Draft Spectrum Light Licensing
Regulations

First Version
August 2023

## Version Control Table

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1. Introduction

In accordance with the Telecommunications and Information Technology Act (the ‘Act’) issued by Royal Decree No. (M/106) and dated 2/11/1443 AH, the Act’s Bylaw, and the Communications, Space and Technology Commission (CST) Ordinance (Ordinance), CST issued the Spectrum Light Licensing Regulations. The regulations aligns with CST’s goals to achieve efficient use of spectrum, enable emerging technologies, and promote competition and transparency in spectrum management.

Light licensing is an increasingly popular mechanism for stimulating innovation and economic growth globally. Consistent with these global trends, in the Spectrum Outlook for Commercial and Innovative Use 2021-2023, CST introduced plans to implement a light licensing framework in the Kingdom. The Spectrum Outlook identified several frequency bands and radio services that were candidates for light licensing. As explained in the Spectrum Outlook, lightly licensed spectrum can improve the efficient utilization of spectrum by introducing shared access to frequencies in a way that both protects existing primary incumbents and supports spectrum access for wider segments of potential spectrum users across various verticals and industries while reducing the administrative and monetary burdens associated with obtaining reliable access to spectrum. The goals and principles of light licensing can be summarized as follow:

- Achieve optimal use of spectrum.
- Enable data-driven spectrum management.
- Develop the infrastructure of smart databases for frequency coordination.
- Support a shared spectrum model under appropriate technical conditions of use to ensure coexistence of services.
- Analyze frequency bands thoroughly and the impact of making them available for light licensing.
- Align the spectrum fees of light licensing to ensure promoting emerging technologies.
2. Definitions

The words and phrases that are defined in the Act, the Light-Licensing Regulations, and other decisions issued by CST will have the same meaning when used in this Annex, and the following words and expressions will have the meanings associated with them, unless clearly indicated otherwise.

2.1. **CST**: Communications, Space and Technology Commission

2.2. **Light Licensing**: An approach where spectrum is not exclusively assigned, but users need to register to obtain a shared access to specified radio spectrum.

2.3. **Primary Incumbents**: Users that are licensed exclusively in accordance with the National Frequency Plan.

2.4. **Light Licensed users**: Licensees are permitted to use the frequency spectrum within the frequency bands specified for the light license.

2.5. **Regulatory decisions of light licensing frequency bands**: These decisions regulate the use of light licensing spectrum and form an integral part of the Spectrum Light Licensing Regulations, complementing them.

3. Scope of Light Licensing

This document applies to all beneficiaries of light licensing and the applicable radio applications specified in the regulatory decisions of light licensing frequency bands and the relevant eligibility criteria in each annex.

4. Light Licensing approach

4.1. The light licensing regime includes two approaches for licensing. The regime may incorporate a manual licensing and registration approach, or it may be a dynamic and database-driven approach. The regulatory decisions of light licensing frequency bands shall define the appropriate approach for each frequency band.

4.2. CST considers database-driven as the targeted approach for light licensing, and will be the first choice whenever appropriate. Smart databases enable dynamic and automated frequency licensing, and they support a more efficient spectrum sharing and harmful interference prevention.
5. **Identifying Light Licensing Frequency Bands**

5.1. Light licensing will be introduced on a band-by-band basis, and each frequency band will be part of the regulatory decisions of light licensing frequency bands, which define the regulatory and technical condition specific to each frequency band.

5.2. Prior to introducing a frequency band for light licensing, CST may conduct the following steps:

5.2.1. Analyze the impact of releasing the frequency band.

5.2.2. Review the current use of the band.

5.2.3. Conduct coexistence analysis between the light licensing and existing services.

5.2.4. Study the possibility of limiting the expansion of the current use of the band to enable light licensing.

5.2.5. Identify the technical and regulatory conditions to ensure coexistence with primary incumbents.

5.2.6. Evaluate the possibility of applying a dynamic approach and the required infrastructure for smart databases.

5.2.7. Conduct benchmarking analysis for best practices.

6. **Compliance**

6.1. Light Licensed users must comply with following:

6.1.1. Light licensing regulations

6.1.2. Regulatory decisions of light licensing frequency bands

6.1.3. CST’s relevant regulations

6.2. CST reserves the right to re-evaluate this document and the regulatory decisions of light licensing frequency bands to achieve the goals and principles of light licensing. Licensees must ensure that they are in compliance with the most recent version of the regulatory documents specified in [7.1].
7. **Priority of Spectrum Usage**

