

(Doc no 416/NTPC-5/CCTV Rev 00)

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Refer CI 4 Pg 14 of 234

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Refer CI 3.0 Pg 12 of 234

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Refer CI 8.5 Pg 19 of 234

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Furniture and Printer mentioned in technical specification for server, workstation etc is NOT in bidder's scope of supply and the same shall be supplied separately by BHEL.

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- a) Flexible GI conduit: M/s Bansal Laboratories and Equipment Pvt. Ltd., Bhopal to be considered as approve make for all five projects of this tender.
- b) Make of Wireless equipment: In addition to makes indicated, bidder can offer other makes which have been supplied and commissioned in a power or process industry.
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Refer Annexure-8 of Technical Specification

The Bill of material has been revised and all changes w.r.t BOM in technical specification has been highlighted in RED. Bidders to quote for this revised BOM.

PREPARED BY: AMIT KUMAR SHARMA



CHECKED & APPROVED BY:



ITEM	UNIT	Nabinagar		Karanpura		Gadarwara		TANDA		Unchahar		Total	
		QTY		QTY		QTY		QTY		QTY		QTY	
VMS software of adequate capacity including spare capacity as mentioned in technical specification.	SET	1		1		1		1		1		5	
Video Content Analytics (VCA) Software of adequate capacity including spare capacity as mentioned in technical specification.	SET	1		1		1		1		1		5	
Camera/Database Server (CDBS) - one set for each zone. (One set comprises of one primary and one standby server)	SET	6		6		5		6		4		27	
a) Camera View Work Station (CMWS) with monitor, keyboard and Joystick	NOS	14		12		13		18		12		69	
b) Camera View Work Station (CMWS) with Joystick & keyboard (without monitor)	NOS	6		6		5		5		4		26	
22 Inch LED Backlit Monitor and UPS for each set of camera/database server	NOS	12		12		10		12		8		54	
19" LCD Monitor KVM Console with 8-Port Switch.	NOS	2		2		2		2		2		10	
PTZ Dome Color Camera SD	NOS	250		224		203		190		150		1017	
PTZ Dome Color Camera HD	NOS	0		0		0		28		0		28	
PTZ SD Explosion proof camera	NOS	7		6		7		7		6		33	
FIXED Colour Camera SD	NOS	2		10		2		0		0		14	
FIXED Colour Camera HD	NOS	0		0		0		2		0		2	
Alarm I/O Device (For CONTACTS as mentioned in specification)	LOT	1		1		1		1		1		5	
Type-I Switch (Core Switch)- Layer-III Switch for interconnection to station LAN	NOS	1		1		1		1		1		5	
Type-II Switch(Distribution Switch with suitable no of each types of ports required for each zone)	SET	6		6		5		6		4		27	
Type-III Switch(Edge Switch)	NOS	50		55		40		50		40		235	
2/4 Pair Control Cable for alarms	MTRS	2400		2400		2400		2400		2400		12000	
Cat 5e Unshielded Twisted Pair Cable (UTP) each box of 305mtrs	Box	37		34		30		0		23		124	
3C 1.5sqmm armoured power cable	MTRS	25000		25000		25000		25000		15000		115000	
4F armoured SM FO cable	MTRS	30000		30000		25000		0		22000		107000	
Wireless network for distant plant incl hardware/software/all accessories (for cameras at MakeUp Water system only for Gadarwara, Nabinagar & Karanpura projects. Refer schematic diagram of Tanda project for location of wireless cameras)	SET	1		1		1		1				4	
All Cat 5e cable accessories like UTP Patch Cable, patch panel, etc for completion of termination of all CAT5e cable for entire CCTV system	LOT	1		1		1		1		1		5	
All fiber optic accessories like Fiber Patch Cable (Duplex for both UPT as well as Fiber ports), LIU (of suitable port at server ends, camera ends, looping etc), Pigtails, all other accessories required for completion of the splicing and termination for entire CCTV system	LOT	1		1		1		1		1		5	
Pair of Single Mode Media Converters -10/100 MBPS speed, suitable for approx 5 KM distance, Power supply: 230 VAC for connecting cameras	NOS	70		60		50		50		40		270	

