TAKING CHARGE

# Agenda for tackling the incoming electric vehicle workforce challenge

April 2024





GREENWORK

# OUR AIM



As the United Kingdom takes strides toward a sustainable future, the electrification of transport and the deployment of electric vehicle (EV) charging infrastructure emerge as pivotal components of this transition.

## This report aims to

1

**Understand current and future EV workforce challenges.**

2

**Propose industry led actions and solutions to meet these challenges in order to accelerate EV infrastructure build out.**

# Contents


## Executive Summary

## Introduction

Introducing Greenworkx

Research Approach

## Findings

**Finding 1:** The skills gap is seen as tomorrow's problem, but needs action today

**Finding 2:** Structural barriers in the electrotechnical talent market

**Finding 3:** Ongoing uncertainty results in a lack of commitment

## Recommendations

**Section 1: Wider policy system**

- Theme 1: A new industrial strategy
- Theme 2: Ongoing industry collaboration

**Section 2: Workforce (supply side)**

- Theme 3: Talent transfer from 'brown' to 'green' industries
- Theme 4: Increasing awareness among young people
- Theme 5: Streamlining access through micro-credentials

**Section 3: Employer (demand side)**

- Theme 6: Improving understanding of, and access to, entry routes
- Theme 7: The employer proposition to combat 'churn'

## Conclusions

# Executive Summary

**Having conducted research and interviews with industry stakeholders about the preparedness of the UK's EV workforce the following findings emerged:**

1. The EV workforce and skills gap is a long term problem that industry players deem important but not urgent; there are therefore not sufficient initiatives in place to address this
2. Attracting and training a sufficient workforce is urgent because of the structural challenges facing skilled trades and the labour market more widely
3. Ongoing policy volatility and uncertainty has generated a lack of commitment and investment in the skills and workforce necessary for the transition

**We believe the UK can get ahead of its workforce challenge by implementing strategies across policy, employee and employer practice. We lay out the following proposals:**

# Section 1

## Policy recommendations

- Industry should produce a roadmap for a Green Industrial Strategy that has clear proposals for infrastructure and skills (this should be complemented by a public facing campaign by Government and Industry)
- An agile and participation focused Energy Transition Skills Alliance should be created by industry to get the most from its experience. This should be cross sector to ensure dialogue takes place across all green industries facing skills shortages

# Section 2

## Workforce (supply side) recommendations

- Industry should collaborate to identify translatable skills from declining industries
- Unions, local government and educational institutions should develop reskilling programmes
- Marketing campaigns should be created that showcase new opportunities to those in declining sectors
- A public awareness campaign should be launched to demystify green economy jobs (this could be delivered as part of the industrial strategy comms campaign above)
- DfE should collaborate with schools, further education providers and student unions to boost awareness of green opportunities
- Pilot training modules should be launched via partnerships between educational organisations and industrial leaders like Siemens
- Make the most of AI by creating more interactive learning experiences that technicians can take into the field

# Section 3

## Employer (demand side) recommendations

- Education partners and industry stakeholders should identify the top ten entry level roles facing skills shortages.
- From here, providers can collaborate to develop appropriate courses to bring new talent to the industry
- Partners should engage with employers to identify the best funding mechanisms for training programmes
- A best practice toolkit should be developed for employees and a resource of successes should be pooled for others to draw on

