TENDER REF. NO.: KK/165/2026/HTD

MINISTRY OF HEALTH

NEGARA BRUNEI DARUSSALAM

PROVISIONAL TURNKEY PROJECT OF GENERAL RADIOGRAPHY SYSTEM FOR RADIOLOGY UNIT, PENGIRAN ISTERI HAJAH MARIAM (PIHM) HOSPITAL

TENDER FEE : $50.00

RECEIPT NO. :

CLOSING DATE : ON TUESDAY, 04th AUGUST 2026

TIME : 2.00 PM

FOA :

THE CHAIRMAN
MINI TENDER BOARD, TENDER BOX
GROUND FLOOR, MINISTRY OF HEALTH
COMMONWEALTH DRIVE
BANDAR SERI BEGAWAN BB3910
NEGARA BRUNEI DARUSSALAM

[CLUSTERING]

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SECTION 2

SPECIFICATIONS AND REQUIREMENTS

TENDER REFERENCE NO.: KK/165/2026/HTD

INVITATION TO TENDER
PROVISIONAL TURNKEY PROJECT OF GENERAL RADIOGRAPHY SYSTEM FOR RADIOLOGY UNIT, PENGIRAN ISTERI HAJAH MARIAM (PIHM) HOSPITAL

SCOPE OF WORK AND SUMMARY OF PRICES	
THIS TENDER IS A PROVISIONAL TURNKEY PROJECT FOR GENERAL RADIOGRAPHY SYSTEM FOR:	
DESCRIPTION	**QTY**
RADIOLOGY UNIT, PENGIRAN ISTERI HAJAH MARIAM (PIHM) HOSPITAL, TEMBURONG	**1**

NO.	**SECTION 1 – USER REQUIREMENTS**
1	**SHENA REGISTRATION**
1	Tenderer must have an active registration with Safety, Health and Environment National Authority (SHENA), Brunei Darussalam for the relevant radiation licenses related to this tender. **[Proof of Active Registration must be included]**
2	**SYSTEM ARHITECTURE**
1	The proposed new digital radiography system shall replace existing Radiography System in **Radiology Unit, PIHM Hospital Temburong.**
2	The System must be capable of performing all general radiographic examinations, with patients in either wheel chair, hospital bed and trolley in horizontal, vertical and oblique positions of all skeletal body of adults and children.
3	The proposed digital Radiography General X-ray System shall come with: 1. **Ceiling suspended x-ray tube and generator** 2. **X-ray Table bucky** 3. **Wall Stand bucky** 4. **Two (2) sets of digital flat panel detectors (FPD)** 5. **Control console and Image Processing Workstation** 6. **Network Connectivity and Integration to HIS and PACS** 7. **Quality assurance and dose management tools**
3.1	**CEILING SUSPENDED X-RAY TUBE AND GENERATOR**
3.1.1	A fully integrated ceiling mounted and suspended X-ray tube with motorized movement across x, y and z axes, and rotation/angulation for horizonal, oblique and lateral projections.
3.1.2	Inclusive supply and installation of all necessary railings and beams required for x-ray tube
3.1.3	Inclusive of collimator rotation +/-90 or more with motorised/manual control.
3.1.4	Inclusive of laser alignment lights for accurate centering
3.1.5	Electromagnetic brakes or servo-controlled movement for smooth operation.
3.1.6	Automatic tube-to-detector tracking for both table and wall stand

NO.	SECTION 1 – USER REQUIREMENTS
3.1.7	Integrated collision protection mechanism
3.1.8	X-ray tube and generator should have the following features:
3.1.8.1	High-frequency generator: 60 – 80kW. **Tenderer to state the generator output.**
3.1.8.2	Tube voltage range: 40-150 kV. **Tenderer to state the range.**
3.1.8.3	mAs range: 0.5mAs to 800mAs or better. **Tenderer to state the range.**
3.1.8.4	Dual-focus (small and large) rotating anode X-ray tube. **Tenderer to state the sizes.**
3.1.8.5	Collimation control (manual and motorised).
3.1.8.6	Integrated Dose Area Product (DAP) meter for dose measurement and recording
3.1.8.7	Color touch screen display on the X-ray tube head to display key parameters. Display of patient's name and identification at tube head is preferred.
3.1.8.8	Measurement tape
3.1.8.9	X-ray tube heat capacity: 300kHU or more
3.2	**X-RAY TABLE BUCKY**
3.2.1	Height adjustable floor mounted table bucky with 4-way floating table top and detector tray for digital detector
3.2.2	Automatic detection when placing detector in detector tray
3.2.3	Detector tray allows portrait or landscape format orientation
3.2.4	Inclusive of measurement chamber for automatic exposure
3.2.5	Automated tracking capabilities for table height adjustment, longitudinal tube travel and tube rotation.
3.2.6	Automated centering on detector.
3.2.7	Foot switches for adjusting the table height, floating tabletop movement and locking.
3.2.8	Removable anti scatter grid for SID of 100cm for horizontal table projections. **Tenderer to specify the grid type and ratio.**
3.2.9	Patient weight capacity: capable to withstand at least 280kg (Static) or heavier patient **Tenderer to specify maximum weight the table can handle.**
3.2.10	Easy access from both sides of table for patient transfer purposes and cross table imaging.
3.2.11	Tabletop Size: At least 220cm (length) x 80cm (width) or better
3.2.12	Tabletop height: Adjustable from 550mm to 850mm or better
3.2.13	Tabletop material: easy to clean and durable
3.3	**WALL STAND BUCKY**
3.3.1	Tiltable standing bucky from -20° to +90° with additional latched position at 0°
3.3.2	Inclusive of measurement chamber for automatic exposure
3.3.3	Interchangeable/Removable anti scatter grid between table and wall bucky.

NO.	SECTION 1 – USER REQUIREMENTS
3.3.4	Detector tray allows portrait or landscape format
3.3.5	Automatic tube tracking
3.3.6	Vertical travel range: Up to 140cm or better
3.3.7	Vertical travel range: Down to 30cm or better
3.3.8	Motorized collimation and lamp control
3.3.9	Motorized Tilting movement
3.3.10	Motorized vertical movement
3.4	**TWO (2) SETS OF WIRELSS DIGITAL FLAT PANEL DETECTORS (FPD)**
3.4.1	Detector technology: Caesium iodide scintillator with Amorphous silicon technology.
3.4.2	Comes with removable, rechargeable and exchangeable battery.
3.4.3	Size of detector: approximately 35cm x 43cm (or equivalent) **Tenderer to state the size and weight of the detector.**
3.4.4	Pixel size: 140 µm or less for higher spatial resolution.
3.4.5	High image matrix: 2k x 2k pixels or better for detailed images.
3.4.6	Can be in portrait and landscape orientation
3.4.7	Battery charging when the wireless detector is in the tray
3.4.8	Automatic detection of detector in the detector tray.
3.4.9	Data transmission of less than 3 seconds for preview and less than 8 seconds for full display of image.
3.4.10	Integrated handle or handgrip on the detector for safe and easy handling.
3.4.11	Operation capacity: up to 1000 images. **Tenderer to state the operation capacity of the detector.**
3.5	**CONTROL CONSOLE AND IMAGE PROCESSING WORKSTATION**
3.5.1	All operation and communication of the radiography system including the digital image processing shall be centralised through a main control console.
3.5.2	Control console should be integrated with image processing workstation, or as separate units, to allow the operator to control acquisition and perform image post-processing, review and quality control in the control area prior to sending images to PACS.
3.5.3	Fully DICOM-compliant and capable of seamless integration with PACS, BruHIMS and network film printer.
3.5.4	Control console panel/workstation shall be located within the control area.
3.5.5	The **control console workstation** shall have the following features:
3.5.5.1	Input devices: keyboard and mouse or touchscreen interface or both.
3.5.5.2	Interface with the generator and flat panel detector.
3.5.5.3	Control console monitor display size: Minimum 19” **Tenderer to state the size of the console monitor.**

