



n France, every energy system generates an average of 25% to 60% loss. Local energy accelerator Teréga seeks to implement innovative solutions that will build tomorrow's energy models and optimise energy consumption. A collaborative project, IMPULSE 2025 aims to roll out a multi-energy system with a mission to launch operationally in 2025 on one site. Several industrial sites are currently under consideration, including the Lacq basin in the Béarn region.

## IMPULSE 2025, a central link in the energy system of tomorrow

The IMPULSE 2025 project involves a new approach to energy systems, made possible thanks to industrial and digital technologies. Through IMPULSE 2025, Teréga would like to recover lost energy for the right use at the right time for consumers, and via a circular economy approach.

IMPULSE 2025 will thus provide the possibility of:

- > sharing a number of energy sources and supplying them to new users;
- reducing energy waste by storing energy waste for later use or by converting it into energy that is more in demand or more efficient.

Backed by Teréga, the IMPULSE 2025 project will eventually create new synergies and maximise interconnections to present the various energy networks (gas, electricity, heat) as a unified and connected system.

Thanks to the adaptability of the infrastructures and the optimisation of existing energy resources, the benefits of this project will be **economical** but also:

- environmental: the IMPULSE 2025 project is fully in line with Teréga's cross-cutting environmental programme: BE Positif. In the long term, this project aims to reduce greenhouse gas (GHG) emissions, and to promote the integration of renewable energies that meet the energy efficiency thanks to targets set by the Paris Agreement (2015),
- energy thanks to the complementary nature of the networks,
- operational thanks to real-time management of this future dynamic network.

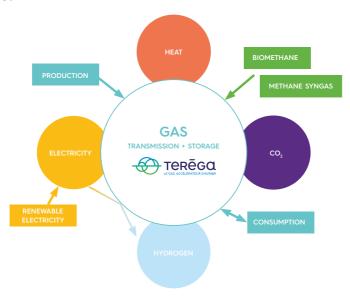
"Teréga is pleased to combine its expertise with the skills of leading specialists in energy systems. We are united around the same goal: the execution of the IMPULSE 2025 project, a necessary new approach to the energy system. This project will allow us to demonstrate that it is through the optimisation of existing resources that we will meet many of the challenges of the ecological and energy transition."

> Dominique Mockly, Chairman & Managing Director of Teréga

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## Teréga infrastructures at the heart of energy networks



## IMPULSE 2025, a three-pronged partnership driven by Teréga

On the initiative of the IMPULSE 2025 project, Teréga wanted to combine the expertise of scientists, namely:

- That of LaTEP (Laboratory of Thermal Engineering, Energy and Processes): associated with the University of Pau and Pays de l'Adour, the partner team worked all aspects of the project relating to the simulation and dynamic optimization of multi-energy systems.
- and, that of IPESE (Industrial Process and Energy Systems Engineering): integrated in the École polytechnique fédérale de Lausanne, this research group led by Professor François Maréchal, an international reference for providing decisionmaking support on the design of integrated multi-energy systems, has worked on the multiobjective energy system optimisation software (OSMOSE).



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