7.1. Light-licensed users may not cause harmful interference to primary incumbents. Light-licensed users are required to immediately shut down or modify equipment operations if CST determines that the operations are causing harmful interference to primary incumbents within a light-licensed band or adjacent band.

7.2. Light-licensed users must comply with the protection criteria adopted for each band to minimize the likelihood of harmful interference not only to primary incumbents in a band, but also between light-licensed users. Each light licensing annex will describe what rights light-licensed users have against primary incumbents and other light-licensed users in the band.

8. **License Duration**

CST recognizes that different types of light-licensed users may benefit from shorter or longer license terms to facilitate utility and better encourage innovation and investment. Thus, license terms and any renewal obligations may vary from band to band. The regulatory decisions of light licensing frequency bands: will set forth details concerning license duration and any renewal obligations.

9. **Authorization process**

9.1. Light-licensed users may not operate until receiving authorization to operate. To receive authorization for light-licensed use, a light-licensed user will need to register their spectrum use. Each light licensing annex will detail the required steps to register and obtain authorization to operate in a specific band. Prospective light-licensed users must provide all technical information or any additional data that CST requires to complete the authorization process.

9.2. Light-licensed users may not modify their operations to operate outside the bound of their authorized use without submitting an application or request to modify their license and receiving approval from CST as specified in the relevant light licensing annex.

10. **Interference Resolution**

10.1. In case harmful interference occurs between a light-licensed user and a primary incumbent, the light-licensed user shall support CST in the investigation and resolution of the harmful interference.
mitigations can be adopted to allow the light-licensed user to resume operations, the user should coordinate with CST to ensure that they are appropriately licensed for any modified operations.

10.2. In case harmful interference occurs between light-licensed users, they should work in good faith to self-remediate the problem. If no resolution is reached, light-licensed users may seek remediation guidance from CST, which may impose additional technical requirement on the affected licensees.

11. Spectrum Fees

Light-licensed users may be required to pay a fee to register their light-licensed use of spectrum. Any required fees will be calculated according to the Frequency Licensing Fees Regulations, with the specific values for each band addressed in the relevant light licensing annex.

12. Enforcement

12.1. If CST detects that frequency use falls outside the terms of any authorized use, CST will serve an enforcement notice requiring either immediate cessation of transmissions in the case of a serious deviation that could lead to harmful interference, or a correction within a given timescale for less serious deviations.

12.2. CST will impose a penalty in accordance with the Telecommunications and Information Technology Act for any violations of these regulations that could lead to harmful interference.

13. Data Collection

CST may, at its discretion, request data concerning the operation of light-licensed users (both at the time of application for a license and at any time during the license validity). Licensees must provide the requested information, and CST will deal with data provided in line with all relevant regulatory requirements.
14. Re-Allocation of Frequencies Subject to Light Licensing

As global spectrum allocations continue to change and new technologies are developed, CST may eventually opt to re-allocate or re-farm frequencies authorized for light licensing to reduce interference, optimize spectrum efficiency, harmonize use with international obligations, or based on the general public interest demands in the Kingdom. In such cases, CST will notify light-licensed users of any changes, and, where it is in the Kingdom’s interest to do so, CST will work with users to identify alternative frequency arrangements.

Q1: Does the document explain the concept, goals and principles of light licensing clearly? And if so, how do you think you can gain benefits through the light licensing regime.

Q2: What are your thoughts on how CST will introduce frequency bands and applications under light licensing?

Q3: Please provide inputs on the regulatory provision in each of the sections of the document.

Q4: What frequency bands you think have potential to be lightly licensed?

Q5: What applications do you think have potential to be lightly licensed?

Q6: Are there any other matters that you would like to provide input on.