



Elyse Energy, Avril, Axens, Bionext and IFP Energies nouvelles announce the creation of the BioTJet plant in the Lacq industrial area, a new centre of excellence for sustainable fuels

Lyon and Pardies, 16 June 2023 - Elyse Energy - an industrial SME pioneering low-carbon molecules - and its partners Avril, Axens, Bionext and IFP Investissements, have officially announced the creation of the BioTJet plant in the Lacq industrial area (64).

This new plant is a key building block in the development of a French sustainable aviation fuel production industry, in keeping with the roadmap announced by the French government and the "ReFuelEU Aviation" European regulation proposal.

With a total capacity of 110,000 tonnes of product per year, including 75,000 tonnes of e-biokerosene, BioTJet will complement the eM-Lacq project led by Elyse Energy, strengthening the Lacq industrial area's position as one of Europe's centres of excellence for low-carbon molecules.

- The project represents a €1 billion investment and involves the creation of at least 800 direct and indirect jobs, forming part of a broader project known as E-CHO.
- This is the largest investment in the Lacq industrial area since gas was discovered in Lacq in 1951.
- The production unit will be located on a 45-hectare site in Pardies, in the tenement formerly occupied by a Yara France factory

- The plant is due to be commissioned in 2028, with construction starting in 2025.
- Supported by the French government and ADEME, BioTJet will meet 20% of national targets for the use of e-biokerosene in aviation by 2030.

BIOTJET ANNOUNCES ITS INSTALLATION IN THE LACQ INDUSTRIAL AREA (64)

Officially announced today, the BioTJet production unit will be created in the Lacq industrial basin, on the former Yara site.

BioTJet will build and operate a sustainable aviation fuel production plant from biomass and low-carbon hydrogen. By 2028, BioTJet should supply 75,000 tonnes of sustainable aviation fuel to reduce carbon intensity in air transport, and 35,000 tonnes of naphtha for road transport and the green chemicals industry.

The project builds on the BioTfuel® process, which has been initially tested in a semi-industrial plant developed from 2010 to 2021 by a consortium involving IFP Energies nouvelles, Avril, Axens, CEA, TotalEnergies and ThyssenKrupp Uhde within the Bionext company. The BioTfuel® technology helps recover a wide range of lignocellulosic biomass (agricultural and forestry residues), without competing with food uses. BioTJet relies on the BioTfuel® technology version that combines biomass conversion (torrefaction, gasification, syngas treatment and Fischer-Tropsch synthesis) with external hydrogen injection to improve its low-carbon yield, thereby doubling the amount of e-kerosene obtained for the same amount of biomass used. Low-carbon hydrogen will be produced using electrolytic hydrogen from Elyse Energy's eM-Lacq project.

A NEW MILESTONE IN THE DEVELOPMENT OF THE BIOTJET PROJECT

The choice of site and the preliminary dimensions are based on the first phase of the feasibility study carried out by the BioTJet project partners. Once the feasibility stage has been completed, basic engineering studies can get under way, along with the public participation phase as part of the preliminary consultation process approved by the *Commission Nationale du Débat Public* (French National Public Debate Commission), with a view to starting construction at the end of 2025 and bringing the project into service by 2028.

In December 2022, the project partners agreed on the financial structure of BioTJet. Five shareholders confirmed their participation in the Executive Committee: Elyse Energy, Avril, Axens, Bionext and IFP Investissements (investment subsidiary of IFP Energies nouvelles). Upon completion of this transaction, Elyse Energy holds more than two-thirds of the capital, the main partners Avril, Axens and IFPI sharing the balance evenly.

The BioTJet project and the eponymous company are supported by ADEME as part of the 4th Future Investment Programme — France 2030. Announced at the launch of a working group dedicated to sustainable aviation fuels at the French Ministry of Energy Transition, the BioTJet project is one of the winner of the Call for Projects for the “Development of a French sustainable aviation fuel production industry” with €7.9 million in aid, including €3 million in repayable advances.

