

Energiewende in the Alps: Switzerland's transition away from nuclear

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Switzerland has a long history of trying to be as self-sufficient and energy independent as possible. Although its energy supply system has served it well in the past, the country is now looking to turn away from its reliance on nuclear power and seeks to compensate for the energy lost from hydropower as a result of climate change. In the latest issue of the *Bulletin of the Atomic Scientists*, published by SAGE, Dominic Notter of Empa discusses how the country aims to address this transition, finding a new supply mix that combines energy conservation, greater efficiencies, alternative energy sources, the "smart grid", and the introduction of new technologies, so that Switzerland can secure its energy independence for the future.

In the article, Notter outlines:

"Switzerland has a long tradition of using [nuclear energy](#). With no reserves of coal, oil, or natural gas of its own, the country has to turn to other sources to meet its energy needs [...] All told, nine percent of Switzerland's total energy is met by nuclear power- a figure triple that of the United States (World Nuclear Association, 2015a) [...] But after Fukushima, the Swiss government decided to close down all its [nuclear power plants](#), without a clear vision of what will take their place- a pressing concern in a time of ever- increasing demand."

Notter discusses how the government is examining how best to replace the energy generated from nuclear power. Switzerland could buy its energy from neighboring countries but prefers to be as self-sufficient

and energy-independent as possible after being surrounded by hostile powers in World War II and relying on them for supplies in a time of great scarcity. He states:

"The goal is to gradually phase out of nuclear power and into renewables by 2034, and to be largely independent of fossil fuels. Reaching it is based upon the idea of combining highly efficient energy production processes with substantial reductions in energy consumption."

Notter concludes:

"Over the next four decades Switzerland faces a restructuring of its entire [energy supply](#) system. The new supply mix will be free from [nuclear power](#), rather low in carbon intensity, and resting upon much higher efficiencies based on the newest and the most energy- efficient technologies- along with the developments of smart grids, decentralized power suppliers, hydropower, wind power, photovoltaics, biomass, wood, and the rigorous use of burning waste to generate energy whenever materials cannot be recycled [...] A single "magic bullet" suitable for every purpose is not available. Switzerland most likely has to find its own [energy](#) supply mix, with the biggest sustainability potential."

More information: The article "Small country, big challenge: Switzerland's upcoming transition to sustainable energy", Dominic Notter, published in *Bulletin of the Atomic Scientists*, will be free to access for a limited time.

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