

Government of Maharashtra  
Water Resources Department  
Budgetary Offer 1/1/2014-15

Executive Engineer, Chief Gate Erection Unit No.2, Nagpur ( PH 0712- 2522498) Email ID ee.cgeu2.ngp@gmail.com invites Budgetary offer for the Estimation Purpose from reputed and experienced company / authorised dealer for following work The offer of each Should be inclusive of all taxes, frieght and duties. The offer should reach to this office on or before 30.1.2015. Please note Budgetary offer is invited only for the estimation purpose and it does not give any assurance regarding floating of tenders or otherwise.

**Schedule**

**Subject :- Budgetary offer for Designing, Manufacturing, Providing, Installing and commissioning of Automatic operation and information (Parameters) system using SCADA technique for Radial Gate and outlet service gate**

**Project :- Pench Navegaonkhairi Project , Dist. Nagpur.**

**Radial Gate- 12x8 M -16Nos**

**Left Bank Outlet Service Gate- 1.8x2.4m-3 Nos**

**Right Bank Outlet Service Gate- 1.8x2.4m-2 Nos**

The details are mentioned below.					
Sr. No.	Description	Qty.	Unit	Rate	Amount
1	<b>Variable Frequency Drives</b> Providing, Installation, designing, erection, commissioning, programming of 3 phase AC DRIVES at site of works and giving test to full Capacity for Radial Gate 12x8 mtrs.-31 nos. for reducing current and maintenance of motor for stability of mechanical equipments and civil structure on all Motors installed of 10.0 HP capacity.	16	Nos.		
2	<b>Providing Installing Programming, Commissioning of various Sensors on Radial Gates and Outlet Service Gate Which Shall Read, Compute and display required Data.</b> a Actual Discharge of Each Gate b Total Discharge per Hour / per Day c Area under Irrigation in Hectares / Acres d % Opening of Each Gate and Gate Fully Open / Closed sensing e Total Electrical Energy Consumption f Energy Consumption of Each Gate per Hour / per Day g Flood Sensing and remote opening/closing in Emergency h Remote control of Each Gate i Limit Switches for Each Gate for Open & Closed position-32nos j Energy Meter for Each VFD (Gate Motor)-16 nos	16	Nos.		
3	<b>Rain Gauge :</b> Providing Installing and commissioning of outdoor temperature and rainfall quantity (max.30m ) with temperature tendency ,indication of total rainfall quantity,of the last hour,the last 24 hour and the last rain with time and date of recording ,bar graph indication and history the last7 days ,weeks & months,rain sensor with alarm ,indication of indoor temperature , max.-min. function , adjustable temperature alarm, Clock and date measuring range temperature outdoor-- 50...+70 deg.C (-58...+158 deg.F),indoor- 10...+50 deg C (14...+122 deg F), rainfall 0...9999 mm (0...999.9 inch) with Central Monitor	5	Nos		
		1	set		

