



**KenGen**  
KENYA ELECTRICITY GENERATING COMPANY PLC

KGN-GDD-198-2021

RFx; 5000008609

**TENDER FOR SUPPLY OF TRACER INJECTION UNIT AND GEOCHEMICAL ANALYZERS  
FOR GEOTHERMAL DEVELOPMENT DIVISION**

**(Citizen Contractors)**

10<sup>th</sup> December, 2021

In Accordance with the “Tender for Supply of Tracer Injection Unit and Geochemical Analyzers for Geothermal Development Division.” KenGen hereby issues **Clarification 2**

NO.	REQUESTED CLARIFICATION	KENGEN RESPONSE
1.	<b>General Clarifications:</b> Are we required to quote for all item in this tender i.e (Schedule 1 to 4) Will the tender be evaluated per schedule(item) or lot wise as per the Price schedule form? If lot wise, kindly consider splitting into 2 lots since item 1 (Tracer Injection Unit) is from a different field from items 2 – 4 which are analytical equipment.	<b>1. Bids to be submitted as per price schedule form</b>
2.	<b>ITEM 2: Atomic Absorption Spectrophotometer:</b> 1. Kindly specify the elements you want to analyze. This will enable us to know which lamps and standards to offer for the system.	<b>The elements to be analysed are but not limited to: Sodium, Potassium, Lithium, Magnesium, Calcium, Aluminium ,Iron, zinc and Silicon.</b>
3.	<b>ITEM 3: UV-VIS Spectrophotometer and ICPE</b> 1. For the ICPE kindly provide list of elements of interest so that we can provide the right accessories and Calibration standards. Some elements such as Mercury and Arsenic require special Accessories.  2. Kindly clarify on your application and the nature of samples you wish to analyze. Do you have any organic solvents, high	<b>1. Elements of interest are Mercury, Zinc, Lead, Cadmium, Arsenic, Antimony.</b> <b>2. Our samples are hydrothermal water samples, with TDS averaging &lt; 5000 ppm. Occasionally we have organic solvents. No hydrofluoric acid.</b> <b>3. Auto sampler is required</b>

	<p>salt samples or samples that contain hydrofluoric acid?</p> <p>3. Do you require an autosampler as well?</p> <p>4. Is it bidders or buyer's responsibility to supply the required gases for operation?</p> <p>5. Also confirm who will be responsible for any ductwork required for use with the ICPE.</p> <p>6. Quantities in the price schedule are 2 pieces. Please clarify if you require 2 UV-VIS spectrophotometers and 2 ICPE units or one of each.</p>	<p>4. Supplier will be responsible for supply of initial gases for installation. (Ultrapure Argon gas of purity &gt;99.95% cylinder 2000psi complete with regulators)</p> <p>5. Supplier will be responsible for duct work</p> <p>A total of two required one each of UV-VIS Spectrophotometer and ICPE</p>
4.	<p><b>Item 4: Capillary and Packed Gas Chromatograph:</b></p> <p>1. You have indicated 5 detectors - FID, TCD, ECD, FPD, FTD, Please note for analysis of NCGs (methane, oxygen, nitrogen, hydrogen etc) a TCD detector is sufficient.</p> <p>Kindly confirm we can offer TCD detector only.</p>	<p>Two (2) detectors installed: Thermal conductivity Detector (TCD) for our gases of interest (CH<sub>4</sub>, O<sub>2</sub>, N<sub>2</sub>, and H<sub>2</sub>) and a Flame Ionization Detector (FID). The Three (3) other detectors, ECD, FPD, FTD to be provided as accessories with their full kit compatible with this GC, that can enable installation if it is required for use.</p>
5.	<p><b><u>3. CAPILLARY AND PACKED GAS CHROMATOGRAPH:</u></b></p> <p>i- Please advise whether the use of a gas sampling valve for the gas sample or a regular capillary injector with a gas-tight syringe.</p> <p>ii- What are the detectors that need to be installed? Maximum two detectors can be installed then add-on kits for the rest of them.</p> <p>iii- For the sample mentioned in the request, the TCD detector is the appropriate applicable detector.</p>	<p>i. A regular capillary injector with a gas tight syringe.</p> <p>ii. and iii. refer to response 4</p>

**ACKNOWLEDGEMENT OF CLARIFICATION NO 2.**

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

Signed.....

Tenderer.....

Date.....