

In addition, trade skills such as joinery and plumbing were identified as being in short supply currently, with one interviewee commenting that renewable energy businesses are facing a significant shortage of plumbers.

Furthermore, workforce skills associated with the day-to-day running of projects such as business, admin and project management skills were highlighted by several companies as being areas of current demand.

31 Total job estimates are across both Haventus and a number of inward investors

If they proceed, many of the larger projects will require significant numbers of construction workers during the first phase of development and build. Depending on the project, this could range from between 350 to 1,000 construction workers, comprising both skilled and semi-skilled roles[32]. The construction phase of future projects will also likely create demand for skilled tradespeople such as joiners and plumbers.

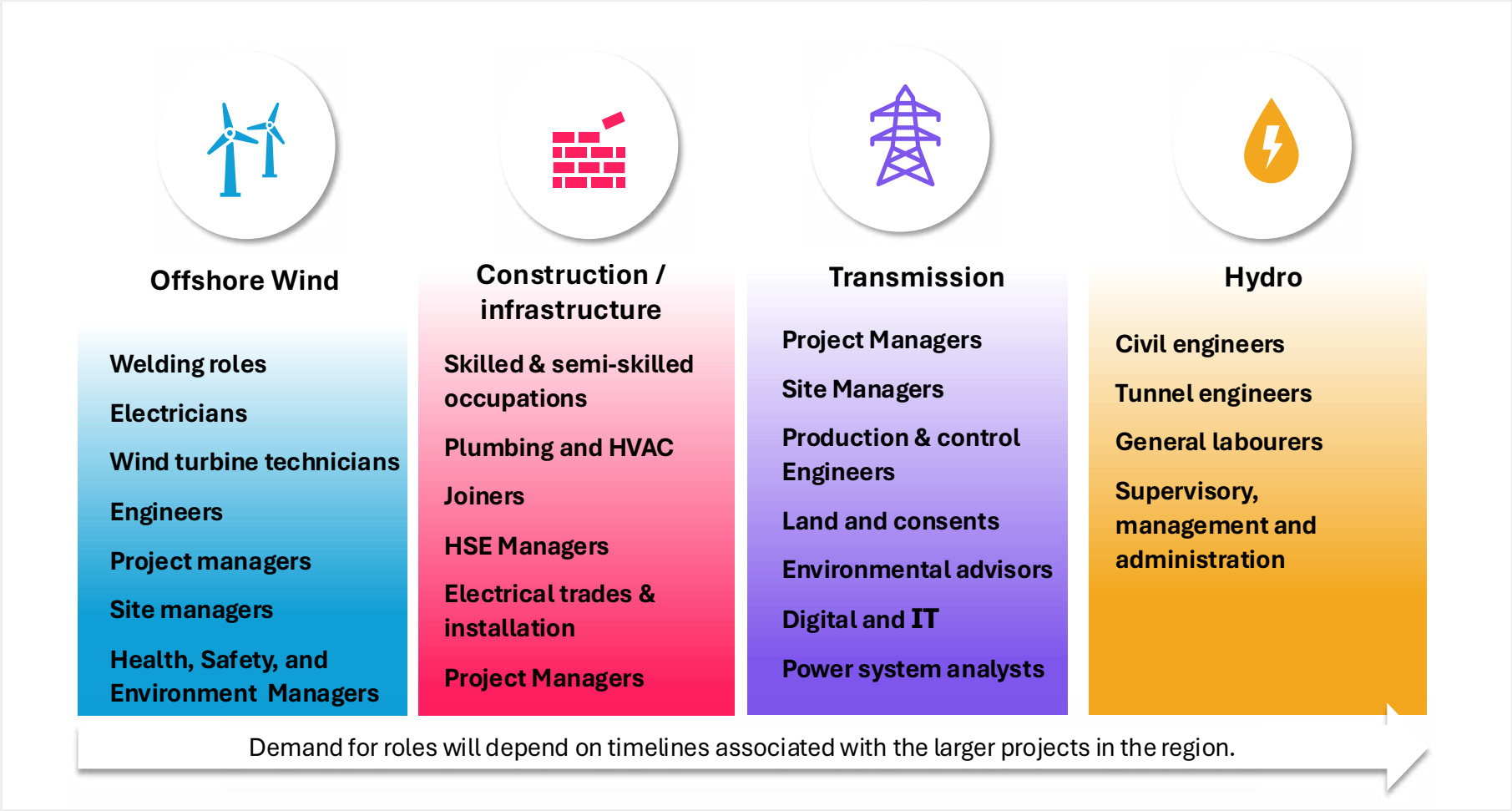
Such requirements were reflected in the consultations with companies who provide the supporting infrastructure for renewable projects, with plumbers being highlighted as an area of workforce shortage in the future. In addition, electricians, joiners, pipe fitters, and platers were also viewed as being areas that will see significant future workforce demand. Consultations also indicated that wind energy project operators and developers are already struggling to recruit, and this is prior to some of the larger projects in the region starting. Analysis of insights shows there are ongoing workforce shortages across the following occupations:

- Overhead line technicians.
- Wind turbine and blade technicians.
- Mechanical and electrical fitters.
- Civil engineering.

Figure 3 summarises the workforce demand in the region aligned with the economic opportunities.

