



EVSTAT

By Jason Balls, director,
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Electric cars are here; they are a clean and efficient way to travel, with just one small problem – how do you charge them when you want to nip to Brighton for a day?

Well, the answer is rapid charging and the possibilities do not end with simply making your Nissan Leaf go, or your Tesla if you prefer.

We have been developing a new typology for the early adopters of the electric revolution, the rapid car charging station EVSTAT (Electric Vehicle Station). Using high voltage DC charging we are testing the technology with our client in the US, charging flat batteries to 80 per cent capacity in under 25 minutes, and the technology will only get better and faster.

The charging part is just half of the story. The early adopters – the generation Y and Millennial babies – don't want the petrol station reinvented. The experience of driving and customisation will be available through the EVSTAT station.

The process of rapid charging needs to be controlled and the battery monitored. The telematic connection will monitor your battery while charging but also talk to your car's computer system. Whilst you wait in the pilots' lounge, you can update your MP3 music, the latest Sat Nav information – and in the near future change the skin of your car. Who wants the same graphics on their car each and every week?

The EVSTAT is also self sustaining. Below the pilots' lounge and the forecourt a battery bunker is located. This recycles old EV batteries, storing green energy from the grid and the EVSTAT array of PVs, essentially taking the station off grid. This allows the station to not only recycle and give



longer life to worn out batteries but reduce the station's load on the grid at peak times.

The EVSTAT does not need to be a stand-alone typology; we have been developing designs for hotels that use the battery bunker as a source of energy at peak times, combined with dedicated EV cars which you pick up at the airport, the Sat Nav directing you straight to the hotel and the battery

powering your room. Other mixed-use developments can be assisted by the storing of energy, allowing CHP systems to run at full capacity – storing the energy when it's not used.

EV vehicles are growing in popularity for individuals seeking a cleaner mode of transport; the future is electric, and Evoasis is leading the charge. **By EPR Architects in partnership with Evoasis**