NO.	SECTION 1 – USER REQUIREMENTS
3.5.5.4	Exposure control: Dual function exposure control button and hand switch with 2-step operation i.e. prep and expose, with safety features to prevent accidental exposure.
3.5.5.5	Control exposure parameter settings (manual and automatic) for kV, mAs, exposure time, focal spot selection and AEC modes.
3.5.5.6	Enter or select patient data and examination
3.5.5.7	Anatomical Program (APR) for adult and pediatrics
3.5.5.8	Image preview and status display
3.5.5.9	Selection of iontomat chambers for AEC
3.5.5.10	User login and password protection, if applicable to the proposed system
3.5.5.11	Real time dose information display and recorded; and can be transmitted to RIS/PACS systems.
3.5.5.12	Error messages and safety alerts
3.5.6	The **Image processing workstation** shall have the following features:
3.5.6.1	Integrated with the control console or provided as a separate workstation.
3.5.6.2	Latest high performance computer system in the market acceptable by MOH, with the following minimum specifications:
3.5.6.2.1	Workstation RAM: At least 16GB or better
3.5.6.2.2	Workstation SATA Hard Drive: For Operating System, Minimum 500GB or better
3.5.6.2.3	Workstation SSD Hard Drive: For Image Processing Software and Image Storage, Minimum 1TB or better
3.5.6.2.4	Workstation Graphic Card: Any suitable and compatible graphic card that can provide high quality images on screen
3.5.6.2.5	Display Monitor Type and Size: Minimum Medical Grade 24” high resolution monitor or better
3.5.6.2.6	Standard image post-processing functions and tools for the following: ▪ window/level adjustment (brightness/contrast) ▪ zoom, pan, flip and rotate ▪ measurement tools (distance, angle, ROI) ▪ Free and defined texts annotations and right/left labelling, ▪ multi-image display/layouts ▪ noise reduction and edge enhancement ▪ Reject/repeat image tracking and QC logs ▪ Export to DICOM, JPEG or PDF format ▪ Burn to CD/DVD with built-in viewer
3.5.7	Software:
3.5.7.1	Security Software: Installed with secure threat and risk analysis security software to prevent unwanted incidents of virus
3.5.7.2	Include **Image Acquisition Software** such as follows:
3.5.7.2.1	Selection of patient from worklist, protocols and exposure parameters
3.5.7.2.2	Image preview within 3 – 5 seconds
3.5.7.2.3	Support for automatic exposure detection or synchronisation
3.5.7.2.4	Anatomical Programmed Radiography (APR) with preset exposure settings

NO.	SECTION 1 – USER REQUIREMENTS
3.5.7.2.5	Support for manual, AEC and dynamic exposure modes
3.5.7.2.6	Support for error detection
3.5.7.2.7	Recordings and export of repeat and reject images together with corresponding reasons for the repeat and rejection.
3.5.7.3	Include **Advanced Image Processing Software** as follows:
3.5.7.3.1	Advanced image processing for bone and soft tissue contrast enhancement
3.5.7.3.2	Advanced image processing for noise reduction and edge enhancement
3.5.7.3.3	Advanced post processing features for sorting and organising patient images automatically.
3.5.7.3.4	All licenses and configurations included in the offer must be activated and installed to its latest version
3.5.8	Inclusive of any software update whenever available or provided by manufacturer within the next ten (10) years Tenderer shall schedule any installation of software updates or upgrades at a time that will have the least impact on the operations of Radiology Department and shall obtain prior approval of this schedule from the Radiology Department.
3.6	**NETWORK CONNECTIVITY AND INTEGRATION TO HIS AND PACS**
3.6.1	The system must be ready and activated to comply with DICOM 3.0 standards, including:
3.6.1.1	DICOM Send
3.6.1.2	DICOM Image Storage
3.6.1.3	DICOM Modality Worklist (MWL),
3.6.1.4	DICOM Query/Retrieve (Q/R)
3.6.1.5	DICOM Dose Structured Reporting (RDSR)
3.6.1.6	DICOM Print
3.6.1.7	DICOM Modality Performed Procedure Step (MPPS)
3.6.2	Allow bidirectional data exchange for seamless workflow.
3.6.3	Image must be able to store as DICOM and PC format
3.6.4	System must have wireless connectivity and ethernet RJ45
3.6.5	System must be HL7 ready and activated
3.6.6	The systems proposed shall be integrated and connected to Ministry of Health's BruHIMS - RIS (Radiology Information System) and Radiology Picture Archiving and Communication System (RPACS) therefore ALL licenses and any related hardwares for these integrations should be included. Please refer to BruHIMS-RIS vendor and PACS vendor for information on Bru-HIMS RIS and PACS integration requirement.
3.6.7	Tenderer to include the cost of BruHIMS-RIS and RPACS integration quoted from BruHIMS vendor and PACS vendor respectively. Tenderer may obtain the quotations for the integration required for this project directly to the MOH's BruHIMS-RIS and PACS vendors or through the Healthcare Technology Department, Ministry of Health.

NO.	SECTION 1 – USER REQUIREMENTS
3	**ONE TIME SUPPLY OF ACCESSORIES**
1	One time supply of accessories which includes but limited to the following: [Please offer an equivalent to the listed accessories if the is no exact item]
1.1	One (1) unit patient hand grip for table and wall stand bucky
1.2	One (1) unit cross table/lateral detector holder
1.3	One (1) unit mattress for the X-ray table and a pillow
1.4	Two (2) units 2.5mm equivalence lead gown and hangers with mobile stand
1.5	One (1) set gonad shield for adult and children
1.6	One (1) set positioning pads of various shapes e.g triangular, rectangular
1.7	One (1) unit PAT slide for patient transfer.
1.8	One stationary grid with frame holder that can accommodate the detector proposed and CR cassette 35x43cm.
1.9	One (1) unit beam alignment and collimation test tool
1.10	One (1) unit image quality test phantom
1.11	One (1) set of two-way intercoms: intercommunications system must be included for ease of giving instruction to patients
2	All necessary accessories for the equipment to be functional should be included
3	**All accessories supplied must have a warranty period of at least one (1) year or better**
4	**DISMANTLING AND REMOVAL OF EXISTING SYSTEM**
1	Tenderer to include the cost to dismantle properly the existing system and remove the components from the site to a location agreed by the Hospital Management.
2	Tenderer shall include the cost to safely dispose X-ray tube in accordance to SHENA guideline
5	**ROOM PREPARATION AND RADIATION SAFETY TEST**
1	It is **mandatory** for the tenderer to **conduct site visit** to inspect, measure and confirm the room requirement for the installation of the proposed Systems at the existing **Radiology Unit, PIHM Hospital, Temburong.**
2	The room preparation must include but not limited to the following: ▪ Replace, supply and install new medical grade vinyl flooring ▪ Replace, supply and install new power distribution box for the system ▪ Replace, supply and install new lightings and dimmer lights for the examination room and control room. ▪ Replace, supply and install new x-ray warning light ▪ Apply new bacterial painting inside examination and console room ▪ Installing floor and ceiling trunking for the system ▪ Replace, supply and install Split Air conditioning Units (For backup) Any other room preparation plans required for the installation shall be provided with the proposal. The proposed plan shall be approved by the MOH / Radiology Department prior to implementation.
3	The tenderer to provide and install lead shielding standard 2mm thickness (only necessary if the existing one is deemed not satisfactory upon inspection with BME)
4	The tenderer must **provide in this tender a proposed layout drawing** of the System. Tender must be able to provide a detailed layout drawing with mechanical, electrical, network points and HVAC requirements upon awarded.

