

Eco-friendly and self-driving cars showcased at Tokyo Motor Show

Green-energy vehicles, self-driving technologies and internet connectivity are expected to be the rage at this year's Tokyo Motor Show slated to open to the public Saturday at the Tokyo Big Sight convention center in Koto Ward.

The 45th biennial exhibition, will see participation from a total of 153 carmakers and auto suppliers, including 13 overseas firms from 10 different countries.

The expo will run until Nov. 5, with the opening ceremony being held on Friday. During Wednesday's media preview, major automakers showed their visions of the future with concept cars equipped with cutting-edge technologies.

Toyota Motor Corp. unveiled the prototype for its hydrogen-powered Fine-Comfort Ride, its latest fuel-cell vehicle model.

The sedan-type FCV emits zero carbon-dioxide and has a driving range of approximately 1,000-km, much farther than the Mirai's 650 km, according to the nation's leading automotive company. That means the car can outdistance most electric-powered cars in the market.

Toyota says the fuel cell is the ultimate eco-friendly power source for vehicles. The Aichi-based company began mass production of hydrogen-powered vehicles with the launch of the Mirai, which means "future" in Japanese, in 2014.

But the world is moving more toward development of electric vehicles rather than FCVs. In a bid to boost the development of EVs, China, the world's largest auto market, declared last month that it would consider banning the sale of gasoline and diesel powered vehicles, following a similar announcement made by countries such as France, Britain and India.

At a news briefing on Wednesday, Toyota's Executive Vice President Didier Leroy emphasized the company has been one of the leaders in developing not only FCVs but also EVs as it boasts 43 percent of the global share in the electric vehicle market and sells 1.5 million units per year in 90 countries.

"We have developed and improved many electrified components including motor, inverter, electric control software and batteries. This experience puts us in a very good condition for the next step — which is pure EVs," he said. "We have no doubt that EV will also be one of key solutions in the near future."

Along with FCVs, Toyota also displayed an EV concept car it calls Concept-i Ride, a two-seater vehicle equipped with an artificial intelligence system that interacts with drivers. It is a compact version of the sedan-type Concept-i Toyota put on display at the International Consumer Electronics Show 2017 in Las Vegas last January.

The Concept-i cars analyze a driver's feelings and preferences based on such things as facial expressions, use of social media and vocal interactions, according to Toyota. When a driver is stressed, the car automatically switches on the autonomous driving mode in order to ensure his or her safety.

The company also debuted its Concept-i Walk — a compact, three-wheeled electric vehicle for use at sightseeing spots. Toyota plans to start road tests on some of technologies behind the Concept-i in 2020.

Nissan Motor Co., Japan's No. 2 automaker, unveiled its high-end concept EV Nissan IMx, which the company says embodies its vision of "intelligent mobility" realized through advances in self-driving technologies, high capacity batteries and internet connectivity.

Nissan has been trying to regain customer trust after a string of scandals related to violations in domestic inspection regulations. The company last week said unauthorized employees had continued to be involved in final quality checks of finished cars even after a transport ministry on-site investigation had revealed the misconduct in mid-September.

"We sincerely regret any inconvenience and concern this has caused to our valued customers and all of our stakeholders in Japan, especially those who use our vehicles," Daniele Schillaci, Nissan's Executive Vice President who is in charge of the company's EV business, said.

Nissan says the Nissan IMx, the design of which is inspired by traditional Japanese culture, lets drivers choose between manual or self-driving modes. When the car is controlled autonomously, the front window displays online information linked to a city's landscape, such as showing locations and information about nearby cafes. The recommendations are based on a driver's preferences.

Honda Motor Co. displayed two different EV concept cars: a sports-type EV and a compact EV suited for urban use. The company aims to commercialize the urban EV first in Europe and then in Japan in 2020.

The NeuV, a self-driving EV concept model designed with safety in mind, which also analyses a driver's stress levels from facial expressions and the tone of their voices, also made its debut. Honda says an owner of the autonomous car can send it out for car-sharing when not in use.

Honda also showcased a "moving living room" called Honda IeMobi Concept. The box-type minivan, whose name is coined from the Japanese word ie (house) and "mobility," has a 5 sq.-meter cabin and can be attached to a house for use as an extra living room.

"Without compromising the merits of electrification, we will create products that will enhance convenience and fun for our customers," Honda President and CEO Takahiro Hachigo said.

The Tokyo Motor Show, which has long enjoyed a reputation as one of the world's five biggest international auto expos along with the Frankfurt, Geneva, Detroit and Paris motor shows, is now on the verge of losing its position as Asia's top such venue to Chinese expos held in Shanghai, Beijing and Guangzhou.

The number of participating companies this year has shrunk by 42 percent compared with its peak of 361 exhibitors in 1995, according to Japan Automobile Manufacturers Association, the largest auto industry lobbying group and the show's organizer. All of the U.S.'s "Big Three" auto makers — General Motors Co., Ford Motor Co. and Fiat Chrysler Automobiles NV — have decided not to participate this year.

The number of visitors is also declining. The motor show two years ago attracted 812,500 people, a mere 40 percent of the record 2,018,500 visitors who attended in 1991. The organizer hopes to improve the numbers for this year, although a JAMA official did not specify a specific goal.