HYDERABAD CITY POLICE COMMISSIONERATE

Notice Inviting Application for Empanelment of System Integrators and Rate Contract for Supply, Installation, Testing, Commissioning, Co-Warranty & Post-Warranty Support & Maintenance of IP based High Definition CCTV Video Surveillance System for the Hyderabad & Cyberabad City Limits QUERIES RECEIVED AND CLARIFICATIONS ISSUED TO PROSPECTIVE SOLUTION PROVIDERS

Modified Date: July 1, 2015

#	Page	Clause as per Eol		Clarifications requested	Clarification Iss	sued
	No. &					
	Clause No.					
1	Pg. 1	MILESTONE	DATE	We earnestly request you to give atleast	MILESTONE	DATE
	Milesto ne	Last date & time for submission of bid proposal	July 17, 2015 @	one month time from now to prepare and submit the documents	Last date & time for submission of bid	Aug 3, 2015 @ 1700 hrs
	Table	in tender box Opening the Bid Proposal at	1700 hrs	The time being to bidders for submission	proposal in tender box	Aug 2, 2015 @
		Hyd. Police commissionerate	July 17, 2015 @ 1730 hrs	of proposal is only 6 working days from the date of issue of addendum. This also	Opening the Bid Proposal at Hyd. Police commissionerate	Aug 3, 2015 @ 1730 hrs
		Evaluation of Tech. Demo start date	July 21, 2015	includes dropping of tender documents in the tender box. Considering the	Evaluation of Tech. Demo start date	Aug 5, 2015
		Tech. demo end date	July 24, 2015	documentation, consortium formation, R&R finalisation and proposal preparation	Tech. demo end date Commercial proposal	Aug 10, 2015 Aug 12, 2015 @
		Commercial proposal review & finalization	July 27, 2015	please provide atleast 3 weeks time from the date of issue of addendum The time	review & finalization Publish Empaneled SI &	1500 hrs Announced
		Publish Empaneled SI & Rate Contract	July 27, 2015	being to bidders for submission of proposal is only 6 working days from the date of issue of addendum. This also	Rate Contract	later
				includes dropping of tender documents in the tender box. Considering the documentation, consortium formation, R&R finalisation and proposal preparation please provide atleast 3 weeks time from the date of issue of addendum		
2	Pg. 7 2	The HCPC release this notice inv Application for Empanelment of Integrators and Rate Contract" t provide the CCTV System involvi	System	Does it mean that the rate contract would be applicable for complete scope as mentioned or separate rate for supply and rest?	Rate Contract is for comple	te scope.
		supply, installation, testing, commissioning, support and maintenance		Who would enter into contract with the SI- HCPC or individual communities?	SI and individual communit	ies
		This notice is issued in the inters community; HCPC plays a mento		Who will publish the exact requirement - HCPC or Communities? Also who would make the payments?	 It is joint effort betwee local police station and SI Community makes the pation 	
3	Pg. 8 4 (1)	The Bidder (Prime Bidder in case consortium maximum of two pa must be a registered company in India competent authority. The bidde	rties) a with a	In case of Consortium can we show sale of both the parties together.	Yes. It will be considered project.	full value of the
		be operating in Integrated Security domain and completed minimum as	m 3 years			
		on last financial year ending Ma 2015. The hidder must have experience				
		The bidder must have experience minimum 3 years in implementi System (Analogue and IP based system) for various clients as on 2015.	ng CCTV HD CCTV			

4	Pg. 8 4 (2)	The Bidder should have average turnover of Rs. 1 Cr. (Rupees Three Crores) from CCTV Surveillance (Analogue & IP based HD) business in the last/previous 3 financial years as on last financial year ending 31 st March, 2015. (i.e, FY 2012-	Our submission is that, if a bidder had installed over Rs 1 crore worth IP based cameras in the past 4/5 years , he should be qualified because, your intention is to get on board only experienced (IP based cameras installation) integrators .	As per clause, it is the minimum criteria.