NO.	SECTION 1 – USER REQUIREMENTS
5	Tenderer to provide in the proposal the **name of any subcontractors** involved in renovation and these subcontractors must possess appropriate and valid certification and licenses which is registered with either MOD or MOH's Estate Maintenance Department.
6	The proposal must also include any special lightings and air conditioning necessary for optimal operation of the machine.
7	The proposal must include provision for hand wash and operator's console station and to include any necessary furniture required for the installation and operation of the system.
8	Flooring fixture, new cabinets, walls, ceiling, Lead door, lighting variations isolated A/C & ventilation, dimmer, occupied signage and other necessary implements shall be provided by Tenderer.
9	Any alterations to floor, ceiling, painting, construction, electrical and finishing shall adhere and comply to set quality standards of Biomedical Engineering and Estate Management Department MOH.
10	A network installation plan detailing cable runs, cable type, termination, concentrators, hubs, bridges, and all other network devices shall be prepared by the Tenderer and approved by the Ministry of Health's Representative prior to proposed System installation.
11	Tenderer shall appoint a qualified expert to perform radiation safety measurements after installation and prior to commissioning of the room.
12	Result of the radiation safety measurement and certificate must be submitted.
13	Radiation warning light to be install and ensure in working condition when exposure is made.
14	Tenderer shall be responsible to mobilize and demobilize the machineries used at the work site and to remove the debris from the site after completion works.
15	Certificate of calibration and inspection from factory.
16	The Tenderer to include all necessary works and other accessories for power supply for the proposed room from the switch board.
17	The calculation of the capacity rating and the proposal for single line should be submitted together with the tender document.
18	Two (2) sets of quality assurance and commissioning report must be submitted after installation and during commissioning.
19	Two (2) sets of room radiation safety measurement and certificate must be submitted during or after commissioning.
6	**END USER TRAINING**
1	Inclusive of clinical application training for all relevant radiography staff for at least seven (7) working days on-site for all the operation and applications offered with the system **by Manufacturer's Application Specialist** which includes but not limited to:
1.1	Basic user operation, including image transfers.
1.2	Application training for the use of the various applications provided with the system.
1.3	Quality control tests and basic maintenance, including troubleshooting
2	**Training certificate must be provided by manufacturer or tenderer after completion of training sessions.**
3	On-site **follow up application training by application specialist after three (3) months** of clinical use to ensure the system is fully optimised.
4	Two (2) sets of User/Operation Manual in English
5	Two (2) sets of Training Manual in English
6	Introductory **Technical Training** to Biomedical Engineers and Technicians at BME RIPASH Office by competent Tenderer's Engineer/Technicians that includes but not limited to:
6.1	Troubleshooting and basic corrective maintenance

NO.	SECTION 1 – USER REQUIREMENTS
6.2	Handling and basic inspection maintenance
7	**WARRANTY**
1	Tenderer to include comprehensive warranty period of **seven (7) years for outright purchase** AND/OR **the leasing term.**
2	Tenderers to **ACKNOWLEDGE** the Warranty Undertaking Form in Section 4 stating the terms of warranty provided for the equipment in the tender for the whole seven (7) years.

SECTION 2 – PRICE PROPOSAL	
OPTION A **OUTRIGHT PURCHASE**	▪ Tenderer to offer the system on an outright purchase basis, with a **single full payment** made after delivery, installation, commissioning, and user training are completed. ▪ Includes a seven (7) years comprehensive warranty, covering: ✓ All parts and labour ✓ On-site after-sales service support ✓ Software updates and upgrades ✓ Preventive Maintenance (minimum twice per year) ▪ Warranty coverage is as specified in the Warranty Undertaking Form.
OPTION B **LEASING PRICE FOR 7 YEARS**	▪ Tenderer to offer the system on a 7-years leasing basis, with quarterly payments over the period of 7 years ▪ Ownership remains with the tenderer during the lease. ▪ Tenderer is responsible for full maintenance and support throughout the lease, as per the Warranty Undertaking Form. ▪ **First payment** starts after delivery, installation, commissioning, and user training. ▪ **Final payment** is due in the last month of the 7th year. At the **end of the lease**, MOH has the option to purchase **the system for $1**, subject to equipment condition and approval by the relevant committee.

OPTION A **OUTRIGHT PURCHASE**	**TOTAL PRICE:**	
OPTION B **LEASING PRICE FOR 7 YEARS**	**QUARTERLY INSTALMENT PRICE:**	**TOTAL PRICE FOR 7 YEARS:**
	PRICE FOR MOH TO PURCHASE AFTER 7TH YEAR LEASING:	

SECTION 3 - PROCUMENT AND TECHNICAL SPECIFICATION								
BRAND:					MODEL:			
COUNTRY OF ORIGIN:								
YEAR INTRODUCED TO MARKET:								
PRICE VALIDITY: [AT LEAST ONE (1) YEAR PRICE VALIDTY]								
DELIVERY TIME:								
AUTHORIZED DISTRIBUTOR: (AUTHORIZED DISTRIBUTOR LETTER ATTACHED)					APPOINTED BRUNEI DISTRIBUTOR			
					PROCURE FROM OVERSEA AUTHORIZED DISTRIBUTOR		COMPANY NAME:	
							COMPANY ORIGIN:	
DETAILED BROCHURE INCLUDED		YES		NO	**☑ or specify where appropriate**			
USER AND SERVICE MANUALS:		YES		NO	Tenderers to acknowledge that they must provide at least TWO sets of USER AND SERVICE manuals when applying commissioning form. One Set for End User, One Set for BME. (Please provide hardcopy or softcopy)			
MAINS POWER SUPPLY:		220V-240V			BATTERY [ ] YES [ ]NO			
		50-60HZ			Type of Battery:		Rating:	
		OTHERS:			RECHARGEABLE		NON-RECHARGEABLE	
POWER ADAPTER/CHARGER OUTPUT RATING:					EQUIPMENT AMBIENT OPERATING TEMPERATURE RANGE:			
NUMBER OF TECHNICAL SUPPORT (ENGINEER/TECHNICIAN) Please provide training or certification for locals who is trained/certified		LOCAL					□ Trained / Certified □ Not yet trained on the product	
		OVERSEA (SPECIFY LOCATION)			NEAREST LOCATION:			
DIMENSIONS AND WEIGHT OF MAIN UNIT:				□ mm □ cm □ inch			□ Kilogram (Kg) □ Gram(g) □ Pound (lbs)	
EQUIPMENT WHOLE LIFE TIME SUPPORT:	The supplier shall ensure that spare parts for the equipment are available for a minimum of 8 years after installation, with the support period extending beyond the expected lifecycle of the equipment. No of years: _____ (Please specify)							

SECTION 4 – WARRANTY UNDERTAKING FORM (PAGE 1)

