

The Green Pages

NEW FUELS GUIDE

Massive investment in battery cells

Tata Sons to build a battery cell gigafactory in Somerset, capable of producing 40GW of cells annually.

This investment, of over £4 billion, will deliver electric mobility and renewable energy storage solutions for customers in UK and Europe. JLR and Tata Motors will be serving customers, with supplies commencing from 2026.

This investment is an integral part of the Tata group's commitment to electric mobility and renewable energy storage solutions, and establishes a competitive green tech ecosystem in the UK at scale.

N Chandrasekaran, Chairman, Tata Sons, said:

"The Tata group is deeply committed to a sustainable future across all of our business. I am delighted to announce the Tata group will be setting up one of Europe's largest battery cell manufacturing facilities in the UK. Our multi-billion pound investment will bring state-of-the-art technology to the country, helping to power the automotive sector's transition to electric mobility, anchored by our own business, Jaguar Land Rover.

Commenting about the announcement of the UK gigafactory, UK Prime Minister, Rishi Sunak said:

"Tata group's decision to build their new gigafactory here in the UK, their first outside of India, is a huge vote of confidence in Britain. This will be one of the largest ever investments in the UK automotive sector. It will not only create thousands of skilled jobs for Britons around the country, but it will also



strengthen our lead in the global transition to electric vehicles, helping to grow our economy in clean industries of the future."

The battery gigafactory will produce high-quality, high-performance, sustainable battery cells and packs for a variety of applications within the mobility and energy sectors. The company's strategic growth plans for its flexible manufacturing capacity will begin with a rapid ramp-up phase and the start of production in 2026. The gigafactory intends to maximise its renewable energy mix, with an ambition for 100% clean power. The plant will employ innovative technologies and resource efficient processes like battery recycling.

The UK Government is also providing subsidies, reported to be worth hundreds of millions of pounds, in the plant which is being described as the most important investment in the UK automotive sector since Nissan arrived in the 1980s.

The Society of Motor Manufacturers and Traders said that the investment had come at a critical time for the UK.

Its Chief Executive, **Mike Hawes**, said:

"This is a shot in the arm for the UK automotive industry, our economy and British manufacturing jobs,

demonstrating the country is open for business and electric vehicle production.

"It comes at a critical moment, with the global industry transitioning at pace to electrification, producing batteries in the UK is essential if we are to anchor wider vehicle production here for the long term. We must now build on this announcement by promoting the UK's strengths overseas, ensuring we stay competitive amid fierce global pressures and do more to scale up our EV supply chain."

Ian Constance, Chief Executive of the Advanced Propulsion Centre said:

"This announcement is a major step in putting the UK at the forefront of the global energy transition, unlocking huge private sector investment that will develop the technology and skills required for Britain to play its part in the next industrial revolution."

Suzanna Hinson, battery workstreams lead at the Green Finance Institute (quoted by Fleet News) said that while the investment is an important foundation for building a thriving battery industry in the UK, *"further finance must be crowded in to enable the many innovative businesses that will support this ecosystem to scale"*.



Charging infrastructure must keep up

A new report from the EV arm of the Renewable Energy Association (REA) - RECHARGE UK, has published a report which sets out key recommendations to ensure that chargepoint deployment keeps up with the growth in UK EV sales. The report reaffirms several of the findings of the final progress report of the EV Energy Taskforce which was recently published.

The report is entitled 'Charging forward to 2030':

'Critical success factors for the deployment and operation of UK-wide inclusive EV charging infrastructure.'

It sets out insights, into which parts of the UK are likely to experience high levels of public charging demand and associated energy demand.

It sets out how to accelerate the roll-out of EV charging, by breaking down the policy and regulatory barriers to chargepoint deployment. Thus meeting the energy demand on the grid by 2030 from public charging.

JOINED-UP THINKING NEEDED

The report calls for more joined-up thinking between stakeholders involved in accelerating the transition to clean energy and transport. It highlights a need to further promote green skills, to fill the skills gaps that will emerge by 2030.