		 13; 2013-14 and 2014-15). The Bidder must have total revenue generated from IP based high definition CCTV System implementation (1.0 MP & above) as: • Financial year 2013-14 : 10% of average turnover of Rs. 1 Cr. • Financial year 2014-15 : 25% of average turnover of Rs. 1 Cr. 	The turnovers may please be revised downwards. These are steep and would eliminate many otherwise worthy contenders. IP surveillance is catching up and due to cost reasons, many customers opt for analogue systems. Even when they do, the systems tend to be smaller in sizes and normally D1 resolution IP cameras as they offer superior performance of similar analogue systems.	No change in the clause
			Please modify the clause as " The bidder / consortium should have Turnover of Rs. 1 Cr from CCTV Surveillance (Analogue & IP based HD) business in any last 3 financial years as on last financial year ending 31 March 2015"	No change in the clause
5	Pg. 8 4 (6)	The bidder must have executed CCTV System projects where minimum 200 cameras (Analogue & IP based) were installed either through outright purchase or on subscription/ rented	Our submission is that if if admit our previous (1) suggestion, you need not ask for this condition. If the bidder had installed IP cameras worth over rs. 1 crore, that should suffice.	As per clause, it is the minimum criteria.
		 model in the last 3 years as on March, 2015. In case of subscription/rental model, the system is running for at least 6 months as on June, 2015. The Bidder must have installed the IP based high definition CCTV System implementation (1.0 MP & above) as: Financial year 2013-14: 10% of the total cameras installed Financial year 2014-15: 25% of the total cameras installed 	This condition of minimum 200 cameras systems is near impossible to meet. It eliminates virtually ALL contenders and gives raise to doubts that these specs are made to suit someone. 200 camera system is very huge, especially for IP based one where 16 cameras is norm. Community IP camera systems do not have volumes of more than 16 cameras , sometimes lower. Please revise this to 8 cameras on an average. The second part also is very difficult to achieve. Many IP cameras have D1 resolution sensors for general surveillance as till one year ago, even 1 MP camera was very expensive. Many customers did not opt for these cameras for cost reasons. Besides, it does not make any difference in installation or configuration whether the sensor is D1 sensor (640 x 480) or 1 MP or even 3 MP. The process and configuration is the same. This must be revised in our opinion Considering the quantum of work, this	No change in the clause
			clause can be modified as "The Bidder/ any member of the consortium must have experience in in City Surveillance System and executed CCTV System projects."	
6	Pg. 9 4 (7)	The size of the order value per year should be having at least (projects completed from FY 2012-13 onwards) • One similar work with order value not less than Rs. 50 Lacs (OR) • Two similar works with order value not less than Rs. 35 Lacs each (OR) • Three similar works with order value	Our prime bidder is having more than 1 crore average turnover for the past 3 years, but we didn't execute 3 single orders each worth 25 Lakhs, but which we have executed for cctv for both analogue and IP will be collectively more than 50 Lakhs. Please consider he above. Must be revised downwards. The requirement for community viewing is for systems not more than 16 IP cameras, so	 The size of the order value per year should be having at least (projects completed from FY 2012-13 onwards as March, 2015) One similar work with order value not less than Rs. 30 Lacs (OR) Two similar works with order value not less than Rs. 15 Lacs each (OR) Three similar works with order value not less than 10 Lacs each.

		not less than 25 Lacs each.	the bidder should be asked to produce capabilities in 8-16 cameras only. These are clusters of IP CCTV systems , connected to IP fabric created by Hyderabad police .	
