

# RSA GRID CODE INDUSTRY EXPERTS TEAM MEETING

## MINUTES OF MEETING HELD ON 12 April 2013

Diamond Boardroom, National Control Building, Simmerpan

### ATTENDANCE:

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**MEETING CHAIRPERSON:** Bernard Magoro

**SECRETARIAT:** Target Mchunu

### APOLOGIES

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### VERSION CONTROL:

Version	Changes	Author	Date
00	First draft by Secretariat	Target Mchunu	18 April 2013

# RSA GRID CODE INDUSTRY EXPERTS TEAM MEETING

## 1 WELCOME

The Chairman welcomed everyone to the meeting. A safety briefing including evacuation procedure was done by the Chairman.

## 2 APOLOGIES

Apologies were noted as indicated on the attendants register above.

## 3 FINALISATION OF THE AGENDA

Chairman requested that item 7.1 “**Sharing of network case files between Eskom and RPP Developers / consultants**” be discussed first on the agenda. The meeting agreed to this.

## 4 APPROVAL OF THE PREVIOUS MINUTES

The minutes of the previous meeting were accepted without changes by the committee.

## 5 MATTERS ARISING

### 5.1 GCEXE12016: A.2.3.3(Large Signal Test)

**Previously:** It was noted that the revised exemption was received late and not circulated to IET members; however the applicant was allowed to go ahead with the presentation. Mr M. Viljoen presented the revised exemption from Camden Power Station. He explained that the main area of code violation is with regard to the reduction of testing from 1.6 x rated current as required by the grid code to 1.1x rated current. After a brief discussion, the applicant was advised to redraft the exemption request again and to give assurance that:

- Nothing has changed since the last successful test done at 1.6 x rated current
- The test will still be conducted as per the grid code requirements at 1.1 x rated current.

No final decision was taken on the exemption until the revised exemption is presented at the next IET meeting scheduled for the 26<sup>th</sup> February 2013.

**This Meeting:** Mr H. Nel requested more time to review the exemption application as per recommendation of the last meeting. Feedback will be given at the next meeting.

**Action: Mr H. Nel**

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### 5.2 GCEXE12018: clause 3.1.7 (restart after station blackout)

**Previously:** Mr F De Vries presented the exemption. He indicated that Camden units are not able to meet this as a result of the inherent design of the turbine. He explained that the turbine rotor is not put on the barring gear immediately after the unit trip under station blackout conditions. This process takes about 8 hours and hand barring facility does not exist. After a brief deliberation, the IET recommended that the applicant should redraft the exemption request and include the following:

- Risk associated with the unit being granted permanent exemption
- Cost-benefit analysis that modification is not an economic option
- Also reflect that the existing restart procedures and achievable timelines will be officially communicated to the System Operator.

EIUG also recommended that some input will be needed from SO when deciding on such request in terms of impact this will have on the overall system restart process.

The final decision on the revised exemption application will be taken at the next IET meeting scheduled for the 26<sup>th</sup> February 2013.

**This Meeting:** Mr F de Vries made a presentation to the meeting regarding Camden's non-compliance to the requirement of restart after power station blackout. The presentation explained constraints with regard to bringing Camden back to service after a power station blackout. It was highlighted that Camden units are relatively small and therefore are not believed to be as critical as the larger units in the fleet. NERSA raised a concern in terms of where Camden sits in the overall restoration plan. Mr. G. Hufford (representing System Operator, National control) highlighted that Camden was currently crucial in system restoration process.

The chairman suggested that Camden and National Control must review the impact of this exemption on the overall system blackstart and restoration plan, and come up with one view on the way forward.

**Action: Mr F de Vries/ G. Hurford**

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### 5.3 Amendment GCAMD12005: Network Code, clause 7.6.5 (5) Integration of power stations

**Previously:** Mr J. La Grange presented the amendment on behalf of Mr. R Estment. The committee was happy with the amendment but the debate went around on whether to keep the reference number of %single largest contingency+(SLC) 1000MW or empower System Operator to manage the number.

The committee concluded by recommending that Roy need to redraft the amendment to;

- Include statement that avoid losing a unit on a certain threshold unit size, and
- Reflect the upper limit of the SLC and that number will be reviewed by System Operator from time to time.

No final decision taken on the amendment until the revised amendment is presented at the next IET meeting scheduled on the 26th February 2013.

**This Meeting:** Mr. R. Estment presented the amendment which incorporated recommendations from the last IET meeting. The amendment was supported for GCAC recommendation. Secretariat to prepare submission to the GCAC.

**Action: Mr T. Mchunu**

## 6 NEW SUBMISSIONS

### 6.1 RPPEXE13002: Reactive power capabilities for category B\_ Aries Solar Facility

Mr M. Hadingham presented the exemption application regarding the requirement for maximum voltage tolerance at the Point Of Connection (PoC) at Aries substation. He highlighted that the requirement for 110 % voltage tolerance at the POC exceeds  $U_{max}$  for 22 kV equipment which according to the IEC 6007-1 should be limited to 24kV (or 109.1%). However, because of voltage drop within the facility, the RPP can only tolerate up to 108.7%.

