Start of construction for Leoben substation

The construction work of the Leoben substation (UW) began on July 29, 2024, as part of the "Neue Anbindung Leoben" (“New Connection Leoben”) project. The new substation will serve as additional grid support for the 110kV grid of the regional distribution grid operator and as a 220kV feed-in point for the local steel industry facilitating the construction of an electric arc furnace (EAF) at the Donawitz site. This is the basis for the production of "green steel" since it results in a considerable CO_2 reduction in the steel industry.

The "New Connection Leoben" project comprises the adaptation of the existing Hessenberg substation (municipality of St. Peter-Freienstein), the construction of the Leoben substation (municipality of Leoben), and an optimized 220kV line connection. The project’s implementation started in April 2024 and will last until mid-2026. "The project will contribute significantly to transforming the energy system without jeopardizing the security of supply and to achieving Austria's climate and energy targets since regionally generated sustainable energy can be fed into APG's trans-regional grid via the Leoben and Hessenberg substations and transported and utilized throughout Austria. In return, sustainable electricity from other regions of Austria can be brought into the region via the two substations and thus made available for businesses, industry, and society," says Christoph Schuh, company spokesperson for APG.

Following the start of the work on the Hessenberg substation back in May, construction work on the Leoben substation has now also been launched.

Technically demanding construction work

A complex terraced construction site (height difference between the different plateaus approx. 6m) had to be built into a slope. As a result, many technical challenges had to be overcome to ensure the safety of the site, explains APG project manager Wolfgang Ranninger: "The upper retaining wall, an in-situ concrete wall with a ribbed structure and permanent grouted anchors has an inclination of 75 degrees and a height of up to 20m. 189 anchor bolts had to be inserted into drilled holes of up to 37m depth. The individual anchors will have to bear a load of up to 80 tons. In addition, a 20cm thick, two-layered, reinforced shell made of shotcrete was erected to secure the areas between the individual ribs. The lower retaining wall, also with a height difference of up to 20m, is a reinforced earth wall. A total of approx. 170,000 m^3 of fill material - the equivalent of around 70 Olympic swimming pools – was needed for this."

An APG operations building with an attached switchgear system, the foundation for a 220/110 kV transformer, the necessary structures for integrating the various lines, and the required infrastructure are now being built on these terraces. A 600 m^3 water tank for firefighting will also be integrated into the hillside construction. Completion and start of operation of the new Leoben substation are scheduled for the summer of 2026.

"Projects such as the “New Connection Leoben” and thus also the Leoben substation are part of APG's nine billion euro investment scheme up to 2034. In 2024 alone, we will invest around EUR 445 million in the domestic electricity infrastructure and thus in achieving the energy transition while securing the security of supply," adds Christoph Schuh.

About Austrian Power Grid (APG)

As independent transmission system operator Austrian Power Grid (APG) is in charge of ensuring the ***security of the electricity supply*** *in Austria. With our high-performance and digital electricity infrastructure and the use of* ***state-of-the-art technologies*** *we integrate renewable energies, we are the platform for the electricity market, and we provide access to reasonably priced electricity for Austria’s consumers and thus create the basis for Austria as supply-secure and future-oriented industrial and business location and place to live. The APG grid totals a length of about 3,500 km and is operated, maintained, and continuously adapted to the increasing challenges of the* ***electrification*** *of businesses, industry, and society by a team of approximately 900 specialists. 67 substations are distributed all over Austria and the majority is operated remotely from APG’s control center in Vienna’s 10th district. Thanks to our committed employees Austria had a security of supply of 99.99 percent also in 2023 and thus ranks among the top countries worldwide. Our investments of 445 million euros in 2024 (2023: 490 million euros, 2022: 370 million euros) are a* ***motor for the Austrian economy*** *and a crucial factor in reaching Austria’s climate and energy targets. Until 2034 APG will invest a total of approximately 9 billion euros in grid expansion and renovation projects.*

Should you have any questions, please contact:

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