BIOTJET, A PROJECT SERVING FRANCE’S AEROSPACE INDUSTRY

Having halved the energy consumption per passenger in 20 years, air transport committed to carbon-neutral growth in 2020 and must strive towards carbon neutrality by 2050, in keeping with national and European policies. In addition to energy efficiency measures, sustainable aviation fuels will be key to achieving these targets.

To this end, in February 2023 the Ministers for Energy, Transport and Industry launched a working group to promote the development of sustainable aviation fuels, with a view to creating a sustainable fuel industry in France. France has major assets to be at the forefront of this new industry: a leading and committed aerospace ecosystem, control of key technologies, and low-carbon resources that can be put to good use in conjunction with the agricultural and waste sectors and nuclear and renewable power facilities.

By meeting almost 20% of the targets set for 2030 in terms of the mandatory incorporation of sustainable aviation fuels, the BioTJet Project is fully in line with the national roadmap, while ensuring strict application of the core principles of France’s strategy, in particular ensuring the sustainability of domestically produced aviation fuels, the implementation of frugal supply chains, consistency with supranational initiatives and the economic viability of the sector.

LACQ, A NEW CENTRE OF EXCELLENCE FOR SUSTAINABLE FUELS

The BioTJet and eM-Lacq (e-methanol production) projects, which have come together to form the E-CHO cluster in the Lacq industrial area, are designed to pool the production of hydrogen by water electrolysis and build on industrial synergies in a project of excellence in terms of circularity and environmental efficiency.

The choice of the Lacq industrial area also reflects the region’s industrial heritage, as the basin bears the marks of the industrial activities resulting from the exploitation of a natural gas deposit discovered in 1951 and put into commercial operation in 1957.

Over the past ten years, despite the cessation of commercial gas production in 2013, the basin has experienced significant and diversified industrial development, based mainly on energy and chemicals. With 8,000 jobs in 2023, industry accounts for a significant proportion of local employment (35% of the local workforce).

Since the end of gas production, the Lacq-Orthez Community of Municipalities, in conjunction with GIP CHEMPARC, has been pursuing a proactive and dynamic policy towards restructuring the basin by encouraging the presence of new players capable of creating jobs in green industries and the energy transition. Since 2019, the Community of Municipalities has been part of the “Lacq-Pau-Tarbes Industrial Territory”, which is involved in economic development strategies on a number of sites in the Lacq industrial area (such as the Pardies-Mourenx-Noguères-Bésingrand platform). This translates into support and the forging of links between institutions and businesses, as well as the development of research in the region.

Lacq industrial area in figures...

17,000 jobs
23 business parks
8 start-up centres
4 business incubators
15 laboratories
More than 300 researchers
7,455 businesses, including
250 service providers and
subcontractors serving the
industrial ecosystem

ecosysteme industriel

From a very early stage, the Lacq industrial area was determined to make a transition to green chemicals and renewable energy, hence its enthusiastic support for manufacturers in these sectors as they relocate to the region. In particular, the Community of Municipalities is keen to position itself as a pioneer in the field of sustainable synthetic fuels, and has been instrumental in helping Elyse Energy and its partners set up BioTJet and eM-Lacq in the basin, as part of what is now known as the E-CHO project cluster, alone or through partnerships. With the creation of these three industrial units, Elyse Energy wishes to help improve national and local energy sovereignty, while also contributing to the Lacq industrial area reindustrialisation strategy.

The aim is to set up 2 low-carbon molecule production plants on 3 sites in the following municipalities:

1. Lacq: production site for 200,000 tonnes of e-Methanol for industry and maritime transport (eM-Lacq) developed by Elyse Energy
 2. Pardies: production site for 75,000 tonnes of e-biokerosene for air transport (BioTJet)
- Mourenx: low-carbon hydrogen and oxygen production site, supplying the Lacq and Pardies plants.

