



**KENYA ELECTRICITY GENERATING COMPANY LIMITED**

**KGN-ADM-016-2018-REQUEST FOR PROPOSALS (RFP) FOR  
CONSULTANCY SERVICES FOR DESIGN AND SUPERVISION OF  
OFFICE FIT OUT AND CONSTRUCTION WORKS AT KENGEN  
STIMA PLAZA AND AREA STATIONS**

**27<sup>th</sup> March, 2018.**

**ADDENDUM 2:**

In accordance with the Request for Proposals (RFP) for Consultancy Services for Design and Supervision of Office Fit out and Construction Works at KenGen Stima Plaza and Area Stations, KenGen hereby issues Addendum No. 2.

**1.1.1 R&D Lab – DESIGN OF R&D LAB IN UPPER TANA (Ground & First Floor)**

**Concept & Detailed Designs should include but not limited to:**

- a) Architectural and Interior Design of working drawings for R&D Lab
- b) 3 dimension perspectives to give a detailed modern interior design model for the lab.
- c) Prepare an efficient smart, solar, LED lighting system that optimizes consumption of energy within the offices.
- d) Develop design and working drawings for structural, telecommunication, electrical and mechanical services for lab.
- e) Optimize space utilization and provide for all space requirements in the design brief.
- f) Prepare fit-out material requirement schedule and bill of quantities (per floor).
- g) Prepare work execution plan with optimized systematic (floor by floor) practical implementation time lines.
- h) Prepare engineers estimate for the fit-out works per floor.
- i) Submit complete design proposal and give a presentation to the approval of KenGen Management.
- j) Prepare technical specification for engagement of a contractor to carry out the open plan office fit-out works.
- k) Supervise the Contractor and be part of the project implementation team according to the agreed works implementation plan.

- l) Ensure design compliance with all the applicable laws of the Republic of Kenya including the current Building Code of the Republic of Kenya 2009, Fire Safety codes, the prevailing Occupational Safety and Health Act, 2007 and EMCA 1999.
- m) Continuously, monitor and ensure quality control during implementation of the fit-out works.

Detailed design specification for the R&D Lab shall include but not limited to;

NO	REQUIREMENTS	DESCRIPTION
1.	Ground Floor	<p>The design should include but not limited to the following:-            Three (3) Offices for research stairwells, service ducts, workshops(chemical,electrical,mechanical and calibration lab),state of the art cloakroom            Stairwell Open Plan office for the R&amp;D Officers &amp; Research Scientists and Secretary/Receptionist. It should also include a file room. Each office will require conduit cabling for computer and telephone communications at each workstation.</p>
		<p><b><u>Dry Laboratory Space</u></b> ( chemical and calibration lab)            Dry laboratory space that is specific to work with dry stored materials, electronics, and/or large instruments with few piped services. An analytical laboratory space that may require accurate temperature and humidity control, dust control, and clean power.</p> <p>a) <b>Durable/Flexible/Mobile Casework:</b> As working conditions will often change due to new projects and equipment, fittings with mobile casework to allow for flexibility in the floor plan. This casework is generally a pre-manufactured laboratory metal casework system with cantilever support off of central service chase system. Counters are typically a plastic laminate with integral splash. The chase system has metal channel support with a horizontal distribution of wiring</p> <p>b) <b>Reliable, Easy to Access, Wiring System:</b> Due to the flexible nature of the Dry Laboratory, the distribution of critical wiring (power, voice data, and HVAC) should be clearly laid out, and easy to access and redirect. Thus, a raised floor system is the recommended system of distribution of critical services for this space type.</p> <p>c) <b>Fire and Life Safety:</b> All Laboratory spaces typically will contain a hand-held chemical emergency fire extinguisher in an emergency equipment cabinet. There is generally one fire alarm pull station by each egress point and an audible and visible (strobe) alarm in each occupiable space (not including closets, storage rooms, or coat racks).</p>
		<p><b><u>Wet Laboratory Space (chemical and mechanical lab)</u></b>            Wet Laboratory space where chemicals, drugs, or other material or biological matter are tested and analyzed requiring water, direct</p>