32 For example, the Loch na Cathrach hydro pumped storage project is anticipated to begin construction in 2026, and will require upto 500 construction workers on site in years three and four of construction, Statkraft's projections estimate that up to 60% of these construction roles will be either skills or semi-skilled, including civil engineers and tunnel engineering, see Mapping Workforce Skills for Construction of Loch na Cathrach Pumped Storage Hydro Project

Figure 3 – Workforce demand across sub-sectors



4 Regional demographics and labour supply considerations

Even before the significant investment opportunities are considered, the Highlands and Islands is forecast to require 93,500 workers by 2034 to fill job openings. Replacement demand, which is the requirement to fill openings due to people leaving the labour market, largely due to retirement, accounts for almost all of this demand (97.7% of the total requirement). Demand is expected to be present across key sectors[33]:

- 11,100 people will be required in health and social care
- 6,700 people will be required in the construction sector
- 4,600 people will be required in the energy sector
- 500 people will be required in the engineering sector (not including manufacturing roles in key sectors such as life sciences and food and drink).

This demand is based on a policy and investment neutral forecast, and as described previously, headline figures indicate investment of up to £100.4 billion for the region, which could greatly increase demand. However, there are several factors which can influence the supply of people, and therefore the ability of industry to build the workforce they need to unlock these opportunities. This highlights complexities in the labour market and the potential limitations of responses if there are not enough people to match expected demand in coming years. Some of the supply issues are highlighted below:

- **Ageing population** – Data reveals that, in 2023, almost a quarter of the population (24.7%) in the Highlands and Islands were aged 65+, above the Scottish average (20.3%)[34]. This has been a trend over recent years, with the 65+ age group in the Highlands and Islands increasing by 20.1% between 2013 and 2023, above the Scottish equivalent of 17.8%[35]. In 2018, the dependency ratio in the region, which is the ratio of those of non-working age compared to those of working age[36], was 65% in the Highlands and Islands, greater than the Scottish average of 56%[37]. This means that for every 100 people of working age in the region, there are 65 people of non-working age. Looking to the future, this is expected to increase to 74% in the Highlands and Islands by 2043 – representing a nine-percentage point increase, which will widen the gap further with the expected Scottish equivalent of 60%.
- **Depopulation** – The HIREP draft Regional Economic Strategy notes that depopulation is a significant issue in the region which has been worsened by outmigration and the impact of Brexit[38]. Looking to the future, analysis of population projections for the Highlands and Islands indicates that the total population is expected to decline by 4.8% (almost 24,000) between 2018 and 2043, in comparison to expected population growth of 2.5% at the Scottish level[39].

33 Oxford Economics
34 National Records of Scotland 2024, accessed in March 2025 via the SDS Regional Skills Assessment data matrix
35 National Records of Scotland 2024, accessed in March 2025 via the SDS Regional Skills Assessment data matrix
36 Working age defined as 16 - 64
37 SDS analysis of Population Projections (National Records of Scotland, 2018 based) – accessed in March 2025 via the SDS Regional Skills Assessment data matrix
38 Highlands and Islands Regional Economic Partnership (June 2024) Draft Regional Economic Strategy
39 National Records of Scotland, 2018-based population projections accessed in March 2025 via the SDS Regional Skills Assessment data matrix

- **Declining labour pool** – Issues of depopulation and an ageing workforce can result in a shrinking workforce and data suggests that the rate of decline in the Highlands and Islands has been faster than across Scotland as a whole. Over the 10-year period from 2013-2023, the working age population (16-64) in the Highlands and Islands declined by 3.8% compared to an increase of 0.6% for Scotland as a whole[40]. Data also shows that between 2014 and 2024, regional employment has decreased by approximately 6.9% (-16,400 people) compared to Scotland where employment increased by 3.8%[41].

- **Housing** – The HIREP draft Regional Economic Strategy notes that "housing quality, affordability and availability supports population and economic growth"[42]. It is recognised that there is a lack of affordable local housing stock, with Highland Council estimating that within this council area, 24,000 additional houses will be needed in the next ten years[43].

40 National Records of Scotland 2024, accessed in March 2025 via the SDS Regional Skills Assessment data matrix
41 Skills Development Scotland (2024) Regional Skills Assessment for Highlands and Islands
42 Highlands and Islands Regional Economic Partnership (June 2024) Draft Regional Economic Strategy
43 Highland Council (2024) Addressing the Housing Challenge

5 Workforce challenges

In addition to gathering evidence on current and future workforce demands, the consultations that SDS undertook also proved critical in understanding stakeholders' opportunities and barriers to capitalising on the investment opportunity presented including views around training, apprenticeships, and wider workforce challenges. This section summarises the wider themes that were discussed:

Transient labour

- Due in large part to the nature of oil and gas and renewables projects being short-term and project-based, some employers expressed concerns about having a reliance on transient labour and the wider impact of this, including the cost implications of a transient workforce.
- Relying on a temporary workforce, often from overseas, has potential implications for the local labour pool, and may be perceived to diminish the opportunities for local jobs.

Training

- Many consultees noted a lack of local training provision, specifically when it comes to more specialist qualifications.
- Despite this, most employers did offer upskilling training to their workforce, usually through private training providers, and some large employers have considered launching their own training academy, with some also already having their own training centre.

