



Electrified road

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## NEW ELECTRIFIED ROAD CHARGES VEHICLES AND REDUCES CARBON EMISSIONS

 TELECOMMUNICATIONS

### A sustainable electrified road offers a new solution for transport, charging vehicles as they are driven

Sweden has built the world's first electrified road. The [eRoadArlanda](#) project, supported by the [Swedish Transport Administration](#) is transforming transport solutions as the electrified road charges vehicles while on the move. By doing so, it is reducing carbon emissions and using less energy while making use of existing infrastructure.

The Swedish government is investing heavily in renewable energy and plans to make transport fossil-fuel independent by 2030. The eRoadArlanda project's test track is a two kilometre stretch of road that has been electrified. The system is suitable for cars, buses and trucks and will collect data over a two year period. The information acquired will feed into the plan for a larger scale electrification of Sweden's roads.

The solution works by having vehicles use battery power on minor roads, and then recharging these batteries with direct power feeds while on busier and major roads. A rail connected to the power grid is built in the road, transferring energy to the vehicle moving above it. It does so with a movable arm that attaches underneath the vehicle and can detect when there is a rail in the road. Installation of a one kilometre rail takes about an hour as the system makes use of the existing road infrastructure. Additionally, the solution provides a shorter distance to the power feed and does not block the driver's vision.

Reducing carbon emissions by 80 to 90 percent and using a less expensive and cleaner energy source, Sweden's electrified roads are renovating transport for vehicles. Some other transport innovations that use alternative energy sources are a train that operates on [solar energy](#) and a motorcycle that is fuelled by [algae oil](#). Are electrified roads the future of transport?

23rd April 2018

Email: [info@eroadarlanda.se](mailto:info@eroadarlanda.se)

Website: [www.eroadarlanda.com](http://www.eroadarlanda.com)

Contact: [info@eroadarlanda.se](mailto:info@eroadarlanda.se)