		<p>ventilation, and specialized piped utilities. Wet Laboratory space does not include biohazards.</p> <ul style="list-style-type: none"> <li>a) Surfaces: Resilient surfaces. Use epoxy paint for lab walls and monolithic, seamless, chemical-resistant vinyl flooring with integral coved base and Mylar finish.</li> <li>b) Separate Laboratory Modules: A Wet Lab space that contain individually controlled connections to HVAC, utilities and safety devices.</li> <li>c) Constant and Reliable HVAC: As some equipment and experiments are temperature- and humidity-sensitive, constant conditions are required to ensure that equipment can perform properly and that experiments produce accurate results.</li> <li>d) Dust Control: Just as experiments and equipment may be sensitive to changes in temperature and humidity, so might they be to dust and other foreign particulates. Air barrier systems to control dust will be required.</li> <li>e) Gas/Utility Services: Utility connections in Wet Laboratory space types can include vacuum, pneumatic supply, natural gas, O<sub>2</sub> and CO<sub>2</sub>, and distilled water. The fittings and connections for each module are connected to the building distribution system for six nominal piping systems.</li> <li>f) Fume Hoods: Design space to accommodate one 6'-0" chemical fume hood for each laboratory module, and provide direct 100% exhaust. Include an acid and corrosives vented storage cabinet located under the fume hood, as well storage for emergency equipment.</li> <li>g) Fire and Life Safety: All Laboratory spaces should contain a hand-held chemical emergency fire extinguisher in an emergency equipment cabinet. There is generally one fire alarm pull station by each egress point and an audible and visible (strobe) alarm in each occupiable space (not including closets, storage rooms, or coat racks). Also include toxic gas monitors in each lab module and a gas storage area with audio and visual (strobe) alarms both inside and outside the lab. Eyewash and deluge shower should be located at each module quad.</li> </ul>
		<p><b><u>Overhead Service Carriers(chemical,calibartion and mechanical lab)</u></b></p> <p>An overhead service carrier hung from the underside of the structural floor system. The utility services are run above the ceiling, where they are connected to the overhead service carrier. The utility services that are run above the ceiling should have quick connect and disconnect features for easy hookups to the overhead service carriers. Overhead service carriers with standard widths and accommodate electrical and</p>

		communication outlets, light fixtures, service fixtures for process piping, and exhaust snorkels.
		<p><b><u>Mobile Casework (chemical,electrical,mechanical and calibration labs)</u></b></p> <p>25% of the space should be devoted to, Mobile write-up stations that can be moved into the lab whenever sit-down space is required for data collection. Data ports are also located adjacent to electrical outlets along the casework. Instrument cart assemblies designed to allow for the sharing of instruments between labs users.</p> <p>Mobile base cabinets constructed with a number of drawers and equipped with an anti-tipping counterweight. The drawer units can be equipped with locks. The typical height of mobile cabinets is 29 in., which allows them to be located below most sit-down benches.</p>
		<p><b><u>Equipment Zone</u></b></p> <p>Allocate approximately 25% of the space for equipment zones. This provides space for the researchers to come in and move casework and equipment around as well as add casework and/or equipment where necessary. The equipment zone becomes a type of swing space. The equipment zone should be an island with lockable equipment space and an office to release equipment to the R&amp;D lab.</p>
		<p><b><u>Flexible engineering systems</u></b></p> <p>a) Supply and exhaust air, water, electricity, voice/data, vacuum systems. Easy connects/disconnects at the walls and ceiling to allow for fast, affordable hookups of equipment. The engineering systems may need to be designed to enable fume hoods to be removed or added, to allow the space to be changed from a lab environment to an office and then back again, or to allow maintenance of the controls outside the lab.</p> <p>b) Ductwork sized to allow for change and growth and vertical exhaust risers provided for future fume hoods in the initial construction. When a hood is required, the duct can simply be run from the hood to the installed vertical riser.</p> <p>c) Space should be allowed in utility corridors, ceilings, and vertical chases for heating, ventilation, and air conditioning (HVAC), plumbing, and electrical needs. Service shutoff valves should be easily accessible, located in a box in the wall at the entry to the lab or in the ceiling at the entry. All pipes, valves, and clean-outs should be clearly labeled to identify the contents, pressure, and temperature</p>
		<p><b><u>Light Industry Space</u></b></p> <p>Space for the assembly, disassembly, fabricating, finishing, manufacturing, packaging, and repairing or processing of materials.</p>

