



NUCLEAR ENERGY IN SWITZERLAND TODAY

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ABSTRACT

Use of nuclear energy has a long-standing tradition in Switzerland. Especially after the 1st International Geneva Conference on Nuclear Energy in 1955, Switzerland has increasingly started to develop nuclear technology supported similarly by the State as well as by private industries and to apply the merits of nuclear technology to the wealth of the country.

Today, four nuclear power stations with a total of 5 reactors are operating in Switzerland. They contribute approx. 40 % to the country's electrical energy production. Several institutes and universities are involved in research, development and education of nuclear technology, amongst others the well-known CERN and Paul Scherrer Institute.

With an established and consolidated nuclear program in Switzerland and as a result of major accidents at nuclear power stations in USA and Russia, the emphasis on nuclear energy development has changed here. Today, research programs are related mainly on increasing nuclear safety and on finding feasible solutions to management and disposal of nuclear waste. In parallel, nuclear research is also directed towards nuclear fusion and on the use of high-energy cyclotrons.

To cope with the demand on electrical power, that increases rather slowly today in Switzerland, all nuclear power stations have embarked on a generating capacity uprating program. The ambitious goal of these programs is to rise the net power output of each reactor by some 5 %, with neither a need for major changes nor for expensive back-fittings in the existing plants. In parallel safety enhancing systems are added to the nuclear power stations, especially to those which are in successful service since more than two decades.

The paper summarises the present use of nuclear energy in Switzerland - in power generation, for research, industry and medical applications - and gives some highlights of the aforementioned programs.