

QUICK FACTS

Price £14,000 (est)
On sale Now



Citroën C1 Ev'ie

30.4.09, London British firm ECC converts Citroën's C1 into a credible electric city car

FIRST VERDICT

ECC takes the lead on electric city cars with a pragmatic and easy-driving C1 conversion

★★★★☆

HERE, AT LAST, is the electric city car done right. It's good looking, works well, offers first-class crash protection and has a roomy cabin. Low-speed performance is brisk and the handling is predictable. In fact, the oddly named Citroën C1 Ev'ie (pronounced 'Eevee') behaves much like the petrol-powered city car on which it is based.

The company that equips Ev'ie with its 30kW (51bhp) electric motor

and its 25 lithium ion battery cells (which replace the fuel tank and do not compromise cabin space) is British. The Electric Car Company was established a couple of years ago by David Martell, founder of the successful Trafficmaster firm. It has a "small but expandable" factory in Hertfordshire which has so far made 10 cars and can build about four a week. The plan is to expand to about 500 cars a year.

ECC charges £14,000 for the most basic model – around double the price of the petrol C1. The price looks steep, but after that you're talking about savings, especially in the London sales target area. The

Ev'ie owner pays no road tax, a lower insurance premium, avoids the capital's £8-a-day congestion charge and can park very cheaply in the inner city. One full battery charge (via a 13-amp socket) takes six hours, costs only 90p and can propel the car for 60-80 miles at speeds up to 60mph. That's roughly 20 per cent of the petrol cost for the same distance.



TESTER'S NOTE

London drivers will want on-street charge points. ECC says it will install 1000.
STEVE CROPLEY

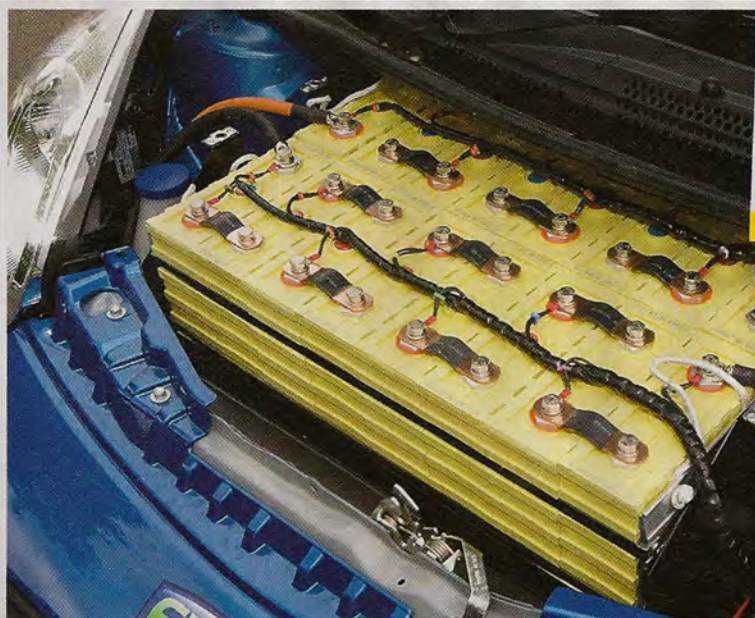
High on the list of justifications for the Ev'ie is its green credentials; the car emits no exhaust gases (even if the power station that generates its electricity may do). The bottom line, according to the maker, is a total saving of £6500 a year on a car used and parked daily in the London congestion zone. The good news continues until the battery reaches its charging threshold of about 3000 cycles (after an estimated seven years), when its cells will need replacing at a current cost of £2800.

Ev'ie makes as much use of the C1 mechanicals as possible. An electric motor sits where the petrol unit used to be, with some of the cells above



ECC's trick has been to keep the C1 as normal as possible, so the interior is relatively unchanged from the regular Citroën

NEWTECH FAST TRACK TO NORMALITY



Full charge on 13A socket takes six hours

ECC's main technical approach has been to keep its electric C1 as close as possible to the original petrol model. The 30kW engine sits where the old petrol motor did. The battery cells occupy engine and fuel tank space, keeping accommodation and boot space unchanged. The electric socket plugs into the fuel filler. Even the existing gearbox and final drive are maintained, with the gearbox 'locked' in third. The result is a four-seat car, only 3.4 metres long, which meets Europe's crash standards and weighs less than 900kg at the kerb. Most of the world's major car manufacturers would love a car like that.

C1 engine bay is full of electric motor and battery cells



Direct-drive gearbox is easy to use

SO GOOD

- Practical nature
- Can carry four people
- Fun to drive (yes, really)
- Decent crash protection
- Feels nippy around town
- Could save Londoners about £6500 per year

NO GOOD

- £5k EV subsidy isn't here yet
- Initial outlay
- New batteries will be needed after seven years
- Too few city charge points

it, and others in the fuel tank's position. There is no clutch. The motor drive is fed into the existing transaxle with the gearbox in effect locked in third gear; this provides the optimal gearing.

On the road, the car is simplicity itself to drive. Twist the key and watch the dash lights come alive. Move the simple central lever either forwards (to go forwards) or back, and then just squeeze the accelerator. The lever needs only two positions; there is no neutral.

Acceleration off the mark is quite strong, but when you lift off the motor's polarity changes so that the engine provides retardation as it

feeds charge back into the battery. ECC estimates that in city driving, power 'earned' by braking adds around 15 miles to the 60 miles of a regular full charge.

ECC says it "regrets" the fact that the much-trumpeted £5000 government subsidy of electric cars isn't planned until 2011. In effect, the firm is being penalised for its prompt action. But the reality is that, as the first 'respectable' electric city car on the British market and one that brings some practically priceless benefits to inner Londoners, the Ev'ie is likely to be popular enough anyway.

STEVE CROPLEY

FACTFILE

CITROËN C1 ELECTRIC

VITALS	
Price	£14,000 (est)
Top speed	60mph
0-62mph	na
CO ₂	na (from vehicle)
Kerb weight	890kg
Engine	DC electric motor
Installation	Front, transverse, FWD
Power	30kW (51bhp)
Gearbox	Direct drive
Range	60-80 miles
Charging	Six hours (13-amp plug)