

## **Maon Begins Research Project INTERPRET on Interpretable AI-Based Analysis of Short-Term Electricity Markets**

**Berlin, 6<sup>th</sup> July 2026** – Maon has started the research project “Artificial Intelligence and Fundamental Simulation for the Interpretable Analysis of Short-Term Electricity Markets” (INTERPRET). It focuses on developing a novel hybrid method that combines Artificial Intelligence with fundamental simulations to improve the understanding and explainability of short-term power markets.

In today’s rapidly evolving energy system, short-term markets such as Intraday, Day-Ahead, and balancing markets are increasingly affected by volatility and uncertainty. The growing share of renewable generation, battery storage, and electric vehicles leads to more frequent and less predictable deviations between forecasted and actual conditions. While large amounts of data are available, current approaches are often limited either by low interpretability or by insufficient ability to capture real-time dynamics in a consistent way.

In INTERPRET, continuously updated parameters are used as inputs to a fundamental market simulation. By comparing outcomes with observed data, the system iteratively improves its internal representation of market behavior through a feedback-driven learning loop. The central innovation lies in enabling both real-time simulation and interpretability, bridging the gap between data-driven forecasting and physics- and economics-based modeling.

Unlike conventional Machine Learning (ML) approaches that directly predict prices without explaining underlying mechanisms, INTERPRET aims to decompose price formation into structural cost components and behavioral influences. At the same time, it extends fundamental models by enabling near real-time calibration, substantially reducing the typical constraints related to computational effort and manual parameterization.

INTERPRET investigates key research questions, including whether short-term market information can be reliably translated into fundamental model parameters using ML, and whether electricity prices can be meaningfully decomposed into economic and behavioral drivers in a consistent and explainable framework. One of the main expected outcomes is a method that enables fast and interpretable analysis of short-term electricity markets. This could significantly improve decision-making for market participants, system operators, and utilities by providing a deeper and more transparent understanding of price formation and market behavior under uncertainty.

### **About Maon**

Maon is advancing the continental-scale simulation of wholesale energy markets with asset-level resolution. It develops scientifically grounded methods for modeling and analysis, making them available to users through cloud-native simulation environments. By combining production-grade software with leading-edge research, Maon delivers new insights into complex energy markets and enables superior forecasting and decision-making.

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