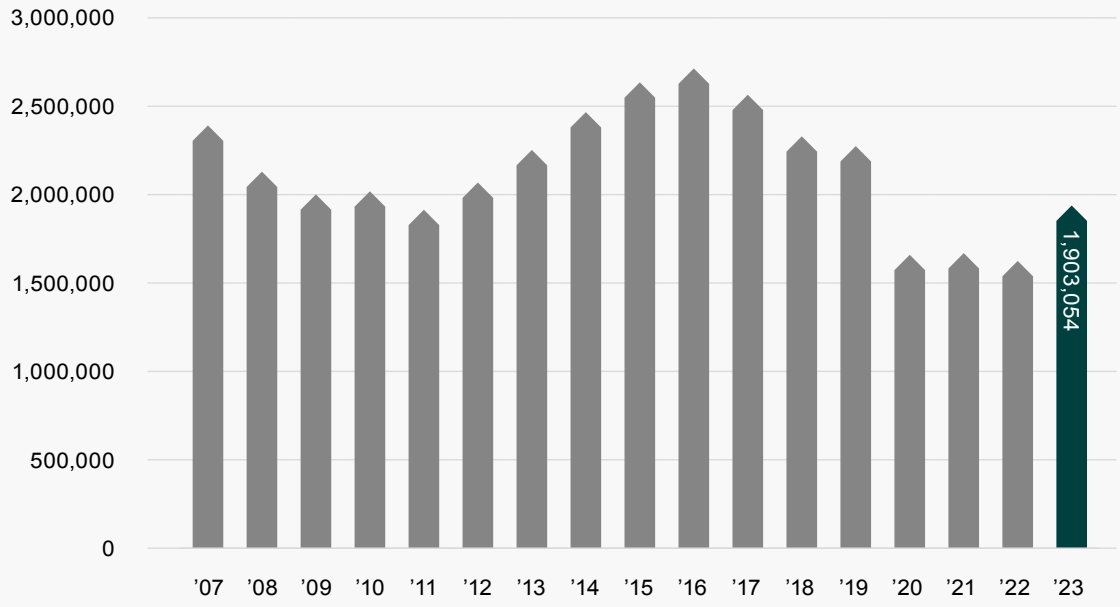
# Introduction

# Introduction

The global commitment to combat climate change has spurred nations to embrace cleaner and more sustainable modes of transportation. The United Kingdom has taken a bold step by announcing its intention to phase out the sale of new petrol and diesel cars and vans by 2035, with all new vehicles sold aiming to be fully zero-emission from the same year. As the deadline approaches, it becomes increasingly urgent to establish a robust and reliable EV charging infrastructure that can support the transition to electric vehicles.

The demand for electric vehicles has grown steadily, both in the UK and internationally. In 2023, new car registrations in the UK saw a 17.9% increase compared to the previous year. In particular, electrified vehicles, ranging from mild hybrids (less powerful hybrids that cannot be operated on battery alone, and always require the combustion engine) to full EVs, accounted for a substantial 56% of new registrations in 2023. EV car registrations have increased since 2022, ranging from an 18% increase for battery electric (BEV) car registrations to a 39% increase for plug-in hybrids (PHEV).[1] This underlines the increasing preference for electric vehicles, signalling a growing demand for EV charging infrastructure.

## Annual New Car Registrations 2007 to 2023




As of January 2024, UK EV charging infrastructure reached 55,301 electric vehicle charging points across 31,445 charging locations. This represents a substantial 46% increase in the number of charging points since January 2023. The growth in the UK's charging network has been significant in recent years, with an eight-fold increase from 6,500 charging points at the end of 2016 to 53,906 devices in 2023.[2]

The growth in demand for electric vehicles and the commensurate increase in charging infrastructure since 2016 has been impressive, and a product of repeat government commitments in favour of electric vehicle technologies. Growth accelerated from 2019 with the legally binding commitment to reaching net zero by 2050 (and the proposed ban on conventional combustion engine vehicles from 2035, with the ZEV Mandate requiring 80% of new cars and 70% of new vans sold in Great Britain set to be zero emission by 2030).

The next decade will prove critical if the transition to electrified transportation is to succeed and e-mobility is to dominate. Yet, to sustain the growth in EV ownership, and the follow-on demand for infrastructure, planning, grid connections, supply chain and labour force are all going to have to keep pace with the required 30% year-on-year growth in EV charging points to reach the government's 2030 target.

Exponential growth will put the greatest strain on workforce and skills; already a workforce that is in decline and in short supply, and with projections suggesting that at least 33,000 additional workers may be needed in the electrotechnical sector over the next four years. This workforce encompasses a range of roles which face different barriers to entry. For example, installing and maintaining public charging infrastructure requires on-the-ground roles which are often perceived negatively as a career option (including civils gangers, electricians and supervisors), as well as desk-based roles which many are unaware of (such as project managers, data analysts, network planners and hardware engineers).

To ensure that a skilled workforce shortage does not become the bottleneck that stalls the transition to electrified transportation, this report looks at the context and nature of the workforce challenges (which are here already, though not felt too severely just yet), and more importantly, what can be done to address them in a timely way so as to safeguard the transition to electrified transportation.

# Introducing Greenworkx

**Greenworkx** is a climate edtech startup building the skilled trade workforce to deliver net-zero homes and roads. We're on a mission to get 10 million more people into green jobs in 10 years - building careers that are good for people and good for the planet.

For the avoidance of doubt, the use of "we" and "our" throughout this report refers to Greenworkx, as the author of this report.

# Research Approach

Our research on the EV skills gap in the UK took a two-pronged approach, blending desk research and primary qualitative and quantitative research methods. We initiated the study with an analysis of the challenges associated with EV infrastructure and green skills, summarising secondary research that came before our work, such as the July 2023 RECHARGEUK EV Infrastructure Report, data from IMI and SMMT, and labour market projections from the Social Market Foundation and Pye Tait.

The initial research informed a stakeholder mapping exercise, helping identify and engage a range of key actors in the field of electrification of transport, including but not limited to: training and certification bodies, power generation suppliers, trade associations, chargepoint operators, installers, and think tanks. We reached out through professional networks and invited them to participate in an industry-leading roundtable discussion.

Before the roundtable discussion, we measured the range and diversity of perspectives and opinions among stakeholders, in order to gain the most current perspective from industry on the nature and scale of the e-mobility workforce challenge.

