Nissan hopes zero-emission Leaf will electrify drivers

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The Nissan Leaf electric car during a press preview at the LA Auto Show in Los Angeles, California in November 2010. Billed as the world's first mass-production electric car, the Nissan Leaf due to be launched this month is expected to send a jolt through an auto industry racing to build greener vehicles.

Billed as the world's first mass-produced electric car, this month's launch of the Nissan Leaf is expected to send a jolt through an auto industry racing to build greener vehicles.

The Leaf -- short for Leading Environmentally-friendly Affordable Family car -- has enjoyed a crescendo of industry buzz, last month becoming the first electric vehicle to win European Car of the Year.

The fulcrum of Nissan's green ambitions, the mid-sized five-seat hatchback is already a sell-out in Japan and the United States on pre-

orders and is set to launch in Europe early next year.

Nissan is expected to announce the date of its Japan launch on Friday, with all eyes on whether the automaker's big bet will herald the readiness of electric vehicles to hog the middle of the road.

"The Leaf will serve as a standard, a benchmark, for other manufacturers when they build new electric vehicles," said Mamoru Kato, auto analyst at Tokai Tokyo Research Center.

Emitting none of the tailpipe pollutants that have covered skies over cities from Los Angeles to Mumbai in smog, the all-electric Leaf is touted as an evolutionary step from petrol-electric hybrids made by the likes of Toyota.

It and other electric vehicles' carbon footprint is instead determined by the way its battery is charged -- meaning it can effectively be powered by anything from fossil fuel or nuclear plants to hydro, wind or solar energy.

Despite the development of electric cars being constrained by issues over whether sufficiently large networks of re-charging stations exist worldwide, the Leaf has caught the imagination.

The first US shipment has sold out, Nissan said, with the company having received 20,000 orders and separately at least 6,000 more orders in Japan.

Nissan, controlled by French partner Renault, started mass production of the Leaf in October in Japan and plans to expand production in North America in 2012 and in Europe in 2013.

"This is a significant milestone, not only for Nissan and the Renault-

Nissan alliance, but also for the entire automotive industry," Nissan President Carlos Ghosn said at an October ceremony marking the start of production.

The Leaf can top 145 kilometres (90 miles) per hour and can manage 175 kilometres on a single eight-hours charge. For those in a hurry, it can be rapid-charged to 80 percent of capacity in 30 minutes.

By 2020, Nissan predicts, electric cars will account for 10 percent of the global auto market.

American research firm J.D. Power and Associates estimates combined global sales of hybrid and electric vehicles to total 5.2 million units in 2020, 7.3 percent of the global auto market.

But it also warns the current demand for hybrid and electric vehicles is "over-hyped", adding that the firm did not expect "a mass migration to green vehicles in the coming decade".

The Nissan Leaf electric vehicle during a press day at the LA Auto Show in Los Angeles, California in November 2010. Nissan is expected to announce the date of its Japan launch on Friday, with all eyes on whether the automaker's big bet will herald the readiness of electric vehicles to hog the middle of the road.

But the concept of a car that can be charged like a cellphone by plugging it into a wall socket, preferably during overnight off-peak hours, is appealing in the face of volatile petrol prices.

Nissan estimates the cost of a battery charge for the Leaf to be only 13 percent of gasoline cost for conventional autos.

Despite a price tag of 3.76 million yen (44,700 dollars) in Japan, likely tax breaks and other incentives for green vehicles are expected to reduce that price, analysts say.

The Leaf is not the first electric vehicle to hit Japanese streets, and will face challenges from rivals such as Mitsubishi Motors' "i-MiEV" minicar.

Toyota, which has for more than a decade sold petrol-electric hybrids such as the Prius, aims to launch its own electric car by 2012 but has put its immediate focus on new hybrid models.

Honda's hybrid Fit went on sale in Japan in October as the cheapest petrol-electric car available in the nation at 1.59 million yen.

Last month US giant GM unveiled the battery-powered Chevrolet Volt combining electric power with a gasoline-powered engine/generator.

But the Leaf's advantage, say analysts, lies in its roomy comfort in addition to the silent and powerful performance that has won it rave reviews.

Last month it became the first electric vehicle to receive the 2011 European Car of the Year award, speeding ahead of rival nominees Alfa Romeo Giulietta and Opel/Vauxhall Meriva.

"In spite of the lack of a large recharging network and the limited range, the Leaf represents a technical and commercial bet that might otherwise satisfy many potential consumers, especially where public incentives will come to reduce the paying price," the award jury said in a statement.

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