	ITEM	UNIT	Nabinagar QTY	Karanpura QTY	Gadarwara QTY	TANDA QTY	Unchahar QTY	Total QTY
	Single Mode Media Converters -1000 MBPS speed, suitable for approx 5 KM distance, Power supply: 230 VAC for connecting workstation Pair of media converter	NOS	50	25	30	30	25	160
	Industrial Panel	LOT	1	1	1	1	1	5
	Industrial Wall Mount Enclosure	LOT	1	1	1	1	1	5
	Cable Tray with necessary mounting accessories	MTRS	10000	10000	8000	7000	6000	41000
	1 inch Flexible GI Conduit with necessary mounting accessories	MTRS	750	750	750	750	750	3750
	HDPE 50mm ISI, with bends, coupler and other mounting accessories	MTRS	8000	8000	6000	6000	4500	32500
	1KVA Mini UPS with SNMP (network interface) Module for Interface	NOS	15	15	10	10	10	60
	NMS software (if required for the system offered)	lot	1	1	1	1	1	5
	Symantec End Point protection 12.1 compatible to Windows server 2012 R2 Std. & Windows 8.	SET	1	1	1	1	1	5
	All types of licence for Camera View Work Stations (CMWS) with lifetime validity	NOS	32	22	30	32	22	138
	Anti-Virus software, for all the server/viewing stations with lifetime support	SET	1	1	1	1	1	5
	LVS interface system (refer technical spec for details)	lot	1	1	1	1	1	5
	Fringe electrical items such as Terminal Blocks(TBs), Miniature Circuit Breakers(MCB), cable coverings, cable managers, panel lamp (for Panel & Enclosure) and RJ45 connectors and crimping tool etc.	LOT	1	1	1	1	1	5
	Fringe mechanical items such as G / C channels and DIN rail, junction boxes, cable glands, mounting brackets bolts & nuts etc. for fiber accessories, Panel, Enclosure & camera mounting	LOT	1	1	1	1	1	5
	Camera poles made of M S / G I with standard heights of 12/15 feet tall. Poles shall be corrosion resistant, durable finish, high tensile steel and ready to erect.	NOS	20	20	15	15	15	85
	Any other item mentioned in technical specification or required for functional completion of CCTV system as per technical specification and but specifically mentioned above.	Lot	1	1	1	1	1	5
	Container of suitable size and quantity as required for each project with lock and key for storing CCTV components except cable and poles	Lot	1	1	1	1	1	5
SERVICES:								
	Erection, Installation and commissioning of full CCTV package as per services scope mentioned in technical specification. Lumpsum charge for total Erection & Commissioning service for the full packages to be quoted.	lot	1	1	1	1	1	5
	Training charges FOR 4 MANDAYS	lot	1	1	1	1	1	5

