

Amendment No. 03**Date: 11/06/2018****Sub: Amendment No.03 to the Tender Enquiry Document****Ref: (i) Tender No: HITES/PCD/AIIMS-BBSR/01/18-19 dated 20.04.2018 and subsequent amendments published for the referred tender.**

The pre bid meeting of the above referred tender enquiry was held on 27.04.2018. Based on pre-bid discussions following amendments are being incorporated in the tender enquiry document.

Section VII
Technical Specifications

Schedule No. 01 128-SLICE PET - CT SCANNER

Para	TENDER SPECIFICATION	READ AS
2	Gantry and Detector	
2.k	Integrated CT simulation software for conformal radiotherapy planning with laser system (one moving & 2 fixed lasers of green color) to be provided. It is to be connected with main TPS in the radiotherapy department through Ethernet wiring. A separate workstation is to be provided in TPS room.	Integrated CT simulation software for conformal radiotherapy planning with laser system (one moving & 2 fixed lasers of green color) to be provided. It is to be connected with main TPS in the radiotherapy department through Ethernet wiring. One out of 5 workstations to be installed in TPS room
3.h	High frequency X-Ray generator tube with output of 70 kW or more, Anode heat storage capacity of 6.0 MHU or more, Tube Voltage between 80-140 kV, Tube Current of 20-400mA, Automatic self-testing system.	High frequency X-Ray generator tube with output of 70 kW or more, Anode heat storage capacity of 6.0 MHU or more, Tube Voltage between 80-140 kV, Tube Current of 20-600mA , Automatic self-testing system.
6.h	The workstation should be accessible remotely by at-least 5 concurrent workstations for PET and CT each.	Five workstations with concurrent users for all applications in PET and CT.
7.1.b	4D CT Scanning facility: 4D CT Scan software with 4D phantom for QA shall be provided and separately there shall be 4D CT Respiratory Gating hardware to be provided.	4D PET-CT Scanning facility: 4D PET-CT Scan software shall be provided and separately there shall be 4D PET-CT Respiratory Gating hardware to be provided. 4D phantom for QA should be quoted as optional.
7.2.c	Quote complete cardiac package both for PET and CT with ECG gating as optional item.	Quote complete cardiac package both for PET and CT with ECG gating as standard item.
8.c	High Resolution dry chemistry type DICOM laser film printer with online capability of 3 film sizes for x-ray films with minimum 500 packets of films of 14x17 inch size.	High Resolution dry chemistry type DICOM laser film printer with online capability of 3 film sizes for x-ray films with minimum 5 packets (500 films) of films of 14x17 inch size

Para	TENDER SPECIFICATION	READ AS
8.d	Supply of Germanium-68 pin source for a period of 5 years. - Specification of Ge-68 Pin source: 55 MBq (1.49mCi) Ge-68 uniformly dispersed in a ceramic medium with an outer stainless tube and permanently sealed end caps.	Supply of sealed calibration source for QA of PET scanner for a period of 10 years
8.e	High resolution colour laser printer for colour hardcopy on paper with 5 sets of all cartridges.	High resolution (1200 x 1200 dpi) colour laser printer for colour hardcopy on paper with 5 sets of all cartridges.
8.f	Required Phantoms for CT & PET Quality Assurance and calibration sources.	Standard NEMA Phantoms (Scatter/NECR, Sensitivity, Image quality and resolution, Fillable Uniform Flood phantoms) for PET QA, CT image quality phantom to be provided
8.i	One decay drum for PET radionuclides.	Decay drum for PET radionuclides as per standard
8.l	One Dose drawing module for F-18 FDG.	One dose drawing module for F-18 FDG (comecer or equivalent make)
8.g	Four dose calibrators (Capintec- CRC 25 PET or equivalent).	Three dose calibrators (Capintec- CRC 25 PET or equivalent).
8.s	Tungsten lined Carriers (160 mm) for carrying the radiopharmaceuticals from Cyclotron to PET CT to be provided – 20 nos. (unit price to be quoted separately)	4 numbers of "Type A" Package for transport of radioactive material (FDG bulk dose, upto max 2000 mCi) consisting of following containers: 1. External polyethylene case 2. Internal Tungsten shield container for vial housing
9.a	Dehumidifier: 6 nos	Dehumidifier: 3 nos
9.b	Fume hood for PET Radio pharmacy.	Standard Fumehood with HEPA filter for PET radiopharmacy
9.f	Dose calibrator for all PET & SPECT radiotracers: 2 no.	Deleted
9.l	Four Physicians to be trained onsite for 4 weeks and Two technologist to be trained onsite for 4 weeks	Two Physician to be trained outside country in an internationally reputed centre for 4 weeks and Two technologist to be trained onsite for 4 weeks
9.m	Qualified Engineer with Minimum 3 years' experience be deputed by the OEM to perform weekly onsite maintenance check-up.	Qualified Engineer with Minimum 3 years' experience be deputed by the OEM to perform monthly onsite maintenance check-up.
9.n	After sale service to be available onsite through a service centre of the company located in Bhubaneswar.	After sale service to be available onsite through a service centre of the company located in Bhubaneswar.
10	BOQ for the turn key to be submitted by the vendors after the survey and consultation with the institute.	The centre will be made by cycltron vendor, interior and minor civil work if required due to AERB regulation will be responsibility of PET-CT vendor

