Clarification Regarding Technical Specifications (Part II)

Date: 15/01/2014

Subject: Clarification regarding Technical Specifications

Ref: **(i) Tender Enquiry No.: HLL/PCD/PMSSY/AIIMS-II/02/13-14 dated 02/12/2013**
   (ii) Amendment No.1 dated 20/12/2013.
   (iii) Amendment No.2 dated 10/01/2014.
   (iv) Clarification regarding technical specifications published on 11/01/2014.

The following clarifications regarding technical specifications are made further to those referred above.

Section – VII
Technical Specifications

Schedule No. 1
Technical Specification for a New State of the Art multidetector, multislice (128 rows detector) CT Scanner System on a turnkey basis

1.Existing Specification:

Added Para:

i. DUAL ENERGY APPLICATIONS to be provided as standard: Renal Calculi Characterisation & Gout.

ii. Also specify if DUAL ENERGY APPLICATIONS like Metal Artifact Correction / Beam Hardening artifact Correction, Brain Haemorrhage are available in the system. Any other application for dual energy if present in future upgrades should be part of the system.

Read as:

Added Para:

i. DUAL ENERGY APPLICATIONS to be provided as standard: Renal Calculi Characterisation & Gout**.**
ii. **All other Dual Energy applications available with vendor should be listed as optional with price of each quoted separately.**
iii.**Proof of availability of dual energy application must be supported with original datasheet.**
iv.**Dual energy application must be possible on all workstation and all fields of view with minimum FOV 33cm.**
v. Also Specify if DUAL ENERGY APPLICATIONS like Metal Artifact Correction / Beam Hardening artifact Correction, Brain Haemorrhage are available in the system. Any other application for dual energy if present in future upgrades should be part of the system.

2. Existing Specification (Amendment No: 01):

Para 7.j.: CT should be with a dual monitor console with one workstation having capability of all 2D & 3D post processing , with at least 8 GB RAM, Archival on DVD / CD with Cardiac Recon, CT Angiography , Colonoscopy as well as DICOM Print should be included in the Scope of Supply.

Additional thin client server architecture with 3 concurrent licenses having all post processing tools as that of the workstation. The necessary hardware and networking should also be supplied.

Read as:

Para 7.j.: CT should be with dual monitor console **with two workstations (thin client server architecture based solution) comprising of medical grade monitors (2 mega pixel resolution) with atleast 8GB RAM. The server should have image storage capacity of 3 Tera bytes, minimum 40000 concurrent slice processing power and at least 64 GB RAM. It can be single/dual server configuration. The workstation should have following processing capabilities.**
   a. **MPR**
   b. **Minimum and maximum intensity projection.**
   c. **3D volume rendering.**
   d. **3D SSD (Shaded Surface Display).**
   e. **Advanced vessel analysis.**
   f. **Auto bone removal.**
   g. **Lung nodule assessment.**
   h. **Liver lesion analysis.**
   i. **Virtual endoscopy.**
   j. **Dedicated Colonography.**
   k. **Time point comparison.**
   l. **Whole organ (Brain & Body) perfusion CT.**
   m. **Coronary tree analysis: automated 3D processing of coronary arteries, calcium scoring, stent analysis, LV analysis.**
   n. **Neuro DSA with Automated Bone Removal.**
   o. **Fusion CT: Fusion of morphological data of CT & MRI.**

3. **Existing Specification (Amendment No: 01):**

   Para: 8. j.Bone/Osteo CT: for bone mineral density assessment and quantification for metabolic bone diseases.

   Read as:

   Para: 8. J. **Mention the availability of Bone / Osteo / Dental CT software.**

Schedule no. 2
Technical specification of a new, state of the art 3T MRI scanner

1. Existing Specifications:
Para 10: Imaging Sequences
Contrast kinematics like TWIST/TRICKS/TRACKS should be offered.
Read as :
Para 10: Imaging Sequences
Contrast Kinematics likeTWIST / TRICKS / **4DTRAK**should be offered**.**

2. Existing Specifications:
RF COILS
a) 32 channel or more head coil-capable of multi frequency MR spectroscopy (1H & 31P).

Read as :

a) 32 channels or more head coil-**capable of multi frequency MR spectroscopy (H1).**

Dedicated Multinuclear/ Multi-frequency MR Spectroscopy Coil capable of H-1 and P-31 Spectroscopy should be quoted separately as an OPTIONAL item.

3. Existing Specification under Para 8: Workstation should be Read as:

Two workstations (thin client server architecture based) with post processing tools as specified below. The server (single/dual configuration) should have image storage capacity of 3 Tera bytes, minimum 4000 concurrent slice processing power and at least 64GB RAM. Necessary Workstation hardware to be includedwith 18" or more TFT/LCD Medical Grade (2 megapixel or more resolution) monitor with dual processor, separate hard drive with image storage of at least 2.5 lakh images (256 x 256 matrix) with CD RW or DVD RW. DICOM 3.0 compatibility and interfacing with other modalities must be possible.

All necessary software including post-processing software for all offered applications (point no. 9,10) including evaluation for fMRI, perfusion (Contrast perfusion and T1 perfusion), diffusion, DTI with fibertracking, cardiac evaluation, and other associated post processing like MIP, MPR, surface reconstruction should be provided.

The workstation should have the following features:

1. Cardiac perfusion analysis & Processing of Real Time BOLD imaging data, with colour metabolite mapping, quantification of the CSF flow date.
2. Should mention whether software for vascular properties like IAUC, KEP is available.
3. DSA images should be viewable in Subtraction mode.
4. Necessary and adequate hardware and software for sending and receiving the patient data{text + images}. Printing of films should be possible from both main console and workstation. Workstation should also be able to function independent of the main console.
5. Post processing of the MRS data including for CSI with paramagnetic metabolic mapping.
6. Capability to calculate colour display of real MTT, real CBV, and real CBF.
7. Compatibility with data from other MRI system for post processing.
8. Output in the form of jpeg, avi / equivalent formats should be possible.

Cardiac Package (Price to be quoted separately). : The workstation should have display of Cardiac cine images in movie mode with rapid *avi* creation and should have comprehensive cardiac post processing software including for coronary MRA with regular free upgrades in future. Calculation of ventricular area and volume, stroke volume, ejection fraction and relative ejection fraction, Time volume diagram generation, filling rates and myocardial wall motion, Graphic display of output calculation of flow and velocity parameter with colour coded display of velocity parameters.

All other terms and conditions of the tender enquiry remain unaltered.