

Annexure-4 (Mandatory spare list of Ariyalur) , Rev -0			
Sl. No.	Item Description	Unit	Qty.
1	Circuit Breaker		
1.1	765kV CB		
1.1.1	SF6 Gas(50kg Cylinder)	Nos.	2
1.1.2	SF6 gas filling adopter	Nos.	2
1.1.3	Portable SF6 gas leakage detector	No.	1
1.1.4	Portable SF6 gas filling unit with Vacuum pump	No.	1
1.1.5	One Complete pole of 765 KV, 3150A ,50 KA for 1Sec SF6 Circuit Breaker Without CSD and without PIR with operating mechanism box without support Structure	No.	1
1.2	400kV CB		
1.2.1	SF6 gas filling adopter	No.	1
1.2.2	One Complete pole of 400 KV, 3150A ,63 KA for 1 Sec SF6 Circuit Breaker Without CSD and without PIR with operating mechanism box without support Structure	No.	1
2	ISOLATOR		
2.1	765kV Isolator		
2.1.1	765 kV, 3150 A, 3 phase,50 kA for 1 sec, double break/vertical knee type isolator (individual pole operated motorized and electrically ganged) with two Earth switch (individual pole operated motorized and electrically ganged) with operating mechanism alongwith with all accessories with operating rod insulator but without support insulator , structure & terminal connectors.	Set	1
2.2	400kV Isolator		
2.2.1	420 kV, 3150 A, 3 phase, 63 kA for 1 sec, double break type isolator (individual pole operated motorized and electrically ganged) with two Earth switch (individual pole operated motorized and electrically ganged) with operating mechanism alongwith with all accessories but without support insulator , structure & terminal connectors. Distance between Center-line of busbar for equipment connection and plinth level is 8000 mm.	Set	1
2.2.2	Flexible braided copper alongwith lugs for earthing as per note no. 3 (1 set is equal to 420kV , 3 phase isolator with 1 earth switch/two earth switch)	Set	1
3	Electrical lifting platform (battery operated vertical movement 20 meter , horizontal	No	1
4	Clamps and Connectors		
4.1	T Clamp for Twin BULL AAC to twin BULL AAC	No.	6
4.2	T Clamp for Twin BERSIMIS to twin BERSIMIS	No.	6
4.3	T Clamp for QUAD Bull AAC to QUAD bull AAC and Besimis	No.	6
4.4	T Clamp for QUAD BESIMIS to QUAD BESIMIS	No.	6
4.5	T Clamp for 4.5" Bus To QUAD/TWIN BULL AAC	No.	12
4.6	T Clamp for 4.5 " Bus To QUAD/TWIN BESIMIS	No.	12
4.7	" T " Clamp for Zebra to Zebra for line in dropper for LAS	No.	3
4.8	Joint Clamp for 4" mm Alu.BusBar/welding sleeve	No.	12
4.9	Bolted type Suspension fitting suitable for 765 KV Quad AAC BULL	NO	3
4.10	Bolted type Suspension fitting suitable for 765 KV Double AAC BULL	NO	3
4.11	Bolted type Suspension fitting suitable for 400 KV Quad Besimis	NO	3
4.12	Bolted type Suspension fitting suitable for 400 KV Double Besimis	NO	3
4.13	power connectors(items in this heading 1set 3no each)	lot	1

