	TECHNICAL CLARIFICATIONS ON TENDER KZN027 -THE PROVISION FOR THE DESIGN, MANUFACTURE, TESTING, SUPPLY, DELIVERY, OFF-LOADING, INSTALLATION AND COMMISSIONING, (INCLUDING SPARES AND TRAINING) OF MV INDOOR PRIMARY METAL- ENCLOSED SWITCHGEAR.	CENTRAL EAST CLUSTER
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1. TECHNICAL CLARIFICATIONS, CLARIFICATION MEETING QUESTIONS AND RESPONSES

1.1 QUESTION1

For SAP no items below in a) and b) it was queried as to whether there is associated feeder panels listed as required to work together with these items?

- a) 0170209 BKR PANEL 11kV 2500A 25kA B/S D6258
- b) 0170210 BKR PANEL 11kV 2500A 25kA INCMR D6258

RESPONSE 1

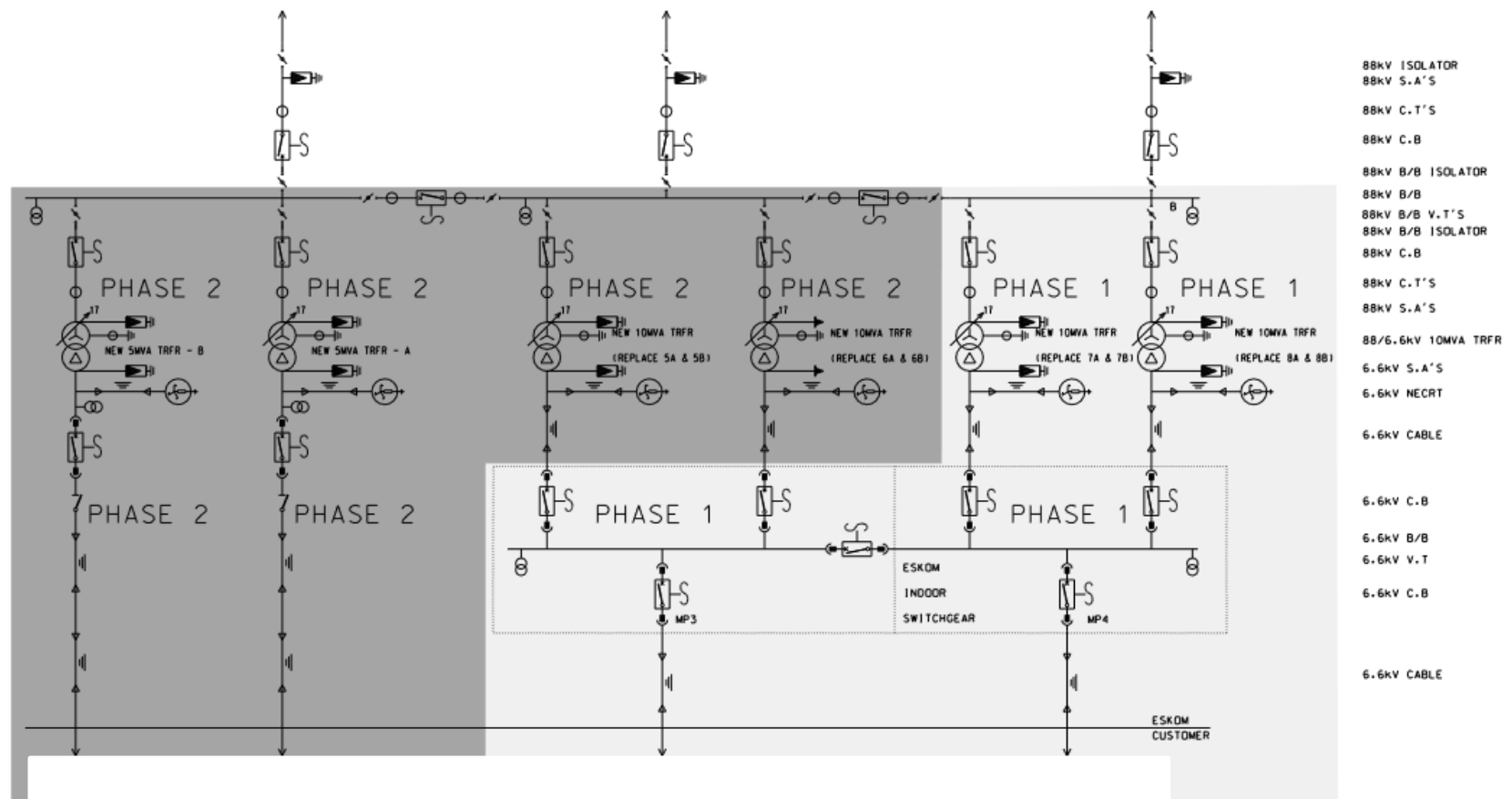
For the project required refer the below points a)-e) and the single line diagram in figure 1:

