### ABSTRACT ESTIMATE

## Jal Jeevan Mission (JJM)-WSS - to Santhanpara, Rajakumary (Part) and Senapathy (Part) Panchayaths in Idukki District-Package V-Supply, erection, testing and commissioning of Raw

water pump set ,Clear water pump sets

,Supply and installation of flow meters ,Electrical and allied works-General Civil Work

Sl No	Specification	Quantity	Rate	Amount	
1	Supply and installation of flow m	eters at WTP c	compound		
1.001	OD254483/2022-2023				
	<ul> <li>Supplying 350mm electro- magnetic flow meter conforming to protection level of IP 68 for</li> <li>Flow Sensor and IP-67 for transmitter and having an accuracy level of 0.5% with LED/LCD</li> <li>display unit. The flow meter should have the housing(flow sensor) to be made of SS 304</li> <li>Carbon Steel with anti corrosive protection and inside liner to be made up of Hard Rubber/Neoprene all conforming to drinking water standards. The flow meter should be</li> <li>coupled with HART for data acquisition and transfer with provision for wireless transfer</li> <li>through GSM. The manufacture should have the calibration standards as per ISO 17023 and the product shall have sufficient warranty provisions.</li> </ul>				
	Net Total	1.0001 nos	@190900.00/1 nos	190900.00	
1.002	OD254489/2022-2023				
	Labour for cutting DI pipes 350mm Dia				
	Net Total	2.000no	@378.03/no	756.06	
1.003	OD254492/2022-2023				
	Fabricating and fixing 350 mm MS	flange			
	Net Total	4.000no	@5105.14/no	20420.56	
1.004	OD254493/2022-2023				
	conveying and fixing 350 mm mech				
	Net Total	1.000no	@3616.26/no	3616.26	
1.005	OD254495/2022-2023				
	Supplying 250mm electro- magnetic flow meter conforming to protection level of 68 for Flow Sensor and IP-67 for transmitter and having an accuracy level of 0.5% with LED/LCD display unit. The flow meter should have the housing(flow sensor) to be made of 304				
	Carbon Steel with anti corrosive pro Rubber/Neoprene all conforming to				

Sl No	Specification	Quantity	Rate	Amount	
	be coupled with HART for data acquisition and transfer with provision for wireless transfer through GSM. The manufacture should have the calibration standards as per ISO 17023 and the				
	product shall have sufficient warrar	ty provisions			
	Net Total	1.0001 nos	@156400.00/1 nos	156400.00	
1.006	OD254516/2022-2023				
	Labour for cutting DI pipes 250mm	Dia			
	Net Total	2.000no	@274.74/no	549.48	
1.007	OD254504/2022-2023				
	Fabricating and fixing 250 mm MS	flange			
	Net Total	4.000no	@3594.00/no	14376.00	
1.008	OD254508/2022-2023	AN			
	conveying and fixing 250 mm mech	nanical flow met	ter		
	Net Total	1.000no	@2304.80/no	2304.80	
1.009	OD254521/2022-2023				
	ARAD/ZENNER/REYCHEM RPG/ITRON make and the flowmeter shall and certified by FCRI - Palakkad. Flow meter should be calibrated with physi measurement at site after installation. : 200 mm diameter				
	Net Total	2.000no	@34500.00/no	69000.00	
1.010	OD254524/2022-2023				
	Labour for cutting DI pipes 200mm Dia				
	Net Total	2.000no	@223.11/no	446.22	
1.011	OD254510/2022-2023				
	Fabricating and fixing 200 mm MS flange				
	Net Total	4.000no	@2924.43/no	11697.72	
1.012	OD254511/2022-2023				
	conveying and fixing 200 mm mech	nanical flow me	ter		
	Net Total	2.000no	@1625.85/no	3251.70	
1.013	OD254531/2022-2023				
	Supplying and fixing mechanical flo 4064 class B of ARAD/ZENNER/REYCHEM RPC and certified by FCRI - Palakkad. Flow measurement at	/ITRON make	and the flowmeter sl	hall be tested	

Sl No	Specification	Quantity	Rate	Amount	
	site after installation. : 150 mm diam	neter			
	Net Total	1.000no	@30003.33/no	30003.33	
1.014	OD254533/2022-2023				
	Labour for cutting DI pipes 150mm	Dia			
	Net Total	2.000no	@171.45/no	342.90	
1.015	OD254534/2022-2023				
	Fabricating and fixing 150 mm MS	flange			
	Net Total	4.000no	@2192.13/no	8768.52	
		]	Heading Total(Rs)	512833.55	
2	Electrical and allied works				
2.001	OD112108/2023-2024				
	set of 9.6KV,6KA Lightning Arrestors, 1 sets (3 nos) of 11KV, D.O fuses, Pin insulators, Disc insulators and inter connections of the above items using 8mm dia copper wire with proper copper sockets, including all associated civil works and painting of all structurers with two coats of zinchromate primer and aluminium paint etc. and earthing using 5 nos of 3m GI earthing pipes and inter connection complete as per standard construction practices approved by Kerala Electrical Inspectorate and relevant standards				
	Net Total	1.000set	@142864.50/set	142864.50	
2.002	OD254553/2022-2023				
	OUTDOOR HT BREAKER PANEI Supply, Installation, Testing & amp; Panel with the following component 11kV Load Break Swich 11kV, 350 MVA, 630A, LBS unit - Voltmeter (0 - 11kV) - 3 Nos LED Pilot Indication - LBS ON / OF Trip Push buttons - 1 Set 2NO+2NC Aux contacts - 1 Set 230V AC Shunt Trip Coil - 1 No Aluminium Busbar - 1 Set Seal off Bushings - 3 Nos Space Heater Element with Thermos Inspection Lamp LED with switch & Metering Chamber PT - 100 VA, 11kV/110V, CL 0.2S	Commissioning s. 1 set FF - 1 Set stat & wiri amp; wiring -	ng - 1 Nos	IT Breaker	

Sl No	Specification	Quantity	Rate	Amount	
	" Current Circuit: The apparent power taken by current circuit at basic current, reference frequency & amp; reference temperature shall not exceed 1.0 VA/phase. (The Quoted rate shall be inclusive of necessary control wiring, components working on LT supply should be prewired completely with necessary controls as specified till the connection point for feeding LT Supply from outside, Cable end box for receiving incoming and outgoing cables and suitable civil foundation etc as required.)				
	Net Total	1.000set	@296778.02/set	296778.02	
2.003	OD254554/2022-2023				
	HT Bidirectional TOD Meter Supply & amp; Providing 3 phase, 4wire, HT CT/PT operated, bi-directional with accuracy class 0.2S for both Active and Reactive energy, -/5A, HT static tri vector meter with TOD register, DLMS compliant & amp; AMR compatible with optical port and RS232 port having ISI Marking, suitable for measurement of active kWh, reactive energy kVARh and apparent energy kVAh and kVA MD, kW MD at nominal frequency in the range of 47.5 Hz to 52.5 Hz in balanced as well as unbalanced load conditions in the existing outdoor Meter cubicle including testing & amp; commissioning etc. complete.				
	Net Total	1.000set	@50505.56/set	50505.56	
2.004	OD254555/2022-2023	- Alexandre			
	HT Equipment Pinth, Substation Yard Fencing & amp; Levelling Providing, fabricating and fixing 2m high chainlink fencing over 4mm thick barbed wire with a framework of 50x50x6mm MS angle between vertical posts of ISMC 75 at 2400mm interval, Earthing as per KSEI/KSEB standards shall be done around the periphery of the fencing. The MS framework for chainlink fencing shall be Hot Dip Galvanised. The rate shall be inclusive of all materials, labour, lead, lift etc including escalation works and fabrication and assembly works including all nuts, bolts and other miscallaneous items etc complete as per drawing and as directed by the Engineer in Charge.				
	Net Total	20.000metre	@1388.88/metre	27777.60	
2.005	OD254558/2022-2023 HT Equipment Pinth, Substation Y Supplying and filling the substation including cost and conveyance of al Net Total	yard with 40m	m size blue jelly of 1		
2.006	OD254560/2022-2023				
2.000	HT Equipment Pinth, Substation Yard Fencing & CD254560/2022-2023 HT Equipment Pinth, Substation Yard Fencing & Comply & Comply & Comply & Comply & Comply & Comply & Complexity and the store in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) upto plinth level with : Cement mortar 1:6 (1 cement : 6 coarse sand).			coarse sand :	
	Net Total	2.000cum	@6269.13/cum	12538.26	
2.007	OD254561/2022-2023				
	Transformer Supply, installation, testing and con 3Ph, 50Hz, 11/0.433 kV,ONAN coo				