		The space should include provisions for printing, metal work, millwork, and testing.
		<p><b><u>General Storage</u></b>  Functional general storage space for non-research equipment, tools and implements.</p>
		<p><b><u>Electrical and network cabling</u></b>  For data points &amp; Power output at appropriate points</p>
		<p><b><u>Loading Dock</u></b>  Loading docks are the arrival and departure point for large items brought to or taken from the R&amp;D Lab by trucks or vans. This space must be able to accommodate large vehicles, forklifts, and pedestrian traffic. The features should include a ramp with a maximum slope of 1:12 ensuring that is easy to maneuver for deliveries on carts and dollies. Ensure design for lighting, guard rails, exit doors for personnel, resilient floors and storm water management.</p>
		<p><b><u>Design for Computing</u></b></p> <ul style="list-style-type: none"> <li>a) Specialized equipment enclosures.</li> <li>b) Computer hardware enclosures. Hardware enclosures that are fully ventilated and secure are available. Security for computers/laptops/iPads and electronics. Consider mobile cabinets with adjustable shelving that can be locked.</li> </ul>
		<p><b><u>Lobby</u></b>  The character and function of a lobby space often influence a visitor's first impression upon entering a building. The lobby space includes foyers, entries to halls, and security screening areas at or near the entrance to a building or demarcated space, and are meant to welcome and direct tenants and visitors, control access, and provide exit ways from buildings.  This space should be designed with both secure and nonsecure areas. Since building lobbies often serve as the "public face" of building interiors. Key design concerns for this space type include balancing aesthetics, security, and operational considerations.</p> <p><b>a) Aesthetics</b></p> <ul style="list-style-type: none"> <li>i. Utilize appropriate finishes, furniture, signage, and art to reflect the R&amp;D nature of the space.</li> <li>ii. A spatial compression/release experience to enhance the aesthetic experience (outside approach, compression thru entrance doors/vestibule, release in lobby/atrium).</li> <li>iii. Well-designed lobbies to provide staff/visitors with a relief opportunity, such as breaks, from more confined spaces</li> </ul>

		<ul style="list-style-type: none"> <li>iv. Consider combining employee and visitor entrance to spaces.</li> <li>v. Equipment that must be installed in lobbies should be of a low profile variety and consolidated with other equipment to minimize bulk.</li> <li>vi. Consider air pressurization and entrance door design to mitigate stack effect at tall building entrance and elevator lobbies.</li> <li>vii. Durable finishes to accommodate maximum pedestrian traffic.</li> <li>viii. Have historic features in lobbies and hallways, requiring—and deserving—special attention</li> </ul> <p><b>b) Safety</b></p> <ul style="list-style-type: none"> <li>i. Separate secure and nonsecure areas with turnstiles, metal detectors or other devices used to control access to secure areas. A control desk and bag checking area should be located within the secure area. Mechanical ductwork, piping and main electrical conduit runs should not extend from one area to the other. Traffic separation devices should be flexible and portable to allow for changing traffic patterns.</li> <li>ii. Design control points such that secure areas cannot be bypassed. Ensure that security personnel can properly observe all areas of control points.</li> <li>iii. Avoid installing features such as trash receptacles or mailboxes that can be used to hide devices in nonsecure areas.</li> <li>iv. Avoid using raised floor systems in nonsecure areas.</li> <li>v. Location of fire command center and emergency elevator control panel requires design integration with lobby wall finish, fire protection systems, and building communications systems.</li> </ul>
		<p><b><u>Washrooms</u></b>  Take into considerations the flowing but not limited to:  Install water taps and urinals with automatic sensors to optimize water consumption  Wash rooms, visual and audio amenities to support Persons with disabilities and special groups  complete for complete WC and WHB and all plumbing works need</p> <p><b><u>Office (2No.)</u></b>  Incorporate an open plan offices the concepts to architect specifications</p>
2.	<b>FIRST FLOOR</b>	Design open plan office sections , Manager and Chief offices’ as per the specifications given in LOT 1
		Refreshment Corner

		Food area for 24/7 use to allow easy food warming, with equipment such as refrigerator/freezer unit, a cooking section with four burner range, roasting oven, steam kettles, steam cookers, utensil shelves, hot food tables, mobile dish and 3 round table that seat at least 4 at time to allow researchers have meals away from the laboratory.
		Conference room Furnished with 20 seats, Translucent partitions, Provision of blinds along the windows but not limited to this description
		<b><u>Washrooms</u></b> Take into considerations the flowing but not limited to: Install water taps and urinals with automatic sensors to optimize water consumption Wash rooms, visual and audio amenities to support Persons with disabilities and special groups complete for complete WC and WHB and all plumbing works need
		<b>Safety</b>  <ul style="list-style-type: none"> <li>i. Separate secure and nonsecure areas with turnstiles, metal detectors or other devices used to control access to secure areas. A control desk and bag checking area should be located within the secure area. Mechanical ductwork, piping and main electrical conduit runs should not extend from one area to the other. Traffic separation devices should be flexible and portable to allow for changing traffic patterns.</li> <li>ii. Design control points such that secure areas cannot be bypassed. Ensure that security personnel can properly observe all areas of control points.</li> <li>iii. Avoid installing features such as trash receptacles or mailboxes that can be used to hide devices in nonsecure areas.</li> <li>iv. Avoid using raised floor systems in nonsecure areas.</li> </ul> <p>Location of fire command center and emergency elevator control panel requires design integration with lobby wall finish, fire protection systems, and building communications systems</p>

**ACKNOWLEDGEMENT OF ADDENDUM NO.2**

We, the undersigned hereby certify that the clarification is an integral part of the document and has been incorporated in the tender proposal.

Signed .....

Tenderer .....

Date.....