Attendees participated (n=19) in 30-minute interviews and completed a 5-minute survey. The findings from the analysis, reflected in this report, were also presented at the beginning of our roundtable, helping to shape the nature of the discussion on the day.

The second chapter of this report reflects the main proposals following the roundtable which have been supplemented with further desk research to validate the feasibility by identifying relevant case studies.

# Findings

# Our key findings fall into three major themes:

01

**The EV workforce and skills gap is a long term problem that industry players deem important but not urgent; there are therefore not sufficient initiatives in place to address this.**

The skills gap in the electric vehicle (EV) sector is a long-term issue - not a major problem right now but one that is very likely to become a pain point in the near future if plans are not put in place. There is no sign that policy uncertainty is dampening EV adoption and infrastructure growth: every sign would suggest that the demand for electrified transportation continues growing while the long term trend in the supply of skilled labour is one of contraction. While the true extent of the skills and workforce gap is not well known and is possibly unknowable, it is clear that the workforce and skills shortages will impact in the coming years if robust plans are not put in place.

02

**There are structural challenges in this labour market – and the skilled trades more widely – which makes it all the more pressing to come up with ways to attract and train fast.**

Workforce and skills issues, the lack of urgency on the problem, and the complexity in understanding its nature, are made worse by structural challenges in this labour market. It is one plagued by chronic, pre-existing workforce shortages (made worse by the effects of the COVID-19 pandemic and EU Exit), and the repeated challenge of encouraging new entrants into the relevant sectors due to a lack of awareness of opportunities and general negative perception of skilled trade roles.

03

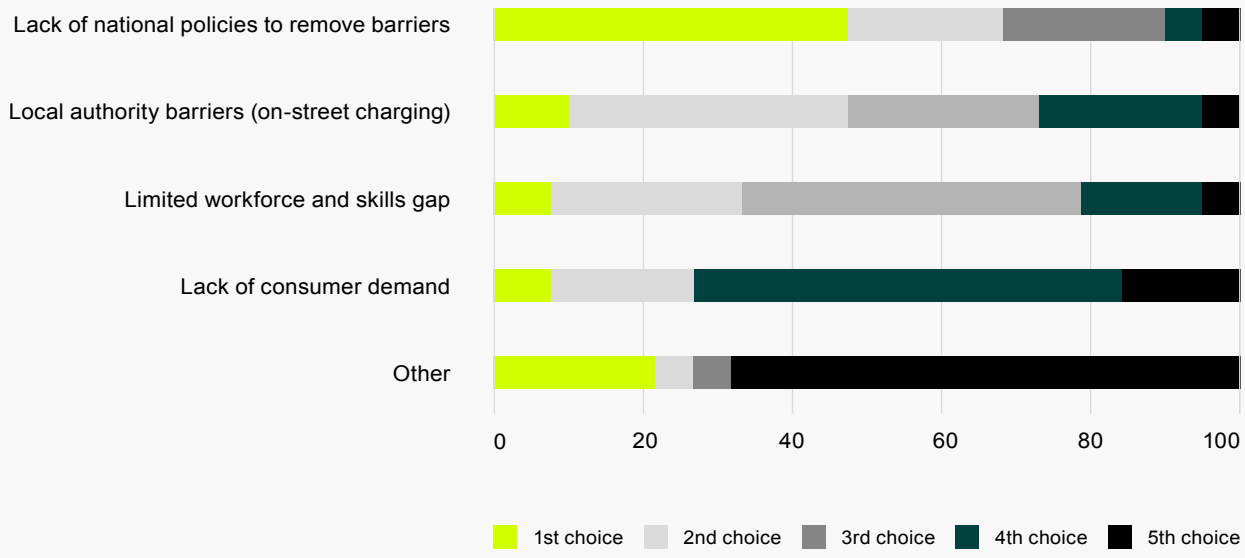
**Ongoing policy volatility and uncertainty means that there has been a lack of commitment and investment.**

The transition is inherently complex and volatile which creates challenges for industry confidence in talent development and recruitment. Infrastructure and electric vehicle ownership are symbiotic, making demand for both hard to model. This uncertainty is experienced by current and prospective technicians as much as firms - lowering the attractiveness of investing time and resources into training, for both candidates and prospective employers.