Sl No	Specification	Quantity	Rate	Amount
	transformer with tappings from +5% side & amp; LT side shall have cable have suitable enclosure for The HT complete with all standard accessor rate shall be inclusive of all materia for mounting to the existing transfor schematic diagram & amp; particula	e end box for X side & amp; LT ies and fittings ls, lead,lift, firs rmer foundatior	LPE cable. The trans side. The transform & amp; conform to IS t fill of oil, necessary complete as per sin	sformer shall er shall be S:2026. The v civil works
	Net Total	1.000no	@1167000.00/no	1167000.00
2.008	OD254562/2022-2023			
	NEUTRAL CT Supply & amp; Providing 5P10 Prot suitable enclosure including giving	connections to '	Transformer Neutral	etc.complete
2.009	Net Total OD254563/2022-2023	1.000no	@5044.65/no	5044.65
	MSB for 500KVA Transformer Supply, fabrication, erection, testing compartmentalised, dust tight, verm falling to IP54 category fabricated of standards with Aluminium Busbars double earth connection to all switc suitable chambers, front open, top c standing panel consisting of the foll confirm to conforming to IEC 6094 Incommer 800A FP Microprocessor based MC Earth Fault Relay - 1 Set 800A TPN best conductivity Alum sleeves etc. as per ISS - 1set RYB indicators ( LED Pilot type ) v Multifunction Digital Panel meter to kVAh, kVARh Class 1.0 - 1 Set 800/5A CL 1.0, 15VA Metering CT Outgoing : 250A FP Microprocessor based MC 25A FP Microprocessor based MC "Surge Protection Pluggable type surge arrester with p provision for inbuilt common remote between Line and Neutral and one r between Line and Neutral and one r between Line to Neutral & amp Discharge Current Imax 50 kA (8/2 Supports The panel shall be supported to grout Angles etc. painted with two coats of paint. The framework shall be firml concrete plinth. The Panel Board shall be provided v length. Painting letters / identification	in proof, water out of 16 SWG of of suitable size hes, internal rig able entry with owing as per sta 7-2 standards). CB (36kA) - 1 ninium busbar w with 2A Control or read V, A, F, 1 T's - 1 Set CCB (36kA) &n CCB (36kA) &n CCB (36kA) &n CCB (36kA) &n otential free co the indication for number Spark ( ving ratings inc e 230V, 50Hz, b; 50 kA (8/20 s 0 sec) -1Set&qu and using fram of Zinc Chroma y supported to g with 25 x 3mm	proof 800A LT- Ma CRCA Sheet Steel pa , earth bus of adequa id connection etc. ir water proof shroudir andards ( All switche Nos. vith SMC supports, h I MCB and toggle sw PF, kW, kVA, kVAF dash; 4Nos dash; 4Nos dash; 4Nos dash; 4Nos etfective arrester to c luding base element Nominal Discharge of sec) for Neutral to Ea uot; ework fabricated out te primer and two co ground using suitable copper earth bus for	in MV Panel ainted as per te capacity, neluding ng, free es shall neat shrinkable vitches - 4 Set X, kWh, nector & amp; o connect & amp; current 30 kA arth, Maximum of MS Flats / ats of enamel e cement the full

Sl No	Specification	Quantity	Rate	Amount	
	fuse sizes, etc., in white enamel pair that future extension be possible.	nt. The board sh	nall be fabricated in s	such a way	
	Net Total	1.000no	@243915.00/no	243915.00	
2.010	OD254564/2022-2023				
	<ul> <li>SSB</li> <li>Supply, fabrication, erection, testing and commissioning of cubicle type fully compartmentalised, dust tight, vermin proof, water proof 200A MV Panel falling to IP54 category fabricated out of 16 SWG CRCA Sheet Steel painted as per standards with Aluminium Busbars of suitable size, earth bus of adequate capacity, double earth connection to all switches, internal rigid connection etc. including suitable chambers, front open, top cable entry with water proof shrouding, free standing panel consisting of the following as per standards ( All switches shall confirm to conforming to IEC 60947-2 standards). Incoming :</li> <li>250A(36KA) MCCB FP Micro processor based, TPN best conductivity Aluminium busbar with SMC supports, heat shrinkable sleeves etc. as per ISS - 1set Multifunction Digital Panel meter to read V, A, F, PF, kW, kVA, kVAR, kWh, kVAh, kVARh Class 1.0 - 1 Set</li> <li>RYB indicators ( LED Pilot type ) with 2A Control MCB and toggle switches - 1 Set 100/5A CL 1.0, 15VA Metering CTs - 1 Set</li> <li>250A, 36kA FP MP MCCB - 4 Nos.</li> <li>20A TP D curve MCB (10kA) - 4 Nos.</li> <li>Supports</li> <li>The panel shall be supported to ground using framework fabricated out of MS Flats / Angles etc. painted with two coats of Zinc Chromate primer and two coats of enamel paint. The framework shall be firmly supported to ground using suitable cement concrete plinth.</li> <li>The Panel Board shall be provided with 25 x 3mm copper earth bus for the full length. Painting letters / identifications for the incoming and outgoing switches, cable fuse sizes, etc., in white enamel paint. The board shall be fabricated in such a way that future extenstion be possible.</li> </ul>				
	Net Total	1.000set	@46892.11/set	46892.11	
2.011	OD254565/2022-2023 APFC PANEL Automatic Power Factor Correction Mannual mode operation to be fabr coated with provision for capacitor of louvers and powder coated with a components(refer particular specific earth bus of adequate capacity, doul connection etc. including suitable of standing panel consisting of the foll Incomer 200A TPN Isolator - 1 No. 200 A TPN best conductivity Alun sleeves etc. as per ISS - 1 set Multifunction Digital Panel meter to kVAh, kVARh Class 1.0 - 1 Set	icated out of 14 mounted inside approved shade cation) with Al ole earth connect chambers, front owing as per st	guage CRCA sheet s the panel with adeq and having followin umimium Busbars of ction to all switches, open, top cable entry andards.	steel Powder uate number g specific f suitable size, internal rigid y, free	

Sl No	Specification	Quantity	Rate	Amount	
SI No	RYB indicators ( LED Pilot type ) with 2A Control MCB and toggle switches- 1 Set200/5A 15VA CL 1.0 Metering CTs - 3 SetsMicroprocessor based intelligent, 8 step IPFC relay with PF display - 1 No.Out goings63A, 10kA C Curve TP MCB - 1 Nos16A, 10kA C Curve TP MCB - 6 NosCapacitor duty contactors working on 3 Phase 415V AC supply of the followingratings wired with Pilot LED indication for ON & amp; OFF, Push Buttons forManual ON & amp; OFF operation using suitable NO / NC contacts for all the stages25 kVAr- 1 Nos10 kVAr- 6 Nos480 V,50 Hz Double di-electric polypropylene ( MPP heavy duty ) Capacitors of thefollowing ratings including fixed compensation for low load losses.25 kVAr- 1 Nos10 kVAr- 6 Nos480 V,50 Hz Double di-electric polypropylene ( MPP heavy duty ) Capacitors of thefollowing ratings including fixed compensation for low load losses.25 kVAr- 1 Nos10 kVAr- 6 NosSupportsThe panel shall be supported to ground using framework fabricated out of MS Flats /Angles etc. painted with two coats of Zinc Chromate primer and two coats of enamelpaint. The framework shall be firmly supported to ground using suitable cementconcrete plinth.The Panel Board shall be provided with 25 x 3mm copper earth bus for the fulllength. Painting letters / identifications for the incoming and outgoing switches, cable,fuse sizes, etc., in white enamel paint.				
2.012	Net Total	1.000set	@163793.15/set	163793.15	
	OD254566/2022-2023 Supply, installation, testing & amp; commissioning of best quality sheet steel, phosphatised and painted, dust and vermin proof enclosure (IP43) Vertical TPN Double door DB including copper bus bar, neutral link, earth bus and DIN rail suitable for fixing RCCB + Isolator (8 module ) as incommer and SP/TP MCB as outgoings etc. on wall using suitable anchor bolts or fixed in recess including cutting hole on the wall , making good the damages, colour washing, dressing the DB including termination etc. as required. (Including closing vaccant slots using Dummy				
	Net Total	1.000job	@10629.69/job	10629.69	
2.013	OD254568/2022-2023 Supply and providing the following MCCB/ RCCB / MCB / MCB Isolators/COS etc. to the existing DBs / MCS / Junction Boxes etc. including giving proper termination using suitable Bananna copper lugs, sleeves, insulation etc. complete. 63A, 100mA 3Ph RCCB			ntors/COS etc. r termination	
	Net Total	1.000no	@6515.22/no	6515.22	
2.014	OD254572/2022-2023 Supply and providing the following to the existing DBs / MCS / Junctio using suitable Bananna copper lugs 63A, 4P MCB Isolator	n Boxes etc. inc	cluding giving proper	ntors/COS etc. r termination	
	Net Total	1.000no	@907.53/no	907.53	
2.015	OD254573/2022-2023				