Apprenticeships

- Most of the companies included in the interview sample took on apprentices as part of their recruitment strategy, with some companies highlighting that they struggle with recruiting apprentices.
- Despite recruitment challenges, regional stakeholders were generally positive about apprenticeships and felt they met their needs.

Challenges

- Through the consultation, several barriers and challenges to workforce development were discussed. These issues were wide-ranging, including issues retaining talent, uncertainty around larger projects and the associated timelines which has follow-on implications for timelines around skill and workforce demand, and can create some risks around investing in workforce upskilling.
- There were also some concerns expressed around sector attractiveness and awareness of the wide range of opportunities available, particularly in construction. One consultee in the construction sector highlighted that despite engaging with local schools, they did not receive any applications for a junior role at their company.
- Overall, the opinion that came through in the interviews was that more should be done to promote sector attractiveness and the range of opportunities available.

- Another issue raised was that there is a lack of local people to fill roles due to depopulation and youth migration in the region. The Highlands and Islands is sparsely populated compared to the central belt of Scotland, making population issues more acute and creating a tight labour market. Issues around depopulation have been further exacerbated due to Brexit causing some migrant workers to return to their home countries. This triangulates with recent research undertaken by UHI to support the Loch Na Cathrach Statkraft project that states that one of the key challenges for this particular project is strong competition for energy skills in the region[44].

- Issues around the cost of doing business were also viewed as a key challenge, particularly in light of the upcoming rise in employers' rate of national insurance (this will take employer's contribution from 13.8% to 15%)[45]. This triangulates with insight from the most recent Highlands and Islands Enterprise Business Panel, which reveals the cost of doing business to be one of the biggest challenges in the region – cited by 41% of businesses participating in the panel[46].

44 See Loch Na Cathrach: Maximising Local Job Opportunities
45 See Changes to the Class 1 National Insurance Contribution secondary threshold, the Secondary Class 1 National Insurance contributions rate, and the Employment Allowance from 6 April 2025
46 Highlands and Islands Enterprise (HIE) (2025) HIE Business Panel - Wave 27: November/December 2024 Executive Summary

6 Key issues that co-investment propositions should consider

Reading across the evidence, five key overarching issues can be identified that any proposed response should consider:

Figure 4 – Issues identified

Securing and retaining talent which is **compounded by an aging workforce** and **depopulation**.

Sector attractiveness was highlighted as being a challenge and awareness **of the wide range of opportunities available.**

Uncertainty about the timelines and likelihood of projects progressing which creates follow-on implications for skills.

Equality of access to provision, especially for specialised courses was identified as being a barrier to skills development.

The nature of work in some of the sectors where opportunities lie poses specific workforce challenges as it is short-term and project-based.

Securing and retaining talent

Given the wider population issues that the region is currently facing, securing and retaining talent is a genuine concern for employers and wider stakeholders. This challenge is especially acute in the Highlands and Islands with the backdrop of a population that is ageing more rapidly than the national population and younger people migrating out of the area for more opportunities in the central belt and other regions of Scotland. This, combined, creates a shrinking pool of labour, which has significant implications for skills:

- **Competition for labour** – There is competition for a limited pool of labour in the region and this situation may be exacerbated as further clean growth opportunities are realised in the future.
- **Workforce shortages** – Insight from the consultations revealed workforce shortages in key occupational roles such as: welders, overhead line technicians, wind turbine technicians, wind turbine blade technicians, mechanical/electrical fitters, engineers, project managers, joiners and plumbers.

Sector attractiveness

Linked to the above, there were concerns expressed about the attractiveness of the sectors included in the research and whether people understand the wide range of roles available within these sectors. Employers reported some strategies to try and overcome this issue, with community engagement being one of the avenues through which to convey the range of opportunities.

Several interviewees reported visiting schools to try and engage local young people who may be considering applying for an apprenticeship. The skills implications that follow are:

- **Difficulty recruiting** – Where there are issues with sector attractiveness, it follows that there may be problems recruiting into that sector. Some interviewees reported issues recruiting, particularly in filling apprenticeship places in construction.

- **Potential issues with the talent pipeline** – With reported issues around sector attractiveness, younger people may not choose to work in these sectors, creating issues with the longer-term talent pipeline that will be needed to maximise the economic opportunities and create opportunities for local people. If local people do not see the sector as being attractive, they will not choose to take up opportunities as they arise.

Uncertainty about project timelines

With many of the potential projects in the region facing some uncertainty around timelines, and others facing uncertainty around the likelihood of proceeding, this poses challenges as there are follow-on uncertainties about when and if skills and occupations will be required. The uncertainties around projects were highlighted as being a barrier to even reaching the stage of considering workforce and skills, as they are not embedded from the start of a project. The uncertainties give rise to the following:

- **Workforce demand uncertainty** – The timing of workforce demand in the region is a critical consideration for planning at individual company level but also for the wider regional skills system, in ensuring provision can respond to company needs. For the region to seize economic opportunities arising from the net zero transition, companies need access to the right volume of people with the right types of skills, at the right time. However, the uncertain timelines bring an element of risk to investing in workforce development for roles which might not be required until later than anticipated or may not materialise at all.

