



Policy paper

5G and NIS Ordinances

An overview of the key points

- In February 2019, BAKOM auctioned mobile radio frequencies in the 700 MHz, 1400 MHz and 3500 MHz bands on behalf of ComCom. The industry sector paid the federal government CHF 390 million. Along with the award comes an obligation to provide the population with the latest mobile communications standard of 5G. Since then, however, the 5G expansion has been progressing very slowly.
- The introduction of 5G caused great uncertainty among parts of the population. Technology critics cited health concerns and a lack of technology impact research. Politicians at all levels took up the debate and sometimes used parliamentary tools to stop the 5G roll-out.
- At the federal level, a group of experts was convened under the leadership of UVEK. Their [report on “Mobile Communication and Radiation”](#) drafts scenarios for the “Future of Mobile Communication under Consideration of Beneficial and Protective Interests”. The broadly composed group of experts also dealt in depth with the health issue. In the process, the following was concluded: There is no scientific evidence of health risks from mobile phone radiation.
- In 2019, the frequencies were auctioned without the enforcement provisions for adaptive antennas (which will be widely used with 5G) being in place. It was not until two years later that the FOEN published the addendum to the enforcement recommendations for adaptive antennas. It considers the functionality of these new installations and grants a so-called “correction factor”, which ensures that adaptive antennas are not assessed more strictly than conventional installations. However, the precautionary installation limits of 5 volts per metre must be observed.

Swisscom’s position

- 5G is a new mobile communications standard that uses frequencies that were previously available for other radio technologies. The signals of 5G are similar to those of 4G or WLAN. 5G is therefore no different from older mobile communications technologies, for which around 4,000 studies are available (their results are therefore transferable to 5G from a scientific perspective). But there are also already more than 100 research papers on 5G.
- The Ordinance on Non-Ionising Radiation (ONIR) regulates emissions and thus the transmission power of mobile antennas. It defines the limits for mobile communications. The installation limits apply to all mobile phone generations – i.e. 3G, 4G and 5G.
- The emission limit of 50 volts per metre (WHO recommendations) must be complied with at all accessible locations. Switzerland, however, has one additional regulation: As a precautionary measure, ten times stricter values have been defined for places where people stay for long periods of time. In residential areas, in particular, virtually all antenna sites are affected by the special regulation. In addition, there are uniquely strict enforcement provisions.



- The combination of licensing procedures, strict ONIR, enforcement provisions and spatial planning severely restricts mobile communication expansion in Switzerland. This leads to delays in the 5G expansion and to thousands of additional antenna sites because existing installations are only allowed to operate at low power levels compared to abroad. This currently results in a traffic jam regarding the expansion with the new mobile communications standard: More than 3,100 planning applications were unprocessed by the end of September 2022! This puts Switzerland's competitive advantage and attractiveness as a business location at risk.
- Much could already be gained if the existing framework conditions (limit values) could be better utilised. It is about abolishing additional precautionary measures without calling into question the limits that are already ten times stricter than those enforced abroad.