News Release

October 30, 2024
Coca-Cola Bottlers Japan Inc.
Fuji Electric Co., Ltd.

Coca-Cola Bottlers Japan and Fuji Electric to unveil world's first hydrogen-cartridge-powered vending machine at Osaka-Kansai Expo 2025

Visitors will have opportunity to experience the vending machine of the future.

Coca-Cola Bottlers Japan Inc. and Fuji Electric Co., Ltd. will unveil the world's first (Note 1) vending machine that uses hydrogen cartridges to generate power (hereinafter referred to as "this vending machine") at EXPO 2025 Osaka, Kansai, Japan (hereinafter “Osaka-Kansai Expo 2025").

Left: Actual model of this vending machine

Right: Image of this vending machine installed at Osaka-Kansai Expo 2025 site. (Note 2)

Coca-Cola Bottlers Japan and Fuji Electric have developed a vending machine that uses hydrogen as its power source, which is expected to serve as a new alternative energy that could further drive the ongoing efforts to reduce CO2 emissions with an aim to achieve carbon neutrality by 2050. As the next-generation vending machine that is unaffected by weather or location and emits no CO2 while operating, one unit of this vending machine will be installed at Osaka-Kansai Expo 2025 site that is conceptualized to be the “People’s Living Lab” where advanced technologies from Japan and abroad will be brought together, offering many visitors an opportunity to experience “the vending machine of the future."

Coca-Cola Bottlers Japan and Fuji Electric intend to continue contributing to the realization of a decarbonized society through the development of environmentally friendly vending machines.

(Note 1) As of October 30, 2024, according to Fuji Electric
(Note 2) The design may be subject to change.

■ Applying hydrogen energy to vending machine

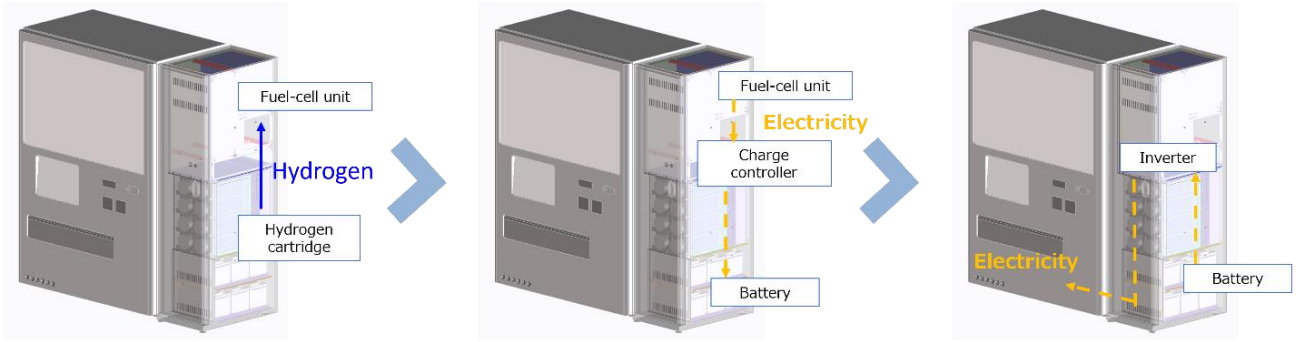
Hydrogen energy is highly compatible as a power source for vending machines because it allows the machines to run in any weather conditions and does not require much space to operate them. Challenges to address going forward include the infrastructure for supplying hydrogen and optimization of the overall cost.

Compatibility with vending machines

	Wind and solar power generation	Hydrogen
		
Effects of weather	Yes	No
Transportability	Not transportable	Transportable
Location of installation	Only outdoors	Outdoors, Indoors
Size of power supply equipment	Large	Small

■ Operating image of this vending machine

This vending machine consists of two units, the vending machine itself and a generator. A hydrogen cartridge is loaded in the generator and electricity is generated through a chemical reaction between hydrogen and oxygen in the air. The generated electricity is then stored in a battery from where it is transmitted to the vending machine and used to run the machine.



Hydrogen filled in the hydrogen cartridge is supplied to the fuel-cell unit, and generates electricity through a chemical reaction with air.

Electricity generated by the fuel-cell unit is stored in the battery via a charge controller.

Electricity stored in the battery is converted by the inverter, and after passing through the ATS, becomes the power to run the vending machine.

[For reference]

More information on the vending machine that uses hydrogen cartridge to generate power:
https://youtu.be/0AY1uChkiYY

※Please note that the information contained in this news release is current as of the date of release. Certain information may have changed since the date of release.