t U	Supply and providing the following				
C	Supply and providing the following MCCB/ RCCB / MCB / MCB Isolators/COS etc. to the existing DBs / MCS / Junction Boxes etc. including giving proper termination using suitable Bananna copper lugs, sleeves, insulation etc. complete. 6A to 32A, 10kA SP MCB				
	Net Total	36.000no	@215.57/no	7760.52	
2.016	OD254574/2022-2023				
t f f	HT Power Cables "Supply & laying 11KV stranded compact circular aluminium conductor, conductors screened with extruded semi conducting compound XLPE insulated, insulation screened with extruded semi conducting compound in combination with copper tape (0.3 kA for 1 sec.), cores laid up, inner sheath of PVC tape, galvanized steel flat strip armoured, and overall PVC sheathed cable of the following sizes in the existing cable trench conforming to IS: 7098 part II 1985 with latest amendments." 3C x 300 Sqm				
	Net Total	25.000metre	@2225.01/metre	55625.25	
2.017	OD254575/2022-2023	A.O.A.A			
i c s t f f	"Supply & laying 11KV stranded compact circular aluminium conductor, conductors screened with extruded semi conducting compound XLPE insulated, insulation screened with extruded semi conducting compound in combination with copper tape (0.3 kA for 1 sec.), cores laid up, inner sheath of PVC tape, galvanized steel flat strip armoured, and overall PVC sheathed cable of the following sizes in the existing cable trench conforming to IS: 7098 part II 1985 with latest amendments." 3C x 150 Sqm				
	Net Total	25.000metre	@1393.80/metre	34845.00	
2.018	OD254578/2022-2023				
د ز 1 1	HT Cable Terminations "Supplying and making Outdoor cable end jointing with heat shrinkable jointing kit, including lugs and other jointing materials, for for following sizes, XLPE aluminium conductor cable of 11 KV grade as required." 3C x 150 Sqmm				
	Net Total	2.000set	@9524.30/set	19048.60	
2.019	OD254586/2022-2023				
ئ j c 1 2	HT Cable Terminations "Supplying and making Outdoor cable end jointing with heat shrinkable jointing kit, including lugs and other jointing materials, for for following sizes, XLPE aluminium conductor cable of 11 KV grade as required." 3C x 300 Sqmm				
	<u> </u>			·	

Sl No	Specification	Quantity	Rate	Amount
2.020	OD254590/2022-2023			
	LT Power Cables Supply & amp; laying UG A2XFY,I conductor armoured power cable of trench/wall/ ceiling. 4C x 400 Sqmm			
	Net Total	50.000metre	@3144.91/metre	157245.50
2.021	OD254591/2022-2023			
	LT Power Cables Supply & amp; laying UG A2XFY,I conductor armoured power cable of trench/wall/ ceiling. 3.5C x 185 Sqmm			
	Net Total	25.000metre	@1361.31/metre	34032.75
2.022	OD254592/2022-2023			
	LT Power Cables Supply & amp; laying UG A2XFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling. 3.5C x 50 Sqmm			
	Net Total	40.000metre	@433.10/metre	17324.00
2.023	OD254599/2022-2023	FORM FOR THE	MANAGEMENT	
	LT Power Cables Supply & amp; laying UG A2XFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling. 3.5C x 35 Sqmm			
	Net Total	30.000metre	@297.26/metre	8917.80
2.024	OD254594/2022-2023			
	LT Power Cables Supply & amp; laying UG A2XFY, conductor armoured power cable of			
	trench/wall/ ceiling. 4C x 16 Sqmm		i tonowing sizes un	ough
	trench/wall/ ceiling.	30.000metre	@218.51/metre	ough 6555.30
2.025	trench/wall/ ceiling. 4C x 16 Sqmm			
2.025	trench/wall/ ceiling. 4C x 16 Sqmm Net Total	30.000metre	@218.51/metre nd PVC sheathed A1	6555.30 uminium
2.025	trench/wall/ ceiling. 4C x 16 Sqmm Net Total OD254595/2022-2023 LT Power Cables Supply & amp; laying UG A2XFY,I conductor armoured power cable of trench/wall/ ceiling.	30.000metre	@218.51/metre nd PVC sheathed A1	6555.30 uminium
2.025	trench/wall/ ceiling. 4C x 16 Sqmm Net Total OD254595/2022-2023 LT Power Cables Supply & amp; laying UG A2XFY,I conductor armoured power cable of trench/wall/ ceiling. 4C x 6 Sqmm	30.000metre PVC insulated a 1.1 KV grade c	@218.51/metre nd PVC sheathed Al of following sizes thr	6555.30 uminium ough

Sl No	Specification	Quantity	Rate	Amount	
	Supply & amp; laying UG A2XFY, PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling. 4C x 4 Sqmm				
	Net Total	110.000metre	@119.11/metre	13102.10	
2.027	OD254593/2022-2023				
	LT Power Cables Supply & amp; laying UG A2XFY, conductor armoured power cable of trench/wall/ ceiling. 3C x 35 Sqmm				
	Net Total	60.000metre	@297.26/metre	17835.60	
2.028	OD254605/2022-2023				
	LT Power Cables Supply & amp; laying UG A2XFY, conductor armoured power cable of trench/wall/ ceiling. 3C x 25 Sqmm				
	Net Total	100.000metre	@226.39/metre	22639.00	
2.029	OD254606/2022-2023				
	LT Power Cables Supply & amp; laying UG A2XFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling. 3C x 16 Sqmm				
	Net Total	50.000metre	@167.33/metre	8366.50	
2.030	OD254607/2022-2023				
	LT Power Cables Supply & amp; laying UG A2XFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling. 3C x 6 Sqmm				
	Net Total	45.000metre	@126.97/metre	5713.65	
2.031	OD254608/2022-2023				
	LT Power Cables Supply & amp; laying UG A2XFY, conductor armoured power cable of trench/wall/ ceiling. 3C x 4 Sqmm				
	Net Total	180.000metre	@101.37/metre	18246.60	
2.032	OD254609/2022-2023				
	Supply & amp; laying UG 2XFY,PV armoured Power / Control cable of trench/wall/ ceiling 4C x 2.5 Sqmm				
	Net Total	50.000metre	@237.21/metre	11860.50	

Sl No	Specification	Quantity	Rate	Amount	
2.033	OD254611/2022-2023				
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 3.5C x 185 Sqmm				
	Net Total	2.000job	@758.90/job	1517.80	
2.034	OD254612/2022-2023				
	Supplying and making end termination with brass compression gland and alum lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 3.5C x 50 Sqmm				
	Net Total	2.000job	@356.32/job	712.64	
2.035	OD254613/2022-2023				
	Supplying and making end termination with brass compression gland and alumini lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 3.5C x 35 Sqmm				
	Net Total	2.000job	@324.83/job	649.66	
2.036	OD254614/2022-2023				
	Supplying and making end termination with brass compression gland and alum lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 4C x 16 Sqmm				
	Net Total	30.000job	@270.69/job	8120.70	
2.037	OD254615/2022-2023				
	Supplying and making end terminat lugs for following size of PVC insu- conductor cable of 1.1 KV grade as 4C x 6 Sqmm	lated and PVC s	compression gland as sheathed / XLPE alu	nd aluminium minium	
	Net Total	2.000job	@237.21/job	474.42	
2.038	OD254616/2022-2023			-	
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 4C x 4 Sqmm				
	Net Total	10.000job	@237.21/job	2372.10	
2.039		10.000job	@237.21/job	2372.10	
2.039	Net Total OD254619/2022-2023 Supplying and making end terminat lugs for following size of PVC insu- conductor cable of 1.1 KV grade as 3C x 35 Sqmm	ion with brass c lated and PVC s	compression gland a	nd aluminium	
2.039	OD254619/2022-2023 Supplying and making end terminat lugs for following size of PVC insu- conductor cable of 1.1 KV grade as	ion with brass c lated and PVC s	compression gland a	nd aluminium	

Sl No	Specification	Quantity	Rate	Amount	
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. <u>3C x 25 Sqmm</u>				
	Net Total	8.000job	@240.17/job	1921.36	
2.041	OD254621/2022-2023				
	Supplying and making end terminat lugs for following size of PVC insul conductor cable of 1.1 KV grade as 3C x 16 Sqmm	lated and PVC s			
	Net Total	4.000job	@240.17/job	960.68	
2.042	OD254622/2022-2023				
	Supplying and making end terminat lugs for following size of PVC insul conductor cable of 1.1 KV grade as 3C x 6 Sqmm	lated and PVC s			
	Net Total	4.000job	@228.37/job	913.48	
2.043	OD254623/2022-2023	A COLOR			
	Supplying and making end termination with brass compression gland and alumin lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 3C x 4 Sqmm				
	Net Total	16.000job	@228.37/job	3653.92	
2.044	OD254624/2022-2023				
	Supplying and making end terminat for following size of PVC insulated of 1.1 KV grade as required. 4C x 2.5 Sqmm	ion with brass c and PVC sheat	compression gland ar hed / XLPE copperc	nd copper lugs onductor cable	
	Net Total	6.000job	@265.77/job	1594.62	
2.045	OD254630/2022-2023				
	Supply & amp; drawing the following size of FR Multi-core PVC Insulated and PVC sheathed Copper conductor round flexible wire manufactured with bright annealed bare copper conductor as per IS 8130/1984 Insulated and sheathed with electrical grade PVC compound as per IS 5831/1984 generally conforming to IS 694/1990 for working voltage up to and including 1100 V through existing PVC conduit / casing capping wall. 3C x 0.5 Sqmm			nt annealed electrical 594/1990 for	
	Net Total	100.000metre	@51.18/metre	5118.00	
2.046	OD254632/2022-2023				
	Supply & amp; drawing the following sheathed Copper conductor round fl bare copper conductor as per IS 813 grade PVC compound as per IS 583 working voltage up to and including capping wall.	exible wire man 0/1984 Insulate 1/1984 general	nufactured with brighted and sheathed with ly conforming to IS (	nt annealed electrical 594/1990 for	