Tenderer, on behalf of the manufacturer, acknowledged and agrees that when equipment is under Warranty for either seven (7) years for Outright Purchase or Leasing period of Seven (7) years, must cover the scope of comprehensive warranty at no additional cost:

- Warrants the supplied medical equipment and its accessories to be in good condition, in working order and free from defects to the extend such equipment do not comply with specifications, under normal use for the warranty period. The scope of warranty covers to its maximum extent permitted by applicable law.
- During warranty, tenderer must rectify issues arise from any mechanical, technical or software faulty as soon as it is reported including any cost of breakdown repairs, replacement of parts including one time x-ray tube replacement.
- **Exchange warranty**; Providing replacement units or OEM parts for:
    A. Warranty against defects – Manufacturing defects or Equipment malfunction resulted from mechanical, electrical or software failure during Commissioning or within the first six (6) months of use
    B. Faulty workmanship or unsatisfactory condition during delivery or commissioning
    C. If a unit or accessory is deemed used item or refurbished item (not a new unit) by the user and BME Unit.
- **One time yearly Planned Preventive Maintenance (PPM)** according to Manufacturer's Preventive Maintenance Guideline, including one-time replacements of PM Kits, batteries and any relevant parts to prolong equipment lifespan.

EXCLUSION FROM WARRANTY

MOH understand that the following circumstances are not covered in the warranty and Tenderer may quote for repair and subject to MOH approval:

- Unauthorized modifications - an alteration or repair by anyone other than the Manufacturer or Authorized agent during warranty period.
- Accidental damage or problems caused by negligence or mishandling, subject to appropriate justification by both parties.
- Vandalism and Natural disasters
- Normal wear and tear

Tenderer may also attach a list of terms to be excluded from the warranty for MOH consideration and notification.

COMPREHENSIVE MAINTENANCE SERVICE

Tenderer must provide a comprehensive maintenance during the warranty period.
The scope for **Comprehensive Maintenance Service** consists of:

A. Inspection Maintenance (IM)
B. Corrective Maintenance (CM) and
C. Planned Preventive maintenance (PPM)
D. Breakdown call

SECTION 4 – WARRANTY UNDERTAKING FORM (PAGE 2)

A. Inspection Maintenance (IM)

- Must be conducted every six (6) months starting from commissioning date.
- Issuance of IM Report to End User and Biomedical Engineering Unit of respective Facilities (BME)
- Physical hardware checks on main unit/system and all supplied accessories
- System, Software and Application check-up – Update to latest version when available
- Performance and Functional testing
- Servicing/Cleaning of dust

B. Corrective Maintenance (CM):

- During warranty, tenderer must rectify issues arise from any mechanical, technical or software faulty as soon as it is reported including any cost of breakdown repairs.
- Repair and replacement of parts with new, quality, and compatible parts within thirty (30) days after receipt of reported problem by BME.
- Post repair tests with reports to ensure Electrical Safety Test, Performance Test and Functional Test is conducted.
- **One-time replacement of one unit of each Flat Panel Detector (FPD) type for each location. [35x43 and 24x30cm FDP]**

C. Planned Preventive Maintenance (PPM):

- **One time yearly Planned Preventive Maintenance (PPM)** according to Manufacturer's Preventive Maintenance Guideline, including replacements of PM Kits, any relevant parts to prolong equipment lifespan AND **one-time battery replacement during the 6th or 7th year, unless required earlier.**
- Provide Maintenance Due Date stickers after each PPM or booklet for easy monitoring

D. Breakdown Call

- Onsite response to assess and rectify any breakdown call within a maximum of two (2) hours after receipt of reported problem by BME Unit preferably during office hours, else after office hours or public holidays.
  - ✓ Deduction demerit shall be imposed if the Company fails to provide onsite response within the time above and the deduction amount shall be based on the frequency of event times certain rate to be formulated later.
- Downtime: Not more than 24 hours after receipt of reported problem by BME unit
- If Downtime is expected to be more than 24 hours, Tenderer must notify formally to BME unit through email or letter immediately indicating the reason of delay with estimation of:
  A. Estimated time of parts to arrive and
  B. Expected no of days for repair completion
- **The downtime permitted after the first 24 hours with notification, should not be more than 72 working hours or else, a penalty fee of BND$50 per day per unit will be charge after the 72th downtime hour.**

NO.	TERMS AND CONDITIONS
1	Tenderer must be registered with the Ministry of Health.
2	**TENDER FORM should be filled** completely including the **USER REQUIREMENT FORM** (if available). Submission of incomplete form **MAY** cause **DISQUALIFICATION OF TENDER.**
3	Each tenderer is allowed to quote **ONE BRAND/ MODEL WITH ONE PRICE ONLY** for each item. Submission of more than one brand/model and price will cause **DISQUALIFICATION OF TENDER.**
4	Tenderers are **required to submit individual proposal booklets for each item listed**. Each item shall be treated as a standalone submission
5	All consumables supplied throughout this tender shall have a minimum expiry date of **twelve (12) months / on delivery** (if applicable). Should the consumables be urgently needed, provision of consumables with expiry date of less than twelve (12) months should be first agreed by the User before delivery is made (if applicable).
6	Brochures / catalogues should be submitted / attached with tender document.
7	Any room renovation which may be required, it is **mandatory to conduct site visit**. Failure to conduct the site visit, is considered as **non-compliance dan disqualification from the tender**.
8	DELIVERY PERIOD: (Please state) Not More Than **90 days** upon confirmation
9	PRICE VALIDITY: The quotation shall remain valid for **12 MONTHS** from the final date for the submission of the quotation and no supplier may withdraw his/her quotation within that period. The Government reserves the right to extend this period if deemed necessary provided that such extension to the quotation validity period shall have written consent of the supplier(s).
10	The equipment supplied must be newly manufactured, unused, and in its original, sealed packaging. The equipment must not be previously owned, refurbished, or reconditioned in any form. The vendor is required to provide **proof of manufacture date confirming the equipment is new**.

SECTION 3

TENDER FORM

To:

TENDER REFERENCE NO.: KK/165/2026/HTD

INVITATION TO TENDER
PROVISIONAL TURNKEY PROJECT OF GENERAL RADIOGRAPHY SYSTEM FOR RADIOLOGY UNIT, PENGIRAN ISTERI HAJAH MARIAM (PIHM) HOSPITAL

TENDER OF *(name of tenderer)* : _____

Company/Business Registration No. : _____

Tender Closing Date : _____

SCOPE OF WORK AND SUMMARY OF PRICES					
THIS TENDER IS A PROVISIONAL TURNKEY PROJECT FOR GENERAL RADIOGRAPHY SYSTEM FOR:					
DESCRIPTION	**QTY**	**Y**	**N**	**A**	**B**
RADIOLOGY UNIT, PENGIRAN ISTERI HAJAH MARIAM (PIHM) HOSPITAL, TEMBURONG	**1**			**TOTAL PRICE** BND$	**TOTAL PRICE** BND$

NO.	**SECTION 1 – USER REQUIREMENTS**	**(✓)**		**STATE OR SPECIFY OR REMARKS OR BROCHURE PAGE**
		Y	**N**	
1	**SHENA REGISTRATION**			
1	Tenderer must have an active registration with Safety, Health and Environment National Authority (SHENA), Brunei Darussalam for the relevant radiation licenses related to this tender. **[Proof of Active Registration must be included]**			Licence No.: Expiry Date:
2	**SYSTEM ARHITECTURE**			
1	The proposed new digital radiography system shall replace existing Radiography System in **Radiology Unit, PIHM Hospital Temburong.**			
2	The System must be capable of performing all general radiographic examinations, with patients in either wheel chair, hospital bed and trolley in horizontal, vertical and oblique positions of all skeletal body of adults and children.			
3	The proposed digital Radiography General X-ray System shall come with: 1. **Ceiling suspended x-ray tube and generator** 2. **X-ray Table bucky** 3. **Wall Stand bucky** 4. **Two (2) sets of digital flat panel detectors (FPD)** 5. **Control console and Image Processing Workstation** 6. **Network Connectivity and Integration to HIS and**			