- a) The board will have 4 x transformer incomer panels. Each panel will be supplied by an 88/6.6kV 10MVA transformer;
- b) The board busbar conductors and bus-section panels are to be 2500A rated;
- c) The board will have 2 x panels that will supply the customer. Each panel needs to handle the peak load of 20MVA @ 6.6kV;
- d) The board shall have a 6.6kV VT panel at each end; and
- e) The Eskom SAP no's are below:
 - i) Transformer incomer panel: 0239690 (11kV 1250A 25kA FDR(B))
 - ii) Bus-section panel: 0170209 (11 kV 2500 A 25 kA B/S)
 - iii) Customer panel: 0170210 (11 kV 2500 A 25 kA)
 - iv) VT Panel: 0239687 (6.6 kV/110 V 50 VA 0.2(B))

NOTE: SAP no 0239690 with description BRK PANEL 11kV 1250A 25kA FDR (B) D6258 has been added onto the tender list with a quantity of 4. Please refer also the NEC3 Supply contract addendum that will indicate this additional SAP no.

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- 88kV ISOLATOR
- 88kV S.A'S
- 88kV C.T'S
- 88kV C.B
- 88kV B/B ISOLATOR
- 88kV B/B
- 88kV B/B V.T'S
- 88kV B/B ISOLATOR
- 88kV C.B
- 88kV C.T'S
- 88kV S.A'S
- 88/6.6kV 10MVA TRFR
- 6.6kV S.A'S
- 6.6kV NECRT
- 6.6kV CABLE
- 6.6kV C.B
- 6.6kV B/B
- 6.6kV V.T
- 6.6kV C.B
- 6.6kV CABLE

REV	PROPOSED SOLUTION ON UPGRADE OF TRANSFORMERS	CHKD	AUTH	DATE
4				04/03/2021

PROPOSED

REV
4

Figure 1. Single line diagram for proposed withdrawable

1.2 QUESTION2

For all the withdrawable switchgear SAP no's below a concern was raised as to whether the SAP no's listed would allow certain switchgear board configurations to be built .

- a) 0170209 BKR PANEL 11kV 2500A 25kA B/S D6258
- b) 0170210 BKR PANEL 11kV 2500A 25kA INCMR D6258
- c) 0170207 BKR PANEL 11kV 1250A 25kA INCMR D6258
- d) 0170208 BKR PANEL 11kV 800A 25kA FDR (A) D6258
- e) 0239687 VT PANEL 6.6kV/110V 50VA CL 0.2 (B)D6175
- f) 0237141 VT PANEL 11kV/110V 50VA CL 0.2 (A)D6175

RESPONSE 2

A single line diagram of the switchgear board configuration to be built shall be issued before assembly of the switchgear board is to be started. This single line diagram will clarify the switchgear panels that will be required to assemble the required switchgear board.