**Addressing these challenges will require consistent strategy from both industry and government.**

# Finding 01 The skills gap is seen as tomorrow's problem, but needs action today

Figure 1 Rank the major barriers to the UK's EV infrastructure rollout



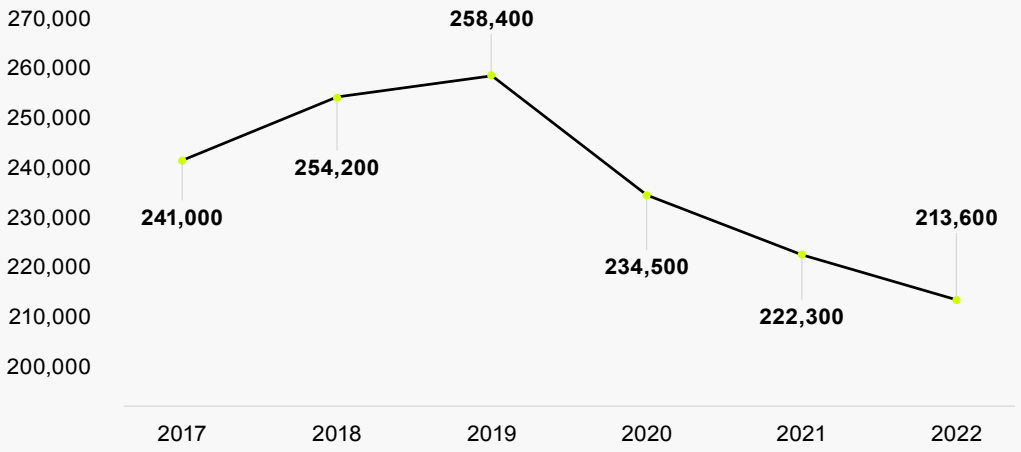

Our stakeholders were conclusively of the view that addressing workforce and skills is less pressing than other blockers to EV adoption and charging infrastructure proliferation, such as introducing on-street charging. This would suggest that the sector recognises the importance of the problem, but that there is not yet an urgent pain point in respect to workforce and skills.

Despite this prioritisation, the salience of the workforce challenge is only going to grow. The IMI's October labour forecasts for EV technicians showed demand to be growing exponentially, and set to outstrip supply by 2031, causing a fundamental barrier to the transition to electric vehicles.[3] The gap is already apparent, with more than 23,000 vacancies in the motor trades sector - 40% above the average vacancy rate across all industries. This is despite the broadly positive news that in the second quarter of 2023, official data from education regulators revealed that 2,900 technicians achieved EV certification. As of January 2024, the total number of qualified EV technicians (able to repair and maintain EVs) in the UK was an impressive 52,000, representing 22% of all technicians in the country[4].

To overcome the tension around a long term problem that is not here yet will require immediate long-term workforce planning, given how long it takes to train new talent.[5] Our subsequent findings and the proposals in the second half of this report will reflect on the strategies that will be required to overcome the sense that this problem is not here yet and does not have a clear owner.

# Finding 02 Structural barriers in the electrotechnical talent market

Figure 2 Total workforce in SOC 2020 code 5241 electricians and electrical fitters (2017-2021)

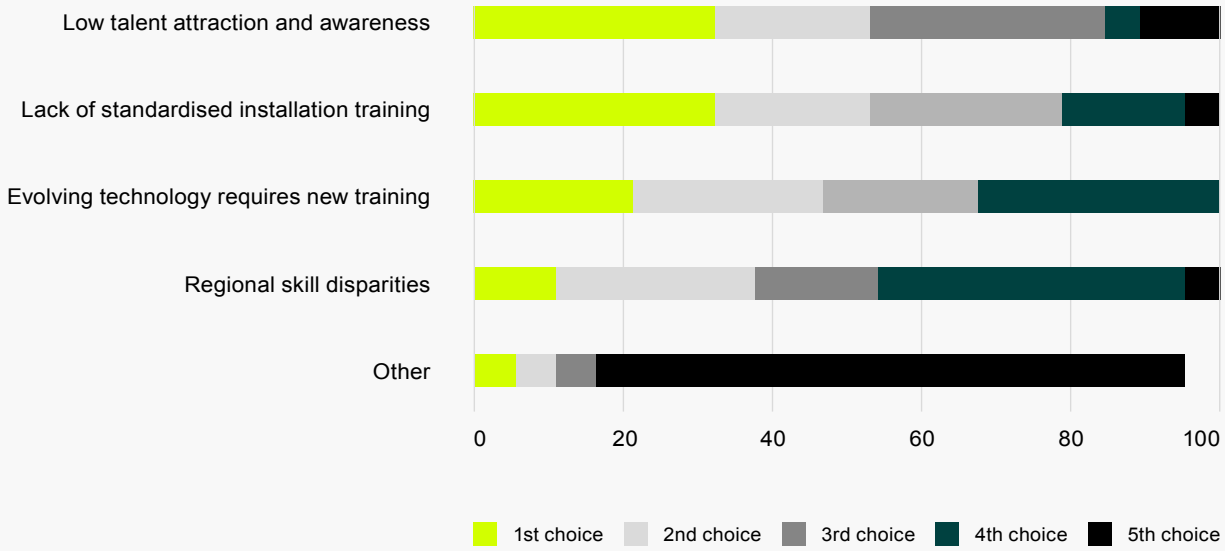



Source: ONS APS occupation (SOC2020) by sex by employment type, Jan to Dec 2022.
(NB:2022 figures were obtained from data released after SOC2020 codes were implemented)

A major challenge foreseen by industry over the coming years is a labour pool shortage, often mentioned alongside skills shortages, according to the latest research on the topic[6].

