

IJGlobal ESG Energy Transition – EDRAM's Project Ares 2

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Edmond de Rothschild Asset Management's (EDRAM) Project Ares 2 – the second round financing for Francaise de l'Energie (FDE) – wins the IJGlobal ESG Energy Transition Award for what one judge described as an “interesting, innovative and potentially scalable” project.

Another judge says of EDRAM's financing: “Cryo Pur's technology is based on a cryogenic system that combines a system of integrated refrigeration cascades to separate the different gas components and liquefy them.

“Thanks to these processes based on several major families of international patents, the LBG and Bio-CO2 obtained thus meet the needs of all types of application.

“This is an example of exemplary innovation in the supporting the transition needs.”

FDE – the carbon negative energy producer – in October 2022 issued a second green bond for the development of its low carbon energy portfolio in Europe, working in partnership with EDRAM.

This follows FDE's successful €40 million (\$42m) bond issuance in 2021 (Project Ares 1) through EDRAM's BRIDGE (Benjamin de Rothschild Infrastructure Debt Generation) platform.

This 2021 deal involved the green bond financing of FDE which played a part in winning EDRAM an IJGlobal ESG Award [last year \(2022\)](#) to recognise its main activity of capturing of methane emissions (CH4) from abandoned coal mines in France and Belgium.

FDE converts or monetises this gas into electricity, gas and heat sales under long-term regulated tariffs – feed-in tariff in France and green certificates in Belgium – or long-term private contracts with local stakeholders including industrials and municipalities that are willing to offer local and affordable green energy to surrounding communities.

At the time, Jean Francis Dusch, managing director and global head of infrastructure and structured finance at EDRAM, said: “What we liked about this opportunity is that it is good energy transition play, where we start with closed mines but from that create something that has positive impact on the environment. From the moment we talked to them, we could see their conviction and the CEO had a clear view on how to implement it.”

He added: “We also liked that there was a true conviction on what the positive impact on environment could be, which was important in putting together a financing structure that would finance this investment.

“Importantly, we also had a kind of framework finance agreement in place, where – if the next project fitted certain



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environmental, social impact, operational and financial criteria – we would then finance the next phase.”

And here, Dusch was referring to the latest financing – Project Ares 2 – which is valued at €20 million and is a genuine example of an innovative bilateral energy investment.

In April 2022, FDE acquired 94% of the capital of Cryo Pur, a French company specialising in the treatment of biogas and its liquefaction into liquefied biogas (LBG) and Bio CO₂ (as by-product from the liquefaction process of biogas).

BRIDGE extended the second financing to FDE – Project Ares 2 – to support the application of the Cryo Pur technologies on several biogas production site across Europe, in particular in Norway where fish waste is being treated in biomethanisation plants and then liquefied thanks to its technology.

Marriage of equals

Francaise de l'Energie (FDE) is now a multi-technology energy producer active in emissions capture and recovery (CH₄ and CO₂), solar energy and biogas, staking its position as a positive influence on the market transition toward lower carbon emitting activities.

The projects that are being financed by BRIDGE have an important sustainability impact in terms of reducing greenhouse gas (GHG) emissions into the atmosphere. This is particularly relevant given CH₄ is considered by scientists to have 82.5x more greenhouse impact than CO₂ over a 20-year period.

The proceeds of this latest bond enable the construction and installation of further capacity over the next 3 years. Beyond that, the recovery of CO₂ from the Cryo Pur process is also key as it can be used as a carbon capture technology across a long list of carbon intensive activities.

As an extra bonus, the biogas liquefaction is becoming increasingly important as – once liquefied – it allows the efficient transport of biogas that is usually produced in remote areas, therefore allowing for its deployment in applications as diverse as road transportation and shipping industries.

Cryo Pur acquisition

The Ares 2 financing was put in place for the Cryo Pur acquisition by FDE and to finance its ramp up across several European countries.

Cryo Pur's technology is based on a cryogenic system that combines a system of integrated refrigeration cascades to separate the different gas components and liquefy them. Thanks to these processes, based on international patents, the LBG and Bio-CO₂ obtained meet the needs of numerous applications.

In addition, the processes invented by Cryo Pur – combining purification and liquefaction – have a decisive competitive advantage, particularly in terms of energy costs, and give it a unique positioning compared to biogas purification techniques that do not involve liquefaction, like membrane processes.

This technology allows farmers, cooperatives, industrialists and energy companies efficiently to recover the full energy potential of their products and waste while reducing methane and CO₂ emissions.

The Bio-CO₂ produced, thanks to the process, can be used in short circuits throughout the value chain – including by the food industry – and Bio-LNG is sold to consumers as a substitute for fossil gas.

Cryo Pur technology – which has a useful life of up to 30 years – is currently used in the UK and Norway on 3 biogas sites operated by leading industrial and agricultural players (Greenville and Renevo) with a production capacity of 5,000 tonnes of Bio-LNG and 5,000 tonnes of Bio-CO₂ per annum.

Given the biogas sector relies primarily on supply from waste being managed and used as part of a circular economy solution there is a positive social impact for the nearby communities on top of providing local sources of energy.

FDE is a local energy producer by nature with a strong focus on circular economy and local sources of energy. It focuses on offering affordable energy to local stakeholders in regions where this additional support is welcomed by consumers.

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