1.3 QUESTION3

A query was raised as to whether the Eskom buyers guide DDT 6175 is the correct Eskom buyers guide reference for the SAP item 0170208 BKR PANEL 11kV 800A 25kA FDR (A) D6258 as stated in table 1 of the technical addendum document?

RESPONSE 3

The Eskom buyers guide reference for SAP item 0170208 BKR PANEL 11kV 800A 25kA FDR (A) D6258 was incorrectly stated as DDT 6175 and the reference should be DDT 6258.

1.4 QUESTION 4

Regarding the requirement for the need to perform room pressure simulation reports, will dimensioned drawings of the rooms be made available before an order is placed for the switchgear?

RESPONSE 4

Yes, dimensioned drawings shall be made available before the order is placed.

1.5 QUESTION 5

If a tender has had a factory evaluation performed on them relating to an Eskom switchgear specification that is applicable in this tender, but it is more than 7 years ago will it be required to undergo the factory evaluation again?

RESPONSE 5

If the factory evaluation has been performed more than 7 years ago it will be required to undergo the factory evaluation again.

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1.6 QUESTION 6

Do the type test report copies submissions have to be duplicated for each SAP no submission?

RESPONSE 6

Type test report copy submissions do not have to be duplicated, a type test report folder can be submitted, and clear reference can be made to the relevant type test report copies for the SAP no item in question.

1.7 QUESTION 7

Does the invitation to tender document refer to both fixed pattern and withdrawable switchgear SAP no's?

RESPONSE 7

Please refer the NEC3 Supply Contract (SC3) for the full list of SAP no's out for tender.

1.8 QUESTION 8

Can a type test conformity summary report be submitted as evidence for compliance to type test requirements?

RESPONSE 8

No, copies of full type test reports shall be submitted.

1.9 QUESTION 9

Must prospective bidders bid on all items required by the tender, or will it be allowed to bid on only certain items ?

RESPONSE 9

Prospective bidders can bid on items below as follows :

- a) On all the items as required by the tender i.e. the complete list of all voltage level fixed pattern and withdrawable switchgear and ancillaries or;
- b) Either the complete set of 11 kV fixed pattern switchgear and associated items. The 11 kV items tendered for shall be such that they can form a functional unit, and or;
- c) The complete set of 11 kV withdrawable switchgear and associated items. The 11 kV items tendered for shall be such that they can form a functional unit, and or;
- d) Either the complete set of 22 kV fixed pattern switchgear and associated items. The 22 kV items tendered for shall be such that they can form a functional unit, and or;
- e) The complete set of 22 kV withdrawable switchgear and associated items. The 11 kV items tendered for shall be such that they can form a functional unit.

NOTE:

- a) It will not be allowed to bid on a subset of items from the full set of 11 kV withdrawable switchgear or a subset from the full set of the 11 kV or 22 kV fixed pattern switchgear and associated items; and
- b) Items bid on, must be able to be assembled as required by the single line diagrams that will be given before assembly is required and therefore bidding on only certain items only (and considering it needs to interface with other items) may lead to the switchgear board not being able to be built.

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1.10 QUESTION 10

My Question:

Eskom Document - TECHNICAL EVALUATION CRITERIA ADDENDUM FOR CENTRAL EAST CLUSTER FIXED PATTERN AND WITHDRAWABLE INDOOR SWITCHGEAR	My Question
3. m) For each item offered the tenderer should submit all technical information required. For e.g., if the tenderer is offering eleven items there shall be eleven separate technical submissions. Items may not share or cross reference information. All technical information shall be completed per Eskom SAP no. and or description;	You mentioned that we must follow the sequence when submitting returnable, do we have to submit all this for each SAP number that we are quoting for, including Type test reports?
3. n) The returnable information as stipulated by the Eskom std PDRP_2013-252-TECHNICAL EVALUATION CRITERIA FOR MV INDOOR PRIMARY SWITCHGEAR shall be organised per SAP no and description and shall be clearly organised for evaluation as per each evaluation stage from the TEC and its associated category;	

RESPONSE 10

For each SAP No, the technical information per SAP No must be filed with that SAP No following the requirements of the PDRP_2013-252-TECHNICAL EVALUATION CRITERIA FOR MV INDOOR PRIMARY SWITCHGEAR. For the type test copies evidence submission refer to question 6 and response 6 of this document.