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Sl. No.	Item Description	Unit	Qty.
4.14	T Clamp for Hexa Zebra to quad zebra (2 feeder-Hexa zebra 765 KV -2# X3 X2 =12) LAS and CVT	Nos	15
4.15	T Clamp for 4.5 bus to twin Zebra - (2 feeder- Hexa zebra 765 KV -2# X 2setX6 =24) - 42 Nos	Nos	42
4.16	T Clamp for 4.5 bus to Hexa Zebra 765 KV - 2X 3=6)	Nos	6
4.17	Spacer clamp for Quad zebra	Nos	50
4.18	Suspension clamp for Hexa Zebra	Nos	6
4.19	T Clamp for Quad Moose to twin Moose - (4 feeder-quad moose-4X3X2=24)	Nos	27
4.20	T Clamp for 4 " bus to twin Moose	Nos	24
4.21	T Clamp for Quad Moose to 4 " bus (4 feeder-quad moose-4X3=12)	Nos	12
4.22	Spacer clamp for twin moose	Nos	50
4.23	Suspension clamp for Hexa Zebra	Nos	6
5	cables		
5.1	28C x 2.5 sq mm HR PVC/Copper, Armoured Control cable	km	2
5.2	20C x 2.5 sq mm HR PVC/Copper, Armoured Control cable	km	2
5.3	14C x 2.5 sq mm HR PVC/Copper, Armoured Control cable	km	2
5.4	4C x 2.5 sq mm HR PVC/Copper, Armoured Control cable	km	2
5.5	2C x 2.5 sq mm HR PVC/Copper, Armoured Control cable	km	2
5.6	14C x 4 sq mm HR PVC/Copper, Armoured Control cable	km	2
5.7	8C x 4 sq mm HR PVC/Copper, Armoured Control cable	km	2
5.8	8C x 2.5 sq mm HR PVC/Copper, Armoured Control cable	km	2
5.9	4C x 4 sq mm HR PVC/Copper, Armoured Control cable	km	2
5.10	2C x 35 sq mm HR PVC/Copper, Armoured Auxiliary Power cable	km	1
6	AAC Bull conductor	km	1
7	BERSIMIS conductor	km	1
8	Surge Arresters		
8.1	624kV Surge arresters		
8.1.1	624kV Surge arresters (single phase) complete with all accessories like corona ring terminal pad, surge counter, insulating base, connecting cable , fixing hardware etc.	No.	1
8.1.2	624kV Surge arresters (single phase) ,Rigid Type terminal connector suitable for Quad Bull AAC conductor with Horizontal approach	No.	1
8.1.3	Insulated connecting Cable between Lightning Arresters and Surge monitor (Single Length)	Mtr.	9
8.2	390kV Surge arresters		
8.2.1	390kV Surge Arresters, class -4 , nominal discharge current 20kA, creepage distance 25mm/kV , (single phase) complete with all accessories like corona ring terminal pad, surge counter, insulating base, connecting cable , fixing hardware etc.	No.	1
8.2.2	Rigid Type terminal connector suitable for twin bersimis ACSR with Horizontal approach for 390kV Surge arresters (single phase).	No.	1
8.2.3	Insulated connecting Cable between Lightning Arresters and Surge monitor (Single Length).	m	6.5
9	post insulator		
9.1	765 KV Solid core Insulator with corona ring	No	21
9.2	400 KV Solid core Insulator with corona ring	No	21
10	11 KV 210 KN Anti fog Disc insulator	No	360
11	11 KV 160 KN Anti fog Disc insulator	No	320
12	4.5" Aluminium BusBar	T	1
13	4.0" Aluminium BusBar	T	1

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Sl. No.	Item Description	Unit	Qty.
14	3.0" Aluminium BusBar	T	1
15	Manufacturing and supply of fire bucket of 10 Litre capacity made out of 26 (0.46mm) SWG MS sheet; Painted with white and red enamel paint inside and outside respectively; Bottom of bucket shall be 'U' shaped outside of the bucket shall be written as FIRE in English / Tamil in white enamel paint including cost of all materials.	nos.	32
16	Control & Protection System		
16.1	Bay Control Unit for 765kV	No.	1
16.2	Bay Control Unit for 400kV	No.	1
16.3	Numerical Main-1 Distance Protection Relay for 765kV Line Feeder	No.	1
16.4	Numerical Main-2 Distance Protection Relay for 765kV Line Feeder	No.	1
16.5	Numerical Main-1 Distance Protection Relay for 400kV Line Feeder	No.	1
16.6	Numerical Main-2 Distance Protection Relay for 400kV Line Feeder	No.	1
16.7	Numerical Main-1 Protection Relay for 765/400kV ICT	No.	1
16.8	Numerical Main-2 Protection Relay for 765/400kV ICT	No.	1
16.9	Numerical Relay for Busbar Protection - Central Unit	Set	2
16.10	Numerical Relay for Busbar Protection - Peripheral Unit	Set	2
16.11	Ethernet Switch for One Diameter plus 50% spare ports	No.	4
16.12	Ethernet Switch for Main Control Room plus 50% spare ports	No.	1
16.13	Electronic Tri-Vector Meter (ABT)	No.	1
16.14	Automatic DC Selection Relay	No.	4
16.15	Master Trip Relay (86)	No.	4
16.16	Master Trip Relay (96) for Busbar Protection	No.	4
16.17	T-N-C Switch	No.	2
16.18	PT Selection Relay/ Switch	No.	2
16.19	DC Supply Supervision Relay	No.	2
16.20	Trip Circuit Supervision Relay	No.	4
16.21	Single-Phase Trip Relay (With Self-Reset Contacts)	No.	2
16.22	Selector Switch for L/R Selection	No.	2
16.23	Selector Switch for A/R IN/OUT Selection	No.	2
16.24	Selector Switch for Carrier IN/OUT Selection	No.	2
16.25	Hard Disk for HMI Server	No.	1
16.26	Each Type of Hardware Modules for GPS Equipments	Set	1
16.27	Spares for Inverter of SAS	Set	1
16.28	Line Interface Unit for SAS FO LAN for One Diameter	Set	1
17	OLTE System		
17.1	Racks supplied (One No. of each type)	Set	1
17.2	Modules provided in the equipments supplied along with connectors, cables & tag block (One No. of each type)	Set	1
17.3	Connectors for DDF connectivity	Nos.	100
17.4	Baluns (75 Ohms to 120 Ohms) for DDF connectivity	Nos.	100
17.5	Co-axial cable for DDF connectivity	kM	1
17.6	Optical patch chords of 10 mtr length with suitable connectors at both ends	Nos.	20

