

Electric Vehicle and Battery Safety Skills for Emergency Services, Vehicle Repair, and Auto Retailers



Fire, police, ambulance, and service personnel will need new skills to handle EV accidents and repair to ensure the safety of themselves and others. The number of those workers who need reskilling is substantial and resources are needed to support sector skills councils and providers for regional delivery of accredited courses.

As the UK consumer's appetite shifts from vehicles powered by internal combustion engines to fully electric, emergency service personnel, vehicle mechanics, and retailers will need a new set of skills to protect themselves and others from harm. Multiple safety systems are designed into an EV to protect passengers, emergency services and mechanics from harm and rates of fires associated with EV batteries remain low.

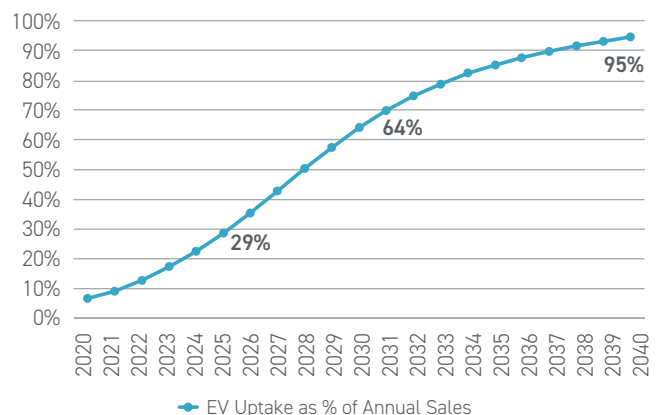
However, vehicles with high-voltage batteries present unique risks that will need to be understood and controlled through reskilling. In particular the nature of EV fires is different to fires involving petrol and diesel cars. EV fires release large amounts of heat, can be directional, involve projectiles, can produce large volumes of toxic gases, and can reignite after they have apparently been extinguished.

For emergency services, reskilling requirements include the ability to identify an EV by make and model, use the vehicle's emergency disconnect capabilities to disable a high-voltage system and backup power supply, know how to fight a high-voltage battery fire, identify no-cut zones for extrication, and determine when a vehicle is safe to be released to a second

responder. For vehicle mechanics, this includes how to repair a high-voltage vehicle, conduct diagnostic testing, and to replace a battery safely. Retail sales personnel will need to have awareness of how EVs function and to identify hazards and risks in order to pass this information on to the consumer. Actions to raise awareness and deliver specific training are needed now if we are to meet the electrification challenge as the number of EVs on the road increases.

This Faraday Insight will explore the standards by profession and the relevant professional bodies responsible for

Figure 1: Projected uptake of electric vehicles as a percentage of annual vehicle sales in the UK, 2020-2040.¹ As the population shifts to EVs, without adequate training the risk to emergency responders, service and repair, and retail personnel will increase.



Rates of incidents involving EVs remain low and multiple safety systems are designed into EVs to protect passengers, emergency services and mechanics. However, vehicles with high-voltage batteries present unique risks, particularly related to fires, which need to be understood and controlled through reskilling.

¹ From the Faraday Institution 2019 report *UK Electric Vehicle and Battery Production Potential to 2040* produced in consultation with experts from McKinsey Energy Insights and the University of Oxford.

providing training and skills for employees to reach a level of competency on an ongoing basis. It will also identify best practices and make recommendations on how best to ensure the UK protects its frontline responders and service workers.