Sr. No.	Description	Qty.	Unit	Rate	Amount
4	<b>Level and Open channel Flow monitoring instruments</b>				
	4.1) Radar Level Transmitter for Upstream Level	1	set		
	4.2) Ultrasonic Level Transmitter, one each at Service gate for Open channel flow	1	set		
5	<b>Providing Installing Programming Commissioning of Local Control Panel</b> With Micro Processor Based Alarm Annunciation Of 36 Windows, Digital Panel Meter, Power Supply I/O's Utility Sockets Etc.	1	set		
6	<b>Item No. 5: Providinnng, Installing, Programing and commissioning of PLC control Panel.</b> All field instruments within the vicinity of the dam shall be hard-wired to the PLC / RTU while remaining instruments shall be provided with Wireless Signal Transmission facility via GPRS / GSM. The PLC / RTU shall have the necessary Wirless Modem to demand & receive the data from these instruments via GPRS / GSM at user specified time interval. The PLC / RTU shall have 128 Digital Inputs, 80 Digital Outputs & 4 Analog Inputs for all hard-wired signals leaving approximately 20% spare I/Os over and above those used. The PLC / RTU shall have sufficient communication channels to receive data from remote field instruments over wireless network. The PLC / RTU shall have built-in Ethernet communications for interfacing to SCADA. The PLC / RTU shall be housed in suitably sized CRCA sheet steel panel with all essential components such as 24VDC SMPS, Relays, Terminal Blocks, Signal Conditioners, etc.	1	Set		
7	Item No. 6 : Providing of Required Configuration Computer 500GB Hardisk, RAM 4 GB, CPU intel core i3, 22 " TFT monitor, laser printer for Displaying of All Parameters In PIP(Picture In Picture) Technology	2	Nos		
8	Item No. 07 : Providing Installing and Commissioning Of SCADA System (Software) For Automation of Radial Gates and To Get Real Time Information.	2	Nos		
9	<b>Providing and Installing Cabling &amp; Accessories :</b>		1		
	Power Cables between VFDs & respective motors	1	Lot		
	Control & Signal Cables between all hard-wired sensors to VFD Panel or PLC / RTU Panel	1	Lot		
	Network & Data Cable between PLC / RTU Panel & SCADA	1	Lot		
	Cabling Accessories such as Glands, Lugs, Ferrules, etc.	1	Lot		
10	<b>CCTV System</b>	16	Nos		
	CCTV Camera with Whetherproof Enclosure for each Radial gates with 90m cable each and DVR (4 Nos for 4 nos. Radial gates)				
11	<b>Providing, Installing and Commissioning Wireless Network :</b>	1	set		
	GPRS / GSM based Modems, Serial or TCP/IP with Antenna and below minimum specifications :				
	Suitable station manager software for easy integration with SCADA				
12	<b>Air-Conditioner Unit for Control Room</b>	2	Nos		
	Supplying & erecting split type room air conditioning unit 2 ton capacity 250 Volits , 50 cycles , A.C. supply having 2 Nos. of air handing units hi wall mounting type complete at position				

Sr. No.	Description	Qty.	Unit	Rate	Amount
13	<b>UPS</b>	2	Nos		
	UPS / Survo Stabiliser 4 KVA				
14	<b>Power Supply cable</b>		Per mtr.		
	Armoured copper 4 sq mm				
15	<b>Providing, installing and comissioning of VFDs at Service Gates</b>	5	Nos		
	Providing, installing and comissioning of VFDs at Service Gates to be installed near Service gate, Local panel provided. Local Mains power to the existing motor considered fo Supply. Manual operation, with VFD Bypass also considered. Service Gate control Signals from VFD, Limit switch/Encoder/Level Sensors shall be via Wireless to Main Control Room.				
16	<b>Existing DG Set Interlocking</b>	1	Nos		
	DG Set Interlock, when main power fails, system will switchover to DG, Using fast acting ATS, Automatic transfer switch OR AMF Panel				
17	<b>Solar Power Supply in Catchment area</b>	5	Nos		
	Solar Power panels with battery and Voltage Controllers for powering Rain Gauge and Wireless transmitters				
18	<b>Operation and Maintence</b>	1	Year		
	Includes technical and semi-technical manpower.				

\*Specification and make of equipment, instrument should be mentioned

**Note-** The contractor shall undertake full responsibility to supply, install, program, configure, test and commission the above described equipments in totality as a whole integrated system for achieving the desired functional and technical results.

The above mentioned specifications shall form the basis of the system design and shall be treated as minimum compliance specifications. Any deviations or alternate specifications offered by the contractor shall be clearly spelt out. Such deviations, unless approved by the buyer, may render the offered system technically non-compliant.. we have considered 5.5KW VFD for Service Gate. However, Motor for Service Gate is excluded from our considered scope. Arrenging/errecting Towers for Wireless transmission in your scope. [Web based Monitoring at Remote location/s without any control permissions offered with system](#)

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Water Resources Department  
Budgetary Offer 1/2/2014-15

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**Schedule**

**Subject :- Budgetary offer for Designing, Manufacturing, Providing, Installing and commissioning of Automatic operation and information (Parameters) system using SCADA technique for Radial Gate and outlet service gate**