7	Pg. 9 4 (8)	The bidder must have executed multiple comprehensive AMC sites minimum 75 IP based HD cameras as part of CCTV System in the last 2 financial years ending March 31, 2015 with an AMC value not less than Rs. 15 Lac per year	The AMC condition must be removed. It is the customer who decides to have AMC or not. This condition is not necessary. If somebody had installed IP cameras in 2014-15, worth Rs.25 lakhs, the warranty is not yet over. How AMC will come into play? If he installed Rs.10 lakhs worth IP cameras in 2013-14, how AMC worth Rs.15 lakhs possible? Please modify the clause as " The bidder / any member of the consortium must have executed multiple comprehensive AMC sites of IP based HD cameras as part of CCTV system in the last 2 fin. Yrs not lest than Rs. 15 lac per years" We request you to change the clause as "The bidder must have executed multiple comprehensive AMC sites minimum 75 CCTV cameras as part of CCTV system in the last 2 financial years ending March 31, 2015 with an AMC value not less than Rs. 15 lacs per year.	The bidder must have executed multiple Comprehensive AMC sites of IP based HD cameras as part of CCTV System in the last 2 financial years ending March 31, 2015 with an cumulative AMC value not less than Rs. 15 Lac.
8	Pg. 9 4 (9)	The bidder should have its own office and full-fledged service setup in Hyderabad & Cyberabad City limits	In case of Consortium is it ok if one of the parties has got office locally in Hyderabad. Please modify the clause as "The bidder should give the undertaking that bidder will open the full-fledge service and office with 1 month of award of project" We request you to change the clause as "The bidder should have its own office should have experience more than 2 years or bidder shall open its own office and full-fledged service setup in Hyderabad & Cyberabad City 2 years within 6 month after award of project. Bidder shall submit an undertaking in this regard.	The bidder should have its own office and full-fledged service setup in Hyderabad & Cyberabad City limits. The bidder should give the undertaking that the office will open full-fledge service within 30 days from the date of empanelment.
9	Pg. 9 4 (9)	Minimum 3 technical personnel in implementation and at least 5 technical personnel for co-warranty & post- warranty support & maintenance of CCTV system. The average longevity of technical personnel with the company should not be less than 2 years and at least 50% of the team should have experience more than 2 yrs.	These are days of employee turnovers. No one stays for more than one year for obvious reasons – salaries. It is a constant conflict between employer and employee and turnovers are quite common. As long as the system integrator can guarantee the system uptime, it should be left to his choice to get the job done either thro those who have IP experience. IP camera requires networking experience which most analogue CCTV installers do not have. It is sufficient to have access to network administrators who will do the job and leave. Please review this condition.	Minimum 5 technical personnel for installation, support & maintenance of CCTV system. The total experience of at least one technical personal should be of minimum 4 years and other technical personnel should have an average of 2 years of experience.
10	Pg. 9 4 (10) 4 (11)	4 (10). The bidder should have back-to- back support from OEMs for various equipment / component, IT hardware, Video Storage solutions & Video Management software for five years 4(11). The bidder would provide 5-years	OEM support for 5 years should not be mandatory in our opinion as the responsibility of maintaining the system is on the SI and they should be left with the option of finding a similar model from elsewhere. 5 year warranties are IMPOSSIBLE to get from the	The bidder should provide 5-years comprehensive warranty on the complete CCTV System components where AMC Item is marked as "YES" in the Annex-5 Camera Specs and Annex-5a Component Specs.

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		comprehensive warranty on the CCTV system components marked in Annexure-5 Technical Specs.	manufacturers, especially for the same models. This pushes the cost skywards as integrators tend to over correct the risk perception. Manufacturers offer at the most 2 to 3 years warranty. This means the integrator must be prepared to buy one more camera and supply during the warranty period of 5 years. This may please be revised to 3 years or be prepared for steep quotes.	
11	Pg. 10 6 (e)	The bidder should be providing undertaking on their letter head that the CCTV system would be supported with complete ownership during the comprehensive warranty period of 5 years with no extra costs involved. The bidder should be ready to take up the comprehensive warranty support of CCTV system installed & maintained by other empaneled SI in case of sudden exit for whatever reasons as per prevailing terms & conditions agreed upon with the client. If the empaneled SI exited during implementation or warranty period without prior written notice or no proper justifications provided, the HCPC would initiate an enquiry and would blacklist the empaneled SI, and restraining from participating in Tender process in any National/Local government departments or PSUs etc.	There should be flexibility in allowing the SI to exit if the operation becomes too costly. The costs and expenses for the next 5 years is near impossible to estimate and it is easy for SI / bidder to make inadvertent mistakes in estimating. There should be provision for the SI to walk out if the costs become too much and the entire proposition becomes a grinding stone around the neck .	No change in the clause.
