**Section II: Schedule of Requirements**

**eSourcing reference:** ITB/2023/48692

1. **Summary of Requirements**
2. Purpose of CCTV system

* To monitor different Hydrology sites

1. Scope of supply
   * Complete solution of solar powered remote CCTV camera system
   * Remote transmission system
   * Data storage and monitoring equipment
   * Installation, integration and commissioning
   * Maintenance training
2. Summary of technical requirements

* The sites may have different setups and features. As well as types of cameras and connection methods needed

| No | Site name | Camera type | Connection/ transmission | remarks |
| --- | --- | --- | --- | --- |
|  | GERD bridge | Panoramic with PTZ | 4G |  |
|  | Baro | Panoramic with PTZ | 4G |  |
|  | Omorate | Panoramic with PTZ | 4G |  |
|  | Genale | Panoramic with PTZ | Not specified | Will be communicated in the near future |
|  | Wabe Shebele | Panoramic with PTZ | 4G |  |
|  | Dedessa | PTZ | Not specified | Will be communicated in the near future |
|  | Dabus | PTZ | 4G |  |
|  | Abbay Bure | PTZ | Vsat/ Wireless bridge/ High gain 4G router |  |
|  | Main Beles | PTZ | 4G |  |

UNOPS requirements are comprised of the following lots:

* Lot 1: CCTV Camera excluding mounting pole
  + Multi sensor panoramic + PTZ camera
  + 8MP WDR Varifocal PTZ camera to be mounted on Poles with the following technical features
* Lot 2: CCTV Camera including mounting pole
  + Multi sensor panoramic + PTZ camera
  + 8MP WDR Varifocal PTZ camera to be mounted on Poles with the following technical features