Para	TENDER SPECIFICATION	READ AS
15	Automatic syringe less triple-head continuous injector with accessories and disposables for first 500 patients.	Deleted
17.b	Necessary furniture and fixtures for comfortable working conditions, storage of system components and consumable stand for protective aprons and gonad shields etc. should be provided.	The vendor should provide the following furnitures and accessories of standard make as described 1. Consultant table-4 2. Consultant chair - 6 3. Customize table for workstations -2 4. Wooden Cupboards - 6 5. Patient sofa for resting in post injection room - 4 6. 5 seater visitor sofa for consultant room -1 7. CCTV facility for patient viewing in waiting area 8. Apron Stand -1 9. protective aprons -3 10. Gonad shield -3. etc. 11. One executive table and chair for HOD 12. Three seater chrome plated patient waiting chair -8 Preferred FURNITURE make - Hermen Miller / Godrej / Featherlite/Geeken
Added Para		Possible arrangement of Demonstration of the machine to be quoted by vendor if in any centre installed in India

Schedule No. 02 Dual particle cyclotron

Para	TENDER SPECIFICATION	READ AS
	MEDIUM ENERGY CYCLOTRON	
	A. FDG PRODUCTION	
A.ii	It must be an auto-ejectable cassette system that will be installed in one hot cell with four mini- hot cells for synthesis of radiopharmaceuticals.	It must be an automated cassette based system installed in one hot cell with capability of consecutive FDG synthesis without the need to open the hotcell door
B	IODINE-124 & IODINE -123 PRODUCTION: All the equipment necessary for Iodine-124 & Iodine -123 production must be detailed	B. IODINE-124 PRODUCTION: All the equipment necessary for Iodine-124 production must be detailed.
	MAINTENANCE / SERVICING	
iv	Trained Service Engineer should be stationed on-site on 24 hrs x7 days basis.	Trained service engineer should be stationed at Bhubaneswar on 24 hrs x 7 days basis.
	APPENDIX 1: MEDIUM ENERGY CYCLOTRON – SPECIFICATIONS	
A1.1.	Particle Acceleration and Beam Extraction Requirements	

Para	TENDER SPECIFICATION	READ AS
A1.1.iv	Minimum Two number control station to be connected.	Minimum one control station to be connected.
A1.1. v	The cyclotron shall be capable of producing and accelerating protons to an energy ≥ 15 MeV with maximum extracted proton beam current $\geq 150 \mu\text{A}$.	The cyclotron shall be capable of producing and accelerating protons to an energy ≥ 18 MeV with maximum extracted proton beam current $\geq 150 \mu\text{A}$.
A1.1. vi	The cyclotron should be equipped with minimum two proton sources.	Dual particle cyclotron with atleast one ion source .
A1.1. vii	The changeover between protons on target to protons shall be 1 min or less.	Deleted
A1.2.ii	The time required to establish the vacuum must not exceed thirty minutes.	Deleted
A1.3	Cyclotron Control system	
	Cyclotron Control Computer	
iii	iii. It should be possible to fully control the cyclotron operation from multiple computer work stations, installed at different locations and interlinked to the cyclotron via standard ethernet cabling (Cat 5 - UTP).Details of the function offered shall be provided	It should be possible to fully control the cyclotron operation from external computer workstation
	APPENDIX 2: SYNTHESIS UNITS FOR PET PRODUCTION LABORATORY - SPECIFICATIONS	
B.vi	Each FDG Synthesis Unit shall be capable of ≥ 4 runs in one day	Each FDG synthesis Unit shall be capable of atleast two runs without opening the hotcell door in between the runs
F	[O15] Gas Processing Unit	[O15] Gas Processing Unit - OPTIONAL
G	[F2-18] SYNTHESIS UNIT	Deleted
H	[124-IODINE] – RECOVERY UNIT & [123- IODINE] - RECOVERY UNIT	I-124 Iodine recovery unit
	APPENDIX 3: EQUIPMENT FOR PET PRODUCTION LABORATORY – SPECIFICATIONS	
D	Quality Control Equipment for FDG	
D.d	Quality Control equipment for Endotoxin Tests and Sterility Tests on site shall be offered including the respective enclosures.	Quality Control equipment for Endotoxin Tests and Sterility Tests shall be offered including the respective enclosures.
E.c.vii	Neutron monitor : 4 no. (price to be quoted separately)	Neutron Monitor: 1 no
	APPENDIX 4: BUILDING ENGINEERING FILE - SPECIFICATIONS	

Para	TENDER SPECIFICATION	READ AS
D. b.	Dimensioning of the installations with the detailed design drawings of the installations with dimensions required for tendering, excluding specific locally agreed systems for potentially activated waste water treatment after decay (customers' charge).	Deleted
F	Support of local architect: The supplier will work closely with a local architect and will support him with above files in order to allow submitting a tender for local building companies.	Deleted
		Added Para :
		Self shielded dual particle medical cyclotron
		A double door medical refrigerator of reputed make should be provided
		Demonstration of equipment with mentioned specification must be done at a reputed institute where the equipment is currently functioning.
		Hot cells, double door fridge
	SCOPE OF TURNKEY	
6	Total area to be constructed for entire building (Cyclotron bunker, radiopharmacy lab and PET-CT) is 8500 square feet.	Total area to be constructed for entire building (Cyclotron bunker, radiopharmacy lab, PET-CT and isolation ward) is 13,500 square feet.
16	The construction of the entire building shall be completed within 9 months after obtaining AERB clearance for the project.	Timeline to complete construction of building should be maximum 9 months after getting AERB approval. Maximum time of 6 months can be considered for cyclotron installation. However, the entire project (construction and installation) should run in overlapping mode and maximum time for total project after AERB approval of site and layout must be 12 months.
24	<p>Passenger lifts:</p> <ul style="list-style-type: none"> - Providing and installing lift from OTIS or equivalent (machine room less) for 08 passenger with 03 stops, automatic center opening door enamel painted, S.S. handrail inside, emergency alarm, facia plate, press and speak intercom, emergency light, PVC flooring inside car, car ceiling/panels with enamel paint. - All the regulatory permission to operate the lift will be taken by vendor. 	<p>Passenger lifts:</p> <ul style="list-style-type: none"> - Providing and installing lift from OTIS or equivalent (machine room less) for one patient trolley and 2 stops, automatic center opening door enamel painted, S.S. handrail inside, emergency alarm, facia plate, press and speak intercom, emergency light, PVC flooring inside car, car ceiling/panels with enamel paint. - All the regulatory permission to operate the lift will be taken by vendor.
		Added para :

Para	TENDER SPECIFICATION	READ AS
		Water and electricity line will be supplied as close to the proposed building as possible. The vendor may quote the price of wire per meter in case it exceeds 2 m.
		No occupancy above the cyclotron as per AERB rule. The future expansion floor will be for general room purpose.
		For road clearances inside hospital premise the vendor should visit the proposed site and raised the concern if any regarding transportation. The transportation will be sole responsibility of the vendor. Cyclotron vendor has to liaise with PET-CT vendor for all necessary mutual support for smooth installation of both equipment.
		The number of firefighting equipment must be as per the firefighting norms. The regulatory approval for firefighting will be responsibility of the vendor.

All other terms and conditions of the tender enquiry remain unaltered