RECHARGE UK (previously known as the REA EV Forum) published the report with the support of ChargeSafe, Field Dynamics, GreenFlux, Syzygy, Trojan Energy and Zap Map.

RECHARGE UK is chaired by Mark Constable, Head of Public Affairs at Zemo member company, Trojan Energy.



Mark Constable said:

"Most of the net zero transition over the next decade won't be delivered by people who are currently working in the clean transport and energy sectors. Instead, it will be largely delivered by people who are currently in other jobs or are still in education – people who are just setting out on their career path."

"So there needs to be a holistic approach to the influx of skills needed across all age ranges and across all backgrounds, to help them get into the industry and ultimately help get the UK over the finishing line."

The RECHARGE UK report reaffirms many of the proposals put forward in the Zemo-convened **EV Energy Taskforce Progress Report** which has recently been published.

The EV Energy Taskforce report says that we're still in the earlier stages of this historic transition, and there are many challenges to come. It shows that progress has been made against the targets and objectives outlined by the Taskforce two years ago. But there is a long road ahead and no room for complacency that this job is anywhere near complete. It identifies what actions need to be taken – many of them to an accelerated timescale – to deliver the future road transport system we need.



More fleets introduce vehicles running on HVO

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Royal Mail is replacing some of its diesel HGV fleet in favour of HVO to initially operate out of its Sheffield mail centre, Midlands 'super hub' and Manchester vehicle operating centre.

Royal Mail says that using HVO at these sites will save a combined consumption of 2.1 million litres of diesel this year.



DECARBONISATION PROGRESS

Rob Fowler, fleet director at Royal Mail, explained:

"We've made great progress in decarbonising our operation, by introducing 5,000 electric vehicles into our final mile fleet, but we also need to focus on our HGVs. At present, the electric and hydrogen alternatives are still in development for HGVs. Vehicle ranges are low, purchase prices are high, and infrastructure is in its infancy. That's why we have introduced the use of HVO to decarbonise the HGV fleet within our operation via the most viable low-carbon option."

The transition to HVO is part of Royal Mail's Steps to Zero plan – a drive to reduce the business' carbon emissions to net zero by 2040.



Royal Mail says it plans to continue to increase its HVO deployment across its local and national distribution fleet network over the coming years, aiming to reduce its direct emissions by up to 200,000 tonnes of CO2e.

PepsiCo is also introducing HVO fuel to its distribution fleet in a move it says will save 2,650 tonnes in greenhouse gas (GHG) emissions annually.

The vehicles will be used to transport 240,000 tonnes of potatoes each year from PepsiCo's British farmers to its Leicester site. PepsiCo says it is continuing to increase the use of sustainable HVO fuel across the business, with plans to expand its use to the company's transport operations in Scotland later this year.



HVO FOR FALKIRK COUNCIL

Meanwhile, Falkirk Council has introduced HVO as the fuel source for all 24 of its bin lorries. Earlier this year, the Council embarked on a three-year, £5-million initiative to create a more sustainable fleet. As part of its efforts, the local authority has introduced 43 electric vehicles so far this year, bringing the total number of electric-powered cars and vans it operates to 129.

However, due to the current limited mileage range and high cost of electric-powered heavy goods vehicles like bin lorries, the council decided HVO was a positive step towards reducing carbon emissions, while awaiting advancements in technology.

The council says that crews and drivers have been extremely positive about the move. They say the switch has had no impact on the driving experience and there have been no reported breakdowns or mechanical issues associated with HVO.

Huge demand for Biomethane

Gasrec sales of biomethane soar

Gasrec is reporting the highest demand for biomethane in the company's history, with volumes reaching an all-time high in June 2023. This is set to continue rising, thanks to pending orders from fleets for new gas-powered trucks.

June's gas sales represented a 250 per cent increase versus March 2020, when demand had been soaring prior to the pandemic.

James Westcott, Chief Operating Officer at Gasrec, says:

"Fleets are under pressure from customers to decarbonise, and bio-LNG (liquefied natural gas) is the most viable, readily-available solution; plus it's suitable for longer-haul missions, with quick refuelling times."

