



## PRESS RELEASE

### More clients order hydrogen buses made by Solaris

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**The hydrogen bus Solaris Urbino 12 hydrogen, which debuted at the Global Public Transport Summit in Stockholm, has already found more buyers. The affiliated transport company of the transport association Verkehrsverbund Rhein-Ruhr, the Wuppertal-based company WSW Mobil GmbH and the RVK Köln carrier have just placed orders pursuant to which Solaris Bus & Coach S.A. is to supply 25 hydrogen-fuelled, environmentally friendly city buses in total.**

Ten of the 25 commissioned buses will be in use in Wuppertal, whereas the remaining 15 ones will be operated on lines serviced by RVK Köln in nearby Cologne. The first of the ordered innovative Solaris Urbino 12 hydrogen buses will make it to both cities this year. The remaining vehicles will be handed over to the two operators by the end of 2021.

The ecological Solaris Urbino 12 hydrogen that are destined for German streets use a set of fuel cells with a power of 70 kW. Owing to the advanced technology used in them, the buses will be capable of covering up to 350 km on a single refill. In a hydrogen fuel cell, electric power is generated in the process of reverse electrolysis and then transferred directly to the driveline. The sole by-products of the chemical reaction happening in the fuel cell are heat and steam. Consequently, the vehicles do not generate any noxious substances whatsoever.

The hydrogen buses from Bolechowo will be also fitted with a Solaris High Power traction battery with a capacity of circa 30 kWh which is to support the fuel cell whenever the demand for electric power peaks. The battery will be recharged using energy derived from hydrogen and energy recuperated during the braking process. Electric power generated as a result of electrolysis will propel an axle with integrated electric engines.

The Urbino 12 hydrogen features cutting-edge solutions also with regard to the hydrogen storing technology. The element is accumulated in gaseous form at a pressure of 350 atmospheres in 5 new-generation tanks on the bus roof. The set of type 4 composite tanks, placed longitudinally above the first axle of the vehicle, has a volume of 1560 l and it ensures a hydrogen storage capacity of 37.5 kg.

Aside from solutions applied in most modern city buses and which constitute equipment regularly seen in vehicles of Solaris, such as air conditioning, modern CCTV cameras, and an advanced passenger information system, the Polish producer is going to implement a range of state-of-the-art technologies in its innovative Urbino 12 hydrogen to facilitate the work of drivers. These include above all the MobilEye Shield+ system which allows the driver to see more thanks to cameras placed outside of the vehicle and thus substantially improves the safety of passengers and other road users. The cameras detect pedestrians and cyclists staying in the blind spot of the vehicle, which is particularly important during turns. In such a case the system warns the driver by means of acoustic alerts and of light signals. Furthermore, the device similarly informs the driver about each pedestrian and cyclist who is up to 80 cm around the bus. The MobilEye Shield+ responds also when a vehicle leaves a lane without appropriately signalling so beforehand or when the distance to the vehicle in front is inadequate. The system also alerts the driver to collision risks, recognises speed limits and signals these to the driver on the display.

The Wuppertal-based client WSW Mobil GmbH has also opted for having its vehicles fitted with the eSConnect system which enhances the fleet management. The eSConnect system ensures remote access to updated vehicle data, which allows operators to quickly respond to potential malfunctions and to exercise better control over the driving ranges. What is more, the eSConnect system offers the option of generating personalised reports with historical data thanks to which the customer has also full access to sporadically appearing alerts and vehicle operating characteristics. Thanks to an analysis of these it is possible to schedule fleet operation ensuring highest operability.

Thanks to ordering vehicles with hydrogen drivelines and owing to the innovative configuration of the commissioned product, some of the most technologically advanced vehicles available on the market will soon roll out on the streets of two German cities. And yet, the order secured by Solaris is not the first placed with the Polish manufacturer for hydrogen-propelled buses. Solaris has already supplied two Urbino 18.75 electric to Hamburg and 10 trolleybuses to Riga, all of them fitted with hydrogen-based range extenders. Meanwhile though, Italian operator SASA Bolzano has placed an order with Solaris for 12 Solaris Urbino 12 hydrogen buses with technical parameters similar to those of the vehicles commissioned by WSW Mobil. These deliveries will be performed in 2021, whereas the first of the ordered buses will make it to Italy before the end of this year.

#### **Additional information**

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##### **About our company**

Solaris Bus & Coach sp. z o.o. is one of the leading European bus and trolleybus manufacturers. Benefiting from nearly 25 years of experience and having manufactured over 20,000 vehicles, Solaris affects the quality of city transport in hundreds of cities across Europe every day. Thinking of the future, the firm is setting new standards by dynamically developing its products, in particular in the electromobility sector. Solaris electric buses, trolleybuses and hydrogen buses are cutting-edge solutions for zero emission public transport. Solaris products have been repeatedly awarded for quality and innovation. The Solaris Urbino 12 electric won the prestigious European "Bus of the Year 2017" competition. In September 2018 Solaris Bus & Coach sp. z o.o. joined CAF Group.