According to projections based on a best case scenario, an additional 33,000 workers may be needed in the electrotechnical sector over the next four years (not taking into account any churn in the existing population). Although the projections are uncertain, as a worst case scenario may see the sector contract further losing up to 17,500 workers.

## Figure 3 Rank barriers to workforce development for EV installation and maintenance




The electrotechnical skills sector is plagued by chronic, pre-existing workforce shortages (made worse by the effects of the COVID-19 pandemic and EU Exit), and the repeated challenge of encouraging new entrants into the relevant sectors due to a lack of awareness of opportunities and general negative perception of skilled trade roles.

A lack of awareness and understanding concerning green careers and entry routes was ranked by our stakeholders as the number one barrier to workforce development in the EV sector, ahead of the lack of standardised qualifications.

This problem has also been highlighted in REA Recharge's most recent report on the EV infrastructure rollout, which advocated for a more efficient, long-term strategy that could be adopted by the Department for Education to link up with industry to drive new courses offered as part of a wider Green Jobs Campaign supported by the Government.[7]

In last year's WorldSkills UK's GreenSkills Report, nearly two thirds of young people aged 16-24 reported they want to work in a role committed to tackling climate change.[8] An E.On survey of 2,000 young people also found that almost half (46%) of young people aged 16-24 say they will forgo traditional higher education because they want to go straight into a green job.[9]

**Workforce challenges highlighted by interviews:**



## The attractiveness of the industry to young people and career switchers and their understanding of the opportunities”

**APPRENTICESHIP AND SKILLS PROFESSIONAL**



## General lack of focus on attracting young people to all green economy sectors such as construction.”

**EV POLICY RESEARCHER**

The long term struggle to overcome gaps in awareness and negative perceptions of trades, while not unique to the UK, has had an extremely negative impact over the past five years especially, heading into a period of acceleration for net zero infrastructure. Among other things, the relatively low social status of skilled electrotechnical roles needs to be overcome if the transition to electrified transportation is going to be a success.

# Finding 03 Ongoing uncertainty results in a lack of commitment

The complex nature of the transitional challenge, balancing demand for new technology infrastructure with the demand for electric vehicles alongside the huge shifts in the workforce, makes the true need for skilled workers difficult to establish.

According to Checkatrade UK Skills Index, one third of the current workforce is aged over 50 and will retire in the next decade. Some 244,000 qualified apprentices are required to plug the skills gap by 2032.[10]

These numbers and projections are only estimates based on certain scenarios coming to pass, though they may not happen at all. And for them to happen, we need policy, regulator, investment and business confidence. This would then yield consistent job creation and sustained demand for new skills; a number of strategies could then be deployed to rise to the need, including greater flexibility, or to cite one of our stakeholders:



**Managing a flexible workforce can respond to demand and provide job certainty."**

**SENIOR DNO MANAGER**

Further, multi-stakeholder collaboration can be a way of bringing about more solid support for green skills, as we underline in the next section. In the Chapter that follows, we dive deeper into the conclusions generated from our roundtable discussions. We present concrete recommendations and proposals, drawing comparisons with relevant case studies.

Our aim is to be propositional, creating an actionable framework for addressing the challenges identified in our research.

# Recommendations

## Background

Our national ambitions for electrifying transportation are reaching a crossroads. The tremendous growth in public charging infrastructure - the UK passed the milestone of 50,000 chargepoints in 2023 - could stall due to a number of blockers. As our research and stakeholder roundtables have highlighted, a workforce gap in the electrotechnical sector poses a significant risk, potentially bottlenecking the UK's rollout of electric charge points. The aim of this research and report is to contribute a plan that might help us get ahead of this risk before it materialises as a serious threat to the bold plans set out in the government's strategy.[11]

This chapter is structured around three sections: first, themes and recommendations for the wider policy system; second, themes and recommendations for the supply-side (workforce end) of the skills equation, and thirdly, demand-side (employer end) themes and recommendations.

# Section 01

# Wider Policy System



# THEME 01 A new industrial strategy

**Owners and collaborators:** Policy/Trade bodies: ChargeUK, Zemo Partnership, others

## Finding

The United Kingdom has the opportunity to develop and deliver an industrial strategy with the green energy transition at its heart - one that balances the economic opportunities of the energy transition, domestic manufacturing and production with the benefits of transitioning to a low carbon society[12]. Leading economies, such as China and the United States, have introduced comprehensive industrial strategies such as Made in China 2025 and the Inflation Reduction Act (IRA) to expedite the growth of green industries.[13] Recent analysis from IPPR's shows that the UK is trailing behind some of its European counterparts in terms of the green goods and services sector's contribution to the Gross Domestic Product (GDP; in the UK these sectors account for 4% of GDP, compared to 6% in the EU and more like 11% in Sweden and Denmark).