NO.	SECTION 1 – USER REQUIREMENTS	(✓)		STATE OR SPECIFY OR REMARKS OR BROCHURE PAGE
		Y	N	
	PACS 7. **Quality assurance and dose management tools**			
3.1	**CEILING SUSPENDED X-RAY TUBE AND GENERATOR**			
3.1.1	A fully integrated ceiling mounted and suspended X-ray tube with motorized movement across x, y and z axes, and rotation/angulation for horizonal, oblique and lateral projections.			
3.1.2	Inclusive supply and installation of all necessary railings and beams required for x-ray tube			
3.1.3	Inclusive of collimator rotation +/-90 or more with motorised/manual control.			
3.1.4	Inclusive of laser alignment lights for accurate centering			
3.1.5	Electromagnetic brakes or servo-controlled movement for smooth operation.			
3.1.6	Automatic tube-to-detector tracking for both table and wall stand			
3.1.7	Integrated collision protection mechanism			
3.1.8	X-ray tube and generator should have the following features:			
3.1.8.1	High-frequency generator: 60 – 80kW. **Tenderer to state the generator output.**			Generator Output:
3.1.8.2	Tube voltage range: 40-150 kV. **Tenderer to state the range.**			Tube Voltage Range:
3.1.8.3	mAs range: 0.5mAs to 800mAs or better. **Tenderer to state the range.**			Mas RANGE:
3.1.8.4	Dual-focus (small and large) rotating anode X-ray tube. **Tenderer to state the sizes.**			Small: Large:
3.1.8.5	Collimation control (manual and motorised).			
3.1.8.6	Integrated Dose Area Product (DAP) meter for dose measurement and recording			
3.1.8.7	Color touch screen display on the X-ray tube head to display key parameters. Display of patient's name and identification at tube head is preferred.			
3.1.8.8	Measurement tape			
3.1.8.9	X-ray tube heat capacity: 300kHU or more			Tube Heat Capacity:
3.2	**X-RAY TABLE BUCKY**			
3.2.1	Height adjustable floor mounted table bucky with 4-way floating table top and detector tray for digital detector			
3.2.2	Automatic detection when placing detector in detector tray			
3.2.3	Detector tray allows portrait or landscape format orientation			
3.2.4	Inclusive of measurement chamber for automatic exposure			
3.2.5	Automated tracking capabilities for table height adjustment, longitudinal tube travel and tube rotation.			
3.2.6	Automated centering on detector.			
3.2.7	Foot switches for adjusting the table height, floating tabletop movement and locking.			
3.2.8	Removable anti scatter grid for SID of 100cm for horizontal table projections. **Tenderer to specify the grid type and ratio.**			Grid Type: Ratio:
3.2.9	Patient weight capacity: capable to withstand at least 280kg (Static) or heavier patient			Maximum Weight:

NO.	SECTION 1 – USER REQUIREMENTS	(✓)		STATE OR SPECIFY OR REMARKS OR BROCHURE PAGE
		Y	N	
	Tenderer to specify maximum weight the table can handle.			
3.2.10	Easy access from both sides of table for patient transfer purposes and cross table imaging.			
3.2.11	Tabletop Size: At least 220cm (length) x 80cm (width) or better			
3.2.12	Tabletop height: Adjustable from 550mm to 850mm or better			
3.2.13	Tabletop material: easy to clean and durable			
3.3	**WALL STAND BUCKY**			Wall Stand Bucky Model:
3.3.1	Tiltable standing bucky from -20° to +90° with additional latched position at 0°			
3.3.2	Inclusive of measurement chamber for automatic exposure			
3.3.3	Interchangeable/Removable anti scatter grid between table and wall bucky.			
3.3.4	Detector tray allows portrait or landscape format			
3.3.5	Automatic tube tracking			
3.3.6	Vertical travel range: Up to 140cm or better			
3.3.7	Vertical travel range: Down to 30cm or better			
3.3.8	Motorized collimation and lamp control			
3.3.9	Motorized Tilting movement			
3.3.10	Motorized vertical movement			
3.4	**TWO (2) SETS OF WIRELSS DIGITAL FLAT PANEL DETECTORS (FPD)**			Wireless FPD Model:
3.4.1	Detector technology: Caesium iodide scintillator with Amorphous silicon technology.			
3.4.2	Comes with removable, rechargeable and exchangeable battery.			
3.4.3	Size of detector: approximately 35cm x 43cm (or equivalent) **Tenderer to state the size and weight of the detector.**			Size: Weight:
3.4.4	Pixel size: 140 µm or less for higher spatial resolution.			
3.4.5	High image matrix: 2k x 2k pixels or better for detailed images.			
3.4.6	Can be in portrait and landscape orientation			
3.4.7	Battery charging when the wireless detector is in the tray			
3.4.8	Automatic detection of detector in the detector tray.			
3.4.9	Data transmission of less than 3 seconds for preview and less than 8 seconds for full display of image.			
3.4.10	Integrated handle or handgrip on the detector for safe and easy handling.			
3.4.11	Operation capacity: up to 1000 images. **Tenderer to state the operation capacity of the detector.**			Operation Capacity:
3.5	**CONTROL CONSOLE AND IMAGE PROCESSING WORKSTATION**			
3.5.1	All operation and communication of the radiography system including the digital image processing shall be centralised through a main control console.			

NO.	SECTION 1 – USER REQUIREMENTS	(✓)		STATE OR SPECIFY OR REMARKS OR BROCHURE PAGE
		Y	N	
3.5.2	Control console should be integrated with image processing workstation, or as separate units, to allow the operator to control acquisition and perform image post-processing, review and quality control in the control area prior to sending images to PACS.			
3.5.3	Fully DICOM-compliant and capable of seamless integration with PACS, BruHIMS and network film printer.			
3.5.4	Control console panel/workstation shall be located within the control area.			
3.5.5	The **control console workstation** shall have the following features:			Size of Console Monitor:
3.5.5.1	Input devices: keyboard and mouse or touchscreen interface or both.			
3.5.5.2	Interface with the generator and flat panel detector.			
3.5.5.3	Control console monitor display size: Minimum 19” **Tenderer to state the size of the console monitor.**			
3.5.5.4	Exposure control: Dual function exposure control button and hand switch with 2-step operation i.e. prep and expose, with safety features to prevent accidental exposure.			
3.5.5.5	Control exposure parameter settings (manual and automatic) for kV, mAs, exposure time, focal spot selection and AEC modes.			
3.5.5.6	Enter or select patient data and examination			
3.5.5.7	Anatomical Program (APR) for adult and pediatrics			
3.5.5.8	Image preview and status display			
3.5.5.9	Selection of iontomat chambers for AEC			
3.5.5.10	User login and password protection, if applicable to the proposed system			
3.5.5.11	Real time dose information display and recorded; and can be transmitted to RIS/PACS systems.			
3.5.5.12	Error messages and safety alerts			
3.5.6	The **Image processing workstation** shall have the following features:			
3.5.6.1	Integrated with the control console or provided as a separate workstation.			
3.5.6.2	Latest high performance computer system in the market acceptable by MOH, with the following minimum specifications:			
3.5.6.2.1	Workstation RAM: At least 16GB or better			
3.5.6.2.2	Workstation SATA Hard Drive: For Operating System, Minimum 500GB or better			
3.5.6.2.3	Workstation SSD Hard Drive: For Image Processing Software and Image Storage, Minimum 1TB or better			
3.5.6.2.4	Workstation Graphic Card: Any suitable and compatible graphic card that can provide high quality images on screen			
3.5.6.2.5	Display Monitor Type and Size: Minimum Medical Grade 24” high resolution monitor or better			
3.5.6.2.6	Standard image post-processing functions and tools for the following: ▪ window/level adjustment (brightness/contrast)			