Equality of access to provision

Many interviewees raised concerns about equality of access to skills provision, particularly in relation to the Island communities. Ensuring that where upskilling and reskilling is needed, it is available and accessible is a key consideration in any response. Interviewees suggested that more providers should pivot to online delivery of courses where possible. In considering equality of access, the key point to note is:

- **In some cases, employers have been unable to access the training they need locally** – At a general level, there was some consensus that training is available at a local level through current providers, both through the college and university and through private training providers. However, when considering more specialist qualifications, employers reported issues accessing these locally, with one company explaining that they flew an instructor to the site to deliver training as this was the most cost-effective way of achieving training for their employees. This was viewed as diminishing the opportunities for developing a workforce with the right skills.

The nature of work in key opportunity sectors

The nature of work in the oil, gas, and renewable energy sectors is often characterised by phased and short-term employment. During the initial phases, a significant number of construction workers are needed. However, once the project is operational, the demand for construction workers diminishes, and long-term employment shifts to operation and maintenance roles, which typically require fewer workers than the construction phase. This has the following skills implications:

- **Use of transient workforce** – Workforce shortages along with the project-based nature of work can lead to employers having to outsource their workforce from outside of the region. While this response can help overcome short-term challenges for individual employers, enabling projects to progress, there are cost implications, and this approach does not address wider workforce shortages in the region in the longer-term as the workers will leave the region when the contract is complete.

- **The traditional apprenticeship model is challenging to implement** – With the traditional apprenticeship model being reliant on an apprentice being employed for four years, this can be challenging to facilitate when some phases of the project may only require large numbers of workers for shorter periods of time.

7 Emerging Co-investment propositions

The propositions introduced in this paper have been designed in response to identified workforce issues. Co-investment will be the catalyst for targeted action to create a workforce that is responsive and has the right skills to meet employer demand and unlock the £100.4 billion potential investment. A collaborative, co-investment approach has the potential to deliver significant benefits for the region, including:

Figure 5 - Planned benefits

Any co-investment will galvanise activity which:

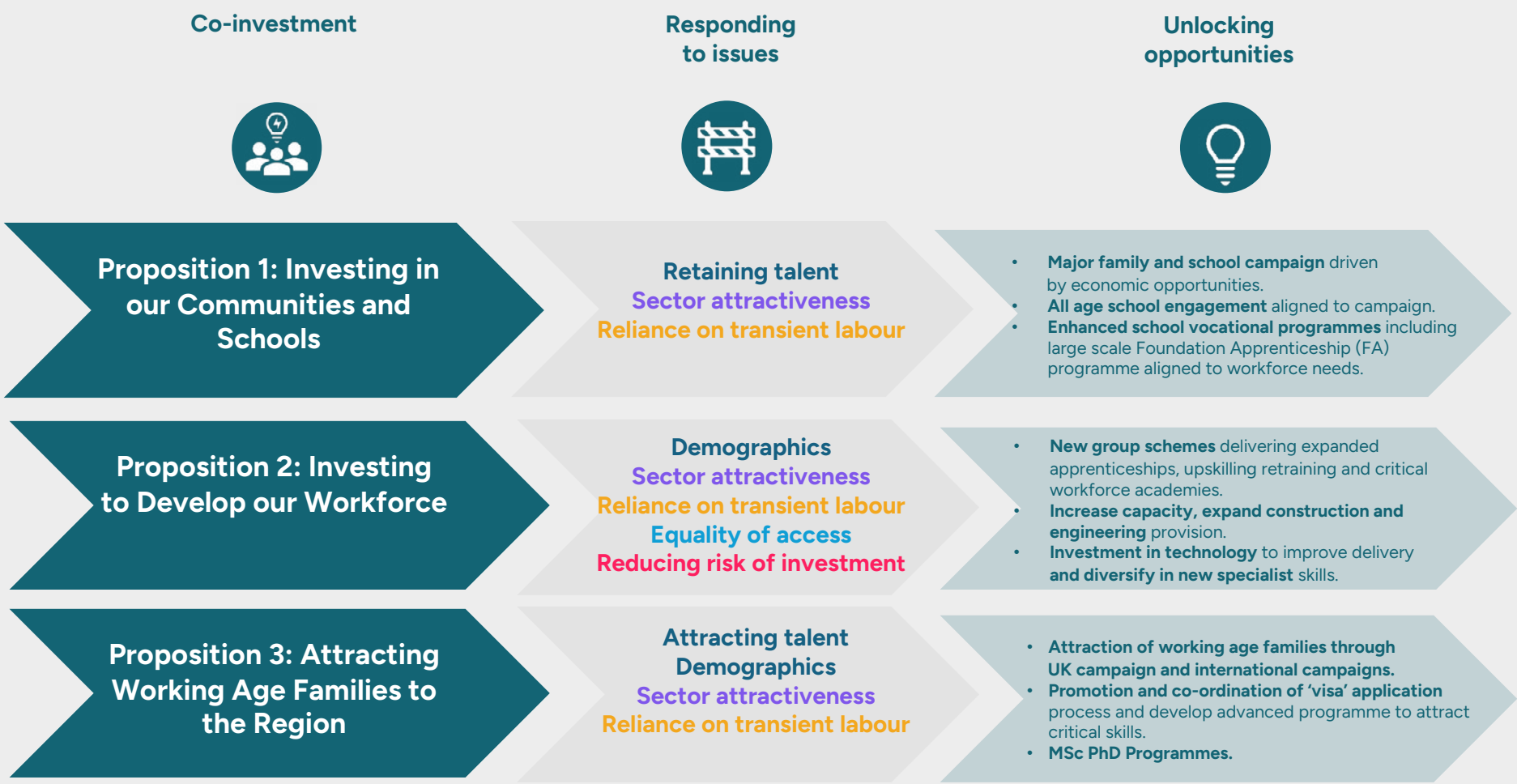
- **Builds on a well-established regional skills infrastructure** – This development of the propositions recognises the strong relationship that many businesses have with further education, higher education, and private training providers in the region. However, the system is facing significant pressure resulting in capacity issues that will impact providers' ability to respond to any increases in demand. Co-investment would strengthen the skills infrastructure, building capacity to offer provision which meets the needs of current and future workforce demands.
- **Enables a skills system which can plan and flex in response to uncertainty** – Demand uncertainty makes workforce planning difficult as there are several factors affecting the likelihood of projects progressing and jobs coming to fruition. It can also be difficult to predict the timeline of jobs, and following this, the timelines around workforce demand, which introduces risk for both employers and training providers. Co-investment should enable greater flexibility and responsiveness within the skills system, enabling employers to access the workforce they need as and when demand arises.
- **Supports immediate needs while also building a longer-term pipeline** – The skills system should be able to provide short turnaround upskilling, delivered through short courses while also providing a pipeline for jobs which are expected in the longer-term. The propositions set out options which will create a route to access the required workforce in a relatively short time frame.

