Hydrogen charging station for buildings Smart Grid

by Geoffroy Ville / 2018-06-18 15:27:29 / France / 12869 / FR

Year of commitment : 2017
Address 1 - street : 27 RUE DE LUSCANEN VANNES, France

Green energies : Hydrogen, Hydrogen Storage
Digital services : Smart grid
Sustainable mobility : Charging station

280 000 €

Builder
Atawey

Manager / Dealer
ENGIE COFELY

GENERAL INFORMATION

Atawey has designed a hydrogen station to recharge cars running on this energy interconnectable with the Smart Grid buildings. The new buildings are mainly focused on renewable energy buildings. Hydrogen is a means of storing this intermittent energy and enabling a new clean mobility service for building users.

Hydrogen is produced in the station from water and electricity. The station is connectable to the renewable energy source of the building (solar and / or wind) and

integrates into the energy management system of the latter to be controlled in real time according to the energy production , energy surpluses and building needs.

The first project is installed on behalf of ENGIE COFELY at its client Morbihan Energies (Energy Union of Morbihan). The headquarters of Morbihan Energies is a building whose roof is covered by photovoltaic solar panels generating a power of 130 kWp and a wind turbine of a few kW. The customer also has a Lithium battery (56 kWh) and an energy management system to control it and optimize self-consumption. Hydrogen supplements battery technology to offer a service of energy storage and a valuation of surplus energy for green mobility.

Atawey's Hydrogen Solution enables renewable energy from buildings to offer an innovative clean mobility solution for fleets of community and corporate vehicles, with key benefits for vehicle users: autonomy (> 500 km) and a charging time (5 minutes) similar to traditional vehicles.

Progress Status

Delivered

Data Reliability

Self-declared

Funding Type

Private

Website Enterprise / Infrastructure

https://www.engie-cofely.fr/publications/communique-de-presse-hydrogene-morbihan-energies/

Sustainable Development

Attractiveness :

Atawey is the designer and manufacturer of the Hydrogen Production / Distribution Station as well as the intelligence / program of the system to be driven by an energy management system. The end customer Morbihan Enegies, owner of the building wanted to hold an energy storage solution to optimize his self-consumption. Thanks to hydrogen, he has turned to a solution for developing renewable energies thanks to mobility. ENGIE COFELY is the owner, operator and operator of the hydrogen solution on behalf of Morbihan Energies. It provides the equipment, ensures maintenance and availability. The end customer decides based on its energy production, building consumption of hydrogen production. Holder of a hydrogen vehicle made available to its employees for business trips, the customer manages the hydrogen station according to his needs.

Well Being :

We set up an ergonomic station in its supervision and integration with the customer's Smart Grid. It can be remotely supervised and can be fully integrated into its energy management system. Hydrogen production fully adapts to load variations according to the photovoltaic producible.

Social Cohesion :

The solution brings together clean mobility and innovation. Users have non-polluting electric-hydrogen vehicles with a range of over 500 km and a recharge time of 5 to 10 minutes. This new mobility technology makes it possible to have clean vehicles without changing the behavior of users.

Preservation / Environmental Improvement :

Hydrogen production is made from renewable energies produced by the building. This makes it possible to locally valorise energy surpluses in a use of 100% green mobility. The solution therefore avoids energy wastage thanks to a vector allowing the storage of energy and a flexibility of use by connecting different complementary uses. We start from renewable energies to run vehicles.

Resilience :

The hydrogen station is designed for outdoor installation. As a result, the components are made to withstand normal weather conditions (frost, snow, rain, heat, wind). In case of malfunction due to severe weather conditions, the fairing of the product is completely removable for repair / change of impacted components.

Responsible use of resources :

The different technologies included in the solution do not use rare earths. We have designed the hydrogen station so that it is as economical as possible in operation and also the most durable in time (lifespan> 15 years). We also have a solution of hydrogen production unique in the world (patented) that abolishes the use of corrosive products in the electrolyser (more Soda or Potash) damaging to the environment and to man. This high environmental performance technology improves equipment life.

Testimony / Feedback

Governance

Morbihan Energies

Holder Type : Local Authority

Atawey

Builder Type : Other

ENGIE COFELY

Manager / Dealer Type : Private

The hydrogen station was manufactured by Atawey. This is the property of ENGIE COFELY who operates it and operates it on behalf of the Energy Syndicate Morbihan Energies.Morbihan Energies is the end user.

Business Model :

The hydrogen station is rented by the owner over a long period of time to the end customer. The lease includes the installation and commissioning of the equipment as well as the maintenance and availability of the equipment. The rental solution offers a flexibility solution to the customer.

Sustainable Solutions

Hydrogen charging station

Description :

- Compact, economical and perfectly adapted station for fleets of hydrogen vehicles from 1 to 30+ vehicles
- Plug-and-play station, quick-installation and easily movable for use that adapts to users' whereabouts
- Production of green hydrogen on site by electrolysis of water or supply via external H2 logistics
- Lightened administrative approach for its installation and use

- Mobility :
- Soft transportation
- Electric vehicles
- SmartGrids

Company (es) Website :

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Company (es) Website :

Contest

Reasons for participating in the competition(s)

Les avantages de cette solution pour les bâtiments producteurs d'énergie sont :

- proposer une solution de stockage d'énergie entièrement intégrable au système de gestion de l'énergie du bâtiment

- répondre aux besoins d'autoconsommation de l'énergie produite dans une boucle locale

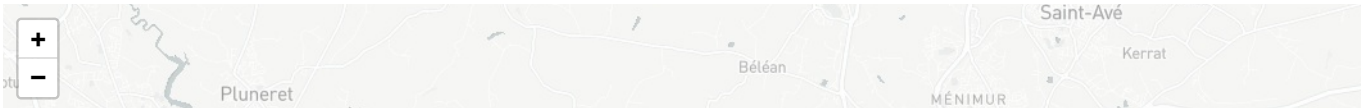
- création d'une nouvelle offre de valeur de mobilité propre pour les usagers du bâtiment

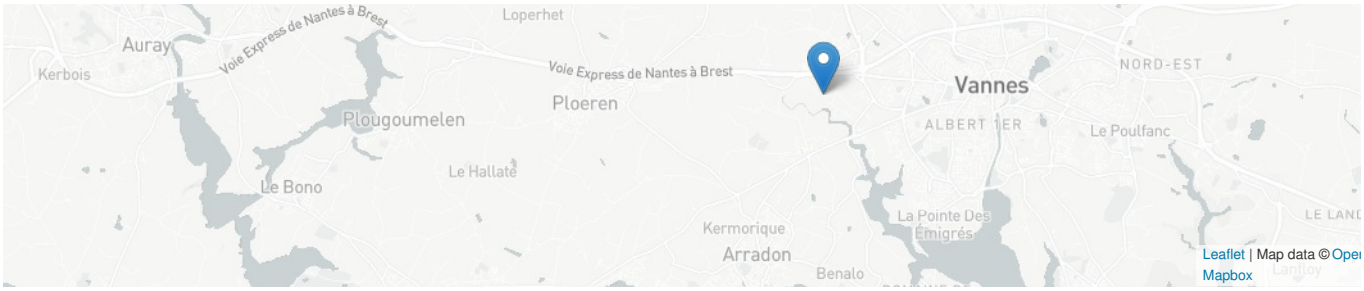
- mobilité propre qui ne demande pas de changement d'usage (autonomie et temps de recharge)

Building candidate in the category

Coup de Cœur des Internautes

Grand Prix Infrastructure Durable





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