			Nabinagar	Karanpura	Gadarwara	TANDA	Unchahar	Total
	ITEM	UNIT	QTY	QTY	QTY	QTY	QTY	QTY
MANDATORY SPARES								
	PTZ Camera SD (10% or min 2nos)	NOS	25	23	21	19	15	103
	mounting accessories, power supply box, housing etc	NOS	25	23	21	19	15	103
	PTZ Camera HD (10% or min 2nos)	NOS	0	0	0	3	0	3
	mounting accessories, power supply box, housing etc	NOS	0	0	0	3	0	3
	PTZ SD Explosion proof camera (10% or min 2nos)	NOS	2	2	2	2	2	10
	mounting accessories, power supply box, housing etc	NOS	2	2	2	2	2	10
	Fixed Camera SD (10% or min 2nos)	NOS	2	2	2	0	0	6
	mounting accessories, power supply box, housing etc	NOS	2	2	2	0	0	6
	Fixed Camera HD (10% or min 2nos)	NOS	0	0	0	2	0	2
	mounting accessories, power supply box, housing etc	NOS	0	0	0	2	0	2
	Motorised Zoom lens for camera (10%) as applicable	NOS	1	1	1	1	1	5
	Full function Keyboard (1no of each type)	NOS	1	1	1	1	1	5
	Joy Stick (1no of each type)	NOS	1	1	1	1	1	5
	Client workstation With Monitor (1no of each type)	NOS	1	1	1	1	1	5
	Type-I Switch (Core Switch) - 10% of each type	NOS	1	1	1	1	1	5
	Type-II Switch(Distribution Switch) - 10% of each type	NOS	1	1	1	1	4	8
	Type-III Switch(Edge Switch) - 10% of each type	NOS	5	6	4	5	4	24
	Camera / Database Server (1no of each type)	NOS	1	1	1	1	1	5
	Mechanism motors - 10% of each type	LOT	1	1	1	1	1	5
	Media Converters- 10% of each type	NOS	1	1	1	1	1	5
	Bus coupler of each type and make (20% or min 2nos)	LOT	0	1	0	0	0	1
	Interface cards of each type and make (20% or min 2nos)	LOT	0	1	0	0	0	1
	Other communication devices (20% or min 2nos)	LOT	0	1	0	0	0	1

Corrigendum / Clarification for CCTV system's technical specification

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Other General clarifications on technical specification

1. If all technical and function requirement of technical specification are met if installing NMS in VMS server, then separate NMS server need not be offered.
2. Type-II switch being offered for various zones of each project should meet all technical & functional requirements of the CCTV system of respective projects. The number of port (Cu and FO) in each switch and quantity of the switch in each zone shall be suitable and sufficient for that zone. Bidder to note that as per schematic diagram of CCTV for each project (Refer Annexure-4 of technical specification), switch to switch connectivity shall be through FO cable using SFP ports.
3. Sizing calculation for storage of video must be provided for each zone in technical bid.
4. Housing with wiper for camera shall be of same make as of camera or compatible make earlier supplied in NTPC projects or earlier supplied & commissioned in power or process industry.
5. Due to different quantity of each zone, the storage capacity will be different for each zone. This may result in offer & supply of different series of same make server. For mandatory spares, the model with maximum storage capacity offered in each project should be offered.
6. All wireless equipment to be offered should be suitable for 25-30 Km operation.
7. MCB with fuse to be considered for all component mounted inside JB.
8. Storage capacity in server (ie hardware for CCTV system) in each zone should include spare requirement mentioned for each project.
9. If all alarms I/O can be connected to respective switch of that zone, then separate alarm I/O switch need not be offered. Else bidder to offer separate alarm I/O switch.
10. Flexible GI or HDPE Conduit offered shall be used for laying both CAT-5 & Power cable combination or FO & power cable combination in a conduit. Inner dimension of conduits offered shall be suitable for this requirement.

All bidder should compulsorily submit following check list for documents submitted for Pre-Qualification Requirements:

Clause no	Pre-Qualification Criteria	Supporting Document	Whether document uploaded
1.0	The bidder should have supplied and commissioned CCTV system during last 7 years as on bid submission due date of this tender in a power plant / cement plant / petroleum refinery / steel plants / coal mine / other process industry / large commercial establishments which involves cameras in outdoor locations	CI 1.i Purchase order copies to be uploaded as file named Annexure-I CI 1.ii Commissioning report/MOM signed by user to be uploaded as file named Annexure-II CI 1.iii Performance certificates, if available, to be uploaded as file named Annexure-III CI 1.iv List of past supplies in tabular form to be uploaded as file named Annexure-IV CI 1.v Authorisation letter to be uploaded as file named Annexure-V	Yes / No
2.0	OEM of camera based outside India who are submitting offer for this tender, shall have authorized representatives in India for support related to Documentation, technical support, troubleshooting, Erection, Commissioning and other co-ordination work. Letter from OEM detailing Indian representative details should be provided. OEM to also furnish an undertaking letter that in case of change in Indian representative / agent, OEM shall continue to support for commissioning and troubleshooting the supplies made through this tender.	Document to be uploaded as file named Annexure- VI	Yes / No
3.0	System Integrators participating on behalf of OEM of cameras of CCTV system should submit following documents: i) Bidder must furnish letter issued by camera OEM confirming to provide service and spare support for at least 5 years for the offered solution, after supply of the system.	CI 3.i To be uploaded as file named Annexure-VII CI 3.ii To be uploaded as file named Annexure-VIII	Yes / No