NO.	SECTION 1 – USER REQUIREMENTS	(✓)		STATE OR SPECIFY OR REMARKS OR BROCHURE PAGE
		Y	N	
	▪ zoom, pan, flip and rotate ▪ measurement tools (distance, angle, ROI) ▪ Free and defined texts annotations and right/left labelling, ▪ multi-image display/layouts ▪ noise reduction and edge enhancement ▪ Reject/repeat image tracking and QC logs ▪ Export to DICOM, JPEG or PDF format ▪ Burn to CD/DVD with built-in viewer			
3.5.7	Software:			
3.5.7.1	Security Software: Installed with secure threat and risk analysis security software to prevent unwanted incidents of virus			
3.5.7.2	Include **Image Acquisition Software** such as follows:			
3.5.7.2.1	Selection of patient from worklist, protocols and exposure parameters			
3.5.7.2.2	Image preview within 3 – 5 seconds			
3.5.7.2.3	Support for automatic exposure detection or synchronisation			
3.5.7.2.4	Anatomical Programmed Radiography (APR) with preset exposure settings			
3.5.7.2.5	Support for manual, AEC and dynamic exposure modes			
3.5.7.2.6	Support for error detection			
3.5.7.2.7	Recordings and export of repeat and reject images together with corresponding reasons for the repeat and rejection.			
3.5.7.3	Include **Advanced Image Processing Software** as follows:			
3.5.7.3.1	Advanced image processing for bone and soft tissue contrast enhancement			
3.5.7.3.2	Advanced image processing for noise reduction and edge enhancement			
3.5.7.3.3	Advanced post processing features for sorting and organising patient images automatically.			
3.5.7.3.4	All licenses and configurations included in the offer must be activated and installed to its latest version			
3.5.8	Inclusive of any software update whenever available or provided by manufacturer within the next ten (10) years Tenderer shall schedule any installation of software updates or upgrades at a time that will have the least impact on the operations of Radiology Department and shall obtain prior approval of this schedule from the Radiology Department.			
3.6	**NETWORK CONNECTIVITY AND INTEGRATION TO HIS AND PACS**			
3.6.1	The system must be ready and activated to comply with DICOM 3.0 standards, including:			
3.6.1.1	DICOM Send			
3.6.1.2	DICOM Image Storage			
3.6.1.3	DICOM Modality Worklist (MWL),			
3.6.1.4	DICOM Query/Retrieve (Q/R)			
3.6.1.5	DICOM Dose Structured Reporting (RDSR)			

NO.	SECTION 1 – USER REQUIREMENTS	(✓)		STATE OR SPECIFY OR REMARKS OR BROCHURE PAGE
		Y	N	
3.6.1.6	DICOM Print			
3.6.1.7	DICOM Modality Performed Procedure Step (MPPS)			
3.6.2	Allow bidirectional data exchange for seamless workflow.			
3.6.3	Image must be able to store as DICOM and PC format			
3.6.4	System must have wireless connectivity and ethernet RJ45			
3.6.5	System must be HL7 ready and activated			
3.6.6	The systems proposed shall be integrated and connected to Ministry of Health's BruHIMS -RIS (Radiology Information System) and Radiology Picture Archiving and Communication System (RPACS) therefore ALL licenses and any related hardwares for these integrations should be included. Please refer to BruHIMS-RIS vendor and PACS vendor for information on Bru-HIMS RIS and PACS integration requirement.			
3.6.7	Tenderer to include the cost of BruHIMS-RIS and RPACS integration quoted from BruHIMS vendor and PACS vendor respectively. Tenderer may obtain the quotations for the integration required for this project directly to the MOH's BruHIMS-RIS and PACS vendors or through the Healthcare Technology Department, Ministry of Health.			
3	**ONE TIME SUPPLY OF ACCESSORIES**			
1	One time supply of accessories which includes but limited to the following: [Please offer an equivalent to the listed accessories if the is no exact item]			
1.1	One (1) unit patient hand grip for table and wall stand bucky			
1.2	One (1) unit cross table/lateral detector holder			
1.3	One (1) unit mattress for the X-ray table and a pillow			
1.4	Two (2) units 2.5mm equivalence lead gown and hangers with mobile stand			
1.5	One (1) set gonad shield for adult and children			
1.6	One (1) set positioning pads of various shapes e.g triangular, rectangular			
1.7	One (1) unit PAT slide for patient transfer.			
1.8	One stationary grid with frame holder that can accommodate the detector proposed and CR cassette 35x43cm.			
1.9	One (1) unit beam alignment and collimation test tool			
1.10	One (1) unit image quality test phantom			
1.11	One (1) set of two-way intercoms: intercommunications system must be included for ease of giving instruction to patients			
2	All necessary accessories for the equipment to be functional should be included			
3	**All accessories supplied must have a warranty period of at least one (1) year or better**			
4	**DISMANTLING AND REMOVAL OF EXISTING SYSTEM**			

NO.	SECTION 1 – USER REQUIREMENTS	(✓)		STATE OR SPECIFY OR REMARKS OR BROCHURE PAGE
		Y	N	
1	Tenderer to include the cost to dismantle properly the existing system and remove the components from the site to a location agreed by the Hospital Management.			
2	Tenderer shall include the cost to safely dispose X-ray tube in accordance to SHENA guideline			
5	**ROOM PREPARATION AND RADIATION SAFETY TEST**			
1	It is **mandatory** for the tenderer to **conduct site visit** to inspect, measure and confirm the room requirement for the installation of the proposed Systems at the existing **Radiology Unit, PIHM Hospital, Temburong.**			
2	The room preparation must include but not limited to the following: ▪ Replace, supply and install new medical grade vinyl flooring ▪ Replace, supply and install new power distribution box for the system ▪ Replace, supply and install new lightings and dimmer lights for the examination room and control room. ▪ Replace, supply and install new x-ray warning light ▪ Apply new bacterial painting inside examination and console room ▪ Installing floor and ceiling trunking for the system ▪ Replace, supply and install Split Air conditioning Units (For backup) Any other room preparation plans required for the installation shall be provided with the proposal. The proposed plan shall be approved by the MOH / Radiology Department prior to implementation.			
3	The tenderer to provide and install lead shielding standard 2mm thickness (only necessary if the existing one is deemed not satisfactory upon inspection with BME)			
4	The tenderer must **provide in this tender a proposed layout drawing** of the System. Tender must be able to provide a detailed layout drawing with mechanical, electrical, network points and HVAC requirements upon awarded.			
5	Tenderer to provide in the proposal the **name of any subcontractors** involved in renovation and these subcontractors must possess appropriate and valid certification and licenses which is registered with either MOD or MOH's Estate Maintenance Department.			
6	The proposal must also include any special lightings and air conditioning necessary for optimal operation of the machine.			
7	The proposal must include provision for hand wash and operator's console station and to include any necessary furniture required for the installation and operation of the system.			
8	Flooring fixture, new cabinets, walls, ceiling, Lead door, lighting variations isolated A/C & ventilation, dimmer, occupied signage and other necessary implements shall be provided by Tenderer.			
9	Any alterations to floor, ceiling, painting, construction, electrical and finishing shall adhere and comply to set quality standards of Biomedical Engineering and Estate Management Department MOH.			

