

Information

Schlieren, November 2022

Situation: Power shortage in the fibre optic network

Introduction

Due to the special circumstances in Switzerland and in the surrounding countries, the Federal Council classified a possible power shortage as a high risk and took various preparatory measures. The special circumstances are due to the fact that the gas supply is massively limited because of the Ukraine crisis and that 32 of the 56 available nuclear power plants are currently under maintenance or repair. The possibilities for importing electricity from Germany and France are therefore very much reduced. If now a long and cold winter with little precipitation, little sun and little wind were to happen, the situation in Switzerland could in fact get worse. The situation in the reservoirs can be assessed well, because the levels are known (see www.uvek-gis.admin.ch). However, it is not possible to predict what weather influences have to be expected.

Definitions and Measures

According to the National Economic Supply Act (NESA), Article 2b <https://www.fedlex.admin.ch/eli/cc/2017/308/en>, a power shortage is classified as a significant threat to the national economic supply. Therefore, the Federal Council called the Swiss Federal Office of Energy (SFOE) of the Department of DETEC and the Federal Office of National Economic Supply (FONES) of the Department of EAER to take preparatory measures.

In the event of a power shortage, the Confederation and the FONES Department would take over the control of energy production and distribution via OSTRAL (Organisation for Electricity Supply in Extraordinary Situations). For this purpose, the OSTRAL defined a package of measures in 4 levels <https://www.ostral.ch/de>:

1. Savings appeals
2. Restrictions on electricity consumption
3. Allocation
4. Grid shut-downs

Effects on GAS&COM's fibre optic network

Due to our special situation as a subsidiary of energy companies in the natural gas sector, which represents a national critical infrastructure, we have intensively dealt with this issue. Our technical committee, consisting of representatives of GAS&COM and our shareholders Erdgas Ostschweiz, Gasverbund Mittelland and Gaznat, has drawn up a detailed concept. In addition, we are in active contact with the competent federal authorities in order to constantly assess the situation and adjust it if necessary.

In the event of a power shortage situation in which OSTRAL is called in, GAS&COM is prepared as follows: For levels 1 and 2, we will have voluntarily switched off all unneeded equipment with immediate effect and not left it on stand-by.

For levels 3 and 4, the situation is as follows:

Our active components are either housed in our own colocation sites or in public data centres.

Data centres

Those located in the public data centres are protected by the measures taken there. We have recorded the relevant emergency power provisions of each affected data centre and built them into our plan. The data centres have very powerful emergency power supplies and emergency generators. In addition, the data centres are classified as critical infrastructure and are given special treatment.

Pressure-reducing and metering stations (PRM)

Our active components in our own colocation sites are housed in so-called PRM stations (pressure-reducing, metering and offtake stations of the high-pressure natural gas companies). These are subject to strict regulations of the Swiss Federal Office of Energy.

Our active components here are equipped with UPSs (uninterruptible power supply with emergency batteries) with an autonomy of 8 hours. Should there be a longer power cut, the PRM sites are equipped with a by-pass connection for mobile generators. The mobile generators as well as the supply of diesel are controlled in cooperation with our shareholders.

Certain sites are equipped with natural gas generators, i.e., that the autonomy works as long as natural gas flows in Switzerland.

With these precautions, we can guarantee the operation of our backbone DWDM and MPLS network in the event of short and medium power failures and consequently also offer the highest possible security in this area.

If you have any questions, please do not hesitate to contact the experts at GAS&COM.

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