**Project :- Pench Totladoh Project , Dist. Nagpur.**

**Radial Gate- 12x8 M -14Nos**

**Power Outlet Service Gate- 3.64x4.46m-2 Nos**

The details are mentioned below.					
Sr. No.	Description	Qty.	Unit	Rate	Amount
1	<b>Variable Frequency Drives</b>	14	Nos.		
	Providing, Installation, designing, erection, commissioning, programming of 3 phase AC DRIVES at site of works and giving test to full Capacity for Radial Gate 12x8 mtrs.-31 nos. for reducing current and maintenance of motor for stability of mechanical equipments and civil structure on all Motors installed of 10.0 HP capacity.				
2	<b>Providing Installing Programming, Commissioning of various Sensors on Radial Gates and Outlet Service Gate Which Shall Read, Compute and display required Data.</b>	14	Nos.		
	a Actual Discharge of Each Gate b Total Discharge per Hour / per Day c Area under Irrigation in Hectares / Acres d % Opening of Each Gate and Gate Fully Open / Closed sensing e Total Electrical Energy Consumption f Energy Consumption of Each Gate per Hour / per Day g Flood Sensing and remote opening/closing in Emergency h Remote control of Each Gate i Limit Switches for Each Gate for Open & Closed position-28 nos j Energy Meter for Each VFD (Gate Motor)-14 nos				
3	<b>Rain Gauge :</b>	5	Nos		
	Providing Installing and commissioning of outdoor temperature and rainfall quantity (max.30m ) with temperature tendency ,indication of total rainfall quantity,of the last hour,the last 24 hour and the last rain with time and date of recording ,bar graph indication and history the last7 days ,weeks & months,rain sensor with alarm ,indication of indoor temperature , max.-min. function , adjustable temperature alarm, Clock and date measuring range temperature outdoor-- 50...+70 deg.C (-58...+158 deg.F),indoor- 10...+50 deg C (14...+122 deg F), rainfall 0...9999 mm (0...999.9 inch) with Central Monitor	1	set		

Sr. No.	Description	Qty.	Unit	Rate	Amount
4	<b>Level and Open channel Flow monitoring instruments</b>				
	4.1) Radar Level Transmitter for Upstream Level	1	set		
	4.2) Ultrasonic Level Transmitter, one each at Service gate for Open channel flow	1	set		
5	<b>Providing Installing Programming Commissioning of Local Control Panel</b> With Micro Processor Based Alarm Annunciation Of 36 Windows, Digital Panel Meter, Power Supply I/O's Utility Sockets Etc.	1	set		
6	<b>Item No. 5: Providinnng, Installing, Programing and commissioning of PLC control Panel.</b> All field instruments within the vicinity of the dam shall be hard-wired to the PLC / RTU while remaining instruments shall be provided with Wireless Signal Transmission facility via GPRS / GSM. The PLC / RTU shall have the necessary Wirless Modem to demand & receive the data from these instruments via GPRS / GSM at user specified time interval. The PLC / RTU shall have 128 Digital Inputs, 80 Digital Outputs & 4 Analog Inputs for all hard-wired signals leaving approximately 20% spare I/Os over and above those used. The PLC / RTU shall have sufficient communication channels to receive data from remote field instruments over wireless network. The PLC / RTU shall have built-in Ethernet communications for interfacing to SCADA. The PLC / RTU shall be housed in suitably sized CRCA sheet steel panel with all essential components such as 24VDC SMPS, Relays, Terminal Blocks, Signal Conditioners, etc.	1	Set		
7	Item No. 6 : Providing of Required Configuration Computer 500GB Hardisk, RAM 4 GB, CPU intel core i3, 22 " TFT monitor, laser printer for Displaying of All Parameters In PIP(Picture In Picture) Technology	2	Nos		
8	Item No. 07 : Providing Installing and Commissioning Of SCADA System (Software) For Automation of Radial Gates and To Get Real Time Information.	2	Nos		
9	<b>Providing and Installing Cabling &amp; Accessories :</b>		1		
	Power Cables between VFDs & respective motors	1	Lot		
	Control & Signal Cables between all hard-wired sensors to VFD Panel or PLC / RTU Panel	1	Lot		
	Network & Data Cable between PLC / RTU Panel & SCADA	1	Lot		
	Cabling Accessories such as Glands, Lugs, Ferrules, etc.	1	Lot		
10	<b>CCTV System</b>	14	Nos		
	CCTV Camera with Whetherproof Enclosure for each Radial gates with 90m cable each and DVR (4 Nos for 4 nos. Radial gates)				
11	<b>Providing, Installing and Commissioning Wireless Network :</b>	1	set		
	GPRS / GSM based Modems, Serial or TCP/IP with Antenna and below minimum specifications :				
	Suitable station manager software for easy integration with SCADA				
12	<b>Air-Conditioner Unit for Control Room</b>	2	Nos		
	Supplying & erecting split type room air conditioning unit 2 ton capacity 250 Volits , 50 cycles , A.C. supply having 2 Nos. of air handing units hi wall mounting type complete at position				

