

Scope of Works

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SCOPE OF WORK FOR LOT-IINSTALLATION, TESTING, COMMISSIONING AND CIVIL WORKS OF 10 NOS. FEEDERS OF RAHIM YAR KHAN CIRCLE

ITEM NO.	DESCRIPTION	UNIT	Rahimyar Khan Circle										TOTAL QTY
			Name of Grid Station										
			132 kV Nawazabad	132 kV M.W Qureshi	132 kV R.Y.Khan II	132 kV Liaqat Pur	132 kV	132 kV RYK 2	132 kV Khan Pur	132 kV Khan Pur	132 kV Khan Pur	132 kV R.Y.Khan I	
			Name of 11-KV Feeders										
			11-KV KOT SABZAL	11-KV CHUGHTI FEEDER	11-KV SHAH GARH FEEDER	11-KV METLA FEEDER	11-KV EXPRESS- II	11-KV ALLAMA IQBAL	11-KV MODEL TOWN	11-KV ISLAM GARH	11-KV QAZI ZAFAR	11-KV JINNAH Feeder RYK	
1	Installation/ Replacement HT Steel Structures and Dismantlement of HT Structures / Tubular Poles / Spun Poles / PCC Poles (where Required) as per Specification	-	-	-	-	-	-	-	-	-	-	-	
01 – A	Collection of HT Structures from MEPCO Designated Store, Safe Handling / Transportation, Assembling, Excavation, Erection, Concrete Foundation, back filling, curing &Dismantlement of existing damaged/ Off Size HT Structures / Tubular Poles / PCC Poles/ P.S.C Spun Poles as per site requirement and return to designated store.	-	-	-	-	-	-	-	-	-	-	-	
	(1) HT Structures 58’	EACH	0	0	0	2	0	56	5	0	0	1	64
	(2) HT Structures 45’	EACH	7	4	0	5	3	7	5	7	0	116	154
	(3) HT Structures 36’	EACH	0	0	0	0	0	0	1	4	2	0	7

ITEM	DESCRIPTION	UNIT	Rahimyar Khan Circle										
	(4) LT Structures 31'	EACH	0	0	0	0	0	0	0	0	0	0	0
2	Installation/ Replacement HT/ LT P.S.C Spun Poles and Dismantlement of HT Structures / Tubular Poles / Spun Poles / PCC Poles (where Required) as per Specification	-	-	-	-	-	-	-	-	-	-	-	-
02 – B	Collection of HT/LT P.S.C Spun Poles from MEPCO Designated Store, Safe Handling / Transportation, Excavation, Erection, back filling & Dismantlement of existing damaged HT Structures / Tubular Poles / PCC Poles/ P.C Spun Poles as per site requirement and return to designated store.	-	-	-	-	-	-	-	-	-	-	-	-
	(1) HT P.C Spun Pole 45'	EACH	65	157	130	62	247	46	16	417	9	1	1150
	(2) HT P.C Spun Poles 36'	EACH	25	126	167	130	405	4	8	70	227	3	1165
	(3) LT P.C Spun Poles 31'	EACH	0	0	4	0	4	0	0	0	0	0	8
3	Installation and Dismantlement of HT Bare/ Insulated Conductors / Cables.	-	-	-	-	-	-	-	-	-	-	-	-

ITEM	DESCRIPTION	UNIT	Rahimyar Khan Circle										
03 – A	Collection of HT Bare/ Insulated Conductors / Cables from MEPCO Designated Store, Safe Handling / Transportation and Their Installation/ Replacement of existing HT Line inclusive of Allied Accessories / Hardware, P.G Connectors& Return of Dismantled Material to designated Store as per site requirement.	-	-	-	-	-	-	-	-	-	-	-	-
	11 KV Line Reconductoring:	-	-	-	-	-	-	-	-	-	-	-	-
	(1) ACSR Osprey Bare / Insulated Conductor	KM	0	0	0	15.500	0	0.104	0.192	6.300	0	0	22.096
	(2) ACSR Dog Bare / Insulated Conductor	KM	0.517	0.635	0	0	2.690	0	0	0.829	4.894	0.480	10.045
	(3) ACSR Rabbit Bare / Insulated Conductor	KM	0.420	0	10.600	1.400	5.510	0	0	2.035	1.478	0.000	21.443
	(4) 11 KV XLPE 500 MCM Cable Single Core	KM	0	0	0	0	0	0	0	0	0	0	0
4	Installation of HT Bare/ Insulated Conductors / Cables.	-	-	-	-	-	-	-	-	-	-	-	-
04 – A	Collection of HT Bare/ Insulated Conductors / Cables from MEPCO Designated Store, Safe Handling / Transportation and Their Installation inclusive of Allied Accessories / Hardware, P.G Connectors in New/ Extension of HT Line as per site requirement and Specifications.	-	-	-	-	-	-	-	-	-	-	-	-

ITEM	DESCRIPTION	UNIT	Rahimyar Khan Circle										
	11 KV New Line:	-	11-KV KOT SABZAL	11-KV CHUGHTI FEEDER	11-KV SHAH GARH FEEDER	11-KV METLA FEEDER	11-KV EXPRESS- II	11-KV ALLAMA IQBAL	11-KV MODEL TOWN	11-KV ISLAM GARH	11-KV QAZI ZAFAR	11-KV JINNAH Feeder RYK	-
	(1) ACSR Osprey Bare / Insulated Conductor	KM	10.515	12.346	11.300	5.600	24.664	4.281	4.916	23.500	0	7.020	104.142
	(2) ACSR Dog Bare / Insulated Conductor	KM	0.310	3.680	5.520	0	6.328	0	0	0	12.280	0	28.118
	(3) ACSR Rabbit Bare / Insulated Conductor	KM	1.740	1.958	0.810	0.440	8.740	0	0	3.009	1.695	0	18.392
	(4) 11 KV XLPE 500 MCM Cable Single Core	KM	0	0	0	0	0	0	0	0	0	0	0
5	Installation of LT Bare/ Insulated Conductors.	-	-	-	-	-	-	-	-	-	-	-	-
05 – B	Collection of LT Bare/ Insulated Conductors from MEPCO Designated Store, Safe Handling / Transportation and Their Installation inclusive of Allied Accessories / Hardware, P.G Connectors in New/ Extension of LT Line as per site requirement and Specifications.	-	-	-	-	-	-	-	-	-	-	-	-
	LT New Line	-	-	-	-	-	-	-	-	-	-	-	-
	(1) All Aluminum WASP (Bare / Insulated Conductor)	KM	0	0	0	0	0	0.200	0.150	0	0	0	0.350
	(2) All Aluminum ANT (Bare / Insulated Conductor)	KM	0.500	0.200	0.800	0.500	0.700	0.200	0	0.500	0.650	0.400	4.450
6	Proper Installation of 11KV Termination Kits	-	-	-	-	-	-	-	-	-	-	-	-
06 – A	Collection of Termination Kits from Designated MEPCO store, Safe Handling / Transportation and proper Installation of	-	-	-	-	-	-	-	-	-	-	-	-

ITEM	DESCRIPTION	UNIT	Rahimyar Khan Circle										
	11KV Termination Kits as per Specifications.												
	(1) 11 KV TERMINATION KIT S/C CABLE 500MCM (OUTDOOR)	EACH	3	9	9	15	33	9	9	9	9	3	108
	(2) 11 KV TERMINATION KIT S/C CABLE 500MCM (IN DOOR)	EACH	3	3	3	3	3	3	3	3	3	3	30
7	Proper Installation of 11KV US. CAPACITOR BANK 3X150 KVAR	-	-	-	-	-	-	-	-	-	-	-	-
07 – A	Collection of 11KV US. CAPACITOR BANK 3X150 KVAR from Designated MEPCO store, Safe Handling / Transportation and proper Installations as per Specifications.	-	-	-	-	-	-	-	-	-	-	-	-
	(1) 11KV US. CAPACITOR BANK 3X150 KVAR	SET	0	0	2	2	2	1	0	4	0	2	13
8	Proper Installation of 11KV Switch Panel (Outgoing)	-	-	-	-	-	-	-	-	-	-	-	-
8-A	One (1) set of complete metal-clad switchgear 11 kV shall be designed, supplied, delivered, installed, tested and commissioned, under this contract, as per WAPDA/NTDC spec P- 44:2018 (amended to date) comprise the following:	-	-	-	-	-	-	-	-	-	-	-	-
	A complete indoor Bus coupler panel 11 kV, 2500 A busbars, 25 kA, 1 sec,	SET	1	1	1	1	1	1	1	1	1	1	10

ITEM	DESCRIPTION	UNIT	Rahimyar Khan Circle										
	50Hz, 95/36 kV BIL, equipped with:												
	Q0 - One (1) set of three pole, draw-out, vacuum type, 11 kV, 2500 A, 25 kA, 1 sec, circuit breaker with spring-stored energy operating mechanism		1	1	1	1	1	1	1	1	1	1	10
	Two (2) Load Break Switches		1	1	1	1	1	1	1	1	1	1	10
	All other necessary material and equipment required for completing Bus Coupler Panel.		1	1	1	1	1	1	1	1	1	1	10
	A complete indoor Incoming panel 11 kV, 2500 A busbars, 2500 A feeder, 25 kA, 1 sec, 50 Hz, 36/95 kV BIL, equipped with:	SET	1	1	1	1	1	1	1	1	1	1	10
	Q0 - One (1) set of three pole, draw-out, vacuum type, 11 kV, 2500 A, 25 kA, 1 sec, circuit breaker with spring-stored energy operating mechanism		1	1	1	1	1	1	1	1	1	1	10
	T90 -Three (3) single-phase, 2-core, multi ratio, 1600-800/5 A, cl. 0.5 FS10 / 5P20, 10 & 15 VA, 1 sec, dry type current transformers		1	1	1	1	1	1	1	1	1	1	10
	T92 - Three (3) single-phase, 1-core, multi ratio, 1600-800/5 A, cl. 5P20, 15 VA 1 sec, dry type current transformers		1	1	1	1	1	1	1	1	1	1	10
	T5 - Three (3) single-phase, 1-secondary winding, 11/√3 / 0.11/√3 kV, cl. 0.5, 100 VA, 1 sec, dry type voltage		1	1	1	1	1	1	1	1	1	1	10

ITEM	DESCRIPTION	UNIT	Rahimyar Khan Circle										
	transformers												
	All other necessary material and equipment required for completing Incoming Panel.		1	1	1	1	1	1	1	1	1	1	10
	A complete indoor Outgoing panel 11 kV, 2500 A busbars, 630 A feeder, 25 kA, 1 sec, 50Hz, 36/95 kV BIL, equipped with:	SET	1	1	1	1	1	1	1	1	1	1	10
	Q0 - One (1) set of three pole, draw-out, vacuum type, 11 kV, 630 A, 25 kA, 1 sec, circuit breaker with spring-stored energy operating mechanism		1	1	1	1	1	1	1	1	1	1	10
	T91 -One (1) single-phase, 2-core, single ratio, 600-300/5-5A, cl. 0.5 FS10 / 5P20, 10/15 VA 1 sec,dry type current transformers		1	1	1	1	1	1	1	1	1	1	10
	Three (3) AIS Surge arrester 11 kV, single phase, gapless, metal oxide type, with surge counter as per WAPDA/NTDC spec P-181:2012 (amended to date)		1	1	1	1	1	1	1	1	1	1	10
	All other necessary material and equipment required for completing Outgoing Panel.		1	1	1	1	1	1	1	1	1	1	10
	A complete indoor Capacitor control panel 11 kV, 2500 A busbars, 630 A feeder, 25 kA, 1 sec,	SET	1	1	1	1	1	1	1	1	1	1	10

ITEM	DESCRIPTION	UNIT	Rahimyar Khan Circle										
	50Hz, 36/95 kV BIL, equipped with:												
	Q0 - one (1) set of three pole, draw-out, vacuum type, 11 kV, 630 A, 25 kA, 1 sec, circuit breaker with spring-stored energy operating mechanism		1	1	1	1	1	1	1	1	1	1	10
	T91 -Three (3) single-phase, 2-core, multi ratio, 600-300/5-5A, cl. 0.5 FS10 / 5P20, 10 & 15 VA 1 sec, dry type current transformers		1	1	1	1	1	1	1	1	1	1	10
	Three (3) AIS Surge arrester 11 kV, single phase, gapless, metal oxide type, with surge counter as per NTDC Specification P-181:2012.		1	1	1	1	1	1	1	1	1	1	10
	All other necessary material and equipment required for completing Capacitor Control Panel.		1	1	1	1	1	1	1	1	1	1	10
	11 kV Capacitor Bank	-	-	-	-	-	-	-	-	-	-	-	-
	11 kV, 3.6 MVAR (18 x 200 kVAR), 25 Fuses, Capacitor Bank comprising of 1-phase capacitors (200 kVAR) complete with mounting racks, fuses and bus works with Neutral CT as per WAPDA/NTDC Specifications P-165:89 (amended to date).	SET	1	1	1	1	1	1	1	1	1	1	10
	Digital over current Earth Fault Protection Relay with Broken Conductor Feature and Minimum		1	1	1	1	1	1	1	1	1	1	10

ITEM	DESCRIPTION	UNIT	Rahimyar Khan Circle										
	Earth Fault Setting=0.25A												
	All other necessary material and equipment required for completing 11kV capacitor bank		1	1	1	1	1	1	1	1	1	1	10
9	Proper Installation of Stay Rod SET with accessories (Complete).	-	-	-	-	-	-	-	-	-	-	-	-
9-A	Collection of Stay Rod SET with accessories (Complete) from Designated MEPCO store, Safe Handling / Transportation and proper Installation as per Specifications.	EACH	80	145	150	140	200	120	55	428	145	100	1563
10	Proper Installation of Earthing SET with accessories (Complete).	-	-	-	-	-	-	-	-	-	-	-	-
10-A	Collection of Earthing SET with accessories (Complete) from Designated MEPCO store, Safe Handling / Transportation and proper Installation as per Specifications.	EACH	105	297	323	203	671	170	115	510	246	121	2761
11	Shifting of Sub-Station of Different Capacities of Transformers Along with Allied accessories as per Specification	-	-	-	-	-	-	-	-	-	-	-	-