"This year we've already opened three new refuelling facilities in Lutterworth, Fradley Park and South Elmsall, increasing our network to 16 sites, and with three more due to be installed before the end of the year."

Commenting on the road transport industry's appetite for biomethane, he adds:

"Our fuels are once again significantly cheaper than diesel, meaning customers can save money whilst improving sustainability. For fleets looking at gas trucks today, our number one message is to talk to your fuel provider as soon as possible, to ensure they can have the refuelling infrastructure in place where needed and understand gas pricing. The demand right now is exceptional."



OPERATORS OF ALL SIZES

Operators of all sizes are turning to biomethane, from some of the country's largest logistics and own-account operators, to family-owned haulage businesses and SMEs.

The supply of biomethane is an important part of the energy transition for the HGV sector, providing a commercially viable option for fleets to reduce their carbon footprint by up to 85 per cent in comparison to diesel.

ABOUT GASREC

Gasrec is a major fuel provider for gas-powered commercial vehicles on UK roads. It supplies, builds and operates Bio-LNG and Bio-CNG refuelling stations, enabling fleets to take advantage of a fuel which is significantly cheaper and better for the environment than diesel.

www.gasrec.co.uk

A guide to renewables

Zemo's new Renewable Fuels Guide shows operators the way to cut carbon emissions from HDVs – today

While the drive to electrify road transport may take most of the headlines, there are other clear options for operators of large, harder (and more expensive to electrify) heavy duty vehicles to cut their greenhouse gas (GHG) emissions.

While new, non-zero emission HGVs will be barred from sale from 2040 (and 2035 for sub-26 tonne HGVs) the full market transition of all heavy duty vehicles (HGVs as well as buses & coaches) will take a lot longer than 15 years.

Today, low carbon renewable fuels are contributing a third of all carbon savings from road transport. Over the next, critical, decade, using lower carbon fuels in the heavy duty vehicle fleet is the biggest opportunity to make a step change reduction in GHG emissions.

Zemo Partnership research shows that GHG emissions from the UK's HGVs could be cut by an extra 46 million tonnes over the next seven years (equivalent to 4% of all road transport GHG emissions) if an average of 30% renewable fuel (such as high blend biodiesel, renewable diesel or biomethane) were adopted across the existing HGV fleet.

Considerable emissions savings can be achieved up to 2040, if the residual diesel HGV fleet were to introduce renewable fuels on a wide scale.

MANDATORY DISCLOSURE

With disclosure of GHG emissions becoming a mandatory requirement for businesses in the UK and internationally, and many organisations incorporating sustainability performance standards into their tendering processes, adopting renewable fuels can provide a highly practical solution. This is particularly for operators of vehicles with long duty

cycles and those with heavy payloads, which are difficult (and, currently, very costly) to electrify.

Report author and Zemo's fuels lead and Head of Sustainability, Gloria Esposito, said:

"We're delighted to publish this new Guide to help heavy duty vehicle operators who are facing many other challenges, find a way through the maze of guidance and regulations around cutting carbon emissions."

"The Guide has been compiled with the support of Zemo members: manufacturers, fuel suppliers and fleet operators, who have shared their invaluable knowledge and experience."

SCANIA TRUCKS

Tanya Neech, Head of Sustainability for Scania UK said:

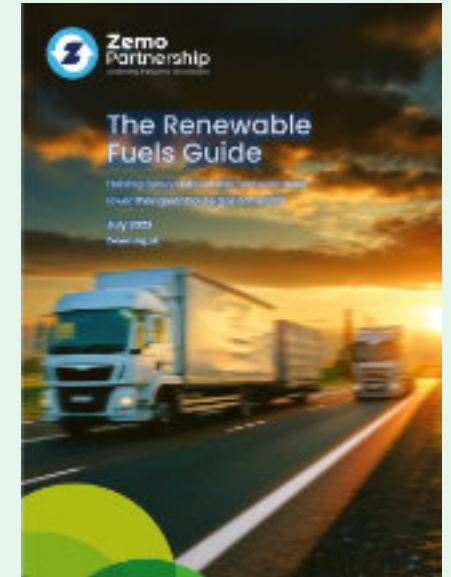
"There's no 'silver bullet' solution to reducing the GHG emissions from our sector, which is why we must explore and investigate all technologies. Efforts will need focus on three pillars: energy efficiency, renewable fuels and electrification. All three are important, and only by combining them, can we provide sustainable solutions, and be able to reduce GHG emissions on par with the Paris Accord."