Sr. No.	Description	Qty.	Unit	Rate	Amount
13	<b>UPS</b>	2	Nos		
	UPS / Survo Stabiliser 4 KVA				
14	<b>Power Supply cable</b>		Per mtr.		
	Armoured copper 4 sq mm				
15	<b>Providing, installing and comissioning of VFDs at Service Gates</b>	2	Nos		
	Providing, installing and comissioning of VFDs at Service Gates to be installed near Service gate, Local panel provided. Local Mains power to the existing motor considered fo Supply. Manual operation, with VFD Bypass also considered. Service Gate control Signals from VFD, Limit switch/Encoder/Level Sensors shall be via Wireless to Main Control Room.				
16	<b>Existing DG Set Interlocking</b>	1	Nos		
	DG Set Interlock, when main power fails, system will switchover to DG, Using fast acting ATS, Automatic transfer switch OR AMF Panel				
17	<b>Solar Power Supply in Catchment area</b>	5	Nos		
	Solar Power panels with battery and Voltage Controllers for powering Rain Gauge and Wireless transmitters				
18	<b>Operation and Maintence</b>	1	Year		
	Includes technical and semi-technical manpower.				

\*Specification and make of equipment, instrument should be mentioned

**Note-** The contractor shall undertake full responsibility to supply, install, program, configure, test and commission the above described equipments in totality as a whole integrated system for achieving the desired functional and technical results.

The above mentioned specifications shall form the basis of the system design and shall be treated as minimum compliance specifications. Any deviations or alternate specifications offered by the contractor shall be clearly spelt out. Such deviations, unless approved by the buyer, may render the offered system technically non-compliant.. we have considered 5.5KW VFD for Service Gate. However, Motor for Service Gate is excluded from our considered scope. Arrenging/errecting Towers for Wireless transmission in your scope. [Web based Monitoring at Remote location/s without any control permissions offered with system](#)

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Budgetary Offer 1/3/2014-15

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**Schedule**

**Subject :- Budgetary offer for Designing, Manufacturing, Providing, Installing and commissioning of Automatic operation and information (Parameters) system using SCADA technique for Radial Gate and outlet service gate**

**Project : - kalisar Project , Dist. Gondia.**

**Radial Gate- 12x6.5 M -4 Nos**

**Outlet Service Gate- 1.2x1.2m-2 Nos**

The details are mentioned below.					
Sr. No.	Description	Qty.	Unit	Rate	Amount
1	<b>Variable Frequency Drives</b> Providing, Installation, designing, erection, commissioning, programming of 3 phase AC DRIVES at site of works and giving test to full Capacity for Radial Gate 12x8 mtrs.-31 nos. for reducing current and maintenance of motor for stability of mechanical equipments and civil structure on all Motors installed of 10.0 HP capacity.	4	Nos.		
2	<b>Providing Installing Programming, Commissioning of various Sensors on Radial Gates and Outlet Service Gate Which Shall Read, Compute and display required Data.</b> a Actual Discharge of Each Gate b Total Discharge per Hour / per Day c Area under Irrigation in Hectares / Acres d % Opening of Each Gate and Gate Fully Open / Closed sensing e Total Electrical Energy Consumption f Energy Consumption of Each Gate per Hour / per Day g Flood Sensing and remote opening/closing in Emergency h Remote control of Each Gate i Limit Switches for Each Gate for Open & Closed position-8 Nos j Energy Meter for Each VFD (Gate Motor)-4 Nos	1	set		
3	<b>Rain Gauge :</b> Providing Installing and commissioning of outdoor temperature and rainfall quantity (max.30m ) with temperature tendency ,indication of total rainfall quantity,of the last hour,the last 24 hour and the last rain with time and date of recording ,bar graph indication and history the last7 days ,weeks & months,rain sensor with alarm ,indication of indoor temperature , max.-min. function , adjustable temperature alarm, Clock and date measuring range temperature outdoor-- 50...+70 deg.C (-58...+158 deg.F),indoor-- 10...+50 deg C (14...+122 deg F), rainfall 0...9999 mm (0...999.9 inch) with Central Monitor	5	Nos		
		1	set		