ITEM	DESCRIPTION	UNIT	Rahimyar Khan Circle										
11 – A	Shifting of Transformer Sub Station along with accessories of different Capacities of Transformers exists along with 11KV Feeder & Proper Installation at Newly Installed HT/ LT Structures/ Poles, Safe Handling / Transportation and their Installation and return of Dismantled Material (Allied Accessories where Replaced) to MEPCO Designated Store & Providing thimbles to LT bushes of T/F.	-	-	-	-	-	-	-	-	-	-	-	-
	(1) Construction of complete Double Structure Platform (For 100 / 200 KVA T/F)	EACH	4	5	11	2	1	20	1	4	2	2	52
	(2) Construction of complete Single Structure Platform (For 50 / 25 / 15 / 10 KVA T/F)	EACH	0	0	0	0	0	8	0	0	2	0	10
	(3) Replacement/ Shifting of HT Side Accessories as per SDI (11KV Jumpers, Dropout Cutout, X-Arms etc.)	EACH	4	5	11	2	1	28	1	4	4	2	62
	(4) Replacement/ Shifting of LT Side Accessories as per SDI (LT Bus Bars along with thimbles for LT Side T/F Bushing)	EACH	4	5	11	2	1	28	1	4	4	2	62
	(5) Earthing of Transformer substation as per Specification	EACH	4	5	11	2	1	28	1	4	4	2	62

11-KV SHAH GARH FEEDER	
SCOPE OF WORK	
a. <u>New Line:-</u>	
i)	01 No 11-KV outgoing Panal to Energize the new proposed feeder that will come into existence due to bifurcation of existing feeder.
ii)	0.110 KM New HT Power Cable 500 MCM has been proposed from Node # 1 to 2 (01-Segment) due to bifurcation of existing feeder.
iii)	11.30 KM New 11-KV line of ACSR "OSPREY" Conductor has been proposed from Node# 2 to 3 (01 Segments) Due to Change the Route
iv)	2.46 KM New 11-KV line of ACSR "DOG" Conductor has been proposed from Node# 3 to 4 (01 Segment) Due to Change the Route
v)	0.71 KM New 11-KV line of ACSR "RABBIT" Conductor has been proposed from Node# 07 to 08 (01 Segment)
vi)	0.100 KM New 11-KV line of ACSR "RABBIT" Conductor has been proposed from Node# 12 B to 12 C (01 Segment)
vii)	1.260 KM New 11-KV line of ACSR "DOG" Conductor has been proposed from Node# 12 A to 12 B (01 Segment)
viii)	1.800 KM New 11-KV line of ACSR "DOG" Conductor has been proposed from Node# 12 B to 12 D (01 Segment)
b.<u>Reconductoring</u>	
i)	5.58 KM reconductoring of 11-KV line form ACSR "GOPHER" to "RABBIT" has been proposed from Node # 05 to 06, 9 to 10, 13 to 14, 17 to 18 (04-Segment)
ii)	5.02 KM reconductoring of 11-KV line form ACSR "GOPHER" to "RABBIT" has been proposed from Node # 11 to 12, 15 to 16, 19 to 20, 21 to 22, 23 to 24, 25 to 26, 27 to 28, 29 to 30, 31 to 32. (08-Segment)
c. <u>Installation of Capacitor</u>	
i)	Installation 02 Nos. 450 KVAR fixed Capacitor Proposed.
ii)	Cost of 2 No. 11-KV V/Regulator.

11-kV METLA FEEDER	
SCOPE OF WORK	
a. <u>New Line:-</u>	
i)	01 No 11-KV outgoing Panal to Energize the new proposed feeder that will come into existence due to bifurcation of existing feeder.
ii)	0.15 KM New HT Power Cable 500 MCM has been proposed from Node # 1 to 2, 1.1 to 1.2 (02-Segment) due to bifurcation of existing feeder.
iii)	5.6 KM New 11-KV line of ACSR "OSPREY" Conductor has been proposed from Node# 2 to 3 (01 Segments)
iv)	0.44 KM New 11-KV line of ACSR "RABBIT" Conductor has been proposed from Node# 07 to 08 (01 Segment)
b. <u>Reconductoring</u>	
i)	4.6 KM reconductoring of 11-KV line form ACSR "DOG" to "OSPRAY" has been proposed from Node # 03 to 04,(01-Segment)
ii)	1.4 KM reconductoring of 11-KV line form ACSR "GOPHER" to "RABBIT" has been proposed from Node # 5 to 6, (01-Segment)
iii)	10.9 KM reconductoring of 11-KV line form ACSR "DOG" to "OSPRAY" has been proposed from Node # 09 to 10,(01-Segment)
c. <u>Installation of Capacitor</u>	
i)	Installation 02 Nos. 450 KVAR fixed Capacitor Proposed.

11-KV KOT SABZAL FEEDER

SCOPE OF WORK

a. New Line:-

- i) 01 No 11-KV outgoing Panel to Energize the new proposed feeder that will come into existence due to bifurcation of existing feeder.
- ii) 0.100 KM New HT Power Cable 500 MCM has been proposed from Node # 1 to 2 (01-Segment) due to bifurcation of existing feeder.
- iii) 10.515 KM New 11-KV line of ACSR "OSPREY" Conductor has been proposed from Node# 2 to 3 (01 Segment) due to change the route
- iv) 0.310 KM New 11-KV line of ACSR "DOG" Conductor has been proposed from Node# 3 to 4 (01 Segment)
- v) 0.770 KM New 11-KV line of ACSR "RABBIT" Conductor has been proposed from Node# 06 to 07 (01 Segment) due to change the route
- vi) 0.690 KM New 11-KV line of ACSR "RABBIT" Conductor has been proposed from Node# 08 to 09 (01 Segment)
- vii) 0.280 KM New 11-KV line of ACSR "RABBIT" Conductor has been proposed from Node# 11 to 12 (01 Segment)

b. Reconductoring

- i) 0.517 KM reconductoring of 11-KV line form ACSR "RABBIT " to "DOG" has been proposed from Node # 04 to 05 (01-Segment) ACSR Rabbit Conductor does not exist at site due to which newly ACSR Dog Conductor proposed
- ii) 0.420 KM reconductoring of 11-KV line form ACSR "GOPHER" to "RABBIT" has been proposed from Node # 09 to 10 (01-Segment)

11-KV JINNAH FEEDER	
SCOPE OF WORK	
a. <u>New Line:-</u>	
i) 01 No 11-KV outgoing Panel to Energize the new proposed feeder that will come into existence due to bifurcation of existing feeder.	
ii) 0.100 KM New HT Power Cable 500 MCM has been proposed from Node # 1 to 2 (01-Segment) due to bifurcation of existing feeder.	
iii) 7.020 KM New 11-KV line of ACSR "OSPREY" Conductor has been proposed from Node# 2 to 3 (01 Segments)	
b. <u>Reconductoring</u>	
i) 0.48 KM New 11-KV line form ACSR "RABBIT" to "DOG" has been proposed from Node # 03 to 04, (01-Segment)	
c. <u>Installation of Capacitor</u>	
i) Installation 02 Nos. 450 KVAR fixed Capacitor Proposed.	

11-KV ISLAM GARH FEEDER

SCOPE OF WORK

a. New Line: -

- i) 01 No 11-KV outgoing Panel to Energize the new proposed feeder that will come into existence due to bifurcation of existing feeder.
- ii) 0.154 KM New HT Power Cable 500 MCM has been proposed from Node # 1 to 2 & A to B (02-Segment) due to bifurcation of existing feeder & Railway Crossing
- iii) 23.500 KM New 11-KV line of ACSR "OSPREY" Conductor has been proposed from Node# 2 to 3 along the Road/ suit able route (01 Segment)
- iv) 1.500 KM New 11-KV line of ACSR "RABBIT" Conductor has been proposed from Node# 5 to 6 along the Road/ suit able route (01 Segment)
- v) 0.930 KM New 11-KV line of ACSR "RABBIT" Conductor has been proposed from Node# 13 to 14 (01 Segment)
- vi) 0.579 KM New 11-KV line of ACSR "RABBIT" Conductor has been proposed from Node# 17 to 18 (01 Segment)

b. Reconductoring

- i) 2.035 KM reconductoring of 11-KV line from ACSR "GOPHER" to "RABBIT" has been proposed from Node # 3 to 4 (01-Segments)
- ii) 0.829 KM reconductoring of 11-KV line form ACSR "GOPHER" to "DOG" has been proposed from Node # 7 to 8 (01-Segment)
- iii) 6.300 KM reconductoring of 11-KV line form ACSR "DOG" to "OSPRAY" has been proposed from Node # 9 to 10 (01-Segment)

c. Installation of Capacitor

- i) Installation 04 Nos. 450 KVAR fixed Capacitor proposed.

	11-KV EXPRESS-II FEEDER
	SCOPE OF WORK
	a. <u>New Line: -</u>
1	i) 01 No 11-KV outgoing Panal to Energize the new proposed feeder that will come into existence due to bifurcation of existing feeder.
2	ii) 0.10 KM New HT Power Cable 500 MCM has been proposed from Node # 1 to 2 (01-Segment) due to bifurcation of existing feeder.
3	iii) 24.66 KM New 11-KV line of ACSR "OSPREY" Conductor has been proposed from Node# 2 to 3 (01 Segments)
4	iv) 0.73 KM New 11-KV line of ACSR "RABBIT" Conductor has been proposed from Node# 05 to 06 (01 Segment)
5	v) 1.53 KM New 11-KV line of ACSR "RABBIT" Conductor has been proposed from Node# 07 to 08 (01 Segment)
6	vi) 3.53 KM New 11-KV line of ACSR "RABBIT" Conductor has been proposed from Node# 09 to 10 (01 Segment)
7	vii) 0.61 KM New 11-KV line of ACSR "RABBIT" Conductor has been proposed from Node# 11 to 12 (01 Segment)
8	viii) 0.73 KM New 11-KV line of ACSR "RABBIT" Conductor has been proposed from Node# 13 to 14 (01 Segment)
9	ix) 0.884 KM New 11-KV line of ACSR "RABBIT" Conductor has been proposed from Node# 15 to 16 (01 Segment)
10	x) 0.708 KM New 11-KV line of ACSR "RABBIT" Conductor has been proposed from Node# 17 to 18 (01 Segment)
11	xi) 6.328 KM New 11-KV line of ACSR "DOG" Conductor has been proposed from Node# 19 to 20 (01 Segment)
	b. <u>Reconductoring</u>
1	i) 2.690 KM reconductoring of 11-KV line form ACSR "RABBIT " to "DOG" has been proposed from Node # 03 to 04 (01-Segment) Due to Change the Route
2	ii) 2.69 KM reconductoring of 11-KV line form ACSR "RABBIT " to "DOG" has been proposed from Node # 04 to 05 (01-Segment)
3	iv) 5.51 KM reconductoring of 11-KV line form ACSR "GOPHER " to "RABBIT" has been proposed from Node # 21 to 22 (01-Segment)
	c. <u>Installation of Capacitor</u>
1	i. Installation 02 Nos. 450 KVAR fixed Capacitor proposed.

	BIF/REH: OF 11KV CHUGHTI FEEDER EMANATING FROM 132KV GRID STATION MIAN WALI QURESHIAN
Sr.NO	SCOPE OF WORK
A. NEW PROPOSED FEEDER FROM 132KV GRID STATION KHAN PUR	
1	01 No. 11-KV Panel to energize the new proposed feeder that will come into existence due to Bifurcation of existing Qazi Zafar Feeder
2	0.204 KM new Power Cable 500 MCM has been proposed from Node 1 to 2 due to bifurcation of existing Model Town Feeder due 132 KV down crossing.
3	12.280KM new 11-KV Line of ACSR DOG Conductor has been proposed from Node # 3 to 4 ,5 to 6
4	1.695KM new 11-KV Line of ACSR RABBIT Conductor has been proposed from Node # 7 to 8,9 to 10
B. Reconductoring: -	
1	4.894 KM Reconductoring of 11-KV Line from ACSR Rabbit to ACSR DOG Conductor has been proposed from Node # 11to 12 ,13to14.
2	1.478 KM Reconductoring of 11-KV Line from ACSR GOPHER to ACSR RABBIT Conductor has been proposed from Node # 15to 16 ,17to18,19to20,21to22.

**BIF/REH: OF 11KV QAZI ZAFAR FEEDER
EMANATING FROM 132KV GRID STATION KHAN PUR**

Sr.NO	SCOPE OF WORK
A. NEW PROPOSED FEEDER FROM 132KV GRID STATION KHAN PUR	
1	01 No. 11-KV Panel to energize the new proposed feeder that will come into existence due to Bifurcation of existing Qazi Zafar Feeder
2	0.204 KM new Power Cable 500 MCM has been proposed from Node 1 to 2 due to bifurcation of existing Model Town Feeder due 132 KV down crossing.
3	12.280KM new 11-KV Line of ACSR DOG Conductor has been proposed from Node # 3 to 4 ,5to6
4	1.695KM new 11-KV Line of ACSR RABBIT Conductor has been proposed from Node # 7 to 8 ,9to10
B. Reconductoring: -	
1	4.894 KM Reconductoring of 11-KV Line from ACSR Rabbit to ACSR DOG Conductor has been proposed from Node # 11to 12 ,13to14.
2	1.478 KM Reconductoring of 11-KV Line from ACSR GOPHER to ACSR RABBIT Conductor has been proposed from Node # 15to 16,17to18,19to20,21to22.

11 KV MODLE TOWN FEEDER FROM 132 KV G/S KHAN PUR	
Sr.NO	SCOPE OF WORK
A. NEW PROPOSED FEEDER FROM 132KV GRID STATION KHAN PUR	
1	01 No. 11-KV Panel to energize the new proposed feeder that will come into existence due to Bifurcation of existing Model Town Feeder
2	0.164 KM new Power Cable 500 MCM has been proposed from Node 1 to 2 due to bifurcation of existing Model Town Feeder due 132 KV down crossing.
3	4.916 KM new 11-KV Line of ACSR Ospray Conductor has been proposed from Node # 3 to 4
B. Reconductoring: -	
1	0.192 KM Reconductoring of 11-KV Line from ACSR Rabbit to ACSR Ospray Conductor has been proposed from Node # 4 to 5.

