

## Norway's Free EV Parking

Battery-powered cars in the world's fourth richest country are not just exempt from high rates of purchase tax, and VAT (GST), but pay no road and ferry tolls or parking fees, cost less to insure and can be charged up for free from thousands of recharge points. Local government will also subsidise the installation of charging points in homes. These subsidies can be worth nearly \$9,200 a year per car.

"You can buy a Nissan leaf for 280,000 NOK (\$49,000) which compares with 300,000 (\$54,000) for a VW Golf. Over 10,000 km, it costs about 1,800 Nok (\$325) to run, a petrol car would be 8,000 Nok (\$1450).

"On top of that I save 35Nok (\$5.90) a day on tolls but some people are saving far more," says Snorre Sletvold, president of the Norwegian electric vehicle association.

One unfortunate side effect is that the vehicles are now so popular that they dominate the bus lanes into Oslo, making up to 75% of the vehicles allowed in them. In addition, it's getting harder and harder to find unoccupied public charging facilities.



## Oslo Loves EV's

Norway traffic jams are becoming the cleanest and quietest in the world due to a flood of drivers buying electric cars which zip around the country's cities on hydro-electricity, competing for free charging points.

For three months at the end of 2013, the luxury electric sports car, the Tesla Model S and Nissan Leaf family electric car, were the best-selling models among all cars sold in the country beating popular and conventionally-fuelled cars including the VW Golf.

The latest figures suggest that over 21,000 plugin electric vehicles are now registered in the country of 5 million people, with sales running at over 1,200 a month, or over 10% of all sales.

The Nordic rush for zero-emission vehicles, which have a range of just over 160Km in the case of the Leaf, is less inspired by concern for the environment than for the chance of free commuting in the bus lane and generous incentives.

## Free High Speed Charging in UK

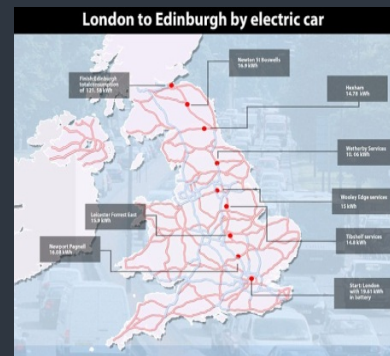
Robert Llewellyn and David Peilow stopped at the following service stations after setting off from Marble Arch:

Newport Pagnell, Leicester Forest East, Tibshelf, Woolley Edge, Wetherby, Scotch Corner (quick test of new charger), Aston Hotel Darlington (a media stop), Hexham, Newton St Boswells and Edinburgh Castle, which was the final destination. If they were going to do the trip in 11 hours, they would have stopped only at Watford Gap, Tibshelf, Wetherby, Scotch Corner, Hexham and Newton St Boswells, before reaching Edinburgh.



## London to Edinburgh by EV

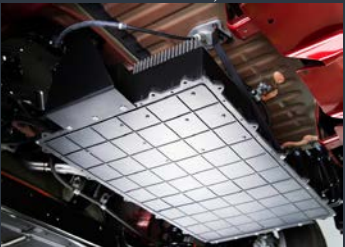
A milestone in electric motoring was hailed in late January after a car was driven from London to Edinburgh for free. The all-electric Nissan Leaf became the first car to complete the 400-mile journey without spending a penny on fuel or power thanks to a newly-opened network of charging points. Red Dwarf actor Robert Llewellyn, who played robotic servant Kryten in the comedy series, set off from Marble Arch with friend David Peilow and made nine stops along way to charge the battery. The dynamic duo knocked out the London-to-Edinburgh leg in a single day, in part because of a new British network of about 150 fast-charging stations. Llewellyn used his Twitter feed to update the general public of the two drivers' progress, noting that the 862 mile round trip took about 13 hours on the 26<sup>th</sup> of January. This was 3½ days quicker than a BBC team that did the trip in 2011 in an undisclosed model of EV. (Hopefully it wasn't Jeremy Clarkson!! Na! he'd still be going!!)



## Evatrans Wireless EV Charging Station



Using inductive power transfer technology, The Plugless L2 efficiently and safely charges your EV. It works just as fast as level 2 plug-in stations without the hassle of cables. And since Plugless starts charging automatically whenever you park over the system — even for a few minutes — your EV gets more frequent charges, which helps extend the life of your battery. The Plugless Level 2 EV Charging System even guides you into the ideal parking position for optimal transfer efficiency to the car mounted receiver. There are different units for various EV models (On special for US\$1995 – for a Volt; US\$2098 for a Leaf)



## Energica Ego



Ph: Damiano Fiorentini©

The Energica Ego is an Italian motorcycle and it does have a bit of Italian design flare to it, it's quite a nice looking motorcycle. The Ego prototype weighs a hefty 569 pounds, significantly more than the 360-420 pound range that ICE "superbikes" tend to inhabit. However, despite the weight, the Ego's oil-cooled, permanent magnet AC motor has to be electronically limited to reign in its ample power. Its 165 lb-ft of torque is dialed back to 144 (195 N-m), and the top speed is limited to 240kph (149 mph). With all that available oomph, the Ego's range varies by average speed travelled. You'll get a maximum range of about 190 kilometers per charge at 60 km/h, 150 km at 80 km/h, 100 km at 100 km/h, and about 50 in racing conditions near the top speed.

Energico is working with prospective dealers, and anticipates the final sale price to be \$25,000-26,000. Not cheap, but comparable with other electric motorcycles with less power, like the Brammo Empulse R (\$18,995) and Zero S (\$15,995) but less than similarly specked electric models like the Mission R (\$32,499) and Lightning (\$38,000).

The companies CFO has based pricing on buyers being less concerned with range and more absorbed with performance and looks."

The Energica Ego is to go on sale in 2015 and will come standard with anti-lock brakes (ABS) – which Consumer Reports says have the potential to reduce motorcycle crash fatalities. – Apparently the EU is making motorcycle ABS mandatory in 2016.

## The Shape Of Things to Come!!



## GC-PHEV concept

Able to automatically switch between pure EV and hybrid drive, depending on driving conditions and remaining battery charge, the Mitsubishi GC-PHEV controls torque distribution via electronically controlled front and centre limited slip differentials and an Electric-Active Yaw Control (E-AYC) unit. The concept claims an electric only cruising range of more than 40km.

Its powertrain comprises a 250kW supercharged 3.0-litre V6 petrol engine, an eight-speed automatic transmission, a 70kW electric motor and a 12kWh battery installed under the rear luggage space. Interestingly there is no "B" pillar, instead a central frame between the seats keeps the vehicle rigid and provides the support for a "Tactical Touch Screen Table" allowing information to be gathered, created and shared between occupants.

The GC-PHEV also comes with a 1500W power inverter to drive AC devices directly from the Battery bank.

## This Month's Technology Review

BOSCH has releases a range of J1772 connector based charging stations for home and business use. The smallest in the range is the PowerMax16A/12' cord, as you might guess a 16 amp 12 foot corded unit providing a nominal 3.3kW charge for your car for US\$449 available on line through [www.pluginnow.com](http://www.pluginnow.com) The next model in the PowerMax range is a 30Amp 18' device giving 7.2kW charging at US\$593. Lastly there is a 30Amp 25' unit for US\$749. All models are wall or pedestal mounted, has a NEMA Type 3 indoor/outdoor rating and comes with a 3 year warranty.

