

The Independent Communications  
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Attention:  
Mr Manyapelo Richard Makgotlho  
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**Date:**  
08 February 2013

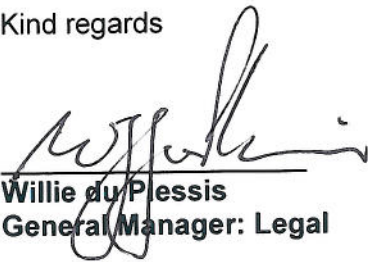
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**Dear Sir/Madam**

**RE: THE 2ND DRAFT FREQUENCY MIGRATION REGULATION AND RADIO  
FREQUENCY MIGRATION PLAN**

We thank the Independent Communications Authority of South Africa for granting us an opportunity to comment on and influence the Second Draft Frequency Migration Regulation and Radio Frequency Migration Plan. We trust that our comments have been constructive and that they are of assistance in finalising the draft. Our comments dealing with the draft are attached.

Kind regards



**Willie du Plessis**  
**General Manager: Legal**

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**THE 2ND DRAFT  
FREQUENCY MIGRATION REGULATION  
AND RADIO FREQUENCY MIGRATION  
PLAN**

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**COMMENTS BY ESKOM**

**DATE**

**8 February 2013**

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**COMMENTS BY ESKOM ON THE 2ND DRAFT  
FREQUENCY MIGRATION REGULATION AND RADIO  
FREQUENCY MIGRATION PLAN**

**PUBLISHED FOR GENERAL COMMENT IN THE GOVERNMENT  
GAZETTE 36031: NOTICE 1064 OF 2012**

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**1. INTRODUCTION**

Eskom requires spectrum allocations in specific bands for the deployment of fixed wireless broadband access systems for Smart Grid applications.

**2. GENERAL COMMENTS**

Utilities around the world are developing strategies and implementing Smart Grid Technologies in their utility networks. For example, in Canada 30 MHz of spectrum has been allocated for Smart Grid. In Europe the EUTC (European Utilities Telecom Council) is lobbying ITU for spectrum in the 450 MHz and 1.4/1.5 GHz bands.

Spectrum is required for connectivity to various elements of the national electricity grid to Eskom's national fibre optic and microwave network. The point to multipoint radio access network has to be deployed in dense urban areas, along transmission lines and in rural areas at the edge of the network. Thus spectrum is required below 1 GHz (to cover long distances in rural areas and above 1 GHz (for dense urban areas).

Where possible public networks will be used for non-critical applications. However, for secure communication of critical data for management and control of network elements a private interference free wireless access network is required.

Spectrum for Smart Grid will ensure continuity of electricity supply, to monitor and control the complete power grid network from generation through transmission to distribution.

Eskom has identified areas in the spectrum that are considered to be suitable for Smart Grid applications in view of broadband wireless equipment being available in one or more of these bands. The systems available for wireless access for Smart Grid include CDMA, WiMAX and LTE.

These are also the bands being considered by the EUTC (European Utility Telecommunications Council). EUTC plans to submit proposals at WRC15 for the allocation of spectrum for Smart Grid

Allocation is required by Eskom in the following bands:

**A. Immediate requirement: 450 MHz band: 2 x 5 MHz channels for long distances in rural areas.**

In the Draft it is stated that some users will be migrated out of this band. Spectrum should be allocated for Smart Grid in the spectrum that becomes available.

**B. Future requirement: 800 MHz band: 2 x 10 MHz channels**

This should be allocated when the spectrum becomes available after the switchover from analogue to digital TV

**C. Immediate requirement 1.4 GHz band (1375/1400 MHz and 1427-1452 MHz)**

the requirement is for a point to multipoint access network for mainly smart meter concentrators in high density urban areas. The network will also be used for the monitoring and control of elements in the transmission and distribution network.

**Requirement to Prevent Interference with Eskom's PLC Systems**

Eskom utilises Power Line Carrier (PLC) equipment on its network in conjunction with normal telecommunications infrastructure. The PLC equipment operates in the range from 40 KHz to 500 KHz. ICASA must restrict the utilisation and radiation in this frequency band to prevent interference with Eskom's and the Electricity Supply Industries PLC equipment.

### **3. CONCLUSION**

Eskom would like to extend its appreciation to the Authority of for the opportunity to influence the provisions of the Bill/Act/Regulations. We trust that our comments have been constructive and that they are of assistance in finalising the Bill.

We trust that the Authority recognises the need and urgency to allocate the required spectrum for Smart Grid applications.

In the event that further clarification or information is required, Eskom would be more than happy to provide whatever is required.