

Mr. Manyapelo Richard Makgotha

Independent Communication Authority of South Africa  
164 Kathrine Street, Pinmill Farm, Block A, SANDTON

Date:

28 September 2012

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Dear Mr Makgotha

**Re: Comment from Eskom on the Frequency Migration Plan**

Attached is the comment from Eskom. Eskom's input is for the Authority to consider providing spectrum for Smart Grid application by power utilities in South Africa.

Eskom is willing to participate in the hearing to elaborate on the requirement.

We look forward to the revision of the spectrum for Smart Grid.

Yours sincerely,



28 September 2012

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**Cornelius Naidoo, Pr Eng**

**MANAGER: TELECOMMUNICATIONS  
TECHNOLOGY**

**ESKOM HOLDINGS SOC Ltd.**

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**DATE**

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**Draft Radio Frequency Migration Regulations  
2012 and Radio Migration Plan**

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**COMMENTS BY ESKOM**

**DATE**

28 September 2012

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# **Comments by Eskom on the Draft Radio Frequency Migration Regulations 2012 and Radio Migration Plan**

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## **1. INTRODUCTION**

Eskom would like to extend its appreciation to the ICASA of for the opportunity to influence the provisions of the Bill/Act/Regulations.

## **2. GENERAL COMMENTS**

Eskom recommends that the South African Communications Authority should consider the allocation of spectrum for Smart Grid for use by electricity utilities in South Africa. This requirement should also be submitted for inclusion in the SADC Frequency Allocation Plan and forwarded to WRC.

Smart Grid is required to improve the quality of electricity delivery, reduce carbon emissions, incorporate distributed energy resources, provide automated demand response and reduce the cost of electricity to consumers by reducing operating costs. It will enable the effective management of energy consumption, automatic metering and preservation of the natural resources required to generate power. It is thus of national strategic and economic importance for South Africa to have spectrum allocated for the Smart Grid Strategy.

The USA and most countries in Europe and Asia are implementing Smart Grid at various frequencies below and above 1 GHz for the access network. Wireless technologies include WiMAX, LTE, CDMA2000, EvDO and HSPA, however, the

trend is towards using LTE for Smart Grid access networks. “It is estimated that between 15 and 30 MHz of spectrum will be required and the ideal spectrum will be below 1 GHz, but up to 3 GHz may be viable.” \*

The European Utilities Telecom Council (EUTC) is in the process of lobbying national regulators, CEPT and the EU for suitable harmonized spectrum for Smart Grid. However, this could take several years since different portions of the spectrum below 3 GHz are used by different European countries for Smart Grid applications.

It is therefore imperative to allocate spectrum for Smart Grid in Southern Africa due to the immediate requirements of substation visibility and the roll out of Smart Meters at consumer sites.

**\*Reference:** Options for a Harmonised Allocation to Support Utility Operations (Smart Grids) Final Report including “Way Forward” Study for European Utilities Telecom Council (EUTC) 2209/EUTC/DR/v13 16.03.2010 (Available from EUTC)

### **3. SPECIFIC COMMENTS**

Review of the spectrum below 3GHz for Smart Grid technology deployments by power utilities in South Africa and in particular Eskom. Applicable bands are:-

- I. 790-862 MHz
- II. 862-890 MHz
- III. 1890-2010 MHz
- IV. 2025-2110 MHz
- V. 2500-2690 MHz

### **4. CONCLUSION**

We trust that our comments have been constructive and that they are of assistance in finalising the Bill. In the event that further clarification or information is required, Eskom would be more than happy to provide same.