

Press Release

Martigny and Sion, September 12, 2025

Idiap and HES-SO Valais/Wallis Partner to Accelerate Valais' Energy Transition

The Idiap Research Institute and HES-SO Valais/Wallis have recently completed the OpenBEERS project, a joint initiative supporting the canton of Valais in its shift toward a sustainable and resilient energy system.

To address the lack of centralized data on buildings and energy use, OpenBEERS developed an digital platform that simulates building renovations and renewable energy deployment at an urban scale. The platform combines CitySim, a software for urban infrastructure simulation, and BASOPRA, a tool that optimizes solar energy use via batteries, heat pumps, and electric vehicles.

The platform consists of three key components: a database of building information, a suite of open-source simulation tools for modeling current and future scenarios, and a 3D web interface for data visualization.

The project focused on the municipalities of Sierre and Val de Bagnes, using real or synthetic data as needed. Findings reveal that energy data in Valais is still fragmented, making advanced simulations challenging. Electricity demand is expected to rise sharply with the electrification of heating and mobility, while solar and battery storage alone will not fully address seasonal fluctuations—highlighting the need for long-term storage solutions and rapid building renovations.

The OpenBEERS project was carried out by an interdisciplinary team including Dr. Jérôme Kämpf and Dr. David Geissbühler from the Idiap Research Institute, as well as Prof. Jakob Rager, Dr. Alejandro Pena-Bello, and Dr. Lucien Troillet from HES-SO Valais/Wallis.

By combining their expertise in energy engineering, artificial intelligence, data management, and system modeling, the researchers designed a strategic tool to accelerate the canton's energy transition and strengthen the resilience of its energy system.

Media contacts

Giorgia Rossi, Communications Officer, Idiap
Email: communications@idiap.ch

Jakob Rager, Associate Professor, HES-SO Valais/Wallis
Email: Jakob.rager@hes-so.ch

About

The Idiap Research Institute, located in Martigny, Switzerland, is a Swiss and world leader in artificial intelligence since 1991. With almost 200 employees, the Institute is specialized in several fields of AI, organized into four research programs: Human-AI Teaming, Resilient & Sustainable Societies, AI for Life & AI for All. In addition to its cutting-edge research, Idiap actively participates in local, national, and international projects, fosters collaborations with companies, and drives continuous innovation in the field.