



An ISO 9001
Company

Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

CAPITAL EQUIPMENT/ MATERIALS MANAGEMENT

ENQUIRY

NOTICE INVITING TENDER

Phone: +91 431 257 70 49

Fax : +91 431 252 07 19

Email : csguna@bheltry.co.in

Web : www.bhel.com

TWO PART BID

Tender to be submitted in two parts.

**Enquiry
Number:**

2621000054

**Enquiry
Date:**

08.05.2010

**Due date for submission
of quotation:**

08.06.2010

You are requested to quote the Enquiry number date and due date in all your correspondence. This is only a request for quotation and not an order.

Please note that under any circumstances both **delayed offer and **late offers** will not be considered. Hence vendors are requested to ensure that the offer is reaching physically our office before 14.00 hrs on the Date of tender opening.**

Item	Description	Quantity	Delivery (Item required at BHEL on)
10	Supply and Installation of Security Surveillance System Closed Circuit TV (CCTV) as per the technical specification, general guidelines instructions & commercial conditions applicable (to be downloaded from web site www.bhel.com or http://tenders.gov.in)	11 sets	30.06.2010

BHEL commercial terms & conditions with Price Bid and Bank Guarantee formats can be downloaded from BHEL web site <http://www.bhel.com> or from the Government tender website <http://tenders.gov.in> (public sector units > Bharat Heavy Electricals Limited page) under Enquiry reference "2621000054".

Tenders should reach us before 14:00 hours on the due date
Tenders will be opened at 14:30 hours on the due date
Tenders would be opened in presence of the tenderers who have submitted their offers and who may like to be present

Yours faithfully,
For BHARAT HEAVY ELECTRICALS LIMITED

Sr.Manager / MM / Capital Equipment

SPECIFICATION FOR 36X IP PTZ SPEED DOME CAMERA

Application of IP Surveillance :

It is to provide security system that gives to View, monitor and record video over an IP (Internet protocol) base computer network. It includes network camera, IP network, network switch, LIU, PC, Server, Power backup, LCD Monitor for viewing, Managing and storing Video, Software, Control unit Cabling and fixtures etc.

SL.NO	DESCRIPTION	SPECIFICATION	QUANTITY	BIDDER'S OFFER (With Complete Technical Details)
1.0	Camera:(36x PTZ Dome Speed Camera)			
1.1	Description:	36x IP PTZ Speed Dome Camera	9 Nos.	
1.2	Model	Vendor should specify		
1.3	Plane of installation	As per enclosed sketch.		
1.4	Type	Out door, Day/Night functionality to cover specified area by enabling in pan, tilt and zoom (PTZ) functions with motion detection, allowing user to monitor only areas where there is movement and to track moving objects automatically within the camera's field of view.		
1.5	Kind of image want to capture	Full over view image for capturing any object crossing over the compound walls. Automatic optical/Digital zooming as per pre-fixed time intervals.		
1.6	Pan covering area	360 Degree, and a tilt of 180 Degree. (Vendor to ensure)		
1.7	Maximum optical & Digital Zooming range	Vendor to specify		
1.8	PTZ control command	To be send through IP Network, Vendor to specify		
1.9	Image sensor technology	CCD (Charge –coupled device) for good light sensitive		
1.10	Size of the image sensor	Vendor to specify		
1.11	Progressive scan technology	To be provided		
1.12	Type of lens	Vendor to specify		
1.13	Camera's light sensitivity	Vendor to specify		
1.14	Type of video compression, Video resolution, Frames/second I/O port, Video motion detection, active tampering alarm, Power consumption and Image resolution.	Vendor to specify		
1.15	Access level of cameras	To be provided for Administrator, Operator and viewer.		
1.16	Environment protection	IP 66 rated protection against dust & heavy rain.		
1.17	Viewing and recording needs	Day and night for all days.		
1.18	Mounting	To be mounted on the 8 Mtr. GI Pole	9 Nos.	

SL.NO	DESCRIPTION	SPECIFICATION	QUANTITY	BIDDER'S OFFER (With Complete Technical Details)
2.0	<u>Camera:(IP Fixed Dome Camera)</u>			
2.1	Description:	IP Fixed Dome Camera	2 Nos.	
2.2	Plane of installation	As per enclosed sketch.		
2.3	Type	Out door at gate. Light will be available during night, functionality to cover fixed direction for capturing vehicle and person movements and close up views of person / Vehicle for Identification		
2.4	Covering area	20 Meters (Minimum) Vendor to ensure.		
2.5	Image sensor technology	CCD (Charge –coupled device) for good light sensitive		
2.6	Size of the image sensor	Vendor to specify		
2.7	Progressive scan technology	To be provided		
2.8	Type of lens	Vendor to specify		
2.9	Camera's light sensitivity	Vendor to specify (Light will be available during night)		
2.10	For Type of video compression, Video resolution, Frames/second, I/O port, Video motion detection, active tampering alarm, Power consumption and Image resolution.	Vendor to specify		
2.11	Access level of cameras	To be provided for Administrator, Operator and viewer		
2.12	Environment protection	IP 66 rated protection against dust & heavy rain.		
3.0	<u>Monitoring & Viewing:</u>			
3.1	Different ways to view live images	Split view, Single camera view ,Full screen and automatically switches to all of the camera		
3.2	Control of function of the camera	By Clicking on the key pad and Using mouse. Vendor to ensure		

