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August 19, 2020

Dear Valued Stakeholder,

The Spectrum Management Authority ('the SMA') appreciates your participation in the recently concluded '**Revision to Spectrum Pricing**', a **consultation on proposals for Spectrum Licence Fees for recommendation to the Ministry of Science, Energy & Technology ('MSET')**. The SMA noted all comments received, and considered each objectively, particularly the objections as raised in the document, but found that none were in relation to a departure from industry best practices on the part of the SMA. Additionally, it is the considered view of the SMA that the proposals being recommended are fair and consistent with the objectives as articulated by the Government of Jamaica ICT Policy, 2011 and the Telecommunications Act, 2000 for the industry, notwithstanding comments to the contrary.

The SMA took particular note of two (2) specific points raised by the operators, mainly, the matter of theft and/or vandalism and the Spectrum Cap Policy. It should be noted that the SMA recognizes and empathizes with operators, in relation to the level of theft and vandalizing of equipment they have been experiencing within the industry. However, as the spectrum regulator, the SMA is unable to consider this as a factor in determining spectrum prices, as this goes against spectrum management best practices. Additionally, it is not lost on the SMA, the challenges that may exist in relation to accessing low and middle band spectrum, which resulted in the Spectrum Cap Policy being implemented to ensure all operators have fair and reasonable access to these bands. Therefore, with this in mind, and with various changes in the environment, to include additional spectrum being allocated for mobile spectrum at the recently concluded World RadioCommunications Conference 2019 (WRC-2019), the SMA in short order, will be consulting on the Spectrum Cap Policy.

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Upon final analysis of all comments, the SMA will be recommending to the MSET, the proposed fees as outlined in the Consultative Document, with the exception of the following:

- **Inflation Factor:** In light of the comments received, and upon further consideration, the SMA will not be recommending the inclusion of this factor, at this juncture.

Further, based on the comments received regarding the Efficient Factor (EF), the SMA was able to arrive at a mechanism to determine required qualification for Category 2. As proposed, this factor will enable operators to receive a discount on their fees. See explanation below.

- **Efficiency Factor – EF** This factor is to incentivize the use of the most efficient point to point (PtP) technologies, as follows;

Category 1 = 1.00

Category 2 = 0.90

Where the requirements to qualify for Category 2 is based on meeting two (2) of the three (3) minimum criteria for:

- **Antenna performance**
- **Polarization and,**
- **Frequency Reuse factor**

1. ANTENNA PERFORMANCE CRITERIA (APC)

Antenna performance is described in detail in Appendix 1 and is defined by reference to the antenna's front-to-back ratio and the minimum cross-polar discrimination (XPD).

Two antenna types are defined, namely Type 1 and Type 2.

Type 1 antennas may be likened to High Performance (HP) Antennas and Type 2 antennas to Ultra-High Performance (UHP)

To satisfy the Antenna Performance Criteria, at least 50% of the links in the network must comply with at least Type 1 requirement. (See Appendix for details).

2. FREQUENCY REUSE CRITERIA (FRC)

This refers to the number of times the same frequency/channel pair is used at a hub station.

A hub station is a station where at least two (2) links originate from.

To satisfy the Frequency Reuse Criteria, 50% of the hub stations must reuse the same channel at least twice.

3. ANTENNA POLARIZATION FACTOR (AP)

Antenna polarization factor has two options, namely single polarization and dual polarization.

To satisfy the Antenna Polarization Factor, at least 50% of the links in the network must use dual polarization.

Please note that these recommendations will be submitted to the MSET by Friday, 2020 August 21, whereby the Minister with responsibility for Telecommunications will determine the final prices.

Yours truly,

SPECTRUM MANAGEMENT AUTHORITY



Dr. Maria Myers-Hamilton (Ed. D)
Managing Director

APPENDIX

Antenna Performance Compliance Requirements for Directional Point to Point Antennas

The following defines the minimum antenna performance required to qualify for the Antenna Performance Factor.

Antenna Compliance is determined by reference to the Antenna's front -to -back ratio and the minimum cross-polar discrimination for the respective bands.

Type 1 Antennas: Those antennas required for use in areas of high spectrum density or congested cities/regions.

Type 2 Antennas: Those antennas required for use in areas of very high spectrum density or very congested cities/regions. These antennas may be required to facilitate coordination where Type 1 use otherwise may not be feasible.

Frequency Band (GHz)	Cross-Polar Discrimination (dB)	Type 1 F/B ratio	Type 2 F/B ratio
4	25	55	65
U6 and L6	25	60	75
7.5	25	55	70
8	25	60	75
10	25	55	65
11	25	50	75
13	25	55	70
15	25	55	65
18	25	55	65
23	25	55	65