

Overview of Rural and Mountain Connectivity Iceland

The overall situation of electronic communication systems in Iceland can be regarded to be pretty good. The island is only habited on the coastline and on the lowland and that's where the most companies and homes are located. They have good access to various kinds of tele- and electronic communications. This means that all distance learning facilities in Iceland are quite good. But the island's landscape, with its steep mountains and narrow fjords, do affect the transmission capacity and coverage of the service in some areas, especially the highlands where no one lives but a lot of people like to visit. This situation, lack of full coverage mostly affects travellers and is a big safety issue. The quality of electronic communications in the habitable areas varies between places and some areas are more vulnerable to hazardous weather conditions than others but the construction of optical fibre throughout the country is an ongoing project.

The Icelandic government has recently passed a law (2022) on telecommunications that contribute to the necessary ongoing development and development of the electronic communications market. The goals of the new law on electronic communications include more active competition, more cost-effective investments, the spread of high-speed networks, fibre optic cables and user access to high-quality telecommunications services at an affordable price.

These new laws have already made a difference regarding better

telecommunication service on the highlands of Iceland after a partnership was established between Neyðarlínna (Icel. rescue phone) and the mobile companies Nova, Vodafone and Síminn. This is an important and timely project where relevant parties have joined forces to ensure a good mobile phone connection in remote places in Iceland. This creates increased security, as it will be possible to contact the emergency number 112 as well as other telephone numbers more widely. This is possible through the cooperation of the parties mentioned that use the so-called MOCN technology, (e. Multi-Operator Core Networks) where the same transmitter can connect to the core systems of all the mobile companies and electronic transmitters, and frequencies in remote locations are thus shared.

<https://www.stjornarradid.is/efst-a-baugi/frettir/stok-frett/2022/06/16/Ny-log-um-fjarskipti-samthykkt-a-Althingi/>

Registered telecommunications companies in Iceland are quite a few, see the following link.

<https://www.fjarskiptastofa.is/english/telecom-affairs/register-of-operators/>

The Electronic Communications Office of Iceland (ECOI) is responsible for the administration of electronic communications and network security in Iceland. And the wholesale telecommunications market company *Míla*, builds and operates telecommunications infrastructure nationwide. Míla's fibre optic network is open to all companies that provide electronic communications services in Iceland and the

potential speed that Míla's customers can offer to their users in the Capital region via Fiber Optic Mile is 100 Mbps and 500 Mbps. Since February 1, 2017, 1 Gb/s has also been available on Míla's Fiber Optic. Míla is also building urban optical networks across the country that will serve residents and ensure high-speed connectivity. Míla's fibre optic cable and Míla's Light Network will in the years to come be responsible for providing all with access to high-speed connectivity in a comprehensive manner that Míla's trunk pipes are responsible for connecting to the outside world.

<https://www.mila.is/um-milu/frettasafn/uppbygging-fjarskipta-a-islandi>

In the ECOI statistics report on the Icelandic electronic communications market for 2020 – 2022 some of the key statistics are the following:

The total number of mobile subscriptions increases between years ('20 – '22), or by 5.0%. There is an increase in the number of contractual subscriptions, however, the number of pre-paid subscriptions decreases. The number of minutes from mobile phones was 1.144 million minutes in 2022, compared to the previous year around 1.137 million minutes, making the increase in minutes between years only around 0.6%.

The number of M2M (Machine-to-Machine) cards on mobile networks decreased between years, from 1,179,191 to 724,095 cards at the end of 2022, but these are mobile cards where devices communicate automatically with other devices.

The volume of data on mobile networks continues to increase although the increase has decreased by 23% between years and, as in previous years, the increase is in connection with the introduction of 4G and 5G. In mobile networks, relatively more data volumes are used on telephones than on other devices exclusively for data use, such as tablets or 4G and 5G network equipment.

The number of Internet connections increased slightly between years, but there is a sharp increase in fibre optic connections alongside a decrease in xDSL connections, by the end of 2022 fibre connections accounted for 82% of all internet connections, and the number of fibre connections is now around 117 thousand connections.

The total data volume on the fixed network increased by more than 12% between years and is about 90% of the data volume for downloads and 10% for uploads.

Subscribers with TV over IPTV were 79,968 at the end of 2022, up from 84,798 the previous year, a decrease of almost 6% from the previous year.

Turnover in the telecommunications market increased in 2022, revenues from home telephones and other revenues were declining, while revenues from fixed networks, mobile telephony, data transmission and Internet services, television services and other media were rising.

Investment in the telecommunications market is mainly in a fixed network, inter alia, due to the construction of fibre and mobile telephony.

As Iceland being an island, telecommunication for ship and aeroplane communication is also very important.

GMDSS (Global Maritime and Safety System) stands for global emergency and safety system for seafarers. This is what ships' emergency communications are based on and is under the supervision of ECOI as well as licence for all radio equipment on board all aircrafts.

<https://www.fjarskiptastofa.is/fjarskiptastofa/fjarskiptainnvidir/skipa-og-flugfjarskipti/>

The broadband connectivity in the region of FAS is that everyone has available broadband in excess of 30 Mbit/s up to approx 1.5 Gbit/s through either xDSL, fiber optic or 3-5G service, even multiple options for each.