SL.NO	DESCRIPTION	SPECIFICATION	QUANTITY	BIDDER'S OFFER (With Complete Technical Details)
4.0	<u>Control Unit :</u>		1 Set	
4.1	Description	PC Based centralized control unit		
	Model	Vendor to specify		
4.2	For Hardware, Network video recording server, Storage media PC, Server, Mouse, Key board and Windows Latest operating system and Mounting cabinet, Table and seating.	Vendor to specify		
4.3	Soft ware	The licensed software should be supplied with its product key. The software should support & compatible of multi branded cameras for viewing, recording and controlling. Also the software should support future versions of Windows Operating Systems. Internet option should be provided for future requirements.		
5.0	<u>LCD TV Monitor</u>	32 Inch, colour monitor with wall mounting facility.	1 No.	
6.0	<u>UPS to meet connected load with 3Hrs Power Backup:</u>		1 Set	
6.1	Power input	230 V AC/50 Hz. Vendor to specify for locations of UPS, capacity, numbers Housing etc.		
6.2	Connected load	Vendor to specify along with design calculation to meet the system .		
7.0	<u>Recording & Storing Unit</u>	Vendor has to specify for RECORDING & STORING UNIT with model, type, capacity Features, mounting, Accessories required, soft ware etc. to be given in detail. Features, mounting, Accessories required, soft ware etc. to be given in detail. Option :- Vendor has to specify for storage capacity for one month.	1 Set	
8.0	<u>CABLE ,CONDUITS & ACCESSORIES</u>	OFC cable for long distance and CAT – 6 cable to provided for short distance. Vendor to specify for Model, make, size, single core/Multi core, suitable conduit, accessories for wiring at the under ground, wall & Post. Multicore fibre optic cable, suitable for outdoor deployment in Ethernet (up to 10Gbps) data network. The fibres shall be in a central tube filled with water-blocking compound and with standard colour code index. The cable shall have steel armour to provide rodent and lightning protection. The outer sheath shall be water-resistant, UV-resistant and Fungus-resistant and shall provide maximum environmental protection. The cable shall conform to TIA / EIA-568B standard. The minimum bending radius of the cable shall be 20 x cable diameter under load.	1 Lot	

SL.NO	DESCRIPTION	SPECIFICATION	QUANTITY	BIDDER'S OFFER (With Complete Technical Details)
9.0	<u>Power Cable (Copper Flexible)</u>	Vendor has to specify type required size & length for whole system.	1 Lot	
10.0	<u>Single line diagram of proposed system</u>	Vendor to provide		
11.0	<u>Cabling between camera to Control :</u>		<u>Approx. distance in meters</u>	
11.1	Control room to Camera location - 1	OFC	400 Mtrs.	
11.2	Control room to Camera location - 2	OFC	375 Mtrs.	
11.3	Control room to Camera location - 3	CAT-6	20 Mtrs.	
11.4	Control room to Camera location - 4	OFC	300 Mtrs.	
11.5	Control room to Camera location - 5	OFC	320 Mtrs.	
11.6	Control room to Camera location - 6	OFC	640 Mtrs.	
11.7	Control room to LIU Box location - 11	OFC	650 Mtrs.	
11.8	LIU Box location - 11 to Camera location - 7	OFC	420 Mtrs.	
11.9	LIU Box location - 11 to Camera location - 8	OFC	140 Mtrs.	
11.10	LIU Box location - 11 to Camera location - 9	OFC	140 Mtrs.	
11.11	LIU Box location - 11 to Camera location - 10	OFC	420 Mtrs.	
11.12	Control room to Camera location - 12	CAT-6	50 Mtrs.	

