eFuels in detail

30/04/2024 Together with international partners and the Chilean operating company Highly Innovative Fuels (HIF), we have ensured that synthetic fuel has been produced industrially in **Punta Arenas in Chile**since the end of 2022. This location has very favorable conditions by global standards. There is a constant and strong wind there. This results in very low electricity generation and therefore low production costs. A pilot plant has been built at this prime location, which is designed for a maximum production volume of **130,000 liters.**

HIF: The Siemens Gamesa wind turbine has a capacity of 3.4 MW and a total height of 150 meters. The blades are 65m meters long and the tower is 84m meters high. Strong and constant winds make Magallanes one of the best locations in the world for production of hydrogen and derivatives.

At the planned location of the pilot plant in Chile, a wind turbine runs at full load for an average of 270 days a year. In Germany, on the other hand, the same wind turbine with the same investment only runs at full load on around 66 days a year due to the geographical and meteorological conditions. At 74 percent, the utilization rate of the wind turbine in Chile is therefore four times higher than in Germany at 18 percent.

HIF: The raw methanol is distilled to lower the water content from 36% to 4%. Refrined mathanol enters the fluidized bed reator, where dehydration reactions glue the carbon atoms from the methanol together to form longer hydrocarbon chains, known as raw gasoline. The gasoline goes through a stabilization and fractioning process to obtain the final product: a 93 octane gasoline, chemically equivilant to conventional gasoline.

HIF: This green tank stores unprocessed water. Only 280 l/h of water is consumed in the electrolysis process. Over 80% of the capacity of the tank is required to fire fighting purposes.

HIF: The electrolyser uses the renewable energy produced by the wind turbine to split water molecules into oxygen and hydrogen. This process is called „electrolysis“.

MEDIA ENQUIRIES

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