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The net zero workforce

Oil, gas & chemicals

June 2021

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01 How can the sector prepare for net zero?

A blue-tinted photograph showing several industrial workers in hard hats and safety gear. They are gathered around a large sheet of paper or blueprint spread out on the floor, examining it closely. The setting appears to be an industrial or construction site.

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prepare for net zero?

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The 2050 drive to net zero is creating a fundamental shift for oil, gas and chemicals businesses. It is raising questions on the role of hydrocarbons in a rapidly changing energy economy, leading companies to reinvent their business models and operations. It is also creating opportunities for businesses to re-establish their position in society and engage in the UK's decarbonisation effort. Companies that build a motivated, digitally driven workforce with the right skills and capabilities will be at the forefront of this change.

The challenge for companies today, is how to build the workforce to support our net zero future.

Companies will still need highly skilled, experienced staff to maximise current assets, maintain safety and continue improvements vital for ageing infrastructure. With less investment likely in traditional exploration and production, some roles, such as reservoir engineering positions, could become increasingly automated, improving efficiency, but with fewer people. Understanding which skills are core and which capabilities can be transferred to other sectors is also becoming critical and could put businesses on a more sustainable footing.

New skills and capabilities will also be needed along with innovative ways of thinking and delivering work in new physical and virtual locations to support decarbonisation ambitions. According to OPITO, over 25,000 additional people will be needed in the sector, with approximately [4,500 people in roles in 2025 that did not exist in 2019](#). How will the industry attract the right people in the right numbers with the right capabilities? While the COVID-19 pandemic has shown that increasing the proportion of work done remotely is possible, the green recovery brings a level of urgency to work more collaboratively with other sectors. From a talent perspective, the industry needs share skills, where possible, but also borrow fresh ideas for project delivery.

Overall, the sector needs to develop and sustain a workforce that is ready not only to tackle decarbonisation challenges, but also to find new opportunities and position companies positively for a sustainable future.

"Companies that build a motivated, digitally driven workforce with the right skills and capabilities will be at the forefront of this change."

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Oil, gas and chemicals leaders need to consider several key questions:

1. How to retain and motivate the existing workforce to maximise current operations?
2. Which roles will be disrupted and what new capabilities will need to be acquired and by when?
3. How to reskill the workforce?
4. How to develop a diverse workforce that can effectively navigate the energy transition and deliver sustainable business outcomes?
5. As talent strategies and operating models in a post-pandemic world are reimagined, to what extent should certain roles be allowed and enabled to be performed on a remote or hybrid basis?
6. How to attract, incentivise and reward the next generation of talent by offering purposeful career opportunities with increased flexibility aligned to Millennial and Gen Z goals and expectations?

There is a need for a continuing and timely review of workforce planning in energy transition. Leaders need to ensure they have a master plan, timelines, next generation of leadership and succession planning as well as ongoing cross-functional reviews.