Sl No	Specification	Quantity	Rate	Amount
	3C x 1.5 Sqmm			
	Net Total	100.000metre	@85.63/metre	8563.00
2.047	OD254633/2022-2023			
	Supply and providing the following specials confirming to IS 9537/1983 damages made etc.complete. 20mm dia 1.5mm thick			
	Net Total	400.000metre	@90.55/metre	36220.00
2.048	OD254634/2022-2023			
	Supply and providing the following specials confirming to IS 9537/1983 damages made etc.complete. 25mm dia 1.5mm thick			
	Net Total	300.000metre	@97.44/metre	29232.00
2.049	OD254635/2022-2023	M		
	Supply and providing the following specials confirming to IS 9537/1983 damages made etc.complete. 32mm dia 1.5mm thick			
	Net Total	150.000metre	@99.42/metre	14913.00
2.050	OD254638/2022-2023	FORM FOR THE	MANAGEMENT	
	Supply & providing Capping / 20 mm	Casing of good	quality of the follow	ving sizes.
	Net Total	100.000metre	@66.93/metre	6693.00
2.051	OD254640/2022-2023			
	Supply & providing Capping / 25 mm	Casing of good	quality of the follow	ving sizes.
	Net Total	100.000metre	@77.75/metre	7775.00
2.052	OD254643/2022-2023			
	UG Cable Tamper Protection "Providing, laying and fixing complete with G.I. fittings including trenchin 50 mm	-		-
	Net Total	20.000metre	@579.76/metre	11595.20
2.053	OD254650/2022-2023			
	"Providing, laying and fixing complete with G.I. fittings including trenchin 80 mm	-		-
	Net Total	20.000metre	@868.16/metre	17363.20
2.054	OD254651/2022-2023			

Sl No	Specification	Quantity	Rate	Amount		
	"Providing, laying and fixing following dia G.I. pipe (medium class) in ground complete with G.I. fittings including trenching (75 cm deep)and re-filling etc as required" 100 mm					
	Net Total	20.000metre	@1203.82/metre	24076.40		
2.055	OD254652/2022-2023					
	Circuit Mains Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required. 2 X 4 sq. mm + 1 X 4 sq. mm earth wire					
		150.000metre	@216.55/metre	32482.50		
2.056	OD254653/2022-2023 Circuit Mains Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required. 2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire					
	Net Total	300.000metre	@181.11/metre	54333.00		
2.057	OD254655/2022-2023					
	Circuit Mains Wiring for circuit/ submain wiring a FRLS PVC insulated copper conduc class PVC conduit as required. 2 X 1.5 sq. mm + 1 X 1.5 sq. mm ea	ctor, single core	cable in surface/ rec	essed medium		
2.050		500.000metre	@157.49/metre	78745.00		
2.058	OD254656/2022-2023 Supplying and installing following size of perforated painted with powder coating M.S. cable trays with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & amp; nuts, painting suspenders etc as required 150 mm width X 50 mm depth X 1.6 mm thickness					
	Net Total	50.000metre	@573.85/metre	28692.50		
2.059	OD254657/2022-2023					
	Supplying and installing following size of perforated painted with powder coating M.S. cable trays with perforation not more than 17.5%, in convenient sections, joint with connectors, suspended from the ceiling with M.S. suspenders including bolts & amp; nuts, painting suspenders etc as required 300 mm width X 50 mm depth X 1.6 mm thickness					
	Net Total	50.000metre	@671.30/metre	33565.00		
2.060	OD254658/2022-2023					
	Supplying and installing following a M.S. cable trays with perforation no with connectors, suspended from th & amp; nuts, painting suspenders etc	ot more than 17. e ceiling with M	5%, in convenient se	ections, joined		

Sl No	Specification	Quantity	Rate	Amount	
	600 mm width X 50 mm depth X 2	mm thickness			
	Net Total	30.000metre	@827.82/metre	24834.60	
2.061	OD254659/2022-2023				
	Laying of one number PVC insulate KV grade of following size direct in protective covering and refilling the Above 120 sq. mm and upto 400 sq	ground includi trench etc as re	ng excavation, sand		
	Net Total	50.000metre	@521.69/metre	26084.50	
2.062	OD254660/2022-2023				
	Laying of one number PVC insulate KV grade of following size direct in protective covering and refilling the Upto 35 sq. mm	ground includi	ng excavation, sand		
	Net Total	640.000metre	@349.43/metre	223635.20	
2.063	OD254661/2022-2023	AN		-	
	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required. Above 35 sq. mm and upto 95 sq. mm				
	Net Total	40.000metre	@365.17/metre	14606.80	
2.064	OD254663/2022-2023	FORM FOR THE	MANAGEMENT		
	Laying of one number PVC insulated and PVC sheathed / XLPE power cable or KV grade of following size direct in ground including excavation, sand cushion protective covering and refilling the trench etc as required. Above 95 sq. mm and upto 185 sq. mm				
	Net Total	25.000metre	@380.93/metre	9523.25	
2.065	OD254665/2022-2023				
	Laying and fixing of one number Py cable of 1.1 KV grade of following Upto 35 sq. mm (clamped with 1mr	size on wall sur		LPE power	
	Net Total	10.000metre	@42.32/metre	423.20	
2.066	OD254666/2022-2023				
	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on wall surface as required. Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)				
	Net Total	10.000metre	@112.22/metre	1122.20	
2.067	OD254667/2022-2023				
	Laying and fixing of one number P			LPE power	
	cable of 1.1 KV grade of following Above 95 sq. mm and upto 185 sq.			flat clamp)	
				flat clamp) 1318.90	

Sl No	Specification	Quantity	Rate	Amount	
	Supply and erection of 6mm MS Ch for 10 Sq.m)	nequered Plates	for covering cable tr	rench. (Rate	
	Net Total	100.000kg	@226.39/kg	22639.00	
2.069	OD254670/2022-2023				
	Supply route marker with 10cmx10 bolted / welded to 35x35x6mm ang as required.				
	Net Total	50.000no	@572.87/no	28643.50	
2.070	OD254673/2022-2023				
	Supply route marker with 10cmx10 bolted / welded to 35x35x6mm ang as required.				
	Net Total	25.000no	@414.39/no	10359.75	
2.071	OD254674/2022-2023				
	Earthing with 1200x1200x12.5 mm and providing masonry enclosure w watering pipe of 2.7 metre long etc.	ith cover plate l	having locking arran	gement and	
	Net Total	8.000set	@12882.20/set	103057.60	
2.072	OD254676/2022-2023				
	Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. (but with charcoal/ coke and salt ) as required.				
	Net Total	6.000set	@5741.55/set	34449.30	
2.073	OD254677/2022-2023				
	Supply and clamping the following cable tray using clamps fabricated f GI spacer saddles spacing of clamps colour washing etc. as required (for	rom 20 X 3 mm s not exceeding	GI flat duly painted 1 m, making good th	l or heavy duty he damages,	
		650.000metre		397319.00	
2.074	OD254678/2022-2023				
	Supply and drawing bare earthing conductors of the following sizes along with wiring/ cables and giving connection as required 2.65 mm copper conductor (12 SWG)				
	Net Total	350.000metre	@57.09/metre	19981.50	
2.075	OD254680/2022-2023				
	Supply and drawing bare earthing c wiring/ cables and giving connectio 3.15 mm copper conductor (10 SW	n as required	e following sizes alo	ng with	
	Net Total	450.000metre	@80.71/metre	36319.50	
2.076	OD254684/2022-2023				
	Supply and drawing bare earthing c wiring/ cables and giving connectio	onductors of the n as required	e following sizes alo	ng with	

