

Hydrogen in a Nevers High School

Energy transition is at the heart of current concerns. The Burgundy Franche-Comté Region has a good understanding of the challenge and is implementing systems to promote the new generation awareness and to teach them on how to use alternative energies. A public tender was launched in 2017 for the installation of 5 multi-purpose hydrogen stations in the high-schools of the Region. MAHYTEC just finalized the first implementation in Pierre Bérégovoy High School in Nevers (in Burgundy, East of France).

Educational version of energy storage stations

The system includes the whole hydrogen chain : production through an electrolyser, storage and electrical conversion with batteries and a fuel cell. In order to provide a better understanding of all the hydrogen energy technologies, the station is equipped with hydrogen storage using two different technologies. The system includes indeed a compressed hydrogen storage at 30bar to increase understanding around handling medium pressure, and two metal hydride storage, working at low pressure, that will allow students to discover and experiment some thermodynamics fundamentals. Some tablets are offered with the system for monitoring and interactive lessons.



Through this station, it is also possible to fill the tank of a small hydrogen vehicle. This vehicle is powered through hydrogen stored into metal hydride tank at low pressure and a hybrid system fuel cell/batteries. This environmentally friendly method of transportation at the disposal of the high school staff with the station will be used as a demonstration of the potential of hydrogen as the new fuel of the future.

To face the challenges of the energy transition, MAHYTEC proposes some conferences open to the general public (teachers, students, staff, etc.) These conference are free and will give through practical cases some information on why and how to operate hydrogen as an energy vector.

MAHYTEC has finalized in end of July the implementation of the first bivalent station installed in Pierre Bérégovoy High School in Nevers (Burgundy). The station will be ready to use for back-to-school time. Four stations will be installed in the coming weeks in the high schools of Dole, Auxerre, Joigny and Montbéliard.

A highlighted company from Dole

MAHYTEC is specialized in the design and manufacturing of hydrogen tanks, but also of renewable energy storage systems. Conscious of the need for trainings in the hydrogen sector, MAHYTEC developed a specific product for education, based on a multi-purpose station. With its strong experience in education, the founders of the company think that it is important to anticipate now the needs of trainings, starting in high-schools, for tomorrow's carriers in clean energy industry. By having pedagogic tools at an industrial size will allow future technicians to reach a better understanding of hydrogen technology and carry an advantage to enter the industry.

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