



Press release  
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## With the local production of green hydrogen for Fébus, ENGIE is rolling out a global carbon-free mobility solution for the Urban Community of Pau Béarn Pyrénées

Following the September 2019 inauguration of the hydrogen station developed and operated by ENGIE, and the start-up of Fébus in December 2019, the Group has just won the contract awarded by the Urban Community of Pau Béarn Pyrénées to supply these innovative buses with hydrogen produced from Pyrenean hydroelectricity. With an integrated and custom mobility solution, ENGIE is supporting a pioneering community in the energy transition and making use of local hydraulic resources.

### Pyrenean hydroelectricity to produce green hydrogen

With the deployment of alternative and cleaner solutions, Pau and its agglomeration confirm their position as early adopters, contributing to the goals of the Climate Action Plan that this innovative territory adheres to. **First 100% urban high-service bus to run on hydrogen, 100% clean**, i.e. without generating greenhouse gases, Fébus has been circulating in the streets of Pau since December 2019.

In addition to the renewable dimension of the hydrogen that supplies Fébus, **the agglomeration of Pau has chosen to extend its trust in ENGIE to supply renewable electricity produced in the SHEM hydroelectric plants in the Pyrenees, to enable the production of hydrogen on-site**. The station has a capacity of 268 kg of hydrogen per day and thus supplies carbon-free and renewable fuel to eight 18-metre long buses, with a range of 250 to 350 km.

This innovative public transport system responds to the diversity of clean transport and to the ambition of Pau Béarn to develop a less polluting network while using local energy resources in a short-supply circuit dynamic.

### The expertise of ENGIE at the service of the energy transition in Pau

To support the agglomeration of Pau Béarn Pyrénées and to supply renewable and local hydrogen, ENGIE depends on the tried and tested expertise of three of the Group's entities:

- A developer of sustainable mobility (hydrogen, NGV, electric), **ENGIE Solutions** installed the renewable hydrogen charging station for the buses and will be responsible for its maintenance for the next 15 years, alongside Van Hool which supplied the vehicles and ITM Power which made the electrolyser installed on site.
- The third French hydroelectric producer, **Société Hydro-électrique du Midi (SHEM)** is supplying the hydroelectricity thanks to its production sites located in Béarn, the Basque

country and Bigorre. 100% renewable, this electricity under Guarantee of Origin enables completely carbon-free hydrogen to be produced.

- **ENGIE Entreprises & Collectivités, energy supplier**, routes this green electricity using an innovative blockchain\* technology to record daily the allocation of the production of the hydroelectric plants for the use of the buses (production of hydrogen and Fébus charging).

Thus, hydrogen, combined with oxygen in the fuel cell fitted on the bus, makes it possible to produce electricity and heat while rejecting only water. The electricity produced thanks to the electro-chemical reaction is thus used to move Fébus.

To produce “green” hydrogen, electrolysis of water consists in breaking water (H<sub>2</sub>O) down into oxygen (O<sub>2</sub>) and dihydrogen (H<sub>2</sub>) using an electric current from a renewable source. A great vector of renewable energy storage, the hydrogen thus separated can be kept on a long-term basis until it is used as fuel for Fébus.

*“With this exemplary project in the Pyrénées Atlantiques, we are delighted to rely on the confidence of the Urban Community of Pau Béarn Pyrénées to deploy the full know-how of the ENGIE group at the service of carbon-free mobility”* said Eric SARRAZIN, Regional Director ENGIE Nouvelle-Aquitaine.

*“With Fébus, the deployment of a sector of excellence in hydrogen mobility is a strategic priority for the Urban Community and is in perfect keeping with the government’s ambitions”,* stated François BAYROU, President of the Urban Community of Pau Béarn Pyrénées. *“By using the ENGIE group, we benefit from an experienced partner which encourages the development of renewable and local energies. ”*

\* TEO (The Energy Origin) is an innovative solution using blockchain technology to trace the origin of green energy consumed and to evaluate its carbon impact. <https://theenergyorigin.com/>. The start-up TEO is incubated in the ENGIE group.

#### **The Fébus project in numbers**

- 8 High-Service Level buses
- 18 metre-long buses
- Hydrogen produced thanks to the SHEM's hydroelectricity
- 8 distribution points
- 1 hydrogen station producing 268 kg of hydrogen by water electrolysis
- 1 electrolyser
- 2 tonnes of oxygen per day
- 2 IC90 compressors with innovative compression technology
- 1 storage capacity equivalent to 3 days of service

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## About ENGIE

Our group is a global reference in low-carbon energy and services. Our purpose (“raison d’être”) is to act to accelerate the transition towards a carbon-neutral world, through reduced energy consumption and more environmentally-friendly solutions, reconciling economic performance with a positive impact on people and the planet. We rely on our key businesses (gas, renewable energy, services) to offer competitive solutions to our customers. With our 170,000 employees, our customers, partners and stakeholders, we are a community of Imaginative Builders, committed every day to more harmonious progress.

Turnover in 2019: 60.1 billion Euros. The Group is listed on the Paris and Brussels stock exchanges (ENGI) and is represented in the main financial indices (CAC 40, DJ Euro Stoxx 50, Euronext 100, FTSE Eurotop 100, MSCI Europe) and non-financial indices (DJSI World, DJSI Europe and Euronext Vigeo Eiris - World 120, Eurozone 120, Europe 120, France 20, CAC 40 Governance).

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