	BIF/REH: OF 11-KV ALLAMA IQBAL FEEDER EMANATING FROM 132-KV GRID STATION RYK-I.
Sr.NO	SCOPE OF WORK
A. NEW PROPOSED FEEDER FROM 132KV GRID STATION RYK-I	
1	01 No. 11-KV Panel to energize the new proposed feeder that will come into existence due to bifurcation of existing Allama Iqbal Feeder.
2	0.227 KM new Power Cable 500 MCM has been proposed from Node 1 to 2 & Node 3.1 to 3.2 due to Bifurcation of existing Allama Iqbal Feeder and Railway crossing.
3	4.281 KM New 11-KV line of ACSR Ospray Conductor has been proposed from Node # 3 to 4 due to change the route.
4	Installation of 01 No. Fixed Capacitor Set
B. Reconductoring: -	
1	0.104 KM Reconductoring of 11-KV line from ACSR Rabbit to ACSR Ospray conductor has been proposed from Node # 4 to 5.

SCOPE OF WORK FOR LOT-II NSTALLATION, TESTING, COMMISSIONING AND CIVIL WORKS OF 9 NOS. FEEDERS OF KHANEWAL CIRCLE

ITEM NO.	DESCRIPTION	UNIT	Khanewal Circle									TOTAL QTY	
			Name of Grid Station										
			132 kV Khanewal	132 kV Jahanian	132 kV Bhati Bangla	132 kV Kabir Wala	132 kV Mian Channu	132 kV Kabir Wala	132 kV Kacha Khu	132 kV Kabir Wala	132 kV Mian Channu		
			Name of 11-KV Feeders										
			11-KV Kot Abbas Shaheed & Jangle Maryala	11-KV Ali Sher Wahan & Pir hajan Sher	11-KV Akbar Abad	11-KV Kukar Hatta	11-KV Tulamba	11- KV Raza Abad	11-KV Chak 24/10-R	11-KV Pir Kabir	11-KV Chak- 95/15-L		
1	Installation/ Replacement HT Steel Structures and Dismantlement of HT Structures / Tubular Poles / Spun Poles / PCC Poles (where Required) as per Specification	-	-	-	-	-	-	-	-	-	-	-	-
01 – A	Collection of HT Structures from MEPCO Designated Store, Safe Handling / Transportation, Assembling, Excavation, Erection, Concrete Foundation, back filling, curing &Dismantlement of existing damaged/ Off Size HT Structures / Tubular Poles / PCC Poles/ P.S.C Spun Poles as per site requirement and return to designated store.	-	-	-	-	-	-	-	-	-	-	-	-
	(1) HT Structures 58’	EACH	12	4	0	2	3	2	0	9	0	0	32
	(2) HT Structures 45’	EACH	2	0	0	0	5	0	0	0	0	0	7
	(3) HT Structures 36’	EACH	0	0	2	0	0	0	0	0	0	0	2
	(4) LT Structures 31’	EACH	0	0	0	0	0	0	0	0	0	0	0
2	Installation/ Replacement HT/ LT P.S.C Spun Poles and Dismantlement of HT Structures / Tubular Poles / Spun Poles / PCC Poles (where Required) as per Specification	-	-	-	-	-	-	-	-	-	-	-	-
02 – B	Collection of HT/LT P.S.C Spun Poles from MEPCO Designated Store, Safe Handling / Transportation, Excavation, Erection, back filling &	-	-	-	-	-	-	-	-	-	-	-	-

ITEM	DESCRIPTION	UNIT	Khanewal Circle									
	Dismantlement of existing damaged HT Structures / Tubular Poles / PCC Poles/ P.C Spun Poles as per site requirement and return to designated store.											
	(1) HT P.C Spun Pole 45'	EACH	163	6	12	14	42	133	46	94	27	537
	(2) HT P.C Spun Poles 36'	EACH	279	359	224	332	296	294	437	94	273	2588
	(3) LT P.C Spun Poles 31'	EACH	0	0	0	0	0	3	2	0	1	6
3	Installation and Dismantlement of HT Bare/ Insulated Conductors / Cables.	-	-	-	-	-	-	-	-	-	-	-
03 – A	Collection of HT Bare/ Insulated Conductors / Cables from MEPCO Designated Store, Safe Handling / Transportation and Their Installation/ Replacement of existing HT Line inclusive of Allied Accessories / Hardware, P.G Connectors& Return of Dismantled Material to designated Store as per site requirement.	-										-
	11 KV Line Reconductoring:	-	11-KV Kot Abbas Shaheed & Jangle Maryala	11-KV Ali Sher Wahan & Pir hajan Sher	11-KV Akbar Abad	11-KV Kukar Hatta	11-KV Tulamba	11-KV Raza Abad	11-KV Chak 24/10-R	11-KV Pir Kabir	11-KV Chak-95/15-L	-
	(1) ACSR Osprey Bare / Insulated Conductor	KM	5.996	2.151	7.381	8.894	6.246	6.847	14.492	4.708	0	56.715
	(2) ACSR Dog Bare / Insulated Conductor	KM	3.306	0	1.170	3.620	2.491	9.481	3.852	0	3.957	28.407
	(3) ACSR Rabbit Bare / Insulated Conductor	KM	8.711	12.698	0.941	0.530	17.859	2.319	23.252	2	10.311	81.005
4	Installation of HT Bare/ Insulated Conductors / Cables.	-	-	-	-	-	-	-	-	-	-	-
04 – A	Collection of HT Bare/ Insulated Conductors / Cables from MEPCO Designated Store, Safe Handling / Transportation and Their Installation inclusive of Allied Accessories / Hardware, P.G Connectors in New/ Extension of HT Line as per site requirement and Specifications.	-	-	-	-	-	-	-	-	-	-	-

ITEM	DESCRIPTION	UNIT	Khanewal Circle									
	11 KV New Line:	-	11-KV Kot Abbas Shaheed & Jangle Maryala	11-KV Ali Sher Wahan & Pir hajan Sher	11-KV Akbar Abad	11-KV Kukar Hatta	11-KV Tulamba	11-KV Raza Abad	11-KV Chak 24/10-R	11-KV Pir Kabir	11-KV Chak-95/15-L	-
	(1) ACSR Osprey Bare / Insulated Conductor	KM	16.521	13.393	5.537	10.225	9.067	10.665	8.884	7.150	8.948	90.390
	(2) ACSR Dog Bare / Insulated Conductor	KM	2.027	0	1.989	0.289	0	2.129	1.561	0.457	4.085	12.537
	(3) ACSR Rabbit Bare / Insulated Conductor	KM	2.229	4.648	0	2.132	2.395	0	2.276	0.231	0.365	14.276
	(4) 11 KV XLPE 500 MCM Cable Single Core	KM										
5	Installation of LT Bare/ Insulated Conductors.	-	-	-	-	-	-	-	-	-	-	-
05 – B	Collection of LT Bare/ Insulated Conductors from MEPCO Designated Store, Safe Handling / Transportation and Their Installation inclusive of Allied Accessories / Hardware, P.G Connectors in New/ Extension of LT Line as per site requirement and Specifications.	-	-	-	-	-	-	-	-	-	-	-
	LT New Line	-	-	-	-	-	-	-	-	-	-	-
	(1) All Aluminum WASP (Bare / Insulated Conductor)	KM	0	0	0	0	0	0	0	0.230	0.100	0.330
	(2) All Aluminum ANT (Bare / Insulated Conductor)	KM	0.030	0	0	0	0	0	0.350	0.250	0.100	0.730
6	Proper Installation of 11KV Termination Kits	-	-	-	-	-	-	-	-	-	-	-
06 – A	Collection of Termination Kits from Designated MEPCO store, Safe Handling / Transportation and proper Installation of 11KV Termination Kits as per Specifications.	-	-	-	-	-	-	-	-	-	-	-
	(1) 11 KV TERMINATION KIT S/C CABLE 500MCM (OUT DOOR)	EACH	15	9	3	3	15	3	9	3	3	63
	(2) 11 KV TERMINATION KIT S/C CABLE 500MCM (IN DOOR)	EACH	3	3	3	3	3	3	3	3	3	27
7	Proper Installation of 11KV US.CAPACITOR BANK 3X150 KVAR	-	-	-	-	-	-	-	-	-	-	-

ITEM	DESCRIPTION	UNIT	Khanewal Circle									
07 – A	Collection of 11KV US.CAPACITOR BANK 3X150 KVAR from Designated MEPCO store, Safe Handling / Transportation and proper Installation as per Specifications.	-	-	-	-	-	-	-	-	-	-	-
	(1) 11KV US.CAPACITOR BANK 3X150 KVAR	SET	6	2	2	2	4	5	0	2	0	23
8	Proper Installation of 11KV Switch Panel (Out Going)	-	-	-	-	-	-	-	-	-	-	-
8-A	One (1) set of complete metal-clad switchgear 11 kV shall be designed, supplied, delivered, installed, tested and commissioned, under this contract, as per WAPDA/NTDC spec P-44:2018 (amended to date) comprise the following:	-	-	-	-	-	-	-	-	-	-	-
	A complete indoor Bus coupler panel 11 kV, 2500 A busbars, 25 kA, 1 sec, 50Hz, 95/36 kV BIL, equipped with:	SET	1	1	1	1	1	1	1	1	1	9
	Q0 - One (1) set of three pole, draw-out, vacuum type, 11 kV, 2500 A, 25 kA, 1 sec, circuit breaker with spring-stored energy operating mechanism		1	1	1	1	1	1	1	1	1	9
	Two (2) Load Break Switches		1	1	1	1	1	1	1	1	1	9
	All other necessary material and equipment required for completing Bus Coupler Panel.		1	1	1	1	1	1	1	1	1	9
	A complete indoor Incoming panel 11 kV, 2500 A busbars, 2500 A feeder, 25 kA, 1 sec, 50 Hz, 36/95 kV BIL, equipped with:	SET	1	1	1	1	1	1	1	1	1	9
	Q0 - One (1) set of three pole, draw-out, vacuum type, 11 kV, 2500 A, 25 kA, 1 sec, circuit breaker with spring-stored energy operating mechanism		1	1	1	1	1	1	1	1	1	9
	T90 -Three (3) single-phase, 2-core, multi ratio, 1600-800/5 A, cl. 0.5 FS10 / 5P20, 10 & 15 VA, 1 sec, dry type current transformers		1	1	1	1	1	1	1	1	1	9
	T92 - Three (3) single-phase, 1-core, multi ratio, 1600-800/5 A, cl. 5P20, 15		1	1	1	1	1	1	1	1	1	9

ITEM	DESCRIPTION	UNIT	Khanewal Circle							
	VA 1 sec, dry type current transformers									
	T5 - Three (3) single-phase, 1-secondary winding, 11/√3 / 0.11/√3 kV, cl. 0.5, 100 VA, 1 sec, dry type voltage transformers		1	1	1	1	1	1	1	9
	All other necessary material and equipment required for completing Incoming Panel.		1	1	1	1	1	1	1	9
	A complete indoor Outgoing panel 11 kV, 2500 A busbars, 630 A feeder, 25 kA, 1 sec, 50Hz, 36/95 kV BIL, equipped with:	SET	1	1	1	1	1	1	1	9
	Q0 - One (1) set of three pole, draw-out, vacuum type, 11 kV, 630 A, 25 kA, 1 sec, circuit breaker with spring-stored energy operating mechanism		1	1	1	1	1	1	1	9
	T91 -One (1) single-phase, 2-core, single ratio, 600-300/5-5A, cl. 0.5 FS10 / 5P20, 10/15 VA 1 sec, dry type current transformers		1	1	1	1	1	1	1	9
	Three (3) AIS Surge arrester 11 kV, single phase, gapless, metal oxide type, with surge counter as per WAPDA/NTDC spec P-181:2012 (amended to date)		1	1	1	1	1	1	1	9
	All other necessary material and equipment required for completing Outgoing Panel.		1	1	1	1	1	1	1	9
	A complete indoor Capacitor control panel 11 kV, 2500 A busbars, 630 A feeder, 25 kA, 1 sec, 50Hz, 36/95 kV BIL, equipped with:	SET	1	1	1	1	1	1	1	9
	Q0 - one (1) set of three pole, draw-out, vacuum type, 11 kV, 630 A, 25 kA, 1 sec, circuit breaker with spring-stored energy operating mechanism		1	1	1	1	1	1	1	9
	T91 -Three (3) single-phase, 2-core, multi ratio, 600-300/5-5A, cl. 0.5 FS10 / 5P20, 10 & 15 VA 1 sec, dry type current transformers		1	1	1	1	1	1	1	9
	Three (3) AIS Surge arrester 11 kV, single phase, gapless, metal oxide type,		1	1	1	1	1	1	1	9

ITEM	DESCRIPTION	UNIT	Khanewal Circle									
	with surge counter as per NTDC Specification P-181:2012.											
	All other necessary material and equipment required for completing Capacitor Control Panel.		1	1	1	1	1	1	1	1	1	9
	11 kV Capacitor Bank	-	-	-	-	-	-	-	-	-	-	-
	11 kV, 3.6 MVAR (18 x 200 kVAR), 25 Fuses, Capacitor Bank comprising of 1-phase capacitors (200 kVAR) complete with mounting racks, fuses and bus works with Neutral CT as per WAPDA/NTDC Specifications P-165:89 (amended to date).	SET	1	1	1	1	1	1	1	1	1	9
	Digital over current Earth Fault Protection Relay with Broken Conductor Feature and Minimum Earth Fault Setting=0.25A		1	1	1	1	1	1	1	1	1	9
	All other necessary material and equipment required for completing 11kV capacitor bank		1	1	1	1	1	1	1	1	1	9
9	Proper Installation of Stay Rod SET with accessories (Complete).	-	-	-	-	-	-	-	-	-	-	-
9-A	Collection of Stay Rod SET with accessories (Complete) from Designated MEPCO store, Safe Handling / Transportation and proper Installation as per Specifications.	EACH	325	230	158	258	330	302	536	130	215	2484
10	Proper Installation of Earthing SET with accessories (Complete).	-	-	-	-	-	-	-	-	-	-	-
10-A	Collection of Earthing SET with accessories (Complete) from Designated MEPCO store, Safe Handling / Transportation and proper Installation as per Specifications.	EACH	30	371	4	14	16	450	30	231	305	1451
11	Shifting of Sub-Station of Different Capacities of Transformers Along with Allied accessories as per Specification	-	-	-	-	-	-	-	-	-	-	-
11 – A	Shifting of Transformer Sub Station along with accessories of different Capacities of Transformers exists	-	-	-	-	-	-	-	-	-	-	-

