



Media release
20 October 2023

Renovated Grande Dixence facilities unveiled

Sion – After six years of work, Grande Dixence is today celebrating the return to service of the Fionnay and Nendaz power stations and the penstock linking Lac des Dix to the Rhône plain. These facilities, built in the 1960s, have been completely renovated and put back into service in 2023. Thanks to these major renovation works, they will be able to make a further contribution to Switzerland's electricity supply security in the decades to come. This Saturday, Grande Dixence is organising an open day at the Nendaz plant to give the general public a behind-the-scenes look at the construction sites.

Almost 60 years after the Grande Dixence scheme was commissioned, the hydroelectric company has undertaken major renovation and maintenance work on the entire downhill line linking Lac des Dix to the Rhône plain. Grande Dixence SA and its shareholders have invested a total of CHF 240 million to carry out this major project. Michael Wider, Chairman of the Board of Directors of Grande Dixence SA, emphasises: "To ensure that our facilities can continue to play their part in ensuring the security of our country's electricity supply over the coming decades, it was our responsibility to invest in maintaining the power generation facilities bequeathed to us by our predecessors."

An initial phase during which the various facilities that make up the downhill line between Lac des Dix and the Rhône were analysed allowed for the definition of the renewal, repair and restoration work that was to be carried out. This work, which was divided into 89 sub-projects, took place between 2016 and 2023. For Beat Imboden, Director of Grande Dixence SA, "thanks to the major work that it has carried out, Grande Dixence is maintaining its role as a systemic asset which, in just a few minutes, can inject a huge amount of power into the electricity grid, thereby maintaining the vital balance between electricity supply and demand."

Renovation of the Fionnay and Nendaz power stations

The six generating units at each of the two Grande Dixence power stations, Fionnay and Nendaz, have been fitted out with new valves, turbines, alternators, automatic control systems and auxiliary services. The interactions between the various sub-projects that were carried out simultaneously required rigorous coordination. Innovative solutions had to be implemented to meet the ambitious deadlines, particularly during the phases when the facilities were being brought back into service despite all the work having not yet been completed. The generating units have been gradually brought back into service from the beginning of 2023, to contribute to Switzerland's electricity supply during the critical winter period. Both plants will be fully operational again by the end of winter 2023-2024.

A new pipeline between the lake and the plain

The penstock linking Lac des Dix to the Rhône, via the Fionnay and Nendaz power stations, has also been completely renovated. The overhead section of the penstock, an 850-metre stretch between Péroua and Condémines, has been replaced, while the anti-corrosion protection of the underground sections has been renewed.

The main valves of the downhill line – seven in all – have also been renovated. The safety valves at Louvie and Péroua, at the start of the penstocks, have been replaced, and major renovation work has been carried out on the valves at the start of the water supply galleries at the Grande Dixence dam and the Fionnay reservoir. Due to the large size (three metres in diameter) of the valves involved, the dismantling and installation work as well as the logistical aspects presented real challenges, which were compounded by the difficulty of accessing the sites, which are located at high altitudes. The entire downhill line was reopened at the beginning of September 2022, enabling water to be supplied to the generating plants.

Production maintained despite the work

A special feature of the Grande Dixence complex is that there is a second downhill line linking Lac des Dix to the Rhône plain. This waterfall feeds the Bieudron power station, Switzerland's most powerful hydroelectric plant, with a capacity of 1,200 MW. Throughout the works, all the water stored in the Grande Dixence dam could therefore be used to power the Bieudron plant turbines. One of Switzerland's largest hydroelectric complexes has never ceased to supply Switzerland with electricity.

Open doors

The general public is invited to visit the Nendaz and Bieudron power stations and see the work that has been carried out over the last six years at an exhibition on Saturday 21 October 2023, from 10 a.m. to 4 p.m.

On-site catering and parking available.

For more information on Grande Dixence, visit www.grande-dixence.ch

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Grande Dixence SA – an overview

Founded in 1950, Grande Dixence SA is a leading electricity supplier in Switzerland and Europe. The Sion-based company owns the Grande Dixence hydroelectric scheme, which harnesses the waters of 35 glaciers in the Valais region, from the edge of the M Mattertal (Zermatt region) to Val d'Hérens. The jewel in the crown of this complex is the Grande Dixence dam, which gathers and stores the collected water. The power produced by Grande Dixence SA accounts for a fifth of the country's stored energy. The energy produced by its plant is supplied entirely to its four shareholders, which share the company's share capital (CHF 300 million). These four shareholders are: Alpiq Suisse SA (60%), Axpo Power AG (13 1/3%), BKW Energie AG (13 1/3%) and IWB Industrielle Werke Basel (13 1/3%).