

# Road test: Kia Niro

by Tim Saunders



Purely electric cars have a long way to go to be a truly attractive proposition. This is because the batteries are not advanced enough yet to hold enough charge to drive long distances at a decent speed.

This is where a hybrid is attractive, giving the motorist the best of both worlds. An electric motor and a petrol engine. The aim is to use the electric mode as much as possible and to have the engine as a back up to get to a charging station.

There are two types of hybrid: self-charging and plug in. For me self-charging are the most attractive because I don't need to do anything extra. A plug-in requires plugging in to charge.

A number of manufacturers offer plug-ins these days and the Niro is one of Kia's offerings, also available as a self-charging hybrid.

Where a standard petrol or diesel has a single filler cap, the Niro has two; the one on the passenger's side front wing is to charge the battery – the other for filling up with petrol. There are cables in the boot to connect to a charging point. It is possible to charge such a car at home although it usually costs more.

Driving in electric vehicle (EV) mode allows us to travel 30 miles when it is 91% charged. A bit disappointing as I was hoping technology had



advanced to allow a far greater range by now. This makes it attractive for doing the school run and other short trips. And relying on that battery for such journeys will allow the fuel to remain in the tank for a considerable time. A full tank of fuel should cover 500 miles. Interestingly, the battery charge doesn't go below 8% and when on a

long journey it seems to recharge slightly to 12 or 13%.

The petrol engine uses the Atkinson cycle combustion process to make greater use of energy. Invented by James Atkinson at the dawn of the motoring age (he first filed for patents in the mid-1880s) it is now proving to be an ideal solution for emissions-reducing hybrid cars. It works on the principle of completing all four stages of the combustion process (intake, compression, ignition and exhaust) on just one rotation of the crankshaft, rather than the two required in the more common Otto cycle engine. At the same time the compression ratio is reduced and the intake stroke is shorter than the power stroke, therefore requiring less fuel to turn the engine over.

For me a plug-in hybrid is more appealing than a completely electric car because it can be driven like a normal car at a normal speed and all the mod cons like listening to the radio and having warm feet can be taken for granted. Not so in a completely electric car because the radio, windows etc all deplete the battery charge and certainly in the Nissan Leaf the driver and passengers have to put up with cold feet due to no heating down there.

The Kia Niro is a good size family estate car or crossover in modern parlance because it has a slightly raised ride height making it feel a bit like an off-roader. The bonnet, tailgate panel, front bumper back beam and several chassis components are constructed of aluminium to save weight. The remaining 53% is made of advanced high-strength steel. It is well built and comfortable with black leather upholstery. There's a good driving position.

Overall, Kia has put a lot of thought into this vehicle and as a result it has some worthy environmental credentials.

Watch the videos at [www.testdrives.biz](http://www.testdrives.biz)

## FACTS AT A GLANCE

### Kia Niro 1.6 GDi PHEV '3' 6-speed DCT

Price: £32,195 on the road

Power: 139bhp

Top speed: 107mph

0 to 60mph: 10.4secs

Economy: Claimed weighted combined mpg of 201 miles but this is reliant on fully charging the battery once the 36 mile range has been used (the battery can be charged in as little as 2hrs 15mins)