ITEM	DESCRIPTION	UNIT	Khanewal Circle									
	alongwith 11KV Feeder & Proper Installtion at Newly Installed HT/ LT Structures/ Poles, Safe Handling / Transportation and their Installation and return of Dismantled Material (Allied Accessories where Replaced) to MEPCO Designated Store & Providing thimbles to LT bushes of T/F.											
	(1) Construction of complete Double Structure Platform (For 100 / 200 KVA T/F)	EACH	1	0	0	2	3	3	3	7	1	20
	(2) Construction of complete Single Structure Platform (For 50 / 25 / 15 / 10 KVA T/F)	EACH	0	1	0	3	0	4	12	10	1	31
	(3) Replacement/ Shifting of HT Side Accessories as per SDI (11KV Jumpers, Dropout Cutout, X-Arms etc.)	EACH	1	1	0	5	3	7	15	17	2	51
	(4) Replacement/ Shifting of LT Side Accessories as per SDI (LT Bus Bars along with thimbles for LT Side T/F Bushing)	EACH	1	1	0	5	3	7	15	17	2	51
	(5) Earthing of Transformer substation as per Specification	EACH	1	1	0	5	3	7	15	17	2	51

Bifurcation Of 11-KV Tulamba Feeder
Emanating From 132-KV Grid Station Mian Channu

<u>S#</u>	<u>SCOPE OF WORK</u>
<u>A. NEW (PROP) FEEDER FROM 132-KV GRID STATION MIAN CHANNU</u>	
<u>a. New Line</u>	
i	01 No. New 11-KV Outgoing Panel to energize the new proposed feeder that will come into existence due to bifurcation of existing Feeder
ii	0.248-Km HT Power Cable 500-MCM has been proposed from node no. 0 to A, A1 to A2 (02 Segment) Due to bifurcation of existing Feeder & 132-KV Crossing
iii	9.067-Km 11-KV Line of ACSR Ospray conductor has been proposed from node no. A to A1, A2 to B (02 segment)
iv	1.985-Km 11-KV Line of ACSR Rabbit conductor has been proposed from node no. 7 to 8, W to X , I to J, O to P & G2 to 13 (05 segment)
<u>b. Installation of Capacitor:</u>	
1	03 No. 450-KVAR Capacitor bank set have been proposed
<u>c. Reconducting:</u>	
i	0.283-Km Reconducting of 11-KV Line from ACSR Gopher to Ospray Conductor has been proposed from node no. B to C & C to D (02 segment)
ii	0.935-Km Reconducting of 11-KV Line from ACSR Rabbit to Ospray Conductor has been proposed from node no. D to E (01 segment)
iii	i. 2.491-Km Reconducting of 11-KV Line from ACSR Gopher to Dog Conductor has been proposed from node no. E to F, E to G, to G1,G3 to H, G1 to G4 & H to 11(06 segment) ii. 0.410 Km 11-KV New Line from ACSR Dog Conductor has been proposed from node no. G1 to G2 to G3 (02 segment)
iv	12.157-Km Reconducting of 11-KV Line from ACSR Gopher to Rabbit Conductor has been proposed from node no. C to V1, F to W, Z to 3 to 4 to 4.1 to 5.1 to 6, Z to Y, Z to 1 to 2, 8 to 9, 8 to 10 , 12 to 13, 11 to I, K to L to M to M1 to N, K to Q , Q to R to S to T, R to U (23 segment)

<u>Bifurcation Of 11-KV Tulamba Feeder Emanating From 132-KV Grid Station Mian Channu</u>	
<u>S#</u>	<u>SCOPE OF WORK</u>
B. <u>11-KV Talumba (REM) Feeder Emanating from 132-KV Grid MIAN CHANNU</u>	
a. <u>Reconducting:</u>	
i	i.4.803-Km Reconducting of 11-KV Line from ACSR Dog to Ospray Conductor has been proposed from node no. A to A1, A2 to A3 & A4 to B (03 segment) ii. 0.225 Km Reconducting of 11-KV Line from ACSR Rabbit to Ospray Conductor has been proposed from node no. A3 to A4 (01 segment) iii. 0.048-Km HT Power Cable 500-MCM has been proposed from node no. A10 to A2 (01 Segment) Due to 132-KV Crossing
ii	5.702-Km Reconducting of 11-KV Line from ACSR Gopher to Rabbit Conductor has been proposed from node no. C to D to E to F, E to G, D to H , B to I , J to K, L1 to M, N to O, O to P, Q to R, Q to S to T, S to U & V to W (15 segment)
b. <u>Installation of Capacitor:</u>	
1	01 No. 450-KVAR Capacitor bank set have been proposed

<u>Bifurcation Of 11-KV Kukkar Hatta Feeder Emanating From 132-KV Grid Station Kabirwala</u>	
<u>S#</u>	<u>SCOPE OF WORK</u>
A. <u>NEW (PROP) FEEDER FROM 132-KV GRID STATION MAAN KOT</u>	
a. <u>New Line</u>	
i	01 No. New 11-KV Outgoing Panel to energize the new proposed feeder that will come into existence due to bifurcation of existing Feeder
ii	0.180-Km HT Power Cable 500-MCM has been proposed from node no. 0 to 1 (01 Segment) Due to bifurcation of existing Feeder
iii	10.225-Km 11-KV Line of ACSR Ospray conductor has been proposed from node no. 1 to 2 to 3 (02 segment)
iv	0.289-Km 11-KV Line of ACSR Dog conductor has been proposed from node no. 5 to 6 (01 segment)
v	0.950-Km 11-KV Line of ACSR Rabbit conductor has been proposed from node no. 2 to 7 (01 segment)
vi	0.182-Km 11-KV Line of ACSR Rabbit conductor has been proposed from node no. 4 to 8 (01 segment) Due To House Crossing
b. <u>Installation of Capacitor:</u>	
i	01 No. 450-KVAR Capacitor bank set have been proposed
c. <u>Reconducting:</u>	
i	2.619-Km Reconducting of 11-KV Line from ACSR Rabbit to Ospray Conductor has been proposed from node no. 3 to 4 (01 segment)
ii	2.778-Km Reconducting of 11-KV Line from ACSR Rabbit to Dog Conductor has been proposed from node no. 4 to 5 (01 segment)
B. <u>11-KV Kukkar Hatta (REM) Feeder Emanating from 132-KV Grid Kabirwala</u>	
a. <u>New Line</u>	
i	1.000-Km 11-KV Line of ACSR Rabbit conductor has been proposed from node no. 6 to 8 (01 segment)

Bifurcation Of 11-KV Kukkar Hatta Feeder
Emanating From 132-KV Grid Station Kabirwala

<u>S#</u>	<u>SCOPE OF WORK</u>
b. <u>Installation of Capacitor:</u>	
i	01 No. 450-KVAR Capacitor bank set have been proposed
c. <u>Reconducting:</u>	
i	6.275-Km Reconducting of 11-KV Line from ACSR Dog to Ospray Conductor has been proposed from node no. 0 to 1 (01 segment)
ii	0.842-Km Reconducting of 11-KV Line from ACSR Rabbit to Dog Conductor has been proposed from node no. 1 to 2 & 3 to 4 (02 segment)
iii	0.530-Km Reconducting of 11-KV Line from ACSR Gopher to Dog Conductor has been proposed from node no. 2 to 3 (01 segment)
iv	2.914-Km Reconducting of 11-KV Line from ACSR Gopher to Rabbit Conductor has been proposed from node no. 5 to 6 to 7, 9 to 10, 11 to 12, 13 to 14, 15 to 16 & 17 to 18 (07 segment)

<u>Bifurcation / Reconductoring Of 11-KV Akbar Abad Feeder Emanating From 132-KV Grid Station Baati Bangla</u>	
<u>Sr. #</u>	<u>SCOPE OF WORK</u>
<u>A. NEW (PROP) FEEDER FROM 132-KV GRID STATION BAATI BANGLA</u>	
<u>a. New Line</u>	
i	01 No. New 11-KV Outgoing Panel to energize the new proposed feeder that will come into existence due to bifurcation of existing Feeder
ii	0.174-Km HT Power Cable 500-MCM has been proposed from node no. 0 to 1 (01 Segment) Due to bifurcation of existing Feeder
iii	5.537-Km 11-KV Line of ACSR Ospray conductor has been proposed from node no. 1 to 2 (01 segment)
iv	1.989-Km 11-KV Line of ACSR Dog conductor has been proposed from node no. 3 to 4 to 5 (02 segment)
<u>b. Installation of Capacitor:</u>	
i	01 No. 450-KVAR Capacitor bank set have been proposed
<u>c. Reconducting:</u>	
i	0.954-Km Reconducting of 11-KV Line from ACSR Rabbit to Ospray Conductor has been proposed from node no. 2 to 3 (01 segment) Note:- nod no. 7 to 8 already Ospray exist at site
ii	1.170-Km Reconducting of 11-KV Line from ACSR Rabbit to Dog Conductor has been proposed from node no. 5 to 6 (01 segment)
<u>B. 11-KV Akbar Abad (REM) Feeder Emanating from 132-KV Grid Baati Bangla</u>	
<u>a. Installation of Capacitor:</u>	
i	01 No. 450-KVAR Capacitor bank set have been proposed
<u>b. Reconducting:</u>	
i	5.830-Km Reconducting of 11-KV Line from ACSR Dog to Ospray Conductor has been proposed from node no. 0 to 1, 2 to 3 & 4 to 5 (03 segment)

Bifurcation / Reconductoring Of 11-KV Akbar Abad Feeder
Emanating From 132-KV Grid Station Baati Bangla

<u>Sr. #</u>	<u>SCOPE OF WORK</u>
ii	0.597-Km Reconducting of 11-KV Line from ACSR Rabbit to Ospray Conductor has been proposed from node no. 1 to 2 & 3 to 4 (02 segment)
iii	Note:- nod no. 6 to 7 already Dog exist at site
iv	0.941-Km Reconducting of 11-KV Line from ACSR Gopher to Rabbit Conductor has been proposed from node no. 7 to 8, 9 to 10 & 1 to 14 (03 segment) Note:- nod no. 11 to 12, 11 to 13 already Rabbit exist at site

11-KV Ali Sherwan & Pir Hajan Sher Feeder Emanating From 132-KV Grid Station Jahanian	
<u>S#</u>	<u>SCOPE OF WORK</u>
A. <u>NEW (PROP) FEEDER FROM 132-KV GRID STATION JAHANIAN</u>	
a. <u>New Line</u>	
i	01 No. 450-KVAR Capacitor bank set have been Shifted
ii	02 No. 450-KVAR Capacitor bank set have been proposed
iii	01 No. New 11-KV Outgoing Panel to energize the new proposed feeder that will come into existence due to bifurcation of existing Feeder
iv	0.209-Km HT Power Cable 500-MCM has been proposed from node no. A to 0 & 0.1 to 0.2 (02 Segment) Due to bifurcation of existing Feeder & Railway Crossing
v	13.393-Km 11-KV Line of ACSR Ospray conductor has been proposed from node no. 0 to 0.1, 0.2 to 1 to 2 to 3 & 4 to 5 (05 segment)
vi	3.316-Km 11-KV Line of ACSR Rabbit conductor has been proposed from node no. 1 to 28, 2 to 29, 20.1 to 21, 13 to 14 to 15, 14 to 16 & 30 to 31 (07 segment)
b. <u>Reconducting:</u>	
i	2.090-Km Reconducting of 11-KV Line from ACSR Rabbit to Ospray Conductor has been proposed from node no. 3 to 4 & 5 to 6 (02 segment)
ii	6.942-Km Reconducting of 11-KV Line from ACSR Gopher to Rabbit Conductor has been proposed from node no. 22 to 22.1 to 22.2, 22.1 to 23, 24 to 25 to 25.1, 26 to 27, 11 to 11.1 to 12, 11.1 to 19 to 20 (10 segment)
B. <u>11-KV PIR HAJJAN SHER (REM) Feeder Emanating from 132-KV Grid JAHANIAN</u>	
a. <u>New Line</u>	
i	1.332-Km 11-KV Line of ACSR Rabbit conductor has been proposed from nod no. 42 to 43 (01 segment)
b. <u>Reconducting:</u>	
i	1.885-Km Reconducting of 11-KV Line from ACSR Gopher to Rabbit Conductor has been proposed from nod no. 34 to 35, 36 to 37, 44 to 45 & 46 to 47 (04 segment)

**11-KV Ali Sherwan & Pir Hajan Sher Feeder
Emanating From 132-KV Grid Station Jahanian**

<u>S#</u>	<u>SCOPE OF WORK</u>
C. <u>11-KV ALI SHERWAN (REM) Feeder Emanating from 132-KV Grid JAHANIAN</u>	
a. Reconducting:	
i	0.061-Km Reconducting of 11-KV Line from ACSR Dog to Ospray Conductor has been proposed from node no. 48 to 49 (01 segment)
ii	3.871-Km Reconducting of 11-KV Line from ACSR Gopher to Rabbit Conductor has been proposed from node no. 50 to 51, 54 to 55, 58 to 59, 60-A to 60 to 60-B to 60-C & 60-B to 61 (07 segment)