12	Pg. 10 6 (f)	The bidder installed CCTV systems in the community should be able to connect to the Police backbone network when it is made available and ability to take the feed for live & recorded viewing and analyzing. Bidder is responsible for its successful connectivity.	There could be a lot of issues in the connectivity issues to the back bone. It is the responsibility of the buyer NOT the bidder to resolve connectivity issues which would be in large scale. It should be the responsibility of the bidder to ensure the performance of the system locally as warranted in the tender. This is unreasonable and not practical. We would not accept this condition as it involves issues beyond the scope of the system bidded for.	The bidder installed CCTV systems in the community should be able to connect to the police backbone network when it is made available and ability to take the feed for Live, recorded replay and viewing and analyses. Successful integration of community CCTV system to the backbone is the joint effort of community bidder and other bidders for their scope of system involved. Any conflict of responsibility would be solved from time to time.
13	Pg. 11 7.1	Empanelment & Rate Contract Frequency	The rate contract should be valid for one year at least. It is difficult to plan finances and estimates with short time frames Will there be any flexibility in the payment terms	No Change in the clause. Refer Clause 7.2, page no. 11 for more details
			Whether the same rate contract is applicable as it is freezed in first phase?	The rate contract resulted out of this empanel process would be appended to the first phase of rate contract
14	Pg. 11 7.2	Upon empaneling the bidder & rate contract is made the validity of the SI empanelment period would be valid for first six months on probation and based upon the performance it would be extended for five years	May we know if HCPC has some requisition / requirement to be finalized in first six months? This is important as HCPC is going to assess the performance during probation period of 6 months.	No change in the clause. Performance assessment will be done during probation based on the adequate opportunities are provided to execute the projects. The probation period may be extended in case the opportunities were not adequate.
15	Pg. 11 7.3	Restrictions on Transfer of Agreement	Sub-contracting should be allowable and would only work in favor of the customer. It is sometimes very difficult to manage with limited resources. Most of the conditions are formed with imaginative	No change in the clause.

16	Pg. 11 7.7 (iv)	The Prime bidder shall have at least 51% stake in the consortium agreement as pre-qualification criteria	situations and NOT practical situations faced by system integrators. At the end of the day, it is getting the job done that is important than who gets the job done. Responsibility is anyway fixed with the system integrator. In the absence of any specific project value, may we know on what basis the 51% stake would be calculated? Will it on the basis of unit rates to be provided in	The Prime bidder shall have at least 51% stake of the average turnover of Rs. 1 Cr from CCTV surveillance business in the consortium agreement as pre-qualification
17	Pg. 17 8.5 (i)	The Unit Base Rate (UBR) is calculated as 75% of the Unit Total Rate (UTR) for each item. The UBR will be Rate Contracted for each item to provide quotations to the community. The balance 25% of UTR for items would be considered as AMC amount for 5 years based on the AMC items. The AMC per year shall work out around 6.67% will be due to the System Integrator at the end of each year based on the SLA performance.	the concerned excel sheet. The unit base rate concept is loaded AGAIST the bidder. 25% loading for 5 year warranty is absurdly low to say the least. No manufacturer will give 5 year warranty on ANY model without steep increase in costs and replacements if any have to be bought adhoc. The option of quoting what they want SHOULD be left to the bidder. They may or may not qualify in price bidding is a different thing, but this should be left to the prerogative of the bidder on how much to quote.	criteria No change in the clause