*“Elyse Energy is delighted to officially announce the creation of BioTJet in the Lacq industrial area. This could not have happened without the support and commitment of all our local partners, including a wide range of players from industrial and political ecosystems: the Lacq-Orthez Community of Municipalities, Chemparc, Téréga Solutions, Sobegi and all the manufacturers on the platform, as well as our partners in the BioTJet project company”, points out **Pascal Pénicaud, co-founder and CEO of Elyse Energy.***

*“This investment in a large-scale French industrial project in the Lacq industrial area demonstrates Axens’ deep-rooted commitment to the industrial development of technologies essential to the energy transition”, says **Jean Sentenac, CEO of Axens.***

*“We are delighted to see BioTJet establish itself in the iconic industrial area of Lacq. The BioTfuel® technology, which will be at the heart of this sustainable aviation fuel production unit, is the result of an intense, 10-year research partnership to which we have been, and still are, strongly committed. This achievement is fully in line with the IFPEN group’s ambition to use its innovations to help reduce carbon intensity in industry and transport”, adds **Pierre-Franck Chevet, CEO of IFP Energies Nouvelles.***

*“The creation of BioTJet in the Lacq industrial area marks the industrial maturity of a new generation of biofuels for sustainable aviation. Avril, a long-standing leader in biofuels and transport decarbonisation in Europe, and its partners in the Bionext/ BioTfuel® consortium, are behind the technology that is now used to reduce carbon intensity in air transport and promote green reindustrialisation. This second-generation biofuel, derived from lignocellulosic biomass, is particularly promising, as it should reduce greenhouse gas emissions from the aviation sector by up to 90%. At the same time, Avril is continuing to develop a biofuel made from French intermediate oilseed crops, illustrating the natural convergence between our country’s agricultural, industrial and aerospace sectors - and its strong potential”, emphasises **Paul-Joël Derian, Avril’s Director of Innovation and Sustainable Development and CEO of Bionext.***

*“The creation of BioTJet announced today is a perfect illustration of our commitment, enshrined in this formula: “Lacq has a future because it has decided to have one”. Chemparc supported medium-sized energy transition and green chemistry projects in terms of investment, before a new ambition, significant and fundamental for the future of Lacq, was set in motion with Elyse Energy and its partners. This ambition is achieved through the E-CHO projects led by the Elyse Energy group. GIP CHEMPARC, which has been working with Elyse Energy on these projects for several months, will continue to act as an interface with all local, regional, national and European stakeholders to ensure that the project becomes a reality. Chemparc would like to thank Elyse Energy for the confidence it has shown in the Lacq industrial basin and in all the players who have contributed to this decision in their own way”, adds **Pierre Nerguararian, Chairman of the Chemparc Public Interest Group (GIP), Lacq.***

“For some years now, the Lacq industrial area has been charting a new course based on renewable energy and reducing our carbon footprint on Earth. The Lacq-Orthez Community of Municipalities is playing its part with an ambitious policy of redeveloping brownfield sites. This policy has led to the installation of solar farms producing 50 Megawatts of electricity, as well as France’s largest biogas plant.

*Elyse Energy is planning the largest investment in our region since gas was discovered at Lacq. This investment will reduce carbon intensity in air and sea transport, making our planet more breathable. We are proud to welcome their plants to our region, where they will produce the fuels of tomorrow, reducing greenhouse gases, the main culprits for global warming. We are delighted that Elyse Energy and its partners have chosen the Lacq industrial area as the location for their activities, thus creating many jobs based on the production of the fuels of the future. While energy production in the Lacq industrial area is continuing, it is now part of a sustainable future”, stresses **Patrice Laurent, Chairman of the Lacq-Orthez Community of Municipalities and Mayor of Mourenx.***

*“The Nouvelle-Aquitaine region has worked hard to host Elyse Energy’s biokerosene plant project in the Lacq industrial area, which is set to become an emblematic hub for green industry. We have everything we need to become the leading region for low-carbon aviation, with a rich aerospace ecosystem in both industry (Safran, Dassault, Thales, etc.) and research (ICMCB, PPrime, etc.). Our economic policy, geared towards supporting innovation, has enabled the emergence of new players who will be pillars of the energy transition in aerospace, such as VoltAéro (with its hybrid-electric and soon hybrid-hydrogen aircraft), Elixir Aircraft with its 100% composite aircraft, and Beyond Aero, a hydrogen-powered business jet that has chosen to put down roots in our region...”, says **Alain Rousset, President of the Nouvelle-Aquitaine Region.***

About Elyse Energy:

Based in Lyon, Marseille and Madrid, Elyse Energy produces e-fuels through the development and operation of green hydrogen and e-fuel (e-methanol and SAF) plants. Created in 2020, Elyse Energy aims at providing tangible solutions and neutral fuels for the air and maritime sectors, as well as intermediates for industry and petrochemicals. Elyse Energy relies on a team of experts in hydrogen technologies and carbon recovery, as well as in the financing and development of major energy projects, all committed to the transition towards environmentally and climate-friendly forms of energy.