In terms of the remedies, he proposed that;

- SAGCRPP code be amended to replace 110 % voltage tolerance at the POC by  $U_m$  less up to 105 % to cater for voltage rise within the RPP facility.
- The SAGCRPP is amended to replace 110 % voltage at the POC by  $U_m$  and a permanent exemption for Aries is granted limiting the POC voltage to  $U_m$  less 0.2 % or a temporary exemption granted limiting the POC voltage to  $U_m$  less 0.4 % the basis of the requirements of the SAGCRPP being unknown at the time of the awarding of the bid.

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EIUG commented that the modification of operating voltages was not the jurisdiction of this committee and further questioned the basis for 110% on the RPP code different from industry practice and IEC 6007-1.

Eskom Distribution supported the merit on the amendment regarding Um by the IPPs as probably an oversight issue during the development of the grid code. However even amending the code to Um, the RPP would not comply with the 109.1%.

After a lengthy discussion, the IET recommended that a temporally 2 year exemption be granted to Biotherm to allow for the review of the grid code as well as installation of the permanent solution once the grid code requirement has been clarified.

**Action: Mr W. Engelbrecht**

### **6.2 RPPAMD13001: Figure 9: Requirements for voltage control range for RPPs of category B.**

The chairman requested that the amendment be discussed as part of the workshop scheduled on the 25<sup>th</sup> April regarding comments on the renewable code.

### **6.3 RPPEXE13001: Reactive power capabilities for category B\_ Konkoonsies Solar Facility**

Decision applicable as per item 6.1

### **6.4 RPPEXE13004: Tolerance of frequency and Voltage deviation\_ Abnormal operating condition**

Ms T. Ziso presented the permanent exemption in relation to **Section 5.2 Abnormal Operating Conditions** of the SAGCRPP to reduce the sudden phase jumps of up to 40° to 20° at the POC without disconnecting or reducing its output. Mike Coker questioned how we ended up with 40° tolerance while the initial clause had 20°. Mr B. Magoro highlighted that the 40° came from the study conducted by Mr A. Bartylak; however Mr Bartylak was not available to present the case.

The committee agreed that the requirement should be revisited and further look at the wording as there were some concern raised with regard to the requirement for the RPP not required to reduce its output during the phase jump. IET concluded by recommending the permanent exemption to the applicant to the GCAC. The chairman also further noted to the committee that similar exemption from Amakhala wind farm was requested and the committee supported it for GCAC. The decision was mainly based on the fact that the requirement was not in place prior to

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the award of round one projects and that there was no viable technical solution to allow compliance with SAGCRPP at present. Secretariat to prepare submission to the GCAC.

**Action: T. Mchunu**

### **7 GENERAL**

#### **7.1 Sharing of network case files between Eskom and RPP Developers / consultants**

Mr B Magoro gave a bit of background to the discussion. The RPP code allows generators to access network information to enable them to conduct generation integration and grid code compliance studies. Hence a need for both parties (Eskom & Developers) to agree on the network information needed in order to do any integration of generators or load to the system. He also mentioned some generators have reported that they have requested access to full network case files from Eskom, but not successful. The real issues for debate are clarity on what information generators require and for what purpose, as well as the information that the NSPs are reluctant to give.

Dr C. Carter-Brown requested the IPPs to indicate why they need the case files. What studies need to be done by the developers and by Eskom? Also indicated that the principle must be very clear in terms of the studies that need to be done for the design of the plant and studies need to be done for broader interaction on the network and that it should also be clear as to who is accountable for the studies necessary for the stability of the network.

Mr W. Engelbrecht commented that from the developer point of view it was supported that the consultants could get hold of the models to do some studies that would give comfort in terms of grid stability.

EIUG highlighted that the technical performance of the network impacts on the cost estimate and denying certain information might affect the developers.

Mr G. Hurford highlighted that the system operator is in support of sharing the case files with generators to base their design. Also whatever need to be shared should be clear as a principle not leave the decision to the design engineer.

Consultants also raised a concern that Developers pass the responsibility of grid code compliance to them which becomes problematic if there was no sufficient network data at their disposal. DNSP commented that a need for clarity when the grid code calls for compliance studies where that falls to the developers or some aspect where the utility is accountable.

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After various inputs into the discussion, the Chairman proposed the formation of a workgroup comprised of Network Service Providers, SO and Developers (or their Agents) to discuss this matter at length and reaching consensus. He also advice the developers to be clear about the information they require and purpose for which it is required. Also with Network Service Providers, the Chairman highlighted that it be clear as to why this information cannot be shared.

**Action: T. Mchunu**

### **8 CLOSURE**

The meeting was closed at 12h30.

I hereby certify that these minutes are a true reflection of the proceedings of the meeting held on 12 April 2013.

Signature of the Chairman:

Date: