

# The Green Pages

## NEW FUELS GUIDE



SPRING 2023 • ISSUE 13

## Car registrations this year to date

FEBRUARY					
	2023	2022	% change	Mc share -23	Mc share -22
Diesel	3,348	3,922	-14.6%	4.5%	6.6%
Petrol	32,311	23,952	34.9%	43.4%	40.9%
MHEV diesel	2,049	1,882	8.9%	2.8%	3.2%
MHEV petrol	10,057	7,261	38.5%	13.5%	12.3%
BEV	12,310	10,417	18.2%	16.3%	17.2%
PHEV	4,723	4,677	1.0%	6.3%	7.9%
HEV	9,533	5,883	62.0%	12.9%	11.7%
<b>TOTAL</b>	<b>74,441</b>	<b>58,994</b>	<b>26.2%</b>		

YEAR TO DATE					
	YTD 2023	YTD 2022	% change	Mc share -23	Mc share -22
Diesel	8,528	9,930	-13.1%	4.2%	5.7%
Petrol	91,291	75,420	21.0%	44.2%	43.3%
MHEV diesel	7,168	7,614	-5.9%	3.5%	4.4%
MHEV petrol	27,310	22,168	23.2%	13.2%	12.7%
BEV	29,507	28,950	19.7%	14.3%	14.3%
PHEV	13,832	13,724	0.8%	6.7%	7.9%
HEV	28,509	20,375	40.4%	13.9%	11.7%
<b>TOTAL</b>	<b>205,435</b>	<b>174,081</b>	<b>18.6%</b>		

BEV - Battery Electric Vehicle, PHEV - Plug-in Hybrid Electric Vehicle, HEV - Hybrid Electric Vehicle, MHEV - Mid-Hybrid Electric Vehicle

All data as at 7th March 2023

BEST SELLERS					
FEBRUARY 2023			YEAR-TO-DATE		
1	Vauxhall Corsa	2,818	1	Vauxhall Corsa	5,243
2	Vauxhall Mokka	1,805	2	Volkswagen T-Roc	4,516
3	Ford Puma	1,590	3	Nissan Qashqai	4,318
4	Nissan Juke	1,551	4	MG HS	4,042
5	Hyundai Tucson	1,528	5	Ford Puma	3,996
6	Tesla Model Y	1,482	6	Hyundai Tucson	3,787
7	Volkswagen T-Roc	1,368	7	Kia Niro	3,723
8	Ford Fiesta	1,303	8	Kia Sportage	3,671
9	Kia Sportage	1,262	9	Vauxhall Mokka	3,479
10	Toyota C-HR	1,244	10	Ford Fiesta	3,345



## ICE vehicle ban from 2035 stumbles in Germany

Formal approval was scheduled for The EU's agreement to end the sale of new ICE cars and SUVs by 2035, for March 7. However, the signing was postponed because of unrest in Germany.

Apparently, the problem has come about because the conservative Free Democratic Party (FDP) wants synthetic fuels or e-fuels to be allowed after 2035. Some car makers say this can be an alternative to electric cars because they are CO2 emission-free.

German unions also sceptical and want the ICE ban mitigated. They say thousands of jobs in will be at risk if the ban goes ahead. Italy and Poland are also opposed.

It's not clear whether this is a short-lived issue or a potentially more serious hurdle to the arrangement.

# State of the art, green hydrogen production

## From Wrightbus in Northern Ireland

Plans have been unveiled for an innovative, multi-million pound green hydrogen production facility in Ballymena; at the headquarters of renowned sustainable bus manufacturer Wrightbus.



Subject to planning approval, the new facility, which is being delivered by Wrightbus in partnership with Hygen Energy, will initially produce enough clean energy to power 300 hydrogen powered buses a day in Northern Ireland.

Green hydrogen is a completely renewable fuel, meaning it does not create any carbon emissions. It is made by using renewable electricity to separate water into oxygen and hydrogen – a process called electrolysis. The hydrogen is then used onsite or transported to where it is needed.

Since being acquired by Jo Bamford in 2019, Wrightbus has been one of the most successful proponents of the clean hydrogen revolution. This has included the company introducing the world's first hydrogen powered fleet of double-decker buses in 2020, which by November 2022 achieved the incredible milestone of travelling 1.75 million miles since first entering service.

### ENSURING PRODUCTION

With huge emphasis being placed by the UK government, and governments across the world, on the role of green hydrogen in the drive for net zero, a central focus for industry is ensuring there is enough hydrogen being produced to fulfil those ambitions.

Jo Bamford, Chairman of Wrightbus, says: "Wrightbus is delighted to be working with Hygen on this hydrogen production project at our factory in Ballymena. One of our key objectives when we purchased Wrightbus in 2019 was to bring the first UK manufactured hydrogen double decker bus to market. We have done this, with our Hydroliner buses now moving passengers every day in a number of cities across the UK, including here in Belfast.

"Hydrogen is the best means of decarbonising many bus routes, but for this to happen bus operators need a reliable and voluminous supply of low cost low carbon hydrogen. It is great to see a project that is being sized to enable future demand for hydrogen here in Northern Ireland to be met.

"This project will initially be able to produce enough hydrogen to run up to 300 buses, and has the potential to triple in scale as

demand for hydrogen increases. We hope it will set an example for how these projects will be designed and built."

A community consultation process for the project is now underway, led by Renewable Connections, development partner of Hygen. This is aimed at encouraging people in the vicinity of the site to provide their feedback on the proposed project before any planning application is submitted.

It is intended that a planning application will be submitted to Mid and East Antrim Borough Council in April 2023. It is hoped a planning decision will be issued in winter 2023, meaning the facility will become operational in summer 2024.

Further information about the project is also available online at: <https://www.hygenenergy.com/project/hygen-ballymena-green-hydrogen-facility/>



# The first EV charging corridor in Europe

The first charging corridor for medium and heavy-duty electric trucks (E-Trucks) in Europe has been announced by bp pulse.

Six public charging locations, with ultra-fast 300kw charge points aimed at E-Trucks, have been launched along a 600km stretch of the Rhine-Alpine corridor across Germany. The corridor is one of the busiest road freight routes in Europe, connecting key North Sea ports in Belgium and the Netherlands with the Mediterranean port of Genoa in Italy.

The new chargers have been installed on Aral retail sites, bp's German retail brand. In the next six months, two additional locations are scheduled to open to complete the corridor. Once complete, an E-Truck will be able to cover over 600km across Germany along one of Europe's major road transport routes.

### 20 E-TRUCKS PER CHARGER PER DAY

The 300kw charging stations are each capable of charging more than 20 E-Trucks, per charger each day. An E-Truck's range can reach up to 200km in around 45-minutes using the ultra-fast charge points.

Nigel Head, EV Truck Director, Europe, bp pulse, said:

"This is a significant moment for E-Trucks in Europe and an important step in our journey towards helping to decarbonise truck transportation. By electrifying this stretch of the Rhine-Alpine corridor with ultra-fast charging, bp is enabling EV Truck charging beyond "back to base" whilst rapidly learning customer insights, which will directly inform our longer-term European network and proposition.



"By beginning the roll-out of a dedicated charging network for freight operators and fleets, with a focus on major logistics corridors, bp is supporting the electrification of medium and heavy-duty vehicles, decarbonising the movement of goods, as well as people.

"Ultra-fast charging in the right locations, combined with depot and destination charging, is critical infrastructure to accelerate the electrification transition, unlocking the economic and environmental benefits of low-carbon commercial road freight and transport."

Alex Junge, Aral Board Member for E-Mobility, said:

"The discussion about e-mobility has been focused on the passenger car sector, but medium and heavy goods vehicles are also at a decisive turning point. Our strategy is designed to meet this demand with the right infrastructure and our first public electric truck charging corridor in Germany is an important milestone on this path."

By 2030, it has been estimated that approximately 270,000 battery electric medium and heavy-duty vehicles will be in operation in Europe and they will require up to 140,000 public and destination electric charging points. This transition is already underway; the German truck fleet is now over 3.5 million vehicles.

### MOBILITY HUBS

In addition to developing new dedicated electric charging sites, bp also aims to create a network of mobility hubs along key logistics corridors across Europe providing freight operators with a range of energy options, including traditional fuels.

bp has a global ambition of having more than 100,000 chargers installed worldwide by 2030, focused on ultra-fast charging.

### ABOUT bp PULSE

bp pulse is bp's electric vehicle (EV) charging business. It is one of the leading rapid and ultra-fast public EV charging networks in the UK and operates the largest number of sites with ultra-fast charging in Germany.

### ABOUT bp

bp's purpose is to reimagine energy for people and our planet. It has set out an ambition to be a net zero company by 2050, or sooner and help the world get to net zero, and a strategy for delivering on that ambition. For more information visit [bp.com](http://bp.com).



# Circle K Ireland's delivery fleet to be fuelled by 100% HVO renewable diesel

milesBIO HVO100, a fossil-free biofuel made from waste and by-products from the food industry, will be used to fuel Circle K's fleet of fuel delivery trucks in Ireland.

Circle K will become the first fuel retailer in Ireland to power its national fleet of delivery vehicles with HVO renewable diesel, made from waste and by-products from the food industry. HVO alternative diesel offers an up to 90% reduction in carbon emissions over traditional diesel.

Circle K, has announced that its fleet of delivery vehicles will be fuelled exclusively by milesBIO HVO100. Their fuel station located at Dublin Port will be the first to fuel the fleet with HVO renewable diesel, with work underway at two further locations in Galway and Cork; to ensure the full fleet is powered by milesBIO HVO100 soon.

While milesBIO HVO100 is new to Circle K Ireland, this renewable diesel has been available across Scandinavia at Circle K locations in Norway, Sweden and Denmark in recent years, which is helping to guide the introduction of the product.

The fuel will also be available to commercial customers at Circle K's service station in Dublin Port, to be rolled out at Circle K's locations in Cork and Galway in the coming months. This will support commercial customers in decarbonising the journeys of their own respective fleets. Circle K anticipates



that organisations operating large fleet transport vehicles in sectors such as refuse, retail, and logistics amongst others will benefit greatly from this new product.

Circle K is already supporting the commercial freight and haulage sectors, being the only forecourt to offer Compressed Natural Gas (CNG) refuelling stations at Dublin Port, Cashel, Clonsaugh and Ballysimon in Limerick, with City North to follow.

With more Irish motorists opting for EVs, Circle K is adapting to keep pace with this change. Through its strategic partnerships with ESB, IONITY and Tesla, the business already has the most advanced EV charging network within the forecourt sector in Ireland, with EV charging facilities located at 37 service stations nationwide and continues to add to this network.

Jonathan Diver, Fuels Director with Circle K Ireland commented:

*"Circle K is committed to implementing environmentally sustainable practices across our product range and operations, as well as supporting our customers to reduce their level of carbon emissions. The launch of milesBIO HVO100 across our fleet of delivery vehicles will have a significant impact in reducing emissions across our Irish operations and once fully rolled out early next year, will equate to the emissions of over 2,000 cars being removed from the road."*

*"milesBIO HVO100 is a renewable diesel product that combines both excellent technical and environmental properties, that significantly reduces the net carbon emission when compared to regular diesel fuel, while at the same time offering the same performance as conventional diesel. We are delighted to be introducing alternative fuels of this nature to Circle K Ireland and hope our lead will encourage others to do the same."*



# From green hydrogen production to electric vehicles, six research projects at Cranfield University

Six Cranfield University projects, working with UK businesses, ranging from green hydrogen production to electric vehicle range extension, have been awarded funding from the Accelerated Knowledge Transfer to Innovate scheme from Innovate UK.



## THE PROJECTS ARE:

**H2Top – Novel coupling and control methods for green hydrogen production**

HyWaves, in collaboration with Cranfield University, is developing a concept to address the current complexity and inefficiency in producing hydrogen from renewable energy sources. The project replaces current electronics with a robust, low-cost, and high-energy efficiency architecture.

**Towards the lighter and safer transparent structures for transportation vehicles**

This project with Turing Intelligence Technology Ltd aims to design lighter and safer transparent vehicle structures such as windscreens. Building improved safety performance will benefit both the research community and relevant industrial sectors.



