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# What is new in 5G? 2023 updates

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The development of 5G market in Taiwan has been expanding. This article discusses the most recent news of 2023.

## Business mergers and acquisitions

On 18 January 2023, the National Communications Commission (NCC) gave its conditional approvals after a 12-month review of two respective merger and acquisition cases involving 5G operators, one being Taiwan Mobile's acquisition of T-Star and the other being between FarEasTone (FET) and Asia Pacific Telecom (APT).

There were up to 20 conditions attached to the approval; among them that the NCC specifically ordered a refund to the state or transfer to non-affiliate third parties of the excessive bandwidth by 30 June 2024. This is subject to the 5G auction rules last amended in 2019 and the Regulations Governing the Use of Radio Frequencies. The mergers will give Taiwan Mobile and FET bandwidth in excess of the legal maximum (one-third or 50 megahertz of the total spectrum below 1 gigahertz band of 150 megahertz) allotted to all operators through public tender. FET affirmed after the above NCC resolution that it will give the extra bandwidth back to the state in accordance with regulatory requirements. In contrast, Taiwan Mobile argued that it would be a material impact on the proposed acquisition price to T-Star if it is forced to return the extra bandwidth following the merger.

FET aims to boost its 5G subscriber penetration rate to 40% by end of 2023 from more than 30% last year. The NCC estimates in next three years there will be more than 20,000 picocells deployed by attaching to traffic light poles and lampposts in addition to the existing 35,000 5G base stations which are macro cells and small cells covering 94% of Taiwan population.

## Regulation on 5G vertical application networks

Little progress has been made since November 2022 in the negotiation between the NCC and the Ministry of Digital Affairs (MODA) regarding a draft regulation of 5G vertical application networks in the designated frequencies of 4.8 gigahertz to 4.9 gigahertz (for further details please see "[NCC invites consultation on draft regulation of 5G vertical application network](#)"). It is now pending for the Executive Yuan (the Cabinet) decision to settle which authority would eventually own the licensing power of regulating 5G vertical application network. The timeline for official private network deployment would therefore be stalled until June 2023.

## Beyond 5G applications for medium earth orbit and low earth orbit satellite services

The MODA confirmed since the first open window in December 2022 that it has received two applications for operation of medium earth orbit and low earth orbit satellite services in the following frequency bands (Ku/Ka bands) (for further details please see "[MODA releases spectrum for next generation satellite communication](#)"):

- 10,700-12,700 megahertz;
- 13,750-14,500 megahertz;
- 17,700-20,200 megahertz; and
- 27,500-30,000 megahertz.

Lung Hwa Electronics Co Ltd acts as local agent for Hughes Networks Systems using Eutelsat in provision of fixed satellite network services on land and on sea. On the other hand, Aercomm Taiwan Co works with SES and plans to use O3b satellite network in the deployment of earth stations in motion in boats and aircraft.

The next open window has been scheduled for the beginning of March 2023.

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