

## Tech Talk

### Electric Roadways ©

by Max Farrington



A couple of weeks ago we looked at the Expressways of China, as well as solar panel roadways. Today, we'll continue to talk about roads because the Highways England organisation has a new project in mind.

What if, on the motorways there was a special lane reserved for electric cars. The electric cars would be able to recharge just by driving in these lanes. This is the idea of the organisation and it plans the first prototype before the end of the year.

These lanes will be reserved solely for electric cars, which are still underused even though they cause almost no pollution. The main issue with these cars is their autonomy. Elon Musk, the creator of Tesla and his team have managed to reach 500km of autonomy but it is still not enough. To recharge the cars you often need access to an electrical socket and the car must not be running. This is why the idea of a highway that recharges the car is so attractive.

This huge project will take place in phases. The first is the feasibility study, to prove that it is possible to use a section of the motorway to create this process. The second will test that the recharging process actually works. It is based on electric cables laid under the road surface. These cables will generate an electromagnetic field that is picked up by a coil, which is then converted into electricity. These tests will last for at least 18 months.

Andrew Jones, the Transport Minister of Great Britain has declared that Great Britain is ready to invest 700 million Euros over the next 5 years so that Great Britain will remain an important player in this technology, generating jobs and stimulating growth in the car sector. Britain is not the only country to look into this tech. Since 2013, South Korea has been running special electric buses named OLEV, or On-Line Electric Vehicle. These buses are recharged by a similar system. The Olev can be found in the city of Gumi.

As well as the creation of this special lane, Britain will also be installing recharging docks every 30km. Paul Nieuwenhuis, the director of the Cardiff Business School's Electric Vehicle Centre of Excellence, was interviewed by the BBC on this project. He concedes that this is a great idea but expresses doubts around the costs and that the fast progress in battery technology will make this project obsolete.

The use of electric vehicles seems likely to increase in the future. In 2014 the market for electric cars in Europe increased by 61%, with a total of 65,000 electric cars sold. During this period, Britain only registered 7,370 cars, far behind the 15,000 cars for France and 18,000 cars in Norway.