4.0	OEM of camera offered by bidder not mentioned as “approved” in section-C Annexure-7, shall submit following documents to meet PQR requirements: i) PTR requirement of combination of camera and VMS software is mentioned at section-C cl 7. The bidder shall submit following supporting documents: unpriced PO copy, detailed BOM / Datasheet clearly indicating the make/model/qty of camera and make of VMS software, contact details of end user, commissioning certificate/MOM/performance certificate clearly indicating date of commissioning. ii) The camera OEM shall submit filled up NTPC’s sub-supplier approval form provided Section-C Annexure-9 of this specification. iii) Technical compliance to all technical specification of camera mentioned in section-C iv) If the camera OEM is based outside India, then the OEM shall have authorised service centre in India for undertaking repair of Camera. List of such service centre(s) must be submitted along with supporting documents like copies of service tax or sales tax or VAT registration or property tax receipt etc	CI 4.i Relevant documents to be uploaded as file named Annexure-IX CI 4.ii Relevant documents to be uploaded as file named Annexure-X CI 4.iii Relevant documents to be uploaded as file named Annexure-XI CI 4.iv Relevant documents to be uploaded as file named Annexure-XII	Yes / No
5.0	Bidder should have a clean track record, i.e. the bidder should not be under hold or blacklist by any of the BHEL units / any Govt of India PSU / Govt of India as on bid submission date. To this effect, a declaration should be given by the bidder.	Relevant document to be uploaded as file named Annexure- XIII	Yes / No
6.0	The Bidder’s Average Annual financial turnover during the last 3 financial year, ending 31st March 2016 should be at least 8 crore INR per year. Certificate from bankers/chartered accountant/IT return in this regard should be submitted along with the offer.	Relevant document to be uploaded as file named Annexure- XIV	Yes / No

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2.0	OEM of camera based outside India who are submitting offer for this tender, shall have authorized representatives in India for support related to Documentation, technical support, troubleshooting, Erection, Commissioning and other co-ordination work. Letter from OEM detailing Indian representative details should be provided. OEM to also furnish an undertaking letter that in case of change in Indian representative / agent, OEM shall continue to support for commissioning and troubleshooting the supplies made through this tender.	Document to be uploaded as file named Annexure- VI	Yes / No
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4.0	OEM of camera offered by bidder not mentioned as “approved” in section-C Annexure-7, shall submit following documents to meet PQR requirements: i) PTR requirement of combination of camera and VMS software is mentioned at section-C cl 7. The bidder shall submit following supporting documents: unpriced PO copy, detailed BOM / Datasheet clearly indicating the make/model/qty of camera and make of VMS software, contact details of end user, commissioning certificate/MOM/performance certificate clearly indicating date of commissioning. ii) The camera OEM shall submit filled up NTPC’s sub-supplier approval form provided Section-C Annexure-9 of this specification. iii) Technical compliance to all technical specification of camera mentioned in section-C iv) If the camera OEM is based outside India, then the OEM shall have authorised service centre in India for undertaking repair of Camera. List of such service centre(s) must be submitted along with supporting documents like copies of service tax or sales tax or VAT registration or property tax receipt etc	CI 4.i Relevant documents to be uploaded as file named Annexure-IX CI 4.ii Relevant documents to be uploaded as file named Annexure-X CI 4.iii Relevant documents to be uploaded as file named Annexure-XI CI 4.iv Relevant documents to be uploaded as file named Annexure-XII	Yes / No
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