**Control system development for a high-performance, low-power active suspension system**

Domin Fluid Power Ltd and Cranfield University will work together to develop a control system and validate technology relating to Domin's innovative, high-bandwidth, low-power suspension system, capable of delivering a 10% range extension to electric vehicles.

**CREPs: Corrosion resistant bipolar plates for PEM electrolyzers**

Titanium is a preferred, but expensive material used to produce green hydrogen from renewable sources. An exciting commercial project aims to reduce the cost by replacing titanium with stainless steel to make this route competitive with hydrogen from fossil fuels.

**Blockchain-based system for visibility and sustainability in shipping industry**

This project, with Modular Clinton Global (MCG) Ltd, aims to develop a blockchain-based digital platform, to track and assess cold-chain containers in maritime operations to achieve improved visibility and sustainability.

The novel platform integrates advanced technologies, to automatically capture product flow and compute carbon intensity index throughout maritime journey; enabling transparency and control to maritime service providers.

**Financial crime vaccines trials**

Cranfield University will support the proof of concept of FinCrime Dynamics' solution for financial services within areas of anti-financial crime. The 'vaccine' is a safe way for financial institutions to understand and improve their financial crime controls.

The projects secured over £150,000 in funding.

Professor Leon A. Terry, Pro-Vice-Chancellor for Research and Innovation at Cranfield, said:

*"This funding focuses on accelerating the development of projects or concepts which can bring rapid and significant impacts for businesses. I'm delighted that we can build on our close ties to industry with Innovate UK's support for this series of exciting projects."*

# ULTRACHARGE 160 from Rolec Services

The ULTRACHARGE 160 is the most economical unit to date from Rolec Services, with a scalable, modular design, custom-built to grow with your needs.

It offers DC charging capabilities of up to 160kW and a continuous power output segment of 300-1000v; providing a charge of up to 80% in around 20 minutes. Optimising speed to provide you with a significant increase in revenue potential.

Not only does the unit have the capacity to charge 2 vehicles simultaneously, the ULTRACHARGE 160 is also capable of supporting the charging requirements of not only standard EVs, but also expanding to include larger commercial vehicles such as HGVs and buses. Its wide output range switches automatically according to the vehicles' requirements. All of which can be configured in relation to your site's unique power limitations and adjusted in real time with the help of the unit's dynamic power sharing function. This allocates power equally to each vehicle depending on the site's power provision as well as vehicle demand; automatically diverting 100% of its output once one vehicle reaches full charge.

## BRANDING

If there's one thing that working in the EV industry has taught us, it's that changes can happen quickly and unexpectedly. With this in mind, if/when your needs change, you can easily

upgrade your unit by increasing the number of power modules. It's purpose-designed to expand our range of power offerings from just 60kW to 160kW in 20kW increments; giving you the power to customise your energy at a rate that suits you. You can also further customise your unit with our bespoke chargepoint branding services, tailoring it by adding your brand colours and logo to make them as much a part of your business as they are ours.

As with all our units, the ULTRACHARGE 160 comes with 4G and ethernet connectivity as standard. It is also OCPP1.6 compliant, making it easy for you to manage your unit through any compatible back-office, such as our own VendElectric and other preferred back-office partners (like MONTA, Fuuse and ChargePlace Scotland). So that you can receive real-time data on usage, CO2 emissions and revenue. The integrated



RFID/NPC/contactless payment terminal gives EV drivers a direct and app-less way to pay.

We designed ULTRACHARGE 160 to suit fleets of all sizes, meaning it is compatible with a multitude of different operational methods; choose from simple plug & charge, RFID or app-controlled access. Allowing you to track your staff or fleet's activity and usage. As well as over-the-air firmware and software updates to further future-proof your unit.

[www.rolecserv.com](http://www.rolecserv.com)



# Essar reaches new milestone in transition to low carbon operations



UK Government shortlists Stanlow hydrogen and carbon capture projects

Essar Oil UK has achieved a new milestone in its ongoing transition to low carbon operations, following the UK Government's decision to shortlist the construction of a new hydrogen project and separate carbon capture project at its site in Ellesmere Port, Cheshire.

The announcement by the Department for Business, Energy & Industrial Strategy ('BEIS') confirmed that the projects have been selected as part of the UK Government's Carbon Capture, Usage and Storage (CCUS) Cluster Sequencing programme.