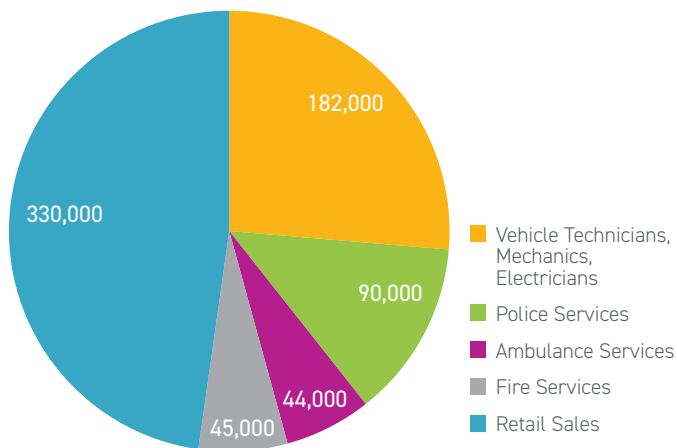
Regulatory Drivers Exist to Protect Workers from Electrical Risks

One key regulatory driver that applies to these workers is the Electricity at Work Regulations 1989², which includes areas that apply to work on high-voltage vehicles and which places the duty to comply on the employer to protect the employee, "where technical knowledge or experience is necessary to prevent danger or, where appropriate, injury, unless he possesses such knowledge or experience...". Further, HSE's *Electricity at Work: Safe Working Practices* provides employers with the directive "You must identify those people who are competent and have knowledge and experience of the electrical system to be worked on. Anyone who does not have this will need a greater level of supervision or will need to be given adequate training to make sure that they have the correct skills, knowledge and risk awareness for the task. Do not let unauthorised, unqualified or untrained people work on electrical systems."³

A Substantial Number of UK Workers Will Be Impacted by the Emergence of EVs

The size of the community in the UK who will need to become competent in various aspects of EVs and batteries in order to safely complete their work is significant. According to the Institute for the Motor Industry (IMI), of the 182,000 vehicle technicians in the UK, only 21,000 are EV qualified, and only 5% overall are trained to a Level 3 or 4 EV qualification⁴. UK emergency services, which include fire, police and ambulance personnel, number 280,000, of which around 180,000 will need training. Among the large retailer and aftersales market, there are 330,000 working in sales who will also need some EV awareness training.

Figure 2: Number of existing UK jobs, excluding automotive manufacturing, where reskilling may be necessary because of the electrification of transport.



² HSE, *The Electricity at Work Regulations 1989*

³ HSE, *Electricity at Work: Safe Working Practices*

⁴ IMI TechSafe, Position statement, September / October 2019

⁵ National Operational Guidance: Control measure – immobilise alternative fuel vehicles

Fire and Rescue Services Require the Greatest Reskilling of Emergency Responders

Of emergency services called to a traffic accident, the fire service is most directly impacted by the increase in the number of EVs on the road. Frontline fire and rescue personnel have the responsibility for extinguishing battery fires, discharging high-voltage batteries, and extracting individuals who may be trapped inside damaged vehicles. Across the UK, there are approximately 55,000 fire service personnel⁵ spanning 51 local Fire & Rescue Service authorities (FRS). While not all personnel will need retraining, roughly 44,000 firefighters and fire control personnel⁶ will need to gain significant skills and competencies in order to mitigate associated fire, explosion and high-voltage risks to protect themselves and others from harm. New hazards introduced by EVs need to be anticipated as well, such as uncontrolled or unpredictable vehicle movements, release of toxic gases, the length of time it takes to release a battery charge, hazard material leakage, and pressurised systems.

Frontline FRS training on EVs might include:

- Introduction to hybrid and EVs
- Basic electrical concepts
- EV systems and charging stations
- EV Identification methods
- Immobilisation and disabling processes
- Extrication operations
- EV and battery fires
- Submersions
- Incidents involving charging stations
- High voltage battery damage

The UK FRSs are governed by a set of external professional bodies, first and foremost the **National Fire Chiefs Council (NFCC)**⁷. The NFCC is the professional voice of the UK fire and rescue services and is comprised of a council of UK Chief Fire Officers. National Operational Guidance (NOG), as opposed to standards, is provided to all FRS and includes specific hazard guidance for alternative fuel vehicles⁸, which includes control measures on how to identify and immobilise the vehicle, then isolate and stabilise its high-voltage system. While the NOG provides strategic and tactical actions a local FRS should take, such as to provide its fire service with mobile data units, it does not go far enough and leaves decisions on whether and where to obtain training for personnel to the local FRS. The NOG is not a set of learning standards and it does not offer detailed learning objectives nor assessment criteria based on levels of competency needed on a given topic. To translate NOG guidance into a