A summary of the potential propositions for consideration is set out in Figure 6, outlining:

- The co-investment opportunities
- The issues that each proposition is responding to (detailed in section 6)
- More detail around the potential actions within each proposition which could unlock the opportunities available

These emerging propositions will form the basis for discussion at the Summit.

Figure 6 – Workforce North emerging propositions



8 Conclusion

This paper has outlined:

- The scale and scope of opportunities that could become available to the Highlands and Islands region, with a total potential value of £100.4 billion between 2025-2040.
- The current and future workforce demand (using a combination of insight from extensive consultations in the region, data and evidence on demand, and evidence from research undertaken by HIE and HIREP around RTOs).
- Three potential co-investment propositions which respond to the workforce issues identified.
- Wider views around transient labour, apprenticeships, training, and workforce challenges that emerged from the stakeholder consultation.
- Issues that any potential co-investment proposition should consider, including securing and retaining talent, sector attractiveness, uncertainty about project timelines, equality of access to provision, and the nature of work in key opportunity sectors.

To capitalise on the £100.4 billion opportunity outlined, it is crucial that the region has the workforce and skills available to meet employer needs. Achieving this will require a new approach combining the expertise, knowledge and resources of both public and private sector, and fostering deep and genuine collaboration across employers and public sector partners.

This is an opportunity to transform the region and enhance the attractiveness of the Highlands and Islands as a place to work and live for years to come.

The Workforce Summit will be critical in realising this vision and the active participation and support of employers in the Highlands and Islands region is essential if we are to create a legacy of sustainable jobs for local people and future generations. By investing in workforce development and collaborating on innovative training programs, employers can ensure that their industries are well-positioned to grasp the opportunities the lie within the reach of the region. We urge all employers and partners to engage actively in this journey and to contribute their expertise, resources, and commitment to shaping a prosperous future for the region.

Appendix 1 Overview of sectoral employment and skills

Sector	Timeline	Opportunity in H&I	No. of jobs created	Employment opportunities	Areas of skills demand
Offshore Wind Scotwind Projects – HIE expect £40.6 billion investment in H&I region over next 10-15 years.	New sites under construction in 2025. Peak construction anticipated in the early 2030s.	Nine planned projects in the H&I, likely to be key for future developments. Jobs in installation and maintenance of wind farms likely to be local.	It is estimated that between 2024 and 2029 the Offshore Wind sector workforce will grow from around 9,000 people to around 40,000, a significant increase.[47]	Installation of wind farms likely to create the most jobs in the region, and these roles will need to be executed in the H&I. Manufacturing requires many workers but may not take place locally. Operational workforce will be much smaller, though will likely be locally based.	■ Construction - will draw heavily upon engineers for cable structuring and onshore civil construction. ■ Data analysts will also be required. ■ Depending on the type of turbine deployed, individuals with experience of sub-sea engineering will also be required. ■ Wind-turbine technicians will be main long-term employment, alongside support roles in logistics.

47 Opergy (2024) Energy Skills Intelligence Hub

Sector	Timeline	Opportunity in H&I	No. of jobs created	Employment opportunities	Areas of skills demand
Onshore Wind Onshore wind - largest current source of renewable energy in Scotland, accounting for 62% of all renewable electricity produced in 2024[48]. Scottish Government aims to more than double current generation capacity of the onshore wind sector by 2030[49].	Five sites currently under construction, further 50 expected in H&I over the next ten years[50].	Planned sites in H&I account for nearly all planned onshore wind capacity in Scotland. Jobs in installation and maintenance will likely be local.	3,736 annual FTEs in 2030. (H&I)[51]. 8,803 - 8,822 annual FTEs in 2035 (Scotland) and 5,013 - 6,510 annual FTEs by 2040 (Scotland)[52].	Majority of jobs will be in installation of wind farms; based in the immediate local area. Anticipated that construction jobs will decline from the 2030s onwards, with much smaller numbers of long-term operational roles[53].	■ Primarily manual and skilled (electricians) construction jobs with roles for specialised engineers, consultants and project managers. ■ Most opportunities for long-term employment for wind turbine engineers, a specialised skilled technical role. ■ Smaller demand for support roles in IT, logistics and general office administration.