Sr. No.	Description	Qty.	Unit	Rate	Amount
4	<b>Level and Open channel Flow monitoring instruments</b>				
	4.1) Radar Level Transmitter for Upstream Level	1	set		
	4.2) Ultrasonic Level Transmitter, one each at Service gate for Open channel flow	2	set		
5	Providing Installing Programming Commissioning Of Local Control Panel With Micro Processor Based Alarm Annunciation Of 36 Windows, Digital Panel Meter, Power Supply I/O's Utility Sockets Etc.	1	set		
6	<b>Item No. 5: Providinnng, Installing, Programing and commissioning of PLC control Panel.</b> All field instruments within the vicinity of the dam shall be hard-wired to the PLC / RTU while remaining instruments shall be provided with Wireless Signal Transmission facility via GPRS / GSM. The PLC / RTU shall have the necessary Wirless Modem to demand & receive the data from these instruments via GPRS / GSM at user specified time interval. The PLC / RTU shall have 128 Digital Inputs, 80 Digital Outputs & 4 Analog Inputs for all hard-wired signals leaving approximately 20% spare I/Os over and above those used. The PLC / RTU shall have sufficient communication channels to receive data from remote field instruments over wireless network. The PLC / RTU shall have built-in Ethernet communications for interfacing to SCADA. The PLC / RTU shall be housed in suitably sized CRCA sheet steel panel with all essential components such as 24VDC SMPS, Relays, Terminal Blocks, Signal Conditioners, etc.	1	Set		
7	Item No. 6 : Providing of Required Configuration Computer 500GB Hardisk, RAM 4 GB, CPU intel core i3, 22 " TFT monitor, laser printer for Displaying of All Parameters In PIP(Picture In Picture) Technology	2	Nos		
8	Item No. 07 : Providing Installing and Commissioning Of SCADA System (Software) For Automation of Radial Gates and To Get Real Time Information.	2	Nos		
9	<b>Providing and Installing Cabling &amp; Accessories :</b>				
	Power Cables between VFDs & respective motors	1	Lot		
	Control & Signal Cables between all hard-wired sensors to VFD Panel or PLC / RTU Panel	1	Lot		
	Network & Data Cable between PLC / RTU Panel & SCADA	1	Lot		
	Cabling Accessories such as Glands, Lugs, Ferrules, etc.	1	Lot		
10	<b>CCTV System</b>	4	Nos		
	CCTV Camera with Whetherproof Enclosure for each Radial gates with 90m cable each and DVR (4 Nos for 4 nos. Radial gates)				
11	<b>Providing, Installing and Commissioning Wireless Network :</b>	1	set		
	GPRS / GSM based Modems, Serial or TCP/IP with Antenna and below minimum specifications :				
	Suitable station manager software for easy integration with SCADA				
12	<b>Air-Conditioner Unit for Control Room</b>	2	Nos		
	Supplying & erecting split type room air conditioning unit 2 ton capacity 250 Volits , 50 cycles , A.C. supply having 2 Nos. of air handing units hi wall mounting type complete at position				

Sr. No.	Description	Qty.	Unit	Rate	Amount
13	<b>UPS</b>	2	Nos		
	UPS / Survo Stabiliser 4 KVA				
14	<b>Power Supply cable</b>		Per mtr.		
	Armoured copper 4 sq mm				
15	<b>Providing, installing and comissioning of VFDs at Service Gates</b>	2	Nos		
	Providing, installing and comissioning of VFDs at Service Gates to be installed near Service gate, Local panel provided. Local Mains power to the existing motor considered fo Supply. Manual operation, with VFD Bypass also considered. Service Gate control Signals from VFD, Limit switch/Encoder/Level Sensors shall be via Wireless to Main Control Room.				
16	<b>Existing DG Set Interlocking</b>	1	Nos		
	DG Set Interlock, when main power fails, system will switchover to DG, Using fast acting ATS, Automatic transfer switch OR AMF Panel				
17	<b>Solar Power Supply in Catchment area</b>	5	Nos		
	Solar Power panels with battery and Voltage Controllers for powering Rain Gauge and Wireless transmitters				
18	<b>Operation and Maintence</b>	1	Year		
	Includes technical and semi-technical manpower.				

