

Civil Works.(a) Design and Construction of Electrical Control room, RCC Columns with foot bridge to Thonithady Raw water pumping station(1) Control room and foot bridge.

1 Specification Code: od2083/2019_2020

od2083/2019_2020 :Providing sanitary facilities and electrical works including water closet ,flushing cistern ,wash basin, steel taps, 250ltr capacity PVC water tank and other required sanitary and electrical fittings as per the direction of departmental officers in charge.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
17.2.1	Rate as per item number 17.2.1 of SH: Sanitary Installations	No	1.00000	4567.20	4567.20	
17.5.2	Rate as per item number 17.5.2 of SH: Sanitary Installations	No	1.00000	12171.80	12171.80	
17.7.7	Rate as per item number 17.7.7 of SH: Sanitary Installations	No	1.00000	1906.45	1906.45	
17.28.1.2	Rate as per item number 17.28.1.2 of SH: Sanitary Installations	No	2.00000	85.45	170.90	
17.28.2.2	Rate as per item number 17.28.2.2 of SH: Sanitary Installations	No	1.00000	87.75	87.75	
1649	Polyethylene water storage tank with cover and suitable locking arrangemnet	per litre	250.00000	5.50	1375.00	
MR	Providing connections to PVC storage tank from water main and tank to taps including necessary pipes and fittings	No	1.00000	3000.00	3000.00	
MR	Providing 2 Nos steel taps including fittings	No	2.00000	550.00	1100.00	
MR	Providing electrification works including 2Nos light points and other charges	L.S	1.00000	7500.00	7500.00	
TOTAL					31879.10	
Add Water Charges @ 1%					129.75	
Add CPOH @ 15%					1965.71	
cost for one No					33974.56	
say					33974.56	

Cost index 41.53 %	8514.13
Total with Cost index	42488.69

2 Specification Code: od148982/2018_2019

od148982/2018_2019 :Providing gantry girder arrangements to existing pump house with allied works etc.complete.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Providing gantry girder arrangements to existing pump house with allied works etc.complete.	No	1.00000	80000.00	80000.00	
TOTAL					80000.00	
cost for one No					80000.00	
say					80000.00	

Cost index 41.53 %	.00
Total with Cost index	80000.0

3 Specification Code: od173455/2020_2021

od173455/2020_2021 :Providing and fixing MS hook of 22mm dia, bend to shape in RCC slab (ceiling of control room) or beam as per standards including painting the exposed portion

Code	Description	Unit	Quantity	Rate	Amount	Remarks
1003	Mild Steel round bar above 12 mm dia	quintal	0.03000	4400.00	132.00	
0103	Blacksmith 2nd class	Day	0.04000	679.00	27.16	
0114	Beldar	Day	0.04000	558.00	22.32	
9988	Carriage and sundries	L.S	1.00000	2.00	2.00	
TOTAL					183.48	
Add Water Charges @ 1%					1.83	
Add CPOH @ 15%					27.80	
cost for one No					213.11	
say					213.11	

Cost index 41.53 %	88.50
Total with Cost index	301.61

Civil Works.(a) Construction of Electrical Control room, RCC Columns with foot bridge to Thonithady Raw water pumping station-(3)Construction of waste water drain.Civil works-(b)Construction of Electrical Control room at water treatment plant site Alady and approach road work..(1)Construction of control room .

4 Specification Code: od173455/2020_2021

od173455/2020_2021 :Providing and fixing MS hook of 22mm dia, bend to shape in RCC slab (ceiling of control room) or beam as per standards including painting the exposed portion

Code	Description	Unit	Quantity	Rate	Amount	Remarks
1003	Mild Steel round bar above 12 mm dia	quintal	0.03000	4400.00	132.00	
0103	Blacksmith 2nd class	Day	0.04000	679.00	27.16	
0114	Beldar	Day	0.04000	558.00	22.32	
9988	Carriage and sundries	L.S	1.00000	2.00	2.00	
TOTAL					183.48	
Add Water Charges @ 1%					1.83	
Add CPOH @ 15%					27.80	
cost for one No					213.11	
say					213.11	
Cost index 41.53 %					88.50	
Total with Cost index					301.61	

Civil work (b)Construction of Electrical Control room at water treatment plant site Alady and approach road work.(2).Construction of concrete road and retaining wall.

5 Specification Code: od165801/2020_2021

od165801/2020_2021 :Dry rubble masonry with hard stone in foundation and plinth including leveling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) up to plinth level with:

Details of cost for 1 cum Material

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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1157	Stone for masonry work	cum	1.00000	1100.00	1100.00	
1154	Through and bond stone size 24 x 24 x 39cm	100 nos	7.00000	5000.00	350.00	
2215	Soling stone & masonry stone	cum	1.16000	122.08	141.61	
0125	Mason (for plain stone work) 2nd class	Day	1.07000	679.00	726.53	
0114	Beldar	Day	1.07000	558.00	597.06	
9999	Sundries	L.S	45.76000	2.00	91.52	
9999	Sundries	L.S	4.42000	2.00	8.84	
TOTAL					3015.56	
Add Water Charges @ 1%					30.16	
Add CPOH @ 15%					456.86	
cost for one cum					3502.57	
say					3502.57	
Cost index 41.53 %					1454.62	
Total with Cost index					4957.19	

Kerala Water Authority

2- Electromechanical works2(a)- Supply, erection, testing and commissioning of 400 KVA Transformer and allied works at Alady plant compound- (1)- 11 KV substation and HT equipments

6 Specification Code: od194695/2018_2019

od194695/2018_2019 :Erection of RCC/ PCC pole of following length in brick ballast and ramming the foundation, finishing with 150 mm thick cement concrete (1:3:6) layer on top with including excavation and refilling etc. as required.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Erection of RCC/ PCC pole of following length in brick ballast and ramming the foundation, finishing with 150 mm thick cement concrete (1:3:6) layer on top with including excavation and refilling etc. as required.(rate as per vetted estimate)	Nos	1.00000	4957.00	4957.00	
TOTAL					4957.00	
cost for one Nos					4957.00	

say	4957.00
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Cost index 41.53 %	.00
Total with Cost index	4957.0

7 Specification Code: od194696/2018_2019

od194696/2018_2019 :Supplying and erection of a set of cross bracing frame work for 11 KV over head line double pole structure having four members fabricated out of 50 mm X 50 mm X 6 mm angle iron to form a rectangle of minimum size 1400 mm width X 2500 mm height, complete with 50 mm X 6mm M.S. flat iron clamps, bolts and nuts including drilling holes for insulator pins, bolts and nuts etc. (as per drawing) and painting with primer and finish paint as required.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supplying and erection of a set of cross bracing frame work for 11 KV over head line double pole structure having four members fabricated out of 50 mm X 50 mm X 6 mm angle iron to form a rectangle of minimum size 1400 mm width X 2500 mm height, complete with 50 mm X 6mm M.S. flat iron clamps, bolts and nuts including drilling holes for insulator pins, bolts and nuts etc. (as per drawing) and painting with primer and finish paint as required.	set	1.00000	6552.00	6552.00	
TOTAL					6552.00	
cost for one set					6552.00	
say					6552.00	

Cost index 41.53 %	.00
Total with Cost index	6552.0

8 Specification Code: od194697/2018_2019

od194697/2018_2019 :Erection of double pole 3 wire cross arm for 11 KV/22 KV/33 KV over head lines as required.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Erection of double pole 3 wire cross arm for 11 KV/22 KV/33 KV over head lines as required.	Nos	1.00000	967.00	967.00	
TOTAL					967.00	
cost for one Nos					967.00	
say					967.00	

Cost index 41.53 %	.00
Total with Cost index	967.0

9 Specification Code: od194698/2018_2019

od194698/2018_2019 :Supplying and erection of 11 kV pin insulator complete with large steel head G.I. pin, nuts, washers etc. as required.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supplying and erection of 11 kV pin insulator complete with large steel head G.I. pin, nuts, washers etc. as required.	set	1.00000	349.00	349.00	
TOTAL					349.00	
cost for one set					349.00	
say					349.00	

Cost index 41.53 %	.00
Total with Cost index	349.0

10 Specification Code: od194699/2018_2019

od194699/2018_2019 :Supplying and erection of three piece nonlinear resistor type lightning arrester suitable for 3 wire, 11 kV overhead lines with rated voltage 9 kV (rms) with a nominal discharge current rating of 5 kA and complete with galvanised clamping arrangement, G.I. bolts, nuts, washers etc. as required.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supplying and erection of three piece nonlinear resistor type lightning arrester suitable for 3 wire, 11 kV overhead lines with rated voltage 9 kV (rms) with a nominal discharge current rating of 5 kA and complete with galvanised clamping arrangement, G.I. bolts, nuts, washers etc. as required.	set	1.00000	3601.00	3601.00	
TOTAL					3601.00	
cost for one set					3601.00	
say					3601.00	

Cost index	41.53 %	.00
Total with Cost index		3601.0

11 Specification Code: od194700/2018_2019

Kerala Water Authority

od194700/2018_2019 :OUTDOOR HT BREAKER PANEL (LBS) Supply, Installation, Testing & Commissioning of 11kV Outdoor HT Breaker Panel with the following components. 11kV Load Break Swich 11kV, 350 MVA, 630A, LBS unit - 1 set Voltmeter (0 - 11kV) - 3 Nos LED Pilot Indication - LBS ON / OFF - 1 Set 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 Thermostat & wiring - 1 Nos Inspection Lamp LED with switch & wiring - 1 set Metering Chamber PT - 100 VA, 11kV/110V, CL 0.2S - 1 No CT - */5A, 15VA, CL 0.2S - 3 Nos Provisions for mounting 3 phase, 4wire, HT CT/PT operated, bi- directional TOD meter with accuracy class 0.2S including wiring and test terminal block, site glass etc. - 1 set Voltage Circuit: The active & apparent power consumption of voltage circuit including power supply of meter at reference voltage, reference temperature & frequency shall not exceed 1.0 Watt & 4.0 VA per phase Current Circuit: The apparent power taken by current circuit at basic current, reference frequency & 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.) Supply & Labour

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Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	<p>OUTDOOR HT BREAKER PANEL (LBS) Supply, Installation, Testing & Commissioning of 11kV Outdoor HT Breaker Panel with the following components. 11kV Load Break Switch 11kV, 350 MVA, 630A, LBS unit - 1 set Voltmeter (0 - 11kV) - 3 Nos LED Pilot Indication - LBS ON / OFF - 1 Set 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 Thermostat & wiring - 1 Nos Inspection Lamp LED with switch & wiring - 1 set Metering Chamber PT - 100 VA, 11kV/110V, CL 0.2S - 1 No CT - *5A, 15VA, CL 0.2S - 3 Nos Provisions for mounting 3 phase, 4wire, HT CT/PT operated, bi- directional TOD meter with accuracy class 0.2S including wiring and test terminal block, site glass etc. - 1 set Voltage Circuit: The active & apparent power consumption of voltage circuit including power supply of meter at reference voltage, reference temperature & frequency shall not exceed 1.0 Watt & 4.0 VA per phase Current Circuit: The apparent power taken by current circuit at basic current, reference frequency & 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.) Supply & Labour</p>	set	1.00000	215359.00	215359.00	
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	TOTAL	215359.00
	cost for one set	215359.00
	say	215359.00

	Cost index 41.53 %	.00
	Total with Cost index	215359.0

12 Specification Code: od194701/2018_2019

od194701/2018_2019 :HT Bidirectional TOD Meter Supply & 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 & 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 & commissioning etc. complete.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	HT Bidirectional TOD Meter Supply & 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 & 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 & commissioning etc. complete..	set	1.00000	43954.00	43954.00	
TOTAL					43954.00	
cost for one set					43954.00	
say					43954.00	

Cost index	41.53 %	.00
Total with Cost index		43954.0

13 Specification Code: od194702/2018_2019

od194702/2018_2019 :HT Equipment Pinth, Substation Yard Fencing & 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 miscellaneous items etc complete as per drawing and as directed by the Engineer in Charge.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	HT Equipment Pinth, Substation Yard Fencing & 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 miscellaneous items etc complete as per drawing and as directed by the Engineer in Charge.	metre	1.00000	1298.00	1298.00	
Kerala Water Authority					TOTAL	1298.00
					cost for one metre	1298.00
					say	1298.00
					Cost index 41.53 %	.00
					Total with Cost index	1298.0

14 Specification Code: od194703/2018_2019

od194703/2018_2019 :Supplying and filling the substation yard with 40mm size blue jelly of 150mm thick including cost and conveyance of all materials, labour charges etc complete

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	Supplying and filling the substation yard with 40mm size blue jelly of 150mm thick including cost and conveyance of all materials, labour charges etc complete	cum	1.00000	3017.00	3017.00	
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TOTAL					3017.00
cost for one cum					3017.00
say					3017.00

Cost index 41.53 %					.00
Total with Cost index					3017.0

15 Specification Code: od194705/2018_2019

od194705/2018_2019 :400 KVA Transformer- Supply, installation, testing and commissioning of one number 400 kVA, DYn11, 3Ph, 50Hz, 11/0.433 kV, ONAN cooled, copper wound outdoor distribution transformer with tappings from +5% to -10% in steps of 2.5% with OFTC. The HT side & LT side shall have cable end box for XLPE cable. The transformer shall have suitable enclosure for The HT side & LT side. The transformer shall be complete with all standard accessories and fittings & conform to IS:2026. The rate shall be inclusive of all materials, lead, lift, first fill of oil, necessary civil works for mounting to the existing transformer foundation complete as per single line schematic diagram & particular specifications.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	400 KVA Transformer- Supply, installation, testing and commissioning of one number 400 kVA, DYn11, 3Ph, 50Hz, 11/0.433 kV, ONAN cooled, copper wound outdoor distribution transformer with tappings from +5% to -10% in steps of 2.5% with OFTC. The HT side & LT side shall have cable end box for XLPE cable. The transformer shall have suitable enclosure for The HT side & LT side. The transformer shall be complete with all standard accessories and fittings & conform to IS:2026. The rate shall be inclusive of all materials, lead, lift, first fill of oil, necessary civil works for mounting to the existing transformer foundation complete as per single line schematic diagram & particular specifications.(rate as per vetted estimate)	set	1.00000	631587.00	631587.00	

TOTAL	631587.00
cost for one set	631587.00
say	631587.00

Cost index 41.53 %	.00
Total with Cost index	631587.0

2(a)- Supply, erection, testing and commissioning of 400 KVA Transformer and allied works at Alady plant compound-(2)- LT / MV PANELS & ACCESSORIES

16 Specification Code: od201682/2018_2019

od201682/2018_2019 :PCC PANEL - Supply, fabrication, erection, testing and commissioning of cubicle type fully compartmentalised, dust tight, vermin proof, water proof 800A LT- Main 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, free standing panel consisting of the following as per standards (All switches shall confirm to conforming to IEC 60947-2 standards). Incommer 800A FP Microprocessor based MDO ACB (35kA) - 1 Nos. Restricted Earth Fault Relay - 1 Set 800A TPN best conductivity Aluminium busbar with SMC supports, heat shrinkable sleeves etc. as per ISS -1set RYB indicators (LED Pilot type) with 2A Control MCB and toggle switches - 4 Set Multifunction Digital Panel meter to read V, A, F, PF, kW, kVA, kVAR, kWh, kVAh, kVARh Class 1.0 - 1 Set 800/5A CL 1.0, 15VA Metering CTs - 1 Set Outgoings: 630A, 35kA 4P MCCB - 2 Nos. 200A FP SDFU (100kA) - 2 Nos. 63A FP SDFU (100kA) - 1 Nos. Surge Protection Pluggable type surge arrester with potential free contact, thermal disconnecter & provision for inbuilt common remote indication for defective arresters to connect between Line and Neutral and one number Spark Gap type arrester to connect between Neutral and Earth of following ratings including base element & pluggable arresters. Nominal voltage 230V, 50Hz, Nominal Discharge current 30 kA (8/20 sec) for Line to Neutral & 50 kA (8/20 sec) for Neutral to Earth, Maximum Discharge Current Imax 50 kA (8/20 sec) -1Set Supports 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. 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.
Supply & Labour

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	<p>PCC PANEL - Supply, fabrication, erection, testing and commissioning of cubicle type fully compartmentalised, dust tight, vermin proof, water proof 800A LT- Main 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).</p>	set	0.00000	0.00	0.00	
MR	<p>Incommer - 800A FP Microprocessor based MDO ACB (35kA) - 1 Nos. Restricted Earth Fault Relay - 1 Set 800A TPN best conductivity Aluminium busbar with SMC supports, heat shrinkable sleeves etc. as per ISS - 1set RYB indicators (LED Pilot type) with 2A Control MCB and toggle switches - 4 Set Multifunction Digital Panel meter to read V, A, F, PF, kW, kVA, kVAR, kWh, kVAh, kVARh Class 1.0 - 1 Set 800/5A CL 1.0, 15VA Metering CTs - 1 Set Outgoings: 630A, 35kA 4P MCCB - 2 Nos. 200A FP SDFU (100kA) - 2 Nos. 63A FP SDFU (100kA) - 1 Nos. Surge Protection Pluggable type surge arrester with potential free contact, thermal disconnecter & provision for inbuilt common remote indication for defective arresters to connect between Line and Neutral and one number Spark Gap type arrester to connect between Neutral and Earth of following ratings including base element & pluggable arresters. Nominal voltage 230V, 50Hz, Nominal Discharge current 30 kA (8/20 sec) for Line to Neutral & 50 kA (8/20 sec) for Neutral to Earth, Maximum Discharge Current I_{max} 50 kA (8/20 sec) -1Set Supports 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</p>	set	0.00000	0.00	0.00	

	framework shall be firmly supported to ground using suitable cement concrete 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.					
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MR	Supply & Labour	set	1.00000	294498.00	294498.00	
TOTAL					294498.00	
cost for one set					294498.00	
say					294498.00	

	Cost index	41.53 %	.00
	Total with Cost index	294498.0	

17 Specification Code: od194956/2018_2019

Kerala Water Authority

od194956/2018_2019 :WTP - MCC PANEL- 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 : 200A TPN Isolator - 1 No. 200A 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 RYB indicators (LED Pilot type) with 2A Control MCB and toggle switches - 1 Set 200/5A CL 1.0, 15VA Metering CTs - 1 Set Outgoings: 100A TPN SDFU (100kA) - 3 Nos. 32A TP D curve MCB (10kA) - 6 Nos. 25A TP D curve MCB (10kA) - 3 Nos. 10A TP D curve MCB (10kA) - 4 Nos. Supports 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. 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 & Labour

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	<p>WTP - MCC PANEL- 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, free standing panel consisting of the following as per standards (All switches shall confirm to conforming to IEC 60947-2 standards). Incoming : 200A TPN Isolator - 1 No. 200A 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 RYB indicators (LED Pilot type) with 2A Control MCB and toggle switches - 1 Set 200/5A CL 1.0, 15VA Metering CTs - 1 Set Outgoings: 100A TPN SDFU (100kA) - 3 Nos. 32A TP D curve MCB (10kA) - 6 Nos. 25A TP D curve MCB (10kA) - 3 Nos. 10A TP D curve MCB (10kA) - 4 Nos. Supports 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. 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 & Labour</p>	set	1.00000	84484.00	84484.00	
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	TOTAL	84484.00
	cost for one set	84484.00
	say	84484.00