Sl No	Specification	Quantity	Rate	Amount		
	4.00 mm copper conductor ( 8 SWC	5)				
	Net Total	650.000metre	@126.97/metre	82530.50		
2.077	OD254685/2022-2023					
	Supply and drawing bare earthing conductors of the following sizes along with wiring/ cables and giving connection as required 4.75 mm copper conductor (6 SWG)					
	Net Total	100.000metre	@168.31/metre	16831.00		
2.078	OD254686/2022-2023					
	Supply and providing 6 mm thick & rubber mat to withstand 3.3 KV die					
	Net Total	10.000sqm	@1744.22/sqm	17442.20		
2.079	OD254688/2022-2023					
	Supply and providing 12 mm thick rubber mat to withstand 15 KV diel front of the HT Breaker Panel.					
	Net Total	4.000sqm	@3109.46/sqm	12437.84		
2.080	OD254689/2022-2023					
	Supply and providing 5 Kg. Dry Chemical Powder type Fire Extinguisher with hose and clamps including fixing it to wall as required.					
	Net Total	4.000no	@11741.95/no	46967.80		
2.081	OD254690/2022-2023	BLIC WORKS				
	Supply and providing 9 Litre capac- primer coat of red oxide and writter MS angle frame work/ wall bracket stand including making good the da	with white pair filled with fine	nt 'FIRE' sand, painting the bi	; mounted on racket/ floor		
	Net Total	6.000no	@6550.66/no			
2.082		0.000110	000000000000000000000000000000000000000	39303.96		
2.082	OD254691/2022-2023	0.000110	C 0000100/110			
2.082	OD254691/2022-2023 Supply and providing First Aid Cha location for clear vision.			39303.96		
2.082	Supply and providing First Aid Cha			39303.96 picuous		
2.082 2.083	Supply and providing First Aid Cha location for clear vision.	urt duly framed a	and placed in a cons	39303.96		
	Supply and providing First Aid Cha location for clear vision. Net Total	ectrical Schema	and placed in a consp @524.64/set	39303.96 picuous 1049.28		
	Supply and providing First Aid Cha location for clear vision. Net Total OD254692/2022-2023 Supply and providing Laminated El	ectrical Schema	and placed in a consp @524.64/set	39303.96 picuous 1049.28		
	Supply and providing First Aid Cha location for clear vision. Net Total OD254692/2022-2023 Supply and providing Laminated El a conspicuous location for clear vis	rt duly framed a 2.000set ectrical Schema ion.	and placed in a consp @524.64/set tic diagram framed	39303.96 picuous 1049.28 and placed in		
2.083	Supply and providing First Aid Cha location for clear vision. Net Total OD254692/2022-2023 Supply and providing Laminated El a conspicuous location for clear vis Net Total	ectrical Schema 2.000set ectrical Schema ion. 2.000set m anodised Dan English and Ma	and placed in a cons @524.64/set tic diagram framed @756.94/set ger Notice Board of layalam) and conve	39303.96 picuous 1049.28 and placed in 1513.88 size 200 x entional Skull		
2.083	Supply and providing First Aid Cha location for clear vision. Net Total OD254692/2022-2023 Supply and providing Laminated El a conspicuous location for clear vision Net Total OD254693/2022-2023 Supply & amp; providing Aluminius 150 mm. with inscriptions ( both in	ectrical Schema 2.000set ectrical Schema ion. 2.000set m anodised Dan English and Ma	and placed in a cons @524.64/set tic diagram framed @756.94/set ger Notice Board of layalam) and conve	39303.96 picuous 1049.28 and placed in 1513.88 size 200 x entional Skull		
2.083	Supply and providing First Aid Cha location for clear vision. Net Total OD254692/2022-2023 Supply and providing Laminated El a conspicuous location for clear vis Net Total OD254693/2022-2023 Supply & amp; providing Aluminius 150 mm. with inscriptions ( both in and Bone in Red colour at locations	ectrical Schema 2.000set ectrical Schema ion. 2.000set m anodised Dan English and Ma as directed by t	and placed in a cons @524.64/set tic diagram framed @756.94/set ger Notice Board of layalam) and conve he Engineer in Char	39303.96 picuous 1049.28 and placed in 1513.88 size 200 x entional Skull		

Sl No	Specification	Quantity	Rate	Amount		
	Earthing design & amp; fault level calculations to the Electrical Inspectorate including all MV additions recently made and obtaining approval, arranging inspection for entire installation, obtaining sanction orders for the electrical installation, complete (Including all incidental and statutory expenses ).					
	Net Total 2.000L.S @73824.15/L.S 1					
2.086	OD94736/2023-2024					
2.000	MSB Supply, fabrication, erection, testing compartmentalised, dust tight, verm falling to IP54 category fabricated out of 16 S with Alumimium Busbars of suitable size connection to all switches, internal rigid connection top cable entry with water proof shrouding, fr per standards ( All switches shall confir Incommer 250A FP Microprocessor based MC Restricted Earth Fault Relay - 1 Set 250A FP Microprocessor based MC Restricted Earth Fault Relay - 1 Set 250A TPN best conductivity Alumi sleeves etc. as per ISS - 1 set RYB indicators ( LED Pilot type ) v Multifunction Digital Panel meter to kVAh, kVARh Class 1.0 - 1 Set 200/5A CL 1.0, 15VA Metering CT Outgoings: 100A, 16kA FP MP MCCB - 4 Nos & amp;quot;Surge Protection Pluggable type surge arrester with p & amp;amp; provision for inbuilt common remote indication and Neutral and one number Spark Gap Earth of following ratings including base elevoltage 230V, 50Hz, Nominal Discharge current 3 50 kA (8/20 sec) for Neutral to Earth, Maximum Disc 1Set" Supports The panel shall be supported to grou Angles etc. painted with two coats of Zinc O The framework shall be firmly supported	in proof, water SWG CRCA Sh e, earth bus of a on etc. including ree standing par m to conformin CCB (26kA) - 1 nium busbar wi Vith 2A Control o read V, A, F, 1 Ss - 1 Set ootential free co on for defective type arrester to ment & amp; am 0 kA (8/20 sec) charge Current und using frame Chromate prime	proof 250A LT- Ma eet Steel painted as p dequate capacity, do g suitable chambers, hel consisting of the f ag to IEC 60947-2 sta Nos. th SMC supports, he MCB and toggle sw PF, kW, kVA, kVAF ntact, thermal discon arresters to connect connect between Ne p; pluggable arrester for Line to Neutral o Imax 50 kA (8/20 sec ework fabricated out er and two coats of er	in MV Panel ber standards uble earth front open, following as andards) at shrinkable ritches - 4 Set R, kWh, nector between Line eutral and rs. Nominal & amp; amp; c) - of MS Flats / namel paint.		

Sl No	Specification	Quantity	Rate	Amount		
	The Panel Board shall be provided with 25 x 3mm copper earth bus for the full length. Painting letters / identifications for the incoming and outgoing switches, cable, fuse sizes, etc.,					
	in white enamel paint. The board shall be fabricated in such a way that future extension be possible.					
	Supply and installing 50 kvar APP capacitor for no load compansation					
	Net Total         1.000job         @120105.10/job         120105.1					
2.087	OD94737/2023-2024					
	SSB Supply, fabrication, erection, testing and commissioning of cubicle type fully compartmentalised, dust tight, vermin proof, water proof 200A MV Panel falling to IP54 category fabricated out of 16 SWG CRCA Sheet Steel painted as per standards with Alumimium Busbars of suitable size, earth bus of adequate capacity, double earth connection to all switches, internal rigid connection etc. including suitable chambers, front open,					
	top cable entry with water proof shrouding, fi per	ree standing par	nel consisting of the f	following as		
	standards (All switches shall confirm to conforming to IEC 60947-2 standards). Incoming : 100A TPN Isolator - 1 No.					
	<ul> <li>200A TPN best conductivity Aluminium busbar with SMC supports, heat shrinkable sleeves</li> <li>etc. as per ISS - 1set</li> <li>Multifunction Digital Panel meter to read V, A, F, PF, kW, kVA, kVAR, kWh, kVAh, kVARh</li> <li>Class 1.0 - 1 Set</li> <li>RYB indicators (LED Pilot type ) with 2A Control MCB and toggle switches - 1 Set</li> <li>100/5A CL 1.0, 15VA Metering CTs - 1 Set</li> <li>Outgoings:</li> <li>10A TP D curve MCB (10kA) - 1 Nos.</li> </ul>					
	Supports The panel shall be supported to grou Angles	-				
	etc. painted with two coats of Zinc The framework shall be firmly supporte The Panel Board shall be provided y	d to ground usin	ng suitable cement co	oncrete plinth.		
	The Panel Board shall be provided with 25 x 3mm copper earth bus for the full length. Painting letters / identifications for the incoming and outgoing switches, cable, fuse sizes, etc in white enamel paint. The board shall be fabricated in such a way that future extension be possible					
	Net Total	1.000job	@57062.68/job	57062.68		
2.088	OD94738/2023-2024					
	OD94738/2023-2024 Supply, installation, testing & amp; amp; commissioning of best quality sheet steel, phosphatised and painted, dust and vermin proof enclosure (IP43) Vertical TPN Double door DB					