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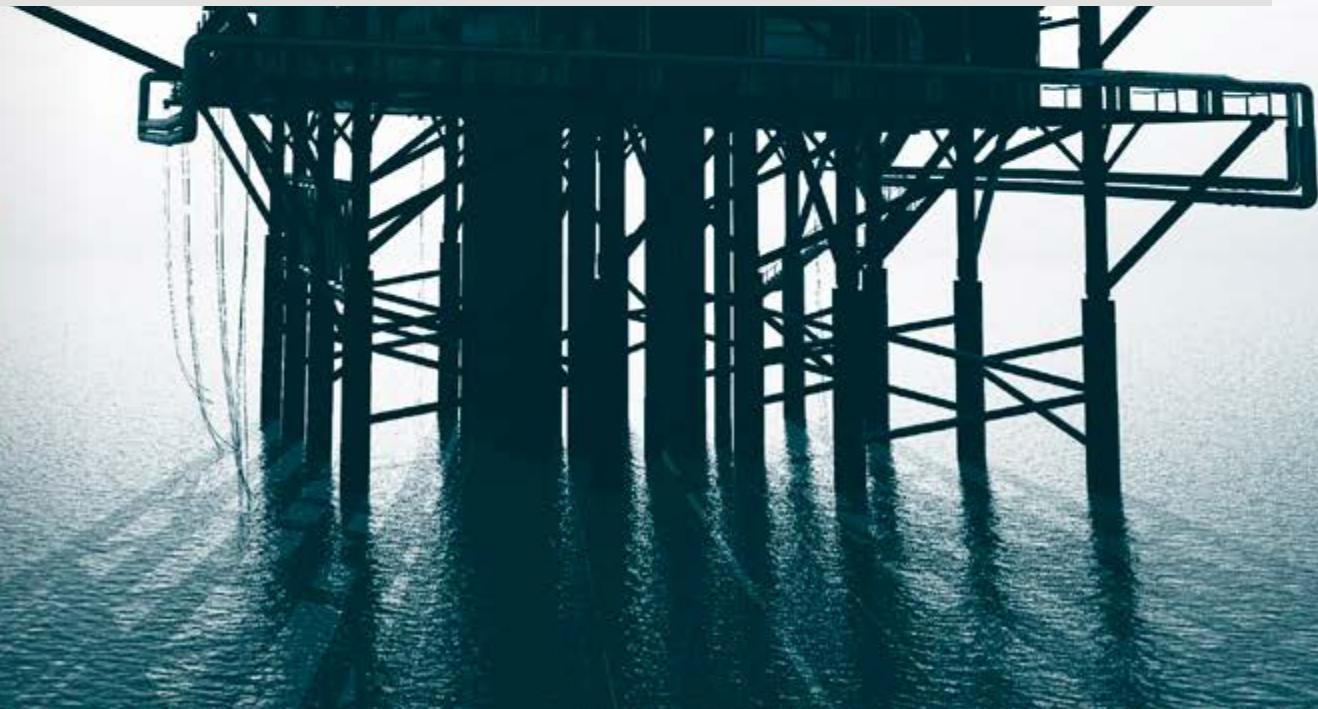
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02 Workforce challenges and opportunities in the oil, gas and chemicals sector

Workforce challenges and opportunities in the oil, gas and chemicals sector



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Net zero obligation and energy transition

The sector's interest in clean energy sources is not new. While many of the oil majors owned renewables assets in the past, the pace of investment has accelerated in recent years with integrated oil companies establishing and expanding their renewable asset portfolios. This trend creates the need for targeted acquisitions of skills and capabilities to manage and integrate renewable assets successfully into traditional oil and gas portfolios.

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However, the government's target of reaching net zero emissions by 2050 has put the spotlight firmly on the future of the industry and its role in energy transition. In addition to OGUK's voluntary [Roadmap 2035: A blueprint for net zero](#) initiative, the [Oil and Gas Authority's new strategy](#) includes a range of net zero obligations for the sector. Many of the specialist skills necessary to support net zero obligations already exist in the supply chain. These include the technical expertise needed in asset electrification, energy efficiency and management, and fugitive emissions reduction.

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While the long-term decline in demand for fossil fuels is likely to reduce workforce requirements, the ambitious targets of [The ten point plan for a green industrial revolution](#) are expected to offer wide-ranging opportunities for the sector. Offshore wind, hydrogen, carbon capture, utilisation and storage (CCUS) are markets keen for some of the skills, capabilities and technologies that oil, gas and chemicals companies already have. It is a business imperative that companies identify the core skills and capabilities they have as well as reskill some of the workforce to take advantage of opportunities in some of these existing and nascent markets.

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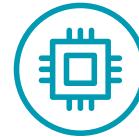
With the right planning and implementation, energy transition should not only open up new avenues for scalable and sustainable growth for the sector. It could also bolster trust among a company's wider stakeholder community: employees, customers and investors.

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Digital transformation

[Digital transformation](#) also brings some profound workforce challenges for the sector. Technological innovation and new ways of working to improve operational efficiency and increase safety are transforming businesses and reshaping the industry. OPITO's [UKCS Workforce Dynamics: The Skills Landscape 2019-2025](#) report concludes that demand

for skills areas such as low carbon energy, data science, data analytics, machine learning, robotics, material science, remote operations and cyber-security will increase. The sector will rapidly need to learn how to navigate this new and different war for talent. This means competing with other industries to hire and retain the best and brightest, and increasing diversity through access to a broader talent pool with potential country-agnostic roles and greater remote working options as a result of the pandemic.