Cost index	41.53 %	.00
Total with Cost index		84484.0

18 Specification Code: od194957/2018_2019

od194957/2018_2019 :APFC PANEL -Automatic Power Factor Correction Panel of total 40 KVAR capacity with Auto / Manual mode operation to be fabricated out of 14 guage CRCA sheet steel Powder coated with provision for capacitor mounted inside the panel with adequate number of louvers and powder coated with approved shade and having following specific components(refer particular specification) 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 , free standing panel consisting of the following as per standards. Incomer 100A TPN Isolator - 1 No. 100 A 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 RYB indicators (LED Pilot type) with 2A Control MCB and toggle switches- 1 Set 100/5A 15VA CL 1.0 Metering CTs - 3 Sets Microprocessor based intelligent, 8 step IPFC relay with PF display - 1 No. Out goings 40A, 10kA C Curve TP MCB - 1 Nos 20A, 10kA C Curve TP MCB - 1 Nos 16A, 10kA C Curve TP MCB - 2 Nos 10A, 10kA C Curve TP MCB - 1 Nos 6A, 10kA C Curve TP MCB - 3 Nos Capacitor duty contactors working on 3 Phase 415V AC supply of the following ratings wired with Pilot LED indication for ON & OFF, Push Buttons for Manual ON & OFF operation using suitable NO / NC contacts for all the stages 15 kVAr - 1 Nos 10 kVAr- 3 Nos 7.5 kVAr- 4 Nos 480 V,50 Hz Double di-electric polypropylene (MPP heavy duty) Capacitors of the following ratings including fixed compensation for low load losses. 15 kVAr - 1 Nos 10 kVAr- 1 Nos 5 kVAr- 2 Nos 2 kVAr - 2 Nos 1 kVAr - 1 Nos 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. Supply & Labour Supports 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.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. Supply & Labour

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	<p>APFC PANEL -Automatic Power Factor Correction Panel of total 40 KVAR capacity with Auto / Mannual mode operation to be fabricated out of 14 guage CRCA sheet steel Powder coated with provision for capacitor mounted inside the panel with adequate number of louvers and powder coated with approved shade and having following specific components(refer particular specification) 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 , free standing panel consisting of the following as per standards. Incomer 100A TPN Isolator - 1 No. 100 A 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 RYB indicators (LED Pilot type) with 2A Control MCB and toggle switches- 1 Set 100/5A 15VA CL 1.0 Metering CTs - 3 Sets Microprocessor based intelligent, 8 step IPFC relay with PF display - 1 No. Out goings 40A, 10kA C Curve TP MCB - 1 Nos 20A, 10kA C Curve TP MCB - 1 Nos 16A, 10kA C Curve TP MCB - 2 Nos 10A, 10kA C Curve TP MCB - 1 Nos 6A, 10kA C Curve TP MCB - 3 Nos Capacitor duty contactors working on 3 Phase 415V AC supply of the following ratings wired with Pilot LED indication for ON & OFF, Push Buttons for Manual ON & OFF operation using suitable NO / NC contacts for all the stages 15 kVAr - 1 Nos 10 kVAr- 3 Nos 7.5 kVAr- 4 Nos 480 V,50 Hz Double di-electric polypropylene (MPP heavy duty) Capacitors of the following ratings including fixed compensation for low load losses. 15 kVAr - 1 Nos 10 kVAr- 1 Nos 5 kVAr- 2 Nos 2 kVAr - 2 Nos 1 kVAr - 1 Nos 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. Supply &</p>	set	1.00000	119898.00	119898.00	
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	Labour Supports 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.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. Supply & Labour					
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	TOTAL	119898.00
	cost for one set	119898.00
	say	119898.00

	Cost index	41.53 %	.00
	Total with Cost index		119898.0

2(a)- Supply, erection, testing and commissioning of 400 KVA Transformer and allied works at Alady plant compound- (3)- DISTRIBUTION BOARDS, SWITCHGEAR & ACCESSORIES

19 Specification Code: od194998/2018_2019

od194998/2018_2019 :Supply, installation, testing & 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 outgoing 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) - 12 Way

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	Supply, installation, testing & 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 outgoing 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) - 12 Way	Nos	1.00000	11136.00	11136.00	
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TOTAL		11136.00
cost for one No		11136.00
say		11136.00

Cost index	41.53 %	.00
Total with Cost index		11136.0

20 Specification Code: od194999/2018_2019

od194999/2018_2019 :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

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	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	Nos	1.00000	6640.00	6640.00	
TOTAL					6640.00	
cost for one No					6640.00	
say					6640.00	

Cost index 41.53 %	.00
Total with Cost index	6640.0

21 Specification Code: od195000/2018_2019

od195000/2018_2019 :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, 4P MCB Isolator

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	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, 4P MCB Isolator	Nos	1.00000	1050.00	1050.00	
TOTAL					1050.00	
cost for one No					1050.00	
say					1050.00	

Cost index 41.53 %	.00
Total with Cost index	1050.0

22 Specification Code: od195001/2018_2019

od195001/2018_2019 :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

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	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	Nos	1.00000	181.00	181.00	
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TOTAL					181.00
cost for one No					181.00
say					181.00

Cost index 41.53 %					.00
Total with Cost index					181.0

2(a)- Supply, erection, testing and commissioning of 400 KVA Transformer and allied works at Alady plant compound- (4)- CABLES , WIRES & ACCESSORIES

23 Specification Code: od195885/2018_2019

od195885/2018_2019 :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

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	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	metre	1.00000	2281.00	2281.00	
TOTAL					2281.00	

cost for one metre	2281.00
say	2281.00

Cost index 41.53 %	.00
Total with Cost index	2281.0

24 Specification Code: od195886/2018_2019

od195886/2018_2019 :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 150 Sqm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	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 150 Sqm	metre	1.00000	2318.00	2318.00	
TOTAL					2318.00	
cost for one metre					2318.00	
say					2318.00	

Cost index 41.53 %	.00
Total with Cost index	2318.0

25 Specification Code: od195980/2018_2019

od195980/2018_2019 :HT Cable Terminations Supplying and making indoor cable end termination with heat shrinkable jointing kit, including lugs and other jointing materials, for following sizes, XLPE aluminium conductor cable of 11 KV grade as required. 3C x 150 Sqmm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	HT Cable Terminations Supplying and making indoor cable end termination with heat shrinkable jointing kit, including lugs and other jointing materials, for following sizes, XLPE aluminium conductor cable of 11 KV grade as required. 3C x 150 Sqmm	set	1.00000	7664.00	7664.00	
TOTAL					7664.00	
cost for one set					7664.00	
say					7664.00	

Cost index	41.53 %	.00
Total with Cost index		7664.0

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26 Specification Code: od195981/2018_2019

PRICE

od195981/2018_2019 :HT Cable Terminations Supplying and making indoor cable end termination with heat shrinkable jointing kit, including lugs and other jointing materials, for following sizes, XLPE aluminium conductor cable of 11 KV grade as required. 3C x 300 Sqmm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	HT Cable Terminations Supplying and making indoor cable end termination with heat shrinkable jointing kit, including lugs and other jointing materials, for following sizes, XLPE aluminium conductor cable of 11 KV grade as required. 3C x 300 Sqmm	set	1.00000	10002.00	10002.00	
TOTAL					10002.00	
cost for one set					10002.00	
say					10002.00	

Cost index 41.53 %	.00
Total with Cost index	10002.0

27 Specification Code: od195993/2018_2019

od195993/2018_2019 :HT Cable Termination- 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

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	HT Cable Termination- 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	set	1.00000	12802.00	12802.00	
TOTAL					12802.00	
cost for one set					12802.00	
say					12802.00	

Cost index 41.53 %	.00
Total with Cost index	12802.0

28 Specification Code: od196006/2018_2019

od196006/2018_2019 :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

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	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	set	1.00000	14660.00	14660.00	
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TOTAL					14660.00
cost for one set					14660.00
say					14660.00

Cost index 41.53 %					.00
Total with Cost index					14660.0

29 Specification Code: od195889/2018_2019

od195889/2018_2019 :LT Power Cables - Supply & laying UG AYFY,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 185 Sqmm

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Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	LT Power Cables - Supply & laying UG AYFY,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 185 Sqmm	metre	1.00000	1752.00	1752.00	
TOTAL					1752.00	
cost for one metre					1752.00	
say					1752.00	

Cost index 41.53 %					.00
Total with Cost index					1752.0

30 Specification Code: od195890/2018_2019

od195890/2018_2019 :LT Power Cables Supply & laying UG AYFY,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 150 Sqmm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	LT Power Cables Supply & laying UG AYFY,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 150 Sqmm	metre	1.00000	1241.00	1241.00	
TOTAL					1241.00	
cost for one metre					1241.00	
say					1241.00	

Cost index	41.53 %	.00
Total with Cost index		1241.0

31 Specification Code: od195891/2018_2019

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od195891/2018_2019 :LT Power Cables Supply & laying UG AYFY,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

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	LT Power Cables Supply & laying UG AYFY,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	metre	1.00000	539.00	539.00	
TOTAL					539.00	
cost for one metre					539.00	
say					539.00	

Cost index	41.53 %	.00
Total with Cost index		539.0

32 Specification Code: od195892/2018_2019

od195892/2018_2019 :LT Power Cables Supply & laying UG AYFY,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

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	LT Power Cables Supply & laying UG AYFY,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	metre	1.00000	421.00	421.00	
TOTAL					421.00	
cost for one metre					421.00	
say					421.00	
Cost index 41.53 %					.00	
Total with Cost index					421.0	

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33 Specification Code: od195893/2018_2019

od195893/2018_2019 :LT Power Cables - Supply & laying UG AYFY,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 25 Sqmm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	LT Power Cables - Supply & laying UG AYFY,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 25 Sqmm	metre	1.00000	350.00	350.00	
TOTAL					350.00	
cost for one metre					350.00	
say					350.00	
Cost index 41.53 %					.00	

Total with Cost index	350.0
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34 Specification Code: od195894/2018_2019

od195894/2018_2019 :LT Power Cables - Supply & laying UG AYFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling - 4C x 6 Sqmm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	LT Power Cables - Supply & laying UG AYFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling - 4C x 6 Sqmm	metre	1.00000	216.00	216.00	
TOTAL					216.00	
cost for one metre					216.00	
say					216.00	

Kerala Water Authority Cost index	41.53 %	.00
Total with Cost index		216.0

35 Specification Code: od195895/2018_2019

od195895/2018_2019 :LT Power Cables - Supply & laying UG AYFY,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

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	LT Power Cables - Supply & laying UG AYFY,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	metre	1.00000	179.00	179.00	
TOTAL					179.00	
cost for one metre					179.00	

say	179.00
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Cost index 41.53 %	.00
Total with Cost index	179.0

36 Specification Code: od195896/2018_2019
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od195896/2018_2019 :LT Power Cables - Supply & laying UG 2XFY,PVC insulated and PVC sheathed Copper conductor armoured Power / Control cable of 1.1 KV grade of the following sizes through trench/wall/ ceiling - 4C x 2.5 Sqmm
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Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	LT Power Cables - Supply & laying UG 2XFY,PVC insulated and PVC sheathed Copper conductor armoured Power / Control cable of 1.1 KV grade of the following sizes through trench/wall/ ceiling - 4C x 2.5 Sqmm	metre	1.00000	305.00	305.00	
TOTAL					305.00	
cost for one metre					305.00	
say					305.00	

Cost index 41.53 %	.00
Total with Cost index	305.0

37 Specification Code: od195897/2018_2019
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od195897/2018_2019 :LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete- 3.5C x 185 Sqmm (57mm)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete- 3.5C x 185 Sqmm (57mm)	Nos	1.00000	1245.00	1245.00	
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TOTAL					1245.00
cost for one No					1245.00
say					1245.00

Cost index 41.53 %					.00
Total with Cost index					1245.0

38 Specification Code: od195898/2018_2019

od195898/2018_2019 :LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete- 3.5C x 150 Sqmm (50mm)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete- 3.5C x 150 Sqmm (50mm)	Nos	1.00000	917.00	917.00	
TOTAL					917.00	
cost for one No					917.00	
say					917.00	

Cost index 41.53 %					.00
Total with Cost index					917.0

39 Specification Code: od195899/2018_2019

od195899/2018_2019 :LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete- 3.5C x 50 Sqmm (35mm)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete- 3.5C x 50 Sqmm (35mm)	Nos	1.00000	548.00	548.00	
TOTAL					548.00	
cost for one No					548.00	
say					548.00	

Cost index	41.53 %	.00
Total with Cost index		548.0

40 Specification Code: od195900/2018_2019

Kerala Water Authority

od195900/2018_2019 :LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete- 3.5C x 35 Sqmm (32mm)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete- 3.5C x 35 Sqmm (32mm)	Nos	1.00000	437.00	437.00	
TOTAL					437.00	
cost for one No					437.00	
say					437.00	

Cost index	41.53 %	.00
Total with Cost index		437.0

41 Specification Code: od195901/2018_2019

od195901/2018_2019 :LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete- 3.5C x 25 Sqmm (28mm)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete- 3.5C x 25 Sqmm (28mm)	Nos	1.00000	398.00	398.00	
TOTAL					398.00	
cost for one No					398.00	
say					398.00	

Cost index 41.53 %	.00
Total with Cost index	398.0

42 Specification Code: od195902/2018_2019

od195902/2018_2019 :LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete - 4C x 6 sqmm (22mm)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete - 4C x 6 sqmm (22mm)	Nos	1.00000	266.00	266.00	
TOTAL					266.00	
cost for one No					266.00	
say					266.00	

Cost index 41.53 %	.00
Total with Cost index	266.0

43 Specification Code: od195903/2018_2019

od195903/2018_2019 :LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete - 4C x 4 sqmm (22mm)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete - 4C x 4 sqmm (22mm)	Nos	1.00000	225.00	225.00	
TOTAL					225.00	
cost for one No					225.00	
Kerala Water Authority say					225.00	

Cost index 41.53 %	.00
Total with Cost index	225.0

44 Specification Code: od195904/2018_2019

od195904/2018_2019 :LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete - 4C x 2.5 Sqmm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete - 4C x 2.5 Sqmm	Nos	1.00000	211.00	211.00	
TOTAL					211.00	

cost for one No	211.00
say	211.00

Cost index 41.53 %	.00
Total with Cost index	211.0

45 Specification Code: od195905/2018_2019

od195905/2018_2019 :LT Power Cables - Supply & 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

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	LT Power Cables - Supply & 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	metre	1.00000	47.00	47.00	
TOTAL					47.00	
cost for one metre					47.00	
say					47.00	

Cost index 41.53 %	.00
Total with Cost index	47.0

46 Specification Code: od195906/2018_2019

od195906/2018_2019 :LT Power Cables - Supply & 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 1.5 Sqmm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	LT Power Cables - Supply & 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 1.5 Sqmm	metre	1.00000	88.00	88.00	
TOTAL					88.00	
cost for one metre					88.00	
say					88.00	
Cost index 41.53 %					.00	
Total with Cost index					88.0	

47 Specification Code: od195907/2018_2019

od195907/2018_2019 :PVC Conduits - Supply and providing the following size of ISI Marked rigid PVC conduits with specials confirming to IS 9537/1983 on surface / concealed position making good the damages made etc.complete.20mm dia, 1.5mm thick

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	PVC Conduits - Supply and providing the following size of ISI Marked rigid PVC conduits with specials confirming to IS 9537/1983 on surface / concealed position making good the damages made etc.complete.20mm dia, 1.5mm thick	metre	1.00000	88.00	88.00	
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TOTAL					88.00
cost for one metre					88.00
say					88.00

Cost index 41.53 %					.00
Total with Cost index					88.0

48 Specification Code: od195908/2018_2019

od195908/2018_2019 :PVC Conduits - Supply and providing the following size of ISI Marked rigid PVC conduits with specials confirming to IS 9537/1983 on surface concealed position making good the damages made etc.complete.25mm dia, 1.5mm thick

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	PVC Conduits - Supply and providing the following size of ISI Marked rigid PVC conduits with specials confirming to IS 9537/1983 on surface concealed position making good the damages made etc.complete.25mm dia, 1.5mm thick	metre	1.00000	107.00	107.00	
TOTAL					107.00	
cost for one metre					107.00	
say					107.00	

Cost index 41.53 %					.00
Total with Cost index					107.0

49 Specification Code: od195909/2018_2019

od195909/2018_2019 :PVC Conduits - Supply and providing the following size of ISI Marked rigid PVC conduits with specials confirming to IS 9537/1983 on surface concealed position making good the damages made etc.complete.
32mm dia 1.5mm thick

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	PVC Conduits - Supply and providing the following size of ISI Marked rigid PVC conduits with specials confirming to IS 9537/1983 on surface concealed position making good the damages made etc.complete. 32mm dia 1.5mm thick	metre	1.00000	138.00	138.00	
TOTAL					138.00	
cost for one metre					138.00	
say					138.00	

Cost index	41.53 %	.00
Total with Cost index		138.0

Kerala Water Authority

50 Specification Code: od195910/2018_2019

PRICE

od195910/2018_2019 :PVC Conduits- Supply & providing Capping / Casing of good quality of the following sizes. 20 mm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	PVC Conduits- Supply & providing Capping / Casing of good quality of the following sizes. 20 mm	metre	1.00000	43.00	43.00	
TOTAL					43.00	
cost for one metre					43.00	
say					43.00	

Cost index	41.53 %	.00
Total with Cost index		43.0

51 Specification Code: od195911/2018_2019

od195911/2018_2019 :PVC Conduits- Supply & providing Capping / Casing of good quality of the following sizes. 25 mm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	PVC Conduits- Supply & providing Capping / Casing of good quality of the following sizes. 25 mm	metre	1.00000	49.00	49.00	
TOTAL					49.00	
cost for one metre					49.00	
say					49.00	

Cost index	41.53 %	.00
Total with Cost index		49.0

52 Specification Code: od195912/2018_2019

od195912/2018_2019 :UG Cable Tamper Protection- Supply & laying the following size of B class GI Pipe for UG Cable tamper protection in the existing trench in position etc. complete.50 mm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	UG Cable Tamper Protection- Supply & laying the following size of B class GI Pipe for UG Cable tamper protection in the existing trench in position etc. complete.50 mm	metre	1.00000	379.00	379.00	
TOTAL					379.00	
cost for one metre					379.00	
say					379.00	

Cost index	41.53 %	.00
Total with Cost index		379.0

53 Specification Code: od195913/2018_2019

od195913/2018_2019 :UG Cable Tamper Protection- Supply & laying the following size of B class GI Pipe for UG Cable tamper protection in the existing trench in position etc. complete. 75 mm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	UG Cable Tamper Protection- Supply & laying the following size of B class GI Pipe for UG Cable tamper protection in the existing trench in position etc. complete. 75 mm	metre	1.00000	485.00	485.00	
TOTAL					485.00	
cost for one metre					485.00	
say					485.00	