Sl No	Specification	Quantity	Rate	Amount		
	including copper bus bar, neutral link, earth bus and DIN rail suitable for fixing RCCB + Isolator (8 module )as incommer and SP/TP MCB as outgoings etc. on wall using suitable anchor bolts or					
	fixed in recess including cutting hole on the wall, making good the damages, colour washing, dressing the DB including termination etc. as required. (Including closing vaccant slots using Dummy)					
	Net Total	1.000job	@10812.96/job	10812.96		
2.089	OD94739/2023-2024					
	Supply and providing the following to the existing DBs / MCS / Junction Box suitable Bananna copper lugs, sleeves, insul	es etc. including	giving proper termi			
	Net Total	1.000job	@10182.09/job	10182.09		
	le l	AND AND	Heading Total(Rs)	4599084.72		
<b>3</b> 3.001	Supply erection,testing and comm from WTP to Kuruvilacity discha OD34959/2023-2024	arge of 25 lps fo	ntrifugal pump set or a head of 110 m.	for CWPM		
	Supply erection,testing and commissioning of CF pumpset having a discharge of 25 lps for a head of 110 m from WTP to Kuruvilacity. Supply and erection of CF pump set with the following specification 1. Pump Supply, erection, testing and commissioning of KWA pre-qualified reputed make Centrifugal pump sets with Bronze/SS impeller, SS shaft and CI pump casing with suitable type base plate with coupling, coupling guard foundation bolts & nuts etc. complete suitable for coupling the pump and motor above the base plate etc. complete including providing suitable concrete foundation including cost of cement sand and metal etc. complete;The duty condition is as follows;Discharge - 25 lps;Total head - 110 mtrs;Size of pumping main pipe - 200 mm DI, Length-2615 m;Speed- Less than 1500 rpm. 2. Motor : Supply, erection, testing and commissioning of KWA pre qualified reputed make horizontal solid shaft foot mounted TEFC squirrel cage induction motor suitable for the above pump working 3 phase 50 Hz AC supply, working voltage 415 V/3300V (select the suitable). The motor shall confirm to IE2/IE3 as per IS12615- 2018 including providing suitable concrete foundation including cost of cement sand and metal etc. complete For 3300v motors digital motor protection relay shall be included in starter as per present CEA regulation. Flexible coupling shall be used for coupling of pumps and motors 3.Starter:Supply, erection, testing and commissioning of suitable rating Soft starter suitable for the above motor with over voltage and under voltage protection, single phase preventer, over load relay with motor protection relay with main contactor and bypass contactor as per CEA regulation and code of practice etc. complete					

Sl No	Specification	Quantity	Rate	Amount
	4. Panel board (suitable for operatin Supply, erection, testing and commi fabricated dust and vermin proof co suitable capacity MCCB as incomer going (the two MCCBs are interlock Aluminium bus bar inter connect the lamps, 1 No. volt meter with selector Complete and provided with a common connect with the MCCBs as per CE. be fitted on a common base frame o accommodate 2 soft starters. (Specifi pump set by changing 2 Nos of out printerlocking may be avoided) 5. Cabling work : Supply, laying, tec cables for the above pump set from considering energy conservation. 6. Earthing :Supply of all materials size pipe/plate earthing GI/copper st to motor, starter, panel board etc. as 7. Capacitor: Supply, erection, testin capacitor for the motor to get a pow to IS 2834. 8. Valves;Supply of suitable size be CI double flanged sluice valve and I Fitting of valves shall include proper RCC sup positive suction pump set sluice valve should repair works. 9. Suction fitting of suitable size best quality GI/MS pip of 10 m. suitable for the above pump set and suction pipe and valve with suitable flanges, nut and delivery side of the pump with the valves and main. If the dia & specials shall be provided. Also to be added at panel	g two pump set assioning of cub mmon control p and 2 Nos of s cing with each of e above MCCB or switch, 1 No. non earth bus for A regulation an n suitable found fication may be going as one ou sting and comm panel board to s and providing s trip buried in gr per IE standard fig and commiss er factor above st quality heavy Non return valv oport especially d be in suction a on and delivery e of thickness m suitable size fo bolts IR sheet e d suitable specia of suction pipe	s but one pump set a bical type floor mount oanel board consisting uitable capacity MCO other) providing suita s and fitted with 3 No Ammeter with select or the entire panel an d code of practice. The dation with provision modified if there is of at going and the provi- nissioning of suitable starter and from starter uitable earthing by u yound and giving dou ls. sioning of heavy duty 0.95. The capacitor set of duty ISI marked e with suitable presset for Non return valve as well as delivery sid pipe connections;Sup- not less than 8mm for ot valve and connect etc. complete and con- als to connect with the is above 80 mm CI p	t a time: ted MS g of 1 No. CB as out ble size os of indicator tor switch etc. d inter he panel shall to only one sion of size XLPE er to motor. sing suitable ble earthing APP shall confirm are rating. es. In case of des for easy oply and a total length ing the necting the e pumping pipes
	for safety.	2 000	@1050750.01/	2701504.02
3.002	Net Total OD90424/2023-2024	2.000no	@1850752.01/no	3701504.02
5.002	Approval from Electrical Inspectora	te /KSEB L		
	Net Total	1.000L.S	@9756.60/L.S	9756.60
		1.00000.0	· - · · · · · · · · · · · · · · · ·	

Sl No	Specification	Quantity	Rate	Amount		
	heavy duty ISI marked CI double flanged sluice valve and Non return valve with suitable pressure rating. Fitting of					
	valves shall include proper RCC support especially for Non return valves. In case of positive					
	suction pump set sluice valve should be in suction as well as delivery sides for easy repair					
	works. 9. Suction and delivery pipe connections Supply					
	and fitting of suitable size best quality GI/MS pip of 10 m.	e of thickness r	not less than 8mm for	r a total length		
	suitable for the above pump set and suction pipe and	suitable size fo	ot valve and connect	ting the		
	valve with suitable flanges, nut and delivery	bolts IR sheet e	etc. complete and con	nnecting the		
	side of the pump with the valves an main. <br&gt pipes &amp;</br&gt 					
	specials shall be provided. .Also two year Warrantee and Supply of ELCB/RCCB to be added at panel for safety.					
	Net Total	2.000no	@1133864.82/no	2267729.64		
4.002	OD90435/2023-2024	BLIC WORKS	MANAGEMENT			
	Approval from Electrical Inspectora	ate /KSEB L				
	Net Total	1.000L.S	@9756.60/L.S	9756.60		
			Heading Total(Rs)	2277486.24		
5	Supply erection,testing and comm from WTP to Jamespadi discharg	nissioning ofcen ge of 32 lps for	ntrifugal pump set f a head of 140 m.	for CWPM		
5.001	OD90901/2023-2024					
	Supply erection,testing and commiss lps for a head of 140 m from WTP-Jamespace commissioning of KWA pre-qualified Bronze/SS impeller, SS shaft and C coupling, coupling guard foundation the pump and motor above the base concrete foundation including cost of condition is as follows;Discharge - than 1500 rpm. 2. Motor : Supply, e qualified reputed make horizontal so induction motor suitable for the above working voltage 415 V/3300V (select IE2/IE3 as per IS12615-2018 included including cost of cement sand and motor motor protection relay shall be inclu- Flexible coupling shall be used for of	di. 1.Pump: Sup ed reputed mak I pump casing v n bolts , nuts etc plate etc. comp of cement sand 32 lpsTotal hea erection, testing olid shaft foot n ove pump worki ect the suitable). ding providing s netal etc. compl uded in starter a	ply, erection, testing e Centrifugal pump with suitable type ba c. complete suitable to blete including provid and metal etc. compl d – 140 mtrs and commissioning nounted TEFC squir ng 3 phase 50 Hz A0 . The motor shall cor suitable concrete fou lete For 3300v motor s per present CEA re	g and sets with se plate with for coupling ding suitable lete .The duty .;Speed- Less of KWA pre rel cage C supply, nfirm to ndation rs digital		