1. **Technical specifications for Goods and Comparative Data Table**

Lot 1: CCTV camera excluding Mounting Pole

| **Item No** | **UNOPS minimum technical requirements** | **Qty** | **Is the bid compliant?** Bidder to complete | **Details of goods offered.** Bidder to complete |
| --- | --- | --- | --- | --- |
| 1.1 | Multi sensor panoramic + PTZ camera | 5 |  | Insert details of goods offered, including specifications and brand/model offered |
|  | **Technical Specification**  Lens  Panoramic section   * Multi sensor |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Resolution 4 MP or better per sensor |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * State focal length |  | Please state | Insert details of goods offered, including specifications |
|  | * Number of lenses - multiple (horizontal view angle 360 degrees) |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | PTZ section   * Resolution 8Mp or better |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * State focal length |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Zooming capacity >30X optical & >10X digital minimum |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Can identify at distance minimum 400m |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | PTZ   * Long distance IR illuminator 100m min |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Sensor Motion detection   * State the Motion detection range in distance |  | Please state | Insert details of goods offered, including specifications |
|  | * Smart tracking function |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Connection type ( as per summary of technical requirements )   * Wireless (wifi) / GSM/ HSPA/LTE 4G internal / separate interface |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * RJ45 Port |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Supports Two-Way audio |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Please indicate the internet bandwidth requirements for the mainstream and sub- stream channels of the cameras |  | Please state | Insert details of goods offered, including specifications |
|  | Analytics   * Tamper detection |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Objects entered the region of interest. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Objects leaving the region of interest. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Object moves into a region of interest and then stops moving for the specified threshold time. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Day/night detection   * Automatic |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Night vision operation |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | FOV  Panoramic   * Horizontal 360o |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | PTZ   * Pan range 360o endless |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Tilt range -10o - 87 o  min |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * WDR > 120 dB |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Power supply   * Solar powered with backup batteries |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Least power consumption is preferred. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * POE compatible |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Temperature & Humidity   * Should operate at places where relative humidity 95% |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Temperature range 0-60o C ( better is acceptable) |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Protection class IP 66 minimum |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Protocol   * TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv6, UDP, Bonjour, SSL/TLS |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Memory   * Local storage 256GB card or better |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Certifications/Approvals   * CE - ROHS or equivalent |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Safety Standards   * UL 62368-1 or CSA 62368-1 or IEC/EN 62368-1 or equivalent |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Photo biological safety IEC/EN 62471 or equivalent |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Environmental Standards/Ratings   * IP66 rating min |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Product Impact protection certification |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Product vibration protection certification |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Product shock protection certification |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Electromagnetic Emissions Standards   * EN 55032 (Class A) or equivalent |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Warranty  * Comprehensive warranty for 1 year after acceptance. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | DocumentationUser (Operating) manual in English. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Service (Technical / Maintenance) manual in English. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 1.2 | 8MP WDR Varifocal PTZ camera to be mounted on Poles with the following technical features | *5* |  | Insert details of goods offered, including specifications and brand/model offered |
|  | Lens   * Lens motorized varifocal |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Resolution 8Mp or better |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Please indicate the focal length |  | Please state | Insert details of goods offered, including specifications |
|  | * Zooming capacity optical zoom >30X, Digital zoom >10X |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * DORI distance, Identify at 400m min |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | IR   * Long distance IR illuminator 200m min |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Connection type   * Separate or built in Wireless (wifi) / GSM/ HSPA/LTE 4G internal / interface |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * RJ 45 port |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Support two-Way audio system or better |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Please indicate the internet bandwidth requirements for the mainstream and sub- stream channels of the cameras |  | Please state | Insert details of goods offered, including specifications |
|  | Analytics   * Tamper detection |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Objects entered the region of interest. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Objects leaving the region of interest. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Object moves into a region of interest and then stops moving for the specified threshold time. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Day/night detection   * Automatic |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Night vision operation |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | FOV   * Pan range 360o endless |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Tilt range -10o - 87 o  min |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * WDR > 120 dB |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Power supply   * Solar powered with Backup batteries |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Least power consumption is preferred. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * POE compatible |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Temperature & Humidity   * Should operate at places where relative humidity is 95% |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Temperature range 0-60o C |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Lens wiper included |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Protection class IP 66 or better |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Protocol   * TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv6, UDP, Bonjour, SSL/TLS |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Memory   * Local/card storage 256GB or better |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Certifications/Approvals   * CE-ROHS or equivalent |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Safety Standards   * UL 62368-1 or CSA 62368-1 or IEC/EN 62368-1 or equivalent |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Photo biological safety IEC/EN 62471 or equivalent |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Environmental Standards/Ratings   * IP66 rating min |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Product Impact protection certification |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Product vibration protection certification |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Product shock protection certification |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Electromagnetic Emissions Standards   * EN 55032 (Class A) or equivalent |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | WarrantyComprehensive warranty for 1 year after acceptance. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | DocumentationUser (Operating) manual in English. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Service (Technical / Maintenance) manual in English. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 1.3 | Storage and monitoring items  The supply includes but not limited to   * NVR 16 channel SSD 16TB min. storage capacity |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * All necessary communication interfaces and items for interconnection |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Supply and installation, integration with system |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * VMS licence |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 1.4 | PV system | *10* |  |  |
|  | PV panels   * Panels shall be of suitable capacity to charge batteries and carry the loads of all equipment at the site |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * All panels are expected to be installed on the same pole of the camera for every site. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Batteries   * Batteries shall be of capacity of supplying the loads for 24 hours at least |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * All batteries shall be fixed to the pole within weather resistant rugged solar box |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * All required hardware must be supplied to install the batteries and related items |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | PV charge controller   * The charge controller shall have capability to charge drained batteries as well as supplying loads simultaneously |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Mounting Poles   * The bidder must present all dimensions of the mounting pole . The design should consider the weights of all items to be installed on it and all other loads including wind load. camera installation height = 6m. |  | Please state | Insert details of goods offered, including specifications |
|  | Installation and integration of the camera systems into the central monitoring station. Consisting of supply of all required items including but not limited to installation brackets, arms, data & power cables etc. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | The equipment manufacturer or supplier has a local agent/dealer for after sales services |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | If No, can you commit/agree to arrange a local agent/dealer within 3 to 4 weeks after award for after sales services. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Maintenance and troubleshooting training for ten client’s staff in Addis Ababa |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | General points   * All signals will be communicating to the central monitoring station |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * All installations are on or at edges of Bridges. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Field of views for cameras will be selected during configuration |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |

Lot 2: CCTV camera including Mounting Pole

| **Item No** | **UNOPS minimum technical requirements** | **Qty** | **Is the bid compliant?** Bidder to complete | **Details of goods offered.** Bidder to complete |
| --- | --- | --- | --- | --- |
| 1.1 | Multi sensor panoramic + PTZ camera | 5 |  | Insert details of goods offered, including specifications and brand/model offered |
|  | **Technical Specification**  Lens  Panoramic section   * Multi sensor |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Resolution 4 MP or better per sensor |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * State focal length |  | Please state | Insert details of goods offered, including specifications |
|  | * Number of lenses - multiple (horizontal view angle 360 degrees) |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Lens  PTZ section   * Resolution 8Mp or better |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * State focal length |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Zooming capacity >30X optical & >10X digital minimum |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Can identify at distance minimum 400m |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | PTZ   * Long distance IR illuminator 100m min |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Sensor Motion detection   * State the Motion detection range in distance |  | Please state | Insert details of goods offered, including specifications |
|  | * Smart tracking function |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Connection type ( as per summary of technical requirements )   * Wireless (wifi) / GSM/ HSPA/LTE 4G internal / separate interface |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * RJ45 Port |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Supports Two-Way audio |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Please indicate the internet bandwidth requirements for the mainstream and sub- stream channels of the cameras |  | Please state | Insert details of goods offered, including specifications |
|  | Analytics   * Tamper detection |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Objects entered the region of interest. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Objects leaving the region of interest. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Object moves into a region of interest and then stops moving for the specified threshold time. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Day/night detection   * Automatic |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Night vision operation |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | FOV  Panoramic   * Horizontal 360o |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | PTZ   * Pan range 360o endless |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Tilt range -10o - 87 o  min |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * WDR > 120 dB |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Power supply   * Solar powered with backup batteries |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Least power consumption is preferred. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * POE compatible |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Temperature & Humidity   * Should operate at places where relative humidity 95% |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Temperature range 0-60o C ( better is acceptable) |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Protection class IP 66 minimum |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Protocol   * TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv6, UDP, Bonjour, SSL/TLS |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Memory   * Local storage 256GB card or better |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Certifications/Approvals   * CE - ROHS or equivalent |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Safety Standards   * UL 62368-1 or CSA 62368-1 or IEC/EN 62368-1 or equivalent |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Photo biological safety IEC/EN 62471 or equivalent |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Environmental Standards/Ratings   * IP66 rating min |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Product Impact protection certification |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Product vibration protection certification |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Product shock protection certification |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Electromagnetic Emissions Standards   * EN 55032 (Class A) or equivalent |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Warranty  * Comprehensive warranty for 1 year after acceptance. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | DocumentationUser (Operating) manual in English. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Service (Technical / Maintenance) manual in English. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 1.2 | 8MP WDR Varifocal PTZ camera to be mounted on Poles with the following technical features | *5* |  | Insert details of goods offered, including specifications and brand/model offered |
|  | Lens   * Lens motorized varifocal |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Resolution 8Mp or better |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Please indicate the focal length |  | Please state | Insert details of goods offered, including specifications |
|  | * Zooming capacity optical zoom >30X, Digital zoom >10X |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * DORI distance, Identify at 400m min |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | IR   * Long distance IR illuminator 200m min |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Connection type   * Separate or built in Wireless (wifi) / GSM/ HSPA/LTE 4G internal / interface |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * RJ 45 port |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Support two-Way audio system or better |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Please indicate the internet bandwidth requirements for the mainstream and sub- stream channels of the cameras |  | Please state | Insert details of goods offered, including specifications |
|  | Analytics   * Tamper detection |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Objects entered the region of interest. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Objects leaving the region of interest. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Object moves into a region of interest and then stops moving for the specified threshold time. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Day/night detection   * Automatic |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Night vision operation |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | FOV   * Pan range 360o endless |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Tilt range -10o - 87 o  min |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * WDR > 120 dB |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Power supply   * Solar powered with Backup batteries |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Least power consumption is preferred. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * POE compatible |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Temperature & Humidity   * Should operate at places where relative humidity is 95% |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Temperature range 0-60o C |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Lens wiper included |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Protection class IP 66 or better |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Protocol   * TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv6, UDP, Bonjour, SSL/TLS |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Memory   * Local/card storage 256GB or better |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Certifications/Approvals   * CE-ROHS or equivalent |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Safety Standards   * UL 62368-1 or CSA 62368-1 or IEC/EN 62368-1 or equivalent |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Photo biological safety IEC/EN 62471 or equivalent |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Environmental Standards/Ratings   * IP66 rating min |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Product Impact protection certification |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Product vibration protection certification |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Product shock protection certification |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Electromagnetic Emissions Standards   * EN 55032 (Class A) or equivalent |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | WarrantyComprehensive warranty for 1 year after acceptance. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | DocumentationUser (Operating) manual in English. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Service (Technical / Maintenance) manual in English. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 1.3 | Storage and monitoring items  The supply includes but not limited to   * NVR 16 channel SSD 16TB min. storage capacity |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * All necessary communication interfaces and items for interconnection |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Supply and installation, integration with system |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * VMS licence |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 1.4 | PV system | *10* |  |  |
|  | PV panels   * Panels shall be of suitable capacity to charge batteries and carry the loads of all equipment at the site |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * All panels are expected to be installed on the same pole of the camera for every site. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Batteries   * Batteries shall be of capacity of supplying the loads for 24 hours at least |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * All batteries shall be fixed to the pole within weather resistant rugged solar box |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * All required hardware must be supplied to install the batteries and related items |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | PV charge controller   * The charge controller shall have capability to charge drained batteries as well as supplying loads simultaneously |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Mounting Poles   * 7m galvanised flanged steel straight pole with anchors and template. The pole must be designed to withstand all the loads ( wind load , weight of items to be installed.) Items to be installed on the pole are as below but not limited to; 1. Solar panel/s, 2. Battery compartment, 3. PV controller/inverter , 4. Camera, 5. Transmission equipment, and others. Design of Anchor and foundation should be presented.. All poles shall be equipped with a lightning protection system. | 10 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Installation and integration of the camera systems into the central monitoring station. Consisting of supply of all required items including but not limited to installation brackets, arms, data & power cables etc. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | The equipment manufacturer or supplier has a local agent/dealer for after sales services |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | If No, can you commit/agree to arrange a local agent/dealer within 3 to 4 weeks after award for after sales services. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Maintenance and troubleshooting training for ten client’s staff in Addis Ababa |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | General points   * All signals will be communicating to the central monitoring station |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * All installations are on or at edges of Bridges. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | * Field of views for cameras will be selected during configuration |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |

1. **Delivery requirements and Comparative Data Table**

| **UNOPS Requirements** | | **Is the bid compliant?** Bidder to complete | **Details**  Bidder to complete |
| --- | --- | --- | --- |
| **Delivery time** | Bidder shall deliver the goods FCA within 30 days after Contract signature. | ☐ Yes ☐ No | Insert details |
| Bidder shall deliver the goods DAP within 45 days after Contract signature. | ☐ Yes ☐ No | Insert details |
| **Delivery place and Incoterms rules** | Ethiopia, DAP 2020 including customs clearance at the destination. | ☐ Yes ☐ No | Insert details |
| FCA as per Incoterms 2020 after Contract signature. | ☐ Yes ☐ No | Insert details |
| **Consignee details** | Ministry of Water and Energy, Addis Ababa Ethiopia | ☐ Yes ☐ No | Insert details |
| **UNOPS Right to vary requirements** | At the time the Contract is awarded, UNOPS reserves the right to vary the quantity of the goods and associated services specified above, provided this does not exceed +/-20% , without any change in the unit prices or other terms and conditions of the ITB. | ☐ Yes ☐ No | Insert details |

1. **Inspections and tests**

The following inspections and tests shall be performed:

The vendor must have the goods inspected in the manufacturer’s works by a competent authority and submit a test certificate and also a guarantee/warranty certificate that the goods conform to written specifications.

UNOPS or its representative shall inspect and/or test any or all items of the goods to confirm their conformity to the contract, prior to dispatch from the manufacturer’s premises. Such inspection and clearance will not prejudice the right of the consignee to inspect and test the goods on receipt at destination.

If the goods fail to meet the laid down specifications, the supplier shall take immediate steps to remedy the deficiency or replace the defective goods to the satisfaction of the purchaser.