48 Scottish Government (2024) Green Industrial Strategy
49 Scottish Government (2022) Onshore Wind Policy Statement
50 SQW analysis of DESNZ Renewable Energy Planning Database (October 2024).
51 CXC (2024) Mapping the current and future workforce and skills requirements in Scotland's onshore wind industry
52 Scottish Enterprise (2024) Economic Impact Scenarios for Scotland's Energy Transition
53 CXC (2024) Mapping the current and future workforce and skills requirements in Scotland's onshore wind industry

Sector	Timeline	Opportunity in H&I	No. of jobs created	Employment opportunities	Areas of skills demand
Tidal and Wave Most operational and planned energy sources located across Shetland and Orkney Islands. Other pipeline projects planned for Highlands and Argyll and Bute[54]. Largest potential contributors to solar energy - Brims Tidal Array (Orkney) and MeyGen development (Pentland Firth)[55].	Multiple projects planned before 2030.	Multiple projects planned in H&I in the next five years.	3,970 annual FTEs in 2030 for tidal (UK). 14,500 annual FTEs in 2040 in tidal (UK). 8,140 annual FTEs in 2040 for wave (UK)[56].	Most jobs related to operations and maintenance and likely onsite in H&I. Construction of tidal platforms and wave energy converters will be in demand.	■ Construction including subsea engineering in the H&I drawing upon engineering and mechanical services, including local supply chains in steel fabrication[57]. ■ Offshore design, electrician work and manufacturing also required. ■ Installation and maintenance of vessels will be consistently in demand.

54 Highlands and Islands Enterprise (2024) Baselining Inventory for Greenhouse Gas Emissions in the Highlands and Islands
55 Offshore Renewable Energy Catapult (2018) Tidal Stream and Wave Energy Cost Reduction and Industrial Benefit
56 Offshore Renewable Energy Catapult (2018) Tidal Stream and Wave Energy Cost Reduction and Industrial Benefit
57 Leask Marin (2019) Leask Marine start the first tidal platform build in Orkney

Sector	Timeline	Opportunity in H&I	No. of jobs created	Employment opportunities	Areas of skills demand
Pumped Hydro Two of four currently operational pumped hydro facilities in UK are located in H&I. Five new pumped-hydro facilities and expansion of existing site planned in H&I in the next 10 years. Three have consent from Scottish Government Energy Consent Unit (Cruachan, Coire Glas and Loch na Cathrach)[58].	Projects beginning construction in the near future with all current projects aiming to be complete by 2034.	Majority of sites in Scotland in the H&I region. Construction, operations and maintenance employment will likely be local.	5,960 annual FTEs from 2023 – 29, 10,680 annual FTEs from 2030-34 and 9,940 FTEs from 2040-44. (Scotland)[59].	Majority of jobs will be in construction, with relatively limited number of jobs created in operations.	■ Primarily manual and skilled (electricians, gas technicians) construction jobs. As pumped hydro facilities are very site-specific there needs to be significant initial engineering work, creating roles for specialised engineers, environmental consultants and project managers[60]. ■ The operation of a pumped hydro facility will create jobs in the management of the facility and in maintenance, for example employing electricians and technicians[61].

58 Biggar Economics (2023) The Economic Impact of Pumped Storage Hydro
59 Biggar Economics (2023) The Economic Impact of Pumped Storage Hydro
60 Biggar Economics (2023) The Economic Impact of Pumped Storage Hydro
61 ESRC Research Centre on Micro-Social Change (2024) Mixed-methods study of the 'green skills gap' in the UK and its effect on the UK's hydropower sector

Sector	Timeline	Opportunity in H&I	No. of jobs created	Employment opportunities	Areas of skills demand
Hydrogen 98 hydrogen projects in active development across Scotland[62].	Multiple sites currently planned and anticipated to begin construction in next five years. However longer-term project pipeline dependent on level of hydrogen uptake and development of hydrogen export economy.	Some planned sites in the region, with planned hydrogen hub in region. Most planned projects are across other regions in Scotland.	6,614 annual FTEs from 2025- 30 and 18,535 annual FTEs from 2030-35. (Scotland)[63].	Most early-stage hydrogen jobs will be in construction of hydrogen production facilities and infrastructure.	■ Planning and construction of hydrogen facilities will require both manual construction roles and skilled technical professionals including civil, mechanical, chemical, gas, and electrical engineers as well as specialised roles for electrolysis, fuel cells and electro-chemical engineers. Other construction roles will include welders, gas technicians and project managers. ■ Anticipated that operation of hydrogen plants will be highly automated and produce few employment opportunities. The export of hydrogen likely to produce most hydrogen jobs outside of construction phases.

