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PRESS RELEASE

Solaris is to demonstrate the future of electric roads

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Solaris Sverige AB, a representative of a Polish-based Solaris Bus & Coach company on the Swedish market, participates in an innovative 'EVolution Road' project concerning creating an electric road which automatically detects and charges electric vehicles. A Solaris-built trolleybus will be adopted for test drives on an innovatory road. The aim of the initiative is to test novel ways of electric vehicles charging and paving the way towards fossil-free transportation.

'EVolution Road' is an electric road which will enable battery charging of the bus - and eventually of other electric vehicles - both while driving as well as at a standstill, for instance when parked. Initiated by the Swedish company Elonroad AB together with the Faculty of Engineering at the University of Lund, this cutting-edge research and development project is a cooperation between members from the industry, academia and public sector. The test vehicle used in the project is a Solaris trolleybus.

The demonstration site is to be situated in the city of Lund in southern Sweden, where a one kilometer long section of the road will be equipped with electric rails, each of them one meter long. A specially developed pick-up aggregate will be built into a Solaris Trollino trolleybus selected for test drives. The traction batteries of the vehicle will be charged as the pick-up receiver under the trolleybus connects with the conductive rail installed in the road. Solaris will hold the responsibility of developing the technical integration between the onboard charging systems and the custom made conductive pick-up installed under the vehicle. The construction of the demo site starts in the first quarter of 2020 and the entire project will be running for three years. The total investment is worth EUR 9m and the procurer and main financier is the Swedish Transport Administration.

The road uses wireless communication to identify electric vehicles approaching and switches on the power in a one meter long segments directly underneath the vehicle. The power can only be supplied in the areas where the pick-up receivers are able to connect with the rail and receive power. In all other segments in front and behind the moving vehicles, the power will be turned off, making it safe to install this type of charging in both - cities and on highways.

Among the main advantages of this type of in-motion charging is the fact that it significantly reduces the need for large, expensive and heavy traction batteries. This in turn results in reduced weight and cost of the electric vehicle. It also allows to save time as there in no more need for regular stops for the recharge.

The installation causes little interference with existing urban infrastructure. No masts nor overhead wires are needed, and no side-rails will be necessary to protect from collision with pantograph chargers' masts. The plans assume that charges for using the electric road will be made automatically thanks to wireless communication between the vehicle and the road.

The partners of this truly innovative on a world scale project, apart from Solaris, are the Faculty of Engineering at Lund University, the Swedish National Road and Transport Research Institute, Lund municipality, Elonroad, Innovation Skåne AB, Kraftringen Energi AB, Ramboll AB and Skånetrafiken.

Additional information

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About our company

Solaris Bus & Coach sp. z o.o. is a leading producer of city and intercity buses in Europe. It focuses on the development of low-emission and zero-emission vehicles, i. e. electric and hydrogen buses as well as trolleybuses. Over 25,000 Solaris vehicles have been delivered so far and they ply the streets in 850 towns and cities across 33 countries located throughout Europe as well as beyond it. Solaris is part of the Spanish CAF Group (Construcciones y Auxiliar de Ferrocarriles) S.A. From conception, to the design and manufacturing phases, all Solaris buses are produced in Poland. All activities undertaken by the company are in line with its mission, which is reflected in the brand’s promise: to change the image of public transport. Solaris also actively partners with public transport operators and provides them with comprehensive support in their transition to zero-emission mobility. Solaris products have been repeatedly awarded for quality and innovation. The Urbino 18 hydrogen bus has won the prestigious 'Bus of the Year 2025' title.