"Electrification on its own won't be enough to reach the GHG reduction targets. To keep the necessary pace of halving the real well-to-wheel carbon footprint from heavy duty transport every decade, sustainable biofuels will be vital."

Niki Holt, Head of Commercial for Certas Energy said:

"As a member of Zemo Partnership, we're committed to working with partners across the energy industry to support businesses."

"Renewable fuels, such as HVO, have the potential to play a significant role in plugging the gap to net zero. This guide provides businesses with persuasive evidence and practical guidance to take their next step with their energy transition strategy. By switching our own fleet to HVO, we've successfully exceeded our own 2025 carbon reduction target three years ahead of schedule and we look forward to supporting more HGV operators in doing the same."



James Westcott, Chief Commercial Officer, Gasrec said:

"Decarbonisation is the biggest challenge fleet operators will be facing over the next decade. Having information like this will help the industry make the right decisions and accelerate the transition to low emission fuels."

WATSON FUELS

Claire Bishop, Vice President, UK Land, Watson Fuels said:

"As proud members of Zemo Partnership, we fully support the goal of helping HGV operators better understand ways to reduce carbon emissions. We're committed to supporting our customers in planning their respective energy transitions, and the Renewable Fuels Guide is an important resource to aid this mission."

Daniel Mitchell, Chief Executive Officer, advantage Global said:

"We're proud to sponsor this guide and help highlight how heavy duty truck fleets can reduce their carbon footprint – including retrofitting advantage which delivers an instant 23% reduction."

Zemo's new Renewable Fuels Guide is intended to help HGV operators on their journey to net zero, and to explain the low carbon fuel options available today. Fuels covered include biodiesel, renewable diesel, biomethane and bio-propane.


Each section provides an overview of the UK's renewable fuels market, the current deployment of renewable fuels in the HGV fleet (with case studies), plus the fuels' GHG emission performance and primary sustainable feedstocks. It also includes operational information, including public and depot-based refuelling infrastructure, as well as financial information.

The Guide also lists heavy duty manufacturers engine models that are approved to run on high blend biodiesel (e.g. B20, B30) and renewable diesel (e.g. HVO).


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ULEMCo to lead £8 million Hydrogen fuel cell project

In a strong boost for zero emission vehicles, ULEMCo and its partners have been awarded £3.9 million by government, matched by industry to a total £7.9 million, for a major project with Oxfordshire County Council (OCC) to develop solutions for hydrogen powered vehicles.

The 'HYER Power' project will develop a hydrogen fuel cell range extender module, that will integrate into electric vehicles used for specialist applications such as ambulances, fire engines and street sweepers.

The funding has been awarded through the Advanced Propulsion Centre Collaborative Research and Development programme, in support of ambitions to build an end-to-end supply chain for zero-emission vehicles in the UK.

OCC will provide the customer input, trialling and dissemination, and the work will lead to a manufacturing-ready, zero-emission hydrogen fuel cell-based range extension system for electric drivetrains. Other partners in the project with ULEMCo include: Technical Services (UK) Ltd for cooling capability, Altair Ltd for vehicle energy system modelling, along with Emergency One for the fire engine solutions.

WIDE RANGE OF SETTINGS

The zero-emission range extender used for HYER Power will apply existing, proven fuel cell technology from the Toyota Mirai, and will demonstrate how zero emission vehicles can be used in a wide range of specialised and challenging settings. Key outcomes of the project will include a production-ready zero-emission ambulance, as a result from the work already completed by ULEMCo under the ZERRO project, alongside a fully working prototype fire pumping appliance and an HGV road sweeper.



