

A first-of-its-kind dynamic electric road system will be built in Sweden

Today, the Swedish Transport Administration (Trafikverket) announced the pre-commercial procurement results for the electric road system tender.

The consortium Smart Road Gotland (Gotland GPe Circuit AB as its applicant) won the final round of the tender with the highest evaluation points, despite the much bigger industrial competitors.

Electreon AB (a wholly owned subsidiary of Electreon Wireless) will lead the project's next phase to provide vital knowledge of the future potential of dynamic wireless mobile power transfer through this demonstration road system.

This public-private initiative, based on Electreon's leading technology, will be the first in the world to charge inductively both an electric truck and a bus while in full motion.

To enable the mission-critical knowledge transfer to the Swedish Transport Administration, the Smart Road Gotland consortium will deploy a fully functional public shuttle service and test bed through a 1.6 km long electric road as part of the total route of 4.1 km between the airport and city center of Visby on the idyllic island of Gotland, an eco-municipality in the middle of the Baltic Sea.

The electric truck will be test-driven by a professional in varied seasonal conditions to ensure that the system is ready for large-scale projects on highways.

As an integral strategic step towards implementing the Swedish government's national roadmap for electric road systems, the Smart Road Gotland project will create a vital learning curve for the authority.

Long haul heavy trucks benefit significantly from the Electreon solution since no heavy and costly batteries, nor stops for charging, are needed. This optimal solution enables installation of electric road systems without the environmental impact (benefits are both physical and visual) of a conductive system.

After acquiring relevant ERS demonstration results, the Swedish Transport Administration can evaluate the potential for larger scale electric road investments.

Initially, Gotland GPe Circuit AB (GotlandRing, world's first sustainable race and test circuit) - with the support of World Ecological Forum (a global crossover sustainability network, a facilitator and enabler of green business and entrepreneurship) started the project in co-operation with Electreon - 'For the whole consortium, it's wonderful news that we have been selected as the top candidate. It is of utmost importance to significantly reduce CO2-emissions within the transport sector. To commence with the heavier transports is logical since the biggest emission improvements can be gained where the usage and tonnage is the highest. The future positive impact could be global.', comments Alec Arho-Havrén, CEO/Founder Gotland GPe Circuit/GotlandRing and World Ecological Forum.

- 'We, the Swedish Transport Administration, believe that electric roads are an important contribution to reducing CO2-emissions from heavy transportation. Demonstrating and evaluating new technical solutions for electric routes is one of our most important steps in our long-term plan for a potential rollout of electrified routes on the heavy road network in Sweden.', says Jan Pettersson, program manager, Trafikverket (The Swedish Transport Administration)

- 'We are excited that we have been selected to take part in the Swedish government's ambitious program to examine and implement electric road technology as a solution to electrify heavy trucks on highways. Electreon's wireless electric road technology makes it possible to electrify truck fleets economically without the need to carry huge batteries and stop for charging and without creating a visual hazard. The selection of Electreon by the Swedish government after careful filtration testifies to the recognition of the potential of the technology to bring the global electrification revolution to the next critical stage of full implementation.', Oren Ezer, CEO of Electreon, comments.

- 'It is exciting and positive that Trafikverket wants to see this unique technology and test bed realised on Gotland. It strengthens the image of Gotland as one of the most innovative and climate smart regions in the world.', says the chairwoman of the regional government, Eva Nypelius (C).

The Smart Road Gotland consortium members include:

- Electreon AB - a fully owned Swedish subsidiary of Electreon wireless (publicly traded on the Tel Aviv Stock Exchange, a leader in dynamic wireless power transfer technology)
- EiTech - a Swedish subsidiary of Vinci, one of the world's biggest infrastructure and construction companies
- RISE RESEARCH INSTITUTES OF SWEDEN - Sweden's research institute and innovation partner and a leading research institute in the field of electric roads
- Gotland GPe Circuit AB, Gotland Ring - world's first sustainable race and test circuit, traffic electrification partner for the vehicle industry
- World Ecological Forum - a global crossover sustainability network, a facilitator and enabler of green business and entrepreneurship (project initiator)
- Matters Group - a sustainability consultancy
- Flygbussarna - a local Swedish public transportation operator owned by TransDev, formerly Veolia TransDev, a French international public transport operator, with operations in 20 countries
- Swedavia - the Swedish airport authority
- Dan transport - Israel's leading bus operator and a strategic investor in Electreon will provide a HIGER E-Bus based on Supercapacitor
- Hutchinson - a leading French manufacturer will manufacture the underground coils
- Eco-municipality of Gotland - the most popular tourist destination summer time, an eco region
- GEAB - utility company, electricity supplier (owned 75% by Vattenfall, 25% by the municipality)

Smart Road Gotland synopsis

- Technology: Dynamic mobile wireless power transfer, <https://www.electreon.com/technology>
- Invisible installation to road users (coils deployed 8 cm under the surface) and activated only when corresponding vehicle drives on top of it
- Located in Visby, Gotland, the Swedish island in the Baltic Sea, an eco-municipality
- 1.6 km of the 4.1 km airport route will be electrified
- Compatible with all types of EVs, including buses, trucks, passenger cars, including self-driving vehicles (a typical passenger car can be equipped with just one 12 kg receptor, heavier vehicles can have more units to optimise charging levels)
- The main project mission is acquiring knowledge for the Swedish Transport Administration, including demonstrating the environmental and commercial benefits
- World Ecological Forum and Gotland GPe Circuit AB/GotlandRing initially contacted Electreon (Tel Aviv listed public company) to initiate a demonstration test bed on Gotland, which is now realised thanks to Trafikverket
- Budget for the public-private project: SEK 116 M

About Electreon

Electreon Wireless is an Israeli publicly traded company developing DWPT (Dynamic wireless power transfer) technology. The technology enables a shared infrastructure that significantly reduced the need to charge vehicles' batteries during day/overnight and decreases the size of the battery. It can support any type of EV - buses, trucks, and passenger vehicles. It is fully compatible for autonomous and self-driving EVs. Electreon is a global leader in its field because of its deep technological capabilities and focus on making the technology cost effective, durable and efficient.

Smart Energy Road and Traffic System (SERTS) synopsis

- Smart Energy Road and Traffic System (SERTS), an energy harvesting smart infrastructure, finalist i InfraAwards 2017, testbeds planned on GotlandRing in the future
- The vision is to enable access to limitless sustainable energy through smart infrastructure development and simultaneously urge the paradigm for e-mobility. Our mission is to develop and commercialise an energy harvesting electric road system, a modular, self healing micro smart grid with wireless, mobile dynamic charging for electric vehicles.
- Unique combination of solar, thermal, wind, kinetic, and hydraulic energy harvesting technology that provides decentralised and secure energy
- Innovative infrastructure with options - in road, covered tiling, contoured (roadside) solar panels, can also be combined with existing road
- Synergetic systems for energy harvesting, capture, storage of 100% renewable energy
- Enables smart e-mobility on a large scale and solves range anxiety
- Electreon's dynamic wireless power transfer is an important planned feature for the SERTS

GotlandRing/Gotland GPe Circuit AB synopsis

- World's first sustainable race and test circuit, traffic electrification and new model launch partner for the vehicle industry
- Located in a former limestone quarry
- Green business campus and eco resort development area
- About to enter an expansion phase making it the longest modern standard race circuit in the world

For more information about Gotland GPe Circuit/GotlandRing, World Ecological Forum and Smart Energy Road and Traffic System (SERTS), please contact:

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