

# Research for the energy turnaround

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Mandated by the Federal Council, the Swiss National Science Foundation (SNSF) is launching two National Research Programmes (NRPs) to explore scientific and technological as well as social and economic aspects of implementing Energy Strategy 2050. Coordinated energy research is a cornerstone of Energy Strategy 2050: it supports the substantial reduction of energy consumption, promotes new technologies, explores the social context and boosts research and business in Switzerland.

The Swiss [energy](#) system is faced with the dual challenge of implementing Energy Strategy 2050 and achieving climate targets at the same time. The two National Research Programmes run by the SNSF will help to advance research at the ETHs, universities, universities of applied sciences and private research institutes. The research results are expected to support politicians, businesses and consumers in making the energy turnaround a reality.

Both programmes will generate scientific and technological as well as social and economic knowledge aimed at reducing the consumption of non-renewable energy and the resulting negative impacts on humans, environment and climate. They will study renewable energy supply and demand as well as options for balancing the two.

Both programmes will prioritise collaboration between researchers, politicians and businesses to ensure the practical relevance of research findings. Besides developing innovative technologies and business models, the results will describe the economic, political and social

conditions as well as management tools that will facilitate implementation in Switzerland in the next 10 to 30 years.

## **Technology and society**

The National Research Programme "Energy Turnaround" (NRP 70) will investigate the ways in which technology can sustainably support the implementation of Energy Strategy 2050. The innovative research and development projects run by excellent academic researchers in cooperation with industry partners will lead to a significant improvement of existing technologies.

Instead of focusing on individual technologies, the projects are geared to key topics along the entire value chain, from production and storage to distribution and consumption. These topics are electricity production and distribution, electricity and heat storage, industrial processes, mobility as well as low-energy and low-CO<sub>2</sub> building materials. Thanks to the integration of individual topics into larger joint projects and close collaboration with industry, NRP 70 will deliver results that are ready for implementation, thereby making concrete and integral contributions to Energy Strategy 2050.

## **"How much is enough?"**

The National Research Programme "Managing Energy Consumption" (NRP 71) will focus on societal issues on the demand side. The aim is to identify economic, legal, political, psychological and societal parameters and trends that make it easier (or more difficult) to tap efficiency and sufficiency potentials. Steering measures will be developed and tested to realise these potentials in private households, businesses and public institutions.

This NRP will also engage in intensive knowledge transfer activities with the political and economic realms. It will analyse questions relating to [energy consumption](#) in households, transport and industry as well as to the acceptance of political and economic measures. The results will include recommendations that support sound decision-making with regard to the location of small hydroelectric power stations or the key elements of an energy tax that would foster rather than hamper the economy. In addition, the programme will develop effective communication measures to encourage a more efficient use of energy along with measures aimed at halving the CO<sub>2</sub> emissions of urban freight traffic by 2050.

**More information:** More detailed information about the projects and the organisation of the two NRPs can be found at [www.nrp70.ch](http://www.nrp70.ch) and [www.nrp71.ch](http://www.nrp71.ch).

Provided by Swiss National Science Foundation

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