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1.11 QUESTION 11

Please clarify the following:

1. Looking at the Technical Schedule AB, All the panels have VT, but it is highlighted "Where Applicable"
How will we know which panel must have VT and which one must not have a VT?
VT are normally in the Incomer panels, but these panels are not indicated which one will be feeders or Incomers.
2. NEC Contract does not mentioned the required warranty period by Eskom, please advise.
3. As this will be a 3-Years Contract "as and when required basis", do we have estimated batches per year with its estimated quantities? It will be good to have planned quantities/batches per year to plan for factory capacity.

RESPONSE 11

1. Refer response 1 and response 9;
2. The warranty issue shall be dealt with as follows:
 - a) The matter of warranties will be discussed during post evaluation completion;
 - b) The warranty shall be set taking in consideration the Eskom needs and requirements; and
 - c) The warranty shall be guided by historical warranties Eskom required and implemented for indoor switchgear and similar equipment to indoor switchgear.
3. Quantities per SAP no are already in the NEC3 Supply contract published on the Eskom tender portal.

1.12 QUESTION 12

Please can you provide definitions of what is expected in terms of training on Level 1 – 4:
We could not find any documents detailing these training levels in the RFQ documents.

Installation			
29.		Level 1 training and manuals per training session and will be per group of 30 people	2
30.		Level 2 training and manuals per training session on site and will be per group of 10 people	12
30.		Level 3 training and manuals per training session on site and will be per group of 10 people	12
31.		Level 4 Training and Manuals per training session on site and will be per group of 5 people	12

RESPONSE 12

Please refer to the Eskom standard 240-56065202 Switchgear Training Requirements from Original Equipment Manufacturers Standard and point 3.o) from the document Technical evaluation criteria addendum for Central East Cluster fixed pattern and withdrawable indoor switchgear.

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1.13 QUESTION 13

Please clarify the following.

In the Technical Evaluation document, Level 1 Gatekeeper. There is this requirements.

Is a proposal for condition monitoring functions and sensors that can be supplied with each panel type in English submitted?	5.24	Yes/No	
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Do we need to just submit proposal?

Or we need to submit proposal with cost and this cost included per panel?

RESPONSE 13

From the Eskom Fixed pattern indoor switchgear standard 240-56062704 and the Eskom indoor withdrawable switchgear standard 240-56065131 the following is stated in clause 5.24.4 "The supplier shall provide with the tender a proposal for condition monitoring functions and sensors that can be supplied with each panel type".

The tenderer shall submit the proposal and also two prices per panel, one price without the proposal and one price with the proposal.

1.14 QUESTION 14

Clarity required on technical returnable

Please advise, do we have to initial all the technical returnable, type test pages including the required manuals? As for commercial I understand that all mandatory documents must be signed

RESPONSE 14

Only Technical Documents that ask for signatures from manufacturers and suppliers needs to be signed. There is no requirement for technical documents such as for e.g. copies of type test reports and manuals and other technical documents to be initialled on every page of these documents.

1.15 QUESTION 15

With reference to the above tender, please can you clarify the following.

