



Telecommunications

Overview

Hong Kong has one of the most sophisticated and successful telecommunications markets in the world. This has been an important factor in Hong Kong's development as a leading business and financial centre. In 2019, the telecommunications sector employed around 20 000 persons and its gross output amounted to HK\$102 billion.

All sectors of Hong Kong's telecommunications market have been liberalised with no foreign ownership restrictions. The government's objectives are to provide a level playing field in the telecommunications market and ensure that consumers get the best services available in terms of capacity, quality and price.

The Communications Authority

The Communications Authority (CA) is an independent statutory body established under the Communications Authority Ordinance (Cap. 616) on 1 April 2012, comprising 10 non-officials from various sectors of the community and two public officers. The CA is a unified regulatory body for the broadcasting and telecommunications industries in Hong Kong. It regulates the broadcasting and telecommunications industries in accordance with the Broadcasting Ordinance, Telecommunications Ordinance, Communications Authority Ordinance, Broadcasting (Miscellaneous Provisions) Ordinance, Trade Descriptions Ordinance and Competition Ordinance. It also enforces the Unsolicited Electronic Messages Ordinance.

The Telecommunications Affairs Committee is set up under the CA to offer advice and report to the CA on relevant telecommunications matters.

The Office of the Communications Authority (OFCA), the CA's executive arm and secretariat, helps the CA administer and enforce the relevant ordinances governing the broadcasting and telecommunications industries.

Local Fixed Carrier Services

The local fixed carrier services market is fully liberalised. There is no pre-set limit on the number of licences issued, nor deadline for applications. Furthermore, there is no specific requirement on network rollout or investment. The level of investment is determined by the market.

As at July 2020, there were 27 licensees permitted to provide local fixed carrier services on a competitive basis. They are PCCW-HKT Telephone Limited and Hong Kong Telecommunications (HKT) Limited, HKBN Enterprise Solutions Limited, HKBN Enterprise

Solutions HK Limited, HGC Global Communications Limited, Hong Kong Broadband Network Limited, Towngas Telecommunications Fixed Network Limited, ComNet Telecom (HK) Limited, TraxComm Limited, HKC Network Limited, Hong Kong Cable Television Limited, Reach Networks Hong Kong Limited and Reach Cable Networks Limited, Telstra International HK Limited and Telstra International Limited, Verizon Hong Kong Limited, SmarTone Communications Limited, Vodafone Enterprise Hong Kong Limited, Hong Kong Telecommunications (HKT) Limited, China Mobile Hong Kong Company Limited, 21 ViaNet Group Limited, NTT Com Asia Limited, Equinix Hong Kong Limited, China Telecom Global Limited, PCCW Global (HK) Limited, Superloop (Hong Kong) Limited, China Unicom (Hong Kong) Operations Limited, Village Telephone Limited, Easy Tone Network Limited and China Mobile International Limited.

As at March 2020, 90.7 per cent and 79.9 per cent of residential households were able to enjoy a choice of at least two and three local fixed networks respectively.

Fixed-line users can make an unlimited number of calls within Hong Kong on payment of a fixed monthly charge. Internet protocol telephony services are also available in the market. Further, under the unified carrier licence jointly held by PCCW-HKT Telephone Limited and Hong Kong Telecommunications (HKT) Limited, the licensee has a universal service obligation to provide a good, efficient and continuous basic service, including the provision of telephone services to consumers anywhere in Hong Kong within a reasonable period of time.

As at July 2020, there were around 4 million fixed lines, including about 2.23 million lines for residential customers. The telephone density was about 53 per cent by population or 84 fixed lines per 100 households, which was among the highest in the world.

Local fixed carriers are required to facilitate fixed number portability which enables consumers to switch to another local fixed operator without having to change their telephone numbers.

