



CHARGING UP THE ROADS

The industry appears ready and willing to invest in electric trucks, but the lack of charging infrastructure is slowing down progress. **Chris Tindall** reports

When the Conservative peer Lord Howell stood up to discuss the charging infrastructure of electric HGVs during a recent debate in the House of Lords, it is likely he knew his striking use of language would capture people's attention.

The former journalist, politician and economic consultant did not mince his words: "Would not a fleet of HGVs all topping up with electricity add a colossal load to our electricity supply and transmission system, even to the point, some say, that the existing cables could melt, causing local outages?"

As things stand, the Lord's concerns are far from being fully allayed.

Automotive group the SMMT has for some time now complained that the zero-emission HGV market is shack-

led by both the absence of EV infrastructure, as well as a long-term plan to encourage fleet operators to kick start their transition to an all-electric future.

Global competitor

It says truck manufacturers are playing their part; they are now able to offer 20 zero emission vehicle (ZEV) models, but the latest figures show the electric and hydrogen HGVs represent just 0.3% of the market.

"Given the absence of a single HGV-dedicated public charging or hydrogen refuelling station in the UK, and with the sale of new non-ZEV trucks under 26 tonnes due to end in 2035, further measures are needed for operators across the UK to make the switch," the SMMT says in a statement.

Mike Hawes, chief executive at the

SMMT, adds: "For truck fleet renewal to drive UK economic growth and decarbonisation in the long term, the zero emission HGV market must gather speed – but operators still need greater certainty that Britain is serious about becoming a globally competitive location for zero emission logistics.

"With an abundance of new electric and hydrogen truck models now ready to join UK roads, a plan is urgently needed to deliver HGV-dedicated public infrastructure, along with incentives for Net Zero vehicle and depot investments that contend with the world's major decarbonising nations."

Lord Howell's concerns raised in the House of Lords were tacitly acknowledged by the transport minister Baroness Vere, who pointed out he had made "an important point"

Pictured top: The bp pulse charging network currently has over 8,750 charging points across the UK



She added that the government recognised that the charging and refuelling sites required to support zero-emission HGV uptake needed to increase before 2040, but it seems solutions should not be expected to materialise within the next few months:

“Last year’s future of freight plan committed to convening industry stakeholders to develop a plan for rollout, which is happening through our freight energy forum,” Vere said.

“Extensive stakeholder engagement will begin later this year.

“We need to discuss with industry stakeholders exactly how they feel the strategy for the rollout of zero-emission vehicles will go, particularly at the heavy end.

“That is why we will publish the zero-emission HGV infrastructure strategy later this year, once we have been able to discuss it with those stakeholders.”

Commercial pilots

Digital freight management firm Zeus sees a lot of value in the government’s £200m freight demonstrator

“**Understanding what investments will be needed will require more real-world experience**”

Dr Christopher de Saxe,
Zeus head of sustainability

programme, which should provide the evidence needed to enable long-term, strategic infrastructure decisions to be made.

Dr Christopher de Saxe, Zeus’ head of sustainability, says: “Charging infrastructure for electric HGVs must include planned combinations of overnight depot charging, high-speed opportunity charging at warehouses and retail sites, and high-speed charging at service stations; in that order of preference, depending on the duty cycles.

“Understanding what investments will be needed will require more real-world experience.

“This is where more commercial pilots are needed, not just technology pilots. As Zeus has seen in piloting new decarbonised freight transport in Europe, real-world pilots provide essential implementation guidelines.

“Given these cost and infrastructure barriers, we need to see fast-moving science-based government policy decisions supported by real-world evidence,” he says.

“The government-funded zero emission road freight demonstrators kick off this year which will provide much-needed insights into the actual in-service costs and challenges.”

IoT data

Internet of Things (IoT) data firm Sam-sara believes there is a growing desire among fleet companies to transition to electric lorries and, perhaps unsurprisingly, it sees IoT as a solution to how operators can manage the large-scale charging of their assets.

“As charge anxiety is a common issue experienced by EV drivers, fleet managers can help ease this problem by increasing their visibility of operations →



Left: Urban operations provide an easier win for BEV vehicles

with IoT data,” explains Philip van der Wilt, Samsara VP and GM.

“This data can allow them to monitor charge levels across the entire fleet and plan routes based on individual vehicle ranges. In turn, they can also factor in numerous variables such as load weight, weather, and the location of charging stations, empowering managers to make intelligent decisions on behalf of their drivers.”

Depot charging

Transport & Environment (T&E), the Brussels-based NGO, is also optimistic about the rollout of battery electric HGVs. A study it commissioned last month found far fewer trucks will require charge points away from their depots than has previously been suggested.

It says the UK Government’s 2035 and 2040 phase out dates for diesel HGVs can be achieved ahead of time, but the government needs to set out a detailed plan to enable the transition to zero-emission trucks.

T&E says trucks usually take shorter journeys in the UK than other European countries and it claims well over half will only ever need to be charged at their home depot.

It says 93% of the 400,000-odd truck charges needed by 2050 will be from depots.

“The UK’s island geography and density mean lorries do relatively short

“**The government mustn’t miss the opportunity now to kick start the take-up of electric trucks**”

Richard Hebditch,
director of T&E UK

journeys and the lion’s share of truck charging will happen in depots,” says Richard Hebditch, director of T&E UK.