SL.NO	DESCRIPTION	SPECIFICATION	QUANTITY	BIDDER'S OFFER (With Complete Technical Details)
12.0	<u>General System Overview :</u>			
12.1		System to operate Day & Night in Auto and manual mode and Playback all video records simultaneously.		
12.2		Incase of power failure ,system in central control room should work on its power backup mode for Minimum 3 Hrs.		
12.3		All equipments should be capable of 24 Hrs/day, 7days/week unmonitored surveillance recoding with remote viewing and control		
12.4		Search video records by camera, date, event type and time segments include advanced motion search, missing and left object search		
12.5		Backup facility for video recordings manually or by schedule and directly to CD/DVD		
13.0	<u>IP Network Management System :</u>		1 Set	
13.1		Digital video surveillance control software should be capable to display & manage the entire surveillance system. It should be capable supporting devices such as multi branded cameras, media-consider, PTZ controller, LIU and backup device etc.		
13.2		The software should have in-built facility to store configuration cameras.		
13.3		The software should support spilt screen display mode, scroll mode on the PC monitor and preview monitor as per our requirement.		
13.4		The software should be able to control all cameras ie.PTZ control, Iris control auto/manual focus, colour balance of camera, Selection of presets, Video tour selection etc.		
13.5		The software should be same make of camera.		
13.6		The software should generate reports of stored device configuration.		
13.7		The control software is required to provide alarm & alarm log.		
13.8		The software should have user access authority configurable on par device or per device group basis.		
13.9		It should have facility to request the access of any camera and also control the camera for a specific period.		
13.10		The administrator should be able to add, edit & delete user with rights.		
13.11		It should be possible to view ability/rights of each user or the cameras which can be viewed and controlled as per the permission assigned by the administrator.		
13.12		It should have recording modes for continuous, manual or programmed on dates, time and camera wise.		
13.13		It should provide on screen controls for remote operation of all cameras, it should have the facility for scheduled recording.		
13.14		To be provided programmable recording for motion detection.		
13.15		System must be able to support video motion detection algorithms to detect and track object.		
13.16		The CCTV application should allow retrieval of data instantaneously or any date/time interval chosen through search functionality of the application software, in case data is older than 7 days and available, the retrieval should be possible at a later date.		

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14.0	SCOPE OF WORK :			
14.1		All the 36x IP PTZ Speed dome cameras are mounted on the top of 8meter GI poles, near the compound wall (See the sketch).Street light will be available near the cameras during night time.		
14.2		All the IP Fixed dome cameras are mounted on the wall of gates to monitor vehicle movements and Person movements.		
14.3		3-Phase 415V(± 10%), 50 Hz(± 3%) , and Single Phase 230V(± 10%), 50 Hz(± 3%) power for equipments supply will be provided by BHEL.		
14.4		Supply and laying of all the Cables on the wall/pole/ground (Power, Data and Video) will be under the Supplier's Scope. The cable shall be laid underground at a depth of 0.8metre, in 1.5" diameter HDPE (High density polyethylene) pipe. Each run of cable shall be run through separate HDPE pipe. The pipes shall be covered with half round concrete trough of 4" dia, and the soil shall be refilled. Cable route markers shall be used at intervals of 50 meters and at turning points. Underground cable laying involves laying in soft soil, hard soil, road and along cable trenches. Road cutting should be refilled and finished by cementing.		
14.5		Supply and Erecting 8 Mtr .height of GI poles to mount the cameras	9 Nos.	
14.6		Supplier should submit the catalogues and technical details for all the items for pre-evaluation.		
14.7		Erection of entire system should be carried out with the guidance of Area Maintenance Executives.		
14.8		Supply and installation of required capacity of UPS(with minimum 3 hrs backup) are under supplier's scope.		
14.9		Comprehensive Annual Maintenance Contract: The Vendor shall provide two year warranty and shall quote for the Comprehensive AMC.		
14.10		Type of Alert and options should be mentioned by the vendor. BHEL is required e-mail alert for video loss and motion detection.		
14.11		The 'Maintenance Manual' to be supplied by the Vendor (3 sets) shall include: a) Methods of tracing and rectifying common service troubles. b) Method of dismantling and re-assembling of various components and parts. c) A complete comprehensive parts list with exploded views of the different Assemblies & Sub-assemblies		
14.12		Details of all critical spares should be furnished. Supplier's address to be contacted in case of procurement of those spares should also be given.		
14.13		Similar work (Minimum value Rs. 40 Lacs. and above) experience certificate/ work orders preferably in outdoor applications and or in Government PSU firms to be submitted.		
14.14		Manufacturer products shall have quality system in compliance with the UL/FTC Quality system is preferable .		
14.15		After commissioning, the supplier should confirm the performance of the whole system for at least 3 days both in day and night for consistency.		
14.16		Vendor should give their offers in two-bid system as technical and price bids.		
14.17		Camera make preference will be SONY/ HONEYWELL / PELCO/BOSH /AXIS only.		

SL.NO	DESCRIPTION	SPECIFICATION	QUANTITY	BIDDER'S OFFER (With Complete Technical Details)
14.18		Vendor should attach authorization certificate from Camera manufactures for supply and support .		
14.19		Vendors are advised to visit the site before quoting for the proposed system.		