To find out more, visit elyse.energy

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About Avril

Founded in 1983 on the initiative of the agricultural world, Avril is a key industrial and financial player in the vegetable oil and protein sector. Operating in sectors as diverse as human food, animal nutrition and expertise, renewable energy and green chemistry, Avril builds on a portfolio of recognised brands that are leaders in their markets in France and abroad: Bunica (Romania), Costa d'Oro (Italy), Lesieur, OleolOO, Oleon, Puget, Sanders, Taous (Morocco), etc. In 2022, the Group's turnover amounted to €9 billion. It has 7,367 employees in 19 countries and 73 industrial sites worldwide. For nearly 40 years, Avril has remained true to its original mission: to feed People and animals and preserve the planet. Faced with today's challenges, Avril has chosen to reaffirm its power to take action by expressing its *raison d'être*: Serving the Earth.

To find out more, visit groupeavril.com | Twitter @Avril | LinkedIn April

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About Axens

The Axens Group provides a comprehensive range of solutions for the conversion of petroleum and biomass into cleaner fuels, the production and purification of major petrochemical intermediates, the chemical recycling of plastics, natural gas processing and conversion options, water treatment and carbon capture. The offering includes technologies, equipment, furnaces, modular units, catalysts, adsorbents and related services. Axens is ideally positioned to cover the entire value chain, from feasibility studies to the start-up and monitoring of units throughout their life cycle. This unique position guarantees optimal performance and a reduced environmental footprint. Axens' international offering is based on highly qualified human resources, modern production facilities and an extensive global network for industrial, technical and commercial support services. Axens is an IFP Group company.

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About Bionext

Bionext was founded in 2010 by the six partners of the BioTfuel® R&I project: Avril, Axens, CEA, IFP Energies Nouvelles, TotalEnergies and ThyssenKrupp Industrial Solutions. For 10 years, Bionext coordinated the BioTfuel® R&I project and managed the expertise contributed by its six partners and shareholders. In particular, Bionext built and operated two demonstration units, one dedicated to the pre-treatment of biomass by torrefaction (Venette) and the other to the gasification and Fischer-Tropsch synthesis stages (Dunkirk), which helped validate and optimise the BioTfuel® technology marketed by Axens.

About IFP Investissements

IFP Investissements is the investment subsidiary of IFP Energies Nouvelles. IFP Energies nouvelles (IFPEN) is a major player in research and training in the fields of energy, transport and the environment. From scientific concepts in basic research to technological solutions in applied research, innovation is at the heart of its activities, which are structured around four strategic areas: climate, environment and circular economy; renewable energy; sustainable mobility; responsible hydrocarbons.

To find out more, visit www.ifpenergiesnouvelles.fr

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About the Lacq-Orthez Community of Municipalities

The Lacq-Orthez Community of Municipalities is committed to the region's industrial redevelopment through ecological transition, and is pursuing a proactive policy in terms of business property and land. For several years now, it has been developing a strategy designed to acquire land, attract and support project developers, in order to bring new businesses and consolidate existing ones. Encouraging this development while respecting the quality of life of local residents is what guides its action.

At the crossroads between the Mourenx, Noguères, Pardies and Bézingrand municipalities, the eponymous platform on which part of the Elyse Energy project will be located symbolises this industrial renewal in favour of renewable energy. From 162 hectares of wasteland acquired by the Community of Municipalities in 2018, to nearly 150 hectares reclaimed today, it is becoming a leading multi-energy cluster in terms of carbon intensity reduction, combining photovoltaics with anaerobic digestion, low-carbon hydrogen and, soon, e-methanol and sustainable aviation fuels.

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