

Media release

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Bassecourt – Mühleberg voltage increase

Green light for renovation work on the extra-high voltage line

In 2022, Swissgrid will start renovation work on the Bassecourt – Mühleberg extra-high voltage line for the future operation at 380 kilovolts. The line will increase the security of supply in the Greater Bern area and the Swiss Plateau region.

On 23 March 2021, the Federal Supreme Court approved the increase in voltage for the Bassecourt – Mühleberg extra-high voltage line from its current level of 220 to 380 kilovolts (kV). With this decision, the court confirmed the planning approval issued by the Swiss Federal Office of Energy on 22 August 2019 and simultaneously dismissed all objections. The approval is legally binding.

Renovation work to start in 2022

Swissgrid has a great interest in completing the approved line renovation as quickly as possible, as this will increase the security of supply in the Greater Bern area and the Swiss Plateau region. Next, Swissgrid will organise the procurement of the necessary supplies, services and construction contracts in accordance with the public procurement provisions. The planned construction measures for the voltage increase are expected to start in 2022 and last around one year. Swissgrid is planning to put the new 380 kV line into operation in autumn of 2023.

The modernisation of the line requires adjustments to the existing electricity pylons and will not change the landscape. Construction work is planned on 54 of a total of 142 pylons: individual pylon foundations will be reinforced, double tension lines will be installed, or the cable winch tension will be increased. In Bassecourt, the 380 kV line will be routed into the substation along a new route in future. The measures will be implemented in compliance with the applicable limits of the Ordinance on Protection against Non-Ionising Radiation (NISV) as well as the Noise Protection Ordinance (LSV).

New transformers in the Mühleberg and Bassecourt substations

Swissgrid has installed a new transformer in the Mühleberg substation. Together with the increase in voltage of the extra-high voltage line, the transformer in Mühleberg will ensure that current can be transported with a voltage of 380 kV as well as 220 kV.

The new transformer was transported from the Auhafen port in Basel to Mühleberg in four heavy-load transporter trips. Each transformer pole has a transport weight of 170 tonnes and is around 11 metres long, almost 3.6 metres wide and 4.5 metres high (see [Swissgrid blog](#)). The transformer is ready for operation since the end of 2020.

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The renovation work for the new 380/220 kV phase-shifting transformer in the Bassecourt substation has been completed. The new transformer has been in operation since May 2020 and enables better control of the energy flows from France.

Grid projects increase the security of supply in the Swiss Plateau region

The Mühleberg nuclear power plant was shut down in December 2019. As a result, there is a deficit in Swiss energy production in the Swiss Plateau region amounting to almost 3,000 gigawatt hours of electricity per year. This corresponds to 5% of Switzerland's energy production and is equivalent to the annual consumption of around 700,000 households. In the medium-term, this shortfall in feed-in needs to be compensated for by higher production from Swiss power plants or by importing electricity from abroad. This is particularly important in the winter months, when Switzerland relies on additional energy imports. The Bassecourt - Mühleberg line, operating at 380 kV, is an important element for the necessary electricity transport. In order to guarantee the long-term supply, the existing transformer capacities in the transmission grid in the Bern/Jura region have been expanded. Otherwise, it would be possible to use the electricity imports via the 380 kV grid only to a limited extent. This applies not only to Mühleberg and Bassecourt, but also to other locations such as Laufenburg, Beznau and Chippis, where Swissgrid has already installed and commissioned new transformers. They are important elements in Swissgrid's «Strategic Grid 2025».

For more information visit www.swissgrid.ch/bassecourt-muehleberg

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Powering the future

Swissgrid is the national grid company. As the owner of Switzerland's extra-high-voltage grid, it is responsible for operating the grid safely and without discrimination and for maintaining, modernising and expanding the grid efficiently and with respect for the environment. Swissgrid has about 600 highly qualified people from 22 countries at its sites in Aarau, Prilly, Castione, Landquart, Laufenburg, Ostermundigen and Uznach. As a member of the European Network of Transmission System Operators for Electricity (ENTSO-E), it is also responsible for grid planning, system management and market design in the European exchange of electricity. The majority of Swissgrid's share capital is jointly held by various Swiss electricity companies.