While there might be a number of structural differences to explain this, the opportunity to switch the narrative, to become a leader in domestic energy production (in renewables) and new technologies, including battery production and recycling, cannot be overstated. To get there, policy certainty and regulatory support is crucial. Business investment and innovation depend on the expectation of demand and the management of risk and uncertainty.[14]

A consistent industrial strategy is necessary for skills development and job creation, not least to help with the demise of some industries, such as UK car manufacturing, which fell by 9.8% in 2022.[15] As our research found, a number of the skills associated with some declining sectors can be translated into new green economy jobs with more decisive intervention from government.

Our roundtable discussions brought into focus the potential of an effective industrial strategy to incentivize the market to engage in more sustainable economic activities - a strategy that should encompass a long-term economic plan that focuses on investing in people, enhancing skills, and fortifying infrastructure.[16]

## Proposals

- **Focussed advocacy:** ChargeUK and other trade representative bodies can use existing relationships and lines of communication with government and opposition parties to put forward a coherent roadmap for a Green Industrial Strategy, encompassing clear proposals for EV charging infrastructure and skills. This should articulate why a Green Industrial Strategy is critical for the UK's sustainable development and global competitiveness. The upcoming focus on UK government general election manifestos present a moment of opportunity to shape the economic agenda of all the main political parties.
- **Public campaign:** A government-led campaign should be launched to raise awareness about the importance of a Green Industrial Strategy, possibly involving op-eds, social media campaigns, and public endorsements from industry leaders.

# THEME 02

# Ongoing industry collaboration

**Owners and Collaborators:** Policy/Trade bodies; Employers; Training Providers: Greenworkx - Energy Transition Skills Alliance

## Finding

There is a critical need for multi-stakeholder collaboration to address complex workforce problems facing the electrotechnical industry in the coming years. There is a historical separation between the energy and transport sectors driving the current imperative to find methods of merging their expertise for collaboration, which is essential to the successful rollout of EV infrastructure.

Closer ties among stakeholders will make the supply chain more resilient and better equipped to meet future challenges.[17] Though trade bodies and government initiatives have signalled recognition of the workforce challenge, industry would benefit from a clear and actionable transition plan informed by operational experience. Events and set pieces that encourage multi-stakeholder collaboration, such as our roundtable discussions, will be crucial to developing strategic interventions.

## Proposals

- **Participation mechanisms:** Greenworkx will adopt methods for engaging and involving stakeholders in ongoing development, using online platforms, periodic meetings, and feedback loops, under the umbrella of the ‘Energy Transition Skills Alliance’. This will be designed to maximise participation and be agile.
- **Intersectoral collaboration:** Given that the skills required for EV installation and maintenance overlap with those in other green sectors like solar and heat pumps, we will promote cross-sector dialogues.[18]
- **Partnership roadmap:** Greenworkx will create a detailed stakeholder map and a toolkit that includes key milestones, objectives, and KPIs to track progress.

# Section 02

# Supply Side



# THEME 03

# Talent transfer from 'brown' to 'green' industries

**Owners and Collaborators:** Training Providers; Policy/Trade bodies: UK Power Networks

## Finding

The decline of traditional industries such as mining, chemical, and car manufacturing, especially in areas like the north of England, has left a skilled labour force that could be redeployed to new energy transition roles. New sectors in the energy transition, such as EV manufacturing, infrastructure and maintenance, have the potential for significant job growth. These parallel developments offer a unique opportunity for a just transition by reskilling workers from declining sectors.

The net zero transition offers the potential for significant net employment creation in the UK, with estimates of between 135,000 and 725,000 net new jobs being created in low-carbon sectors such as building retrofit, renewable energy generation and electric vehicles.[19]

However, potential skill mismatches cannot be overestimated; while job creation and destruction may involve largely similar categories of skills, it is crucial that the transfer of skills and labour forces is done in a managed and organised way, appreciating that job creation does not equal jobs being filled. This will rely on raising awareness and attractiveness among candidates and the mapping of existing skills to future roles.

## Proposals

- **Strategic reskilling:** Partners should collaborate to identify the translatable skills from declining industries and formulate targeted reskilling programs to prepare these workers for roles in the net zero electrotechnical sector.
- **Partnerships and campaigns:** We will explore the need for collaborations with unions, local government and educational institutions to develop these reskilling programs.
- **Targeted Campaigns:** We will experiment with marketing campaigns aimed at workers in declining sectors, showcasing the opportunities available in the e-mobility sectors and the pathways to get there.

# Figure 4 Ambitious green policies create and destroy similar job types




Source: OECD analysis (June 2017).

## CASE STUDY & REPORTS

- Climate Change Committee (May 2023): Emphasises the need for active reskilling and upskilling of the workforce in the face of international competition.
- OECD Report (2017): Indicates that the skill sets required for green jobs are often similar to those in declining industries, facilitating the reskilling process.
- University of Bristol Policy Briefings: 'Green Jobs and a Just Transition' from the University of Bristol can be a useful guide to shaping the strategy.

# THEME 04

# Increasing awareness among young people

**Owners and Collaborators:** Training Providers; Employers; DfE

## Finding

Our engagement with further education providers and the roundtable discussions indicates there is still a concerning lack of awareness among young people regarding green economy jobs, particularly in the electrotechnical sector.

Research from the social mobility charity Speakers for Schools highlights this gap—while 63% of surveyed state school students aged 15-18 reported they knew what a green job is, over half (56%) were unsure about the required skills and qualifications.[20] A lack of visible role models and insufficient knowledge among career advisors contribute to this awareness gap. Our stakeholder discussions reflected the importance of going upstream to build enthusiasm and momentum among young talent - and there is a recognition that this could be better coordinated - with a special focus on diversity, ensuring that campaign role models represented people who looked like the target audience.

## Proposals

- **Campaign development:** Developing and launching or leveraging public awareness campaigns - for example in *Green Careers Week* - to demystify green economy jobs (and specifically those in the emobility sectors). The campaigns could take inspiration from the recent army recruitment campaigns; This is Belonging or Army Confidence which tap into feelings of self-confidence and connection, which resonate with young audiences.
- **Partnerships:** DfE should collaborate with schools, further education providers, and student unions to disseminate campaigns, leveraging existing platforms used by young people to boost virality.
- **Measuring impact:** Partners should establish Key Performance Indicators (KPIs) to monitor the effectiveness of the campaign, including engagement rates, inquiries about green jobs, and applications for green training programmes.

### CASE STUDIES

- Shell UK is supporting three energy transition skills hubs in Scotland and Wales, scheduled to open from September 2024.[21] These hubs will provide teaching space and equipment demonstrating the latest energy technologies, such as carbon capture and storage, wind turbine construction and solar.
- Surrey County Council has created a collection of content to raise awareness of green careers and routes into them. This includes a promotional film, job profiles and teacher resources.

# THEME 05 Streamlining access through micro-credentials

**Owners and Collaborators:** Training Providers; Employers: Shell UK, Siemens

## Finding

The Office for Zero Emission Vehicles (OZEV) found that a fifth (18%) of installations between 2020 and 2021 had dangerous or potentially dangerous issues.[22] Due to these safety concerns, a cross-industry group developed a new set of industry standards for EV Charging installations and a short course to allow qualified electricians to upskill for this job safely.[23] The Electrical Contractors Association (ECA) required this short course to only be available to qualified electricians with the required experience.

It may be that some elements of a full electrician qualification are not relevant to new entrants who wish to focus on the EV sector rather than broader electro-technical work. Training that is more incremental or modular could also be more adaptable to the diverse skill sets and backgrounds of potential entrants.

Experience is a key thing that installation employers look for in talent. Do current training courses prioritise this? Can industry fund equipment?

There is also a wider potential to identify and integrate transversal skills, those that can be transferred between different jobs or sectors to enable people to take their past skills and experiences into new roles in the energy transition economy.

## Proposals

- **Pilot training modules:** Educational organisations should collaborate with industrial leaders like Siemens to pilot modular, stackable, micro-credential-based training programmes. This will focus on foundational aspects like safety and basic knowledge, leading into more advanced courses. Greenworkx will facilitate an initial cross-stakeholder session to plan how this could work in alignment with regulatory and safety requirements.
- **Artificial intelligence (AI) and AR/VR:** With the advancement of large language models and AI, augmented and virtual reality, there is the potential to create more interactive and automated learning experiences that technicians can take with them into the field.
- **Industry feedback:** With a pilot programme in place, we can collect feedback on the learning benefits of this type of training to refine the programme further before further replication.

**As the UK transitions from a high to a low carbon economy, demand for qualified electricians will only increase; there is therefore an unprecedented opportunity to help individuals, whatever their background or experience, to gain the knowledge and skills needed to secure and sustain employment in a growing sector."**

**CITY & GUILDS**

## CASE STUDIES

- The Irish CILT Skillnet 15-week Electric Vehicle (EV) Fundamentals Micro-Credentials Programme.[24] It's a short yet comprehensive course that equips the learner with both the knowledge and practical skills required for the safe handling of various EV technologies.
- City & Guilds has collaborated with Shell UK to offer the UK's first EV charging points installation course, to NET/SECTT-vetted 4th year apprentices, as a bolt-on to electrical apprenticeships.[25] This enables apprentices, near completion of their full apprenticeship programme, to gain valuable green technology skills to take into the labour market with them. After piloting at London South Bank Technical College, Northeast Scotland College and Inverness College, the ambition is to roll this programme out across the UK.

  This is to support Shell UK's ambition of 90% of UK drivers being within 10 minutes' drive of a Shell public charge point by 2035.
- City & Guilds Technical Training is offering a Green Electrical Upskill Bootcamp Package. The purpose of the course is to upskill practicing electricians to safely design, install and maintain solar PV, electrical energy storage systems and small EV charging installations.

# Section 03

# Demand Side


3

# THEME 06

# Improving understanding of, and access to, entry routes

**Owners and Collaborators:** Training Providers; Employers

## Finding

One of the major obstacles to growing the labour pool of skilled electrotechnical talent is understanding and access to training opportunities. Employers must do more to ensure entry routes are provided and accessible. Recent research from City & Guilds Bright Futures Report found that a quarter of energy sector employees (26%) don't know how to access training that will allow them to adapt to future changes in the industry.[26]

Our research indicates that the majority of current courses, such as City and Guilds Level 3 qualifications focused on EV chargepoint installation, target existing tradespeople with prior skills and qualifications. This focus on growing skills with existing tradespeople is useful, but cannot be the only solution as these sectors have seen workforces decline for a number of years (and have a disproportionately older population).

The landscape for relevant industry-specific qualifications is still very broad and could benefit from further definition and development, not just to provide more standardisation but also broaden the diversity of qualifications to enable more new entrants into industry. The recently developed introduction to Sustainable Technologies, spearheaded by Quantum Group, is the type of introductory course that might create new access routes into industry. The greening of apprenticeship standards, a programme led by the Institute for Apprenticeships & Technical Education (including the likes of Installation and Maintenance Electrician) is crucial to unlocking entry routes to green jobs.

## Proposals

- **Top ten:** education partners should work with e-mobility stakeholders to understand the top ten entry level roles in this industry which are enduring skills shortages, as to then understand and draw up training pathways.
- **Course development:** collaborations with awarding organisations such as City and Guilds to consider the need to design short courses aimed for Further Education (FE) and training providers that might serve to bring new talent into industry (more detail in Theme 5).
- **Funding mechanisms:** partners will continue to engage with employers to understand the best mechanisms for funding learning programmes as a route to early workforce and talent development. This could include advocating for more Skills Bootcamp funding to be spent on green skills, including EV.

### CASE STUDY

The Department for Education has invested £26m in Skills Bootcamps to be delivered by City & Guilds Training over the next two years across England[27]. These free courses for adults aged 19 or above, such as the Level 2 Diploma in Electrical Installation, provide learners with an opportunity to build up sector specific skills and fast-track to an interview with a local employer.

# THEME 07

# The employer proposition to combat ‘churn’

**Owners and Collaborators:** Employers; Policy/Trade bodies; Energy Transition Skills Alliance - participating employers

## Finding

The emobility sector is currently grappling with a high level of employee churn, with the same skilled workers hopping across different employers in pursuit of wage increases.

This causes wage inflation, which plays a role in attracting new talent into industry, but also creates challenges for existing workforce productivity. Employers can work together to spread the idea that there are many purposeful and well-paid career routes in electrification of transport that most individuals can aspire to.

At the EV World Congress 2023, Tim Weston, Director Career Pathways at London South Bank Technical College, highlighted how these high wages often draw skilled professionals away from teaching roles. This emphasises the need to enhance the appeal of teaching and training positions.[28]

This imbalance could profoundly impact the skills training and education institutions, limiting their access to the current skill set and workforce necessary for educating and training the next generation and building the talent pipeline required to achieve net zero.

## Proposals

- **Employer value proposition toolkit:** Greenworkx, through the Energy Transition Skills Alliance, will work to develop a toolkit for employers that outlines the best practices for developing an appealing and sustainable employer value proposition.
- **Harnessing workforce and industry research:** Greenworkx will work with existing talent acquisition professionals across the industry to understand what makes an employer proposition attractive, bringing professionals within the industry to share best practices and challenges.
- **Celebrating success:** for those companies that break through on building successful careers pathways, celebrating their success stories to serve as powerful testimonials that might convince other employers to take similar actions. For example, a chargepoint operator might identify that besides a competitive salary, its employees highly value continuous learning and development opportunities. The company could then partner with educational institutions to offer discounted courses or in-house training programs tailored to the EV industry.

# Conclusions

This report outlines a roadmap designed to overcome key workforce challenges in the emobility sector.

Leveraging stakeholder insights, we made a number of actionable proposals that can help us learn and accelerate the UK's workforce transition.

We will be taking forward these proposals with identified stakeholders to give us all the best prospect of continuing the managed rollout of electrified transportation and infrastructure over the coming years.

# Endnotes


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