62 Unpublished figure provided by Scottish Enterprise in March 2025 and is accurate until February 2025

63 CXC (2023) Mapping the hydrogen skills landscape

Sector	Timeline	Opportunity in H&I	No. of jobs created	Employment opportunities	Areas of skills demand
Power and Transmission Scottish and Southern Electricity Networks (SSEN), announced £20 billion in upgrades under its Pathway to 2030 programme[64].	Significant projects planned to be completed in Northern Scotland by 2030.	Investment planned in range of projects to upgrade transmission infrastructure across region. Jobs in construction likely local though longer term jobs in grid management may not be.	Support 9,250 jobs by 2030. (Scotland)[66].	Majority of jobs in construction of new connections and substations, though there will be continual growth in number of people employed in management and operation of the electricity grid.	■ Construction employment will be outsourced by SSEN to contractors. Jobs will be created for specialised workers in power line design, engineering and construction. ■ Long term employment will be in the management and maintenance of new grid connections. SSEN intend to increase operational staff, requiring skills in software development, and data science.
Solar £4,794m expected investment in Scottish solar sector between 2020 and 2050[65]. The 2022 ScottishPower Renewables (SPR) solar portfolio includes four Scottish solar projects (Glasgow, Angus, and two in Moray). Largest SPR UK proposal planned for H&I, on Milltown Airfield in Moray.	Some new sites under construction in H&I in next five years, strong pipeline of investment nationally into the 2030s.	Some new sites under construction in H&I into 2030s, though majority of investment nationally is elsewhere. Installation and maintenance jobs likely to be located in local area.	903 - 2,318 annual FTEs in 2030, 636 - 1,945 annual FTEs in 2035 and 404-1,655 annual FTEs by 2040 (Scotland)[67].	Jobs will largely be in installation and construction. China dominates manufacturing in this sector. Workforce for operational jobs will be comparatively small.	■ During construction, electricians, fitters, scaffolders and designers are required. ■ Maintenance of solar sites will require qualified electricians on-site in the H&I for maintaining key electrical components.

64 SSEN (2024) SSEN Transmission, Projects delivering a Network for Net Zero - Pathway to 2030

65 Biggar Economics (2023), Economic Impact of the SSENT Pathway 2030 Investment Programme

66 Scottish Enterprise (2024) Economic Impact Scenarios for Scotland's Energy Transition

67 Scottish Enterprise (2024) Economic Impact Scenarios for Scotland's Energy Transition

Sector	Timeline	Opportunity in H&I	No. of jobs created	Employment opportunities	Areas of skills demand
CCUS Investment estimated to be around £4,503m from 2020-2050[68]. Scottish Government committed to investing £80m to support Scottish CCUS Cluster based at St Fergus in Aberdeenshire[69].	Technology to be added to gas fired facilities by the late 2020s with standalone site under construction from 2030 onwards.	No sites currently planned in H&I, early developments likely to be co-located with gas-fired stations across rest of UK. Standalone sites could be located in H&I into the future.	1,016-1,425 annual FTEs in 2030 (Scotland). 760-934 annual FTEs in 2035 and 1,436-2,499 annual FTEs in 2040 (Scotland)[70].	Most employment will be in construction and will be onshore, though some jobs will be based offshore. Place-based coordination of skills activity in clusters will be required to keep jobs localised. Engineering and project management roles will be consistently required through to the 2030s.	■ Requires onshore construction and offshore workforce delivering subsea construction and drilling at the cluster location – does not currently reach the H&I. ■ Jobs are predominantly in engineering and procurement. ■ Transport and storage is required and uses similar skills from oil and gas. ■ Geoscience skill sets are in demand.