Cost index	41.53 %	.00
Total with Cost index		485.0

Kerala Water Authority

54 Specification Code: od195914/2018_2019

od195914/2018_2019 :Circuit Mains- Supply and wiring the following size of PVC insulated copper wire manufactured with bright annealed bunched electrolytic copper conductor as per IS 8130/1984 insulated with di-electrical grade PVC compound per as IS 5831/1984 Generally Conforming to IS 694/1990 for working voltage up to and including 1100 V.through the existing PVC conduits / capping casing. 3 run x 4.0 Sqmm - SPN + E - rate as per vetted estimate

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	Circuit Mains- Supply and wiring the following size of PVC insulated copper wire manufactured with bright annealed bunched electrolytic copper conductor as per IS 8130/1984 insulated with di-electrical grade PVC compound per as IS 5831/1984 Generally Conforming to IS 694/1990 for working voltage up to and including 1100 V.through the existing PVC conduits / capping casing. 3 run x 4.0 Sqmm - SPN + E - rate as per vetted estimate	metre	1.00000	199.00	199.00	
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				TOTAL	199.00
				cost for one metre	199.00
				say	199.00

				Cost index	41.53 %	.00
				Total with Cost index		199.0

55 Specification Code: od195915/2018_2019

Kerala Water Authority

od195915/2018_2019 :Circuit Mains- Supply and wiring the following size of PVC insulated copper wire manufactured with bright annealed bunched electrolytic copper conductor as per IS 8130/1984 insulated with di-electrical grade PVC compound per as IS 5831/1984 Generally Conforming to IS 694/1990 for working voltage up to and including 1100 V.through the existing PVC conduits / capping casing. 3 run x 2.5 Sqmm - SPN + E - rate as per vetted estimate.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Circuit Mains- Supply and wiring the following size of PVC insulated copper wire manufactured with bright annealed bunched electrolytic copper conductor as per IS 8130/1984 insulated with di-electrical grade PVC compound per as IS 5831/1984 Generally Conforming to IS 694/1990 for working voltage up to and including 1100 V.through the existing PVC conduits / capping casing. 3 run x 2.5 Sqmm - SPN + E - rate as per vetted estimate.	metre	1.00000	154.00	154.00	

TOTAL	154.00
cost for one metre	154.00
say	154.00

Cost index 41.53 %	.00
Total with Cost index	154.0

56 Specification Code: od195916/2018_2019

od195916/2018_2019 :Circuit Mains- Supply and wiring the following size of PVC insulated copper wire manufactured with bright annealed bunched electrolytic copper conductor as per IS 8130/1984 insulated with di-electrical grade PVC compound per as IS 5831/1984 Generally Conforming to IS 694/1990 for working voltage up to and including 1100 V.through the existing PVC conduits / capping casing. 3 run x 1.5 sqmm - SPN + E

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Circuit Mains- Supply and wiring the following size of PVC insulated copper wire manufactured with bright annealed bunched electrolytic copper conductor as per IS 8130/1984 insulated with di-electrical grade PVC compound per as IS 5831/1984 Generally Conforming to IS 694/1990 for working voltage up to and including 1100 V.through the existing PVC conduits / capping casing. 3 run x 1.5 sqmm - SPN + E	metre	1.00000	118.00	118.00	
TOTAL					118.00	
cost for one metre					118.00	
say					118.00	

Cost index 41.53 %	.00
Total with Cost index	118.0

57 Specification Code: od195917/2018_2019

od195917/2018_2019 :Cable Supports & Trenching- Supply and erection of Cable trays and cable supports fabricated out of MS angles 25x25x6mm (ISA) and 25x6mmMS flats with and 20cm spacing between successive cross members and supported using 25cm long 32x6mm MS flat at every 1m spacing. The cable trays and supports shall be painted with two coats of Zinc Chromate primer and two coats of enamel paint.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Cable Supports & Trenching- Supply and erection of Cable trays and cable supports fabricated out of MS angles 25x25x6mm (ISA) and 25x6mmMS flats with and 20cm spacing between successive cross members and supported using 25cm long 32x6mm MS flat at every 1m spacing. The cable trays and supports shall be painted with two coats of Zinc Chromate primer and two coats of enamel paint.	kg	1.00000	142.00	142.00	
TOTAL					142.00	
cost for one kg					142.00	
say					142.00	

Kerala Water Authority	Cost index	41.53 %	.00
PRICE		Total with Cost index	142.0

58 Specification Code: od195918/2018_2019

od195918/2018_2019 :Cable Supports & Trenching- Supply and providing 6mm MS chequered plate of suitable thickness including cutting, welding, painting etc. as required for the cable trench covering.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Cable Supports & Trenching- Supply and providing 6mm MS chequered plate of suitable thickness including cutting, welding, painting etc. as required for the cable trench covering.	kg	1.00000	121.00	121.00	
TOTAL					121.00	
cost for one kg					121.00	

say	121.00
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Cost index 41.53 %	.00
Total with Cost index	121.0

59 Specification Code: od195919/2018_2019

od195919/2018_2019 :Cable Supports & Trenching - Charges for making cable trenches in all type of soil including providing country burnt bricks breadth wise above the cable, providing sand cushioning of 150mm refilling & restoring normal surface etc.complete as per standards of the following size. 35 cm Wide x 100 cm Deep (HT Cables)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Cable Supports & Trenching - Charges for making cable trenches in all type of soil including providing country burnt bricks breadth wise above the cable, providing sand cushioning of 150mm refilling & restoring normal surface etc.complete as per standards of the following size. 35 cm Wide x 100 cm Deep (HT Cables)	metre	1.00000	640.00	640.00	
TOTAL					640.00	
cost for one metre					640.00	
say					640.00	

Cost index 41.53 %	.00
Total with Cost index	640.0

60 Specification Code: od195920/2018_2019

od195920/2018_2019 :Cable Supports & Trenching - Charges for making cable trenches in all type of soil including providing country burnt bricks breadth wise above the cable, providing sand cushioning of 150mm refilling & restoring normal surface etc.complete as per standards of the following size. 35 cm Wide x 75 cm Deep (LT Cables)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	Cable Supports & Trenching - Charges for making cable trenches in all type of soil including providing country burnt bricks breadth wise above the cable, providing sand cushioning of 150mm refilling & restoring normal surface etc.complete as per standards of the following size. 35 cm Wide x 75 cm Deep (LT Cables)	metre	1.00000	594.00	594.00	
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TOTAL					594.00
cost for one metre					594.00
say					594.00

Cost index 41.53 %					.00
Total with Cost index					594.0

61 Specification Code: od195921/2018_2019

od195921/2018_2019 :Cable Supports & Trenching - Supply route marker with 10cmx10cm GI plate 5mm thick with inscriptions there on bolted / welded to 35x35x6mm angle iron 60cm long and fixing the same in ground as required.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Cable Supports & Trenching - Supply route marker with 10cmx10cm GI plate 5mm thick with inscriptions there on bolted / welded to 35x35x6mm angle iron 60cm long and fixing the same in ground as required.	Nos	1.00000	516.00	516.00	
TOTAL					516.00	
cost for one No					516.00	
say					516.00	

Cost index 41.53 %					.00
Total with Cost index					516.0

62 Specification Code: od195922/2018_2019

od195922/2018_2019 :Cable Supports & Trenching - Supply route marker with 10cmx10cm GI plate 5mm thick with inscriptions there on bolted / welded to 35x35x6mm angle iron 60cm long and fixing the same in ground as required.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Cable Supports & Trenching - Supply route marker with 10cmx10cm GI plate 5mm thick with inscriptions there on bolted / welded to 35x35x6mm angle iron 60cm long and fixing the same in ground as required.	Nos	1.00000	417.00	417.00	
TOTAL					417.00	
cost for one No					417.00	
say					417.00	

Cost index	41.53 %	.00
Total with Cost index		417.0

2(a)- Supply, erection, testing and commissioning of 400 KVA Transformer and allied works at Alady plant compound- (5)- **EARTHING & ACCESSORIES**

63 Specification Code: od196108/2018_2019

od196108/2018_2019 :Supply and providing plate earthing as per IS 3043 with 1200x1200x12 mm GI/CI earth plate, 50 mm GI watering pipe fixed to the earth plate with 25 x 3mm GI clamps, GI funnel with weld mesh, filling required quantity of charcoal including construction of inspection chamber with a bed concrete of 1:4:8 PCC using 40 mm broken stone (10 cm thick), brick work in cement mortar 1:6, plastering the surface of brick masonry and the exposed surface of PCC bed with cement mortar 1:4, 12 mm thick, (the finished inside dimension shall be 450 x 450 x 450 mm) but excluding test joint, earth continuity conductor to the plate, and covering at the top.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	Supply and providing plate earthing as per IS 3043 with 1200x1200x12 mm GI/CI earth plate, 50 mm GI watering pipe fixed to the earth plate with 25 x 3mm GI clamps, GI funnel with weld mesh, filling required quantity of charcoal including construction of inspection chamber with a bed concrete of 1:4:8 PCC using 40 mm broken stone (10 cm thick), brick work in cement mortar 1:6, plastering the surface of brick masonry and the exposed surface of PCC bed with cement mortar 1:4, 12 mm thick, (the finished inside dimension shall be 450 x 450 x 450 mm) but excluding test joint, earth continuity conductor to the plate, and covering at the top.	set	1.00000	11091.00	11091.00
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	TOTAL	11091.00
	cost for one set	11091.00
	say	11091.00

	Cost index 41.53 %	.00
	Total with Cost index	11091.0

64 Specification Code: od196109/2018_2019

od196109/2018_2019 :Supply and providing pipe earthing as per IS 3043 with 2.5 m long 40 mm dia B class GI pipe, GI funnel with weld mesh, filling required quantity of charcoal & salt including construction of inspection chamber with a bed concrete of 1:4:8 PCC using 40 mm broken stone (10 cm thick), brick work in cement mortar 1:6, plastering the surface of brick masonry and the exposed surface of PCC bed with cement mortar 1:4, 12 mm thick, (the finished inside dimension shall be 300 x 300 x 300 mm) but excluding test joint, earth continuity conductor to the plate, and covering at the top.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	Supply and providing pipe earthing as per IS 3043 with 2.5 m long 40 mm dia B class GI pipe, GI funnel with weld mesh, filling required quantity of charcoal & salt including construction of inspection chamber with a bed concrete of 1:4:8 PCC using 40 mm broken stone (10 cm thick), brick work in cement mortar 1:6, plastering the surface of brick masonry and the exposed surface of PCC bed with cement mortar 1:4, 12 mm thick, (the finished inside dimension shall be 300 x 300 x 300 mm) but excluding test joint, earth continuity conductor to the plate, and covering at the top.	set	1.00000	2952.00	2952.00	
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TOTAL					2952.00
cost for one set					2952.00
say					2952.00

Cost index 41.53 %					.00
Total with Cost index					2952.0

Kerala Water Authority

65 Specification Code: od196110/2018_2019

PRICE

od196110/2018_2019 :Supply & laying the following sizes of Earth Strip for earthing interconnection, termination and leads, for continous earthing along with cables tinned at terminals etc. complete. 25 x 6 mm Copper Strip

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply & laying the following sizes of Earth Strip for earthing interconnection, termination and leads, for continous earthing along with cables tinned at terminals etc. complete. 25 x 6 mm Copper Strip	metre	1.00000	1507.00	1507.00	
TOTAL					1507.00	
cost for one metre					1507.00	
say					1507.00	

Cost index 41.53 %					.00
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Total with Cost index	1507.0
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66 Specification Code: od196111/2018_2019

od196111/2018_2019 :Supply & laying the following sizes of Earth Strip for earthing interconnection, termination and leads, for continous earthing along with cables tinned at terminals etc. complete. 25 x 3 mm Copper strip

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply & laying the following sizes of Earth Strip for earthing interconnection, termination and leads, for continous earthing along with cables tinned at terminals etc. complete. 25 x 3 mm Copper strip	metre	1.00000	797.00	797.00	
TOTAL					797.00	
cost for one metre					797.00	
say					797.00	

Kerala Water Authority Cost index	41.53 %	.00
Total with Cost index		797.0

67 Specification Code: od196112/2018_2019

od196112/2018_2019 :Supply and drawing bare earthing conductors of the following sizes along with wiring/ cables and giving earth connection as required. No. 16 SWG Copper Conductor

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply and drawing bare earthing conductors of the following sizes along with wiring/ cables and giving earth connection as required. No. 16 SWG Copper Conductor	metre	1.00000	199.00	199.00	
TOTAL					199.00	
cost for one metre					199.00	
say					199.00	

Cost index	41.53 %	.00
Total with Cost index		199.0

68 Specification Code: od196113/2018_2019

od196113/2018_2019 :Supply and drawing bare earthing conductors of the following sizes along with wiring/ cables and giving earth connection as required. No. 10 SWG Copper Conductor

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply and drawing bare earthing conductors of the following sizes along with wiring/ cables and giving earth connection as required. No. 10 SWG Copper Conductor	metre	1.00000	113.00	113.00	
TOTAL					113.00	
cost for one metre					113.00	
say					113.00	

Cost index	41.53 %	.00
Total with Cost index		113.0

2(a)- Supply, erection, testing and commissioning of 400 KVA Transformer and allied works at Alady plant compound-(6) SUBSTATION EQUIPMENTS & MISC

69 Specification Code: od196123/2018_2019

od196123/2018_2019 :Supply and providing 6 mm thick & 1 m wide electrical grade chequered type rubber mat to withstand 3.3 KV dielectric strength conforming to IS 5429/ 1969.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply and providing 6 mm thick & 1 m wide electrical grade chequered type rubber mat to withstand 3.3 KV dielectric strength conforming to IS 5429/ 1969.	sqm	1.00000	773.00	773.00	
TOTAL					773.00	

cost for one sqm	773.00
say	773.00

Cost index 41.53 %	.00
Total with Cost index	773.0

70 Specification Code: od196124/2018_2019

od196124/2018_2019 :Supply and providing 12 mm thick & 1 m wide electrical grade chequered type rubber mat to withstand 15 KV dielectric strength conforming to IS 5429/ 1969 in front of the HT Breaker Panel.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply and providing 12 mm thick & 1 m wide electrical grade chequered type rubber mat to withstand 15 KV dielectric strength conforming to IS 5429/ 1969 in front of the HT Breaker Panel.	sqm	1.00000	1379.00	1379.00	
Kerala Water Authority TOTAL					1379.00	
cost for one sqm					1379.00	
say					1379.00	

Cost index 41.53 %	.00
Total with Cost index	1379.0

71 Specification Code: od196125/2018_2019

od196125/2018_2019 :Supply and providing 5 Kg. Dry Chemical Powder type Fire Extinguisher with hose and clamps including fixing it to wall as required.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply and providing 5 Kg. Dry Chemical Powder type Fire Extinguisher with hose and clamps including fixing it to wall as required.	set	1.00000	2383.00	2383.00	

TOTAL	2383.00
cost for one set	2383.00
say	2383.00

Cost index 41.53 %	.00
Total with Cost index	2383.0

72 Specification Code: od196126/2018_2019

od196126/2018_2019 :Supply and providing 9 Litre capacity GI Fire Bucket painted in post office red with primer coat of red oxide and written with white paint 'FIRE' mounted on MS angle frame work/ wall bracket filled with fine sand, painting the bracket/ floor stand including making good the damages, colour washing etc. as required.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply and providing 9 Litre capacity GI Fire Bucket painted in post office red with primer coat of red oxide and written with white paint 'FIRE' mounted on MS angle frame work/ wall bracket filled with fine sand, painting the bracket/ floor stand including making good the damages, colour washing etc. as required.	set	1.00000	638.00	638.00	
TOTAL					638.00	
cost for one set					638.00	
say					638.00	

Cost index 41.53 %	.00
Total with Cost index	638.0

73 Specification Code: od196127/2018_2019

od196127/2018_2019 :Supply and providing First Aid Chart duly framed and placed in a conspicuous location for clear vision.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply and providing First Aid Chart duly framed and placed in a conspicuous location for clear vision.	set	1.00000	247.00	247.00	
TOTAL					247.00	
cost for one set					247.00	
say					247.00	

Cost index	41.53 %	.00
Total with Cost index		247.0

74 Specification Code: od196128/2018_2019

od196128/2018_2019 :Supply and providing Laminated Electrical Schematic diagram framed and placed in a conspicuous location for clear vision.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply and providing Laminated Electrical Schematic diagram framed and placed in a conspicuous location for clear vision.	set	1.00000	226.00	226.00	
TOTAL					226.00	
cost for one set					226.00	
say					226.00	

Cost index	41.53 %	.00
Total with Cost index		226.0

75 Specification Code: od196129/2018_2019

od196129/2018_2019 :Supply & providing Aluminium anodised Danger Notice Board of size 200 x 150 mm. with inscriptions (both in English and Malayalam) and conventional Skull and Bone in Red colour at locations as directed by the Engineer in Charge

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply & providing Aluminium anodised Danger Notice Board of size 200 x 150 mm. with inscriptions (both in English and Malayalam) and conventional Skull and Bone in Red colour at locations as directed by the Engineer in Charge	Nos	1.00000	267.00	267.00	
TOTAL					267.00	
cost for one Nos					267.00	
say					267.00	

Cost index	41.53 %	.00
Total with Cost index		267.00

76 Specification Code: od202018/2018_2019

od202018/2018_2019 :SCHEME APPROVAL & POWER ALLOCATION - Preparation and submission of latest scheme drawings, Voltage drop calculations, Earthing design & 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).

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	SCHEME APPROVAL & POWER ALLOCATION - Preparation and submission of latest scheme drawings, Voltage drop calculations, Earthing design & 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).	L.S	1.00000	20000.00	20000.00	
TOTAL					20000.00	
cost for one L.S					20000.00	
say					20000.00	

Cost index 41.53 %	.00
Total with Cost index	20000.0

77 Specification Code: od202020/2018_2019

od202020/2018_2019 :SCHEME APPROVAL & POWER ALLOCATION - Preparation and submission of latest scheme drawings to KSEB for obtaining sanction for power allocation (Including all incidental and statutory expenses) .Preparation, submission and execution of HT agreement(6 sets) as per the renewed Contract demand according to the latest additions.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	SCHEME APPROVAL & POWER ALLOCATION - Preparation and submission of latest scheme drawings to KSEB for obtaining sanction for power allocation (Including all incidental and statutory expenses) .Preparation, submission and execution of HT agreement(6 sets) as per the renewed Contract demand according to the latest additions.	L.S	1.00000	15000.00	15000.00	
TOTAL					15000.00	
cost for one L.S					15000.00	
say					15000.00	

Cost index 41.53 %	.00
Total with Cost index	15000.0

2(b)- Supply, erection, testing and commissioning of 500 KVA Transformer and allied works at Thonithady raw water pump house compound- (1)- 11 KV substation and HT equipments

78 Specification Code: od194695/2018_2019

od194695/2018_2019 :Erection of RCC/ PCC pole of following length in brick ballast and ramming the foundation, finishing with 150 mm thick cement concrete (1:3:6) layer on top with including excavation and refilling etc. as required.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Erection of RCC/ PCC pole of following length in brick ballast and ramming the foundation, finishing with 150 mm thick cement concrete (1:3:6) layer on top with including excavation and refilling etc. as required.(rate as per vetted estimate)	Nos	1.00000	4957.00	4957.00	
TOTAL					4957.00	
cost for one Nos					4957.00	
say					4957.00	

Cost index	41.53 %	.00
Total with Cost index		4957.0

79 Specification Code: od194696/2018_2019

od194696/2018_2019 :Supplying and erection of a set of cross bracing frame work for 11 KV over head line double pole structure having four members fabricated out of 50 mm X 50 mm X 6 mm angle iron to form a rectangle of minimum size 1400 mm width X 2500 mm height, complete with 50 mm X 6mm M.S. flat iron clamps, bolts and nuts including drilling holes for insulator pins, bolts and nuts etc. (as per drawing) and painting with primer and finish paint as required.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supplying and erection of a set of cross bracing frame work for 11 KV over head line double pole structure having four members fabricated out of 50 mm X 50 mm X 6 mm angle iron to form a rectangle of minimum size 1400 mm width X 2500 mm height, complete with 50 mm X 6mm M.S. flat iron clamps, bolts and nuts including drilling holes for insulator pins, bolts and nuts etc. (as per drawing) and painting with primer and finish paint as required.	set	1.00000	6552.00	6552.00	
TOTAL					6552.00	
cost for one set					6552.00	
say					6552.00	

Cost index 41.53 %	.00
Total with Cost index	6552.0

80 Specification Code: od194697/2018_2019

od194697/2018_2019 :Erection of double pole 3 wire cross arm for 11 KV/22 KV/33 KV over head lines as required.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Erection of double pole 3 wire cross arm for 11 KV/22 KV/33 KV over head lines as required.	Nos	1.00000	967.00	967.00	
TOTAL					967.00	
cost for one Nos					967.00	
say					967.00	

Cost index 41.53 %	.00
Total with Cost index	967.0

81 Specification Code: od194698/2018_2019

od194698/2018_2019 :Supplying and erection of 11 kV pin insulator complete with large steel head G.I. pin, nuts, washers etc. as required.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supplying and erection of 11 kV pin insulator complete with large steel head G.I. pin, nuts, washers etc. as required.	set	1.00000	349.00	349.00	
TOTAL					349.00	
cost for one set					349.00	
say					349.00	

Cost index 41.53 %	.00
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Total with Cost index	349.0
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82 Specification Code: od194699/2018_2019

od194699/2018_2019 :Supplying and erection of three piece nonlinear resistor type lightning arrester suitable for 3 wire, 11 kV overhead lines with rated voltage 9 kV (rms) with a nominal discharge current rating of 5 kA and complete with galvanised clamping arrangement, G.I. bolts, nuts, washers etc. as required.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supplying and erection of three piece nonlinear resistor type lightning arrester suitable for 3 wire, 11 kV overhead lines with rated voltage 9 kV (rms) with a nominal discharge current rating of 5 kA and complete with galvanised clamping arrangement, G.I. bolts, nuts, washers etc. as required.	set	1.00000	3601.00	3601.00	
TOTAL					3601.00	
cost for one set					3601.00	
say					3601.00	
Cost index 41.53 %					.00	
Total with Cost index					3601.0	

83 Specification Code: od201137/2018_2019

od201137/2018_2019 :OUTDOOR HT BREAKER PANEL (LBS) - Supply, Installation, Testing & Commissioning of 11kV Outdoor HT Breaker Panel with the following components. 11kV Load Break Swich 11kV, 350 MVA, 630A, LBS unit - 1 set Voltmeter (0 - 11kV) - 3 Nos LED Pilot Indication - LBS ON / OFF - 1 Set 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 Thermostat & wiring - 1 Nos Inspection Lamp LED with switch & wiring - 1 set Metering Chamber PT - 100 VA, 11kV/110V, CL 0.2S - 1 No CT - */5A, 15VA, CL 0.2S - 3 Nos Provisions for mounting 3 phase, 4wire, HT CT/PT operated, bi-directional TOD meter with accuracy class 0.2S including wiring and test terminal block, site glass etc. - 1 set Voltage Circuit: The active & apparent power consumption of voltage circuit including power supply of meter at reference voltage, reference temperature & frequency shall not exceed 1.0 Watt & 4.0 VA per phase Current Circuit: The apparent power taken by current circuit at basic current, reference frequency & 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.) - Supply & Labour

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	<p>OUTDOOR HT BREAKER PANEL (LBS) - Supply, Installation, Testing & Commissioning of 11kV Outdoor HT Breaker Panel with the following components. 11kV Load Break Swich 11kV, 350 MVA, 630A, LBS unit - 1 set Voltmeter (0 - 11kV) - 3 Nos LED Pilot Indication - LBS ON / OFF - 1 Set 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 Thermostat & wiring - 1 Nos Inspection Lamp LED with switch & wiring - 1 set Metering Chamber PT - 100 VA, 11kV/110V, CL 0.2S - 1 No CT - */5A, 15VA, CL 0.2S - 3 Nos Provisions for mounting 3 phase, 4wire, HT CT/PT operated, bi-directional TOD meter with accuracy class 0.2S including wiring and test terminal block, site glass etc. - 1 set Voltage Circuit: The active & apparent power consumption of voltage circuit including power supply of meter at reference voltage, reference temperature & frequency shall not exceed 1.0 Watt & 4.0 VA per phase Current Circuit: The apparent power taken by current circuit at basic current, reference frequency & 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.) - Supply & Labour</p>	set	1.00000	215359.00	215359.00	
TOTAL					215359.00	
cost for one set					215359.00	

say	215359.00
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Cost index 41.53 %	.00
Total with Cost index	215359.0

84 Specification Code: od201138/2018_2019
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od201138/2018_2019 :HT Bidirectional TOD Meter - Supply & 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 & 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 & commissioning etc. complete.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	HT Bidirectional TOD Meter - Supply & 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 & 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 & commissioning etc. complete.	set	1.00000	43954.00	43954.00	
TOTAL					43954.00	
cost for one set					43954.00	
say					43954.00	

Cost index 41.53 %	.00
Total with Cost index	43954.0

85 Specification Code: od201139/2018_2019

od201139/2018_2019 :HT Equipment Pinth, Substation Yard Fencing & 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 miscellaneous items etc complete as per drawing and as directed by the Engineer in Charge.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	HT Equipment Pinth, Substation Yard Fencing & 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 miscellaneous items etc complete as per drawing and as directed by the Engineer in Charge.	metre	1.00000	1298.00	1298.00	
TOTAL					1298.00	
cost for one metre					1298.00	
say					1298.00	
Cost index 41.53 %					.00	
Total with Cost index					1298.0	

86 Specification Code: od201140/2018_2019

od201140/2018_2019 :HT Equipment Pinth, Substation Yard Fencing & Levelling - Supplying and filling the substation yard with 40mm size blue jelly of 150mm thick including cost and conveyance of all materials, labour

charges etc complete

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	HT Equipment Pinth, Substation Yard Fencing & Levelling - Supplying and filling the substation yard with 40mm size blue jelly of 150mm thick including cost and conveyance of all materials, labour charges etc complete	cum	1.00000	3017.00	3017.00	
TOTAL					3017.00	
cost for one cum					3017.00	
say					3017.00	

Cost index	41.53 %	.00
Total with Cost index		3017.0

87 Specification Code: od201141/2018_2019

od201141/2018_2019 :HT Equipment Pinth, Substation Yard Fencing & Levelling - Supply & erection of Random rubble masonry with hard stone 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).

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	HT Equipment Pinth, Substation Yard Fencing & Levelling - Supply & erection of Random rubble masonry with hard stone 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).	cum	1.00000	6143.00	6143.00	
TOTAL					6143.00	
cost for one cum					6143.00	
say					6143.00	

Cost index 41.53 %	.00
Total with Cost index	6143.0

88 Specification Code: od201142/2018_2019

od201142/2018_2019 :500 KVA Transformer - Supply, installation, testing and commissioning of one number 500 kVA, DYn11, 3Ph, 50Hz, 11/3.3 kV, ONAN cooled, copper wound outdoor distribution transformer with tappings from +5% to -10% in steps of 2.5% with OFTC. The HT side & LT side shall have cable end box for XLPE cable. The transformer shall have suitable enclosure for The HT side & LT side. The transformer shall be complete with all standard accessories and fittings & conform to IS:2026. The rate shall be inclusive of all materials, lead, lift, first fill of oil, necessary civil works for mounting to the existing transformer foundation complete as per single line schematic diagram & particular specifications.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	500 KVA Transformer - Supply, installation, testing and commissioning of one number 500 kVA, DYn11, 3Ph, 50Hz, 11/3.3 kV, ONAN cooled, copper wound outdoor distribution transformer with tappings from +5% to -10% in steps of 2.5% with OFTC. The HT side & LT side shall have cable end box for XLPE cable. The transformer shall have suitable enclosure for The HT side & LT side. The transformer shall be complete with all standard accessories and fittings & conform to IS:2026. The rate shall be inclusive of all materials, lead, lift, first fill of oil, necessary civil works for mounting to the existing transformer foundation complete as per single line schematic diagram & particular specifications.	set	1.00000	918604.00	918604.00	
TOTAL					918604.00	
cost for one set					918604.00	
say					918604.00	

Cost index 41.53 %	.00
Total with Cost index	918604.0

89 Specification Code: od210621/2020_2021

od210621/2020_2021 :Supply/erection/testing commissioning of one number50/ 63 KVA(or suitable near size) 3.3KV/433V ,distribution transformer Indoor (or out door),with HT/LT cable entry ,with suitable HT and LT cables from 3.3 KV pannel to transformer and LT cable to LT panel,cable termination,foundation/structure/enclosure for transformer including ,erection ,testing and commissioning of LT pannel with 100A incomer MCCB, 3 NOS 63 A outgoing MCCB with isolation,erathing , with meters and indicating lamps etc complete including approval from Inspectrate.-complete-as per CEA and Inspectrate statutes

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply/erection/testing commissioning of one number50/ 63 KVA(or suitable near size) 3.3KV/433V ,distribution transformer Indoor (or out door),with HT/LT cable entry ,with suitable HT and LT cables from 3.3 KV pannel to transformer and LT cable to LT panel,cable termination,foundation/structure/enclosure for transformer including ,erection ,testing and commissioning of LT pannel with 100A incomer MCCB, 3 NOS 63 A outgoing MCCB with isolation,erathing , with meters and indicating lamps etc complete including approval from Inspectrate.-complete-as per CEA and Inspectrate statutes	No	1.00000	350000.00	350000.00	
TOTAL					350000.00	
cost for one No					350000.00	
say					350000.00	

Cost index	41.53 %	.00
Total with Cost index		350000.0

90 Specification Code: od201143/2018_2019

od201143/2018_2019 :Neutral Grounding Resistor - Supply & Providing 50A,3.3kV 40ohm 30sec NGR - Supply

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Neutral Grounding Resistor - Supply & Providing 50A,3.3kV 40ohm 30sec NGR - Supply	Nos	1.00000	155766.00	155766.00	

TOTAL					155766.00
cost for one No					155766.00
say					155766.00

Cost index 41.53 %					.00
Total with Cost index					155766.0

91 Specification Code: od201144/2018_2019

od201144/2018_2019 :Neutral Grounding Resistor - Supply & Providing 50A,3.3kV 40ohm 30sec NGR - Labour

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Neutral Grounding Resistor - Supply & Providing 50A,3.3kV 40ohm 30sec NGR - Labour	Nos	1.00000	656.00	656.00	
TOTAL					656.00	
cost for one No					656.00	
say					656.00	

Cost index 41.53 %					.00
Total with Cost index					656.0

92 Specification Code: od201145/2018_2019

od201145/2018_2019 :NEUTRAL CT - Supply & Providing 5P10 Protection Class 20/5A, 15VA Neutral CT in a suitable enclosure including giving connections to Transformer Neutral etc.complete - Supply

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	NEUTRAL CT - Supply & Providing 5P10 Protection Class 20/5A, 15VA Neutral CT in a suitable enclosure including giving connections to Transformer Neutral etc.complete - Supply	Nos	1.00000	4327.00	4327.00	
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TOTAL					4327.00
cost for one No					4327.00
say					4327.00

Cost index 41.53 %					.00
Total with Cost index					4327.0

93 Specification Code: od201146/2018_2019

od201146/2018_2019 :NEUTRAL CT - Supply & Providing 5P10 Protection Class 20/5A, 15VA Neutral CT in a suitable enclosure including giving connections to Transformer Neutral etc.complete - Labour

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	NEUTRAL CT - Supply & Providing 5P10 Protection Class 20/5A, 15VA Neutral CT in a suitable enclosure including giving connections to Transformer Neutral etc.complete - Labour	Nos	1.00000	625.00	625.00	
TOTAL					625.00	
cost for one No					625.00	
say					625.00	

Cost index 41.53 %					.00
Total with Cost index					625.0

2(b)- Supply, erection, testing and commissioning of 500 KVA Transformer and allied works at Thonithady raw water pump house compound-(2)- LT / MV PANELS & ACCESSORIES

94 Specification Code: od201161/2018_2019

od201161/2018_2019 :PCC PANEL -Design ,approval, Supply, fabrication, erection, testing and commissioning of 3.3kv cubicle type fully compartmentalized, dust tight, vermin proof, water proof 3.3 kv , VCB panel set 200Amp or suitable rating - Main 3.3.KV 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, free standing panel consisting of the following as per standards (All switches shall confirm to conforming to IEC 60947-2 standards). Incommer - 200A FP Microprocessor based VCB - suitable MVA based on fault level-- 1 Nos. Restricted Earth Fault Relay - best conductivity Aluminium busbar with SMC supports, heat shrinkable sleeves etc. as per ISS - 1set RYB indicators (LED Pilot type) with 2A Control MCB and toggle switches - 4 Set Multifunction Digital Panel meter to read V, A, F, PF, kW, kVA, kVAR, kWh, kVAh, kVARh Class 1.0 - 1 Set 200/5A CL 1.0, 15VA Metering CTs -one VCB incomer 200 A or suitable size- 3 Sets Outgoings: 200A, VCB - 1 Nos. 100/50A VCB out going- .with isolation facility - Surge Protection Pluggable type surge arrester with potential free contact, thermal disconnecter & provision for inbuilt common remote indication for defective arresters to connect between Line and Neutral and one number Spark Gap type arrester to connect between Neutral and Earth of following ratings including base element & pluggable arresters. Nominal voltage 3.3KV, 50Hz, Nominal Discharge current 30 kA (8/20 sec) for Line to Neutral & 50 kA (8/20 sec) for Neutral to Earth, Maximum Discharge Current I_{max} 50 kA (8/20 sec) -1Set Supports 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. 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 & Labour ,suitable battery and charger for the pannel,-complete as per CEA and kerala State Electrical Inspectrate relevant statutes,.approval from inspectrate ,2.5 sq mm copper cable shall be used for all control circuits-

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	<p>PCC PANEL -Design ,approval, Supply, fabrication, erection, testing and commissioning of 3.3kv cubicle type fully compartmentalized, dust tight, vermin proof, water proof 3.3 kv , VCB panel set 200Amp or suitable rating - Main 3.3.KV 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, free standing panel consisting of the following as per standards (All switches shall confirm to conforming to IEC 60947-2 standards). Incommer - 200A FP Microprocessor based VCB - suitable MVA based on fault level-- 1 Nos. Restricted Earth Fault Relay - best conductivity Aluminium busbar with SMC supports, heat shrinkable sleeves etc. as per ISS - 1set RYB indicators (LED Pilot type) with 2A Control MCB and toggle switches - 4 Set Multifunction Digital Panel meter to read V, A, F, PF, kW, kVA, kVAR, kWh, kVAh, kVARh Class 1.0 - 1 Set 200/5A CL 1.0, 15VA Metering CTs -one VCB incomer 200 A or suitable size- 3 Sets Outgoings: 200A, VCB - 1 Nos. 100/50A VCB out going- .with isolation facility - Surge Protection Pluggable type surge arrester with potential free contact, thermal disconnecter & provision for inbuilt common remote indication for defective arresters to connect between Line and Neutral and one number Spark Gap type arrester to connect between Neutral and Earth of following ratings including base element & pluggable arresters. Nominal voltage 3.3KV, 50Hz, Nominal Discharge current 30 kA (8/20 sec) for Line to Neutral & 50 kA (8/20 sec) for Neutral to Earth, Maximum Discharge Current I_{max} 50 kA (8/20 sec) -1Set Supports The panel shall be supported to ground using framework fabricated out of MS Flats / Angles etc. painted with two coats of Zinc Chromate</p>	set	1.00000	1806133.0 0	1806133.0 0	
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<p>primer and two coats of enamel paint. The framework shall be firmly supported to ground using suitable cement concrete 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. Supply & Labour ,suitable battery and charger for the pannel,-complete as per CEA and kerala State Electrical Inspectrate relevant statutes,.approval from inspectrate ,2.5 sq mm copper cable shall be used for all control circuits-</p>					
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	TOTAL	1806133.00
	cost for one set	1806133.00
	say	1806133.00

	Cost index	41.53 %	.00
	Total with Cost index		1806133.0

2(b)- Supply, erection, testing and commissioning of 500 KVA Transformer and allied works at Thonithady raw water pump house compound- (3)- DISTRIBUTION BOARDS, SWITCHGEAR & ACCESSORIES

95 Specification Code: od194998/2018_2019

od194998/2018_2019 :Supply, installation, testing & 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) - 12 Way

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	Supply, installation, testing & 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 outgoing 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) - 12 Way	Nos	1.00000	11136.00	11136.00	
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TOTAL		11136.00
cost for one No		11136.00
say		11136.00

Cost index	41.53 %	.00
Total with Cost index		11136.0

96 Specification Code: od201177/2018_2019

od201177/2018_2019 :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

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	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	Nos	1.00000	6640.00	6640.00	
TOTAL					6640.00	
cost for one No					6640.00	
say					6640.00	

Cost index 41.53 %	.00
Total with Cost index	6640.0

97 Specification Code: od195000/2018_2019

od195000/2018_2019 :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, 4P MCB Isolator

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	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, 4P MCB Isolator	Nos	1.00000	1050.00	1050.00	
TOTAL					1050.00	
cost for one No					1050.00	
say					1050.00	

Cost index 41.53 %	.00
Total with Cost index	1050.0

98 Specification Code: od201178/2018_2019

od201178/2018_2019 :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

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	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	Nos	1.00000	181.00	181.00	
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TOTAL					181.00
cost for one No					181.00
say					181.00

Cost index 41.53 %					.00
Total with Cost index					181.0

2(b)- Supply, erection, testing and commissioning of 500 KVA Transformer and allied works at
Thonithady raw water pump house compound- (4)- CABLES , WIRES & ACCESSORIES

99 Specification Code: od201350/2018_2019

od201350/2018_2019 :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 150 Sqm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	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 150 Sqm	metre	1.00000	2318.00	2318.00	
TOTAL					2318.00	

cost for one metre	2318.00
say	2318.00

Cost index 41.53 %	.00
Total with Cost index	2318.0

100 Specification Code: od201351/2018_2019

od201351/2018_2019 :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 50 Sqm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	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 50 Sqm	metre	1.00000	1072.00	1072.00	
TOTAL					1072.00	
cost for one metre					1072.00	
say					1072.00	

Cost index 41.53 %	.00
Total with Cost index	1072.0

101 Specification Code: od201352/2018_2019

od201352/2018_2019 :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. 1C x 50 Sqmm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	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. 1C x 50 Sqmm	metre	1.00000	628.00	628.00	
TOTAL					628.00	
cost for one metre					628.00	
say					628.00	
Cost index 41.53 %					.00	
Total with Cost index					628.0	

102 Specification Code: od201353/2018_2019

od201353/2018_2019 :HT Cable Terminations - Supplying and making indoor cable end termination with heat shrinkable jointing kit, including lugs and other jointing materials, for following sizes, XLPE aluminium conductor cable of 11 KV grade as required. 3C x 150 Sqmm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	HT Cable Terminations - Supplying and making indoor cable end termination with heat shrinkable jointing kit, including lugs and other jointing materials, for following sizes, XLPE aluminium conductor cable of 11 KV grade as required. 3C x 150 Sqmm	set	1.00000	10002.00	10002.00	
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TOTAL					10002.00
cost for one set					10002.00
say					10002.00

Cost index 41.53 %					.00
Total with Cost index					10002.0

103 Specification Code: od201354/2018_2019

od201354/2018_2019 :HT Cable Terminations - Supplying and making indoor cable end termination with heat shrinkable jointing kit, including lugs and other jointing materials, for following sizes, XLPE aluminium conductor cable of 11 KV grade as required. 3C x 50 Sqmm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	HT Cable Terminations - Supplying and making indoor cable end termination with heat shrinkable jointing kit, including lugs and other jointing materials, for following sizes, XLPE aluminium conductor cable of 11 KV grade as required. 3C x 50 Sqmm	set	1.00000	7664.00	7664.00	
TOTAL					7664.00	
cost for one set					7664.00	
say					7664.00	

Cost index 41.53 %					.00
Total with Cost index					7664.0

104 Specification Code: od201355/2018_2019

od201355/2018_2019 :HT Cable Terminations - Supplying and making indoor cable end termination with heat shrinkable jointing kit, including lugs and other jointing materials, for following sizes, XLPE aluminium conductor cable of 11 KV grade as required. 1C x 50 Sqmm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	HT Cable Terminations - Supplying and making indoor cable end termination with heat shrinkable jointing kit, including lugs and other jointing materials, for following sizes, XLPE aluminium conductor cable of 11 KV grade as required. 1C x 50 Sqmm	set	1.00000	7664.00	7664.00	
TOTAL					7664.00	
cost for one set					7664.00	
say					7664.00	

Cost index	41.53 %	.00
Total with Cost index		7664.0

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105 Specification Code: od201356/2018_2019

PRICE

od201356/2018_2019 :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

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	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	set	1.00000	12367.00	12367.00	
TOTAL					12367.00	
cost for one set					12367.00	
say					12367.00	

Cost index 41.53 %	.00
Total with Cost index	12367.0

106 Specification Code: od201357/2018_2019

od201357/2018_2019 :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. 1C x 50 Sqmm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	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. 1C x 50 Sqmm	set	1.00000	14660.00	14660.00	
TOTAL					14660.00	
cost for one set					14660.00	
say					14660.00	

Cost index 41.53 %	.00
Total with Cost index	14660.0

107 Specification Code: od201358/2018_2019

od201358/2018_2019 :LT Power Cables - Supply & laying UG 2XFY,PVC insulated and PVC sheathed Copper conductor armoured Power / Control cable of 1.1 KV grade of the following sizes through trench/wall/ ceiling - 4C x 2.5 Sqmm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	LT Power Cables - Supply & laying UG 2XFY,PVC insulated and PVC sheathed Copper conductor armoured Power / Control cable of 1.1 KV grade of the following sizes through trench/wall/ ceiling - 4C x 2.5 Sqmm	metre	1.00000	308.00	308.00	
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TOTAL					308.00
cost for one metre					308.00
say					308.00

Cost index 41.53 %					.00
Total with Cost index					308.0

108 Specification Code: od201359/2018_2019

od201359/2018_2019 :LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete. 3.5C x 400 Sqmm (82mm)

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Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete. 3.5C x 400 Sqmm (82mm)	Nos	1.00000	2152.00	2152.00	
TOTAL					2152.00	
cost for one No					2152.00	
say					2152.00	

Cost index 41.53 %					.00
Total with Cost index					2152.0

109 Specification Code: od201360/2018_2019

od201360/2018_2019 :LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete. 3.5C x 300 Sqmm (70mm)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete. 3.5C x 300 Sqmm (70mm)	Nos	1.00000	1713.00	1713.00	
TOTAL					1713.00	
cost for one No					1713.00	
say					1713.00	

Cost index	41.53 %	.00
Total with Cost index		1713.0

110 Specification Code: od201361/2018_2019

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od201361/2018_2019 :LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete. 3.5C x 35 Sqmm (32mm)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete. 3.5C x 35 Sqmm (32mm)	Nos	1.00000	437.00	437.00	
TOTAL					437.00	
cost for one No					437.00	
say					437.00	

Cost index	41.53 %	.00
Total with Cost index		437.0

111 Specification Code: od201362/2018_2019

od201362/2018_2019 :LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete. 4C x 2.5 Sqmm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete. 4C x 2.5 Sqmm	Nos	1.00000	217.00	217.00	
TOTAL					217.00	
cost for one No					217.00	
say					217.00	

Cost index	41.53 %	.00
Total with Cost index		217.0

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112 Specification Code: od201363/2018_2019

od201363/2018_2019 :LT Power Cables - Supply & 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

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	LT Power Cables - Supply & 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	metre	1.00000	47.00	47.00	
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TOTAL		47.00
cost for one metre		47.00
say		47.00

Cost index	41.53 %	.00
Total with Cost index		47.0

113 Specification Code: od201364/2018_2019

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od201364/2018_2019 :LT Power Cables - Supply & 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 1.5 Sqmm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	LT Power Cables - Supply & 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 1.5 Sqmm	metre	1.00000	88.00	88.00	

TOTAL	88.00
cost for one metre	88.00
say	88.00

Cost index 41.53 %	.00
Total with Cost index	88.0

114 Specification Code: od201365/2018_2019

od201365/2018_2019 :PVC Conduits - Supply and providing the following size of ISI Marked rigid PVC conduits with specials confirming to IS 9537/1983 on surface / concealed position making good the damages made etc.complete. 20mm dia 1.5mm thick

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	PVC Conduits - Supply and providing the following size of ISI Marked rigid PVC conduits with specials confirming to IS 9537/1983 on surface / concealed position making good the damages made etc.complete. 20mm dia 1.5mm thick	metre	1.00000	88.00	88.00	
TOTAL					88.00	
cost for one metre					88.00	
say					88.00	

Cost index 41.53 %	.00
Total with Cost index	88.0

115 Specification Code: od201366/2018_2019

od201366/2018_2019 :PVC Conduits - Supply and providing the following size of ISI Marked rigid PVC conduits with specials confirming to IS 9537/1983 on surface / concealed position making good the damages made etc.complete. 25mm dia 1.5mm thick

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	PVC Conduits - Supply and providing the following size of ISI Marked rigid PVC conduits with specials confirming to IS 9537/1983 on surface / concealed position making good the damages made etc.complete. 25mm dia 1.5mm thick	metre	1.00000	107.00	107.00	
TOTAL					107.00	
cost for one metre					107.00	
say					107.00	

Cost index	41.53 %	.00
Total with Cost index		107.0

116 Specification Code: od201367/2018_2019

od201367/2018_2019 :PVC Conduits - Supply and providing the following size of ISI Marked rigid PVC conduits with specials confirming to IS 9537/1983 on surface / concealed position making good the damages made etc.complete. 32mm dia 1.5mm thick

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	PVC Conduits - Supply and providing the following size of ISI Marked rigid PVC conduits with specials confirming to IS 9537/1983 on surface / concealed position making good the damages made etc.complete. 32mm dia 1.5mm thick	metre	1.00000	138.00	138.00	
TOTAL					138.00	
cost for one metre					138.00	
say					138.00	

Cost index	41.53 %	.00
Total with Cost index		138.0

117 Specification Code: od201368/2018_2019

od201368/2018_2019 :PVC Conduits - Supply & providing Capping / Casing of good quality of the following sizes. 20 mm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	PVC Conduits - Supply & providing Capping / Casing of good quality of the following sizes. 20 mm	metre	1.00000	43.00	43.00	
TOTAL					43.00	
cost for one metre					43.00	
say					43.00	

Cost index	41.53 %	.00
Total with Cost index		43.0

118 Specification Code: od201369/2018_2019

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od201369/2018_2019 :PVC Conduits - Supply & providing Capping / Casing of good quality of the following sizes. 25 mm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	PVC Conduits - Supply & providing Capping / Casing of good quality of the following sizes. 25 mm	metre	1.00000	49.00	49.00	
TOTAL					49.00	
cost for one metre					49.00	
say					49.00	

Cost index	41.53 %	.00
Total with Cost index		49.0

119 Specification Code: od201370/2018_2019

od201370/2018_2019 :UG Cable Tamper Protection - Supply & laying the following size of B class GI Pipe for UG Cable tamper protection in the existing trench in position etc. complete. 50 mm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	UG Cable Tamper Protection - Supply & laying the following size of B class GI Pipe for UG Cable tamper protection in the existing trench in position etc. complete. 50 mm	metre	1.00000	379.00	379.00	
TOTAL					379.00	
cost for one metre					379.00	
say					379.00	

Cost index	41.53 %	.00
Total with Cost index		379.0

120 Specification Code: od201371/2018_2019

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od201371/2018_2019 :UG Cable Tamper Protection - Supply & laying the following size of B class GI Pipe for UG Cable tamper protection in the existing trench in position etc. complete. 75 mm

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	UG Cable Tamper Protection - Supply & laying the following size of B class GI Pipe for UG Cable tamper protection in the existing trench in position etc. complete. 75 mm	metre	1.00000	485.00	485.00	
TOTAL					485.00	
cost for one metre					485.00	
say					485.00	

Cost index	41.53 %	.00
Total with Cost index		485.0

121 Specification Code: od201372/2018_2019

od201372/2018_2019 :Circuit Mains - Supply and wiring the following size of PVC insulated copper wire manufactured with bright annealed bunched electrolytic copper conductor as per IS 8130/1984 insulated with di-electrical grade PVC compound per as IS 5831/1984 Generally Conforming to IS 694/1990 for working voltage up to and including 1100 V.through the existing PVC conduits / capping casing. 3 run x 4.0 Sqmm - SPN + E

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Circuit Mains - Supply and wiring the following size of PVC insulated copper wire manufactured with bright annealed bunched electrolytic copper conductor as per IS 8130/1984 insulated with di-electrical grade PVC compound per as IS 5831/1984 Generally Conforming to IS 694/1990 for working voltage up to and including 1100 V.through the existing PVC conduits / capping casing. 3 run x 4.0 Sqmm - SPN + E	metre	1.00000	199.00	199.00	
TOTAL					199.00	
cost for one metre					199.00	
say					199.00	

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Cost index - 41.53 %	.00
Total with Cost index	199.0

122 Specification Code: od201373/2018_2019

od201373/2018_2019 :Circuit Mains - Supply and wiring the following size of PVC insulated copper wire manufactured with bright annealed bunched electrolytic copper conductor as per IS 8130/1984 insulated with di-electrical grade PVC compound per as IS 5831/1984 Generally Conforming to IS 694/1990 for working voltage up to and including 1100 V.through the existing PVC conduits / capping casing. 3 run x 2.5 Sqmm - SPN + E

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	CCircuit Mains - Supply and wiring the following size of PVC insulated copper wire manufactured with bright annealed bunched electrolytic copper conductor as per IS 8130/1984 insulated with di-electrical grade PVC compound per as IS 5831/1984 Generally Conforming to IS 694/1990 for working voltage up to and including 1100 V.through the existing PVC conduits / capping casing. 3 run x 2.5 Sqmm - SPN + E	metre	1.00000	154.00	154.00	
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TOTAL					154.00
cost for one metre					154.00
say					154.00

Cost index 41.53 %					.00
Total with Cost index					154.0

123 Specification Code: od201374/2018_2019

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od201374/2018_2019 :Circuit Mains- Supply and wiring the following size of PVC insulated copper wire manufactured with bright annealed bunched electrolytic copper conductor as per IS 8130/1984 insulated with di-electrical grade PVC compound per as IS 5831/1984 Generally Conforming to IS 694/1990 for working voltage up to and including 1100 V.through the existing PVC conduits / capping casing. 3 run x 1.5 sqmm - SPN + E

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Circuit Mains- Supply and wiring the following size of PVC insulated copper wire manufactured with bright annealed bunched electrolytic copper conductor as per IS 8130/1984 insulated with di-electrical grade PVC compound per as IS 5831/1984 Generally Conforming to IS 694/1990 for working voltage up to and including 1100 V.through the existing PVC conduits / capping casing. 3 run x 1.5 sqmm - SPN + E	metre	1.00000	118.00	118.00	
TOTAL					118.00	
cost for one metre					118.00	

say	118.00
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Cost index 41.53 %	.00
Total with Cost index	118.0

124 Specification Code: od201375/2018_2019

od201375/2018_2019 :Cable Supports & Trenching- Supply and erection of Cable trays and cable supports fabricated out of MS angles 25x25x6mm (ISA) and 25x6mmMS flats with and 20cm spacing between successive cross members and supported using 25cm long 32x6mm MS flat at every 1m spacing. The cable trays and supports shall be painted with two coats of Zinc Chromate primer and two coats of enamel paint.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Cable Supports & Trenching- Supply and erection of Cable trays and cable supports fabricated out of MS angles 25x25x6mm (ISA) and 25x6mmMS flats with and 20cm spacing between successive cross members and supported using 25cm long 32x6mm MS flat at every 1m spacing. The cable trays and supports shall be painted with two coats of Zinc Chromate primer and two coats of enamel paint.	kg	1.00000	149.00	149.00	
TOTAL					149.00	
cost for one kg					149.00	
say					149.00	

Cost index 41.53 %	.00
Total with Cost index	149.0

125 Specification Code: od201376/2018_2019

od201376/2018_2019 :Cable Supports & Trenching- Supply and providing 6mm MS chequered plate of suitable thickness including cutting, welding, painting etc. as required for the cable trench covering.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Cable Supports & Trenching- Supply and providing 6mm MS chequered plate of suitable thickness including cutting, welding, painting etc. as required for the cable trench covering.	kg	1.00000	121.00	121.00	
TOTAL					121.00	
cost for one kg					121.00	
say					121.00	

Cost index	41.53 %	.00
Total with Cost index		121.0

126 Specification Code: od201377/2018_2019

od201377/2018_2019 :Charges for making cable trenches in all type of soil including providing country burnt bricks breadth wise above the cable, providing sand cushioning of 150mm refilling & restoring normal surface etc.complete as per standards of the following size. 35 cm Wide x 100 cm Deep (HT Cables)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Charges for making cable trenches in all type of soil including providing country burnt bricks breadth wise above the cable, providing sand cushioning of 150mm refilling & restoring normal surface etc.complete as per standards of the following size. 35 cm Wide x 100 cm Deep (HT Cables)	metre	1.00000	651.00	651.00	
TOTAL					651.00	
cost for one metre					651.00	
say					651.00	

Cost index	41.53 %	.00
Total with Cost index		651.0

127 Specification Code: od201378/2018_2019

od201378/2018_2019 :Charges for making cable trenches in all type of soil including providing country burnt bricks breadth wise above the cable, providing sand cushioning of 150mm refilling & restoring normal surface etc.complete as per standards of the following size. 35 cm Wide x 75 cm Deep (LT Cables)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Charges for making cable trenches in all type of soil including providing country burnt bricks breadth wise above the cable, providing sand cushioning of 150mm refilling & restoring normal surface etc.complete as per standards of the following size. 35 cm Wide x 75 cm Deep (LT Cables)	metre	1.00000	604.00	604.00	
TOTAL					604.00	
cost for one metre					604.00	
say					604.00	

Cost index	41.53 %	.00
Total with Cost index		604.0

128 Specification Code: od195921/2018_2019

od195921/2018_2019 :Cable Supports & Trenching - Supply route marker with 10cmx10cm GI plate 5mm thick with inscriptions there on bolted / welded to 35x35x6mm angle iron 60cm long and fixing the same in ground as required.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Cable Supports & Trenching - Supply route marker with 10cmx10cm GI plate 5mm thick with inscriptions there on bolted / welded to 35x35x6mm angle iron 60cm long and fixing the same in ground as required.	Nos	1.00000	516.00	516.00	
TOTAL					516.00	
cost for one No					516.00	
say					516.00	

Cost index	41.53 %	.00
Total with Cost index		516.0

129 Specification Code: od195922/2018_2019

od195922/2018_2019 :Cable Supports & Trenching - Supply route marker with 10cmx10cm GI plate 5mm thick with inscriptions there on bolted / welded to 35x35x6mm angle iron 60cm long and fixing the same in ground as required.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Cable Supports & Trenching - Supply route marker with 10cmx10cm GI plate 5mm thick with inscriptions there on bolted / welded to 35x35x6mm angle iron 60cm long and fixing the same in ground as required.	Nos	1.00000	417.00	417.00	
TOTAL					417.00	
cost for one No					417.00	
say					417.00	

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Cost index	41.53 %	.00
Total with Cost index		417.0

2(b)- Supply, erection, testing and commissioning of 500 KVA Transformer and allied works at Thonithady plant compound- (5)- EARTHING & ACCESSORIES

130 Specification Code: od201561/2018_2019

od201561/2018_2019 :Supply and providing plate earthing as per IS 3043 with 1200x1200x12 mm GI/CI earth plate, 50 mm GI watering pipe fixed to the earth plate with 25 x 3mm GI clamps, GI funnel with weld mesh, filling required quantity of charcoal including construction of inspection chamber with a bed concrete of 1:4:8 PCC using 40 mm broken stone (10 cm thick), brick work in cement mortar 1:6, plastering the surface of brick masonry and the exposed surface of PCC bed with cement mortar 1:4, 12 mm thick, (the finished inside dimension shall be 450 x 450 x 450 mm) but excluding test joint, earth continuity conductor to the plate, and covering at the top.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	Supply and providing plate earthing as per IS 3043 with 1200x1200x12 mm GI/CI earth plate, 50 mm GI watering pipe fixed to the earth plate with 25 x 3mm GI clamps, GI funnel with weld mesh, filling required quantity of charcoal including construction of inspection chamber with a bed concrete of 1:4:8 PCC using 40 mm broken stone (10 cm thick), brick work in cement mortar 1:6, plastering the surface of brick masonry and the exposed surface of PCC bed with cement mortar 1:4, 12 mm thick, (the finished inside dimension shall be 450 x 450 x 450 mm) but excluding test joint, earth continuity conductor to the plate, and covering at the top.	set	1.00000	11091.00	11091.00	
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	TOTAL	11091.00
	cost for one set	11091.00
	say	11091.00

