

Media release

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Strengthening the security of supply in the greater Basel area New extra-high-voltage line to be built between Flumenthal and Froloo

Swissgrid is planning an extra-high-voltage line between Flumenthal (canton of Solothurn) and Froloo (municipality of Therwil, canton of Basel-Country). In the long term, this new line will strengthen the security of supply in the greater Basel area and therefore across Switzerland. Swissgrid has worked out three possible variants for the line routing and technology.

The existing 145-kilovolt distribution grid line between Flumenthal and Froloo, which covers a distance of around 33 km and is currently operated by IWB (Industrielle Werke Basel), is to be replaced by a 220-kilovolt extra-high-voltage line. This new line is part of Swissgrid's Strategic Grid. At present, the greater Basel area is only supplied via the substations in Bassecourt (canton of Jura) and Froloo. The new line will significantly increase the security of supply for the greater Basel area, and for Switzerland as a whole, thanks to the additional connection of the Flumenthal grid node.

The sectoral planning process: planning area, corridors and technologies

At the beginning of April 2022, Swissgrid submitted an application to the Swiss Federal Office of Energy to initiate the sectoral planning process. The sectoral plan for transmission lines (SÜL) is the Swiss government's superordinate planning and coordination tool for the construction and expansion of transmission lines. The first step is for planning areas to be drawn up, i.e. geographic areas in which the new line should be built. In the Flumenthal – Froloo project, there was insufficient scope for several planning areas, which is why Swissgrid and the cantons concerned, i.e. Basel-Country, Solothurn, Bern and Jura, agreed on a single planning area. This area stretches from Flumenthal in the canton of Solothurn in a northerly direction towards Therwil, the municipality in the canton of Basel-Country where the Froloo substation is located. Swissgrid has defined the planning area in such a way that the ILNM areas (Federal Inventory of Landscapes and Natural Monuments of National Importance) in Gempenplateau and Belchen-Passwang are avoided, the ILNM area in Weissenstein is protected as far as possible, and the conurbations of Basel in the north, Delémont in the west and Solothurn in the south are bypassed.

The second step of the process involves defining possible corridors within the planning area. The transmission technology (overhead line, underground cable or a combination of the two) is also always defined. For each project, Swissgrid develops at least one corridor variant per technology. The focus is on protecting people and nature. Swissgrid therefore strives to create

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solutions that minimise the impact on residential and protected areas. Technical feasibility and economic efficiency also play an important role.

Three possible corridor variants

Swissgrid has identified three possible corridors for the Flumenthal – Froloo project, which largely overlap:

- **«Overhead line» corridor:** This corridor has operational advantages and generates comparatively low costs. The challenges are to minimise the impact on protected areas, to ensure that the overhead line, which runs across the valleys in places, is carefully integrated into the landscape, and to maintain a suitable distance to residential areas, villages and individual farms. Cost: approximately CHF 60 – 80 million
- **«Underground cable» corridor:** This corridor variant offers the greatest possible protection of residential areas, landscapes and protected areas between Flumenthal and Therwil, with the exception of wooded areas, which it would be necessary to cut through. Compared to the other two options, an underground cable is more expensive. Further challenges are posed by the geological conditions, which make tunnel construction and the protection of groundwater more difficult, as well as placing increased demands on grid operations. Cost: approximately CHF 230 – 290 million
- **«Combination» corridor:** This corridor combines the two technologies, i.e. overhead line and underground cable. The course of the corridor largely corresponds to the overhead line corridor. As a result, it has comparable advantages and disadvantages. The five-kilometre-long underground cable section between Froloo in Therwil and Ettingen would provide relief for the residential areas of Therwil, Reinach and Ettingen, as well as the landscape conservation area to the east. However, it presents an additional challenge, because it would be necessary to provide as much protection as possible for the amphibian spawning area, which is of national importance. Cost: approximately CHF 80 – 100 million

Both overhead lines and underground cables have their advantages and disadvantages with regard to project planning and construction, as well as operation and maintenance. The decision regarding the corridor, and hence also the technology, is not made by Swissgrid, but by the Federal Council. It bases its choice on the recommendation of a monitoring group set up by the Swiss Federal Office of Energy.

Dismantling the old line

The project will reduce the impact on the residential areas between Flumenthal and Therwil. The plan is to install the new line as far away as possible from residential areas. In addition, the existing 145-kilovolt line, which is around 33 kilometres long, will be completely dismantled after

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the commissioning of the new 220-kilovolt line. Among other things, this will relieve the burden on the heavily populated areas of Herbetswil, Brislach and Zwingen.

Next steps

Next, a monitoring group appointed by the SFOE will discuss the corridors evaluated by Swissgrid and assess the effects on regional planning, the environment, technology and costs. The monitoring group's recommendation will then proceed to the public collaboration stage. The Federal Council is expected to define the corridor between Flumenthal and Froloo, and therefore the technology of the new line, by the end of 2023. Swissgrid will then establish the specific construction project and submit the planning approval application to the competent authority, the Swiss Federal Inspectorate for Heavy Current Installations (ESTI). This will be followed by the public disclosure of the project.

Public information events

Dialogue with the citizens, municipalities, authorities and associations is very important to Swissgrid. Swissgrid will be holding information events on the project on Tuesday, 28 June 2022 in Therwil and on Thursday, 30 June 2022 in Flumenthal.

Further information on the Flumenthal – Froloo grid project: www.swissgrid.ch/flumenthal-froloo

For more information, visit media@swissgrid.ch or call +41 58 580 31 00.

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 more than 600 highly qualified people from 28 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.