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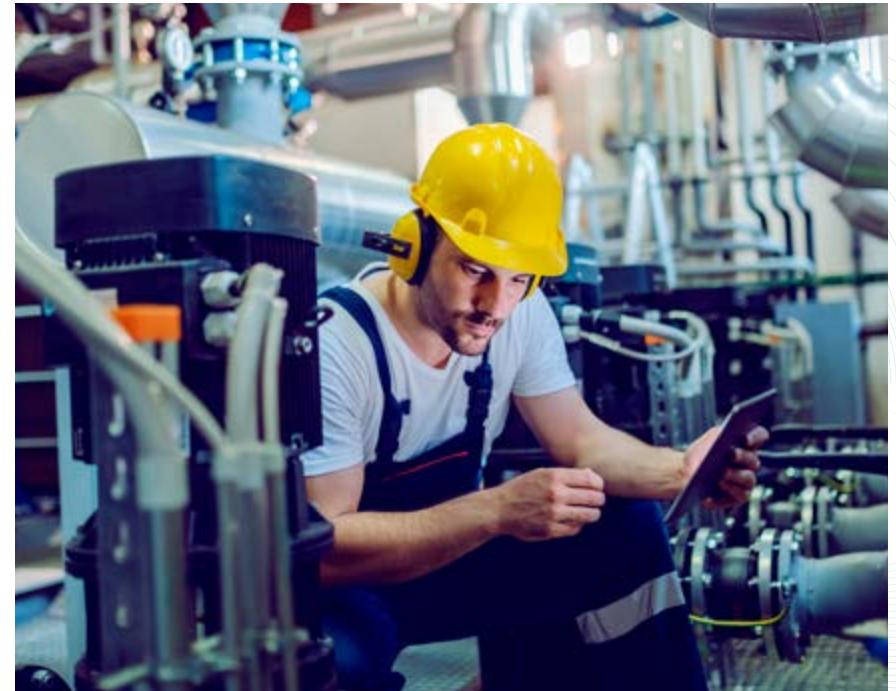
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The need for cross-functional skills, including collaboration, regulatory and commercial strategy skills, will also grow. Certain roles will be disrupted. With capital investment in exploration and development projected to be restrained for the next few years, the need for roles such as geologists is likely to decline. Instead, certain roles will see increasing automation, the majority of which are likely to be transactional or administrative activities in logistics, finance, drilling and wells, health and safety, facilities management and human resources. At the same time, a larger proportion of activities will be strategically focused in 2025. This calls for the sector to support the timely reskilling of the workforce through highly effective targeted training programmes to help adjust to the rapidly shifting industry landscape.

Digital transformation is not only expected to bring improvements and more transparency to operations, business processes and supply chains. It is also set to facilitate the industry's smoother, faster and greater engagement in energy transition.



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The cyclical nature of the industry

Investment in 'boom' times typically results in increased workforce numbers, only to be followed by a sharp reduction in employment when oil prices drop. The years of cost cuts after the price crash of 2014 [reduced total employment in the sector by 195,000 by 2019](#).

A combination of factors stemming from the pandemic caused [the loss of at least another 8,000 jobs in 2020](#). Oilfield services companies account for most of these job losses.

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Suppliers, already struggling to recover from the 2014 oil price downturn, were hit hard by the pandemic. They could become vulnerable to skills gaps by losing highly skilled talent. The cyclical nature of the industry could also cause the sector to lose its reputation as a reliable employer, leading to challenges in attracting new talent or retaining those preferring stability to risk (for instance employees with young families). People leaving can result in an increasing reliance on a shrinking talent pool, who may have a preference to work as contractors, making it challenging for organisations to prepare the permanent workforce for energy transition.

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The role of supply chain companies in developing innovative solutions to support the industry's engagement in energy transition will be crucial. Diversifying into clean energy sectors could enable companies to build more sustainable business models that are less exposed to the 'boom and bust' effects of oil market cycles. This in turn may help avoid future skills gaps, attract talent in sufficient numbers and improve the industry's image as a reliable employer – in particular with the [climate-conscious Millennials and Gen Zs](#).

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The shift towards cleaner energy, digitalisation and the cyclical nature of the industry are creating an urgent need to put an industry-wide workforce strategy in place to ensure that expertise built up over the years in the North Sea can play a crucial role in energy transition.

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As well as the decommissioning market, there will be markets for offshore wind, hydrogen and CCUS, where many of the traditional technical expertise could be redeployed either directly or with various degrees of reskilling. For example, approximately [40 per cent of the total lifetime costs of an offshore wind project has significant synergies with the offshore oil and gas sector](#). According to the [International Renewable Energy Agency \(IRENA\)](#), there are a number of areas where opportunities for crossover business between the two industries exist.

