

Press release 13 novembre 2019

ENGIE, DLVA and Air Liquide are entering into an ambitious partnership to produce green hydrogen on an industrial scale.

ENGIE, the Durance, Luberon, Verdon urban area (DLVA) and Air Liquide are signing a cooperation agreement to develop the "HyGreen Provence" project. which aims at producing, storing and distributing green hydrogen.

Initiated in 2017, "HyGreen Provence" will make it possible to develop and validate the technico-economic conditions for the production of 1,300 GWh of solar electricity, equivalent to the annual residential consumption of about 450,000 people, together with the production of renewable hydrogen on an industrial scale through water electrolysis.

The project will be developed in several phases with the first deliverables envisaged by the end of 2021 and a possible final phase in 2027. Eventually, several tens of thousands of metric tons of renewable hydrogen could be produced in this way every year to meet a very broad spectrum of uses.

The DLVA urban area region, which comprises 25 municipalities and 65,000 inhabitants, has considerable advantageous resources for this project, including one of France's most favourable levels of sunshine (an average of 1,450 hours per year), substantial land availability and the presence of a salt cavity storage site able to accommodate the large-scale centralised production of renewable hydrogen.

ENGIE and Air Liquide, partners committed to the development of hydrogen solutions, have decided to join forces in the project, alongside the DLVA urban area region, by combining their strengths:

- ENGIE's expertise in the implementation of zero-carbon solutions for its industrial customers and the regions, solutions that are based on fully renewable energy sources including hydrogen and incorporate the entire value chain (production, storage, distribution)
- Air Liquide's expertise in the field of hydrogen, spanning across the entire value chain, from production until final usage, and which includes in particularly in low-carbon production technologies including electrolysis



• And the commitment of the DLVA region urban area to supporting the development of a project of a scale and nature unprecedented in France

This hydrogen will serve various uses in the areas of mobility, energy and industry, both locally and regionally. As far as mobility is concerned, hydrogen can power all types of vehicle from light motor cars to buses, utility vehicles and trucks. On the energy front, the project plans to provide heat and cooling for an urban eco-district. Lastly, hydrogen can be used in industrial processes that will benefit the entire region.

The signature of this innovative public-private partnership has been made possible by the involvement of many stakeholders committed to the zero-carbon transition. It is fully aligned with the regional initiative being undertaken by DLVA and will contribute most substantially to the development of the hydrogen sector in France.

Gwenaëlle Avice-Huet, ENGIE's Executive Vice President in charge of Renewables, says, "Entering into the partnership heralds a ground-breaking alliance between large industrial groups in France, and a local with the support of the public authorityies, that will accelerate the emergence of massive renewable hydrogen production projects in France. ENGIE is convinced of the importance of renewable hydrogen in providing "zero carbon as a service" solutions to industrial customers and the regions."

Bernard Jeanmet-Péralta, the President of DLVA, says "First and foremost, HyGreen Provence is an ambitious and innovative regional project. It will embrace all those desiring consultation and dialogue, particularly the National Parks in Verdon and Luberon. We are involved in the dynamic that is the "Vallée des Énergies" together with partners such as the Iter project, the Cadarache CEA, Géomethane and hydroelectricity in Durance. We are thereby contributing to the energy transition in France along with leading industrialists which, through their respective expertise, bring credibility and viability to the requirement for zero carbon emissions."

Guy Salzgeber, Executive Vice President and member of the Air Liquide Group Executive Committee supervising Industrial Merchant, Hydrogen and Innovation, said: "We are pleased to contribute to this flagship project, which will demonstrate, in France, on an industrial scale, the key role that hydrogen will play in the energy transition. For more than 40 years, the Group has developed a unique know-how in the field of hydrogen. With expertise in all production technologies—including electrolysis—the Group is now a leading player in the world with regards to low-carbon hydrogen energy production. This project is in line with the Group's climate strategy, the most ambitious in its sector"

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About ENGIE

Our group is a global reference in low-carbon energy and services. In response to the urgency of climate change, our ambition is to become the world leader in the zero carbon transition "as a service" for our customers, in particular global companies and local authorities. We rely on our key activities (renewable energy, gas, services) to offer competitive turnkey solutions.

With our 160,000 employees, our customers, partners and stakeholders, we are a community of Imaginative Builders, committed every day to more harmonious progress.

Turnover in 2018: 60.6 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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