18	Pg. 17 8.5 (j)	The Rate contracted pricing (UBR) would be the upper limit where empaneled System Integrator should not be quoting higher than this rate (UBR) when they are offering the quotations to the community group for the new installations. However, the community group has an opportunity to further negotiate downward with the empaneled system integrator to finalize the order for release. However, the respective system integrator and community group should ensure that the finalized order prices should not go upward beyond the rate contract prices duly negotiated.	This should be the basis on which systems can be quoted. Police should ensure proper installation and functioning but SHOULD NOT interfere in commercial pricing as they are NOT the buyers. This whole document is too restrictive and loaded against the bidder.	No change in the clause
19	Pg. 17 8.6	During the validity of the empanelment including the extended period if any, if the System Integrator supplied any empaneled item to any other department /organization / individual at a price lower than the price fixed in the contract, the empaneled bidder must voluntarily pass on the price difference with immediate effect.	This should be scrapped in total. The market is dynamic in nature and this clause SHOULD not be there. There are several reasons for giving lower price, not necessarily lower acquisition cost. Dynamic pricing is the order of the day. This point SHOULD be scrapped.	Clause 8.6 is deleted
20	Pg. 19 8.15 (a)	Evaluation Framework - Bidders Competencies	The bidders qualification criteria is loaded AGAINST the bidders and appears to favor a few. The experience should just mention IP cameras and NOT HD IP cameras, as the installation DOES NOT make ANY difference between SD resolution or HD resolution cameras. By insisting on this, the department and the ultimate buyers are DEPRIVED of competitive and probably qualified bidders.	No change in the clause
21	Pg. 20 8.15 (b)	Evaluation Framework – Technical Evaluation	The aspect of asking everyone to provide a demo is not correct. In our opinion, first all technical and commercial evaluation must be completed and short listed (finalized) candidates must be arrived. Then they should be asked to invest in	No change in the clause

			systems demo. HD IP cameras and systems are expensive and do not get sold easily. Since there is no guarantee of getting the order even after successful	
			demo, bidders would balk at the prospect of investing in costly systems. This again works against the buyers by limiting the number of bidders willing to take the risk. Please consider revising this.	
22	Pg. 21 8.15 (c)	Evaluation Framework – Technical Demo Setup	Successful demo should AUTOMATICALLY lead to business and not despair. The department should first open the bids, finalize the vendors on commercial terms and then ask the finalized vendors to make the demo subject to order release after successful demo.	No change in the clause.
23	Pg. 22 9.4	Purchase / Work Order & Payment Terms	Payment terms are loaded AGAINST the bidders and ultimately will lead to community getting lesser or fewer support initiatives. These look good on paper, but DO NOT help the bidder at all. These need interactions and modifications. Another public meeting must be convened to discuss this.	No change in the clause.
24	Pg. 22 9.4 (c)	25% of the supply order value would be paid proportionately (spread across 5 years@5% each year) at the end of each warranty year subject to clearance from PS CCTV Committee and meeting the SLAs during the warranty period	Please share SLAs terms	 25% of the supply order value would be paid proportionately (spread across 5 years@6.67% each year) at the end of each warranty year subject to clearance from PS CCTV Committee and meeting the SLAs during the warranty period SLA: Critical – Resolution within 4 hrs High – Resolution within 24 hrs Medium – Resolution within 48 days Low – Resolution within 7 days.
