The Swiss Data Science Center (SDSC) collaborates with the Swiss Federal Office of Energy (SFOE) to push further digital innovation in the energy sector

- Data science helps deliver more precise and actionable information to policymakers and the population thanks to improved data quality.
- The Energy Dashboard launched by SFOE in late 2022 is using data science for more accurate energy supply monitoring and quantification of electricity savings in Switzerland.
- Further cooperation will address critical energy efficiency and data security issues.

Lausanne, Zurich, May 1st, 2023 – The Swiss Data Science Center provides data science expertise and services addressing a wide range of needs and issues in various sectors with societal impact, such as biomedical data science, energy, climate and environment, as well as digital administration and big data science.

Digitalization provides benefits to companies and administrations while also involving significant challenges in infrastructure, human resources and growing cybersecurity concerns. While the global energy crisis strains the energy sector, digital innovation utilizing data science offers innovative solutions. Data is more than ever at the heart of this transformation.

As the reference data science hub in Switzerland, SDSC has been cooperating with SFOE on various data-driven projects, including the Federal Energy Dashboard (www.dashboardenergie.admin.ch) launched a few months ago. This platform enables the monitoring of the Swiss national energy supply with high resolution. Today, a new version of the Federal Energy Dashboard has been released using data science.

Advanced artificial intelligence (AI) and machine learning techniques, especially developed by the SDSC for this project, were applied to quantify national consumption and enable its short-term forecast. This has generated data that could otherwise not be provided by the Swiss energy industry itself. More recently, data science allows the quantification of electricity savings by specific consumer groups on a daily basis following information campaigns by the Swiss government. In this context, the combination of data from different sources and providers, made interoperable via appropriate abstractions, proved extremely effective for the descriptions and predictions of the platform. Furthermore, the accurate choice of algorithmic methods counterbalanced the relatively small volume of available data. The outcome is a precious tool for policymakers in the energy sector and a demonstration of a powerful data science AI solution deployed to serve public administration.
“We are proud to be working with a federal institution such as SFOE and contribute to the development of value-added tools to better address energy issues and launch efficient digital innovation. Beyond this specific project, cooperation between the Federal Office and the Swiss Data Science Center is likely to be extended to new SFOE projects, confirming the SDSC as a key partner in this sector in Switzerland,” says Dr. Olivier Verscheure, Executive Director of the SDSC.

“The SDSC’s deep scientific expertise combined with our domain knowledge of the complex energy market in Switzerland proved to be an atomic cocktail for innovation in the sector which enabled us to go further and accelerate digital innovation in our sector. Data science is much needed throughout the energy value chain and SDSC is bringing a lot of value to this process,” explained Dr. Matthias Galus, Head of Digital Innovation Office at the Swiss Federal Office of Energy.

About SDSC
The Swiss Data Science Center is a joint venture of Switzerland’s two Federal Institutes of Technology EPFL (Lausanne) and ETHZ (Zurich). Its mission is to accelerate the use of data science and machine learning techniques within the academic community and the industrial sector. It is made up of senior data scientists and experts in domains such as personalized health & medicine, earth & environmental science, social sciences, digital humanities and economics. The SDSC has offices in Lausanne, Zurich and Villigen, Switzerland. www.datascience.ch

About SFOE
The Swiss Federal Office of Energy (SFOE) is the country’s competence centre for issues relating to energy supply and energy use at the Federal Department of the Environment, Transport, Energy and Communications (DETEC). It creates the prerequisites for a sufficient, crisis-proof, broad-based, economic and sustainable energy supply. It ensures the maintenance of high safety standards in the production, transport and utilisation of energy and creates the necessary conditions for efficient electricity and gas markets and an adapted infrastructure. The SFOE actively promotes efficient energy use, an increase in the share of renewable energy and a reduction in CO2 emissions. It also promotes and coordinates national energy research and supports the development of new markets for sustainable energy use and supply.

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