

Nov 18, 2019

Panasonic's Hydrogen Station "H₂ Kusatsu Farm" Is Now in Operation

The hydrogen facility is designed to verify the practicality of hydrogen energy using two methods, water electrolysis and gas reforming

Osaka, Japan – Panasonic Corporation has built the hydrogen station "H₂ Kusatsu Farm" on the Kusatsu site of the Appliances Company located in Kusatsu City, Shiga Prefecture in order to verify the practicality of using hydrogen, which is attracting high interest as a next-generation energy source. The company started operation of fuel cell forklifts within the site with hydrogen supplied from the station.

The "H₂ Kusatsu Farm" can stably supply hydrogen regardless of the weather by using two methods. The first one is to utilize water electrolysis unit that produces hydrogen by electrolyzing water using the power from solar panels. The other is to utilize compact hydrogen production equipment in combination with a gas reforming process with long and accumulated technology from "Ene-Farm", residential natural-gas type fuel cell. This system is capable of producing hydrogen to operate approximately two fuel cell forklifts⁽¹⁾ per day and they can be fully charged with approximately 3 minutes⁽¹⁾. As a result, these forklifts can be efficiently operated with limited time compared to battery-powered forklifts which require longer charging times. Fuel cell forklifts will carry finished products at the "Ene-Farm" factory. Panasonic will accelerate the development of technology for hydrogen production equipment while verifying the stable operability and economic viability of hydrogen energy.

Hydrogen is clean. It can be stably supplied and can also be easily transported and stored for a long time. Because of these characteristics, as well as effective use in combination with other renewable energy sources, such as solar, hydro, and wind power generation, hydrogen is attracting global interest as a potential next-generation energy source for a decarbonized society. In 2009, Panasonic launched the world's first residential fuel cell called "Ene-Farm" in Japan that generates electricity and heat using hydrogen extracted from city natural gas. Since then, the company has made an effort on the development of much longer lifetime, higher efficiency and smaller size. Panasonic is now expanding its fuel cell business abroad to seven countries in Europe, ⁽²⁾ including Germany and the United Kingdom.

Based on these experience and result, Panasonic is developing pure hydrogen fuel cell that generates power efficiently using hydrogen as a fuel source. The company has carried out demonstration experiments continuously in "Yume Solar Hall Yamanashi" in Yamanashi Prefecture and the "Shizuoka Model Hydrogen Town" project from 2012 and plans to commercialize pure hydrogen fuel cell around April 2021 in Japan. Furthermore, Panasonic's pure hydrogen fuel cell and "Ene-Farm" will be installed into the "HARUMI FLAG", a category 1 urban redevelopment project in the west district of 5-chome, Harumi, Tokyo, the site of the Athlete Village during the Tokyo 2020 Olympic Games.

Panasonic will keep working on the development of technology to utilize hydrogen energy by taking advantage of its knowledge and technology as a leading company of residential fuel cells in order to help achieve a future decarbonized society.

[External view of H2 Kusatsu Farm]



[Basic specifications of H2 Kusatsu Farm]

Hydrogen supply method	On-site method ^{(*)3}
Filling pressure	35 MPa
Filling capacity	29 Nm ³ /day
Footprint	10 m ² (5 m x 2 m)

[Notes]

(*1)When the hydrogen tank is fully filled after empty

(*2)Germany, Austria, France, the United Kingdom, Luxembourg, Belgium, and the Netherlands (as of November 18, 2019)

(*3)Method to produce, compress, accumulate, and fill hydrogen in a hydrogen station

About Panasonic

Panasonic Corporation is a worldwide leader in the development of diverse electronics technologies and solutions for customers in the consumer electronics, housing, automotive, and B2B businesses. The company, which celebrated its 100th anniversary in 2018, has expanded globally and now operates 582 subsidiaries and 87 associated companies worldwide, recording consolidated net sales of 8.003 trillion yen for the year ended March 31, 2019. Committed to pursuing new value through innovation across divisional lines, the company uses its technologies to create a better life and a better world for its customers. To learn more about Panasonic: <https://www.panasonic.com/global>.

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