Bifurcation / Rehabilitation Of 11-KV Raza Abad Feeder Emanating From 132-KV Grid Station Kabirwala	
<u>S#</u>	<u>SCOPE OF WORK</u>
A. <u>NEW (PROP) FEEDER FROM 132-KV GRID STATION KABIRWALA</u>	
a. <u>New Line</u>	
i	01 No. New 11-KV Outgoing Panel to energize the new proposed feeder that will come into existence due to bifurcation of existing Feeder
ii	0.307-Km HT Power Cable 500-MCM has been proposed from node no. 0 to 1 & 1.1 to 1.2 (02 Segment) Due to bifurcation of existing Feeder & Due to 132-KV Crossing
iii	10.665-Km 11-KV Line of ACSR Ospray conductor has been proposed from node no. 1 to 2 (01 segment)
iv	2.129-Km 11-KV Line of ACSR Dog conductor has been proposed from node no. 16 to 16.1, 19 to 20 & 10 to 11 (03 segment)
b. <u>Installation of Capacitor:</u>	
i	03 No. 450-KVAR Capacitor bank set have been proposed
c. <u>Reconducting:</u>	
i	1.897-Km Reconducting of 11-KV Line from ACSR Rabbit to Ospray Conductor has been proposed from node no. 2 to 3 to 4 (02 segment)
ii	7.099-Km Reconducting of 11-KV Line from ACSR Rabbit to Dog Conductor has been proposed from node no. 4 to 5 to 6, 9 to 10, 11 to 11.1, 4 to 16, 16.1 to 17 to 18 to 19, 20 to 21, 18 to 24 to 25 to 26 (12 segment)
iii	0.949-Km Reconducting of 11-KV Line from ACSR Gopher to Dog Conductor has been proposed from node no. 8 to 9 & 11.1 to 12 (02 segment)
iv	1.334-Km Reconducting of 11-KV Line from ACSR Gopher to Rabbit Conductor has been proposed from node no. 5 to 7 , 13 to 14 & 22 to 23 (03 segment)
B. <u>11-KV Raza Abad (REM) Feeder Emanating from 132-KV Grid Station Kabirwala</u>	
a. <u>Reconducting:</u>	
i	4.950-Km Reconducting of 11-KV Line from ACSR Dog to Ospray Conductor has been proposed from node no. 0 to 1 (01 segment)

**Bifurcation / Rehabilitation Of 11-KV Raza Abad Feeder
Emanating From 132-KV Grid Station Kabirwala**

<u>S#</u>	<u>SCOPE OF WORK</u>
ii	i) 0.423-Km Reconducting of 11-KV Line from ACSR Gopher to Dog Conductor has been proposed from node no. 2 to 2.1 (01 segment) ii) 1.01-Km Reconducting of 11-KV Line from ACSR Rabbit to Dog Conductor has been proposed from node no. 2.1 to 3 (01 segment)
iii	0.985-Km Reconducting of 11-KV Line from ACSR Gopher to Rabbit Conductor has been proposed from node no. 4 to 5 to 6, 5 to 7 to 8, 9 to 10 & 11 to 12 (06 segment)
b. <u>Installation of Capacitor:</u>	
i	02 No. 450-KVAR Capacitor bank set have been proposed

**Bifurcation / Rehabilitation of 11-KV City Kacha Khoo & 24/10-R Feeder
Emanating From 132-KV Grid Station Kacha Khoo**

<u>S#</u>	<u>SCOPE OF WORK</u>
<u>A. NEW (PROP) FEEDER FROM 132-KV GRID STATION KACHA KHOO</u>	
<u>a. New Line</u>	
i	01 No. New 11-KV Outgoing Panel to energize the new proposed feeder that will come into existence due to bifurcation of existing Feeder
ii	0.181-Km HT Power Cable 500-MCM has been proposed from node no. 0 to A & O1 to P (02 Segment) Due to bifurcation of existing Feeder & Railway Crossing
iii	8.884-Km 11-KV Line of ACSR Ospray conductor has been proposed from node no. A to B, B to C, E to F, G to H & O to O1 (05 segment)
iv	1.352-Km 11-KV Line of ACSR Dog conductor has been proposed from node no. P to Q, P to R & V to W (03 segment)
v	0.294-Km 11-KV Line of ACSR Rabbit conductor has been proposed from node no. B to 11 (01 segment)
<u>b. Reconducting:</u>	
i	3.9212-Km Reconducting of 11-KV Line from ACSR Rabbit to Ospray Conductor has been proposed from node no. F to G, H to I to J (03 segment)
ii	3.255-Km Reconducting of 11-KV Line from ACSR Gopher to Ospray Conductor has been proposed from node no. C to D to E & J to K (03 segment)
iii	3.0286-Km Reconducting of 11-KV Line from ACSR Dog to Ospray Conductor has been proposed from node no. K to L, L to L1 to M to N to O (05 segment)
iv	0.309-Km Reconducting of 11-KV Line from ACSR Rabbit to Dog Conductor has been proposed from node no. R to S, U to V & W to X (03 segment)
v	0.807-Km Reconducting of 11-KV Line from ACSR Gopher to Dog Conductor has been proposed from node no. S to T to U (02 segment)
vi	11.707-Km Reconducting of 11-KV Line from ACSR Gopher to Rabbit Conductor has been proposed from node no. X to Y to Z , 1 to 2 , 3 to 4 , 3 to 5 to 6 , L to 7, L1 to 8 , J to 9 , I to 10 , 11 to 12, 11 to 13 to 14 to 15 (14 segment)

B. <u>11-KV CITY KACHA KHOO (REM) Feeder Emanating from 132-KV Grid KACHA KHOO</u>	
a. <u>New Line</u>	
i	0.2087-Km 11-KV Line of ACSR Dog conductor has been proposed from node no. C to D (01 segment)
ii	0.8804-Km 11-KV Line of ACSR Rabbit conductor has been proposed from node no. O to P & O to Q (02 segment)
b. <u>Reconducting:</u>	
i	1.685-Km Reconducting of 11-KV Line from ACSR Rabbit to Ospray Conductor has been proposed from node no. A to B to C (02 segment)
ii	1.048-Km Reconducting of 11-KV Line from ACSR Rabbit to Dog Conductor has been proposed from node no. D to E & G to H (02 segment)
iii	1.688-Km Reconducting of 11-KV Line from ACSR Gopher to Dog Conductor has been proposed from node no. E to F to G (02 segment)
iv	1.3-Km Reconducting of 11-KV Line from ACSR Gopher to Rabbit Conductor has been proposed from node no. F to T , K to L & R to S (03 segment)
C. <u>11-KV 24/10-R (REM) Feeder Emanating from 132-KV Grid KACHA KHOO</u>	
a. <u>New Line</u>	
i	1.102-Km 11-KV Line of ACSR Rabbit conductor has been proposed from node no. E1 to 3 (01 segment)
b. <u>Reconducting:</u>	
i	2.602-Km Reconducting of 11-KV Line from ACSR Dog to Ospray Conductor has been proposed from node no. J to M ,Mto O (02 segment)
ii	10.245-Km Reconducting of 11-KV Line from ACSR Gopher to Rabbit Conductor has been proposed from node no. A to B, C to D , C to E, F to G, H to I, J to K, J to L, M to N, O to P, Q to R, R to S, R to 1, S to T, S to 2, T to U, T to V, W to X, Y to Z

**Bifurcation / Rehabilitation of 11-KV Chak 95/15-L Feeder
Emanating From 132-KV Grid Station Mian Channu**

<u>S#</u>	<u>SCOPE OF WORK</u>
A. <u>11-KV Chak 95/15-L (PROP) Feeder 132-KV Grid Station Moosa Virk</u>	
a. <u>New Line</u>	
i	01 No. New 11-KV Outgoing Panel to energize the new proposed feeder that will come into existence due to bifurcation of existing Feeder
ii	0.109-Km HT Power Cable 500-MCM has been proposed from node no. 0 to 1 (01 Segment) Due to bifurcation of existing Feeder
iii	8.948-Km of 11-KV Line of ACSR Ospray Conductor has been proposed from node no. 1 to 2 (01 segment)
iv	4.085-Km of 11-KV Line of ACSR Dog Conductor has been proposed from node no. 2 to 3, 2 to 4 to 5, 4 to 6 & 7 to 8 (05 segment)
v	0.365-Km of 11-KV Line of ACSR Rabbit Conductor has been proposed from node no. 13 to 14 (01 segment)
b. <u>Reconducting:</u>	
i	2.530-Km Reconducting of 11-KV Line of ACSR Rabbit to Dog Conductor has been proposed from node no. 3 to 19, 6 to 7 & 8 to 9 (03 segment)
ii	0.793-Km Reconducting of 11-KV Line of ACSR Gopher to Dog Conductor has been proposed from node no. 9 to 10 (01 segment)
iii	2.195-Km Reconducting of 11-KV Line of ACSR Gopher to Rabbit Conductor has been proposed from node no. 10 to 11, 10 to 12, 15 to 16 & 17 to 18 (04 segment)
B. <u>11-KV Chak 95/15-L (REM) Feeder Emanating from 132-KV Grid Station Mian Channu</u>	
a. <u>Reconducting:</u>	
i	0.634-Km Reconducting of 11-KV Line from ACSR Gopher to Dog Conductor has been proposed from node no. 5 to 6 (01 segment)
ii	8.116-Km Reconducting of 11-KV Line from ACSR Gopher to Rabbit Conductor has been proposed from node no. 1 to 2, 3 to 4, 7 to 8 to 9, 8 to 10 to 11, 10 to 12, 13 to 14, 15 to 16, 17 to 18, 19 to 20 & 21 to 22 (12 segment)

Bifurcation / Rehabilitation of 11-KV Pir Kabir Feeder Emanating From 132-KV Grid Station Kabirwala	
<u>S#</u>	<u>SCOPE OF WORK</u>
A. <u>NEW (PROP) FEEDER FROM 132-KV GRID STATION KABIRWALA</u>	
a. <u>New Line</u>	
i	01 No. New 11-KV Outgoing Panel to energize the new proposed feeder that will come into existence due to bifurcation of existing Pir Kabir Feeder
ii	0.274-Km HT Power Cable 500-MCM has been proposed from node no. A to B (01 Segment) Due to bifurcation of existing Pir Kabir Feeder
iii	7.150-Km 11-KV Line of ACSR Ospray conductor has been proposed from node no. B to B1 to B2 to C (03 segment)
iv	0.457-Km 11-KV Line of ACSR Dog conductor has been proposed from node no. B2 to G (01 segment)
v	0.231-Km 11-KV Line of ACSR Rabbit conductor has been proposed from node no. H to I (01 segment)
b. <u>Reconducting:</u>	
i	1.600-Km Reconducting of 11-KV Line from ACSR Gopher to Rabbit Conductor has been proposed from node no. E to E1 to F (02 segment)
c. <u>Installation of HT Capacitor:</u>	
i	01 No HT 450-KVAR Capacitor Bank Set has been Proposed
C. <u>11-KV PIR KABIR (REM) Feeder Emanating from 132-KV Grid Kabirwala</u>	
a. <u>Reconducting:</u>	
i	4.708-Km Reconducting of 11-KV Line from ACSR Dog to Ospray Conductor has been proposed from node no. A to B (01 segment)
ii	0.400-Km Reconducting of 11-KV Line from ACSR Gopher to Rabbit Conductor has been proposed from node no. C to C1 to D (02 segment)
b. <u>Installation of HT Capacitor:</u>	
i	01 No HT 450-KVAR Capacitor Bank Set has been Proposed

Bifurcation / Reconductoring Of 11-KV Kot Abbas Shaheed and Jungle Maryala Feeder Emanating From 132-KV Grid Station Khanewal	
<u>S#</u>	<u>SCOPE OF WORK</u>
A. <u>REMANING KOT ABBAS SHAHEEDSHAD</u>	
a. <u>New Line</u>	
1	01 No. 450-KVAR Capacitor bank set have been proposed
2	1.293-Km 11-KV Line of ACSR RABBIT conductor has been proposed from node no. 0 to 1, 2 to 3, 4 to 5 (03 segment)
3	1.695-Km Reconducting of 11-KV Line from ACSR Gopher to Rabbit Conductor has been proposed from node no. 8 to 9, 10 to 11, 12 to 13, 14 to 15, 16 to 17 (05 segment) NOTE - 6 to 7 It is not possible due to over the houses and narrow street
b. <u>REMANING JUNGLE MARRYALA</u>	
1	03 No. 450-KVAR Capacitor bank set have been proposed
2	3.448-Km Reconducting of 11-KV Line from ACSR Gopher to Rabbit Conductor has been proposed from node no. 1 to 2, 1 to 3, 4 to 5, 6 to 7, 8 to 9 to 10, 9 to 11, 14 to 15 (08 segment)
New proposed feeder	
1	05 No. 450-KVAR Capacitor bank set have been proposed
2	0.252-Km HT Power Cable 500-MCM has been proposed from node no. 0 to 1, 1.1 to 1.2, 1.3 to 1.4 (03Segment) Due to bifurcation of existing Feeder
3	16.521-Km 11-KV Line of ACSR Ospray conductor has been proposed from node no. 1 to 1.1, 1.2 to 1.3, 1.4 to 2 to 2.1 (04 segment)
4	2.027-Km 11-KV Line of ACSR Dog conductor has been proposed from node no. 2 to 12 (01 segment)
5	0.936-Km 11-KV Line of ACSR Rabbit conductor has been proposed from node no. 13 to 14, 15 to 16 (02 segment)
Reconductoring	
1	3.568-Km Reconducting of 11-KV Line from ACSR Gopher to Rabbit Conductor has been proposed from node no. 16 to 17, 16 to 18, 19 to 20, 5 to 22, 22 to 23 to 24, 22 to 25 (07 segment)

Bifurcation / Reconductoring Of 11-KV Kot Abbas Shaheed and Jungle Maryala Feeder Emanating From 132-KV Grid Station Khanewal	
<u>S#</u>	<u>SCOPE OF WORK</u>
2	4.099-Km Reconducting of 11-KV Line from ACSR Rabbit to Ospray Conductor has been proposed from node no. 2.1 to 3 to 4, 7 to 8, 9 to 10, 21 to 6 (05 segment)
3	3.306-Km Reconducting of 11-KV Line from ACSR Rabbit to Dog Conductor has been proposed from node no. 10 to 11 (01 segment)
4	1.897-Km Reconducting of 11-KV Line from ACSR Gopher to Ospray Conductor has been proposed from node no . 4 to 5, 5 to 19, 19 to 21 (03 segment)
5	11 kV Panal 01 no