Sl No	Specification	Quantity	Rate	Amount
	<ul> <li>3.Starter:Supply, erection, testing an suitable for the above motor with or phase preventer, over load relay with bypass contactor as per CEA regula</li> <li>4. Panel board (suitable for operatin Supply, erection, testing and comm fabricated dust and vermin proof cosuitable capacity MCCB as incomer going (the two MCCBs are interloc. Aluminium bus bar inter connect the lamps, 1 No. volt meter with selecter Complete and provided with a common connect with the MCCBs as per CE be fitted on a common base frame of accommodate 2 soft starters. (Specipump set by changing 2 Nos of out interlocking may be avoided)</li> <li>5. Cabling work : Supply, laying, te cables for the above pump set from considering energy conservation.</li> <li>6. Earthing :Supply of all materials size pipe/plate earthing GI/copper s to motor, starter, panel board etc. as 7. Capacitor: Supply, erection, testi capacitor for the motor to get a pow to IS 2834.</li> <li>8. Valves: Supply of suitable size be flanged sluice valve and Non return valves shall include proper RCC supositive suction pump set sluice val for easy repair works</li> <li>9. Suction and delivery pipe connect quality GI/MS pipe of thickness not for the above pump set and suitable and valve with suitable flanges, nut the delivery side of the pump with t pumping main .If the dia of suction provided;.Also two year Warrantee for safety.</li> </ul>	ver voltage and th motor protect tion and code of ag two pump set issioning of cub ommon control p r and 2 Nos of s king with each of e above MCCB or switch, 1 No. mon earth bus for A regulation an on suitable found fication may be going as one ou esting and comm panel board to s and providing s trip buried in gr s per IE standard ng and commiss yer factor above est quality heavy valve with suita pport especially ve should be in tions: Supply and tess than 8mm size foot valve and bolts IR sho he valves and su pipe is above 80	under voltage protection relay with main of f practice etc. complete s but one pump set a ical type floor mount on the board consistinuitable capacity MC0 other) providing suita s and fitted with 3 N Ammeter with selector the entire panel and d code of practice. T dation with provision modified if there is of t going and the proventies starter and from start uitable earthing by u ound and giving dou ds. sioning of heavy duty 0.95. The capacitor and y duty ISI marked Ca able pressure rating. for Non return valve suction as well as de and fitting of suitable for a total length of and connecting the s eet etc. complete and uitable specials to co 0 mm CI pipes speci	tion, single contactor and ete t a time: ted MS g of 1 No. CB as out able size os of indicator tor switch etc. d inter The panel shall to only one ision of e size XLPE er to motor. Using suitable able earthing y APP shall confirm I double Fitting of es. In case of elivery sides size best 10 m. suitable auction pipe I connecting nnect with the als shall be
	Net Total	2.000no	@2857147.16/no	5714294.32
5.002	OD90436/2023-2024			
	Approval from Electrical Inspectora		@0756 (0/L C	0756 60
	Net Total	1.000L.S	@9756.60/L.S	9756.60
6	Supply erection,testing and comn from WTP to Poopara discharge	nissioning of ce		5724050.92 for CWPM
6.001	OD90914/2023-2024			
0.001	Supply erection, testing and commis lps for a	sioning of CF p	umpset having a dise	charge of 38

Sl No	Specification	Quantity	Rate	Amount	
	head of 146 m from WTP to Poopara. Supply and erection of CF pump set with the following specification 1. Pump Supply, erection, testing and commissioning of KWA pre-qualified reputed make Centrifugal pump sets with				
	Bronze/SS impeller, SS shaft and CI pump casing with suitable type base plate with coupling, coupling guard foundation bolts & amp; amp; nuts etc. complete suitable for coupling the pump				
	and motor above the base plate etc. complete including providing suitable concrete foundation including cost of cement sand and metal etc.				
	complete The duty condition is as follows Discharge - 38 lps;Total head - 146 mtrs.Size of				
	<ul> <li>pumping main pipe - 250 mm DI, Length-5407 m;Speed- Less than 1500</li> <li>rpm. 2. Motor : Supply, erection, testing and commissioning of KWA pre qualified</li> <li>reputed make horizontal solid shaft foot mounted TEFC squirrel cage induction motor</li> <li>suitable for the above pump working 3 phase 50 Hz AC supply, working voltage 415</li> <li>V/3300V (select the suitable). The motor shall confirm to IE2/IE3 as per IS12615-</li> <li>2018 including providing suitable concrete foundation including cost of cement sand</li> <li>and metal etc. complete For 3300v motors digital motor protection relay shall be</li> <li>included in starter as per present CEA regulation. Flexible coupling shall be used for</li> </ul>				
	3.Starter:Supply, erection, testing a suitable for the above motor with or phase preventer, over load relay with bypass contactor as per CEA regula 4. Panel board (suitable for operatin Supply, erection, testing and comm fabricated dust and vermin proof co suitable capacity MCCB as income going (the two MCCBs are interloc Aluminium bus bar inter connect th lamps, 1 No. volt meter with selector Complete and provided with a comm connect with the MCCBs as per CE be fitted on a common base frame of accommodate 2 soft starters. (Speci	nd commissioni ver voltage and th motor protect tion and code o ng two pump set issioning of cub ommon control p r and 2 Nos of s king with each o e above MCCB or switch, 1 No. mon earth bus f A regulation an on suitable found	ng of suitable rating under voltage protec- tion relay with main of f practice etc. comple- ts but one pump set a bical type floor moun panel board consistin uitable capacity MC other) providing suita s and fitted with 3 N Ammeter with selec- or the entire panel an d code of practice. T dation with provision	tion, single contactor and ete t a time: ted MS g of 1 No. CB as out able size os of indicator tor switch etc. id inter The panel shall to	
	pump set by changing 2 Nos of out interlocking may be avoided) 5. Cabling work : Supply, laying, te cables for the above pump set from considering energy conservation. 6. Earthing :Supply of all materials size pipe/plate earthing GI/copper s to motor, starter, panel board etc. as 7. Capacitor: Supply, erection, testi capacitor for the motor to get a pow to IS 2834. ;8. Valves <br&an< td=""><th>going as one ou esting and comm panel board to and providing s trip buried in gr s per IE standard ng and commiss yer factor above</th><td>It going and the proventies of suitable starter and from start suitable earthing by uround and giving doured and giving doured s. Sioning of heavy duty 0.95. The capacitor start st</td><td>ision of e size XLPE er to motor. using suitable ible earthing y APP shall confirm</td></br&an<>	going as one ou esting and comm panel board to and providing s trip buried in gr s per IE standard ng and commiss yer factor above	It going and the proventies of suitable starter and from start suitable earthing by uround and giving doured and giving doured s. Sioning of heavy duty 0.95. The capacitor start st	ision of e size XLPE er to motor. using suitable ible earthing y APP shall confirm	

Sl No	Specification	Quantity	Rate	Amount		
	SpecificationQualityRateAmountheavy duty ISI marked CI double flanged sluice valve and Non return valve with suitable pressure rating.Fitting ofvalves shall include proper RCC support especially for Non return valves. In case of positive suction pump set sluice valve should be in suction as well as delivery sides for easy repair works.&amp;lt;br&amp;gt;9. Suction and delivery pipe connections&amp;lt;br&amp;gt;Supply and fitting of suitable size best quality GI/MS pipe of thickness not less than 8mm for a total length of 10 m. suitable for the above pump set and suitable size foot valve and connecting the suction pipe and valve with suitable flanges, nut and bolts IR sheet etc. complete and connecting the delivery side of the pump with the valves and suitable specials to connect with the pumping main.&amp;lt;br&amp;gt;If the dia of suction pipe is above 80 mm CI					
	pipes & specials shall be provided. .Also two year Warrantee and Supply of ELCB/RCCB to be added at panel for safety.					
	Net Total	2.000no	@3836639.13/no	7673278.26		
6.002	000000000000000000000000000000000000000	BLIC WORKS				
	Approval from Electrical Inspectora					
	Net Total	1.000L.S	@9756.60/L.S	9756.60		
			Heading Total(Rs)	7683034.86		
7	Supply erection, testing and comm at raw water pump house	nissioning of 5	5HP Vertical turbi	ne pump set		
7.001						
	Supply and erection of Vertical Turbine pump set with following specifications. Supply, erection, testing and commissioning of VT Pump sets at RAW water pump house- 96 lps discharge and 30 m head. Size of pumping main:350 mm DI K9, Length of pumpingmain:800 m, Maximum length of column pipe: below 1.5m, Casing: Cast iron, Speed: below 1500 rpm Supply, erection, testing and commissioning of KWA approved make ISI marked high efficiency type , self water lubricated above floor discharge type vertical turbine pump with bronze impeller , SS shaft , MS fabricated (minimum 8 mm ) flanged column assembly with strainer and all accessories conforming to IS 1710. The pump shall be					

Sl No	Specification	Quantity	Rate	Amount	
	coupled with suitable vertical hollow motor specified in item No. 2. Casing: Cast iron Speed: below 1500 rpm Impeller : Enclosed type Bronze LTB 2 dynamically balanced as per ISO1940 grade 3 standards Sleeve: SS 304  Colum shaft - SS 410   Pump shaft - SS 316 Bowl Casing ring: Bronze LTB 2Epoxy painted MS Column				
	<ul> <li>pipe 10 mm Thick flanged ends each having length below 1.5 Meter. Strainer fabricated with</li> <li>SS 304 Bearings for spider and bowl synthetic Rubber with outer brass/CI shell &amp; amp;amp;lt;br&amp;amp;gt;Discharge Head Bearing - Thrust / angular roller &amp; amp;amp;lt;br&amp;amp;gt;Ratchet&amp;amp;lt;br&amp;amp;gt;assembly unlocking Centrifugally action &amp; amp;amp;lt;br&amp;amp;gt;&amp; amp;amp;lt;br&amp;amp;gt;Minimum Efficiency: suitable to achieve minimum 70% efficiency for pump &amp; amp;amp;amp; motor&amp;amp;lt;br&amp;amp;gt;(</li> <li>Vibrations should be limited as per HIS 9.6.4.3 standards.&amp; amp;amp;lt;br&amp;amp;gt;Pump performance</li> </ul>				
	<ul> <li>tolerance should be subject to Hydrate Institute standard class A - No negative&amp;amp;lt;br&amp;amp;gt;tolerance is applicable in efficiency and no positive tolerance in power ).</li> <li>Supply, erection, testing and commissioning of suitable rating high efficiency Kirlosker/crompton/BHEL/Marthon/Alstom or equivalent KWA approved make EF1 squirrel cage Induction,SPDP,Vertical hollow shaft motor suitable for direct&amp;amp;lt;br&amp;amp;gt;coupling with the above pump having RPM below 1500 or nearest capable to operate on voltage</li> </ul>				
	of 41: Ambient temp.rise. conforming to relevant IS. Motor <b supporting certificates to prove EF1 or EF2.<br& Design, supply, erection, testing and</br& </b 	5V(+/-10%)501 or> amp;gt;	hz(+/-3%)ÂC 3 phas; ;shall be energy effic	e,50 degree	
	clad, totally enclosed, dust tight and vermin pro- fabricated out of 16 swg. Mild steel supply system. The panel board for one wo change over switch for pumpsets, incoming main as outgoing. The panel board consistin CTS with	sheet for opera orking a a time v n and 2 nos 250	tion 3 phase, 415 vol with 500 A SFU as ir Amps TPN SFU wit	lts 50 Hz, AC ncomer, th HRC fuse	
l	selector switch, indication lamps ne	cessary control	<br&am< th=""><th>p;amp;gt;fuse</th></br&am<>	p;amp;gt;fuse	

