

TENDER NO. KGN-HYD-023-2017
DATE: 03/10/2017
KENYA ELECTRICITY GENERATING COMPANY
**TENDER FOR DESIGN, MANUFACTURE, FACTORY TRAINING AND TESTING, DELIVERY, SUPERVISION OF
ASSEMBLY, INSTALLATION, TESTING AND COMMISSIONING OF A 20/25 MVA, 11/143.7 kV,
ONAN/ONAF GENERATOR STEP-UP TRANSFORMER FOR MASINGA POWER STATION**
CLARIFICATION No .3

In accordance with the Tender for Design, Manufacture, Factory Training and Testing, Delivery, Supervision of Assembly, Installation, Testing and Commissioning of a 20/25 MVA, 11/143.7 kV, ONAN/ONAF Generator Step-Up Transformer for Masinga Power Station, KenGen hereby issues Clarification No.3

RESPONSE TO REQUEST FOR CLARIFICATION

Clause/page	Requirement	Clarification /Comment/Deviation	KenGen Comment
clause 25.2.1	point b :transformer losses	Question: Our device can't monitor the transformer losses. We rarely do this. Please clarify the transformer losses are calculated or measured or not necessary for monitoring?	The transformer losses will be calculated using a suitable algorithm.
clause 25.2.1	point e :hot –spot temperature(calculated as per IEC60076-6/IEEE)	According to the specification, we think the hot –spot temperature is calculated, not measured, please clarify.	The hot spot temperature shall be calculated as per IEC or IEEE standards
clause 25.2.1	point f :oil temperature(top &bottom)	According to the specification ,there should be 2 oil temperature indicators(top &bottom),but on page 68 of 128,clause 17.4.1,17.4.9,it is showed that the transformer shall be provided one for oil temperature, One RTD for Oil Temperature Indication ,please confirm the number of oil temperature indicators and RTD ?	Provide for measurement of bottom and top oil temperatures by use of RTDs. Thus clause 17.4.9 b shall read “17.4.9 b Two (2) RTD for Oil temperature indication – top & bottom temperatures”

clause 25.2.1	point h :moisture in oil	Question: please confirm that the monitoring of moisture in oil include OLTC oil and dissolved gas?	Measurement of moisture in oil is for Main Tank only – the active part of the transformer. OLTC & Dissolved Gases are not included
clause 25.2.2	Point c:Operating parameters(current, running duration)of individual /grouped pumps	Question: The transformer is ONAN/ONAF, this cooling system doesn't include pumps, please clarify is this necessary?	The equipment supplied to carry out Transformer condition monitoring should be able to monitor pumps and fans.
clause 25.2.2	point d :Flow of oil	Please clarify where the oil flow indicator is used? Is it used for Main tank , r Radiators or others? Because the cooling system doesn't include pumps, so please clarify the oil flow indicator is not used for pumps.	The equipment supplied to carry out Transformer condition monitoring should be able to monitor flow of oil.
clause 25.2.2	Point g:current consumption of individual /group fans and pumps	Please clarify the consumption is the power consumption?	Yes it is.
Page 53	3.9.1. The Transformer shall not exceed the following maximum physical dimensions: Maximum Length of Main Tank Base = 3,820 mm Maximum Width of Main Tank Base = 2,260 mm Maximum Height of Main Tank Base = 3,260 mm Overall Length of Assembled Transformer = 9,000 mm Overall Width of Assembled Transformer = 2,950 mm Overall Height of Assembled Transformer = 5,340 mm	The previous transformer manufactured by GEC Power Transformer Limited is 23.5MVA ONAN, now the New transformer is 25MVA ONAF, the capacity is bigger, so the overall width of Assembled Transformer 2,950 mm is not enough, according to the bidder document, the actual design over width is more than 4000mm,please clarify.	The available plinth area is given as 3820 by 2260 (L by W). The design of the tank base shall be such that it shall fit within the available Plinth area. The jerking pads has to be within the same plinth area. The Transformer body shall be such as to have the following maximum assembled dimensions: 1. Length = 5280mm 2. Width = 4250mm
Page 73	Type test reports and certificates based on IEC standards or equivalents, for each of the accessories the Bidder proposes to use when manufacturing the Transformer (e.g. Bushings, CTs, Bucholz Relay, Pressure Relief Device, Tap Changer, etc.).	The type test reports of transformer and OLTC we can provide, but others like Bushings, CTs, Bucholz Relay, Pressure Relief Device may be difficult.	Testing certificates by independent testing laboratories will be sufficient for the named accessories.

<p>Clarification 2 Page 8/18, Row 2</p>	<p>Short circuit withstand test shall be done. Add sub-clause (cc) in clause 22.3.3 as follows. Cc: short circuit test</p>	<p>Upon KenGen's clarification, we understood that the short circuit test is required. Therefore, we would like to suggest as following: 1. Can we submit short circuit calculation and short circuit report of similar transformer instead of offering the short circuit test? 2. In case the short circuit test is still insisted, we understand that the transformer that successfully passes short circuit test would be delivered to and accepted by KenGen as part of scope of supply?</p>	<p>The ability of the transformer to withstand thermal and dynamic effects of short circuit shall be determined by calculation as per IEC 60076-5: 2006 or its latest revisions.</p>
		<p>From the published KGN HYD 023 2017 Addendum 1 Item 5. PRICE SCHEDULE we noted: E: Supervision of assembly, oil filling installation & commissioning on site. F: Testing and commissioning Please confirm the above both mentioned commissioning are same work.</p>	<p>Yes, they are the same work. Please delete "F: Testing and commissioning" from the price schedule.</p>
		<p>The GCC payment procedure clause 14.1 (iii) & (iv) and SCC Ref.5 both indicating installation and commissioning are supply's work at site, however the Price Schedule No.5 indicates Supervision of assembly, oil-filling installation & commissioning on</p>	<p>Please refer to Clarification 2 page 4/18 rows 2 & 3 for the replies to this.</p>

		site. Please confirm the installation and commissioning works scope above.	
SCC NO.5		The SCC NO.5 showing Delivery period and point: The transformer shall be CFR (Cost & Freight), Mombasa port, Kenya followed there after by installation and commissioning works on site. Delivery to Mombasa port shall be 7 months. Please confirm the work period for installation and commissioning works.	Please refer to Clarification 2 page 4/18 rows 2 & 3 for the replies to this.
Clause No.22	In the technical schedule Clause No.22- Engineering Services:	Short circuit withstand test is applicable but there is no mentioning in other place, specially in the technical specification 22.3. Factory Acceptance Testing listed tests. Please confirm if the Short circuit withstand test shall be carried out.	The ability of the transformer to withstand thermal and dynamic effects of short circuit shall be determined by calculation as per IEC 60076-5: 2006 or its latest revisions. The

All other terms and conditions remain unchanged

ACKNOWLEDGEMENT OF CLARIFICATION NO. 3

We, the undersigned hereby certify that the addendum is an integral part of the document and the alterations set out in the Addendum have been incorporated in the tender proposal.

Signed.....

Tenderer.....