Kyoto guarantees more than 93% Heatcube round trip efficiency

Oslo, Norway, 2 November 2023 - Kyoto Group is proud to announce that we have raised the guaranteed round-trip efficiency (RTE) of Heatcube from previously announced 90% to 93%, when accompanied by a Service Agreement.

Based on numerous simulations, proven through tests at our commercial demonstration unit at Norbis Park in Denmark and detailed calculations based on our mature design, Kyoto are thrilled to finally announce the increased round-trip efficiency of our Heatcube.

With heightened focus on digital capabilities to support the Operations & Maintenance (O&M) of Heatcube, augmented understanding of the system’s performance through ongoing tests at our commercial demonstration unit at Norbis Park, and a comprehensive study of the estimated thermal losses and auxiliary consumption, Kyoto now guarantees an RTE of over 93%.

Kyoto measures the RTE as the total loss of energy during a full charge and discharge cycle, including all energy and heat losses from all components which is within the scope of supply of Kyoto. This includes medium voltage transformers, electrical heaters, tanks, pipes, valves pumps and steam generator. The RTE performance test will be conducted together with our customers at the end of the commissioning and is part of our guarantee under the Service Agreements.

The RTE has a significant impact on profitability for our customers. At an electricity price of EUR 50/MWh, each 1% in RTE improvement equals savings of roughly EUR 0.6/MWh of heat. The 3% increase in RTE yields savings of EUR 1.8/MWh of heat, so for a Heatcube that delivers 30 000 MWh per year, there will be a EUR 54 000 saving per year.

“This achievement displays the effectiveness of our thermal energy storage technology and paves the way for a future where industrial process heat is sourced from clean, renewable electricity, enabling the industry to finally decarbonize while optimizing its operational expenses. We are proud to lead the change towards a greener future,” says Bjarke Buchbjerg, CTO of Kyoto Group.

In addition, Kyoto Group is pleased to confirm that the previously announced negotiations with KALL Ingredients in Hungary is near closing. All partners involved in the transaction have received the internal approvals required to enter into the commercial agreements. The final alignment and corporate revisions are ongoing, and the signing is expected to happen shortly. The legal entity that will provide Heat-as-a-Service to KALL Ingredients (Heatcube Tisza Kft) has been established under the law of Hungary and the joint project team with KALL Ingredients has been established, to prepare the execution of the Heatcube installation.
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About Kyoto Group

Heat accounts for two thirds of industrial energy consumption. Traditionally, nearly all of it is based on fossil fuels. Kyoto Group’s Heatcube, a thermal energy storage (TES) solution, provides a sustainable and cost-effective alternative by capturing and storing abundant but variable energy from sources such as solar and wind. Founded in 2016, Kyoto Group is headquartered in Oslo, Norway, and has subsidiaries in Spain and Denmark. The Kyoto share is listed on Euronext Growth (ticker: KYOTO).