⁶ Data from *Fire and rescue services workforce*, 12 April 2019

⁷ [National Fire Chiefs Council](#)

⁸ National Operational Guidance: Hazard – Roadways: Alternative fuel vehicles

learning plan for reskilling requires the work of additional professional bodies.

For example, the sector skills council **Skills for Justice: Fire and Rescue**⁹, supports fire and rescue employees in both the public and private sectors, and provides approved training frameworks for all vocations within the fire and rescue sector. Its stated goal is “to create the kind of targeted training, coaching and workforce development programmes that make the UK a safer place to live—by embedding a culture of prevention and protection alongside preparing for emergencies.” For Skills for Justice to develop a national occupational standard or training framework, it needs to be requested to do so directly by national fire and/or police services.

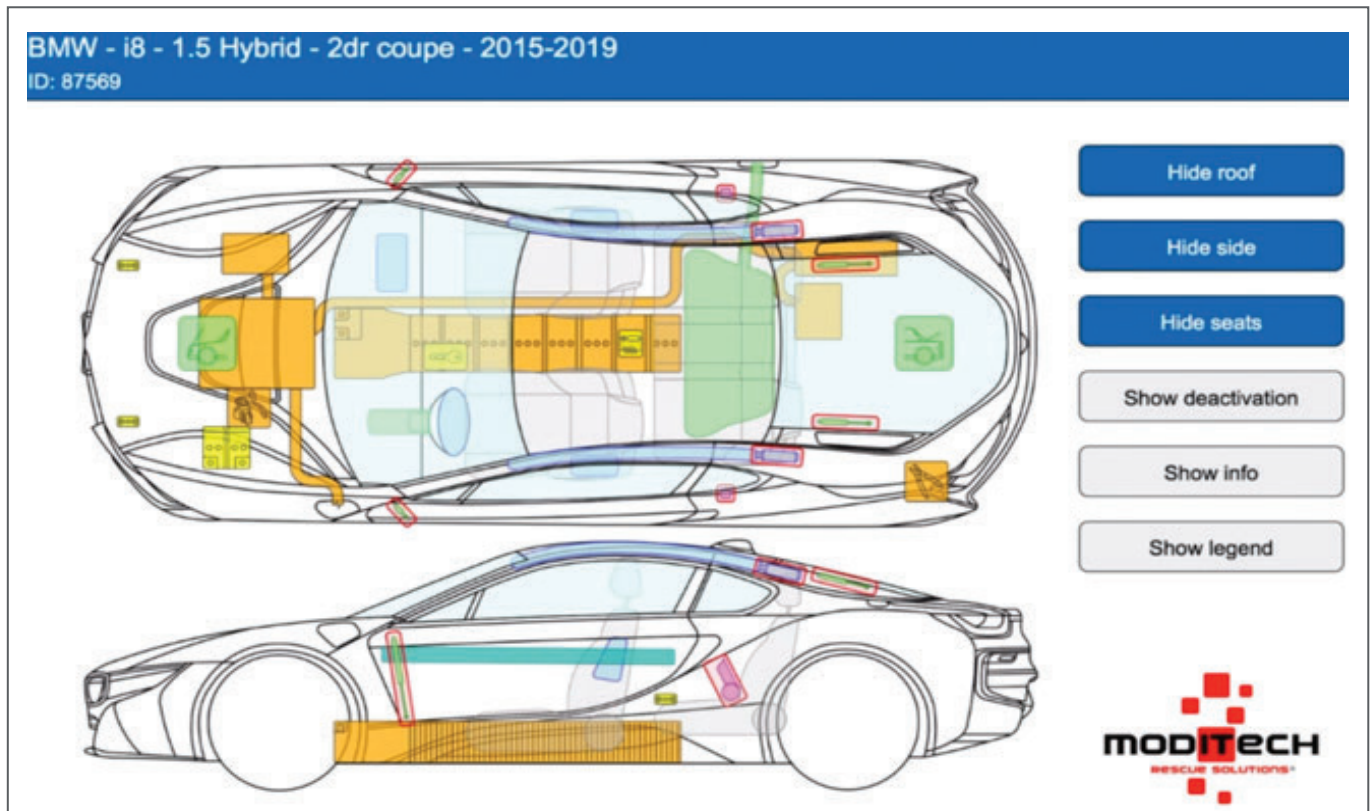
The UK’s **Fire Service College** in Gloucestershire specialises in equipping firefighters and other emergency responders with skills and training to learn techniques and procedures. It is approved to develop and deliver nationally recognised qualifications throughout England, Wales and Northern Ireland. Notably in its 2020 course prospectus¹⁰, two new courses have been added to directly address training for EV hazards—one is a two-week Road Traffic Collisions Instructor Course¹¹, the other is a master class in EVs. The Road Traffic

Collision Instructor Course is for fire service personnel who are responsible for the delivery of road traffic collision training and development at all levels within the fire service. We recommend all local FRSs ensure that they work with trainers who have been through this qualified programme.

Another recommendation to ensure frontline FRS personnel are skilled throughout the UK, is for the NFCC to work with Skills for Justice: Fire and Rescue and with the Fire Services College to extend the Road Traffic Collisions course into a UK-wide training programme that could be regionally delivered. This type of training intervention could be delivered immediately. Short of this, the IMI offers an L2 Award in Electric / Hybrid Vehicle Hazard Management for Emergency Services and Recovery Personnel, which would be a sufficient solution to ensure regional workforce skilling.

Mobile data units, such as Moditech’s Crash Recovery System¹² which is used by about 75% of FRSs in the UK, while not a panacea, should be considered as a valuable tool for emergency services so that battery isolation information by vehicle can be accessed quickly during an emergency. This type of resource will grow in importance over time as the EV market expands in both number of vehicles on the road and diversity of models.

Figure 3. A screenshot of Moditech’s Crash Recovery System (CRS) displaying a schematic for the BMW i8 hybrid. Such CRSs can be used by emergency services to identify features unique to a vehicle, such as recommended steps to properly discharge the battery.



⁹ Skills for Justice: sectors

¹⁰ The Fire Service College Prospectus 2020

¹¹ Road Traffic Collisions Instructor Course, Fire Service College. “The course would be of benefit to operational Crew and Watch Managers who regularly attend road traffic collisions. Other attendees who may find the course of benefit include; motor sports rescue technicians, paramedics, and pre-hospital doctors.”

¹² Moditech’s Crash Recovery System

Police Services in Visible and Specialist Roles Need Considerable Reskilling

For the roughly 150,000 police personnel in the UK, spread over more than 50 territorial forces, there is an opportunity to address reskilling. We estimate that those officers in public facing roles¹³—approximately 90,000 officers—will need to understand how to identify an EV, how to discharge the battery, and in general to recognise the voltage risks associated with an EV at the scene of an accident in order to protect themselves and others from harm.

The **College of Policing**¹⁴ is the main professional body for everyone who works for the police service in England and Wales. Its purpose is to provide those working in policing with the skills and knowledge necessary to prevent crime, protect the public and secure public trust. Developed and owned by the College of Policing, the **Authorised Professional Practice (APP)** is the official source of professional practice on policing.

The College of Policing has created learning standards, as part of the National Policing Curriculum, that broadly describe what should be delivered by trainers in a police force. This includes an awareness of hazards presented by EVs and batteries. For example, within the "Roads Policing" section, a lesson on "Dealing with Road-Related Incidents and Minor Collisions" provides learning outcomes for the learner to "Describe the main sources of support available during an incident on the road". Within this, the Fire and Rescue Service serves the role of "providing safety advice regarding hybrid/electric vehicles". A separate learning outcome is for the learner to "Explain how to use the National Decision Model (NDM)¹⁵ to assess threat and risk at the scene". Included in the list of potential dangers and hazards are: "Batteries, including lithium" and "Hybrid and electric vehicles (silent whilst still active)."

The College is responsible for the production and maintenance of lessons and their learning outcomes, which are then made available to all forces and officers via a Managed Learning Environment¹⁶. It is then up to force trainers to devise and design their own training, to include all requisite learning outcomes. The College collects no data on the number of frontline police officers who are currently trained on EV hazards; this is left to the individual police forces to maintain.

The **National Police Chiefs' Council**¹⁷ serves a coordinating function across the territorial police forces and would be the ideal body for a united effort on EV safety training and preparation. Specifically, the NPCC "serves the following functions:

- The national operational implementation of standards and policy as set by the College of Policing and Government
- To work with the College of Policing, to **develop joint national approaches** on criminal justice, value for money, service transformation, information management, performance management and technology
- Where appropriate, to work with the College of Policing in order to develop joint national approaches to staff and human resource issues, including misconduct and discipline, **in line with the Chief Officers' responsibilities as employers.**"¹⁸

As territorial police forces are solely responsible for ensuring police personnel are appropriately trained, we recommend a UK-wide effort launched by the College of Policing and coordinated by the NPCC to make EV awareness training a visible priority. The College's online Managed Learning Environment, while helpful to build general EV safety awareness, may not be sufficient to provide police personnel with the requisite hands-on skills, and we recommend in-person training with a qualified course provider and subject matter experts.

Ambulance Service Personnel Need Operational and Clinical Upskilling Relative to Their Role

There are 55,000 ambulance service personnel in the UK. In England, there are ten NHS ambulance trusts, as well as an ambulance service on the Isle of Wight, run directly by the Isle of Wight NHS Trust. The English ambulance trusts are represented by the Association of Ambulance Chief Executives (AACE), with the Scottish, Welsh and Northern Irish providers all associate members.

The majority of ambulance personnel, approximately 44,000, will need special EV and high-voltage training relative to their role; specifically, those who are exposed to vehicle incidents will need to understand how the vehicles operate, and to recognise the voltage risks associated with an EV at the scene of an accident. Ambulance personnel may need refresher training on how to treat electric shock, chemical inhalation and chemical burns, as these types of injury may become more prevalent due to unique hazards EVs present.

Multiple bodies oversee or represent the ambulance service and paramedic professionals.

The **Association of Ambulance Chief Executives (AACE)**¹⁹ provides ambulance services with a central organisation that supports, coordinates and implements nationally agreed policy. It also provides the general public and other stakeholders with a central resource of information about NHS ambulance services.

¹³ Of the number of public facing police, we count a combination of visible and specialist officers, roughly 60% of the total workforce. Based on 2011 figures from [Demanding Times: The front line and police visibility, HMIC 2011](#).

¹⁴ [College of Policing](#)

¹⁵ College of Policing, [National Decision Model](#)

¹⁶ [College of Police Managed Learning Environment](#)

¹⁷ [National Police Chiefs' Council](#)

¹⁸ Emphasis made by the Faraday Institution

¹⁹ [Association of Ambulance Chief Executives \(AACE\)](#)

The **College of Paramedics**²⁰ is the recognised professional body for paramedics and the ambulance profession in the UK. Among many duties, the College represents the interests of paramedics and ambulance clinician membership by developing professional standards guidance, and by responding to consultation documents and requests for advice from government, and other professional and registrant bodies.