\*Specification and make of equipment, instrument should be mentioned

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**Schedule**

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**Project : - Pujaritola Project , Dist. Gondia**

**Radial Gate- 12.2x4.27 M -13Nos**

**Left Bank Outlet Service Gate- 1.8x2.44m-3 Nos**

**Right Bank Outlet Service Gate- 1.8x2.44m-2 Nos**

The details are mentioned below.					
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3	<b>Rain Gauge :</b>	5	Nos		
	Providing Installing and commissioning of outdoor temperature and rainfall quantity (max.30m ) with temperature tendency ,indication of total rainfall quantity,of the last hour,the last 24 hour and the last rain with time and date of recording ,bar graph indication and history the last7 days ,weeks & months,rain sensor with alarm ,indication of indoor temperature , max.-min. function , adjustable temperature alarm, Clock and date measuring range temperature outdoor-- 50...+70 deg.C (-58...+158 deg.F),indoor- 10...+50 deg C (14...+122 deg F), rainfall 0...9999 mm (0...999.9 inch) with Central Monitor	1	set		

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Water Resources Department  
Budgetary Offer 1/5/2014-15

Executive Engineer, Chief Gate Erection Unit No.2, Nagpur ( PH 0712- 2522498) Email ID ee.cgeu2.ngp@gmail.com invites Budgetary offer for the Estimation Purpose from reputed and experienced company / authorised dealer for following work The offer of each Should be inclusive of all taxes, frieght and duties. The offer should reach to this office on or before 30.1.2015. Please note Budgetary offer is invited only for the estimation purpose and it does not give any assurance regarding floating of tenders or otherwise.

**Schedule**

**Subject :- Budgetary offer for Designing, Manufacturing, Providing, Installing and commissioning of Automatic operation and information (Parameters) system using SCADA technique for Radial Gate and outlet service gate**

**Project :- Lower Wardha Project , Dist. Wardha.**

**Radial Gate- 12x8 M -31 Nos**

**Outlet Service Gate- 4.8x3.9m-1 Nos**

The details are mentioned below.					
Sr. No.	Description	Qty.	Unit	Rate	Amount
1	<b>Variable Frequency Drives</b>	31	Nos.		
	Providing, Installation, designing, erection, commissioning, programming of 3 phase AC DRIVES at site of works and giving test to full Capacity for Radial Gate 12x8 mtrs.-31 nos. for reducing current and maintenance of motor for stability of mechanical equipments and civil structure on all Motors installed of 10.0 HP capacity.				
2	<b>Providing Installing Programming, Commissioning of various Sensors on Radial Gates and Outlet Service Gate Which Shall Read, Compute and display required Data.</b>	31	Nos.		
	a Actual Discharge of Each Gate b Total Discharge per Hour / per Day c Area under Irrigation in Hectares / Acres d % Opening of Each Gate and Gate Fully Open / Closed sensing e Total Electrical Energy Consumption f Energy Consumption of Each Gate per Hour / per Day g Flood Sensing and remote opening/closing in Emergency h Remote control of Each Gate i Limit Switches for Each Gate for Open & Closed position-64nos j Energy Meter for Each VFD (Gate Motor)-31 nos				
3	<b>Rain Gauge :</b>	5	Nos		
	Providing Installing and commissioning of outdoor temperature and rainfall quantity (max.30m ) with temperature tendency ,indication of total rainfall quantity,of the last hour,the last 24 hour and the last rain with time and date of recording ,bar graph indication and history the last7 days ,weeks & months,rain sensor with alarm ,indication of indoor temperature , max.-min. function , adjustable temperature alarm, Clock and date measuring range temperature outdoor-- 50...+70 deg.C (-58...+158 deg.F),indoor-- 10...+50 deg C (14...+122 deg F), rainfall 0...9999 mm (0...999.9 inch) with Central Monitor	1	set		