“Yes, we’ll need some public charging but we can make lots of progress now without the need for serried ranks of chargers at every motorway service station.

“The government mustn’t miss the opportunity now to kick start the take-up of electric trucks.”

Data-driven approach

But it’s not only the government that is trying to ensure the road network doesn’t become littered with broken down HGVs carrying flat batteries.

Truck manufacturers are also attempting to mitigate potential problems by building charging networks too.

CV builders Volvo Group, Daimler Truck and the Traton Group have signed a binding agreement to create a

joint venture (JV), known as Milence, to install and operate a public charging network across Europe.

The plan involves installing at least 1,700 charging points on and close to highways, as well as at logistic and destination points within five years of the establishment of the JV, although *Roadway* was told by a source close to the project that, “this will obviously help, but not really scratch the surface of what’s needed.”

However, a spokesman for Milence says it aims to open its first charging sites in the UK in 2024 and it will shortly begin sharing these locations on its website: “We are focussed on publicly available charging for regional and long haul battery-electric trucks, of which there are very few at this moment,” he says.

“Our goal is to always build our charging locations ahead of demand. We will take a data-driven approach to this, adapting to the growth in the market. We also build modularly: this means that we will start with small sites which are expanded as the number of electric trucks increases.

“We also hope that others will enter the market soon to accelerate the growth of the market overall, in turn hopefully contributing to a more rapid growth of battery electric truck fleets.”

Louis Jones, transformation lead for electric charging at Scania UK, says: “We are supporting operators with electric solutions today for their fleet, including installing charging infrastructure, as their trusted partner.

“Although HGV public charging is at the start of its journey in the UK, the majority of HGV charging will take place at an operator’s depot, even as battery capacity and range increases.

“Due to the importance of depot charging solutions, we support operators with depot charging infrastructure to enable electric vehicles today.”

Jones adds: “We are also installing charging infrastructure at our Scania workshops across the UK to support our customers with the transition, ensuring the Scania’s can be serviced, maintained and charged across the UK.”

Renault Trucks says that as electric vehicles cannot offer the same adaptability that diesel models can, fleet planners need to consider the energy

Below: eActros 300 Tractor in the Netherlands. The first of five handed over to the food logistics company Simon Loos in June





Knowles Transport has invested in a 19-tonne Volvo FE Electric and a 150kWh supercharger, which charges the truck in two hours

consumption of their vehicles and ensure it can complete the task, or else be recharged en route in order to do so.

A Renault Trucks spokesman says: “Renault Trucks has worked with operators to help their route planning, and believes that with this approach 90% of urban operations should be within the scope of a battery electric vehicle by the end of 2023.

“Renault Trucks expects 80% of charging to take place at operators’ own sites, or at their customers’ locations.

“This will allow the operator to retain control of their vehicles and operations, with vehicles able to be charged as required between shifts, or even while being loaded or during a driver’s rest break.”

The spokesman adds: “Most electric vehicles are currently operating on an overnight charging model, but some operators are introducing opportunity charging to increase the flexibility of their EV fleets.”

Renault has also gone further to help allay customer fears; it has boosted its electric mobility team to support customers and employed two ‘energy transition managers’ to advise on alternative energies and charging infrastructure.

It has also appointed an infrastructure specialist to work locally and ensure the kit works and liaise with charging providers to make sure the hardware is compatible.

Renault Trucks recommends that operators consider the infrastructure and energy provision alongside their vehicle specification and it says it will

provide charging training with the infrastructure provider as part of the HGV handover.

Andrew Scott, head of electric mobility at Renault Trucks, adds: “Charging infrastructure is seen as the Achilles’ heel of the electromobility transition, but there are many experts who can provide both short-term and longer-term solutions.

“Renault Trucks is happy to both advise on these and make introductions to providers. A number of our early vehicles are operating successfully with charging providers we were happy to recommend.”

Investment in sustainability

Knowles Transport in Cambridgeshire says it’s, “putting our money where our mouth is” and recently purchased its first electric truck for local collections and delivery schedules.

It has invested in a 19-tonne Volvo FE Electric following a trial, which garnered an enthusiastic response from drivers and also alleviated worries about range.

The haulier says it also purchased a 150kWh supercharger, which can charge the truck up within two hours.

Alex Knowles, MD at Knowles Transport, says: “There are plenty out there marketing sustainability credentials without backing it up with investment, Knowles is not one of them.

“We are really excited about this step into the future we are making with our new Volvo FE Electric.

“This new electric truck will be the first of many for Knowles as we push forward on our road to Net Zero.”

Knowles adds that the Volvo FE Electric provides his company with a perfect urban platform: “The 200km range of the vehicle makes it limited in its long-range capabilities however it proves ideal for collection and delivery within the region where it will be applied,” he says.

“Our investment in a 150kWh charging unit on the site at which this vehicle is based allows us to charge the vehicle in two hours, making this operable over two shifts if required.”

Government assurance

The haulage industry will be watching keenly at the rollout of charging infrastructure as it tentatively dips a toe in the fledgling EV market – and hoping that the government’s assurances that it can get the equipment in place and running ahead of time is not misplaced: “The government is confident that the grid can cope with the increased demand,” said Baroness Vere during the House of Lords debate, “and the next step is to ensure that depots can connect to it.” ■

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