The National Ambulance Resilience Unit (NARU)²¹ operates in partnership with NHS Ambulance Services to implement government policies related to national resilience, to enhance pre-hospital clinical response capabilities, and to respond to current and emerging threats and risks. Through central coordination, NARU enables NHS Ambulance Trusts to work together to provide a safe and reliable response to major incidents.

The Joint Royal Colleges Ambulance Liaison Committee (JRCALC) is a leading authority on pre-hospital care, best known for the production of clinical guidelines often referred to as the JRCALC guidelines²². To produce a standard and a curriculum for ambulance personnel, NARU recommends two actions: 1) work with JRCALC educational sub-groups to include risks associated with EVs in a clinical practice guideline and 2) work with NARU to develop contract standards around this as well. In the case of the latter, this builds the standard training requirements into the ambulance service contracts. A recent example of using this process to cover a new risk was the emergence of taser units deployed by police. JRCALC and NARU developed standards to instruct ambulance personnel on how to safely remove taser darts while avoiding electric shock.

Further JRCALC and NARU are best positioned to provide direction on how to work with partner organisations in Scotland, Wales and Northern Ireland in order to achieve national coordination for standards development and training delivery.

Vehicle Mechanics, Especially Independents, Will Need to Invest in Skills and Equipment

More than 182,000 workers²³ in the UK serve as vehicle mechanics, technicians, or electricians across approximately 42,000 service locations. 12% (7,000) of these garages are franchised authorised dealerships, with the remaining 88% (35,000) being independent operators (IAM). According to the Society of Motor Manufacturers and Traders (SMMT), "franchised and authorised repairers focus on more extensive forms of collision repair, particularly complex electrical systems. Independent operators will need to invest in the skills and equipment needed to keep pace with rapidly

developing vehicle technology."²⁴ While authorised repairers will receive EV training by the automotive manufacturer directly, independent operators may become under-skilled should independent training not be readily available or required. Fortunately, training is available through skills council approved course providers²⁵ throughout the UK.

The Institute for the Motor Industry (IMI), a qualifying body and the sector's skills council (SSC) serving 85% of the automotive industry market, have an established set of award qualifications for EVs that includes professional standards of behavior and a professional registry²⁶.

IMI: L1 Award in Electric Vehicle Awareness

IMI: L2 Award in Electric/Hybrid Vehicle Routine Maintenance Activities

IMI: L2 Award in Electric / Hybrid Vehicle Hazard Management for Emergency Services and Recovery Personnel

IMI: L3 Award in Hybrid Electric Vehicle Repair and Replacement

IMI: L4 Award in the Diagnosis, Testing and Repair of Electric/Hybrid Vehicles and Components

Of the approximately 650 IMI-approved centres throughout the UK, 27% are IMI EV Centres and deliver this training.

For ensuring skilled vehicle mechanics, the IMI has introduced the IMI TechSafe programme so that vehicle mechanics become competent to work on the electrical systems in hybrids and EVs. TechSafe is built upon the IMI's EV Professional Standard: "a model of training and registration of technicians based on EV qualifications, IMI accreditation or accredited training, a code of professional behaviours, and a commitment to continual professional development (CPD)."²⁷ In 2019, the IMI TechSafe approach was developed by an EV Sector Advisory Group and supported by the SMMT and the Office for Low Emission Vehicles (OLEV). The TechSafe methodology allows the vehicle technician to obtain a recognised IMI award at the appropriate level, obtain TechSafe professional registration, then maintain a currency of competency whereby they carry out the continuing professional development work themselves or purchase a small learning package from the IMI or other providers, log in the work, and pass an assessment—to be completed every three years. The IMI process for professional registration, which proves "currency of competency", is a best practice for independent mechanics.

