

Hydrogen energy back in the vehicle conversation at CES 2024

January 10 2024, by SHAWN CHEN and WYATTE GRANTHAM-PHILIPS



The newly unveiled concept car, Honda Zero Series "Saloon" electric vehicle is displayed during a Honda news conference during the CES tech show Tuesday, Jan. 9, 2024, in Las Vegas. Credit: AP Photo/Ryan Sun

While electric vehicles are gaining the lion's share of the attention for carbon-neutral technology at [CES 2024](#), hydrogen energy has snuck its way back into the conversation thanks to two automotive giants.

Hyundai spotlighted its plans for utilizing hydrogen energy at the sprawling tech and gadget show in Las Vegas. Beyond making vehicles powered by hydrogen-powered fuel cells, the South Korean automaker signaled that it could work toward aiding a "hydrogen society" by expanding into energy production, storage and transportation.

It's already technologically feasible, and it will eventually make sense economically, too, José Muñoz, president and global chief operating officer of Hyundai Motor Co., predicted Monday.

Meanwhile, automotive supplier Bosch Mobility plans to launch its first hydrogen combustion engine this year—another key step toward reducing global man-made carbon emissions, the company said during its CES 2024 event.

Both Bosch and Hyundai say they've been encouraged to move forward with their respective initiatives because of investments such as the \$7 billion that the U.S. government is pouring into the development of hydrogen infrastructure.

'THIN, LIGHT AND WISE' EVs

Honda on Tuesday unveiled two concept vehicles, dubbed the "Saloon" and "Space-Hub." The Japanese automaker says the Zero Series approach for EV development focuses on models that are "thin, light and wise," with specific goals to minimize battery size and weight.



A hydrogen combustion engine designed by Motul in conjunction with GCK Battery is seen on display during the CES tech show Tuesday, Jan. 9, 2024, in Las Vegas. Credit: AP Photo/Ryan Sun

Kia, meanwhile, introduced a trio of electric vans that can quickly swap body modules from cargo haulers to taxis and other purposes. Production of the vans will begin in 2025 in South Korea.

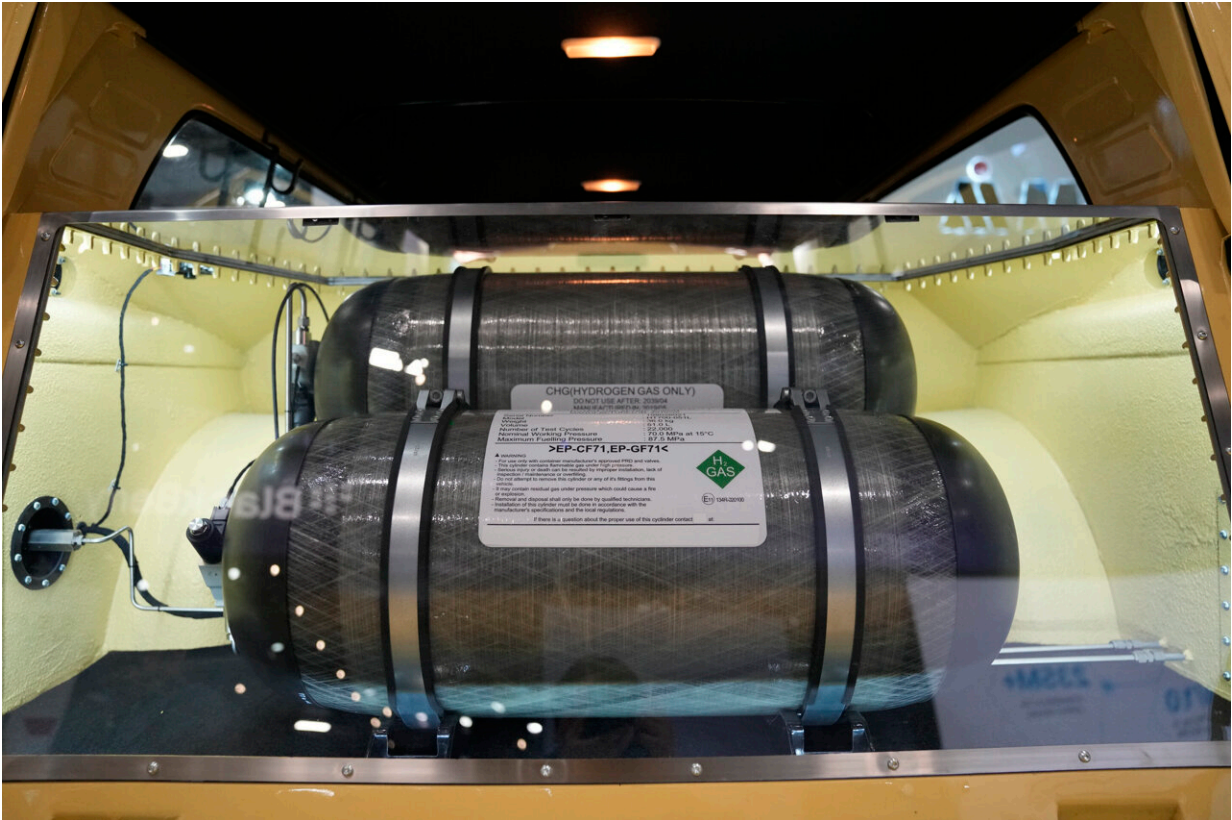
And Vietnam-based electric upstart VinFast unveiled an electric truck concept. The mid-size truck is dubbed the VF Wild.