SCOPE OF WORK FOR LOT-III INSTALLATION, TESTING, COMMISSIONING AND CIVIL WORKS OF 7 NOS FEEDERS OF SAHIWAL CIRCLE AND 1 NO. FEEDER OF VEHARI CIRCLE

ITEM NO.	DESCRIPTION	UNIT	Sahiwal Circle								Vehari Circle	TOTAL QTY
			Name of Grid Station									
			132-KV Grid Station Qadir Abad	132-KV Grid Station Qaboola	132-KV Grid StaitonArifwala	132-KV Grid Station Sahiwal III	132-KV Grid Station Qadirabad	132-KV Grid Station Bonga Hayat	132-KV Grid Station Chichawatni	132kv Garh More		
			Name of 11-KV Feeders									
			11-KV Noor Shah Feeder	11-KV Lal Shah Feeder	11-KV Kalyana Feeder	11-KV Qutab Shahana Feeder	11-KV Hafiz Dayim Feeder	11-KV Farid Kot Feeder	11-KV Old Chichawatni Feeder	11-KV Ghulam Hussain Feeder		
1	Installation/ Replacement HT Steel Structures and Dismantlement of HT Structures / Tubular Poles / Spun Poles / PCC Poles (where Required) as per Specification	-	-	-	-	-	-	-	-	-	-	
01 – A	Collection of HT Structures from MEPCO Designated Store, Safe Handling / Transportation, Assembling, Excavation, Erection, Concrete Foundation, back filling, curing &Dismantlement of existing damaged/ Off Size HT Structures / Tubular Poles / PCC Poles/ P.S.C Spun Poles as per site requirement and return to designated store.	-	-	-	-	-	-	-	-	-	-	
	(1) HT Structures 58’	EACH	11	1	16	3	0	0	15	6	52	

ITEM	DESCRIPTION	UNIT	Sahiwal Circle							Vehari Circle	TOTAL
	(2) HT Structures 45'	EACH	0	0	0	0	0	0	2	0	2
	(3) HT Structures 36'	EACH	0	0	0	0	6	0	0	0	6
	(4) LT Structures 31'	EACH	0	0	0	0	0	0	0	0	0
2	Installation/ Replacement HT/ LT P.S.C Spun Poles and Dismantlement of HT Structures / Tubular Poles / Spun Poles / PCC Poles (where Required) as per Specification	-	-	-	-	-	-	-	-	-	-
02 – B	Collection of HT/LT P.S.C Spun Poles from MEPCO Designated Store, Safe Handling / Transportation, Excavation, Erection, back filling & Dismantlement of existing damaged HT Structures / Tubular Poles / PCC Poles/ P.C Spun Poles as per site requirement and return to designated store.	-	-	-	-	-	-	-	-	-	-
	(1) HT P.C Spun Pole 45'	EACH	33	26	33	74	44	106	39	12	367
	(2) HT P.C Spun Poles 36'	EACH	303	113	41	214	187	130	169	2	1159
	(3) LT P.C Spun Poles 31'	EACH	0	0	0	3	0	0	0	0	3
3	Installation and Dismantlement of HT Bare/ Insulated Conductors / Cables.	-	-	-	-	-	-	-	-	-	-
03 – A	Collection of HT Bare/ Insulated Conductors / Cables from MEPCO Designated Store, Safe Handling / Transportation and Their Installation/ Replacement of existing HT Line inclusive of Allied Accessories / Hardware, P.G Connectors& Return of Dismantled Material to	-	-	-	-	-	-	-	-	-	-

ITEM	DESCRIPTION	UNIT	Sahiwal Circle							Vehari Circle	TOTAL
	designated Store as per site requirement.										
	11 KV Line Reconductoring:	-	11-KV Noor Shah Feeder	11-KV Lal Shah Feeder	11-KV Kalyana Feeder	11-KV Qutab Shahana Feeder	11-KV Hafiz Dayim Feeder	11-KV Farid Kot Feeder	11-KV Old Chichawatni Feeder	11-KV Ghulam Hussain Feeder	-
	(1) ACSR Osprey Bare / Insulated Conductor	KM	0.550	0	0	0.410	0	0	0	0	0.960
	(2) ACSR Dog Bare / Insulated Conductor	KM	0.623	0	3.551	5.337	2.845	3.444	1.296	2.866	19.962
	(3) ACSR Rabbit Bare / Insulated Conductor	KM	0.137	0	1.454	0.710	0	1.641	0	0	3.942
	(4) 11 KV XLPE 500 MCM Cable Single Core	KM	0	0	0	0	0	0	0	0	0
4	Installation of HT Bare/ Insulated Conductors / Cables.	-	-	-	-	-	-	-	-	-	-
04 – A	Collection of HT Bare/ Insulated Conductors / Cables from MEPCO Designated Store, Safe Handling / Transportation and Their Installation inclusive of Allied Accessories / Hardware, P.G Connectors in New/ Extension of HT Line as per site requirement and Specifications.	-	-	-	-	-	-	-	-	-	-
	11 KV New Line:	-	11-KV Noor Shah Feeder	11-KV Lal Shah Feeder	11-KV Kalyana Feeder	11-KV Qutab Shahana Feeder	11-KV Hafiz Dayim Feeder	11-KV Farid Kot Feeder	11-KV Old Chichawatni Feeder	11-KV Ghulam Hussain Feeder	-
	(1) ACSR Osprey Bare / Insulated Conductor	KM	17.004	12.967	5.236	13.627	9.220	10.470	12.548	8.229	89.301

ITEM	DESCRIPTION	UNIT	Sahiwal Circle							Vehari Circle	TOTAL
	(2) ACSR Dog Bare / Insulated Conductor	KM	0	0	0	2.880	0	0.221	0	0	3.101
	(3) ACSR Rabbit Bare / Insulated Conductor	KM	1.800	0.785	0.411	1.003	4.876	0	0.046	0	8.921
	(4) 11 KV XLPE 500 MCM Cable Single Core	KM								0.250	0.25
5	Installation of LT Bare/ Insulated Conductors.	-	-	-	-	-	-	-	-	-	-
05 – B	Collection of LT Bare/ Insulated Conductors from MEPCO Designated Store, Safe Handling / Transportation and Their Installation inclusive of Allied Accessories / Hardware, P.G Connectors in New/ Extension of LT Line as per site requirement and Specifications.	-	-	-	-	-	-	-	-	-	-
	LT New Line	-	-	-	-	-	-	-	-	-	-
	(1) All Aluminum WASP (Bare / Insulated Conductor)	KM	0	0	0	0	0	0	0	0	0
	(2) All Aluminum ANT (Bare / Insulated Conductor)	KM	0	0	0	0	0	0	0	0	0
6	Proper Installation of 11KV Termination Kits	-	-	-	-	-	-	-	-	-	-
06 – A	Collection of Termination Kits from Designated MEPCO store, Safe Handling / Transportation and proper Installation of 11KV Termination Kits as per Specifications.	-	-	-	-	-	-	-	-	-	-
	(1) 11 KV TERMINATION KIT S/C CABLE 500MCM (OUT DOOR)	EACH	9	21	9	15	3	15	15	3	90
	(2) 11 KV TERMINATION KIT S/C CABLE 500MCM (IN DOOR)	EACH	3	3	3	3	3	3	3	3	24

ITEM	DESCRIPTION	UNIT	Sahiwal Circle							Vehari Circle	TOTAL
7	Proper Installation of 11KV US.CAPACITOR BANK 3X150 KVAR	-	-	-	-	-	-	-	-	-	-
07 – A	Collection of 11KV US.CAPACITOR BANK 3X150 KVAR from Designated MEPCO store, Safe Handling / Transportation and proper Installation as per Specifications.	-	-	-	-	-	-	-	-	-	-
	(1) 11KV US.CAPACITOR BANK 3X150 KVAR	SET	5	4	0	3	0	4	0		16
8	Proper Installation of 11KV Switch Panel (Out Going)	-	-	-	-	-	-	-	-	-	-
8-A	One (1) set of complete metal-clad switchgear 11 kV shall be designed, supplied, delivered, installed, tested and commissioned, under this contract, as per WAPDA/NTDC spec P-44:2018 (amended to date) comprise the following:	-	-	-	-	-	-	-	-	-	-
	A complete indoor Bus coupler panel 11 kV, 2500 A busbars, 25 kA, 1 sec, 50Hz, 95/36 kV BIL, equipped with:	SET	1	1	1	1	1	1	1	1	8
	Q0 - One (1) set of three pole, draw-out, vacuum type, 11 kV, 2500 A, 25 kA, 1 sec, circuit breaker with spring-stored energy operating mechanism		1	1	1	1	1	1	1	1	8
	Two (2) Load Break Switches		1	1	1	1	1	1	1	1	8
	All other necessary material and equipment required for completing Bus Coupler Panel.		1	1	1	1	1	1	1	1	8

ITEM	DESCRIPTION	UNIT	Sahiwal Circle						Vehari Circle	TOTAL
20	A complete indoor Incoming panel 11 kV, 2500 A busbars, 2500 A feeder, 25 kA, 1 sec, 50 Hz, 36/95 kV BIL, equipped with:	SET	1	1	1	1	1	1	1	8
	Q0 - One (1) set of three pole, draw-out, vacuum type, 11 kV, 2500 A, 25 kA, 1 sec, circuit breaker with spring-stored energy operating mechanism		1	1	1	1	1	1	1	8
	T90 -Three (3) single-phase, 2-core, multi ratio, 1600-800/5 A, cl. 0.5 FS10 / 5P20, 10 & 15 VA, 1 sec, dry type current transformers		1	1	1	1	1	1	1	8
	T92 - Three (3) single-phase, 1-core, multi ratio, 1600-800/5 A, cl. 5P20, 15 VA 1 sec, dry type current transformers		1	1	1	1	1	1	1	8
	T5 - Three (3) single-phase, 1-secondary winding, 11/√3 / 0.11/√3 kV, cl. 0.5, 100 VA, 1 sec, dry type voltage transformers		1	1	1	1	1	1	1	8
	All other necessary material and equipment required for completing Incoming Panel.		1	1	1	1	1	1	1	8
21	A complete indoor Outgoing panel 11 kV, 2500 A busbars, 630 A feeder, 25 kA, 1 sec, 50Hz, 36/95 kV BIL, equipped with:	SET	1	1	1	1	1	1	1	8
	Q0 - One (1) set of three pole, draw-out, vacuum type, 11 kV, 630 A, 25 kA, 1 sec, circuit breaker with spring-stored energy operating mechanism		1	1	1	1	1	1	1	8
	T91 -One (1) single-phase, 2-core, single ratio, 600-300/5-5A, cl. 0.5 FS10 / 5P20, 10/15 VA 1 sec,dry type current transformers		1	1	1	1	1	1	1	8

ITEM NO	DESCRIPTION	UNIT	Sahiwal Circle							Vehari Circle	TOTAL
	Three (3) AIS Surge arrester 11 kV, single phase, gapless, metal oxide type, with surge counter as per WAPDA/NTDC spec P-181:2012 (amended to date)		1	1	1	1	1	1	1	1	8
	All other necessary material and equipment required for completing Outgoing Panel.		1	1	1	1	1	1	1	1	8
	A complete indoor Capacitor control panel 11 kV, 2500 A busbars, 630 A feeder, 25 kA, 1 sec, 50Hz, 36/95 kV BIL, equipped with:	SET	1	1	1	1	1	1	1	1	8
	Q0 - one (1) set of three pole, draw-out, vacuum type, 11 kV, 630 A, 25 kA, 1 sec, circuit breaker with spring-stored energy operating mechanism		1	1	1	1	1	1	1	1	8
	T91 -Three (3) single-phase, 2-core, multi ratio, 600-300/5-5A, cl. 0.5 FS10 / 5P20, 10 & 15 VA 1 sec, dry type current transformers		1	1	1	1	1	1	1	1	8
	Three (3) AIS Surge arrester 11 kV, single phase, gapless, metal oxide type, with surge counter as per NTDC Specification P-181:2012.		1	1	1	1	1	1	1	1	8
	All other necessary material and equipment required for completing Capacitor Control Panel.		1	1	1	1	1	1	1	1	8
	11 kV Capacitor Bank	-	-	-	-	-	-	-	-	-	0
	11 kV, 3.6 MVAR (18 x 200 kVAR), 25 Fuses, Capacitor Bank comprising of 1-phase capacitors (200 kVAR) complete with mounting racks, fuses and bus works with Neutral CT as per WAPDA/NTDC	SET	1	1	1	1	1	1	1	1	8

ITEM NO	DESCRIPTION	UNIT	Sahiwal Circle							Vehari Circle	TOTAL
	Specifications P-165:89 (amended to date).										
	Digital over current Earth Fault Protection Relay with Broken Conductor Feature and Minimum Earth Fault Setting=0.25A		1	1	1	1	1	1	1	1	8
	All other necessary material and equipment required for completing 11kV capacitor bank		1	1	1	1	1	1	1	1	8
9	Proper Installation of Stay Rod SET with accessories (Complete).	-	-	-	-	-	-	-	-	-	-
9-A	Collection of Stay Rod SET with accessories (Complete) from Designated MEPCO store, Safe Handling / Transportation and proper Installation as per Specifications.	EACH	170	176	159	361	196	269	184	90	1605
10	Proper Installation of Earthing SET with accessories (Complete).	-	-	-	-	-	-	-	-	-	-
10-A	Collection of Earthing SET with accessories (Complete) from Designated MEPCO store, Safe Handling / Transportation and proper Installation as per Specifications.	EACH	347	140	90	302	237	236	231	20	1603
11	Shifting of Sub-Station of Different Capacities of Transfromers Along with Allied accessories as per Specification	-	-	-	-	-	-	-	-	-	-