NO.	SECTION 1 – USER REQUIREMENTS	(✓)		STATE OR SPECIFY OR REMARKS OR BROCHURE PAGE
		Y	N	
10	A network installation plan detailing cable runs, cable type, termination, concentrators, hubs, bridges, and all other network devices shall be prepared by the Tenderer and approved by the Ministry of Health's Representative prior to proposed System installation.			
11	Tenderer shall appoint a qualified expert to perform radiation safety measurements after installation and prior to commissioning of the room.			
12	Result of the radiation safety measurement and certificate must be submitted.			
13	Radiation warning light to be install and ensure in working condition when exposure is made.			
14	Tenderer shall be responsible to mobilize and demobilize the machineries used at the work site and to remove the debris from the site after completion works.			
15	Certificate of calibration and inspection from factory.			
16	The Tenderer to include all necessary works and other accessories for power supply for the proposed room from the switch board.			
17	The calculation of the capacity rating and the proposal for single line should be submitted together with the tender document.			
18	Two (2) sets of quality assurance and commissioning report must be submitted after installation and during commissioning.			
19	Two (2) sets of room radiation safety measurement and certificate must be submitted during or after commissioning.			
6	**END USER TRAINING**			
1	Inclusive of clinical application training for all relevant radiography staff for at least seven (7) working days on-site for all the operation and applications offered with the system **by Manufacturer's Application Specialist** which includes but not limited to:			
1.1	Basic user operation, including image transfers.			
1.2	Application training for the use of the various applications provided with the system.			
1.3	Quality control tests and basic maintenance, including troubleshooting			
2	**Training certificate must be provided by manufacturer or tenderer after completion of training sessions.**			
3	On-site **follow up application training by application specialist after three (3) months** of clinical use to ensure the system is fully optimised.			
4	Two (2) sets of User/Operation Manual in English			
5	Two (2) sets of Training Manual in English			
6	Introductory **Technical Training** to Biomedical Engineers and Technicians at BME RIPASH Office by competent Tenderer's Engineer/Technicians that includes but not limited to:			
6.1	Troubleshooting and basic corrective maintenance			
6.2	Handling and basic inspection maintenance			
7	**WARRANTY**			

NO.	SECTION 1 – USER REQUIREMENTS	(✓)		STATE OR SPECIFY OR REMARKS OR BROCHURE PAGE
		Y	N	
1	Tenderer to include comprehensive warranty period of **seven (7) years for outright purchase** AND/OR **the leasing term.**			
2	Tenderers to **ACKNOWLEDGE** the Warranty Undertaking Form in Section 4 stating the terms of warranty provided for the equipment in the tender for the whole seven (7) years.			

SECTION 2 – PRICE PROPOSAL	
OPTION A **<u>OUTRIGHT PURCHASE</u>**	▪ Tenderer to offer the system on an outright purchase basis, with a **single full payment** made after delivery, installation, commissioning, and user training are completed. ▪ Includes a seven (7) years comprehensive warranty, covering: ✓ All parts and labour ✓ On-site after-sales service support ✓ Software updates and upgrades ✓ Preventive Maintenance (minimum twice per year) ▪ Warranty coverage is as specified in the Warranty Undertaking Form.
OPTION B **<u>LEASING PRICE FOR 7 YEARS</u>**	▪ Tenderer to offer the system on a 7-years leasing basis, with quarterly payments over the period of 7 years ▪ Ownership remains with the tenderer during the lease. ▪ Tenderer is responsible for full maintenance and support throughout the lease, as per the Warranty Undertaking Form. ▪ **First payment** starts after delivery, installation, commissioning, and user training. ▪ **Final payment** is due in the last month of the 7th year. At the **end of the lease**, MOH has the option to purchase **the system for $1**, subject to equipment condition and approval by the relevant committee.

OPTION A **<u>OUTRIGHT PURCHASE</u>**	**TOTAL PRICE:** **BND$**	
OPTION B **<u>LEASING PRICE FOR 7 YEARS</u>**	**QUARTERLY INSTALMENT PRICE:** **BND$**	**TOTAL PRICE FOR 7 YEARS:** **BND$**
	PRICE FOR MOH TO PURCHASE AFTER 7TH YEAR LEASING: **BND$**	

SECTION 3 - PROCUMENT AND TECHNICAL SPECIFICATION								
BRAND:					**MODEL:**			
COUNTRY OF ORIGIN:								
YEAR INTRODUCED TO MARKET:								
PRICE VALIDITY: [AT LEAST ONE (1) YEAR PRICE VALIDTY]								
DELIVERY TIME:								
AUTHORIZED DISTRIBUTOR: (AUTHORIZED DISTRIBUTOR LETTER ATTACHED)					APPOINTED BRUNEI DISTRIBUTOR			
					PROCURE FROM OVERSEA AUTHORIZED DISTRIBUTOR	COMPANY NAME:		
						COMPANY ORIGIN:		
DETAILED BROCHURE INCLUDED		YES		NO	**☑ or specify where appropriate**			
USER AND SERVICE MANUALS:		YES		NO	Tenderers to acknowledge that they must provide at least TWO sets of USER AND SERVICE manuals when applying commissioning form. One Set for End User, One Set for BME. (Please provide hardcopy or softcopy)			
MAINS POWER SUPPLY:		220V-240V			BATTERY [ ] YES [ ]NO			
		50-60HZ			Type of Battery:		Rating:	
		OTHERS:			RECHARGEABLE		NON-RECHARGEABLE	
POWER ADAPTER/CHARGER OUTPUT RATING:					EQUIPMENT AMBIENT OPERATING TEMPERATURE RANGE:			
NUMBER OF TECHNICAL SUPPORT (ENGINEER/TECHNICIAN) **Please provide training or certification for locals who is trained/certified**	LOCAL					□ Trained / Certified □ Not yet trained on the product		
	OVERSEA (SPECIFY LOCATION)				NEAREST LOCATION:			
DIMENSIONS AND WEIGHT OF MAIN UNIT:					□ mm □ cm □ inch		□ Kilogram (Kg) □ Gram(g) □ Pound (lbs)	
EQUIPMENT WHOLE LIFE TIME SUPPORT:	The supplier shall ensure that spare parts for the equipment are available for a minimum of 8 years after installation, with the support period extending beyond the expected lifecycle of the equipment. No of years: _____ (Please specify)							

SECTION 4 – WARRANTY UNDERTAKING FORM (PAGE 1)

Tenderer, on behalf of the manufacturer, acknowledged and agrees that when equipment is under Warranty for either seven (7) years for Outright Purchase or Leasing period of Seven (7) years, must cover the scope of comprehensive warranty at no additional cost:

- Warrants the supplied medical equipment and its accessories to be in good condition, in working order and free from defects to the extend such equipment do not comply with specifications, under normal use for the warranty period. The scope of warranty covers to its maximum extent permitted by applicable law.
- During warranty, tenderer must rectify issues arise from any mechanical, technical or software faulty as soon as it is reported including any cost of breakdown repairs, replacement of parts including one time x-ray tube replacement.
- **Exchange warranty**; Providing replacement units or OEM parts for:
    A. Warranty against defects – Manufacturing defects or Equipment malfunction resulted from mechanical, electrical or software failure during Commissioning or within the first six (6) months of use
    B. Faulty workmanship or unsatisfactory condition during delivery or commissioning
    C. If a unit or accessory is deemed used item or refurbished item (not a new unit) by the user and BME Unit.
- **One time yearly Planned Preventive Maintenance (PPM)** according to Manufacturer's Preventive Maintenance Guideline, including one-time replacements of PM Kits, batteries and any relevant parts to prolong equipment lifespan.

