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SOLUTRANS 2023: RETROFITTING, ONE OF THE SOLUTIONS TO DECARBONISE THE SECTOR

With several weeks to go before the first day of SOLUTRANS, the global hub for heavy and light commercial vehicles, the minds of all transport professionals are focussing on the same question: how to decarbonise the sector cost-effectively.
It is worth recalling that the European Commission has set ambitions greenhouse gas emissions reductions, amounting to more than 25% for transport between now and 2030. SOLUTRANS 2030 will therefore give over a large space to retrofitting as one of the most appropriate transition solutions, which allows owners to reduce their carbon footprint before having to buy a new vehicle.
Workshops, talks and exhibitors will offer more insight into the concept, also attempting to gauge how worthwhile this technique is, depending on the vehicle and its use.

RETROFITTING: A RELIABLE SOLUTION TO CUT EMISSIONS

The retrofitting concept consists of replacing a fossil fuel engine with a less polluting electric, gas or hydrogen alternative. This energy mix solution, particularly suited to commercial vehicles travelling around urban areas, appeals to nearly half of the tradesman population, who say that they are prepared to adopt it.

Several solutions exist today:

- The **electric retrofit**: the most frequently adopted for goods transportation in urban and suburban settings. According to the French energy and environment agency ADEME, electric retrofitting would reduce greenhouse gas emissions by between 61 and 87% compared with diesel.
- The **hydrogen retrofit**: this is starting to take off and could potentially see an ambitious industrial ramp up in the years to come in particular if it benefits from the development of refuelling stations. Hydrogen retrofitting consists of initially converting a fossil fuel vehicle to an electric one. The electric engine is thus powered by a battery pack to which a fuel cell and hydrogen tanks are then added. The size of the hydrogen tank or the power of the fuel cell will change depending on the type of vehicle and its use. The energy needed is therefore measured so as to estimate whether the solution is suited to the daily use of the vehicle.
  Vehicles running on green hydrogen present the advantage of only emitting water, thus eradicating the emission of particulate matter, sulphur and nitrous oxide, and contributing to air quality.
- **BioGNG retrofitting**: the conversion of a diesel or petrol vehicle to one running on biogas. Gas retrofitting emits less greenhouse gases than would the scrapping of a diesel vehicle and its replacement with a new gas vehicle.

Worth noting: the French government recently launched a national action plan in aid of retrofitting. It will provide support of approximately **100 million euros** to decarbonise transport: **60 million** to support the acquisition of electric HGVs and **40 million** to develop a nationwide range of electric road vehicles.

THE LEADING FIGURES IN RETROFITTING WILL BE AT SOLUTRANS

With its status as a global event for the industry, SOLUTRANS 2023 will be fully playing its role by enlightening the sector's professionals on all the existing solutions. Visitors will thus be given insight into what will help them anticipate the challenges that lie ahead for them in terms of energy transition.

Among the exhibitors in attendance this year, visitors will be able to meet several names from the retrofitting sector, including the following.

- **NEOTRUCKS [Hall 3 – Stand A060]**

  Founded in 2020 in the Ain department, Neotrucks has developed ELYT (Electric Yard Truck), a 100% electric yard truck based on the circular economy. The concept, devised in partnership with Renault Trucks, involves buying second-hand tractor units and retrofitting them into electric tractor units for manoeuvring semi-trailers on logistics and industrial sites. As they are not designed to travel long distances, their speed does not exceed 25km/h, so they do not emit any particulate matter. No more 33-tonne trucks idling during loading and unloading, and causing noise and pollution!

  Neotrucks is supported by local firms such as Renault Trucks in Saint Priest**, Carrosserie Brevet** in Viriat and **Novum Tech**, a specialist in the electrical conversion of all types of motorised machines, established in Chambéry.

  The first supplies and dismantles everything to do with the tractor's internal combustion engine: engine, gearbox, exhaust, fuel tank, etc. These parts are 97% recycled and then reused in a dedicated circular economy process. The second operator then adapts the cab, driving seat and chassis to the yard truck activity, and fits a new electric powertrain and battery packs created by Novum Tech. The new vehicle thus created is ready for 10 to 15 years of use on logistics and industrial sites, operating totally carbon-free and noiselessly.