ITEM	DESCRIPTION	UNIT	Sahiwal Circle							Vehari Circle	TOTAL
11 – A	Shifting of Transformer Sub Station alongwith accessories of different Capacities of Transformers exists alongwith 11KV Feeder & Proper Installtion at Newly Installed HT/ LT Structures/ Poles, Safe Handling / Transportation and their Installation and return of Dismantled Material (Allied Accessories where Replaced) to MEPCO Designated Store & Providing thimbles to LT bushes of T/F.	-	-	-	-	-	-	-	-	-	-
	(1) Construction of complete Double Structure Platform (For 100 / 200 KVA T/F)	EACH	0	0	4	3	0	0	1	0	8
	(2) Construction of complete Single Structure Platform (For 50 / 25 / 15 / 10 KVA T/F)	EACH	0	0	0	1	0	0	2	0	3
	(3) Replacement/ Shifting of HT Side Accessories as per SDI (11KV Jumpers, Dropout Cutout, X-Arms etc.)	EACH	0	0	4	4	0	0	3	0	11
	(4) Replacement/ Shifting of LT Side Accessories as per SDI (LT Bus Bars along with thimbles for LT Side T/F Bushing)	EACH	0	0	4	4	0	0	3	0	11
	(5) Earthing of Transformer substation as per Specification	EACH	0	0	4	4	0	0	3	0	11

Bifurcation and Rehabilitation of 11-KV Noor Shah Feeder Emanating from 132-KV Grid Station Sahiwal New (To be Emanating from 132-KV Grid Station Qadir Abad)	
Sr. No.	SCOPE OF WORK
A)	NEW (PROP) FEEDER FROM 132-KV GRID STATION QADIRABAD
a)	New-Line
i)	01-No. 11-KV Out going Pannel to energize the new proposed feeder that which will come into existence due to bifurcation of existing Noor Shah Feeder(if Spare Pannel not available)
ii)	0.100-Km New HT Power Cable 500/MCM has been proposed from Node No. A to B (0 Segment) due to bifurcation of existing Noor Feeders.
ii-b)	0.057 KM Construction of New 11-KV Line With 500-MCM Power Cable for underground Railway Crossing
iii)	17.004 Km new 11-KV Line with ACSR Ospray Conductor has been proposed from Node No. B to C, C to E, & G to H (- Segment)
iv.)	1.800 Km new 11-KV Line with ACSR Rabbit Conductor has been proposed from Node No. C to D. (-Segment)
v)	02-Set of 450-KVAR Fixed Capacitors have been Proposed.
b)	<u>Re-Conductoring</u>
i)	0.489 Km Re-conductoring of 11-KV Line from ACSR Gopher Conductor to ACSR Ospray Conductor has been proposed from Node No. E to F (-Segment)
ii)	0.061 Km Re-conductoring of 11-KV Line from ACSR Rabbit Conductor to ACSR Ospray Conductor has been proposed from Node No. F to G (-Segment)
iii)	0.623 Km Re-conductoring of 11-KV Line from ACSR Rabbit Conductor to ACSR Dog Conductor has been proposed from Node No. H to I (-Segment)
iv)	0.137 Km Re-conductoring of 11-KV Line from ACSR Gopher Conductor to ACSR Rabbit Conductor has been proposed from Node No. J to K (-Segment)
A)	NOOR SHAH (REM) FEEDER FROM 132-KV GRID STATION SAHIWAL NEW
a)	New-Line
i	03 -Set of 450-KVAR Fixed Capacitors have been Proposed.

Bif./Reh. of 11-KV Lal Shah Feeder Emanating from 132-KV Grid Station Qaboola (New Feeder to be emanated from 132-KV Grid Station Hoota)	
Sr. No.	SCOPE OF WORK
<u>A (NEW (PROP) FEEDER FROM 132KV GRID STATION HOTTA.</u>	
<u>a).New Line</u>	
i.	01 No. 11-KV Outgoing Panel to energize the new proposed Feeder that will come into existence due to Bifurcation of existing Lal Shah Feeder
ii.	0.10 KM HT Power Cable "500-MCM" has been proposed from Node #A to B existing Lal Shah Feeder
iii.	12.967 KM Construction of New 11-KV Line with ACSR Ospray Conductor has been proposed from Node #B to C (01-Segment)
iv.	0.785 KM New 11KV line of ACSR “Rabbit” conductor has been proposed from Node # D to E (01-Segments)
v.	02 No. 450-KVAR Bank Capacitor
<u>b).Reconductoring (not Required)</u>	
<u>B(REMAINING LAL SHAH FEEDER FROM 132-KV G. STATION QABOOLA</u>	
<u>a).New Line</u>	
i.	02 No. 450-KVAR Bank Capacitor

Bif./Reh. of 11-KV Kalyana Feeder Emanating From 132-KV Grid Station Arifwala	
Sr. No.	SCOPE OF WORK
<u>A.</u>	<u>NEW (PROP) KALYANA FEEDER FROM 132-KV GRID STATION ARIFWALA</u>
<u>a).New Line</u>	
i.	01 New 11-KV Outgoing Panel to energize the new Proposed Feeder that will come into existence due to bifurcation of existing Kalyana Feeder
ii.	0.100 KM HT Power cable 500MCM has been proposed from Node#A to B (01-Segment) due to connectivity of existing Kalyana Feeder
iii.	5.236 KM New 11KV line of ACSR “ Osprey ” conductor has been proposed from Node # B to C (01-Segment)
iv.	0.411 KM New 11-KV line of ACSR “ Rabbit ” conductor has been proposed from Node # F to G (01-Segment)
<u>b).Reconductoring</u>	
i.	2.956 KM Reconductoring of 11-KV Line from ACSR Rabbit to ACSR Dog has been proposed from Node#C to D (01-Segments)
ii.	0.595 KMReconductoring of 11-KV Line from ACSR Gopher to ACSR Dog has been proposed from Node#D to E (01-Segments)
iii.	1.454 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#H to I (01-Segments)

Bif./Reh. of 11-kV Farid Kot Feeder Emanating From 132-kV Grid Station BOUNGA HAYAT	
Sr. No.	SCOPE OF WORK
<u>A.</u>	<u>NEW (PROP) FARID KOT FEEDER FROM 132-KV GRID STATION BOUNGA HAYAT</u>
<u>a).New Line</u>	
i.	01 No. New 11-KV Outgoing Panel to energize the new Proposed Feeder that will come into existence due to bifurcation of existing Farid Kot Feeder
ii.	0.100 KM HT Power cable 500MCM has been proposed from Node # A to B (01-Segment) due to connectivity of existing Farid Kot Feeder
iii.	10.470 KM New 11KV line of ACSR “ Osprey ” conductor has been proposed from Node # B to C (01-Segment)
iv.	0.221 KM New 11KV line of ACSR “ Dog ” conductor has been proposed from Node # D-1 to E & F to F-1 (01-Segment)
v.	02 No. 450-KVAR fixed capacitor
<u>b).Reconductoring</u>	
i.	1.670 KM Reconductoring of 11-KV Line from ACSR Rabbit to ACSR Dog has been proposed from Node # D to E & F to G (02-Segments)
<u>B.</u>	<u>REM. FARID KOT FEEDER FROM 132-KV GRID STATION BOUNGA HAYAT</u>
<u>a).New Line</u>	
ii.	02 No. 450-KVAR fixed capacitor
<u>b).Reconductoring</u>	
i.	1.774 KM Reconductoring of 11-KV Line from ACSR Rabbit to ACSR Dog has been proposed from Node#A to B (01-Segments)
ii.	1.641 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Dog has been proposed from Node#A-1 to B (01-Segments)

REHABILITATION OF 11-KV OLD CHICHAWATNI FEEDER EMANATING FROM 132-KV GRID STATION CHICHAWATNI	
Sr. No.	SCOPE OF PROPOSED WORK:
A)	NEW (PROP) FEEDER FROM 132-KV GRID STATION CHICHAWATNI
a)	New-Line
i)	01 No. 11 KV PANEL
ii)	0.300 Km New HT Power Cable 500/MCM has been proposed from Node No. A to B (0 Segment) due to bifurcation of existing Chichawatni Old Feeders.
iii)	12.548-Km New 11-KV Line with ACSR Ospray Conductor has been proposed from Node No. B to C (-Segment)
iv)	0.046-Km New 11-KV Line with ACSR Rabbit Conductor has been proposed from Node No. B-I toB -II (-Segment)
b)	Re-conductoring
i)	1.296 Km Re-conductoring of 11-KV Line from ACSR Rabbit Conductor to ACSR Dog Conductor has been proposed from Node No. C to D (-Segment)

Bifurcation and Rehabilitation of 11-KV Qutab Shahana Feeder Emanating From 132 -KV Grid Station Sahiwal -III (New Proposed Feeder to be emanating From 132-KV Grid Sahiwal New (T.B.Z)	
Sr. No.	SCOPE OF PROPOSED WORK:
A)	NEW (PROP) FEEDER FROM 132-KV GRID STATION -III
a)	New-Line
i)	01-No. 11-KV Out going Pannel to energize the new proposed feeder that which will come into existence due to bifurcation of existing Qutab Shahana Feeder.(if Spare Pannel not available)
ii)	0.100 Km New HT Power Cable 500/MCM has been proposed from Node No. A to B (0 Segment) due to bifurcation of existing Qutab Shahana Feeders.
iii)	0.073 Km New HT Power Cable 500/MCM has been proposed from Node No. B-I to B-II
iv)	13.264 Km new11-KV Line with ACSR Ospray Conductor has been proposed from Node No. B to C to D (-Segment)
v)	2.880 Km new11-KV Line with ACSR Dog Conductor has been proposed from Node No. D to F, D to G , H to I, J to K (-Segment)
vi)	1.003 -Km new 11-KV Line with ACSR Rabbit Conductor has been proposed from Node No C to E, M to O , P to Q (-Segment)
vii)	03-Set of 450-KVAR Fixed Capacitors have been Proposed.
b)	<u>Re-conductoring</u>
ii)	4.327 Km Re-conductoring of 11-KV Line from ACSR Rabbit Conductor to ACSR Dog Conductor has been proposed from Node No. G to G-i. G-ii to G-iii, G-iii to H (-Segment)
ii)	0.710. Km Re-conductoring of 11-KV Line from ACSR Gopher Conductor to ACSR Rabbit Conductor has been proposed from Node No. L to M to N (-Segment)
B)	QUTAB SHAHANA(REM) FEEDER FROM 132-KV GRID STATION SAHIWAL -III
a)	New-Line
i)	0.307 Km new11-KV Line with ACSR Ospray Conductor has been proposed from Node No B to C -Segment)

Bifurcation and Rehabilitation of 11-KV Qutab Shahana Feeder Emanating From 132 -KV Grid Station Sahiwal -III (New Proposed Feeder to be emanating From 132-KV Grid Sahiwal New (T.B.Z)	
Sr. No.	SCOPE OF PROPOSED WORK:
ii)	03-Set of 450-KVAR Fixed Capacitors have been Proposed.
b)	<u>Re-conductoring</u>
i)	0.410 Km Re-conductoring of 11-KV Line from ACSR Rabbit Conductor to ACSR Ospray Conductor has been proposed from Node No. A to B Segment)
ii)	1.010 Km Re-conductoring of 11-KV Line from ACSR Rabbit Conductor to ACSR Dog Conductor has been proposed from Node No. D to E Segment)
C)	11-KV KORAY SHAH FEEDER
a)	New-Line
i)	0.056 Km new 11-KV Line with ACSR Ospray Conductor has been proposed -Segment)

**REHABILITATION OF 11-KV HAFIZ DAYIM FEEDER EMANATING FROM 132-KV GRID
STATION QADIR ABAD**

Sr. No.	SCOPE OF PROPOSED WORK:
A)	NEW (PROP) FEEDER FROM 132-KV GRID STATION NOOR PUR
a)	New-Line
i)	01-No. 11-KV Out going Pannel to energize the new proposed feeder that which will come into existence due to bifurcation of existing Hafiz Dayim Feeder.(if Spare Pannel not available)
ii)	0.100 Km New HT Power Cable 500/MCM has been proposed from Node No. A to B (0 Segment) due to bifurcation of existing Hafiz Dayim Feeders.
iii)	9.220-Km new 11-KV Line with ACSR Ospray Conductor has been proposed from Node No.B to C (-Segment)
iv)	1.356 -Km new 11-KV Line ACSR Rabbit Conductor has been proposed from Node No E to F(-Segment)
v)	1.317-Km new 11-KV Line with ACSR Rabbit Conductor has been proposed from Node No G to H (-Segment)
vi)	1.067 -Km new 11-KV Line with ACSR Rabbit Conductor has been proposed from Node No I to J (-Segment)
vii)	1.136 -Km new 11-KV Line with ACSR Rabbit Conductor has been proposed from Node No K to L(-Segment)
b)	<u>Re-conductoring</u>
i)	2.845 Km Re-conductoring of 11-KV Line from ACSR Rabbit Conductor to ACSR Dog Conductor has been proposed from Node No. C to D (-Segment)

A.NEW (PROP) 11kV FEEDER FROM 132KV GRID STATION GARRHA MORR	
A. New Line	
Sr. No.	SCOPE OF PROPOSED WORK:
1	01 No. New 11kV Outgoing Panel to energize the new proposed feeder that will come into existence due to bifurcation of existing feeder. (If spare panel not available)
2	0.084 Km New HT Power cable 500MCM has been proposed from 0 to 1 (01-Segment)
3	08.229 Km New 11kV line of ACSR ‘‘Osprey’’ conductor has been proposed from 1-2,(01-Segment).
B. Reconductoring	
4	02.866 Km Reconductoring of 11KV line ACSR ‘‘Rabbit’’ to ‘‘Dog’’ has been proposed from Node# 2-3, (01-Segment).
C. Installation of Capacitor	
5	01 Nos.Capacitor Proposed at Section No. 350

SCOPE OF WORK FOR LOT-IV INSTALLATION, TESTING, COMMISSIONING AND CIVIL WORKS OF 6 NOS. FEEDERS OF MULTAN CIRCLE AND 4 NOS. FEEDERS OF MUZAFFARGARH CIRCLE

