

Is energy security feasible in a fossil-free Switzerland?

Security of energy supply in a fossil-free Switzerland is feasible and affordable according to a new white paper from an expert group at the Energy Science Center. It will require increased production of renewables and efficient energy trading with neighbouring countries.

How can Switzerland improve energy security?

Even with substantial growth in domestic production, Switzerland will have to continue to import electricity in winter and export it in summer. Energy security could thus be enhanced by expanding winter-productive sources, such as wind, alpine photovoltaics and seasonal heat storage.

Are energy supply systems secure?

An energy supply system is generally regarded as secure when sufficient energy is available without disruption and at affordable prices. To determine the state of energy supply security for Switzerland, the expert group drew on research conducted by ETH Zurich and the ETH Domain.

Why does Switzerland need a European electricity market?

"That's why Switzerland needs efficient access to the European electricity market in which it can balance out the numerous, fluctuating renewable energy sources by time and region," says Schaffner, who is coordinating the work of the expert group in partnership with Kirsten Oswald.

Why are Swiss people worried about energy security?

Recent developments such as the Russian war of aggression in Ukraine and the resulting energy crisis in Europe have aroused concerns about energy security, particularly in the winter months, among the Swiss population and raised questions about the climate and energy policy direction of the federal government.

Why is Switzerland a good place to invest in energy?

Switzerland has a unique opportunity not only to use its innovative strength for the energy transition in its country, but also to export technologies, expertise and experience to Europe and the world in the future. Gabriela Hug is Chair of the Managing Board of the Energy Science Center (ESC) at ETH Zurich.

Future of energy. Whatever the application, safe and intelligent energy distribution sits at the core of solutions for today and tomorrow. ABB's leading-edge solid state circuit breaker concept promises to deliver the major advances in speed, safety and efficiency that next-generation renewables, microgrids and charging stations will need.

The ESC also runs the large energy system analysis platform "Nexus-e" in order to assess scenarios of future energy systems with a focus on the electricity system in Europe. ... is an important information tool covering all aspects of nuclear safety in Switzerland in German and French, as well as some topics in Italian and

English. It is ...

To meet the energy- and climate-policy goals by 2050, the Swiss energy system is undergoing a fundamental change: New nuclear power plants may not be built, existing nuclear power ...

The new research project SURE (Sustainable and Resilient Energy for Switzerland) started on May 4. Over the next six years, ten research institutions under the project lead of the Paul Scherrer Institute PSI will study how ...

In 2004, discussions were started in Switzerland concerning future of energy supply, including domestic electricity generation. On behalf of the Federal Office of Energy, PSI undertook a study to evaluate the ... New safety and system approaches were developed in the 90s, and integrated into the advanced reactor concepts comprising Generation III.

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Tesvolt's new collaboration with Denios aims to "offer extremely safe energy storage systems to customers with special safety requirements". ... Avadis Investment Foundation is buying a BESS project in Switzerland which could be the country's largest when it is scheduled to come online in 2027.

The research group on electrical energy technology and smart grids at the ZHAW Institute for Energy Systems and Fluid Engineering, IEFÉ, centers the integration of renewable energies, electrical energy, and the management of electrical ...

The SWEET-EDGE consortium "Enabling decentralized renewable generation in the Swiss cities, midlands, and the Alps" (2021 - 2027) aims to fast-track the growth of locally-sourced decentralized renewable energy in Switzerland and to ensure that by 2035 and 2050, when ambitious shares of renewable energy are reached, the Swiss energy system is designed and ...

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Urban planners are involved in designing future urban energy systems as a part of their path toward decarbonization or Net Zero targets before 2050. In this process, new energy and information flows between industrial and urban regions should be considered, as well as safety and security managerial aspects regarding the existing and new infrastructures. This ...

The conclusion of our report is clear: transforming Switzerland's energy system to reach net zero is technically feasible and can be achieved at a reasonable cost (possibly even with cost savings according to some calculations) provided that Switzerland rapidly expands renewable electricity generation and maintains the ability to efficiently ...

Changes in the energy system within the next years will be critical for setting the path towards net zero. At the same time, the energy crisis in Europe that was exacerbated by the war in Ukraine ... before 2050. However, keeping the current nuclear power stations in operation in Switzerland as long as they are deemed safe and can be run ...

3 ???· Lausanne, Switzerland. Specialty Chief Editor. Process and Energy Systems Engineering ellen b stechel. Arizona State University. Tempe, United States. Specialty Chief Editor. Process and Energy Systems Engineering chamil abeykoon. The ...

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of Eve Systems o ABB becomes a leader in Matter and Thread, the new smart home connectivity standard and wireless protocol, backed by all major technology players o Acquisition of Eve Systems meets accelerating demand for safe, smart and sustainable retrofitting of buildings driven by energy prices and climate policies

other energy system. It would be totally safe, look like a normal small industry facility with extra protection. Following the success of the previous Th confer-ences, i.e. ThEC10 (UK), ThEC11 (USA) and ThEC12 ... (China), ThEC13 (Switzerland) and ThEC15 (India), iThEC was created in Geneva on September 2012 and brought together regional actors ...

The Country-Specific Safety Culture Forum Switzerland took place in Bern on 19 and 20 November 2024. Representatives from various institutions discussed Switzerland's national culture and analysed its influence on the safety and oversight culture of nuclear facilities. The aim is to continuously improve safety and security.

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The Coalition Linking Energy And Nature for action (CLEANaction) was established in recognition of the urgent need for a global and just transition to a low-impact and nature-sensitive renewable energy system. It brings together NGOs, leading businesses, financial institutions and research and governmental bodies to work together to

CE marking of machines for battery production and for test stands for safe operation according to the requirements of the Machinery Directive 2006/42/EC; Risk assessment according to DIN EN ISO 12100; Design of battery test stands for checking the function and safety of batteries (e.g.: EOL test stands) Electrical risk assessment for lithium-ion batteries as battery storage devices

Nuclear Energy in Switzerland. The nuclear power industry grew rapidly in the 1960s as public and private organizations saw this new form of energy as economical, environmentally clean, and safe. [2] In Switzerland, this was no expectation. In total Switzerland has established five total nuclear power plants ranging from 6 MWe to 1200 MWe.

Sun-Ways is now working closely with global partners, exploring how they can export this technology. They aim to transform how railways generate energy, not just in Switzerland but in other regions too. By engaging with partners worldwide, Sun-Ways hopes to demonstrate that railways can play a crucial role in national energy systems.

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Safe energy systems Switzerland

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