	Cost index 41.53 %	.00
	Total with Cost index	11091.0

131 Specification Code: od201562/2018_2019

od201562/2018_2019 :Supply and providing pipe earthing as per IS 3043 with 2.5 m long 40 mm dia B class GI pipe, GI funnel with weld mesh, filling required quantity of charcoal & salt including construction of inspection chamber with a bed concrete of 1:4:8 PCC using 40 mm broken stone (10 cm thick), brick work in cement mortar 1:6, plastering the surface of brick masonry and the exposed surface of PCC bed with cement mortar 1:4, 12 mm thick, (the finished inside dimension shall be 300 x 300 x 300 mm) but excluding test joint, earth continuity conductor to the plate, and covering at the top.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	Supply and providing pipe earthing as per IS 3043 with 2.5 m long 40 mm dia B class GI pipe, GI funnel with weld mesh, filling required quantity of charcoal & salt including construction of inspection chamber with a bed concrete of 1:4:8 PCC using 40 mm broken stone (10 cm thick), brick work in cement mortar 1:6, plastering the surface of brick masonry and the exposed surface of PCC bed with cement mortar 1:4, 12 mm thick, (the finished inside dimension shall be 300 x 300 x 300 mm) but excluding test joint, earth continuity conductor to the plate, and covering at the top.	set	1.00000	2952.00	2952.00	
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TOTAL					2952.00
cost for one set					2952.00
say					2952.00

Cost index 41.53 %					.00
Total with Cost index					2952.0

Kerala Water Authority

132 Specification Code: od201563/2018_2019

PRICE

od201563/2018_2019 :Supply & laying the following sizes of Earth Strip for earthing interconnection, termination and leads, for continous earthing along with cables tinned at terminals etc. complete. 25 x 6 mm Copper Strip

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply & laying the following sizes of Earth Strip for earthing interconnection, termination and leads, for continous earthing along with cables tinned at terminals etc. complete. 25 x 6 mm Copper Strip	metre	1.00000	1600.00	1600.00	
TOTAL					1600.00	
cost for one metre					1600.00	
say					1600.00	

Cost index 41.53 %					.00
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Total with Cost index	1600.0
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133 Specification Code: od201564/2018_2019

od201564/2018_2019 :Supply & laying the following sizes of Earth Strip for earthing interconnection, termination and leads, for continous earthing along with cables tinned at terminals etc. complete. 25 x 3 mm Copper strip
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Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply & laying the following sizes of Earth Strip for earthing interconnection, termination and leads, for continous earthing along with cables tinned at terminals etc. complete. 25 x 3 mm Copper strip	metre	1.00000	797.00	797.00	
TOTAL					797.00	
cost for one metre					797.00	
say					797.00	

Kerala Water Authority	Cost index	41.53 %	.00
PRICE		Total with Cost index	797.0

134 Specification Code: od201565/2018_2019

od201565/2018_2019 :Supply and drawing bare earthing conductors of the following sizes along with wiring/ cables and giving earth connection as required. No.16 SWG Copper Conductor
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Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply and drawing bare earthing conductors of the following sizes along with wiring/ cables and giving earth connection as required. No.16 SWG Copper Conductor	metre	1.00000	199.00	199.00	
TOTAL					199.00	
cost for one metre					199.00	
say					199.00	

Cost index	41.53 %	.00
Total with Cost index		199.0

135 Specification Code: od201566/2018_2019

od201566/2018_2019 :Supply and drawing bare earthing conductors of the following sizes along with wiring/ cables and giving earth connection as required. No.10 SWG Copper Conductor

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply and drawing bare earthing conductors of the following sizes along with wiring/ cables and giving earth connection as required. No.10 SWG Copper Conductor	metre	1.00000	113.00	113.00	
TOTAL					113.00	
cost for one metre					113.00	
say					113.00	

Cost index	41.53 %	.00
Total with Cost index		113.0

2(b)- Supply, erection, testing and commissioning of 500 KVA Transformer and allied works at Thonithady raw water pump house compound-(6) SUBSTATION EQUIPMENTS & MISC

136 Specification Code: od201637/2018_2019

od201637/2018_2019 :Supply and providing 6 mm thick & 1 m wide electrical grade chequered type rubber mat to withstand 3.3 KV dielectric strength conforming to IS 5429/ 1969.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply and providing 6 mm thick & 1 m wide electrical grade chequered type rubber mat to withstand 3.3 KV dielectric strength conforming to IS 5429/ 1969.	sqm	1.00000	773.00	773.00	
TOTAL					773.00	

cost for one sqm	773.00
say	773.00

Cost index 41.53 %	.00
Total with Cost index	773.0

137 Specification Code: od201638/2018_2019

od201638/2018_2019 :Supply and providing 12 mm thick & 1 m wide electrical grade chequered type rubber mat to withstand 15 KV dielectric strength conforming to IS 5429/ 1969 in front of the HT Breaker Panel.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply and providing 12 mm thick & 1 m wide electrical grade chequered type rubber mat to withstand 15 KV dielectric strength conforming to IS 5429/ 1969 in front of the HT Breaker Panel.	sqm	1.00000	1379.00	1379.00	
Kerala Water Authority TOTAL					1379.00	
cost for one sqm					1379.00	
say					1379.00	

Cost index 41.53 %	.00
Total with Cost index	1379.0

138 Specification Code: od201639/2018_2019

od201639/2018_2019 :Supply and providing 5 Kg. Dry Chemical Powder type Fire Extinguisher with hose and clamps including fixing it to wall as required.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply and providing 5 Kg. Dry Chemical Powder type Fire Extinguisher with hose and clamps including fixing it to wall as required.	set	1.00000	2383.00	2383.00	

TOTAL	2383.00
cost for one set	2383.00
say	2383.00

Cost index 41.53 %	.00
Total with Cost index	2383.0

139 Specification Code: od201640/2018_2019

od201640/2018_2019 :Supply and providing 9 Litre capacity GI Fire Bucket painted in post office red with primer coat of red oxide and written with white paint 'FIRE' mounted on MS angle frame work/ wall bracket filled with fine sand, painting the bracket/ floor stand including making good the damages, colour washing etc. as required.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply and providing 9 Litre capacity GI Fire Bucket painted in post office red with primer coat of red oxide and written with white paint 'FIRE' mounted on MS angle frame work/ wall bracket filled with fine sand, painting the bracket/ floor stand including making good the damages, colour washing etc. as required.	set	1.00000	638.00	638.00	
TOTAL					638.00	
cost for one set					638.00	
say					638.00	

Cost index 41.53 %	.00
Total with Cost index	638.0

140 Specification Code: od201641/2018_2019

od201641/2018_2019 :Supply and providing First Aid Chart duly framed and placed in a conspicuous location for clear vision.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply and providing First Aid Chart duly framed and placed in a conspicuous location for clear vision.	set	1.00000	247.00	247.00	
TOTAL					247.00	
cost for one set					247.00	
say					247.00	

Cost index	41.53 %	.00
Total with Cost index		247.0

141 Specification Code: od201642/2018_2019

od201642/2018_2019 :Supply and providing Laminated Electrical Schematic diagram framed and placed in a conspicuous location for clear vision.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply and providing Laminated Electrical Schematic diagram framed and placed in a conspicuous location for clear vision.	set	1.00000	226.00	226.00	
TOTAL					226.00	
cost for one set					226.00	
say					226.00	

Cost index	41.53 %	.00
Total with Cost index		226.0

142 Specification Code: od201643/2018_2019

od201643/2018_2019 :Supply & providing Aluminium anodised Danger Notice Board of size 200 x 150 mm. with inscriptions (both in English and Malayalam) and conventional Skull and Bone in Red colour at locations as directed by the Engineer in Charge

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply & providing Aluminium anodised Danger Notice Board of size 200 x 150 mm. with inscriptions (both in English and Malayalam) and conventional Skull and Bone in Red colour at locations as directed by the Engineer in Charge	Nos	1.00000	267.00	267.00	
TOTAL					267.00	
cost for one No					267.00	
say					267.00	

Cost index	41.53 %	.00
Total with Cost index		267.00

2(b)- Supply, erection, testing and commissioning of 500 KVA Transformer and allied works at Thonithady raw water pump house compound-(7) - SCHEME APPROVAL & POWER ALLOCATION

143 Specification Code: od202018/2018_2019

Kerala Water Authority

od202018/2018_2019 :SCHEME APPROVAL & POWER ALLOCATION - Preparation and submission of latest scheme drawings, Voltage drop calculations, Earthing design & 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).

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	SCHEME APPROVAL & POWER ALLOCATION - Preparation and submission of latest scheme drawings, Voltage drop calculations, Earthing design & 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).	L.S	1.00000	20000.00	20000.00	
TOTAL					20000.00	

cost for one L.S	20000.00
say	20000.00

Cost index 41.53 %	.00
Total with Cost index	20000.0

144 Specification Code: od202020/2018_2019

od202020/2018_2019 :SCHEME APPROVAL & POWER ALLOCATION - Preparation and submission of latest scheme drawings to KSEB for obtaining sanction for power allocation (Including all incidental and statutory expenses) .Preparation, submission and execution of HT agreement(6 sets) as per the renewed Contract demand according to the latest additions.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	SCHEME APPROVAL & POWER ALLOCATION - Preparation and submission of latest scheme drawings to KSEB for obtaining sanction for power allocation (Including all incidental and statutory expenses) .Preparation, submission and execution of HT agreement(6 sets) as per the renewed Contract demand according to the latest additions.	L.S	1.00000	15000.00	15000.00	
TOTAL					15000.00	
cost for one L.S					15000.00	
say					15000.00	

Cost index 41.53 %	.00
Total with Cost index	15000.0

Supply, erection, testing and commissioning of motor pump set(4) Supply, Erection, Testing and Commissioning of 2 Nos new Vertical Turbine motor Pumpset (working voltage 3300V) having discharge of 80 lps against a total head of 180 M. suction head 20.30m at Thonithady raw water pump house

145 Specification Code: od197162/2018_2019

od197162/2018_2019 :Supply, Erection, Testing and Commissioning of 2 Nos new Vertical Turbine motor Pumpset (working voltage 3300V) having discharge of 80 lps against a total head of 180 M. suction head 20.30 m at WTP sump.(From raw water pumping station to Alady plant) including cost of soft starter

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	<p>VERTICAL TURBINE PUMP SET- Supply of best quality brand new Indian make vertical turbine pumpsets with stainless steel shaft SS 316,bronze LTB2 impeller, Cast iron casing, Bronze LTB2 neck ring, SS 410 sleeve, (column pipe thickness 10mm) (minimum), flanged column pipe with strainer and delivery pipe and all other accessories confirmed to ISS with folowing specification. The pumpset shall be coupled with motor specified. providing suitable concrete foundation including cost of cement sand and metal etc. complete.1.Discharge : 80 lps, 2.Total Head : 180 m, 3. Source : Well , 4.Depth of well : 20.30 m, 5. Length of pumping main:: 2900m, 6. Size of Pumping Main : 350mm MS/CI Pipe</p> <p>The pump set has to be connected to the existing pumping main. Vibration should be limited as per HIS 9.6.4.3 standard for pumpsets. Impeller should be dynamically balanced as per ISO 1940 grade 3 standards. Pump performance tolerance should be subject to Hydrate Institute Standard Class A(No nagative tolerance is applicable in efficiency and no positive tolerance in power)</p>	No	0.00000	0.00	0.00	
MR	<p>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 3300V . The motor shall confirm to EEFI/IS 325,including cost of soft starter, 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 IE rules.</p>	No	0.00000	0.00	0.00	

	Flexible coupling shall be used for coupling of pumps and motors.					
MR	PANEL BOARD (suitable) for operating two pump sets but one pump set at a time)- Supply, erection, testing and commissioning of cubical type floor mounted MS fabricated dust and vermin proof common control panel board consisting of 1 No. suitable capacity MCCB as incomer and 2 Nos of suitable capacity MCCB as out going (The two MCCBs are interlocking with each other) providing suitable size Aluminium bus bar inter connect the above MCCBs and fitted with 3 Nos of indicator lamps, 1 No. volt meter with selector switch, 1 No. Ammeter with selector switch etc. Complete and provided with a common earth bus for the entire panel and inter connect with the MCCBs as per IE rules and code of practice. The panel shall be fitted on a common base frame on suitable foundation.	No	0.00000	0.00	0.00	
MR	CABLING WORK- Supply, laying, testing and commissioning of suitable size XLPE cables for the above pump set from panel board to starter and from starter to motor , considering energy conservation.	No	0.00000	0.00	0.00	
MR	EARTHING- Supply of all materials and providing suitable earthing by using suitable size pipe/plate earthing GI/copper strip buried in ground and giving double earthing to motor, starter, panel board etc. as per IE standards.	No	0.00000	0.00	0.00	
MR	CAPACITOR - Supply, erection, testing and commissioning of heavy duty APP capacitor for the motor to get a power factor above 0.95. The capacitor shall confirm to IS 2834	No	0.00000	0.00	0.00	
MR	VALVES- Supply of suitable size best quality 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. (PN - 1.6).	No	0.00000	0.00	0.00	

MR	Erection and commissioning of the motor pump set with all accessories detailed above including necessary civil, electrical and mechanical works, suitable concrete foundation, including fixing the starter, motor, panel board etc, installing all electrical items, wiring, earthing, giving connection etc as directed by departmental officers as per IE rules and IS specification, interconnection with existing pumping main, fitting suction and delivery pipe and specials, sluice valve, reflux valves, etc complete and trial run for a period of 72 hrs as per the specification including all cost of cement and all other materials etc. complete.	No	0.00000	0.00	0.00	
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MR	$H_p = w \times Q \times H / (75 \times \text{efficiency } 70\%)$ $= 80 \text{Lps} \times 180 \text{m} / (75 \times 70) = 154.76 \text{ say}$ 274.5HP, 275HP @14510.00/HP=3990250/- Rate included maintenance during a period of two years	set	1.00000	3381567.79	3381567.79	
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TOTAL					3381567.79	
Add CPOH @ 15%					507235.17	
cost for one No					3888802.96	
say					3888802.96	

Cost index 41.53 %					.00	
Total with Cost index					3888802.96	

146 Specification Code: od197164/2018_2019

od197164/2018_2019 :Supply of additional cable beyond the initial supply of 10Mtr. Additional requirement from panel board to starter and from starter to motor

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply of additional cable beyond the initial supply of 10Mtr. Additional requirement from panel board to starter and from starter to motor	metre	1.00000	1320.00	1320.00	

TOTAL	1320.00
Add CPOH @ 15%	198.00
cost for one metre	1518.00
say	1518.00

Cost index 41.53 %	.00
Total with Cost index	1518.0

147 Specification Code: od197165/2018_2019

od197165/2018_2019 :Supply of suitable size PVC insulated, sheathed, armoured copper conductor cable conforming to relevant IS code, for giving power connections to main switchboard to pannel board etc. complete as per standards including end termination materials as per IE rules. The supply shall be limited to the actual requirement.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply of suitable size PVC insulated, sheathed, armoured copper conductor cable conforming to relevant IS code, for giving power connections to main switchboard to pannel board etc. complete as per standards including end termination materials as per IE rules. The supply shall be limited to the actual requirement.	metre	1.00000	1320.00	1320.00	
TOTAL					1320.00	
Add CPOH @ 15%					198.00	
cost for one metre					1518.00	
say					1518.00	

Cost index 41.53 %	.00
Total with Cost index	1518.0

148 Specification Code: od197167/2018_2019

od197167/2018_2019 :Providing 350mm surge arrestor- Providing 350mm surge arrestor having test pressure 45Kg/cm2 to the clear water pumping main including cost of specials such as 2 Nos. Tail piece, 2 Nos. Mechanical joints, cutting the existing DI pipe, inserting surge arrestor, jointing with flanged joints etc. including cost of surge arrestor.(Rate as per DSR Observed data)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Providing 350mm surge arrestor- Providing 350mm surge arrestor having test pressure 45Kg/cm2 to the clear water pumping main including cost of specials such as 2 Nos. Tail piece, 2 Nos. Mechanical joints, cutting the existing DI pipe, inserting surge arrestor, jointing with flanged joints etc. including cost of surge arrestor.(Rate as per DSR Observed data)	Nos	1.00000	600000.00	600000.00	
TOTAL					600000.00	
cost for one No					600000.00	
say					600000.00	

Kerala Water Authority	Cost index	41.53 %	.00
PRICE		Total with Cost index	600000.0

149 Specification Code: od197168/2018_2019

od197168/2018_2019 :Providing 350mm surge arrestor- Cement concrete 1:2:4 using 20mm nominay size metal for anchore block including charges of form work and labour charges etc. complete.(Rate as per DSR Observed data)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Providing 350mm surge arrestor- Cement concrete 1:2:4 using 20mm nominay size metal for anchore block including charges of form work and labour charges etc. complete.(Rate as per DSR Observed data)	cum	1.00000	8941.83	8941.83	
TOTAL					8941.83	
cost for one cum					8941.83	

say	8941.83
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Cost index 41.53 %	.00
Total with Cost index	8941.83

150 Specification Code: od197169/2018_2019

od197169/2018_2019 :Providing 350mm surge arrestor- Providing air cushion valve of diameter - 200mm & test pressure 45 Kg/cm2 with flanged ends including all cost of materials such as 200mm air cushion valve - 1 No., 200mm D/F CI sluice valve - 1 No. etc and all labour charges for fitting the same in position as directed by the departmental officers.(Rate as per DSR Observed data)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Providing 350mm surge arrestor- Providing air cushion valve of diameter - 200mm & test pressure 45 Kg/cm2 with flanged ends including all cost of materials such as 200mm air cushion valve - 1 No., 200mm D/F CI sluice valve - 1 No. etc and all labour charges for fitting the same in position as directed by the departmental officers.(Rate as per DSR Observed data)	Nos	1.00000	409500.00	409500.00	
TOTAL					409500.00	
cost for one No					409500.00	
say					409500.00	

Cost index 41.53 %	.00
Total with Cost index	409500.0

151 Specification Code: od197170/2018_2019

od197170/2018_2019 :Providing 350mm surge arrestor- Constructing RCC valve chamber of size 2.50m x 1.20m x 1.20m for providing the zero velocity valve including all cost of materials, labour charge, form work etc complete as directed by the departmental officers. (Rate as per DSR Observed data)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Providing 350mm surge arrestor- Constructing RCC valve chamber of size 2.50m x 1.20m x 1.20m for providing the zero velocity valve including all cost of materials, labour charge, form work etc complete as directed by the departmental officers. (Rate as per DSR Observed data)	Nos	1.00000	63841.40	63841.40	
TOTAL					63841.40	
cost for one No					63841.40	
say					63841.40	

Cost index	41.53 %	.00
Total with Cost index		63841.4

152 Specification Code: od197171/2018_2019

od197171/2018_2019 :STATUTORY APPROVAL FROM KSEB Authority

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	STATUTORY APPROVAL FROM KSEB	Nos	1.00000	50000.00	50000.00	
TOTAL					50000.00	
cost for one No					50000.00	
say					50000.00	

Cost index	41.53 %	.00
Total with Cost index		50000.0

(3) Power Allocation and CD, OYEC charges etc.

