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Press Release from AFRY

LEAG relies on AFRY for another large-scale Power-to-X project in Germany

Lausitz Energie Kraftwerke AG (LEAG) is developing a second Power-to-X (PtX) plant to be built on the decommissioned area of the coal power site in Boxberg, Saxony. AFRY is supporting LEAG from concept optimisation to permit applications, and tendering processes.

One of Germany's major power producers, LEAG, intends to establish the country's largest centre for the production and energetic utilisation of hydrogen, along with large-scale storage of green electricity – the whole initiative known as the H2UB-project – in Boxberg, Saxony.

The hydrogen power plant (H2KW) will consist of a 110 MW electrolyser capable of producing up to 2,100 kilograms of hydrogen per hour. The on-site storage facility is designed for storing at least one day of green hydrogen production.

The hydrogen plant will enable the storage of surplus electricity generated during sunny and windy periods, converting it into green hydrogen. This can then be reconverted by means of a 10 MW fuel cell plant back into electricity during periods of heightened power demand. The green hydrogen could also be transported to external customers via rail or truck, allowing for flexibility in response to market dynamics and developments. The plant will operate in conjunction with a battery storage plant being built at the same site.

Having already provided advice during the permitting and tender preparation phase of another large PtX project called the "Innovative Storage Power Plant – Jänschwalde", LEAG has confirmed AFRY as its trusted technical consultant for the hydrogen power plant of the Boxberg project.

AFRY is supporting LEAG throughout the optimisation of the hydrogen plant concept, providing basic design and layout planning, as well as assistance during permitting and the Engineering, Procurement, and Construction (EPC) tendering phases. The first phase of the project, encompassing concept design, permit application preparation, and technical aspects of tender documents, will have a duration of nine months.

AFRY conducts comprehensive process simulations and technology evaluations to optimise the plant concept and prepare cost estimates, forming the basis for the permit application and international EPC tender process. The technology-neutral permit application highlights LEAG's innovative strategy, while AFRY is responsible of developing a functional EPC tender document for international bidders.

"With experienced and global partners like AFRY, we are well positioned to successfully realise our forward-looking plan to make green electricity base-load capable and therefore available around the clock", says Daniel Kosel, Head of Project Development

at LEAG. "Together with AFRY, we are working on solutions to combine technologies from the fields of hydrogen, electricity generation and electricity storage and put them into practice on a large scale".

"The H2UB Boxberg project is a testament to our commitment to innovative and leading-edge solutions to accelerate the energy transition. We are proud to be LEAG's trusted technical partner in this transformative PtX project, actively contributing to the shift towards a sustainable and green energy industry", says Jose Torres Carmona, EMEA Regional Director, Renewables & Thermal power.

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