

GREEN HYDROGEN PLANT FOR INDUSTRIAL USE

Europe's most ambitious innovation project to promote decarbonization of industrial sectors

100% renewable hydrogen for emission-free ammonia and fertilizer production



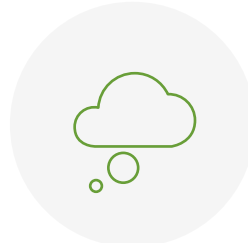
Investment

150 M€



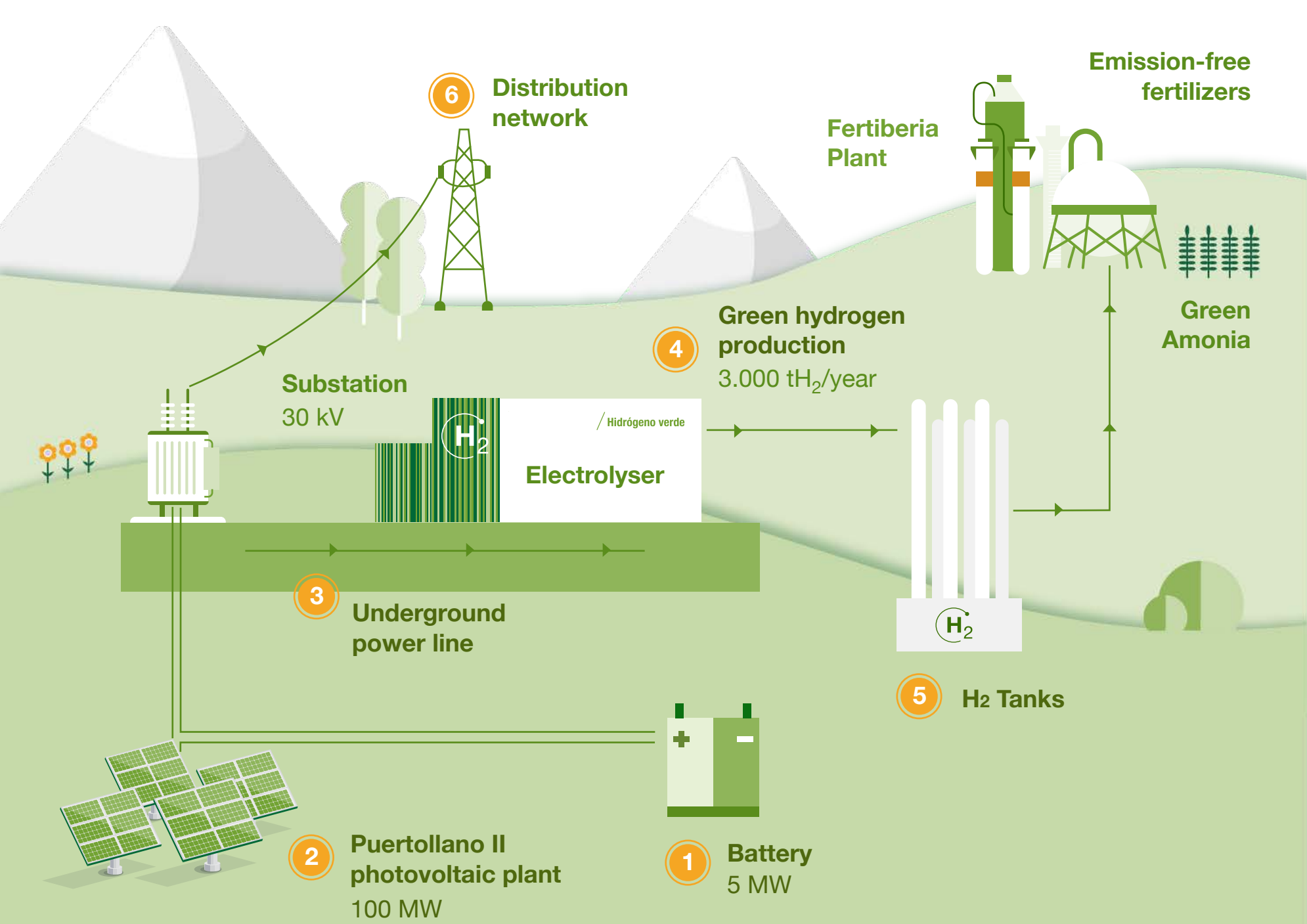
Local jobs

1,000



CO₂ avoided emissions ⁽¹⁾

48.000
tCO₂/año



1 Battery

The project includes a 5MW lithium-ion battery system, with a storage capacity of 20MWh, which allows for greater plant manageability and optimisation of control strategies.



2 Photovoltaic Plant

The new facility for the production of green H₂ from 100% renewable sources consists of a solar photovoltaic plant with an installed capacity of 100 MW.

The installation incorporates state-of-the-art technologies, such as bifacial panels, which allow for higher production by having two light-sensitive surfaces, and string inverters, which improve performance and make better use of the surface area.



3 Underground power line

Dedicated underground power line for exclusive use to ensure that all energy used in the electrolyser is renewable and environmental impact is minimised.

4 Green hydrogen production

Green hydrogen is produced by electrolysis cells powered by both the energy generated by the photovoltaic plant and the battery energy storage system, in a process with no associated CO₂ emissions and allowing the electrification of industrial sectors.

The production process is carried out with a polymer electrolysis system with a 20 MW power supply and a capacity to generate 360 kg/hour of hydrogen.

5 H₂ Tanks

The storage of green hydrogen is essential to guarantee the stability of supply required by the Fertiberia plant and to make efficient use of renewable energy production. A total of 11 tanks that allow the storage of 6,000 kg of green H₂ at 60 bars.

Each tank has a volume of 133 m³ and dimensions of 23.5 m height and 2.8 m in diameter. They weigh 77 tonnes empty and are made of a special steel with a sheet thickness of 4.5 cm to contain hydrogen, given the small size of this particle.



6 Distribution network

The surplus energy generated in the photovoltaic plant is fed into the distribution network for commercialization.

⁽¹⁾ Avoided emissions include reductions in Fertiberia's processes.