153 Specification Code: od494/2019_2020

od494/2019_2020 :Providing 11 KV line extension, CD and OYEC charges for the power connection of Alady water treatment plant - 400 KVA (Approval from KSEB)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Providing 11 KV line extension for power connection to Alady (400 KVA)	No	1.00000	1939594.00	1939594.00	
MR	CD and OYEC charges	No	1.00000	500000.00	500000.00	
TOTAL					2439594.00	
cost for one No					2439594.00	
say					2439594.00	

Cost index	41.53 %	.00
Total with Cost index		2439594.0

154 Specification Code: od495/2019_2020

od495/2019_2020 :Providing 11 KV line extension, CD and OYEC charges for the power connection of Thonithady raw water pumping station - 500 KVA (Approval from KSEB)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Providing 11 KV line extension for the power connection of Thonithady raw water pumping station (500 KVA)	No	1.00000	372306.00	372306.00	
MR	CD and OYEC charges	No	1.00000	500000.00	500000.00	
TOTAL					872306.00	
cost for one No					872306.00	
say					872306.00	

Cost index	41.53 %	.00
Total with Cost index		872306.0

9(a) Supply, Erection, Testing and Commissioning of 2 Nos motor pump sets at Nariyanpara pump house for pumping to Nariyanpara top GL tank
 9(a.) Supply, Erection, Testing and Commissioning of 2 Nos motor pump sets at Nariyanpara pump house for pumping to Nariyanpara top GL tank

155 Specification Code: od54105/2020_2021

od54105/2020_2021 :Supply, Erection, Testing and Commissioning of 2 Nos new Horizontal / Vertical type multi stage Centrifugal motor Pumpset having discharge of 3.50 lps against a total head of 173 M. suction head 5m, speed 1450 rpm at Nariampara pumping station.(Intermediate sump to Narianpara Top GLSR)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	CENTRIFUGAL PUMP SET- Supply, erection, testing and commissioning of KWA pre-qualified reputed make Centrifugal Pumpsets 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. 1. Discharge : 3.5 lps 2. Total Head : 173m 3. Source : Well/Sump 4. Suction head : 5m 5. Length of suction pipe: : 5m 6. Size & length of pumping main : 80mm GI-1173Mtr.	No	0.00000	0.00	0.00	
MR	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 EEFI/IS 325 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 IE rules. Flexible coupling shall be used for coupling of pumps and motors.	No	0.00000	0.00	0.00	
MR	STARTER- Supply, erection, testing and commissioning of suitable rating (Fully Automatic starter with air break contact for less than 100 HP and for above 100 HP FCMA starters to be used.) starter suitable for the above motor with over voltage and under voltage protection, single phase preventer,over load relay with motor	No	0.00000	0.00	0.00	

	protection relay with main contactor and bypass contactor as per IE rules and code of practice etc.complete.					
MR	PANEL BOARD (suitable) for operating two pump sets but one pump set at a time)Supply, erection, testing and commissioning of cubical type floor mounted MS fabricated dust and vermin proof common control panel board consisting of 1 No. suitable capacity MCCB as incomer and 2 Nos of suitable capacity MCCB as out going (The two MCCBs are interlocking with each other) providing suitable size Aluminium bus bar inter connect the above MCCBs and fitted with 3 Nos of indicator lamps, 1 No. volt meter with selector switch, 1 No. Ammeter with selector switch etc. Complete and provided with a common earth bus for the entire panel and inter connect with the MCCBs as per IE rules and code of practice. The panel shall be fitted on a common base frame on suitable foundation.	No	0.00000	0.00	0.00	
MR	CABLING WORK- Supply, laying, testing and commissioning of suitable size XLPE cables for the above pump set from panel board to starter and from starter to motor , considering energy conservation.	No	0.00000	0.00	0.00	
MR	EARTHING- Supply of all materials and providing suitable earthing by using suitable size pipe/plate earthing GI/copper strip buried in ground and giving double earthing to motor,starter, panel board etc. as per IE standards.	No	0.00000	0.00	0.00	
MR	CAPACITOR - Supply, erection, testing and commissioning of heavy duty APP capacitor for the motor to get a power factor above 0.95. The capacitor shall confirm to IS 2834	No	0.00000	0.00	0.00	
MR	VALVES- Supply of suitable size best quality 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	No	0.00000	0.00	0.00	

	well as delivery sides for easy repair works. (PN 1.6).					
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MR	SUCTION AND DELIVERY PIPE CONNECTIONS- Supply and fitting of suitable size best quality MS pipe of thickness not less than 8mm for a total length of 10m. Suitable for the above pump set and suitable size foot valve and connection the suction pipe and valve with suitable flanges, nut and bolts IR sheet etc. complete and connection the delivery side of the pump with the valves and suitable specials to connect with the pumping main. It the dia of suction pipe is above 80mm CI pipes & specials shall be provided.	No	0.00000	0.00	0.00	
MR	$H_p = w \times Q \times H / (75 \times \text{efficiency } 70\%)$ =3.5.00Lps x173m/(75x70)=11.53 say 12.5HP ,12.5HP @20345.00/HP=254313/- Rate included maintenance during a period of two years	No	1.00000	215519.06	215519.06	
TOTAL					215519.06	
Add CPOH @ 15%					32327.86	
Kerala Water Authority cost for one No					247846.92	
say					247846.92	
Cost index 41.53 %					.00	
Total with Cost index					247846.92	

156 Specification Code: od54106/2020_2021

od54106/2020_2021 :Supply of additional cable byond the initial supply of 10Mtr. Additional requirement from panel board to starter and from starter to motor

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply of additional cable byond the initial supply of 10Mtr. Additional requirement from panel board to starter and from starter to motor	metre	1.00000	168.00	168.00	

TOTAL	168.00
Add CPOH @ 15%	25.20
cost for one metre	193.20
say	193.20

Cost index 41.53 %	.00
Total with Cost index	193.2

157 Specification Code: od54107/2020_2021

od54107/2020_2021 :Supply of suitable size PVC insulated, sheathed, armoured copper conductor cable conforming to relevant IS code, for giving power connections to main switchboard to pannel board etc. complete as per standards including end termination materials as per IE rules. The supply shall be limited to the actual requirement.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply of suitable size PVC insulated, sheathed, armoured copper conductor cable conforming to relevant IS code, for giving power connections to main switchboard to pannel board etc. complete as per standards including end termination materials as per IE rules. The supply shall be limited to the actual requirement.	metre	1.00000	232.00	232.00	
TOTAL					232.00	
Add CPOH @ 15%					34.80	
cost for one metre					266.80	
say					266.80	

Cost index 41.53 %	.00
Total with Cost index	266.8

158 Specification Code: od54108/2020_2021

od54108/2020_2021 :STATUTORY APPROVAL FROM KSEB

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	STATUTORY APPROVAL FROM KSEB	No	1.00000	25000.00	25000.00	
TOTAL					25000.00	
cost for one No					25000.00	
say					25000.00	

Cost index	41.53 %	.00
Total with Cost index		25000.0

9(b) Supply, Erection, Testing and Commissioning of 2 Nos motor pump sets at Nariyanpara pump house for pumping to Mulakaramedu/ Kochuthovala GL tank

159 Specification Code: od54144/2020_2021

od54144/2020_2021 :Supply, Erection, Testing and Commissioning of 2 Nos new Horizontal / Vertical type multi stage Centrifugal motor Pumpset having discharge of 22 lps against a total head of 113 M. suction head 5m, speed 1450 rpm at Nariampara pumping station.(Intermediate sump to Mulakaramedu and Kochuthovala GLSR)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	CENTRIFUGAL PUMP SET- 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.1. Discharge : 22 lps 2. Total Head : 113m 3. Source : Well/Sump 4. Suction head : 5m 5. Length of suction pipe: : 5m 6. Size & length of pumping main : 250mm DIK9-5770MtR, 125mm GI- 3050 mtr,200mm DIK9- 5030mtr	No	0.00000	0.00	0.00	
MR	MOTOR- Supply, erection, testing and	No	0.00000	0.00	0.00	

	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 conform to EEFI/IS 325 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 IE rules. Flexible coupling shall be used for coupling of pumps and motors.					
MR	STARTER- Supply, erection, testing and commissioning of suitable rating (Fully Automatic starter with air break contact for less than 100 HP and for above 100 HP FCMA starters to be used.) 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 IE rules and code of practice etc.complete.	No	0.00000	0.00	0.00	
MR	PANEL BOARD (suitable) for operating two pump sets but one pump set at a time)Supply, erection, testing and commissioning of cubical type floor mounted MS fabricated dust and vermin proof common control panel board consisting of 1 No. suitable capacity MCCB as incomer and 2 Nos of suitable capacity MCCB as out going (The two MCCBs are interlocking with each other) providing suitable size Aluminium bus bar inter connect the above MCCBs and fitted with 3 Nos of indicator lamps, 1 No. volt meter with selector switch, 1 No. Ammeter with selector switch etc. Complete and provided with a common earth bus for the entire panel and inter connect with the MCCBs as per IE rules and code of practice. The panel shall be fitted on a common base frame on suitable foundation.	No	0.00000	0.00	0.00	
MR	CABLING WORK- Supply, laying, testing	No	0.00000	0.00	0.00	

	and commissioning of suitable size XLPE cables for the above pump set from panel board to starter and from starter to motor , considering energy conservation.					
MR	EARTHING- Supply of all materials and providing suitable earthing by using suitable size pipe/plate earthing GI/copper strip buried in ground and giving double earthing to motor, starter, panel board etc. as per IE standards.	No	0.00000	0.00	0.00	
MR	CAPACITOR- Supply, erection, testing and commissioning of heavy duty APP capacitor for the motor to get a power factor above 0.95. The capacitor shall conform to IS 2834	No	0.00000	0.00	0.00	
MR	VALVES- Supply of suitable size best quality 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. (PN 1.6).	No	0.00000	0.00	0.00	
MR	SUCTION AND DELIVERY PIPE CONNECTIONS- Supply and fitting of suitable size best quality MS pipe of thickness not less than 8mm for a total length of 10m. Suitable for the above pump set and suitable size foot valve and connection the suction pipe and valve with suitable flanges, nut and bolts IR sheet etc. complete and connection the delivery side of the pump with the valves and suitable specials to connect with the pumping main. If the dia of suction pipe is above 80mm CI pipes & specials shall be provided.	No	0.00000	0.00	0.00	
MR	$H_p = w \times Q \times H / (75 \times \text{efficiency } 70\%) = 22$ Lps x 113m / (75 x 70) = 47.35 say 50HP, 50HP @ 15073.00/HP = 753650/- Rate included maintenance during a period of two years	No	1.00000	638686.44	638686.44	
TOTAL					638686.44	
Add CPOH @ 15%					95802.97	
cost for one No					734489.41	
say					734489.41	

Cost index	41.53 %	.00
Total with Cost index		734489.41

160 Specification Code: od54145/2020_2021

od54145/2020_2021 :Supply of additional cable beyond the initial supply of 10Mtr. Additional requirement from panel board to starter and from starter to motor

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply of additional cable beyond the initial supply of 10Mtr. Additional requirement from panel board to starter and from starter to motor	metre	1.00000	370.00	370.00	
TOTAL					370.00	
Add CPOH @ 15%					55.50	
cost for one metre					425.50	
say					425.50	

Cost index	41.53 %	.00
Total with Cost index		425.5

161 Specification Code: od54146/2020_2021

od54146/2020_2021 :Supply of suitable size PVC insulated, sheathed,armoured copper conductor cable conforming to relevant IS code, for giving power connections to main switchboard to panel board etc. complete as per standards including end termination materials as per IE rules. The supply shall be limited to the actual requirement.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	Supply of suitable size PVC insulated, sheathed,armoured copper conductor cable conforming to relevantIS code, for giving power connections to main switchboard to pannel board etc. complete as per standards including end termination materials as per IE rules. The supply shall be limited to the actual requirement.	metre	1.00000	710.00	710.00	
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TOTAL					710.00
Add CPOH @ 15%					106.50
cost for one metre					816.50
say					816.50

Cost index 41.53 %					.00
Total with Cost index					816.5

162 Specification Code: od54147/2020_2021

od54147/2020_2021 :STATUTORY APPROVAL FROM KSEB

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	STATUTORY APPROVAL FROM KSEB	No	1.00000	25000.00	25000.00	
TOTAL					25000.00	
cost for one No					25000.00	
say					25000.00	

Cost index 41.53 %					.00
Total with Cost index					25000.0

9(c) Supply, Erection, Testing and Commissioning of 2 Nos motor pump sets at Kalthotty pump house pumping to Labbakada GL tank

163 Specification Code: od54190/2020_2021

od54190/2020_2021 :Supply, Erection, Testing and Commissioning of 2 Nos new Horizontal / Vertical type multi stage Centrifugal motor Pumpset having discharge of 11 lps against a total head of 19 M. suction head 5m, speed 1450 rpm at Kalthotty pumping station.(To Labbakada GLSR)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	CENTRIFUGAL PUMP SET- 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. 1. Discharge : 11 lps 2. Total Head : 19m 3. Source : Well/Sump 4. Suction head : 5m 5. Length of suction pipe: : 5m 6. Size & length of pumping main : 150mm DIK9I-3115Mtr.	No	0.00000	0.00	0.00	
MR	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 EEFI/IS 325 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 IE rules. Flexible coupling shall be used for coupling of pumps and motors.	No	0.00000	0.00	0.00	
MR	STARTER- Supply, erection, testing and commissioning of suitable rating (Fully Automatic starter with air break contact for less than 100 HP and for above 100 HP FCMA starters to be used.) 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	No	0.00000	0.00	0.00	

	per IE rules and code of practice etc.complete.					
MR	PANEL BOARD (suitable) for operating two pump sets but one pump set at a time)Supply,erection, testing and commissioning of cubical type floor mounted MS fabricated dust and vermin proof common control panel board consisting of 1 No. suitable capacity MCCB as incomer and 2 Nos of suitable capacity MCCB as out going (The two MCCBs are interlocking with each other) providing suitable size Aluminium bus bar inter connect the above MCCBs and fitted with 3 Nos of indicator lamps, 1 No. volt meter with selector switch, 1 No. Ammeter with selector switch etc. Complete and provided with a common earth bus for the entire panel and inter connect with the MCCBs as per IE rules and code of practice. The panel shall be fitted on a common base frame on suitable foundation.	No	0.00000	0.00	0.00	
MR	CABLING WORK- Supply, laying, testing and commissioning of suitable size XLPE cables for the above pump set from panel board to starter and from starter to motor ,considering energy conservation.	No	0.00000	0.00	0.00	
MR	EARTHING- Supply of all materials and providing suitable earthing by using suitable size pipe/plate earthing GI/copper strip buried in ground and giving double earthing to motor, starter, panel board etc. as per IE standards	No	0.00000	0.00	0.00	
MR	CAPACITOR - Supply, erection, testing and commissioning of heavy duty APP capacitor for the motor to get a power factor above 0.95. The capacitor shall confirm to IS 2834	No	0.00000	0.00	0.00	
MR	VALVES- Supply of suitable size best quality 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. (PN 1.6).	No	0.00000	0.00	0.00	

MR	SUCTION AND DELIVERY PIPE CONNECTIONS- Supply and fitting of suitable size best quality MS pipe of thickness not less than 8mm for a total length of 10m. Suitable for the above pump set and suitable size foot valve and connection the suction pipe and valve with suitable flanges, nut and bolts IR sheet etc. complete and connection the delivery side of the pump with the valves and suitable specials to connect with the pumping main. It the dia of suction pipe is above 80mm CI pipes & specials shall be provided.	No	0.00000	0.00	0.00	
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MR	$H_p = w \times Q \times H / (75 \times \text{efficiency } 70\%)$ $= 11.00 \text{Lps} \times 19\text{m} / (75 \times 70) = 3.98$ say 5HP 5HP @23832.00/HP=119160/- Rate included maintenance during a period of two years	No	1.00000	100983.05	100983.05	
TOTAL					100983.05	
Add CPOH @ 15%					15147.46	
cost for one No					116130.51	
say					116130.51	

Kerala Water Authority				Cost index	41.53 %	.00
PRICE				Total with Cost index		116130.51

164 Specification Code: od54191/2020_2021

od54191/2020_2021 :STATUTORY APPROVAL FROM KSEB

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	STATUTORY APPROVAL FROM KSEB	No	1.00000	5000.00	5000.00	
TOTAL					5000.00	
cost for one No					5000.00	
say					5000.00	

Cost index				41.53 %	.00
Total with Cost index					5000.0

9(d) Supply, Erection, Testing and Commissioning of 2 Nos motor pump sets at Kalthotty pump house pumping to Meppara GL tank

165 Specification Code: od54202/2020_2021

od54202/2020_2021 :Supply, Erection, Testing and Commissioning of 2 Nos new Horizontal / Vertical type multi stage Centrifugal motor Pumpset having discharge of 11 lps against a total head of 184 M. suction head 5m, speed 1450 rpm at Kalthotty pumping station.(Kalthotty to Mepara GLSR)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	CENTRIFUGAL PUMP SET- 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. 1. Discharge : 11 lps 2. Total Head : 184 m 3. Source : Well/Sump 4. Suction head : 5m 5. Length of suction pipe: : 5m 6. Size & length of pumping main : 150mm DIK9- 3378 mtr.	No	0.00000	0.00	0.00	
MR	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 conform to EEFI/IS 325 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 IE rules. Flexible coupling shall be used for coupling of pumps and motors.	No	0.00000	0.00	0.00	
MR	STARTER- Supply, erection, testing and commissioning of suitable rating (Fully	No	0.00000	0.00	0.00	

	Automatic starter with air break contact for less than 100 HP and for above 100 HP FCMA starters to be used.) 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 IE rules and code of practice etc.complete.					
MR	PANEL BOARD (suitable) for operating two pump sets but one pump set at a time)Supply, erection, testing and commissioning of cubical type floor mounted MS fabricated dust and vermin proof common control panel board consisting of 1 No. suitable capacity MCCB as incomer and 2 Nos of suitable capacity MCCB as out going (The two MCCBs are interlocking with each other) providing suitable size Aluminium bus bar inter connect the above MCCBs and fitted with 3 Nos of indicator lamps, 1 No. volt meter with selector switch, 1 No. Ammeter with selector switch etc. Complete and provided with a common earth bus for the entire panel and inter connect with the MCCBs as per IE rules and code of practice. The panel shall be fitted on a common base frame on suitable foundation.	No	0.00000	0.00	0.00	
MR	CABLING WORK- Supply, laying, testing and commissioning of suitable size XLPE cables for the above pump set from panel board to starter and from starter to motor , considering energy conservation.	No	0.00000	0.00	0.00	
MR	EARTHING- Supply of all materials and providing suitable earthing by using suitable size pipe/plate earthing GI/copper strip buried in ground and giving double earthing to motor, starter, panel board etc. as per IE standards.	No	0.00000	0.00	0.00	
MR	CAPACITOR- Supply, erection, testing and commissioning of heavy duty APP capacitor for the motor to get a power factor above 0.95. The capacitor shall conform to IS 2834	No	0.00000	0.00	0.00	
MR	VALVES- Supply of suitable size best quality heavy duty ISI marked CI double flanged	No	0.00000	0.00	0.00	

	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. (PN 1.6).					
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MR	SUCTION AND DELIVERY PIPE CONNECTIONS- Supply and fitting of suitable size best quality MS pipe of thickness not less than 8mm for a total length of 10m. Suitable for the above pump set and suitable size foot valve and connection the suction pipe and valve with suitable flanges, nut and bolts IR sheet etc. complete and connection the delivery side of the pump with the valves and suitable specials to connect with the pumping main. It the dia of suction pipe is above 80mm CI pipes & specials shall be provided.	No	0.00000	0.00	0.00	
MR	$H_p = w \times Q \times H / (75 \times \text{efficiency } 70\%) = 11 \text{ Lps} \times 184 \text{ m} / (75 \times 70) = 38.55 \text{ say } 40\text{HP}$ 40HP @16580.00/HP=663200/- Rate included maintenance during a period of two years	No	1.00000	562033.89	562033.89	
Kerala Water Authority					TOTAL	562033.89
					Add CPOH @ 15%	84305.08
					cost for one No	646338.97
					say	646338.97

Cost index	41.53 %	.00
Total with Cost index		646338.97

166 Specification Code: od54203/2020_2021

od54203/2020_2021 :Supply of additional cable beyond the initial supply of 10Mtr. Additional requirement from panel board to starter and from starter to motor

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	Supply of additional cable beyond the initial supply of 10Mtr. Additional requirement from panel board to starter and from starter to motor	metre	1.00000	295.00	295.00	
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TOTAL					295.00
Add CPOH @ 15%					44.25
cost for one metre					339.25
say					339.25

Cost index 41.53 %					.00
Total with Cost index					339.25

167 Specification Code: od54204/2020_2021

od54204/2020_2021 :Supply of suitable size PVC insulated, sheathed,armoured copper conductor cable conforming to relevantIS code, for giving power connections to main switchboard to pannel board etc. complete as per standards including end termination materials as per IE rules. The supply shall be limited to the actual requirement.

