



هيئة تنظيم الاتصالات
Telecommunications Regulatory Authority

Spectrum Policy and Planning

Report on the Implementation of the Joint Policy Issued by the Telecommunications Regulatory Authority (TRA) and the Ministry of Transportation (MoT) of the Kingdom of Bahrain

Purpose: To provide information concerning the 2006 spectrum policy and planning document

1. INTRODUCTION

The developments in the telecommunications sector and the demand for spectrum by licensees and prospective licensees, to provide for new or more cost-effective services, necessitated a review in 2006 of the availability and usage of spectrum in the Kingdom of Bahrain. A Spectrum Policy and Planning (SPP) document was prepared jointly by the TRA and the Ministry of Transportation (MoT). Based on the responses of stakeholders to a consultation process, the resulting Plan defined the overall principles of spectrum management policy in the Kingdom.

However since publication, a number of initiatives related to the spectrum used for telecommunications have necessitated changes to the policy detailed in the SPP.

The TRA has therefore developed this Report which highlights the key changes introduced in the telecommunications sector. In addition, since publication in 2006 the TRA has received a number of requests to utilize spectrum in bands not currently allocated for the assignment of frequencies for telecommunications applications. The TRA has as a consequence decided to initiate in the last quarter of 2009 a public consultation exercise, which has been designed, amongst other things to identify additional spectrum that can be provided for the sector and an associated timescale for release and licensing.

This Report should be read in conjunction with the SPP document [Joint Policy Issued by the Telecommunications Regulatory Authority \(TRA\) and the Ministry of Transportation \(MoT\)](#) 27 June 2006.

2. SPECTRUM ALLOCATION AND ASSIGNMENT

The Minister of Cabinet Affairs, the Minister responsible for the Telecommunications Sector following a consideration of the Telecommunications Law, the National Telecommunications Plan and in particular Resolution No. (4) of 2008 with respect to the Adoption of Spectrum Planning and Allocation Policies, established a Spectrum Strategy and Co-ordination Committee (SSCC) in late 2008. Resolution No. (5) of 2008 addresses this matter. Both Resolutions No. 4 and No. 5 are provided on the TRA web-site <http://www.tra.org.bh> for information.

The SSCC facilitates coordination of spectrum requirements and supports the development and maintenance of the National Frequency Plan (NFP) for all radio spectrum resources in the Kingdom, especially to meet the following objectives:

1. Satisfy the spectrum requirements of sector members including those responsible for national security and defence;
2. Support the introduction of more spectrally efficient technologies, including the timely introduction of digitised broadcasting networks;
3. Satisfy the requirements of international obligations and treaties;
4. Support economic growth and create employment;

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5. Meet the needs of civil aviation and the maritime industries;
6. Provide for competitive telecommunication infrastructures through free and fair processes;
7. Introduce future generations of public and private mobile technologies;
8. Satisfy the spectrum requirements for internationally provided radio navigation services e.g. Galileo and GPS;
9. Facilitate the rollout of broadband telecommunications networks;
10. Facilitate regionally and globally harmonised frequencies for the PPDR (Public Protection and Disaster Relief) system, in order to help rescue and emergency teams communicate with each other,
11. Stimulate technological innovation and competitiveness in a technology neutral fashion;
12. Introduce new spectrum management techniques, where appropriate e.g. spectrum commons and spectrum property rights and trading etc;
13. Provide spectrum for rural telecommunications with a particular emphasis on the provision of spectrum for telecommunications services for educational (including art and culture) and other public interest (including health and emergency) purposes.

The Minister responsible for the telecommunications sector approved a revised NFP in November 2009. This was developed and approved by the SSCC earlier in the year. The 2009 NFP replaces the version developed following the ITU World Radiocommunication Conference (WRC) in the year 2000 and addresses, in addition to other matters, the results of subsequent WRCs in 2003 and 2007.

3. DEVELOPMENTS IN SPECIFIC FREQUENCY BANDS

- Some changes have been made in spectrum below 200 MHz arising from the revision of the NFP in 2008/2009.
- The TRA continues to recognise a requirement for cost effective semi-professional hand held equipment which might be the subject to a light licensing regime. However some agencies within the Kingdom continue to have concerns about such a development. The TRA will investigate whether the spectrum identified in Europe for a digital version of PMR446 can be made available in the Kingdom of Bahrain.
- GSM900 and GSM1800 spectrum has been awarded to STC, the third mobile operator. The extended EGSM900 band is currently used by STC and Zain.
- DECT, cordless telecommunications conforming to European standards is tolerated by the TRA in the band 1880 – 1900 MHz. However this band has not as yet been added to the light licensing regime.
- In the 3.5 GHz band two National Fixed Wireless Services (NFWS) licences each comprising 2x45 MHz per licence were awarded to Mena Telecom and Zain.
- In the 26 GHz band the SPP stated that TRA and MoT will allocate and assign 2 x 100 MHz of spectrum (paired) for one FWA licence between 27.55 - 27.65 GHz and 27.63 -

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27.73 GHz. However the band 27.63 – 27.73 GHz was incorrectly stated and should read 28.63 – 28.73 GHz.

4. CERTIFICATION

The TRA prepared a revised certification regime in early 2009 based on a requirement for a declaration of conformity from a manufacturer or importer that equipment to be utilised in Bahrain conforms to appropriate standards. It is envisaged that this regulation will be published in the last quarter of 2009 or first quarter of 2010.

5. SPECTRUM PRICING

The key principles for establishing the schedule of fees to be charged for radio spectrum licensing, as well as the current fees in place have been modified since 2006. They are contained in the 2009 TRA Schedule of Fees published on the TRA web-site, which is subject to change from time to time.