

TELECOM

270MHz eyed for auction to aid 5G

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The telecom regulator plans to auction a combined 270 megahertz of bandwidth on the 700- and 2600-megahertz spectrum ranges by 2020 as the government tries to promote 5G mobile service.

Winning bidders will also be awarded spectra in the 3.5-, 26- or 28-gigahertz (GHz) ranges at no additional cost to incentivise bidding, said the National Broadcasting and Telecommunications Commission (NBTC).

The move is intended to reduce spectrum costs for mobile operators and broaden their financial capacity to roll out the extensive networks needed for massive machine-to-machine connectivity through 5G.

"Thailand could lose 2.3 trillion baht [20% of country's GDP] if it fails to implement 5G by 2030," predicted a recent NBTC study.

Takorn Tantasith, secretary-general of NBTC, said the regulator wants to ensure moderate licence costs in future auctions to avoid "missing the 5G train".

"5G is now a top national agenda item. The government needs to help transform the country from an industry-driven to an innovation-driven economy. This goal will be achieved by creating value in vertical industries in line with the government's Thailand 4.0 policy," he said.

Mr Takorn said lower bands such as the 700-, 2600-, 900- and 1800MHz are "coverage bands" that allow operators to install cell sites to improve data traffic nationwide.

High-frequency ranges such as the 26- and 28GHz (26,000- and 28,000MHz) are "capacity bands" that

require a much higher network density to roll out efficient communications. These are fit to be used for heavy-data transmission in limited areas.

He said there is 90MHz of downlink-uplink bandwidth on the 700MHz spectrum set to be auctioned by 2020. That spectrum is now used by digital TV channels.

The 700MHz spectrum for digital TV will be switched off in 2020 and used for telecom service instead, in line with standards of the International Telecommunications Union (ITU) as well as the World Radiocommunication Conference in 2015, which officially endorsed Thailand's plan to auction the 700MHz band for mobile communications.

Much of the 2600MHz range is used by state-owned public broadcaster MCOT Plc, which holds a total of 380MHz of uplink-downlink bandwidth on it.

The NBTC is monitoring ITU global 5G spectrum standards, expected to be cleared by November.

Mr Takorn said the 3.5GHz range is now partly used by satellite services, and has a vacancy of 200MHz of bandwidth for allocation. The 26- and 28GHz spectra have a vacancy of 3GHz of bandwidth.

WHAT IS 5G?

Speaking at a seminar entitled "The way forward for 5G in Thailand" yesterday, Mr Takorn said 5G technology could provide data rates up to 100 times faster than 4G, and will create opportunities for new use cases with the Internet of Things (IoT), augmented reality (AR), virtual reality applications, smart vehicles, remote healthcare and robotics.

5G technology will bring value to vertical industries by transforming traditional agriculture, health, manufacturing, automobile, city, and meters (water, gas) to smart farming, smart healthcare, smart manufacturing, connected cars and smart cities.

Du Yeqing, vice-president of Huawei's 5G product line, said the technology could create a US\$12.3 trillion (411.8 trillion baht) market globally, nearly 4.6% of global GDP, by 2035.

Use cases in manufacturing will contribute \$3.4 trillion or 26% of the 5G economic impact, followed by information and communications, which will contribute \$1.4 trillion, he said.

In Thailand, 5G is projected to create a \$56.7-billion potential market across industries by 2035.



Takorn: Must not miss the 5G train

Manufacturing will also be the largest contributor in Thailand, providing \$14.3 billion (or 25.2% of 5G's economic impact), followed by agriculture (which will contribute \$6.6 billion), wholesale and retail, public services, finance and insurance.

POLICY AND REGULATION

Somkiat Tangkitvanich, president of Thailand Development Research Institute, said the telecom industry needs to take at least three critical steps to ensure the public derives real benefit from the upcoming 5G adoption: real liberalisation of the industry; good regulation; and a spectrum allocation road map.

Mr Somkiat said liberalisation would mean allowing foreign stakeholders to hold more than 50% in firms to bolster competition and eliminate chronic problems from state enterprises.

Good policy and regulations will eliminate unfair competition and cut high operating costs, while a clear spectrum allocation road map will ensure resource predictability needed by operators to manage their investments, he said.

Chakkrit Urairat, deputy director of government relations at True Corporation, said 2020 will be critical for True Move and Advanced Info Service, as the firms must pay a combined 120 billion baht to the NBTC for their last 900MHz licence payment term.

"It is a substantial financial burden for the two companies to bear in the year they're supposed to roll out new 5G networks," he said.

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