Kerala Water Authority

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply of suitable size PVC insulated, sheathed,armoured copper conductor cable conforming to relevantIS code, for giving power connections to main switchboard to pannel board etc. complete as per standards including end termination materials as per IE rules. The supply shall be limited to the actual requirement.	metre	1.00000	345.00	345.00	
TOTAL					345.00	
Add CPOH @ 15%					51.75	
cost for one metre					396.75	
say					396.75	

Cost index 41.53 %					.00
Total with Cost index					396.75

168 Specification Code: od54205/2020_2021

od54205/2020_2021 :STATUTORY APPROVAL FROM KSEB

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	STATUTORY APPROVAL FROM KSEB	No	1.00000	25000.00	25000.00	
TOTAL					25000.00	
cost for one No					25000.00	
say					25000.00	

Cost index	41.53 %	.00
Total with Cost index		25000.0

9(e) Power allocation charges (OYEC & CD) Extension of three phase line to Kalthotti and Nariyanpara pumping station

169 Specification Code: od54540/2020_2021

od54540/2020_2021 :Power allocation and energization of clear water pump house at Kalthotty (Including application fee, power allocation fee , Estimate cost for service connection, Cash deposit) - As per intimation notice DB-2018-19/ESKNCHR/326 dated 22.03.2019 from KSEB)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Power allocation and energization of clear water pump house at Kalthotty (Including application fee, power allocation fee , Estimate cost for service connection, Cash deposit) - Connected load - 30KW	No	1.00000	1965000.00	1965000.00	
TOTAL					1965000.00	
cost for one No					1965000.00	
say					1965000.00	

Cost index	41.53 %	.00
Total with Cost index		1965000.0

170 Specification Code: od54541/2020_2021

od54541/2020_2021 :Any additional cost for actual execution of work - Power allocation and energization of clear water pump house at Kalthotty 100 KVA (Approval from KSEB)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	CD and OYEC charges for power connection to Kalthotty (100 KVA)	L.S	1.00000	200000.00	200000.00	
TOTAL					200000.00	
cost for one L.S					200000.00	
say					200000.00	

Cost index	41.53 %	.00
Total with Cost index		200000.0

171 Specification Code: od54542/2020_2021

od54542/2020_2021 :Power allocation and energization of clear water pump house at Nariyampara (Including application fee, power allocation fee , Estimate cost for service connection, Cash deposit) - As per intimation notice DB-2018-19/ESKNCHR/326 dated 22.03.2019 from KSEB)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Power allocation and energization of clear water pump house at Nariyampara (Including application fee, power allocation fee , Estimate cost for service connection, Cash deposit) - Connected load - 47 KW	No	1.00000	920000.00	920000.00	
TOTAL					920000.00	
cost for one No					920000.00	
say					920000.00	

Cost index	41.53 %	.00
Total with Cost index		920000.0

172 Specification Code: od54543/2020_2021

od54543/2020_2021 :Any additional cost for actual execution of work - Power allocation and energization of clear water pump house at Nariyampara 160 KVA (Approval from KSEB)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	CD and OYEC charges for power connection to Kalthotty (160 KVA)	L.S	1.00000	200000.00	200000.00	
TOTAL					200000.00	
cost for one L.S					200000.00	
say					200000.00	

Cost index	41.53 %	.00
Total with Cost index		200000.0

13 - Supply, erection, testing and commissioning of motor pumpsets at Alady pump houseSupply, Erection, Testing and Commissioning of 2 Nos Centrifugal Motor Pumpset having discharge of 5 lps against a total head of 81 M. suction head 5m at WTP sump for pumping to Alady Kurisumala GLSR.

173 Specification Code: od54791/2020_2021

od54791/2020_2021 :Supply, Erection, Testing and Commissioning of 2 Nos new Horizontal / Vertical type multi stage Centrifugal motor Pumpset having discharge of 5 lps against a total head of 81 M. suction head 5m, speed 1450 rpm at Alady water treatment plant to Alady GLSR.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	CENTRIFUGAL PUMP SET - 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. 1. Discharge : 5 lps , 2. Total Head : 81 m , 3. Source : Well/Sump 4. Suction head : 5m , 5. Length of suction pipe: : 5m , 6. Size & length of pumping main : 80mm GI pipe- 310	No	0.00000	0.00	0.00	
MR	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 conform to EEFI/IS 325 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 IE rules.Flexible coupling shall be used for coupling of pumps and motors.	No	0.00000	0.00	0.00	
MR	STARTER - Supply, erection, testing and commissioning of suitable rating (Fully Automatic starter with air break contact for less than 100 HP and for above 100 HP FCMA starters to be used.) 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 IE rules and code of practice etc.complete.	No	0.00000	0.00	0.00	
MR	PANEL BOARD (suitable) for operating two pump sets but one pump set at a time) Supply, erection, testing and commissioning of cubical type floor mounted MS fabricated	No	0.00000	0.00	0.00	

	dust and vermin proof common control panel board consisting of 1 No. suitable capacity MCCB as incomer and 2 Nos of suitable capacity MCCB as out going (The two MCCBs are interlocking with each other) providing suitable size Aluminium bus bar inter connect the above MCCBs and fitted with 3 Nos of indicator lamps, 1 No. volt meter with selector switch, 1 No. Ammeter with selector switch etc. Complete and provided with a common earth bus for the entire panel and inter connect with the MCCBs as per IE rules and code of practice. The panel shall be fitted on a common base frame on suitable foundation					
MR	CABLING WORK - Supply, laying, testing and commissioning of suitable size XLPE cables for the above pump set from panel board to starter and from starter to motor , considering energy conservation.	No	0.00000	0.00	0.00	
MR	EARTHING - Supply of all materials and providing suitable earthing by using suitable size pipe/plate earthing GI/copper strip buried in ground and giving double earthing to motor, starter, panel board etc. as per IE standards.	No	0.00000	0.00	0.00	
MR	CAPACITOR - Supply, erection, testing and commissioning of heavy duty APP capacitor for the motor to get a power factor above 0.95. The capacitor shall confirm to IS 2834	No	0.00000	0.00	0.00	
MR	VALVES - Supply of suitable size best quality 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. (PN - 1.6).	No	0.00000	0.00	0.00	
MR	SUCTION AND DELIVERY PIPE CONNECTIONS -Supply and fitting of suitable size best quality MS pipe of thickness not less than 8mm for a total length of 10m. Suitable for the above pump set and suitable size foot valve and connection the suction pipe and	No	0.00000	0.00	0.00	

	valve with suitable flanges, nut and bolts IR sheet etc. complete and connection the delivery side of the pump with the valves and suitable specials to connect with the pumping main. It the dia of suction pipe is above 80mm CI pipes & specials shall be provided.					
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MR	$H_p = w \times Q \times H / (75 \times \text{efficiency } 70\%) = 5 \text{Lps} \times 81 \text{m} / (75 \times 70) = 7.7142 \text{ say } 10 \text{HP}$ 10HP @24457.00/HP=244570/- Rate included maintenance during a period of two years	set	1.00000	207262.71	207262.71	
TOTAL					207262.71	
Add CPOH @ 15%					31089.41	
cost for one No					238352.12	
say					238352.12	

Cost index 41.53 %					.00	
Total with Cost index					238352.12	

174 Specification Code: od54792/2020_2021

Kerala Water Authority

PRICE

od54792/2020_2021 :Supply of additional cable beyond the initial supply of 10Mtr. Additional requirement from panel board to starter and from starter to motor

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply of additional cable beyond the initial supply of 10Mtr. Additional requirement from panel board to starter and from starter to motor	metre	1.00000	362.00	362.00	
TOTAL					362.00	
Add CPOH @ 15%					54.30	
cost for one metre					416.30	
say					416.30	

Cost index 41.53 %					.00	
Total with Cost index					416.3	

175 Specification Code: od54793/2020_2021

od54793/2020_2021 :Supply of suitable size PVC insulated, sheathed,armoured copper conductor cable conforming to relevantIS code, for giving power connections to main switchboard to pannel board etc. complete as per standards including end termination materials as per IE rules. The supply shall be limited to the actual requirement.

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply of suitable size PVC insulated, sheathed,armoured copper conductor cable conforming to relevantIS code, for giving power connections to main switchboard to pannel board etc. complete as per standards including end termination materials as per IE rules. The supply shall be limited to the actual requirement.	metre	1.00000	362.00	362.00	
TOTAL					362.00	
Add CPOH @ 15%					54.30	
cost for one metre					416.30	
say					416.30	
Cost index 41.53 %					.00	
Total with Cost index					416.3	

176 Specification Code: od54794/2020_2021

od54794/2020_2021 :STATUTORY APPROVAL FROM KSEB

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	STATUTORY APPROVAL FROM KSEB	No	1.00000	25000.00	25000.00	
TOTAL					25000.00	
cost for one No					25000.00	
say					25000.00	

Cost index	41.53 %	.00
Total with Cost index		25000.0

(2) - Supply, Erection, Testing and Commissioning of 2 Nos new Centrifugal motor Pumpset having discharge of 65 lps against a total head of 125 M. suction head 5m speed 1450 rpm at WTP sump for pumping to Kalthotty / Nariyampara sumps

177 Specification Code: od55073/2020_2021

od55073/2020_2021 :Supply, Erection, Testing and Commissioning of 2 Nos new Horizontal / Vertical type multi stage Centrifugal motor Pumpset having discharge of 65 lps against a total head of 125 M. suction head 5m, speed 1450 rpm at WTP Alady. (From sump to Nariyanpara/ kalthotty intermediate pumping station) including soft starter

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	CENTRIFUGAL PUMP SET - 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. 1.Discharge : 65 lps , 2.Total Head : 125 m , 3. Source :Well/Sump , 4. Suction head : 5m , 5.Length of suction pipe: : 5m 6. Size of Pumping Main : 350mm DI (K9) 5553 m, 342.9 OD MS pipe 207m, 300mm DIK9 1833m, 300mm DIK9 4830m, 150 mm DI pipe 3115 m	No	0.00000	0.00	0.00	
MR	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, including soft starter ,working voltage 415 V/3300V (select the suitable). The motor shall confirm to EEFI/IS 325 including providing suitable concrete foundation including cost of cement sand and metal etc.	No	0.00000	0.00	0.00	

	complete For 3300V motors digital motor protection relay shall be included in starter as per present IE rules. Flexible coupling shall be used for coupling of pumps and motors.					
MR	PANEL BOARD (suitable) for operating two pump sets but one pump set at a time) Supply, erection, testing and commissioning of cubical type floor mounted MS fabricated dust and vermin proof common control panel board consisting of 1 No. suitable capacity MCCB as incomer and 2 Nos of suitable capacity MCCB as out going (The two MCCBs are interlocking with each other) providing suitable size Aluminium bus bar inter connect the above MCCBs and fitted with 3 Nos of indicator lamps, 1 No. volt meter with selector switch, 1 No. Ammeter with selector switch etc. Complete and provided with a common earth bus for the entire panel and inter connect with the MCCBs as per IE rules and code of practice. The panel shall be fitted on a common base frame on suitable foundation.	No	0.00000	0.00	0.00	
MR	CABLING WORK - Supply, laying, testing and commissioning of suitable size XLPE cables for the above pump set from panel board to starter and from starter to motor , considering energy conservation.	No	0.00000	0.00	0.00	
MR	EARTHING - Supply of all materials and providing suitable earthing by using suitable size pipe/plate earthing GI/copper strip buried in ground and giving double earthing to motor, starter, panel board etc. as per IE standards.	No	0.00000	0.00	0.00	
MR	CAPACITOR - Supply, erection, testing and commissioning of heavy duty APP capacitor for the motor to get a power factor above 0.95. The capacitor shall confirm to IS 2834	No	0.00000	0.00	0.00	
MR	VALVES - Supply of suitable size best quality 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	No	0.00000	0.00	0.00	

	well as delivery sides for easy repair works.(PN - 1.6).					
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MR	SUCTION AND DELIVERY PIPE CONNECTIONS - Supply and fitting of suitable size best quality MS pipe of thickness not less than 8mm for a total length of 10m. Suitable for the above pump set and suitable size foot valve and connection the suction pipe and valve with suitable flanges, nut and bolts IR sheet etc. complete and connection the delivery side of the pump with the valves and suitable specials to connect with the pumping main. It the dia of suction pipe is above 80mm CI pipes & specials shall be provided.	No	0.00000	0.00	0.00	
MR	$H_p = w \times Q \times H / (75 \times \text{efficiency } 70\%)$ No 0.00000 0.00 0.00 No 0.00000 0.00 0.00 =65Lps x125m/(75x70)= 154.76 say 155HP , 155HP @ 19094.00/HP=2959570/-Rate included maintenance during a period of two years	set	1.00000	2508110.16	2508110.16	
TOTAL					2508110.16	
Add CPOH @ 15%					376216.52	
cost for one No					2884326.68	
say					2884326.68	

Cost index	41.53 %	.00
Total with Cost index		2884326.68

178 Specification Code: od55074/2020_2021

od55074/2020_2021 :Supply of additional cable beyond the initial supply of 10Mtr. Additional requirement from panel board to starter and from starter to motor

Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	Supply of additional cable beyond the initial supply of 10Mtr. Additional requirement from panel board to starter and from starter to motor	metre	1.00000	960.00	960.00	
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TOTAL					960.00
Add CPOH @ 15%					144.00
cost for one metre					1104.00
say					1104.00

Cost index 41.53 %					.00
Total with Cost index					1104.0

179 Specification Code: od55075/2020_2021

od55075/2020_2021 :Supply of suitable size PVC insulated, sheathed, armoured copper conductor cable conforming to relevant IS code, for giving power connections to main switchboard to panel board etc. complete as per standards including end termination materials as per IE rules. The supply shall be limited to the actual requirement.

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Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Supply of suitable size PVC insulated, sheathed, armoured copper conductor cable conforming to relevant IS code, for giving power connections to main switchboard to panel board etc. complete as per standards including end termination materials as per IE rules. The supply shall be limited to the actual requirement.	metre	1.00000	960.00	960.00	
TOTAL					960.00	
Add CPOH @ 15%					144.00	
cost for one metre					1104.00	
say					1104.00	

Cost index 41.53 %					.00
Total with Cost index					1104.0

180 Specification Code: od55076/2020_2021

od55076/2020_2021 :Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All classes of soil (Rate as per DSR Observed data)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Earth Work	cum	1.00000	425.54	425.54	
TOTAL					425.54	
cost for one cum					425.54	
say					425.54	

Cost index	41.53 %	.00
Total with Cost index		425.54

181 Specification Code: od55077/2020_2021

od55077/2020_2021 :Providing 350mm surge arrestor having test pressure 45Kg/cm2 to the clear water pumping main including cost of specials such as 2 Nos. Tail piece, 2 Nos. Mechanical joints, cutting the existing DI pipe, inserting surge arrestor, jointing with flanged joints etc. including cost of surge arrestor.(Rate as per DSR Observed data)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Providing 350mm surge arrestor having test pressure 45Kg/cm2 to the clear water pumping main including cost of specials such as 2 Nos. Tail piece, 2 Nos. Mechanical joints, cutting the existing DI pipe, inserting surge arrestor, jointing with flanged joints etc.including cost of surge arrestor.(Rate as per DSR Observed data)	No	1.00000	600000.00	600000.00	
TOTAL					600000.00	
cost for one No					600000.00	

say	600000.00
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Cost index 41.53 %	.00
Total with Cost index	600000.0

182 Specification Code: od55078/2020_2021
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od55078/2020_2021 :Cement concrete 1:2:4 using 20mm nominay size metal for anchore block including charges of form work and labour charges etc. complete (Rate as per DSR observed data)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Cement concrete 1:2:4 using 20mm nominay size metal for anchore block including charges of form work and labour charges etc. complete.(Rate as per DSR Observed data)	cum	1.00000	8941.83	8941.83	
TOTAL					8941.83	
cost for one cum					8941.83	
say					8941.83	

Cost index 41.53 %	.00
Total with Cost index	8941.83

183 Specification Code: od55079/2020_2021
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od55079/2020_2021 :Providing air cushion valve of diameter - 200mm & test pressure 45 Kg/cm2 with flanged ends including all cost of materials such as 200mm air cushion valve - 1 No., 200mm D/F CI sluice valve - 1 No. etc and all labour charges for fitting the same in position as directed by the departmental officers.(Rate as per DSR Observed data)
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Code	Description	Unit	Quantity	Rate	Amount	Remarks
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MR	Providing air cushion valve of diameter 200mm & test pressure 45 Kg/cm ² with flanged ends including all cost of materials such as 200mm air cushion valve - 1 No., 200mm D/F CI sluice valve - 1 No. etc and all labour charges for fitting the same in position as directed by the departmental officers. (Rate as per DSR Observed data)	No	1.00000	409500.00	409500.00	
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TOTAL					409500.00
cost for one No					409500.00
say					409500.00

Cost index 41.53 %					.00
Total with Cost index					409500.0

184 Specification Code: od55080/2020_2021

od55080/2020_2021 :Constructing RCC valve chamber of size 2.50m x 1.20m x 1.20m for providing the zero velocity valve including all cost of materials, labour charge, form work etc complete as directed by the departmental officers. (Rate as per DSR Observed data)

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	Constructing RCC valve chamber of size 2.50m x 1.20m x 1.20m for providing the zero velocity valve including all cost of materials, labour charge, form work etc complete as directed by the departmental officers. (Rate as per DSR Observed data)	No	1.00000	63841.00	63841.00	
TOTAL					63841.00	
cost for one No					63841.00	
say					63841.00	

Cost index 41.53 %					.00
Total with Cost index					63841.0

185 Specification Code: od55081/2020_2021

od55081/2020_2021 :STATUTORY APPROVAL FROM KSEB

Code	Description	Unit	Quantity	Rate	Amount	Remarks
MR	STATUTORY APPROVAL FROM KSEB	No	1.00000	25000.00	25000.00	
TOTAL					25000.00	
cost for one No					25000.00	
say					25000.00	

Cost index	41.53 %	.00
Total with Cost index		25000.0


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