



## HYSNOW - ZERO EMISSION WINTER TOURISM USING HYDROGEN TECHNOLOGY

FRONIUS PROVIDES IMPORTANT COMPONENTS  
FOR THE HYDROGEN ECOSYSTEM WITH A  
REFUELLING SYSTEM AND SNOWMOBILE

# HYSNOW

## WINTER TOURISM BECOMES MORE SUSTAINABLE

Sustainability for winter tourism is finally here. Those in off-grid mountain huts have already known about photovoltaic systems for many years. In the transport sector too, steps are also being taken towards CO<sub>2</sub>-free refuelling. With the innovative “HySnow” project, the foundations are being laid for the next phase. The term HySnow refers to the entire chain, from the photovoltaic system and hydrogen production with refuelling system, to a small fleet of fuel-cell powered snowmobiles, which have been developed, built and tested under real-life operating conditions at the Hinterstoder-Wurzeralm ski resort in Austria. The green electricity for the refuelling system is generated using a 34.5 kWp PV system with Fronius Symo inverters. The primary goal of the pilot project is the decarbonisation of winter tourism.

## HYDROGEN REFUELLING SYSTEM WITH GREEN PV ENERGY FROM FRONIUS INVERTERS

The Lynx HySnow is being used as the snowmobile, which is based on the tried-and-tested Lynx 69 Ranger Alpine. The starting model has been completely revamped, going from having a combustion engine to being a sustainable electrically powered vehicle, complete with a hydrogen fuel cell. The fuel needed – here green hydrogen – is generated directly on the mountain, using a 34.5 kWp PV system. This type of energy production and distribution offers the enormous benefit of local added value. Clean solar energy is coupled with an electrolysis module with a downstream compressor, thus establishing a 350 bar tank infrastructure. Fronius provides the project with important components that are needed to produce and process hydrogen: two Fronius Symo inverters form the energy source for producing hydrogen from solar power.



(c) Rotax

Several project partners came together to share their know-how as part of the “White mobility revolution” project with HySnow.

BRP-Rotax GmbH&CoKG is the consortium leader of the four-year project and is being supported by Fronius International GmbH, HyCentA Research GmbH, the Institute of Electrical Measurement and Measurement Signal Processing (EMT) of TU Graz, Elring Klinger AG, ECuSoL GmbH and Hinterstoder-Wurzeralm Bergbahnen AG as project partners.

HySnow is being funded by the Austrian Research Promotion Agency and the Climate and Energy Fund.

## GREEN HYDROGEN – CO<sub>2</sub>-FREE AND PRACTICALLY SILENT

The Lynx HySnow is refuelled using hydrogen generated from a dedicated PV system, making it completely emissions-free. Another advantage of hydrogen-powered vehicles is that they are almost silent and CO<sub>2</sub>-neutral. They operate regardless of temperature fluctuations and achieve higher ranges than conventional electric vehicles. The Lynx HySnow is mostly used in winter tourism fields, but can also be used for mountain rescue.