

08. June 2017

## Climate-friendly world premier at the Etzel substation

**Axpo and the Electricity Utilities of the Canton of Zurich (EKZ) will use a new, climate-friendly gas for electrical insulation at the Etzel substation, which is currently under construction in Altendorf (SZ). This is the first time worldwide that the innovative, ecologically efficient gas  $g^3$  will be used in high-voltage switchgear. The new gas will replace the commonly utilised insulation gas  $SF_6$  and has a lower greenhouse potential of 98 per cent.**

The new Etzel substation is a joint construction project by Axpo and EKZ and will reinforce power supply in the Höfe and March districts in the Canton of Schwyz. The grid reinforcement project planned for 2018 can now proceed with a particularly ecologically friendly solution after a successful test phase: The gas-insulated switchgear (GIS) in which actual power distribution takes place, will be put into operation with the new climate-friendly insulation gas  $g^3$  at the Etzel substation. Insulation gas is used in switchgear to insulate important components such as contacts and conductors. Tests carried out in recent weeks by General Electric GE according to international standards indicate that the new gas mixture  $g^3$  is a reliable, climate-friendly alternative to the commonly utilised insulation gas  $SF_6$ , and can be used in high-voltage switchgear.  $g^3$  has a 98-per cent lower greenhouse potential as compared to  $SF_6$  without limiting the insulation and switching properties. Substations using  $SF_6$ -free gas are new in Switzerland. This is the first time worldwide that  $g^3$ , which has only been available since 2015, will be used in high-voltage switchgear. The technology leap at the Etzel substation will contribute to reducing climate impacts.

### Minimal gas losses through far-sighted operation

The use of insulation gas enables the realisation of compact switchgear in small spaces in contrast to the common air-insulated switchgear. The insulation gas  $SF_6$  has been in use in Switzerland and worldwide for about 50 years. The insulation gas is trapped in the plant components and can only escape, and in the case of  $SF_6$ , impact the environment through leaks. Independent of the type of insulation gas, it is crucial to keep losses as low as possible through safe operation and careful controlling and maintenance of the plant. In the international comparison, Axpo and EKZ show the lowest loss rate for  $SF_6$  with only 0.2% per year in their plants. The international benchmark is 0.5%. Utilisation of the new, climate-friendly gas  $g^3$  at the new Etzel substation and the low loss rate is a double benefit to the climate.

### Sustainable innovation as an element of corporate strategy

With the innovative pioneer project, Axpo and EKZ are making an important contribution to climate protection and underpinning their commitment to sustainable energy supply. Axpo as well as EKZ have

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committed to sustainability as part of their corporate strategies. The search for innovative solutions to continually reduce greenhouse gas emissions expresses their ecologically responsible behaviour.

#### **Additional Information**

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#### **About Axpo**

The Axpo Group produces, trades and distributes energy reliably for over 3 million people and several thousand companies in Switzerland and in over 30 countries throughout Europe. Around 4500 employees combine the expertise from 100 years of climate-friendly power production with innovative strength for a sustainable energy future. Axpo is an international leader in energy trading and in the development of tailor-made energy solutions for its customers.

#### **EKZ - straightforward, reliable and geared to the future**

As a co-designer of the energy future, we support our customers in their energy world: With 100 per cent renewable energies, one of the lowest power prices in Switzerland, and solutions for the future. We are one of the largest energy suppliers in Switzerland and deliver power to nearly one million people. Our 1400 employees dedicate themselves to homeowners and renters, small to large companies, and other Swiss energy suppliers with versatile energy solutions. Our power grid is approximately 15 000 kilometres long with an above-average availability of 99.997 per cent.