25	Pg. 23 9.6	Scope of Comprehensive Warranty	The service terms are HEAVILY loaded AGAINST even honest SI. Public networks like this are prone to break down even without the fault of the SI, due to access to public areas. Willful damages CAN and WILL occur which is NOT the fault of the SI. Even then, he will be penalized. A separate discussion MUST be constituted to address this and the entire para and points need revision.	 No change in the clause. To provide more clarity on the accountability after the CCTV system is handed over to the community: Community Scope: Any damages or breakdowns due to external factors other than SI mistakes, bad design/workmanship by SI, manufacturing defects and due to Force Majeure, it is in the scope of community. SI Scope: Design or workmanship related damages or breakdowns; manufacturing defects; due to mismatch or wrong components deployed, due to quality issues; SI mistakes; material loss etc.,
26	Camera Specific ations	 f = 4.0 to 120mm, Optical wide-tele Optical Zoom : 30x Digital Zoom : 16x Pan : 360o C endless; Pan Speed : 0.1o to 160o / sec. Tilt : -15o to 90o; Tilt Speed : 0.1 to 120/sec. Presets : Up to 255; Preset Speed : Pan-240o/sec. ; Tilt-200o/sec. Privacy Masking : up to 24 areas * Auto focus : Auto / Semi-Auto / Manual 	Auto Iris feature wont go with IR Vari Focal cameras. Need to ammend the same. Analog video output should be optional as its use in Network IP surveillance is very rare. Many of the Speed dome specs are copy paste from a particular modal, a slight variation will be there from modal to modal and make to make. Please mention the minimum requirement you would need to make the product integrated into your system.	No change in the clause

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27	 Dual Streaming: (Supports all streams at full frame rate) H.264 streaming over UDP, TCP, HTTP or HTTPS MPEG-4 streaming over UDP, TCP, HTTP or HTTPS MJPEG streaming over HTTP or HTTPS H.264 / MPEG-4 multicast streaming Supports activity adaptive streaming for dynamic frame rate control Supports video cropping for bandwidth saving Supports Constant Bit rate (CBR) / Variable bit rate (VBR) 	Some of the latest technologies are still maturing and some of them are brand specific, insisting on all of the features will narrow down the modals to very few. You should say that you would recommend those cameras over the others but not insist them in every camera that is deployed.	No change in the clause
28	 Frame rates: H.264 - Up to 30 fps @ 1280 x 720; Up to 30 fps @ 1920 x 1080 MPEG4 - Up to 30 fps @ 1280 x 720; Up to 30 fps @ 1920 x 1080 MJPEG - Up to 30 fps @ 1280 x 720; Up to 30 fps @ 1920 x 1080 	As per the viewing in Asia that is PAL specs our frame rate should be 25 not 30. Also, we get a very clear recording at 16 FPS as per the research done by experts. Kindly make the Frame rate to 25, if some one has higher in PAL environment it is good but not necessary.	Frame rates: H.264 - Up to 25 fps @ 1280 x 720; Up to 25 fps @ 1920 x 1080 MPEG4 - Up to 25 fps @ 1280 x 720; Up to 25 fps @ 1920 x 1080 MJPEG - Up to 25 fps @ 1280 x 720; Up to 25 fps @ 1920 x 1080
29	 Configurable up to 8 tours; up to 32 pre-sets per tour Adjustable image size, quality & bit rate Time stamp and text caption overlay Flip & mirror Configurable brightness, contrast, saturation, sharpness, white balance & exposure, shutter speed & motion detection windows AGC, AWB, AES WDR enhanced Automatic, manual & scheduled day / night mode Backlight Compensation (BLC) Configurable privacy mask zones 	In general, a maximum of 8 to 10 presets are used per tour and a max of 2 to 3 tours for various times of the day are what is programmed. You can take this data from all the speed domes that are installed in twin cities by police so far. Asking for un-necessarily high requirements makes many of the good brands fall short and be disqualified. Please don't go by the specs of the camera, instead concentrate on what is required for your setup. Speed Dome :- Tours is should be 3 or 4 with 16 Preset per tour	 Configurable 5 tours or better; 10 pre-sets or better per tour Adjustable image size, quality & bit rate Time stamp and text caption overlay Flip & mirror Configurable brightness, contrast, saturation, sharpness, white balance & exposure, shutter speed & motion detection windows AGC, AWB, AES WDR enhanced Automatic, manual & scheduled day / night mode Backlight Compensation (BLC) Configurable privacy mask zones
