

## PRESS RELEASE

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# Dalkia teams up with Terraotherm to roll out innovative heat exchange technology

**EDF subsidiary Dalkia has established an ambitious partnership to market revolutionary heat recovery technology with Terraotherm, an industrial startup specialising in thermal engineering. Audrey Keunebrock, CEO of Starklab, which owns Terraotherm, and Jean-Michel Mazalérat, Chairman and CEO of Dalkia, signed the agreement on 5 September in La Défense, Paris.**

The agreement covers Terraao® technology, which uses an air-to-water heat exchanger to recover thermal energy from air and transfer it to water. The technology is groundbreaking, involving a direct exchange between air and water, avoiding the need for expensive, inefficient metal plates commonly used in such systems. This enables a huge improvement in energy recovery by removing intermediary exchange surfaces and recovering the 'latent energy' resulting from condensation of humidity in the air.

The concept of air-to-water heat exchange is a simple but pioneering idea, as reflected by the eight international patents the startup has filed for Terraao® since 2013. The partnership with Dalkia includes exclusive rights to use the technology across all Dalkia business lines in France. The terms of the agreement will allow Dalkia to market the technology not only for heating and cooling applications but also humidity control for offices, shopping centres, healthcare facilities, museums, swimming pools, etc.

Dalkia first put the technology through its paces at La Presqu'île de Lillebonne, a public swimming pool in Normandy. The trial showed that Terraao® could effectively recover thermal energy from the hot, humid air (previously thrown out into the atmosphere) to heat water for 600 square metres of swimming pool area. "The pool can run solely on recycled energy without the need for boilers at certain times of year," explains Denis Bobillier, Dalkia Director for Technical and Major Projects in northern France and the man who initiated the partnership. "We expect a 60% reduction in energy consumption with this installation," says Jaouad Zemmouri, who created the system.

Terraao® technology unlocks new opportunities for Dalkia, aiming to provide future solutions for energy-intensive local swimming pools by significantly reducing operation and maintenance costs. In 2017, Dalkia will roll out the solution as a cornerstone of its range of products and services for pools and aquatic areas while developing new applications for a wide array of buildings like museums, where it can help address key challenges in heritage conservation.

Terraao® technology is a revolutionary, universal sustainability concept that has numerous applications in areas such as air handling and the recovery of waste heat at low and high temperatures. "*We are really enthusiastic about this new partnership and are happy to see our groundbreaking technology begin to find a market,*" said Audrey Keunebrock, CEO of Starklab-Terraotherm.

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Jean-Michel Mazal rat, Chairman and CEO of Dalkia: *“The partnership is an opportunity to promote a major innovation that is 100% French by offering Dalkia customers a solution that meets their expectations in terms of improved comfort at the best possible price. The technology also supports the energy transition and contributes to the development of French industry and expertise. We are happy to work with Terraotherm, as we do with other innovative startups, in developing its technology towards industrialisation.”*

#### **Terraotherm**

Terraotherm SAS is a company founded in January 2013 that specialises in heat exchange with a focus on air-handling applications. The company designs and produces its own heat exchangers at its Grande-Synthe plant and head office in northern France. It employs 11 people and posted consolidated group sales of €1.1 million in 2015.

#### **Dalkia: leading energy savings in France**

Dalkia, a subsidiary of the EDF group, is one of the leading providers of energy services in France. Dalkia offers its customers tailor-made solutions scaled to fit each building, city, municipality, region and industrial site. Dalkia rises to the challenge of the energy transition and provides its clients with expertise covering the entire energy chain, from energy supply to optimisation of their energy consumption, as well as operation and maintenance of installations. All Dalkia’s solutions are paired with energy efficiency commitments and long-term performance guarantees.