Sl No	Specification	Quantity	Rate	Amount	
	base with HRC fuse				
	and				
	Nutral link etc.also one year Warrantee and Supply of ELCB/RCCB to be added at				
	panel for safety. The switch board surface treated after degreasing, pickling, phospating etc				
	anti-rust primer coating followed by two coa	ts of spray pain	t of approved shade	as standard	
	construction	ts of spray pair	t of approved shade a	as standard	
	practice approved by the Kerala Electrical Inspectorate standard and as standard practice. 				
	Supply and fitting of suitable rating (MDXL)power <br&am< td=""><td></td><th></th><td></td></br&am<>				
	connecting copper	ip,ainp,gt,capa	nor white capacitor in	ixing stand,	
	cables,				
	termination etc. suitable for the abore	ve motor as per	IE rules. KVAR sha	ll be provided	
	enhancing existing power factor to unity. Supply and installation of suitable				
	size,CI			10 1 40 4 6	
	Double Flanged heavy duty Sluice 2000. The	Valve with cap	PN 2.0, conforming	to IS 14846 -	
	size shall not be less than the size of	f pump			
	delivery <br&amp< td=""><td>gt;Supply and</td><th></th><td></td></br&amp<>	gt;Supply and			
	installation <br&ar< td=""><td>mp<mark>;gt;of</mark> suitabl</td><th>e size best quality, IS</th><td>SI marked</td></br&ar<>	mp <mark>;gt;of</mark> suitabl	e size best quality, IS	SI marked	
	heavy duty cast iron, double				
	flanged reflux non return valve (PN2) as per IS: 5312, The size shall not be less than the size of				
	pump delivery 				
	Starter <br&g< td=""><td>t;Supplying&amp;a</td><th>mp;amp;lt;br&amp;a</th><td>mp;gt;a</td></br&g<>	t;Supplying&a	mp;amp;lt;br&a	mp;gt;a	
	complete integrated soft starter panel capable of				
		tion level of IP	40 or more with inte	grated bypass	
	operating the motor having a protection level of IP 40 or more with integrated bypass contactor				
	in the panel and motor protection relay having parameters as per IE rules with a				
	power control				
	MCB and line power contactor and the starting current shall be 2.50- 3.50 times the normal full				
	load current of motor with ammeter	, voltmeter and	phase indicators,		
	space <br&gt< td=""><td></td><th></th><td>ving an</td></br&gt<>			ving an	
	insulation level of 1100				
	V. The standard is to be IEC 60947-				
	4.2.  Supply and installation of 150mm dia, Glycerence filled pressure gauge with stop				
	cock/ valve to				
	be fitted in a stand or wall visible while operating the valves with copper tube				
	connections	.amn.lt.hr&am	a.amp.at.		
	suitable for the above pumps.& Supply of all materials and providin CI plate			200x12mm	
	buried in ground at a depth of 3m fr and salt	rom ground leve	el with alternate layer	rs of charcoal	
	including the supply and fixing of 32mm dia preforated GI pipe, funnel for watering				

Sl No	Specification	Quantity	Rate	Amount		
	SpecificationQuantityRateAmountpurposes, with MS/CI cover etc. as per IE standards conforming of IS 3043/87.&amp;lt;br&amp;gt; Supply, laying and giving earthing connections to motors, starters, capacitors, panel boards etc. using suitable size copper flat as per IE rules.&amp;lt;br&amp;gt; Supply, laying, termination and connecting of (Suitable size ) (AYFY/XLPE) insulated armoured Copper cable for working voltage up to 1100 volt confirming to relevant IS specification to lead cable from panel board to starter and starter to motor and starter to capacitor including terminations materials such as gland, socket, gland earth etc. as per IE rules.&amp;lt;br&amp;gt; Erecting the above motor pump set in suitable concrete foundation including fixing the starter, motor, cubical panel board including cost of all materials etcInstalling the electrical items, wiring and earthing, giving connection etc.as directed by the departmental officers as per IE rules and ISI specifications, fitting suction and delivery pipes and specials, Sluice valve, Gauges etc. including clamping wherever necessary etc. complete and trial run for a period of one week to the satisfaction of the authority officers&am;lt;br&amp;gt;Including cost of all					
	&amp;lt;br&amp;gt; the components specified above including 2 warranteeNet Total2.000no@1931703.38/no3					
7.002	OD85432/2023-2024	2.000110	@1951705.58/110	3863406.76		
7.002	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with					
	Net Total	2.000set	@7242.38/set	14484.76		
7.003	OD85447/2023-2024					
	Earthing strip of 50 x 6 mm GI strip					
	Net Total	2.000metre	@8364.50/metre	16729.00		
7.004	OD85452/2023-2024					
	Submitting application to KSEBL for power connection and power extension					
	Net Total	1.000L.S	@3000.01/L.S	3000.01		
			Heading Total(Rs)	3897620.53		
8	Supply Erection ,testing and commissioning of 5 Ton capacity crane at CW pump house					
8.001	OD94754/2023-2024					
	Design manufacture and supply of HOT overhead travers trolly crane 5 ton capaci					

Sl No	Specification	Quantity	Rate	Amount	
	chain-pully block and geared rolley having wall to wall horizontal movement etc. for smooth functioning of the crane as per IS Specification including all fittings and all incidental charges including painting the exposed surface with following specifications Type and construction of crane Single girder HOT (Design code IS 3832) Hook IS 8610 Load chain IS 6216(Alloy steel Grade 80) Hand chain IS 2420 MS Grade 30 brake type self actuating screw friction and disc type.				
	Net Total	1.000set	@138474.03/set	138474.03	
8.002	OD94753/2023-2024				
	Erection and commissioning of HOT over head crane including providing and fixing suitable size 45 x 45 MS base plate 18mm thick over the existing RCC shade 8 Nos brackets by drilling, fixing belt of suitable size and grouting with CM and welding LT grider ISHB 250 x 125 with MS base plate and also fixing the ends of the LT grider to the size suitably and also providing LT rail with suitable end stoppage. This also included provision for box type fabricated from rolled steel section and carriages of suitable construction with all good quality accessories line gears, wheels, axils, rubber buffers, bearing etc., the work also consists of all tools and equipment, labour supervision, load testing all safety devices and clarification of crane after completion of work. The rate inclusive of MS base plate and steppers and carriages etc.				
	Net Total	1.000L.S	@134734.00/L.S	134734.00	
8.003	OD94752/2023-2024				
	Supply, Fabrication and erection of long travel (LT) girder 300 mm depth fixing to the base plate at the existing bracket at site including cutting, hoisting and fixing in position and painting the exposed surface with two coats of zinc chromic primer and 2 coats of synthetic enamel paint including cost labor charges and conveyance of all materials etc., complete and as directed by the departmental officers.				
	Net Total	0.600tonne	@124861.25/ton ne	74916.75	
8.004	OD94751/2023-2024				
	OD68953/2023-2024 Supply, Fabrication and erection of long travel(LT rains polished square bars of size 80 x 80mm thick to the LT girder and painting to the exposed surface as detailed in above item complete				
	Net Total	1.500quintal	@10453.50/quint al	15680.25	
	Heading Total(Rs) 363805.0				
	<b>Total Estimation PAC</b> 28769176.47			28769176.47	
Sl No	Description		Percentage/LS	Amount	
9	Lumsum Heading				
9.001 LS Amount for Electrification					
9.001		0.00	0.00%	6400000.00	
		Tota	l Lumsum Amount	6400000.00	
10	Extra Charges				
9.001	Provision for GST				

Sl No	Specification	Quantity	Rate	Amount
		28769176.47	18.00%	5178451.76
	Grand Total		40347628.2 3	
			Round off	2371.77
			Rounded Total(Rs)	40350000.00
	Rupees Four Crore Three Lakh Fif	ty Thousand		