The query relates to the fixed pattern switchgear. The revised NEC lists that we should quote of the following types of panels

Mat No	Short Text	QTY
0574919	SWITCHGEAR:FPFEEDER(A);11KV;630A;25kA	54
0574921	SWITCHGEAR:FPFEEDER(A);11KV;630A;31.5kA	14
0574922	SWITCHGEAR: FPFEEDER(B); 11KV; 1250A; 31.5kA	4

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0574928	SWITCHGEAR: FP TFR;11KV;1250A;25kA	12
0574929	SWITCHGEAR: FP FEEDER(A);11KV;1250A;25KA	4
0574932	SWITCHGEAR: FP B/SECTION;11KV;1250A;25KA	8
0574934	SWITCHGEAR: FP TFR;11KV;1250A;31.5KA	4
0574935	SWITCHGEAR: FP FEEDER(A);11KV;1250A;31.5kA	9
0574936	SWITCHGEAR: FP TFR;11KV;2500A;31.5KA	6
0574937	SWITCHGEAR: FP FEEDER(B); 11KV; 630A; 31.5kA	16
0574938	SWITCHGEAR: FP B/SECTION;11KV;1250A: 31.5kA	2
0574939	SWITCHGEAR: FP B/SECTION; 11KV; 2500A; 31.5kA	3
0574940	SWITCHGEAR: FP TFR;22KV;1250A;25kA	5
0574941	SWITCHGEAR: FP FEEDER;22KV;630A;25kA	11
0574942	SWITCHGEAR: FP FEEDER;22KV;1250A;25kA	11
0574943	SWITCHGEAR: FP B/SECTION;22KV;1250A;25kA	2
0574920	SWITCHGEAR: FP TFR;11KV;2500A;25KA	3

Based on the above, the below types can be grouped together to make up complete switchboards

Mat No	11kV,1250A,25kA	QTY	Type of Panel	Bus Bar Rating
0574919	SWITCHGEAR: FP FEEDER(A);11KV;630A;25kA	54	Feeder	1250A (A)
0574928	SWITCHGEAR: FP TFR;11KV;1250A;25kA	12	Incomer	1250A
0574929	SWITCHGEAR: FP FEEDER(A);11KV;1250A;25KA	4	Feeder	1250A (A)
0574932	SWITCHGEAR: FP B/SECTION;11KV;1250A;25KA	8	B/Section	1250A
	11kV,1250A,31.5kA			
0574921	SWITCHGEAR: FP FEEDER(A);11KV;630A;31.5kA	14	Feeder	1250A (A)
0574934	SWITCHGEAR: FP TFR;11KV;1250A;31.5KA	4	Incomer	1250A
0574935	SWITCHGEAR: FP FEEDER(A);11KV;1250A;31.5kA	9	Feeder	1250A (A)
0574938	SWITCHGEAR: FP B/SECTION;11KV;1250A: 31.5kA	2	B/Section	1250A
	11kV,2500A,25kA			
0574920	SWITCHGEAR: FP TFR;11KV;2500A;25KA	3	Incomer	2500A
	11kV,2500A,31.5kA			
0574936	SWITCHGEAR: FP TFR;11KV;2500A;31.5KA	6	Incomer	2500A

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0574939	SWITCHGEAR: FPB/SECTION; 11KV; 2500A; 31.5kA	3	B/Section	2500A
0574922	SWITCHGEAR: FPFEEDER(B); 11KV; 1250A; 31.5kA	4	Feeder	2500A (B)
0574937	SWITCHGEAR: FPFEEDER(B); 11KV; 630A; 31.5kA	16	Feeder	2500A (B)
	22kV,1250A,25kA			
0574940	SWITCHGEAR: FPTFR;22KV;1250A;25kA	5	Incomer	1250A
0574941	SWITCHGEAR: FPFEEDER;22KV;630A;25kA	11	Feeder	1250A
0574942	SWITCHGEAR: FPFEEDER;22KV;1250A;25kA	11	Feeder	1250A
0574943	SWITCHGEAR: FPB/SECTION;22KV;1250A;25kA	2	B/Section	1250A

From the above you will note that SAP 0574920 “11kV,2500A,25kA” “ SWITCHGEAR:FP TFR;11KV;2500A;25KA” is the odd one out and cannot be used in any configuration to build up a board. Is this panel actually required?, we do not see the need for this item. Further to this, the ESKOM specification make reference to busbar VT's, one is required per busbar section. The pricing schedule does not make provision for busbar VT's on the fixed pattern switchgear. Please advise if the pricing schedule will be revised to cater for these or where ESKOM would like us to add the pricing for such.