(continued on Page 8)

²⁰ [College of Paramedics](#)

²¹ [National Ambulance Resilience Unit \(NARU\)](#)

²² [JRCALC Clinical Guidelines](#)

²³ IMI TechSafe, Position statement, September / October 2019

²⁴ SMMT, [Importance of Automotive Aftermarket, 2017](#)

²⁵ IMI, EdExcel Pearson, and City and Guilds, in particular

²⁶ Other automotive SSC include City and Guilds and EAL; both have awards that focus on EV charge point installation and some aspects of vehicle manufacturing

²⁷ IMI TechSafe, Position Statement, September / October 2019

FARADAY INSIGHTS - ISSUE 4 UPDATE: MAY 2021

Table 1: Volume of reskilling required broken down by sector and job role

Sector	Segment	% by role	Number	Level
FRS				
	Firefighter	80	44,000	Comprehensive
	Fire Control	2.5	1,375	Awareness
	Support Staff	17.5	9,625	n/a
Police				
	Visible	41	61,000	Comprehensive
	Specialist	19	28,500	Comprehensive
	Middle office	24	36,000	n/a
	Back office	15	22,500	n/a
Ambulance				
	Specialist advanced paramedic; paramedic	47	26,000	Comprehensive
	Emergency care assistants	33	18,150	Awareness
	Technician	20	11,000	n/a
Mechanics				
	Independent (35,000 service locations)	88	160,000	Comprehensive L2-4
	Franchise (7,000 service locations)	12	22,000	Comprehensive L2-4
Dealerships				
	Independent	32	175,000	---
	Franchise	68	375,000	---
OR				
	Customer sales	60	330,000	Awareness
	Service and repair (included under Mechanics, franchise above)	20	n/a	See "Mechanics"
	Back office	20	n/a	n/a

FARADAY INSIGHTS - ISSUE 4 UPDATE: MAY 2021

Needs
Intro to hybrid and EVs, basic electrical concepts, EV systems and charging stations, EV identification methods, immobilisation and disabling processes, extrication operations, EV and battery fires, submersions, incidents involving charging stations, high-voltage battery damage
Types of electric/hybrid vehicles available, hazards associated with motor vehicle high energy electrical systems, working safely around electric/hybrid vehicles including charging
Types of electric/hybrid vehicles available, hazards associated with motor vehicle high energy electrical systems, working safely around electric/hybrid vehicles including charging, how to reduce the risk of injury when encountering electric/hybrid vehicles, how to safely transport and store electric/hybrid vehicles
Types of electric/hybrid vehicles available, hazards associated with motor vehicle high energy electrical systems, working safely around electric/hybrid vehicles including charging, how to reduce the risk of injury when encountering electric/hybrid vehicles, how to safely transport and store electric/hybrid vehicles
Operational: types of electric/hybrid vehicles available, hazards associated with motor vehicle high energy electrical systems, working safely around electric/hybrid vehicles including charging Clinical: Refresher training on electric shock, chemical inhalation, chemical burns
Operational: types of electric/hybrid vehicles available, hazards associated with motor vehicle high energy electrical systems, working safely around electric/hybrid vehicles including charging
Level 2: electric/hybrid vehicle system components and operation Hazards surrounding electric/hybrid vehicles; how to reduce the risks to yourself and others when working on electric/hybrid vehicles; safely preparing the vehicle when carrying routine maintenance (NOT high-voltage components or systems) Level 3: work safely around a vehicle's high and low voltage electrical system and electric drive train system, whilst carrying out repairs or maintenance, not related to the high energy electrical system. Level 4: repair high-voltage vehicle systems and components; maintain and repair electric/hybrid high-voltage vehicle systems and components.
Level 2: electric/hybrid vehicle system components and operation Hazards surrounding electric/hybrid vehicles; how to reduce the risks to yourself and others when working on electric/hybrid vehicles; safely preparing the vehicle when carrying routine maintenance (NOT high-voltage components or systems) Level 3: work safely around a vehicle's high and low voltage electrical system and electric drive train system, whilst carrying out repairs or maintenance, not related to the high energy electrical system. Level 4: repair high voltage vehicle systems and components; maintain and repair electric/hybrid high-voltage vehicle systems and components.

Types of electric/hybrid vehicles available, hazards associated with motor vehicle high energy electrical systems, working safely around electric/hybrid vehicles including charging
See "Mechanics"
n/a

Auto Dealers Have New Standards Under the NFDA “Electric Vehicle Approved” Scheme

There are approximately 550,000 employees in the retail motor industry in the UK, with an estimated 175,000 employed in the franchised part of the sector, and 375,000 working independently. We expect up to 80% are in customer facing sales and service roles.

In 2019, the National Franchised Dealers Association (NFDA) launched the EVA (Electric Vehicle Approved) Scheme aimed at improving car dealership competence with respect to EVs. EVA is a set of standards for all areas of automotive retail designed to recognise business excellence in the EV sector. This programme is endorsed by the Government's OLEV and the Energy Saving Trust (EST). The EVA mark is awarded to individual locations that are rigorously and independently audited, requiring “proof that all staff on site have taken a form of EV awareness training relevant to their role in the business. This training may be inhouse, but if so evidence of what was covered needs to be provided.”²⁵

To ensure that EVs are being handed over to consumers responsibly and that customers are not having a poor experience, the dealer must show the auditor that the handover process includes informing consumers of many aspects of EV operation and battery safety, including how the onboard battery management systems are operated, how best to maintain the EV and its battery, who to contact to have a home charger installed, and guidance on servicing and maintenance of the vehicle.

For staff training, an “appropriate proportion of technical staff need to have undergone official EV maintenance and repair training. This training can be completed through a manufacturer or independently approved training courses. Applicable independent qualifications include ‘IMI Level 3 Award in Hybrid and Electric Vehicle Repair and Replacement’, and other certified training, which we have already identified as a best practice qualification.”

The EVA standards are neither a critique of nor an attempt to supplant manufacturer standards, which are genuinely detailed, but rather are intended to work in concert with these standards and offer a broad cross-brand view of what “achievable excellence in retail and aftersales care” might look like. The EVA will provide a roadmap in the independent dealer space where manufacturer standards are not available. While it is early days for the EVA programme, launched in 2019, this clear standard and approach to certification should be commended.

Conclusion

The expected growth of EVs on UK roads provides both an opportunity and a necessity for reskilling workers. While some national professional bodies have taken ownership of the challenge—notably the NFDA and its EVA scheme, the IMI's TechSafe programme for vehicle mechanics, both best practices—emergency services lag behind in training. These models, in particular the IMI approach to establishing an ongoing “currency of competency” and professional registry could well be adapted for use by emergency services.

We recommend a national campaign led by appropriate government departments, coordinated through professional bodies and skills councils, and directed to the emergency service personnel to ensure that resources are appropriately directed toward this skills effort. Learning interventions, too, should be identified in order to scale reskilling efforts quickly—such as scaling the Fire Service College's Road Traffic Collision Instructor Course to ensure it measurably reaches all frontline FRS personnel. Relevant technology, such as crash recovery systems in mobile tech units, which are already available to most FRS, should be made available to other emergency services such as police and ambulance personnel so they are provided with up-to-date vehicle data.

About the Faraday Institution and Faraday Insights

The Faraday Institution is the UK's independent institute for electrochemical energy storage research, skills development, market analysis, and early-stage commercialisation. We bring together academics and industry partners in a way that is fundamentally changing how basic research is carried out at scale to address industry-defined goals.

Our ‘Faraday Insights’ provide an evidence-based assessment of the market, economics, technology and capabilities for energy storage technologies and the transition to a fully electric UK. The insights are concise briefings that aim to help bridge knowledge gaps across industry, academia and government. If you would like to discuss any issues raised in this ‘Faraday Insight’, or our wider battery research programme, please contact Stephen Gifford.

Sign up today to be added to the distribution list for future Faraday Insights www.faraday.ac.uk/subscribe

²⁵ EVA Dealer Guide, NFDA