The new hydrogen plant will help Essar deliver its goal of producing 3.8GW of low carbon hydrogen by the end of the decade - almost 40% of the Government's recently extended target of achieving 10GW by 2030. Part of HyNet, the plant is being built by Vertex Hydrogen and will significantly reduce

CO2 emissions every year. The project will also create thousands of new jobs in the North West and North Wales.

The installation of industrial carbon capture technology at the Stanlow refinery, which will enable the direct capture of more than 800,000 tonnes of CO2 per year, is also shortlisted.

## ONE MILLION POUND INVESTMENT

The two projects form just part of the company's £1 billion investment in a range of energy efficiency, low carbon energy and carbon storage initiatives, designed to decarbonise its production processes and put Essar at the forefront of the UK's shift to low carbon energy. The company has plans underway to reduce its emissions by 90% before the end of the decade.

As part of Essar's ongoing investment, the company announced last February

its plans to install a new £45 million furnace, capable of running 100% on hydrogen; the first of its kind in the UK. The furnace should be fully operational this year. It will deliver major improvements to onsite energy efficiency and has the potential to reduce 242,000 tonnes of CO2 every year once it is powered by hydrogen from 2026.

Deepak Maheshwari, Chief Executive Officer at Essar Oil UK, commented:

*"Essar Oil UK continues to deliver on its promise of leading the UK's low carbon transition. Our programme of major investment is decarbonising our own operations and supporting the development of low carbon economy across the North West and North Wales, creating thousands of jobs and securing the long-term future of this crucial facility."*

# Greenergy and Octopus Hydrogen begin strategic green hydrogen partnership

Octopus Hydrogen and Greenergy Flexigrid ('Greenergy') have agreed a logistics partnership for the collection and delivery of green hydrogen to Octopus Hydrogen customers.



The NanoSUN mobile refuelling units will be transported by Greenergy, and allow delivery, storage and dispensing of green hydrogen on customer sites. The first delivery was completed last month, with more scheduled for 2023.



Will Rowe, Founder and CEO of Octopus Hydrogen said:

*"We want to support our customers to achieve their decarbonisation strategies. The efficient transportation of green hydrogen direct to where they need it is a core part of what we offer. It's great to be working with Greenergy on providing this essential service to our customers. Together we're making green hydrogen happen today."*

Christian Flach, CEO of Greenergy said:

*"As part of our approach to support our customers through the energy transition,*

*we are working with Octopus Hydrogen as the first step in our strategy to deliver hydrogen. Greenergy's expertise in specialist logistics and our scalable service offer allow us to provide safe, efficient, and cost-effective transportation delivering green hydrogen directly to*

*customer sites across the UK, helping them to decarbonise."*

Octopus Hydrogen aims to tackle sectors which cannot be decarbonised easily through electrification, for example heavy goods transportation, industrial applications, marine and aviation.

## Rising cost of EV's means drivers may not buy them!

**Lack of government support, leading to the rise in prices of electric vehicles, is meaning a possible eighty percent of drivers may not buy them; according to some new research.**

These statistics, commissioned by the used car buying service, ChooseMyCar.com, are part of a larger study into driver beliefs around EVs. The study includes questions around the costs of EVs, which prove that there are major barriers to drivers supporting EVs as the future.

Currently, EV drivers experience 100% discount on the congestion charge in London, and in a couple of years, the Government introduces vehicle excise duty on EVs. However, according to the research, these costs are putting off a number of car buyers. It shows that a potential 80% of UK drivers stated a belief that the Government needs to do

more to support EV ownership, possibly suggesting that it scraps plans on EV tax, congestion charge, and low emission zones.

Founder of ChooseMyCar.com, Nick Zapolski, said that the statistics prove how important it is that the Government provides incentives for people to buy EVs.

*"EVs have hit the press for all the wrong reasons lately, with complaints about charging difficulties dominating the headlines. "These stats prove that people have valid concerns about EV ownership - and instead of helping ease those concerns, the Government chooses to introduce extra barriers.*

*"If the Government truly wants to support its green agenda and encourage EV ownership, it needs to take action now, or EVs will become a disaster."*