Everllence promotes energy research

Joël Mesot, ETH President, and Patrik Meli, Managing Director Everllence.

Everllence (formerly MAN Energy Solutions Switzerland AG) and ETH Zurich are forming a strategic partnership to support postdoctoral researchers in the field of sector coupling and energy models.

Rapid technological advances in the fields of digital modelling and machine learning pose major challenges for society, but also offer a wealth of opportunities. European universities and industry have traditionally been strong in the development and production of high-quality hardware. In a world increasingly driven by software and data, it will be important to advance the interconnection of hardware and software solutions in the coming years in order to strengthen the position of Switzerland and Europe as research and production locations in the long term.

Against this backdrop, Everllence is supporting ETH Zurich to further advance research in the field of AI-based energy system models. These models enable in-depth technical and economic analysis of European energy supply markets and networks, including heating, cooling and electricity. Furthermore, existing models will be expanded with additional content and at the same time the computational effort they require will be reduced. This is made possible by generous support via the ETH Foundation, which is funding the appointment of six postdoctoral researchers in the field of sector coupling and energy models. Their research activities are being coordinated by the ETH AI Center and the Energy Science Center at ETH.

Shared goals

Everllence, a Volkswagen Group company, develops, produces and delivers technology solutions for the global energy sector. These include industrial large-scale heat pumps and electrothermal energy storage systems, which

are designed to integrate electricity, heating and cooling. In the medium term, the company plans to also offer AI-based energy management solutions for industrial infrastructure. A particular emphasis here lies on the use of digital services to exploit the potential of sector coupling as effectively as possible.

ETH Zurich is making a significant contribution to the implementation of national and international energy strategies. Under the umbrella of the Energy Science Center, researchers from engineering, the natural sciences and social sciences are working together on renewable energies and their integration into the energy infrastructure, and on sustainable business models for the energy sector. The ETH AI Center brings together researchers from all disciplines at ETH occupied with the principles, applications and effects of AI, and builds bridges with industry.

Partnerships are key

At the contract signing ceremony in the historic production halls of Everllence on Escher-Wyss-Platz in Zurich, Managing Director Patrik Meli and ETH President Joël Mesot were delighted about the partnership. Patrik Meli referred to the shared goal of contributing to a climate-neutral future through innovative technology: “We are very pleased to be working together with ETH Zurich on solutions for a sustainable energy future. Partnerships like these are essential for pioneering technological innovations. It is crucial to overcome silo mentalities, and to consider forms of energy such as electricity, heating and cooling not in isolation, but as a networked overall system within the context of sector coupling. Artificial intelligence offers us valuable tools for understanding these connections better and using them more efficiently – an opportunity we should seize with courage and foresight.”

Joël Mesot emphasised the importance of long-term partnerships at the interface of industry, energy and data sciences for ETH Zurich: “ETH relies on the market proximity of its industrial partners for the effective transfer of research results into practice. This collaboration with Everllence is an important step in developing innovative solutions for the future of energy.”

Everllence

ETH Energy Science Center

ETH AI Center