IN-CAR TECH ECOSYSTEMS IMPROVE

Mercedes-Benz showed off updates to its infotainment systems, including a new AI-powered virtual assistant that strives to personalize interactions between drivers and their cars. The update will connect the AI with functions for automated driving, seating comfort, data displays and charging.

But while automakers like Mercedes are focusing on improving their proprietary in-car ecosystems, others are striking more partnerships with Google to pre-install apps such as Google Maps and Assistant in their vehicles, the tech giant revealed at CES 2024.

The Google built-in will come to select models from Nissan, Ford Motor's luxury brand Lincoln, and others this year, with Porsche following suit in 2025. And even Mercedes-Benz is layering Google apps into its own technology.



Hydrogen gas fuel tanks designed by Motul in conjunction with GCK Battery are seen in the back of a vehicle retrofitted with a hydrogen combustion engine during the CES tech show Tuesday, Jan. 9, 2024, in Las Vegas. Credit: AP Photo/Ryan Sun



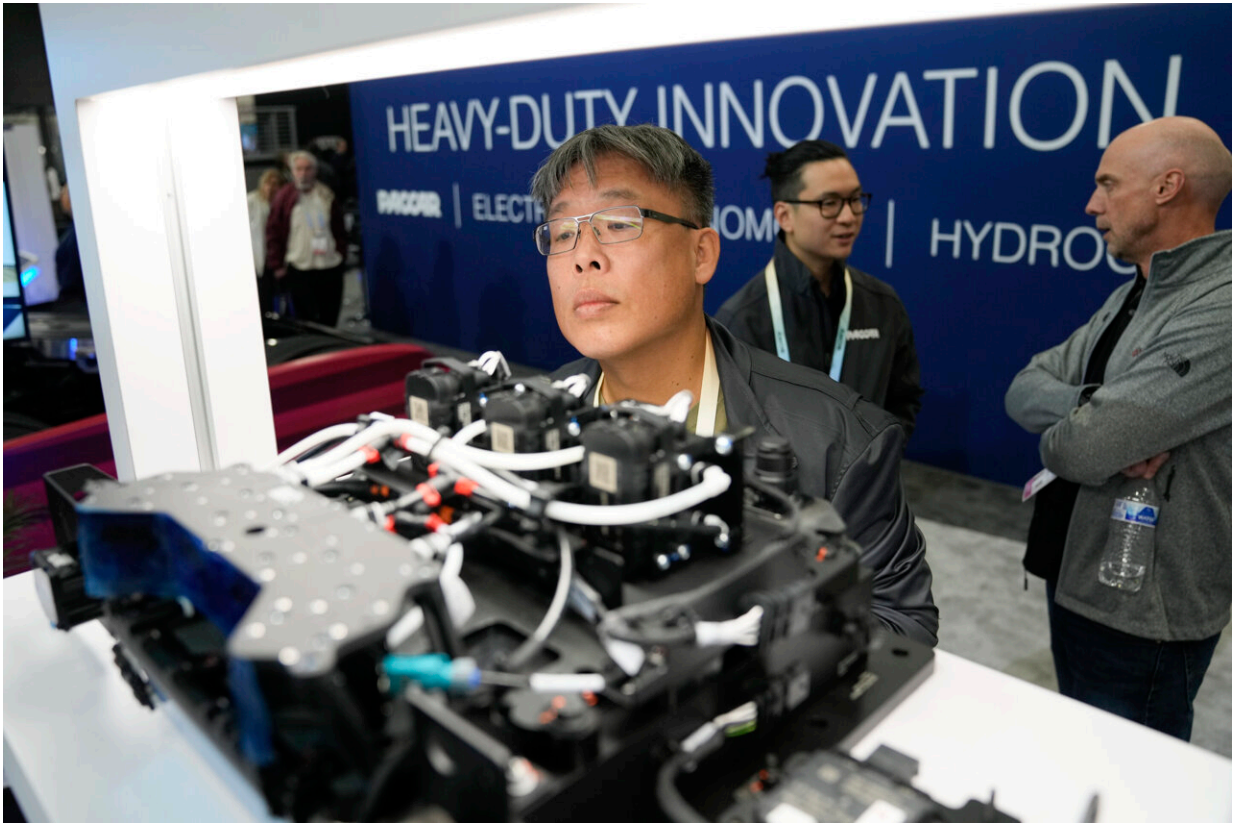
Attendees watch a video demonstration of Mobileye's autonomous driving and advanced-driver technology during the CES tech show Tuesday, Jan. 9, 2024, in Las Vegas. Credit: AP Photo/Ryan Sun



People view the LG Alpha-able future mobility concept at the LG booth during the CES tech show Tuesday, Jan. 9, 2024, in Las Vegas. Credit: AP Photo/John Locher



Vadim Weiss, Mercedes-Benz USA, gives a demonstration of the company's new operating system, MBOS 1, during the CES tech show Tuesday, Jan. 9, 2024, in Las Vegas. Credit: AP Photo/Ryan Sun



An attendee looks at Paccar components of a fuel cell electric vehicle during the CES tech show Tuesday, Jan. 9, 2024, in Las Vegas. Credit: AP Photo/Ryan Sun



