

# **TRANSMISSION COMPANY OF NIGERIA**

## **GENERAL/TECHNICAL DEFINITION OF THE HELICOPTER TYPE REQUIRED**

### **1. GENERAL**

- The proposed Helicopter shall be a multipurpose light twin in the 2.5-3 ton class category equipped with 2-each modular structure, state of the art turbine engines.
- The proposed Helicopter shall be EASA and JAR (Part 27) certified.
- For operational reason the Maximum Take-Off Weight of the proposed Helicopter shall not exceed 3000kg.
- The proposed Helicopter shall be equipped and certified for Single/Dual Pilot IFR, Day & Night, with the capability for CAT 'A' operation up to the level of performance class 1.
- The warranty period of the proposed Helicopter shall not be less than 24 months.
- The proposed Helicopter shall be operational to fly in the temperature range of -15°C to +45 °C.
- The Helicopter shall have system(s) that can allow operations under dusty, sandy, salty and hot environmental conditions.
- The Helicopter shall have single Main Rotor System and minimum of 3 (three) Main Rotor Blades.
- The proposed Helicopter should have been in production for not less than 5 years and still be in production for the next 10 years, and should have been in operation for at least 2 years.
- The proposed (Standard) Helicopter shall be equipped with Air Conditioning system for Tropical environment.

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### **2. PERFORMANCE**

- The proposed Helicopter shall have a maximum cruise speed (at maximum Gross Weight – ISA +15 °C) of not less than 245km/h.
- The maximum range of the proposed Helicopter at sea level, in ISA condition, normal gross weight, standard fuel tank (full fuel, no reserve) shall not be less than 600km.
- Endurance of the proposed Helicopter at sea level in ISA condition with maximum fuel capacity shall not be less than 3 hours.
- Hover ceiling Out of Ground Effect (OGE) at Take Off Power (TOP, in ISA condition and Maximum Gross Weight shall not be less than 700metres.

### **3. CHARACTERISTICS**

- The maximum continuous power per engine of the proposed Helicopter shall not be less than 550shp.
- The design of the proposed Helicopter shall be such that it meets the ICAO (International Civil Aviation Organization) recommended noise level for its class.
- The proposed Helicopter shall be equipped with autopilot that guarantees the stability of basic flight parameter.
- The engines on the proposed Helicopter shall be equipped with a Full Authority Digital Electronic Control (FADEC) system.
- The proposed Helicopter shall be built with a maximum of corrosion proof materials.
- The Instrument panel in the proposed Helicopter shall be equipped with digital display avionics compliant with JAR 27 regulations or the equivalent FAR 27.
- All major components on the proposed Helicopter shall have high Time before Overhaul (TBO) design limits.

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### 4. OPERATIONAL REQUIREMENTS

- The proposed Helicopter shall be able to transport at least 4 passengers + 2 pilots.
- The proposed Helicopter shall be equipped with skid landing Gear.
- The proposed Helicopter shall be equipped with two (2) wide lateral sliding doors and rear clamshell doors for multi-access loading of passengers and equipment.
- The passenger/cargo cabin of the proposed Helicopter shall have a volume of not less than 4.5m<sup>3</sup> for flexible adaptation to different mission roles and a flat floor surface area requirement of not less than 4 m<sup>2</sup> for easy change of mission.
- **Mission Equipment** - The proposed Helicopter shall come equipped with a skid mounted Gyro Stabilized Infra-red/Video camera (**preferably FLIR – Polytech Kelvin 350 III Triple Sensor System**) plus complete Data Acquisition Package (i.e. monitor, recorder, etc.) – (**preferably Skyquest Video Management System**). The preferences are dependent on the compatibility and certification for the proposed Helicopter.
- The **Manufacturer's recommended minimum list of spares and tools holding for two years of operation** shall be clearly defined with its attendant cost.
- All equipment and/or Navigation/Communication equipment contained in the standard Helicopter shall be defined in the proposal.
- The **Manufacturer's price list of Optional/Additional equipment complete with a clear definition of compatibilities and incompatibilities** shall accompany the proposal for the proposed helicopter.
- **Training** - The proposal for the proposed Helicopter shall include the training of **eight (8) pilots, four (4) Helicopter Maintenance Engineers**

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**and two (2) Avionic Engineers** at Manufacturer's Training facility, from ab-initio to professional license level in accordance with JAR-FCL2 or U.S FAA equivalent. A detailed description of the training program shall be required.

### **5. SAFETY**

- The proposed Helicopter shall be equipped with Energy absorbing seats for Pilots and passengers, and energy absorbing fuselage.
- The proposed Helicopter shall be equipped with crash resistant fuel system.
- The proposed Helicopter shall have the anti-torque control provided for by either of shrouded fan-type rotor, four bladed rotor or notar system.
- The proposed Helicopter shall have an Enhanced/unfettered cockpit visibility.
- The proposed Helicopter shall have jettison-able cockpit doors in the event of an emergency evacuation.
- The proposed Helicopter shall be equipped to register engine and flight parameters and the software shall be compliant with JAR 27 or its equivalent FAR 29.
- The proposed Helicopter shall have no separation or centre post (that is the cockpit must not be separated from the cabin).

### **6. MISCELLANEOUS**

- The package and definition for the proposed Helicopter shall include Type conversion training using Flight Simulator of Level D or lower, full set of documentation (i.e. flight and maintenance manuals), external covers, etc.
- Trade-in offers for the two (2) decommissioned BO105CB Helicopters shall be welcomed but would not necessarily determine the outcome of submitted proposal.

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### **IMPORTANT NOTICE**

The following documents will be required for submission with proposals in respect of this procurement:

- Detailed company profile of the Original Equipment Manufacturer or Manufacturers' representative.
- Catalogue/Brochure of the proposed Helicopter.
- Details of actual performance data of the proposed Helicopter.
- Evidence of having supplied or having had on order to supply the proposed Helicopter in the last two (2) years.
- Certification details of the proposed Helicopter from relevant Aviation Authorities.
- Any other information you deemed necessary to enhance the proposal.

Please, note that in the course of evaluating the proposal, there might be need for a flight demonstration to ascertain and/or confirm the performance data claimed in respect of the proposed Helicopter.