

To help achieve a sustainable society, Mazda is actively involved in technology development projects such as the hydrogen rotary engine.

Mazda has commenced leasing of the Mazda Premacy Hydrogen RE Hybrid, the World's First Hydrogen RE Hybrid Automobile

Hydrogen is gaining a lot of attention as a next-generation energy source that produces zero carbon dioxide exhaust emissions and does not rely on fossil fuels. Mazda began efforts early on to develop a hydrogen rotary engine vehicle that would burn hydrogen as a fuel.

As a successor to the RX-8 Hydrogen RE, which became available in Japan in 2006 through commercial leasing, we developed the Mazda Premacy Hydrogen RE Hybrid and began leasing it in March 2009.

Like the RX-8 Hydrogen RE, the Mazda Premacy Hydrogen RE Hybrid uses a dual-fuel system that enables it to run on either hydrogen or conventional gasoline. It is the world's first hydrogen hybrid vehicle and uses a series hybrid system in which energy released by burning hydrogen is efficiently converted into electricity, and the electricity is used to drive the motor. The engine and motor work in synchronization when the accelerator pedal is depressed, delivering powerful acceleration. Mazda will continue R&D work on hydrogen rotary engine vehicles, combining driving pleasure with environmental and safety features to help achieve a clean and sustainable hydrogen-based society for the future.

Since 2007 we have been participating in HyNor, a project promoted by the Norwegian government that is aimed at building a mobile society fueled by hydrogen. Mazda RX-8 Hydrogen RE hydrogen rotary engine vehicles first appeared on public roads in Norway in 2008 in the first large-scale program of its kind outside of Japan. This marked a new step forward in the race to realize a practical hydrogen engine automobile.

Aiming to Develop Bioplastics that Do Not Consume Food Resources

For the next generation of automobiles, there is demand for new car parts that reduce carbon dioxide exhaust emissions and do not rely on fossil fuels.

Mazda is actively involved in R&D work on new materials derived from plants for use in car parts—parts incorporating these materials bear the Mazda Biotechmaterial brand name. We have successfully developed the industry's first bioplastic, which is highly heat resistant, strong, and suitable for injection molding, and the world's first highly durable biofabric made from 100% plant-derived fiber. The Mazda Premacy Hydrogen RE Hybrid, which became available under a leasing program in March 2009, features interior panels around the instrument panel, seat covers, and door trim made from these materials.

In 2008 we became involved in a joint research project with Hiroshima University and the National Institute of Advanced Industrial Science and Technology to develop bioplastics technology using non-food-based cellulosic biomass produced from inedible vegetation such as wood shavings and plant waste. It is a sustainable, plant-based raw material that does not consume food resources and also contributes to a reduction in carbon dioxide emissions during the manufacturing process.



Mazda Premacy Hydrogen RE Hybrid, which became available through leasing in March 2009

TOPICS

Opening Ceremony for HyNor Hydrogen Filling Station

A ceremony was held in May 2009 to celebrate the opening of a HyNor hydrogen filling station in the Norwegian capital of Oslo. Mazda is supplying Mazda RX-8 Hydrogen RE vehicles to the project. Mazda's first RX-8 Hydrogen RE vehicle built to Norwegian specifications was unveiled at the ceremony.



Hydrogen filling station opening ceremony

Comments from HyNor Project Leader

Since the start of the HyNor Project in 2006 we have opened two hydrogen filling stations. I am very pleased that we have now established a station in Oslo, Norway's capital. The opening of this hydrogen filling station is a very significant step in the building of a hydrogen infrastructure throughout the suburbs of Oslo.

Mazda's RX-8 Hydrogen RE is a clean and sustainable vehicle because it runs on hydrogen, and it is also an attractive car that is very enjoyable to drive. I look forward to the delivery of more hydrogen rotary engine vehicles to Norway in the years ahead.



Ulf Hafseid
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HyNor Project URL <http://www.hynor.no>



Note: Other than the parts shown in the photo, Biotechmaterial is also used for rear seat covers and the hydrogen tank cover.