30	 Compression: G.711 / G.726 audio encoding, bit rate: 64 kbps, μ-Law or A-Law mode selectable GSM-AMR speech encoding, bit rate: 4.75 kbps to 12.2 kbps MPEG-4 AAC audio encoding, bit rate: 16 kbps to 128 kbps Interface: External microphone input Audio output Supports two-way audio (bi- directional) & audio mute 	Audio in public places cannot be made necessary. Special requirements may arise but asking for audio in all models is not justified. When audio integrated, you also need equally weather proof mic and speaker system (which mostly works on separate power) for which no specs are asked which will lead to integration issues.	No change in the clause
31	 10/100 Mbps Ethernet, IEEE802.3af PoE (RJ-45) Protocols: IPv4, IPv6, TCP/IP, HTTP, HTTPS, UPnP, RTSP/RTP/RTCP, IGMP, SMTP, FTP, DHCP, NTP, DNS, DDNS, PPPoE, CoS, QoS, SNMP, Samba, multicast, IP filtering, & 802.1x ONVIF compliant / support 	Kindly specify only those that you would use. At individual camera level does it really necessary to have so many protocols? Say if one company does not have an insignificant protocol for your setup, would you like to disqualify the same??	No change in the clause
32	 Live simultaneous viewing for up to 10 clients Triple-window video motion detection Tamper Detection I/O for external sensor and alarm Event notification using HTTP, SMTP or 	I once again request you to not to make it mandatory those feature that are very specifically used in rare circumstances. Whenever their requirement is envisaged, the same can be procured on case to case basis. Kindly consider	No change in the clause

33		 FTP Uploading of snapshots / video clips through email or FTP Supports multiple SMTP & FTP Servers Multiple event notifications 12V DC; 24V AC Power consumption: Max. 9.6 W 802.3af compliant Power-over- Ethernet (PoE) Class 3 	the following as well * Triple-window video motion detection (OR) Multigrid Motion Detection * I/O for external sensor and alarm adds cost of the camera We are not able to understand the logic behind MAX 9.6W, how does this concern?? When you say it should be Class 3 which is 15.4 watts at POE port; 12.95 watts at device. Why multiple power sources required?? You can't have with 12V DC, 24V AC and POE all available in most of the cameras. Need to specify exactly.	 12V DC; 24V AC Power consumption: Max. 9.6 W or as per camera specs 802.3af compliant Power-over-Ethernet (PoE) Class 3
34	Switch Annex- 5a – Compo nent Specs S.No-22	4/8/16/24 port 10/100/1000 BASE-TX, 2 100/1000SFP or 2 Combo 10/100/1000 BASE-T or 100/1000 SFP; store & forwarding switch scheme; full/half- duplex for fast ethernet; Ethernet speeds; IEEE 802.3?? standards; Green Technology; ONVIF; UL; CE; RoHS compliant; IEEE 802.3af, at Compliant; auto MDI/MDIX crossover; multicast support;		4/8/16/24 port 10/100/1000 BASE-TX, 2 100/1000SFP or 2 Combo 10/100/1000 BASE-T or 100/1000 SFP; store & forwarding switch scheme; full/half-duplex for fast ethernet; Ethernet speeds; IEEE 802.3?? standards; Green Technology; ONVIF; UL; CE; RoHS compliant; IEEE 802.3af, at Compliant; auto MDI/MDIX crossover; multicast support; Power budget for each switch model should be minimum of equation as = (no. of switch ports x max. watts per IEEE 802.3af PoE Switch + 25% extra)
35		Cameras Certification: UL, CE, EN, EMC & RoHS	We request you to adopt appropriate Indian testing labs like NABL and not insist on UL (other than power adaptors) for CCTV. Is UL certificate for the camera or for the Power Adaptor	UL for core adopters, CE, EN, EMC & RoHS
36		• 60 months warranty	Many manufacturers provide warranty for max up to 3 years. A written statement or agreement from the integrator cannot be considered as manufacturer's warranty. Need to change the wordings accordingly.	No change in the clause
37		Linux based NVR specified	Windows based NVR should be considered	No change in the clause
38		General	Can two different vendors quote same brand.	Yes.