

## Zero Emission Skills Support in Scotland

### Purpose

This paper provides an overview of the skills landscape in Scotland around HDVs. It provides a general orientation to the education sector in Scotland and sets out actions taken to address known skills issues.

### The Taskforce are asked to consider:

- What additional skills gaps may become or are already a barrier to transition?
- What skills provision is most needed to address these gaps?

### Skills Baseline Report - Findings

In 2021, Transport Scotland commissioned a report to baseline the skills situation for Heavy Duty Vehicles (HDVs), including Heavy Goods Vehicles (HGVs).

The report estimated that there are around 52,000 HDVs in Scotland, of which around 35,000 are HGVs. Transport accounts for 37% of greenhouse gas emissions in Scotland, and HDVs (>3.5T) account for 12.5% of transport emissions.

The Baseline Report estimated that approximately 87,000 employees in Scotland will potentially need new skills across all HDV types (including emergency services, construction etc) with circa 35,000 needing new skills by 2026.

The key skills required for owners and operators of vehicles were:

- Being able to identify the operational performance data necessary to calculate the total cost of ownership
- Commissioning of low carbon systems, including knowing the planning and consent processes for refuelling infrastructure
- Fleet and depot managers to deploy mixed-fuel fleets to optimise performance
- Driver training to improve vehicle performance by tens of percent.

HDV operators face skills gaps in assessing the technical and financial suitability of low carbon HDVs.

Further details from the report can be found on Transport Scotland's website:

[Skills for low carbon Heavy Duty Vehicles \(HDVs\) | Transport Scotland](#)

## Recommendations and progress to date

The Skills Baseline Report included recommendations. Below is a status of actions since.

HDV Recommendations	Actions to date
Increasing need for apprentices with skills to install and maintain hydrogen infrastructure	Being pursued by Transport Scotland with Skills Development Scotland and Scottish Government Hydrogen teams
Skills development content can be developed and delivered for those involved in sales/leasing of low carbon HDVs	Energy Savings Trust upskilling fleet managers through public sector decarbonisation forums, but HDV front is missing and charging infrastructure is a knowledge area that needs focus
Third-party certified competency scheme to enable those involved in low carbon HDV sales/leasing to demonstrate to customers they are credible to do so	IMI Levels 2, 3 and 4 now contain EV qualifications
Operator skills in identifying and assessing low carbon HDVs and associated infrastructure can be developed.	Options being considered by relevant parties.
Access to real-world vehicle performance data can be improved to support skills development in those involved in sales/leasing of low carbon HDVs and operators.	Action needs developing potentially as part of real world trials.
Enabling stakeholders, such as emergency service personnel and DVSA inspection and assessment staff, to access up-to-date technical details about different types of low carbon HDVs	Options being considered by relevant parties.

The Energy Skills Partnership, a collaboration of Scotland's colleges and industry partners, has created the Hydrogen Training Network across nine colleges covering the following topics to help address some of these needs:

- Operational Safety course
- Online Awareness Safety Course
- Hydrogen for Transport online course
- Professional Development Award – Hydrogen: An introduction for technicians
- Desktop Hydrogen Fuel Cell Trainers (shared resource for colleges)
- Electrical Fundamentals (shared resource desktop trainers)
- Staff continued professional development for senior staff and college lecturers.

The ESP has two online courses one on Hydrogen Awareness and one on Hydrogen in Transport which can be accessed at <https://esp-scotland.ac.uk/hydrogen-resources/>.

To date there is no known work underway looking at the skills for maintaining hydrogen infrastructure.

The Institute of the Motor Industry (IMI) has integrated Electric Vehicle training into its IMI qualifications.

Skills Development Scotland (SDS) records there are between 4,000 and 5,000 people in automotive modern apprenticeships each year.

Alongside the public education routes, private organisations such as the Scottish Wholesale Association are developing guidance material for fleet management.

There are also opportunities for transferable skills from the oil and gas sector in risk assessment and hazard management, from gas engineering and gas network companies on handling high pressure gases.

**Overview of Relevant Skills Provision in Scotland**

There are various types of skills interventions each with their own governance within Scotland. The main categories are formal education, apprenticeships, private training.

Formal education operates through the school, college and university systems. Education Scotland is the Scottish Government’s Executive Agency responsible for inspection, review and reporting of education delivery. Education Scotland is responsible for Scotland’s curriculum for 3-18 year olds.

The Scottish Qualifications Authority (SQA) is the executive non-departmental public body of the Scottish Government responsible for accrediting educational awards.

The SQA lists key types of qualifications in Scotland which are laid out below alongside existing HGV-relevant courses, largely focused on the supply chain management or the driving of Heavy Goods Vehicles.

<b>Qualification</b>	<b>End user</b>	<b>HGV Transport-specific courses</b>
National Qualifications (taken in secondary school/colleges)	Young people in formal education	
Scottish Vocational Qualifications (including apprenticeships)	Trainees and employees	Driving Goods Vehicles ( <a href="#">SCQF L5 and L6</a> )  <a href="#">Freight Logistics Modern Apprenticeship</a>  <a href="#">Supply Chain Management</a>
Professional Development Awards	Those in professional employment	

National Certificates and National Progression Awards	National Certificates for 16-18 year olds in education to prepare for employment. NPAs are anyone building knowledge in specialist vocational areas.	<a href="#">Safe Road User</a>
Higher National Qualifications	People seeking practical skills for employment or entry to second year of a degree programme	<a href="#">HNC/HND Supply Chain Management</a>
SQA Awards	Any learner looking for specific skills	
Qualifications for work	Young people 16-19 years old	Introduction to Work Place Skills

The qualifications are mapped to a Scottish Credit and Qualifications Framework of 12 levels that covers National 1 awards to Professional Development Awards, Doctoral Degrees and Professional Apprenticeships.

Funding for further and higher education comes from the Scottish Funding Council, although schemes such as Foundation, Modern and Graduate Apprenticeships are funded by Skills Development Scotland.