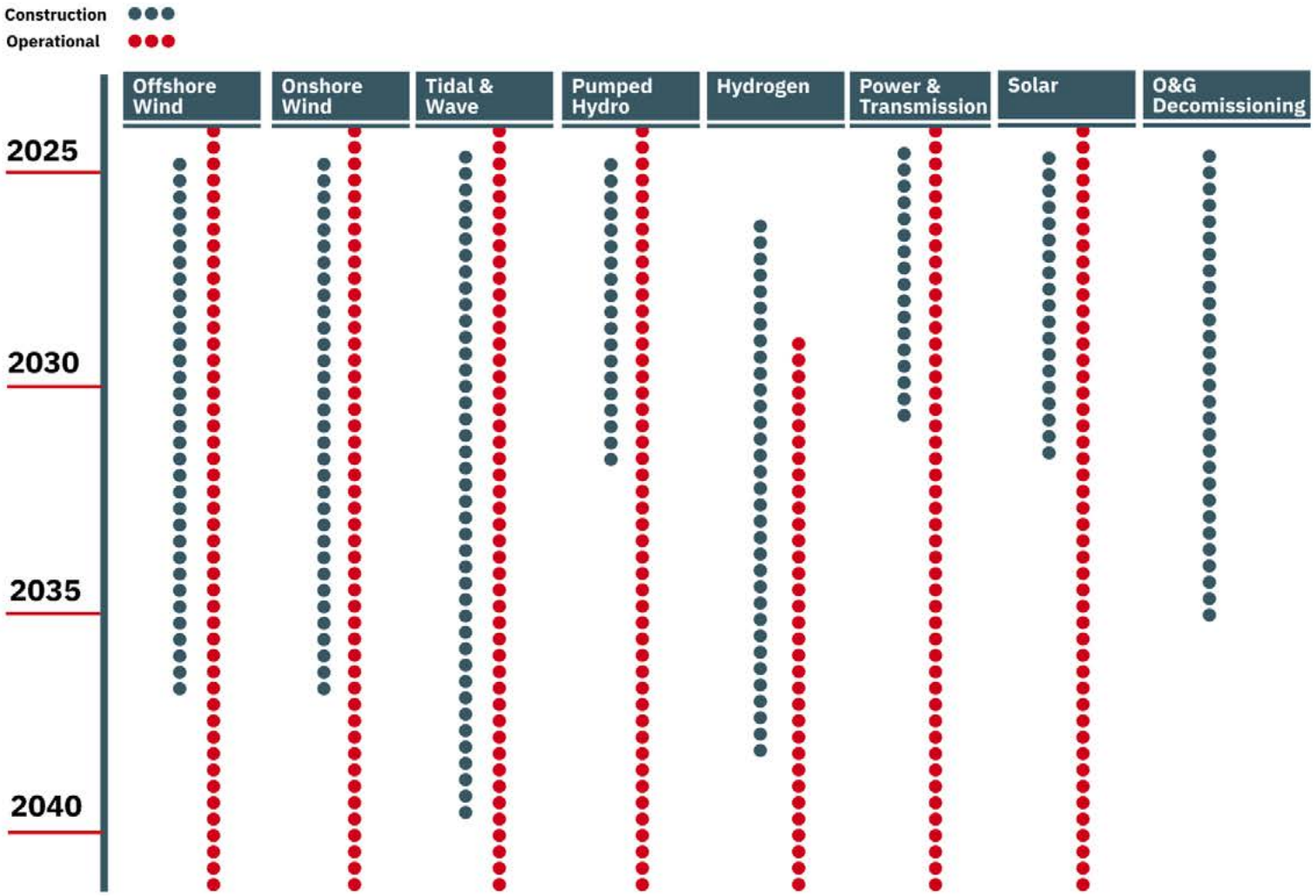
68 Scottish Enterprise (2024) Economic Impact Scenarios for Scotland's Energy Transition
69 Scottish Government, (2023) Draft Energy Strategy and Just Transition Plan – delivering a fair and secure zero carbon energy system for Scotland
70 Scottish Enterprise (2024) Economic Impact Scenarios for Scotland's Energy Transition

Sector	Timeline	Opportunity in H&I	No. of jobs created	Employment opportunities	Areas of skills demand
Oil and Gas Decommissioning From 2024-2033, £9.1 billion is expected to be spent in the Northern North Sea and West of Shetland, and £11.6 billion in the CNS[71].	Steadily increasing flow of decommissioning from 2024 onwards, with most taking place in the early 2030s.	Opportunities in some areas. Majority of decommissioning activity will be in Aberdeenshire, where there is larger number of oil and gas sites.	It is not known how many people will be employed in oil and gas decommissioning, as numbers tend to be combined with current and transitioning workers across the offshore energy sector.	Roles most in demand will be operations, engineering, technical support, project management and procurement/ supply chain management.	■ Subsea and engineering expertise, and mooring and shipping companies related to oil and gas are key. ■ Roles will take place onsite at oil and gas facilities – many in the H&I. ■ Other important roles include project managers, environmental engineers, marine biologists and remotely operated vehicle (ROV) operators and technicians[72]. ■ Renewable energy specialists will be required in decommissioning to assess the feasibility of converting facilities into renewable energy sites.

Source: SQW analysis undertaken as part of the Workforce North project, unpublished (2025)

71 Offshore Energies UK (2024) Offshore Decommissioning Report 2024
72 Oilfield Workers (2024) Transitioning to the Future: The Critical Role of Decommissioning in the Oil & Gas Sector

Appendix 2 Timeline of opportunities



Source: SQW analysis undertaken as part of the Workforce North project, unpublished (2025)

Appendix 3 Consultee list

Aurora Energy Services	David	Duguid
BP	Tom	Thayer
CITB	Ian	Hughes
Compass Building and Training Services	Graham	Bell
CRC Evans (Supply Chain)	Athol	Cobban
ECITB	Kenneth	Flemming
ECITB	Nikki	MacPherson
ECITB	Alan	Middleton
Enginuity	Robert	Bruce
Flotation Energy	Fiona	Moir
Glen Earrach Energy	Roderick	Macleod
Global Energy Group (Tier 1)	Steve	Chisholm
Gows Lybster Ltd (Suppy Chain)	Sandra	Gow
Hydrasun	Stuart	Gardiner
Hydrasun	Jemma	Reynolds
Inverness & Cromarty Firth Green Freeport	Calum	McPherson
Kishorn Port Ltd	Alasdair	Ferguson
Mott Macdonald	Simon	Nesbitt
NMIS	Abdul	Ahmed
NMIS	Stewart	MacKinlay
Proterra Energy Ltd (Supply Chain)	Terry	Stebbings
Ri Cruden (Supply Chain)	Callum	Cruden
Ross Shire Engineering	Stephen	Slessor
Salmon Scotland - HR Leads Meeting	Tavish	Scott
Scottish Futures Trust	Peter	Reekie
Serimax (Supply Chain)	Murdo	MacAngus
Statera (Loch Kemp Storage)	Kirsty	Cassie
Statkraft (Loch na Cathrach pumped hydro storage scheme)	Iain	Robertson
Storegga	Jo	MacDonald
Storegga	Tim	Dumenil
Sumitomo Electric	Mike	Engelbrecht
UHI (STEM)	Dawne	Bloodworth

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