RESPONSE 15

a) Relating to the need for SAP No 0574920 “11kV,2500A,25kA” “ SWITCHGEAR:FP TFR;11KV;2500A;25KA.

SAP No 0574920 “11kV,2500A,25kA” “ SWITCHGEAR:FP TFR;11KV;2500A;25 kA is no longer required and does not need to be tendered upon.

b) Relating to the VT:

The VTs are to be positioned in the transformer incomer panels and needs to comply with Eskom specification 240-56062704 Rev 2, section 5.19.

Furthermore, 5.19.1 from 240-56062704 Rev 2 states “**Busbar connected dry-type voltage transformers (VTs) shall be provided for each bus-section.**” Eskom did not specify additional VTs in the pricing schedule as 5.19.1 from above states the VTs shall be provided for.

1.16 QUESTION 16

Please request for clarification on the following missing panels from the Eskom BOQ: because the TFR panel for 25kA, 11kV, (2500A BB, 2500 CB) is requested with SAP no. 0574920.

\1 FDR panel for 25kA, 11kV (2500A BB, 630A CB).

\2 FDR panel for 25kA, 11kV (2500A BB, 1250A CB).

\3 B/S panel for 25kA, 11kV (2500A BB, 2500A CB).

RESPONSE 16

SAP No 0574920 “11kV,2500A,25kA” “ SWITCHGEAR:FP TFR;11KV;2500A;25 kA is no longer required and does not need to be tendered upon.

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1.17 QUESTION 17

Another clarification from my team.

Item	Description of clarification	Specific reference doc	Clarification required
1	Per panel, provision must be made to bolt the steel support frame/base to the concrete floor.	NEC3 Supply Contract (SC3) - Page 20 of 26	We do not quite understand this requirement, briefly explain?

RESPONSE 17

FOR BOTH WITHDRAWABLE AND FIXED PATTERN INDOOR SWITCHGEAR PLEASE REFER BELOW

Please refer the Eskom fixed pattern switchgear specification 240-56062704 Rev 2 as below:

"5.11.1.5 A CUSTOMISED STEEL SUPPORT FRAME/BASE SHALL BE PROVIDED TO ALLOW THE SWITCHGEAR PANELS TO BE SUPPORTED OVER THE ENTIRE WIDTH OF THE CABLE TRENCH. THE MINIMUM HEIGHT OF THE SUPPORT FRAME/BASE SHALL BE 75 MM."

1.18 QUESTION 18

Point 3: The Gatekeeper evaluation requirements for the KZN 027 tender.

One specific requirement from Eskom is to share the IAC-AFLR videos for the products offered as part of the tender submission. Can there be alternative submission, with regards to the video at Tender stage?

Just to elaborate Further to Point number 3,

1/ would Eskom accept to see the video in our factory or to be presented to them in their office without sharing the video?

2/ in case the video to be shared than a NDA shall be signed by Eskom. we need to ensure that the document will be shared with Eskom organization mentioned in the tender document.

RESPONSE 18

The Eskom technical evaluation team shall not view the IAC type test videos at a tenderer's office. All evidence as required by Eskom PDRP_2013-252 Technical Evaluation Criteria for MV indoor primary switchgear shall be submitted in the required format to evaluate at the designated Eskom place of evaluation. With regards to IAC videos, the videos shall be submitted in a suitable video format viewable on standard windows video viewer applications and shall be on a USB submitted as part of the tender returnables.