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These include:

- **Project planning** – offshore wind projects can benefit from the full range of services, including environmental, geophysical and geotechnical surveying, and even offshore installation that a number of large surveying companies in the oil and gas sector offer. Complex offshore project management and health and safety knowledge are also skills that the two sectors have in common.
- **Manufacturing of support structures** – the oil and gas sector's expertise in designing and manufacturing support structures, especially in deep water environments, is highly transferable to the offshore wind sector.
- **Installation and grid connection** – synergies also exist between the two sectors in terms of installation of turbine foundations, array cables, substation structures and steelwork both for equipment and services.
- **Operations and maintenance** – the oil and gas supply chain has substantial experience in offshore asset maintenance, defect detection, asset repair as well as inspection.

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The IRENA warns, however, that synergies can only be fully exploited with targeted policies and measures, such as dedicated retraining opportunities. Indeed, a recent survey found that more than [three-quarters of UK offshore workers would be willing to move to the renewables sector](#), but skills gaps exist between the two industries and cost is currently a barrier to retraining.

Progress is being made to establish the measures and policies needed to prepare the oil and gas workforce for a successful energy transition. The Scottish government's [Climate emergency skills action plan 2020-2025](#), published at the end of 2020, identified a list of priority areas that will help the country capitalise on the opportunities emerging from the energy transition and support those whose jobs are at risk. The [North Sea Transition Deal](#), published in late March 2021, focuses specifically on what the highly skilled oil and gas workforce and the supply chain will need for a successful transition to a low carbon future. The Deal commits the sector to support the Energy Skills Alliance, which will:

- Map out the future energy skills demand
- Develop all-energy training and standards
- Implement all-energy apprenticeships
- Develop the "[My Energy Future](#)" programme.

The Deal also commits the sector to creating the Integrated People and Skills Plan, led by OPITO and aligned with other energy sector deals and the Energy Skills Alliance, to support the transition and diversification of the workforce. The plan will be presented to the government by March 2022.

Company focus: Build the net zero workforce

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How can companies get their workforce ready for energy transition? How can they ensure they have the right skills and capabilities to deliver a strategy that not only meets the company's net zero obligations and environmental, social and corporate governance (ESG) goals, but also leads to more sustainable business outcomes? In short, how can oil, gas and chemicals companies build the net zero workforce?

02 Workforce challenges and opportunities in the oil, gas and chemicals sector

What should the net zero workforce look like? As shown in Figure 1, in terms of skills and capabilities, the net zero workforce should be:

- Purpose-led and focused on sustainable outcomes** – the net zero workforce should be passionate about delivering business outcomes that are closely aligned to the organisation's purpose and sustainability goals, incentivised and rewarded accordingly at both executive and employee levels. These goals may include working towards a reduced carbon footprint, improved environmental impact or more sustainable business outcomes, as well as meeting ESG and stakeholder expectations.

- Harnessing human capabilities** – the net zero workforce should be innovative and draw on the best of human ingenuity and critical thinking, as well as deep relationships to address organisational decarbonisation and ESG goals.

- Equipped with transferable technical skills** – with the blurring of boundaries between the traditional energy sectors, the workforce should be supported to acquire a set of technical and soft skills that enables it to work collaboratively and agilely across other energy sectors.

- Digitally-driven** – with the increasing need to improve efficiency and focus on higher value activities through new technologies, the net zero workforce should be digitally-skilled and equipped to enhance its capabilities using innovative technology solutions embedded through highly effective training, utilising enhanced teaching methodology such as simulation and virtual reality.

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- Flexible and adaptable** – for some parts of the business, where work is done will become less important than how it is done, using automation, digital capabilities, connected platforms, tools and techniques. The net zero workforce should show flexibility and adaptability as to where, how and what work gets delivered. It should also have advanced collaborative skills to draw resources from the organisation's wider talent ecosystem.

Figure 1. Net zero workforce – skills and capabilities



Source: Deloitte analysis

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Companies that aim to build and sustain the net zero workforce should first redefine work in three different, yet intrinsically connected dimensions: [the work itself, the workforce and the workplace](#). Questions included in Figure 2 highlight potential areas for consideration.

Figure 2. Future of work framework for net zero

 Re-architect work	 Unleash the net zero workforce	 Adapt the workplace
<p>With increasing robotics, cognitive technologies and AI, the potential is growing to enable people to focus on more strategic and value-adding activities.</p> <ul style="list-style-type: none">• How can you re-evaluate work to sustain and improve current operations and drive sustainable business outcomes?• How can you shift your understanding of work from a sequence of task completions to a flow of problem-solving interactions and managing relationships?• How can technology be used to enhance your workforce's skills and capabilities and unlock potential, rather than just to automate tasks?• Which roles can be performed sustainably on a remote or hybrid basis – identifying the extent that additional training/infrastructure is needed to achieve along with the implementation of domestic/international work policies?	<p>With increasing access to talent across broader ecosystems, it's time to shift focus from structure to capabilities and potential.</p> <ul style="list-style-type: none">• How can you inspire and reward your workforce to drive current business in the context of your decarbonisation goals to create a connection to the work itself?• To what extent do you need to rethink your talent/hiring strategies to complete for skills which are not energy industry-specific?• How should your mobility programme be adapted to support future opportunities including virtual assignments?• How can you build internal talent marketplaces to identify specific technical skills, capabilities and interests as well as proficiency levels that are needed to support net zero outcomes?• How can you curate personalised experiences to maximise your workforce's potential?	<p>With new combinations of collaborative teaming and digital technologies, there's an opportunity to reshape where and when work gets done.</p> <ul style="list-style-type: none">• How can you shift focus from the physical workplace to culture and organisation?• How can you redesign the workplace so that it becomes a place of collaboration, innovation and personal connection?• How can you create a supportive, diverse and inclusive culture that empowers and strengthens the workforce?• To what extent will you embrace remote working, recruiting from a wider talent pool and enabling remote work on a domestic or international level?

Source: Deloitte Insights



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Focusing on the workforce, leaders need to follow a set of steps to anticipate the skills and capabilities they will need in the future, assess where the gaps could be and develop a strategy and roadmap on how to meet future workforce requirements. Organisations will need to evaluate their approach towards recruitment and talent retention. They need to assess employee engagement and remuneration strategies continually and recognise that long-term incentives may be less attractive for certain Millennials and Gen Zs, who seek diverse opportunities and may change employment more frequently. A number of oil and gas companies now link remuneration with carbon emission reduction goals as part of their focus on decarbonisation. Questions set out in Figure 3 provide areas for consideration.

02 Workforce challenges and opportunities in the oil, gas and chemicals sector

Leaders also need to consider the impact of the shifting energy landscape on existing talent: What support mechanisms are needed to keep the existing workforce focused on delivering current strategy? How can staff be encouraged to work with new technologies and talent around sustainable outcomes? How to enable them to develop a more diverse set of skills that can be utilised in other energy sectors? Overall, how to develop a workforce that not only has the core skills for the near term, but can also access less specialised skills to scale up quickly if necessary?

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In addition, leadership may need upskilling and support to ensure informed decisions are taken with regards to change management, new technology and net zero/energy transition. Boards may also benefit from diversity-driven appointments.

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Figure 3. Key questions in building the net zero workforce



Based on your mid-and long-term energy transition ambitions consider:

- what technical skills and human capabilities will your organisation need in the future and at what proficiency levels?
- does leadership have the skills to manage new technology and energy transition?
- what proportion will be core and what can/should be transferable to other sectors?
- what skills can you enhance by technology and what can you automate?



Create a live inventory of the skills and capabilities of your workforce and that of your wider ecosystem to drive sustainable business outcomes and understand where the skills gaps are, including:

- project partners, suppliers, contractors, managed services, crowd sourcing platforms and collaborative partners, including skills academies and universities
- passions and special interests
- personal requirements and circumstances (for example for work scheduling patterns)



Develop a dynamic skills and capabilities enhances the workforce and addresses the skills gap. Consider:

- which skills you will acquire and which ones will you develop?
- how will you access your broader talent system to complement your existing skill set?
- to what extent will you enable domestic/international remote working with appropriate policy and compliance infrastructure?
- how are you developing a leadership development and succession plan?
- how will you harness technology to enhance the potential of your workforce?



Implement workforce-related initiatives, including:

- dynamic learning and development programmes to support learning in the flow of work; responsible leadership development programme and succession management; workforce mobility programmes, talent acquisition; building a reward system geared towards capability development and value to the business aligned with strategic energy transition/net zero objectives; contingent workforce management; technology initiatives and workforce composition.

A black and white photograph of two professionals in an industrial environment. A man on the left, wearing a dark long-sleeved shirt, looks down at a tablet held by a woman on the right. The woman, wearing a light-colored short-sleeved shirt, has her hand to her chin in a thoughtful pose. They are standing in front of large industrial structures with pipes and equipment.

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Ultimately, companies need to shift their current workforce development approach to one that supports the continuous development of the workforce's capabilities for the benefit of both the company and wider society, as described in Figure 4.

02 Workforce challenges and opportunities in the oil, gas and chemicals sector

Now is the time for oil, gas and chemicals companies to look beyond the immediate pressures of the pandemic and realign the organisation's purpose, as well as strategy to focus on decarbonisation and ESG goals. Energy transition also creates a great opportunity for companies to re-energise their workforce approach and ensure they create the right environment for attracting and fostering the right talent with the right skills to achieve their sustainability goals.

03 Industry focus: Create a multi-skilled workforce

A failure or delay to prepare the workforce for energy transition can lead to missed opportunities. For example, companies might not be able to capitalise on transferable skills that would help put the business on a more sustainable footing. For individuals, a delay could mean less work and development opportunities. For the industry, a failure to prepare its workforce could cause the cost of decarbonisation to rise.

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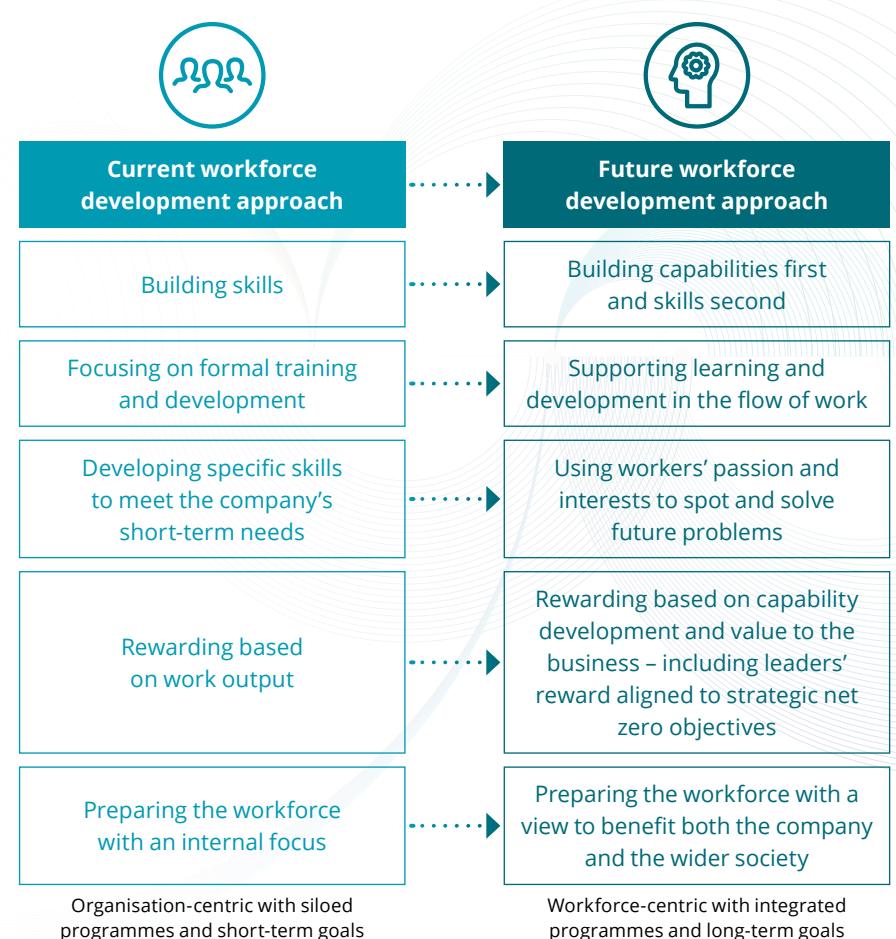
Therefore, companies must support industry-wide initiatives so that the sector can participate effectively in helping the country achieve its net zero target. Following the future of work framework for net zero should lead to a competent and capable workforce that is ready to deliver the net zero goals in support of a cleaner, brighter and more sustainable future for the benefit of both the organisation and wider society.

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Figure 4. Shifting workforce development



Source: Deloitte analysis



A black and white photograph showing a close-up view of a wind turbine's nacelle and the base of its blades. The nacelle is a large, cylindrical metal structure with various mechanical components and bolts visible. The blades are long, thin, and curved, extending upwards from the nacelle. The background is a dark, hazy sky.

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