

## Elusive battery needed to spark electric car's success

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The revolution may have begun a week ago in St.-Jerome, Que.

Then again ...

Seven days ago, ZENN Motor Co. celebrated the Canadian launch of its two-seater electric car in the town north of Montreal.

The ZENN could be the forerunner of the greenest vehicle ever made but, as it stands now, it's not likely to take the world by storm or make much of a dent in greenhouse gas emissions.

Sure, it's cute, emissions-free and makes no noise. And it runs for a couple of pennies a kilometre.

But it's slow – top speed is a leisurely 40 klicks. And it goes no more than 80 kilometres after being plugged into a regular socket for at least four hours and as long as eight. Handy for tootling around the city, on streets where the speed limit is 50 or less, but it's not likely to replace the climate-changing internal combustion engine.

Toronto-based ZENN (Zero Emissions, No Noise) has sold about 350 ZENNs, mainly in the U.S., where 40 states allow "neighbourhood electric vehicles."

In Canada, ZENNs are street legal only in Quebec and British Columbia. Not coincidentally, the \$16,900 vehicles are built in St.-Jerome.

Meanwhile, Ontario has begun a safety study that just might be finished by 2011.

Company CEO Ian Clifford took a backhanded swipe at our cautious province when, announcing last Saturday's launch, he praised "highly progressive" Quebec.

In any case, by the time Ontario completes its review, the issue of slow speed might be moot because the ZENN will have evolved.

ZENN's real future lies in a battery being developed by a secretive Texas company called EESor Inc., in which ZENN has a small stake as well as an agreement that gives it exclusive control over the technology in vehicles lighter than 1,400 kg.

If it works, and if it's certified safe, and if it's commercially viable – a car under \$30,000 – the battery, known as EESU, would almost certainly transform the auto industry. The claim is it would let a car travel 400 km after a five-minute charge at a special plug-in – with a top speed of 125 km/h.

Who wouldn't want one?

ZENN would produce its own vehicle, the cityZENN, and could also supply the propulsion system to major automakers, Clifford says. It would instantly turn vehicles like General Motors' much-hyped Volt into museum pieces.

The launch target is a year from now, but several "milestone" dates have come and gone without milestones

being reached.

ZENN is a publicly traded company so, as Clifford noted in a recent interview with an investment dealer, he can't reveal details – for example, whether he's actually seen a production prototype.

"The delivery timeframe of production prototype EESUs is entirely within the purview of EESor," he said. "We are confident that they are working towards full commercialization as rapidly as possible."

Progress is being made. In July, EESor announced one EESU component had passed a "critical" test.

Much of the battery remains under wraps but in general it's ultra-thin layers of ceramic material and an aluminum powder.

The test concluded that EESor has powder pure enough to withstand the 350 volts inside the device.

Clifford sounds bullish. ZENN is about the environment and dependence on oil, not the cost of gas, he said.

"History has demonstrated that breakthroughs in science and technology can have an extremely rapid and disruptive uptake. There is a growing demand for zero-emission transportation alternatives to internal combustion vehicles and with the right solutions ... the change could happen very, very quickly."

Pie in the sky or on our plates? It's well worth watching.

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