Sr. No.	Description	Qty.	Unit	Rate	Amount
4	<b>Level and Open channel Flow monitoring instruments</b>				
	4.1) Radar Level Transmitter for Upstream Level	1	set		
	4.2) Ultrasonic Level Transmitter, one each at Service gate for Open channel flow	1	set		
5	<b>Providing Installing Programming Commissioning of Local Control Panel</b> With Micro Processor Based Alarm Annunciation Of 36 Windows, Digital Panel Meter, Power Supply I/O's Utility Sockets Etc.	1	set		
6	<b>Item No. 5: Providinnng, Installing, Programing and commissioning of PLC control Panel.</b> All field instruments within the vicinity of the dam shall be hard-wired to the PLC / RTU while remaining instruments shall be provided with Wireless Signal Transmission facility via GPRS / GSM. The PLC / RTU shall have the necessary Wirless Modem to demand & receive the data from these instruments via GPRS / GSM at user specified time interval. The PLC / RTU shall have 128 Digital Inputs, 80 Digital Outputs & 4 Analog Inputs for all hard-wired signals leaving approximately 20% spare I/Os over and above those used. The PLC / RTU shall have sufficient communication channels to receive data from remote field instruments over wireless network. The PLC / RTU shall have built-in Ethernet communications for interfacing to SCADA. The PLC / RTU shall be housed in suitably sized CRCA sheet steel panel with all essential components such as 24VDC SMPS, Relays, Terminal Blocks, Signal Conditioners, etc.	1	Set		
7	Item No. 6 : Providing of Required Configuration Computer 500GB Hardisk, RAM 4 GB, CPU intel core i3, 22 " TFT monitor, laser printer for Displaying of All Parameters In PIP(Picture In Picture) Technology	2	Nos		
8	Item No. 07 : Providing Installing and Commissioning Of SCADA System (Software) For Automation of Radial Gates and To Get Real Time Information.	2	Nos		
9	<b>Providing and Installing Cabling &amp; Accessories :</b>		1		
	Power Cables between VFDs & respective motors	1	Lot		
	Control & Signal Cables between all hard-wired sensors to VFD Panel or PLC / RTU Panel	1	Lot		
	Network & Data Cable between PLC / RTU Panel & SCADA	1	Lot		
	Cabling Accessories such as Glands, Lugs, Ferrules, etc.	1	Lot		
10	<b>CCTV System</b>	31	Nos		
	CCTV Camera with Whetherproof Enclosure for each Radial gates with 90m cable each and DVR (4 Nos for 4 nos. Radial gates)				
11	<b>Providing, Installing and Commissioning Wireless Network :</b>	1	set		
	GPRS / GSM based Modems, Serial or TCP/IP with Antenna and below minimum specifications :				
	Suitable station manager software for easy integration with SCADA				
12	<b>Air-Conditioner Unit for Control Room</b>	2	Nos		
	Supplying & erecting split type room air conditioning unit 2 ton capacity 250 Volits , 50 cycles , A.C. supply having 2 Nos. of air handing units hi wall mounting type complete at position				

Sr. No.	Description	Qty.	Unit	Rate	Amount
13	<b>UPS</b>	2	Nos		
	UPS / Survo Stabiliser 4 KVA				
14	<b>Power Supply cable</b>		Per mtr.		
	Armoured copper 4 sq mm				
15	<b>Providing, installing and comissioning of VFDs at Service Gates</b>	1	Nos		
	Providing, installing and comissioning of VFDs at Service Gates to be installed near Service gate, Local panel provided. Local Mains power to the existing motor considered fo Supply. Manual operation, with VFD Bypass also considered. Service Gate control Signals from VFD, Limit switch/Encoder/Level Sensors shall be via Wireless to Main Control Room.				
16	<b>Existing DG Set Interlocking</b>	1	Nos		
	DG Set Interlock, when main power fails, system will switchover to DG, Using fast acting ATS, Automatic transfer switch OR AMF Panel				
17	<b>Solar Power Supply in Catchment area</b>	5	Nos		
	Solar Power panels with battery and Voltage Controllers for powering Rain Gauge and Wireless transmitters				
18	<b>Operation and Maintence</b>	1	Year		
	Includes technical and semi-technical manpower.				

\*Specification and make of equipment, instrument should be mentioned

**Note-** The contractor shall undertake full responsibility to supply, install, program, configure, test and commission the above described equipments in totality as a whole integrated system for achieving the desired functional and technical results.

The above mentioned specifications shall form the basis of the system design and shall be treated as minimum compliance specifications. Any deviations or alternate specifications offered by the contractor shall be clearly spelt out. Such deviations, unless approved by the buyer, may render the offered system technically non-compliant.. we have considered 5.5KW VFD for Service Gate. However, Motor for Service Gate is excluded from our considered scope. Arrenging/errecting Towers for Wireless transmission in your scope. [Web based Monitoring at Remote location/s without any control permissions offered with system](#)

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