In addition, the Eskom technical evaluation team signs an Eskom Non-Disclosure Agreement(NDA) before the evaluation starts and if a further NDA is to be signed the Eskom Procurement buyer will advise on that.

1.19 QUESTION 19

How or where we shall price for below list of min recommended spares (Clause 8.3.1) as these are not listed in the Eskom Price Schedule, but the comment refers to the price schedule:

(reference page 43 of the spec no. 240-56062704).

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8.3 SPARES

8.3.1 General

Spares will normally be purchased at the same time that orders are placed for circuit-breakers. The supplier shall provide a list of the minimum recommended spares (refer to 5.23.11) together with prices in the pricing schedules for the circuit-breakers concerned.

I understand below is mainly referring to the **tender documentation**, but above clause refers to prices.

5.23.11 A full list of spares required for maintenance shall be provided with the tender documentation (refer to 5.24.1).

5.24.1 The supplier shall provide the following documentation with each tender (in electronic pdf format using appropriate document and folder names):

h) full list of spares required for maintenance (refer to 5.23.11 and section 8.3);

Similarly, how or where shall we price below motors as per clause 8.3.2 (reference page 43-44 of the spec no. 240-56062704).

8.3.2 Availability of spares

- spring charging motors; and
- disconnector operating motors.

RESPONSE 19

Refer clarification 3.

1.20 CLARIFICATION 1

Table 1 from the Technical addendum document has a missing row number after line 27. It is the reference to the Room simulation reports and it is to be noted that it is valid line item that forms part of the tender.

1.21 CLARIFICATION 2

Please note that the below item has been added to the tender list of items. Please refer also the NEC3 Supply contract addendum that will indicate this additional item.

The additional item is as follows:

For withdrawable indoor switchgear: Per panel with removable parts, allow for provision of 3mm galvanised steel or 3CR12 racking floor plates secured to the floor in front of the panel. Refer Eskom DDT5238 and Eskom specification 240-56065131.

1.22 CLARIFICATION 3

Applicable to fixed pattern and withdrawable switchboards delivered to each site:

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- a) The set of operating tools for the switchgear and the hand-held remote control unit for remote operation (remote switching) of the switchgear shall be costed separately and delivered with the switchboard;
- b) A wall-mounted steel tool cabinet with fixing material and the labour to mount the cabinet as specified in Eskom specification 240-56062704 and 240-56065131 shall be provided and costed separately in the pricing schedule. Refer the amended NEC3 pricing schedule;
- c) A set of specialised tools for minor maintenance shall be provided and priced separately in the pricing schedule. The tool set shall be separated for fixed pattern and withdrawable switchgear. A detailed list of the tools shall be provided but a summated cost for the tools shall be quoted. Refer the amended NEC3 pricing schedule;
- d) Specialised tools for major (specialised) maintenance purposes shall be provided and priced separately in the pricing schedule. The tool set shall be separated for fixed pattern and withdrawable switchgear. A detailed list of the tools shall be provided but a summated cost for the tools shall be quoted. Refer the amended NEC3 pricing schedule;
- e) A full list of maintenance spares required for ALL types of panels shall be provided with the tender documentation. A detailed list of the spares shall be provided with a unit cost. In addition, a summated price total of the maintenance spares shall be indicated in the pricing schedule as a set per switchboard. The spares shall include trip coils, close coils, spring charging motors; disconnecting operating motors and racking motors for withdrawable indoor switchgear and any other serviceable parts applicable. The maintenance spares lists shall be separated for fixed pattern and withdrawable switchgear. Refer the amended NEC3 pricing schedule to provide the summated cost per panel type for the serviceable spares; and
- f) A set of basic spares required for maintenance (i.e. 2 x trip coils, 2 x close coils) shall be supplied with each switchboard. The cost of these spares shall be included in the switchboard price and no separate price schedule item will be allocated for these spares. This is as per the Eskom fixed pattern and withdrawable specifications 240-56062704 and 240-56065131.

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