EXCLUSION FROM WARRANTY

MOH understand that the following circumstances are not covered in the warranty and Tenderer may quote for repair and subject to MOH approval:

- Unauthorized modifications - an alteration or repair by anyone other than the Manufacturer or Authorized agent during warranty period.
- Accidental damage or problems caused by negligence or mishandling, subject to appropriate justification by both parties.
- Vandalism and Natural disasters
- Normal wear and tear

Tenderer may also attach a list of terms to be excluded from the warranty for MOH consideration and notification.

COMPREHENSIVE MAINTENANCE SERVICE Tenderer must provide a comprehensive maintenance during the warranty period. The scope for **Comprehensive Maintenance Service** consists of: **A. Inspection Maintenance (IM)** **B. Corrective Maintenance (CM) and** **C. Planned Preventive maintenance (PPM)** **D. Breakdown call**	**TENDERER ACKNOWLEDGMENT ON WARRANTY UNDERTAKING FORM PAGE 1 AND PAGE 2** **COMPANY CHOP AND SIGNATURE**

SECTION 4 – WARRANTY UNDERTAKING FORM (PAGE 2)

A. Inspection Maintenance (IM)

- Must be conducted every six (6) months starting from commissioning date.
- Issuance of IM Report to End User and Biomedical Engineering Unit of respective Facilities (BME)
- Physical hardware checks on main unit/system and all supplied accessories
- System, Software and Application check-up – Update to latest version when available
- Performance and Functional testing
- Servicing/Cleaning of dust

B. Corrective Maintenance (CM):

- During warranty, tenderer must rectify issues arise from any mechanical, technical or software faulty as soon as it is reported including any cost of breakdown repairs.
- Repair and replacement of parts with new, quality, and compatible parts within thirty (30) days after receipt of reported problem by BME.
- Post repair tests with reports to ensure Electrical Safety Test, Performance Test and Functional Test is conducted.
- **One-time replacement of one unit of each Flat Panel Detector (FPD) type for each location. [35x43 and 24x30cm FDP]**

C. Planned Preventive Maintenance (PPM):

- **One time yearly Planned Preventive Maintenance (PPM)** according to Manufacturer's Preventive Maintenance Guideline, including replacements of PM Kits, any relevant parts to prolong equipment lifespan AND **one-time battery replacement during the 6th or 7th year, unless required earlier.**
- Provide Maintenance Due Date stickers after each PPM or booklet for easy monitoring

D. Breakdown Call

- Onsite response to assess and rectify any breakdown call within a maximum of two (2) hours after receipt of reported problem by BME Unit preferably during office hours, else after office hours or public holidays.
  - ✓ Deduction demerit shall be imposed if the Company fails to provide onsite response within the time above and the deduction amount shall be based on the frequency of event times certain rate to be formulated later.
- Downtime: Not more than 24 hours after receipt of reported problem by BME unit
- If Downtime is expected to be more than 24 hours, Tenderer must notify formally to BME unit through email or letter immediately indicating the reason of delay with estimation of:
  A. Estimated time of parts to arrive and
  B. Expected no of days for repair completion
- **The downtime permitted after the first 24 hours with notification, should not be more than 72 working hours or else, a penalty fee of BND$50 per day per unit will be charge after the 72th downtime hour.**

SITE VISIT FORM
TENDER REFERENCE NO.: KK/166/2026/HTD **PROVISIONAL TURNKEY PROJECT OF GENERAL RADIOGRAPHY SYSTEM FOR RADIOLOGY UNIT, PENGIRAN ISTERI HAJAH MARIAM (PIHM) HOSPITAL**
▪ This is to confirm and verify that the company stated below has visited and understood the specification stated in the tender above.
▪ The site visit **is MANDATORY** for every participating tenderer.
▪ Without the site visit, the tenderer shall be considered as **NON-COMPLIANCE.**

	COMPANY DETAILS	
a.	**Name of company**	
b.	**Name of engineer/technician**	
c.	**Designation**	
d.	**Date of visit**	
e.	**Company stamp**	

	VERIFICATION BY BIOMEDICAL ENGINEERS	
a.	**Name**	
b.	**Designation**	
c.	**Date**	
d.	**Stamp**	

	VERIFICATION BY RADIOLOGY DEPARTMENT	
a.	**Name**	
b.	**Designation**	
c.	**Date**	
d.	**Stamp**	

NO.	TERMS AND CONDITIONS	VENDOR'S OFFER (PLEASE STATE)
1	Tenderer must be registered with the Ministry of Health.	
2	**TENDER FORM should be filled** completely including the **USER REQUIREMENT FORM** (if available). Submission of incomplete form **MAY** cause **DISQUALIFICATION OF TENDER.**	
3	Each tenderer is allowed to quote **ONE BRAND WITH ONE PRICE ONLY** for each item. Submission of more than one brand and price will cause **DISQUALIFICATION OF TENDER.**	
4	All consumables supplied throughout this tender shall have a minimum expiry date of **twelve (12) months / on delivery** (if applicable). Should the consumables be urgently needed, provision of consumables with expiry date of less than twelve (12) months should be first agreed by the User before delivery is made (if applicable).	
5	**Brochures / catalogues should be submitted / attached with tender document.**	
6	**Any room renovation which may be required, it is mandatory to conduct site visit (if applicable)**	
7	**Samples should be submitted together with tender or within fourteen (14 days) of the tender closing dates (if applicable).**	
8	**DELIVERY PERIOD**: (Please state) Not More Than **90 days** upon confirmation	
9	**PRICE VALIDITY:** The quotation shall remain valid for **12 MONTHS** from the final date for the submission of the quotation and no supplier may withdraw his/her quotation within that period. The Government reserves the right to extend this period if deemed necessary provided that such extension to the quotation validity period shall have written consent of the supplier(s).	
10	The equipment supplied must be **newly manufactured, unused, and in its original, sealed packaging**. The equipment must not be previously owned, refurbished, or reconditioned in any form. **During delivery, the vendor is required to provide proof of manufacture date confirming the equipment is new.**	

1. We offer and undertake on your acceptance of our Tender to provide the above mentioned services in accordance with your Invitation To Tender.

2. Our Tender is fully consistent with and does no contradict or derogate from anything in your Invitation To Tender. We have not qualified or changed any of the provisions of your Invitation To Tender.

3. OUR OFFER IS VALID FOR **TWELVE (12)** CALENDAR MONTHS FROM THE TENDER CLOSING DATE.

4. When requested by you, we shall extend the validity of this offer.

5. We further undertake to give you any further information which you may require.

Dated this_____day of_____, _____

Tenderer's official stamp

_____

Signature of authorised officer of Tenderer
Name:
Designation: