


# The world's first integrated Power-to-H<sub>2</sub>-to-Power/Heat demonstration plant



 100% Hydrogen operation in DLE

## PROJECT TYPE

Hydrogen Production



Fuel shift hybridization



Partnership



Electrolyzer



H<sub>2</sub> gas turbine



## Customer Challenge/Driver

The EU-funded **HYFLEXPOWER** project, involving a consortium of **Siemens Energy**, **Engie Solutions**, and **Centrax**, is demonstrating the use of **hydrogen**, produced and stored from **renewable electricity**, in combination with natural gas in combined heat and power plants. The **SGT-400** industrial gas turbine at this site has been **upgraded to convert stored hydrogen** into electricity and heat.



## Portfolio Elements/Scope

- **Sylizer 200** electrolysis, hydrogen compression/storage and a 12 MW **SGT-400 industrial gas turbine**
- For the first time, an existing commercial gas turbine has been converted to run on **100% H<sub>2</sub> mixtures** in **DLE** mode



## Customer Benefit

- **100% H<sub>2</sub> for carbon-free power generation** from stored green renewable energy **successfully** demonstrated in Sept. 2023
- **Decarbonizing** Smurfit Kappa PRF pulp and paper industrial site by **modernizing** the combined heat and power plant
- The **partnership** within the consortium leverages **shared expertise**, **drives innovation** and **pioneers** the application of technologies previously limited to the mobility and laboratory sectors.

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