Amanda Lyne, Managing Director, ULEMCo Ltd.

"We are delighted to see this recognition and commitment to developing hydrogen mobility as part of the solution to net zero. Hydrogen is essential for viable zero-emission solutions in applications such as emergency response vehicles, due to the rapid refuelling that enables the vehicle to be 'fit-to-go', and to provide the full flexibility and range required for the job.

"The packaging constraints and the overall energy demand needed for these vehicle drivetrains as well as the onboard equipment, mean that hydrogen solutions are the most cost-productive route to transition to zero-emission fleets. Our strong relationship with OCC will enable us to make rapid progress moving to production-ready hydrogen fuel cell designs."

Councillor Pete Sudbury, Oxfordshire County Council:

"Hydrogen could play an important role in our efforts to decarbonise, especially where battery powered electrification is challenging in heavy duty vehicles, like fire engines. I'm delighted that we are partnering with ULEMCo on this important step in exploring and advancing zero carbon solutions."

Rob MacDougall, Chief Fire Officer for Oxfordshire County Council's Fire and Rescue Service

"We are absolutely committed to act towards our net zero target, and building on the work we have already done, to move part of our fleet away from internal combustion engines.

Heavy fire engines pose a particular challenge and we feel that hydrogen powered fuel cells can play a promising role in delivering on the county's climate action ambitions."

PLA's 'Thames Green Scheme'

Svitzer achieves gold status

Global towage operator, Svitzer, has achieved gold status in the Port of London Authority (PLA)'s 'Thames Green Scheme', in recognition of its environmental commitments and decarbonisation strategy.

Svitzer introduced carbon neutral biofuel across its Thames-based fleet in 2022, offering customers a new, cleaner towage service called Ecotow. The Ecotow product exclusively uses sustainable second-generation biofuels, produced using waste material such as used cooking oil as feedstocks, and are certified by ISSC or RSB.

Relative to marine diesel, these biofuels reduce carbon emissions by 100% on a tank-to-wake basis and about 90% on a well-to-wake basis. Use of the fuel was successfully trialled on the Thames, home to the UK's largest port, in 2021.

ENCOURAGING NEW ADOPTERS

Thames Green Scheme, launched in 2020, recognises early adopters of new technologies and fuels to create a cleaner and healthier environment for people and wildlife. Svitzer progressed from silver status in the scheme to gold, following the adoption of marine biofuel and use of shore power for six vessels based at the PLA's operations site Denton in Gravesend.

Alistair Gale, PLA's director of corporate affairs and strategy, said:

"It is great to see a global organisation like Svitzer leading the way in adopting new technologies, improving air quality and reducing carbon emissions."



This is good news for the tidal Thames, home to the UK's leading port, where we are driving together towards a Net Zero future."

Thames Vision 2050, launched last year, sets out the goal for the Port of London to remain the UK's leading port, central to the nation's economy, with Net Zero emissions. The PLA is targeting Net Zero in its own operations by 2040, or earlier.

FIRST HARBOUR TUG

Also committed to becoming fully carbon neutral by 2040, Svitzer has been making impressive progress in the last two years, announcing the design of the world's first fuel cell tug for harbour operations, running on green methanol. This is in cooperation with Maersk, and the build of the next generation multipurpose tug, TRAnverse Tug,

which will be lighter in design, consume less fuel and be ground-breaking in its use of future carbon neutral fuels.

Cliff Chow, port manager for Svitzer in London, said:

"It is a great honour for Svitzer to be awarded the Thames Green Scheme Gold accreditation. Environmental responsibility is deeply integrated in our strategy, and we invest significantly in finding the right paths to meeting our ambitious decarbonisation targets. This gold status is a nice testament to the strides we are making."

The PLA's Thames Green scheme is a voluntary, free-of-charge scheme for all inland commercial and services vessel operators to join and demonstrate their environmental performance.

Svitzer Designing World's First Methanol Hybrid Fuel Cell Tug

