

Reversible solid oxide Electrolyzer and Fuel cell for optimized Local Energy miX

WP5 Installation and Field Test: objectives

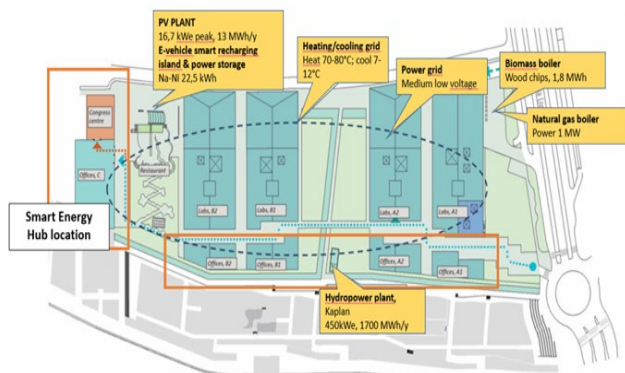


Field test operation of the system is one of the key activity of the project.

The aim of the WP is:

- To prepare the site of ENVIPARK in Torino (Italy) to host and connect the REFLEX Smart Energy Hub;
- To install the REFLEX system at the ENVIPARK headquarter, to partly cover the electrical and heating needs, and maximize auto-consumption of local renewable energy mix;
- To operate the system and assess its performance, efficiency, and lifetime.

Field installation



ENVIPARK is a Technology Park structured as a site of 10 building units that hosts offices and Laboratories operated by the various companies located in the Park. With real renewable energy sources upstream (a Hydroelectric power plant, 450 kWp power, 1700MWh/y, and a Photovoltaic plant of 17 kW of peak power (13MWh/y) integrated into the park's energy grid, and with real usages of electricity and heat downstream, the behaviour of the rSOC based Smart Energy Hub developed in REFLEX will be evaluated in real operating conditions.

Permittings in Italy

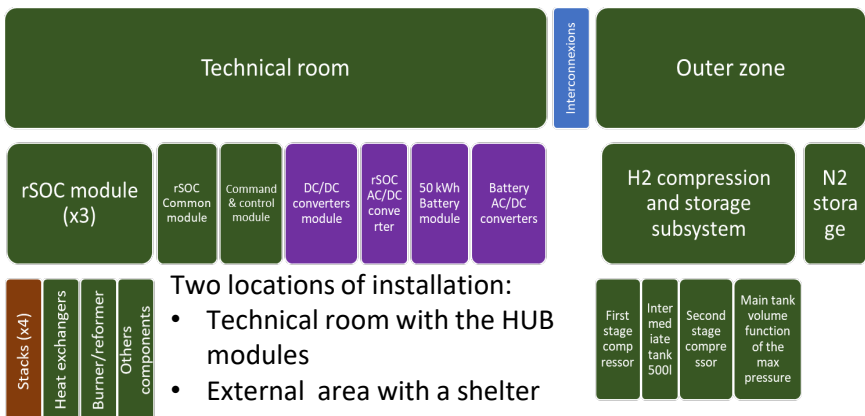
- **Decree of the president of the republic, August 1, 2011, n. 151**

The regulation identifies the activities subject to fire prevention and discipline controls, for the deposit of projects, for the examination of projects, for technical visits, for the approval of exemptions to specifications regulations, and for the verification of fire safety conditions.

- **Decree of the Interior Ministry, February 3, 2016.**

The decree defines the specifications concerning fencing, safety distance and components in natural gas storage facilities, depending on its type and size. In the absence of dedicated regulation about hydrogen storage in the existing Italian legislation, the standard operating procedure is to assimilate hydrogen to natural gas and to consider the limits imposed by this decree.

Smart Energy Hub configuration



The REFLEX project – www.reflex-energy.eu
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