Fixed Broadband Services

Fixed broadband Internet access services are very popular in Hong Kong. With the increased competition and coverage of broadband service using asymmetric digital subscriber line (ADSL), fibre-to-the-building (FTTB) / fibre-to-the-home (FTTH), hybrid fibre coaxial cable and other technologies, broadband networks cover virtually all commercial buildings and households. As at July 2020, there were 256 Internet service providers licensed to provide broadband services, and about 2.84 million registered fixed broadband service subscriptions. Fixed broadband services are currently available at speeds up to 10 Gbps (Gigabits per second). In the residential market, 95.2 per cent of the households are using fixed broadband service. The local fibre penetration has reached 78 per cent. The World Economic Forum's Global Competitive Report 2019 ranked Hong Kong third among 141 economies in terms of the number of fibre internet subscriptions per 100 population. According to the Speedtest report published by Ookla in February 2020, Hong Kong ranked third in the world for the period from December 2018 to November 2019 for upload speed over fixed broadband at 157.64 Mbps. According to the World Competitiveness Yearbook 2020, published by the International Institute for Management Development, Hong Kong ranked sixth in the average broadband Internet speed out of 63 economies.

Operators have been vigorously rolling out Wi-Fi networks. As at July 2020, there were 68 989 public Wi-Fi hotspots in the city and the number continues to grow, and free government Wi-Fi services were available to the public in 1 264 premises.

External Telecommunications Services

As at July 2020, there were 217 licensees authorised to provide external telecommunications services (ETS) in Hong Kong.

International Direct Dialing (IDD) service to most countries and regions of the world is available. In 2019, the traffic minutes of outgoing and incoming IDD calls were 1 433 million and 831 million respectively.

Competition has resulted in a substantial reduction in IDD call rates and improved quality of services.

External Telecommunications Facilities

As at July 2020, there were 42 licensees permitted to operate either external cable or non-cable based facilities for the provision of external telecommunications services.

Hong Kong adopts the open sky policy in regulating the provision of satellite services. Satellite-based telecommunications and television broadcasting services are provided via a multitude of satellites in the region with more than 180 satellite earth station antennas operated by a number of fixed carriers and broadcasters.

As a major telecommunications and internet hub in the region, Hong Kong has eight submarine cable landing stations and is connected to 11 regional and transcontinental submarine cable systems. It is also connected to the Mainland via 20 overland cables. As of June 2020, the total equipped capacity of external telecommunications facilities was over 112 576 Gbps.

Mobile Services

Competition in public mobile services is vibrant. Currently, there are four major mobile network operators, namely, China Mobile Hong Kong Company Limited, Hong Kong Telecommunications (HKT) Limited, Hutchison Telephone Company Limited and SmarTone Mobile Communications Limited providing a wide range of public mobile services. The availability of mobile number portability service since March 1, 1999 has contributed to promoting effective competition among the mobile network operators as it allows customers to retain their telephone numbers when they switch to another mobile network operator.

In July 2020, the number of mobile service subscriptions was 22.41 million, giving one of the highest penetration rates[#] in the world at 280 per cent. Among them, 22.19 million were 3G/4G/5G service subscriptions.

Other than basic voice services, mobile data services are very popular among consumers. As at July 2020, local mobile data usage surged to 79 654 Terabytes (i.e. 79 654 295 Gigabytes), or an average of about 10 595 Megabytes per capita[#]. This represents a growth of 1.19 times in the mobile data usage over the same period in 2019.

In addition to 3G and 4G services, the four major mobile network operators have launched 5G services utilising New Radio (NR) technology. With enhanced Mobile Broadband (eMMB) in 5G technology, mobile service subscribers are able to enjoy data download speed of up to 20 Gbps^{###}. Together with massive Machine Type Communications (mMTC) and Ultra Reliable and Low Latency Communications (URLLC), 5G technology will change our mode of communications and enable the development of various innovative applications.

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[#] Calculations of mobile penetration rate and mobile data usage per capita do not include machine type connections.

^{###} The ITU has set the targeted download speed for eMMB under ideal circumstances at 20 Gbps. However, the actual data download speed will be affected by various factors (including but not limited to the number of subscribers, user devices, network coverage, frequency bands and amount of spectrum used, network settings, network traffic, etc.).