  "ELYT is the first tractor unit to be fitted with a modular battery system that will enable us to adapt the lithium capacity to the customer's actual requirements. It also has an on-board 22 Kw charger, so it is autonomous and can move from one site to another without the need to install a new charging point. All you have to do is install a new power cable and the vehicle can recharge. This is a big innovation," emphasises **Yves Giroud**, **managing director at Neotrucks**.

  Supported by ADEME, the company Neotrucks thus offers an innovative solution, given that ELYT costs 20 to 30% less than a new electric vehicle. To date around 20 tractor units have been sold, and the company is beginning to develop in neighbouring European countries.

- **HYLIKO [Hall 5 – Stand B099]**

  Hyliko, a pioneer in the decarbonisation of road haulage, will be taking part in Solutrans this year. Hyliko brings together experts in alternative energies, transport and heavy goods vehicles to offer an integrated package for hauliers wishing to make the transition to zero-emission mobility.

  Hyliko's unique offering is based on a turnkey approach to decarbonising heavy goods transport. It combines the supply and maintenance of hydrogen vehicles, green hydrogen refuelling at a network of stations dedicated to Hyliko & Partners HGVs, and carbon footprint traceability. This comprehensive solution enables hauliers to embrace hydrogen mobility with complete confidence, without compromising on the performance and efficiency of their operations.

"As a heavy-duty hydrogen mobility platform, Hyliko is firmly committed to carrying out all the actions that will help heavy-duty hydrogen vehicles to be put on the road. While traditional manufacturers continue their efforts to offer hydrogen vehicles, we are making an unprecedented commitment, starting today, by retrofitting diesel HGVs before adding new hydrogen vehicles to our integrated range. Our ambition? To rapidly deploy hydrogen engines and accelerate the transformation of the existing fleet, in order to achieve the objective of zero-carbon road haulage," says **Ovarith Troeung – CEO of Hyliko**

- **GCK Mobility [Hall 4 – Stand C067]**

  The GCK Group, founded in 2020, specialises in technological solutions to accelerate the decarbonisation of transport. It operates across the green energy value chain through the group's three divisions: Technology & Industry, Mobility and Energy.
  In the mobility division, GCK's skills are combined in several complementary activities, including retrofitting and more specifically hydrogen retrofitting of heavy-duty vehicles. Its subsidiary GCK Mobility converts all types of heavy-duty vehicles (buses, coaches, lorries, snow groomers, cruise ships) by replacing the internal combustion engine with an electric or hybrid electric-hydrogen drive chain (via a fuel cell).
  GCK also meets temporary hydrogen refuelling needs by offering mobile recharging stations when there is insufficient infrastructure.

  Solution F, another GCK Group company, will be launching a hybridization kit in the coming months: a solution for transforming an internal combustion engine currently classified as Crit'Air 3 into a rechargeable hybrid. Compatible with the majority of urban vehicles, whether light or commercial, the Twin-E solution will transform a combustion engine car into a rechargeable hybrid in less than a day at a qualified installation partner.
  This is a major innovation for light commercial vehicles which, faced with the introduction of LEZs in urban areas, could find a pertinent solution for extending the life of the vehicle, while continuing to operate it at a controlled cost, with no loss of range or payload. Twin-E will be on show at SOLUTRANS. The kit is in the homologation phase and will be marketed from 2024.

A GUIDED TOUR FOR PROFESSIONALS

Because the purchase of a vehicle throws up a wide array of questions relating to how it works, SOLUTRANS 2023 offers professionals a guided tour:

- **STEP 1 – ENERGY WORKSHOPS:** These are thematic pitches organised each day for 35 minutes, designed to introduce alternative energy solutions to diesel. Electric, gas, hydrogen, biofuels and retrofits are dissected by their designers in order to introduce them to tomorrow's clients.
- **STEP 2 - ROAD TESTING VILLAGE:** Unique in Europe! SOLUTRANS is hosting two test tracks, dedicated to combustion vehicles and "new energy" vehicles, still located behind Hall 4. But this year, the exhibitors who provide the vehicles will benefit from an exceptional feature with the creation of the eco-friendly "road testing village". These chalets are designed from reconditioned refrigerated semi-trailers, insulated and fitted out to provide comfortable and welcoming low-energy spaces for the exhibitors' teams. The wood used to clad the chalets is bio-sourced and low-carbon, and this partner's project is supported by the French environment agency ADEME.
- **STEP 3 – A BANKING AND INSURANCE SPACE:** Once the vehicle has been chosen and tested, it is time to go to this special space in the heart of Hall 6. Vehicle prices are rising, and people need to know how to finance and insure them. The question of leasing also arises. All the players in the sector will be present to advise and help professionals in this field.

A programme of theme-based talks and workshops on retrofitting and new energies:

- **TUESDAY 21 NOVEMBER** [NORBERT DETOUX LECTURE THEATRE] :
  Plenary: the transformations in the HGV and LCV industry with respect to the green transition
  The energy transition has become a leading issue for our society, entailing sizeable changes in all sectors, including that of commercial vehicles. Recent developments in the heavy goods industry are essential to rise to this challenge, by adopting technologies and practices that reduce the environmental impact of these vehicles. The adoption of an energy mix (electric, gas, hydrogen biofuel), the incorporation of cutting-edge technology, and the promotion of sustainable logistical practices are all factors that contribute to making the commercial vehicle industry greener.
  The main transformations and the impact on the industry will be discussed in the presence of politicians and personalities from the trade.
- **WEDNESDAY 22 NOVEMBER FROM 2PM TO 3PM** [NORBERT DETOUX LECTURE THEATRE]:
  Retrofitting, an energy mix solution for LCVs in the city centre
  In the context of the energy transition and the need to reduce greenhouse gas emissions, the issue of decarbonising light commercial vehicles (LCVs) and heavy goods vehicles in urban environments is crucial. Retrofitting, which involves converting existing combustion engine vehicles into low-emission vehicles, is emerging as a promising solution for integrating cleaner technologies into the LCV fleet. The speakers will explore the potential of retrofitting as a solution in the energy mix with the players in this new emerging segment.
- **WEDNESDAY 22, THURSDAY 23 AND FRIDAY 24 NOVEMBER FROM 4PM TO 5PM** [NORBERT DETOUX LECTURE THEATRE]**:**
  How to finance my zero-emission truck– in three parts
  The adoption of zero-emission vans and trucks has become a priority for many companies seeking to reduce their carbon footprint and comply with new environmental regulations. However, acquiring these vehicles can represent a significant financial investment. Manufacturers, leasing companies and banks will be discussing the various financing options available to help companies acquire these green vehicles. Three talks over three days will analyse the widest range of offerings available today.
- **THURSDAY 23 NOVEMBER FROM 2PMTO 4PM** [NORBERT DETOUX LECTURE THEATRE]**:**
  Energy transition, what issues for road haulage and its infrastructure?
  The transition to electric, gas and hydrogen mobility in the LCV and HGV sector is essential to reduce greenhouse gas emissions and promote environmental sustainability. However, the widespread adoption of these zero-emission vehicles faces specific challenges when it comes to charging infrastructure. Manufacturers, energy suppliers, motorway companies, transport federations - everyone with a stake in infrastructure will be present to share their experience and expertise.

Accreditation is open for SOLUTRANS here.

About SOLUTRANS

SOLUTRANS: THE GLOBAL HUB FOR HEAVY & LIGHT COMMERCIAL VEHICLES

SOLUTRANS, bringing together market players from across the heavy and light commercial vehicle industry, will hold its 17th edition from 21 to 25 November 2023 at Lyon Eurexpo, France.

The event, belonging to the French Bodywork Federation FFC and certified by the International Organization of Motor Vehicle Manufacturers (OICA), brings together, over 90,000 sqm, nearly 50,000 professionals along with 1,000 exhibitors and brands from all over the world, under a shared banner: “Energy transition: all players in a greener industry.”

SOLUTRANS is the two-yearly rendezvous of one of the most innovative sector verticals, from industry to services. Global economic conditions make SOLUTRANS a showcase for the exceptional performances of HGV builders, bodywork manufacturers, vehicle fitters, OEMs, manufacturers of workshop equipment, tyre professionals and distribution networks.

SOLUTRANS also aims to echo the challenges of the sector, with a specific focus on energy sources, retrofitting, city centre deliveries and its constraints, etc. Moreover, this year the show will present its vision of the “last yard”, with an approach centring on city centre access restrictions, and low emission zones in particular. New delivery methods, notably cargo bikes, which are becoming a part of the transport ecosystem, will have a large educational and test area allotted to them in the centre of Hall 1.

With its status as a global industry event, SOLUTRANS has set itself the goals of supporting the industrial sector, promoting solutions to professionals, and anticipating the challenges that lie ahead.

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