A concept of a fully electronic autonomous excavator, themed as Xite Innovation, is displayed at the HD Hyundai booth during the CES tech show Tuesday, Jan. 9, 2024, in Las Vegas. Credit: AP Photo/Ryan Sun



Jose Munoz, president and global CEO of Hyundai Motor Company, speaks during a Hyundai news conference before the start of the CES tech show Monday, Jan. 8, 2024, in Las Vegas. Credit: AP Photo/Ryan Sun

WHAT'S THE LATEST ON SOLID-STATE BATTERIES?

Honda also touched on plans for its Zero Series and wider EV advances down the road—notably, the company's independent development of solid-state batteries. In a Tuesday news conference, Executive Vice President Shinji Aoyama said Honda aims to apply solid-state batteries to the Zero Series by the late 2020s.

Solid-state batteries are widely believed to be essential for mass commercialization of battery-powered EVs. Today, lithium-ion batteries

are more commonly used in EVs, but are prone to fires. Solid-state batteries are more stable and potentially more powerful.

Honda Motor's Mitsuru Kariya, who leads the research and development group behind the EV tech announced Tuesday, explained that solid-state batteries have higher energy density, which means they can be smaller while maintaining a good range with stronger outputs. This could also contribute to making EVs lighter, he said, potentially improving fuel economy.

Honda isn't the only automaker with eyes on a solid-state battery future. Toyota, for example, [recently agreed to work](#) with Japanese oil company Idemitsu on technology solid-state battery production.

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