ITEM NO.	DESCRIPTION	UNIT	Multan Circle						M.Garh Circle				TOTAL QTY
			Name of Grid Station										
			132kv Kwl. Road	132kv Man Kot	132kv LAAR	132KV Suraj Miani	132KV Shujabad	132KV Jalal Pur Pir Wali.W	66KV Kot Sultan	132kv Chowk Azam	132kv Jatoi	132kv Dammar Wala	
			Name of 11-KV Feeders										
			11-KV Feeder Sanghi (Buch)	11-KV Feeder New Sanghi (Maan Kot)	11-KV Pir Bakhsh Maral	11-KV Muhammad Pur	11-KV Pir Imam Shah	11-KV Khan Bela	11-KV Lalazar	11-KV Pir Jaggi	11-KV Bealy Wala	11-KV Kotla Gamoon	
1	Installation/ Replacement HT Steel Structures and Dismantlement of HT Structures / Tubular Poles / Spun Poles / PCC Poles (where Required) as per Specification	-	-	-	-	-	-	-	-	-	-	-	
01 – A	Collection of HT Structures from MEPCO Designated Store, Safe Handling / Transportation, Assembling, Excavation, Erection, Concrete Foundation, back filling, curing &Dismantlement of existing damaged/ Off Size HT Structures / Tubular Poles / PCC Poles/ P.S.C Spun Poles as per site requirement and return to designated store.	-	-	-	-	-	-	-	-	-	-	-	
	(1) HT Structures 58’	EACH	23	0	4	9	6	0	0	0	0	0	
	(2) HT Structures 45’	EACH	2	0	12	74	24	5	0	0	2	2	
	(3) HT Structures 36’	EACH	0	0	0	13	0	3	0	0	3	17	
	(4) LT Structures 31’	EACH	0	0	0	0	0	0	0	0	0	0	

ITEM NO	DESCRIPTION	UNIT	Multan Circle						M.Garh Circle				TOTAL QTY
2	Installation/ Replacement HT/ LT P.S.C Spun Poles and Dismantlement of HT Structures / Tubular Poles / Spun Poles / PCC Poles (where Required) as per Specification	-	-	-	-	-	-	-	-	-	-	-	
02 – B	Collection of HT/LT P.S.C Spun Poles from MEPCO Designated Store, Safe Handling / Transportation, Excavation, Erection, back filling & Dismantlement of existing damaged HT Structures / Tubular Poles / PCC Poles/ P.C Spun Poles as per site requirement and return to designated store.	-	-	-	-	-	-	-	-	-	-	-	
	(1) HT P.C Spun Pole 45'	EACH	75	167	88	5	25	35	84	22	11	5	
	(2) HT P.C Spun Poles 36'	EACH	108	109	216	105	49	380	175	469	61	145	
	(3) LT P.C Spun Poles 31'	EACH	0	0	2	0	0	5	0	0	0	0	
3	Installation and Dismantlement of HT Bare/ Insulated Conductors / Cables.	-	-	-	-	-	-	-	-	-	-	-	
03 – A	Collection of HT Bare/ Insulated Conductors / Cables from MEPCO Designated Store, Safe Handling / Transportation and Their Installation/ Replacement of existing HT Line inclusive of Allied Accessories / Hardware, P.G Connectors& Return of Dismantled Material to designated Store as per site requirement.	-	-	-	-	-	-	-	-	-	-	-	
	11 KV Line Reconductoring:	-	11-KV Feeder Sanghi (Buch)	11-KV Feeder New Sanghi (Maan Kot)	11-KV Pir Bakhsh Maral	11-KV Muhammad Pur	11-KV Pir Imam Shah	11-KV Khan Bela	11-KV Lalazar	11-KV Pir Jaggi	11-KV Bealy Wala	11-KV Kotla Gamoon	
	(1) ACSR Osprey Bare / Insulated Conductor	KM	0.224	10.500	10.675	0.433	0.927	8.070	0	30.372	0.619	5.299	67.119
	(2) ACSR Dog Bare / Insulated Conductor	KM	0.532	2.100	3.146	0.308	5.395	6.066	0.425	10.259	6.500	4.226	42.782
	(3) ACSR Rabbit Bare / Insulated	KM	4.384	1.120	4.800	2.319	0.390	4.621	0	2.160	0.667	0.60	21.061

ITEM NO	DESCRIPTION	UNIT	Multan Circle						M.Garh Circle				TOTAL QTY
	Conductor												
4	Installation of HT Bare/ Insulated Conductors / Cables.	-	-	-	-	-	-	-	-	-	-	-	
04 – A	Collection of HT Bare/ Insulated Conductors / Cables from MEPCO Designated Store, Safe Handling / Transportation and Their Installation inclusive of Allied Accessories / Hardware, P.G Connectors in New/ Extension of HT Line as per site requirement and Specifications.	-	-	-	-	-	-	-	-	-	-	-	
	11 KV New Line:	-	11-KV Feeder Sanghi (Buch)	11-KV Feeder New Sanghi (Maan Kot)	11-KV Pir Bakhsh Maral	11-KV Muhammad Pur	11-KV Pir Imam Shah	11-KV Khan Bela	11-KV Lalazar	11-KV Pir Jaggi	11-KV Bealy Wala	11-KV Kotla Gamoon	
	(1) ACSR Osprey Bare / Insulated Conductor	KM	6.373	10.900	7.100	6.806	14.308	9.060	0	10.82	0.535	0.391	66.293
	(2) ACSR Dog Bare / Insulated Conductor	KM	0	0	0	1.588	0.701	1.710	10.02	1	0	1.586	16.605
	(3) ACSR Rabbit Bare / Insulated Conductor	KM	1.294	4.240	1.120	4.126	0	4.861	7	1	0.800	2.164	26.605
5	Installation of LT Bare/ Insulated Conductors.	-	-	-	-	-	-	-	-	-	-	-	
05 – B	Collection of LT Bare/ Insulated Conductors from MEPCO Designated Store, Safe Handling / Transportation and Their Installation inclusive of Allied Accessories / Hardware, P.G Connectors in New/ Extension of LT Line as per site requirement and Specifications.	-	-	-	-	-	-	-	-	-	-	-	
	LT New Line	-	-	-	-	-	-	-	-	-	-	-	
	(1) All Aluminum WASP (Bare / Insulated Conductor)	KM	0	0	0.030	0.100	0.100	0.060	0	0	0	0	
	(2) All Aluminum ANT (Bare / Insulated Conductor)	KM	0	0	0.060	0.300	0.300	0.060	0	0	0	0	
6	Proper Installation of 11KV Termination Kits	-	-	-	-	-	-	-	-	-	-	-	

ITEM NO	DESCRIPTION	UNIT	Multan Circle						M.Garh Circle				TOTAL QTY
06 – A	Collection of Termination Kits from Designated MEPCO store, Safe Handling / Transportation and proper Installation of 11KV Termination Kits as per Specifications.	-	-	-	-	-	-	-	-	-	-	-	
	(1) 11 KV TERMINATION KIT S/C CABLE 500MCM (OUTDOOR)	EACH	3	3	3	15	15	3			6	3	
	(2) 11 KV TERMINATION KIT S/C CABLE 500MCM (IN DOOR)	EACH	3	3	3	3	3	3			0	3	
7	Proper Installation of 11KV US. CAPACITOR BANK 3X150 KVAR	-	-	-	-	-	-	-	-	-	-	-	
07 – A	Collection of 11KV US. CAPACITOR BANK 3X150 KVAR from Designated MEPCO store, Safe Handling / Transportation and proper Installations per Specifications.	-	-	-	-	-	-	-	-	-	-	-	
	(1) 11KV US. CAPACITOR BANK 3X150 KVAR	SET	1	2	2	2	5	3	2	3	0	0	
8	Proper Installation of 11KV Switch Panel (Outgoing)	-	-	-	-	-	-	-	-	-	-	-	
8-A	One (1) set of complete metal-clad switchgear 11 kV shall be designed, supplied, delivered, installed, tested and commissioned, under this contract, as per WAPDA/NTDC spec P-44:2018 (amended to date) comprise the following:	-	-	-	-	-	-	-	-	-	-	-	
	A complete indoor Bus coupler panel 11 kV, 2500 A busbars, 25 kA, 1 sec, 50Hz, 95/36 kV BIL, equipped with:	SET	1	1	1	1	1	1	1	1	0	0	
	Q0 - One (1) set of three pole, draw-out, vacuum type, 11 kV, 2500 A, 25 kA, 1 sec, circuit breaker with spring-stored energy operating mechanism		1	1	1	1	1	1	1	1	0	0	
	Two (2) Load Break Switches		1	1	1	1	1	1	1	1	0	0	

ITEM NO	DESCRIPTION	UNIT	Multan Circle						M.Garh Circle				TOTAL QTY
	All other necessary material and equipment required for completing Bus Coupler Panel.		1	1	1	1	1	1	1	1	0	0	
	A complete indoor Incoming panel 11 kV, 2500 A busbars, 2500 A feeder, 25 kA, 1 sec, 50 Hz, 36/95 kV BIL, equipped with:	SET	1	1	1	1	1	1	1	1	0	0	
	Q0 - One (1) set of three pole, draw-out, vacuum type, 11 kV, 2500 A, 25 kA, 1 sec, circuit breaker with spring-stored energy operating mechanism		1	1	1	1	1	1	1	1	0	0	
	T90 -Three (3) single-phase, 2-core, multi ratio, 1600-800/5 A, cl. 0.5 FS10 / 5P20, 10 & 15 VA, 1 sec, dry type current transformers		1	1	1	1	1	1	1	1	0	0	
	T92 - Three (3) single-phase, 1-core, multi ratio, 1600-800/5 A, cl. 5P20, 15 VA 1 sec, dry type current transformers		1	1	1	1	1	1	1	1	0	0	
	T5 - Three (3) single-phase, 1-secondary winding, 11/√3 / 0.11/√3 kV, cl. 0.5, 100 VA, 1 sec, dry type voltage transformers		1	1	1	1	1	1	1	1	0	0	
	All other necessary material and equipment required for completing Incoming Panel.		1	1	1	1	1	1	1	1	0	0	
	A complete indoor Outgoing panel 11 kV, 2500 A busbars, 630 A feeder, 25 kA, 1 sec, 50Hz, 36/95 kV BIL, equipped with:	SET	1	1	1	1	1	1	1	1	0	0	
	Q0 - One (1) set of three pole, draw-out, vacuum type, 11 kV, 630 A, 25 kA, 1 sec, circuit breaker with spring-stored energy operating mechanism		1	1	1	1	1	1	1	1	0	0	
	T91 -One (1) single-phase, 2-core, single ratio, 600-300/5-5A, cl. 0.5 FS10 / 5P20, 10/15 VA 1 sec, dry type current transformers		1	1	1	1	1	1	1	1	0	0	

ITEM NO	DESCRIPTION	UNIT	Multan Circle						M.Garh Circle				TOTAL QTY
	Three (3) AIS Surge arrester 11 kV, single phase, gapless, metal oxide type, with surge counter as per WAPDA/NTDC spec P-181:2012 (amended to date)		1	1	1	1	1	1	1	1	0	0	
	All other necessary material and equipment required for completing Outgoing Panel.		1	1	1	1	1	1	1	1	0	0	
	A complete indoor Capacitor control panel 11 kV, 2500 A busbars, 630 A feeder, 25 kA, 1 sec, 50Hz, 36/95 kV BIL, equipped with:		1	1	1	1	1	1	1	1	0	0	
	Q0 - one (1) set of three pole, draw-out, vacuum type, 11 kV, 630 A, 25 kA, 1 sec, circuit breaker with spring-stored energy operating mechanism		1	1	1	1	1	1	1	1	0	0	
	T91 -Three (3) single-phase, 2-core, multi ratio, 600-300/5-5A, cl. 0.5 FS10 / 5P20, 10 & 15 VA 1 sec, dry type current transformers	SET	1	1	1	1	1	1	1	1	0	0	
	Three (3) AIS Surge arrester 11 kV, single phase, gapless, metal oxide type, with surge counter as per NTDC Specification P-181:2012.		1	1	1	1	1	1	1	1	0	0	
	All other necessary material and equipment required for completing Capacitor Control Panel.		1	1	1	1	1	1	1	1	0	0	
	11 kV Capacitor Bank	-	-	-	-	-	-	-	-	-	-	-	
	11 kV, 3.6 MVAR (18 x 200 kVAR), 25 Fuses, Capacitor Bank comprising of 1-phase capacitors (200 kVAR) complete with mounting racks, fuses and bus works with Neutral CT as per WAPDA/NTDC Specifications P-165:89 (amended to date).	SET	1	1	1	1	1	1	1	1	0	0	
	Digital over current Earth Fault Protection Relay with Broken Conductor Feature and Minimum		1	1	1	1	1	1	1	1	0	0	

ITEM NO	DESCRIPTION	UNIT	Multan Circle						M.Garh Circle				TOTAL QTY
	Earth Fault Setting=0.25A												
	All other necessary material and equipment required for completing 11kV capacitor bank		1	1	1	1	1	1	1	1	0	0	
9	Proper Installation of Stay Rod SET with accessories (Complete).	-	-	-	-	-	-	-	-	-	-	-	
9-A	Collection of Stay Rod SET with accessories (Complete) from Designated MEPCO store, Safe Handling / Transportation and proper Installation as per Specifications.	EACH	144	160	106	95	116	106			69	176	
10	Proper Installation of Earthing SET with accessories (Complete).	-	-	-	-	-	-	-	-	-	-	-	
10-A	Collection of Earthing SET with accessories (Complete) from Designated MEPCO store, Safe Handling / Transportation and proper Installation as per Specifications.	EACH	208	276	326	212	378	468			81	171	
11	Shifting of Sub-Station of Different Capacities of Transfromers Alongwith Allied accessories as per Specification	-	-	-	-	-	-	-	-	-	-	-	
11 – A	Shifting of Transformer Sub Station along with accessories of different Capacities of Transformers exists along with 11KV Feeder & Proper Installation at Newly Installed HT/ LT Structures/ Poles, Safe Handling / Transportation and their Installation and return of Dismantled Material (Allied Accessories where Replaced) to MEPCO Designated Store & Providing thimbles to LT bushes of T/F.	-	-	-	-	-	-	-	-	-	-	-	

ITEM NO	DESCRIPTION	UNIT	Multan Circle						M.Garh Circle				TOTAL QTY
	(1) Construction of complete Double Structure Platform (For 100 / 200 KVA T/F)	EACH	5	0	1	2	3	2			0	0	
	(2) Construction of complete Single Structure Platform (For 50 / 25 / 15 / 10 KVA T/F)	EACH	0	0	0	0	2	5			0	0	
	(3) Replacement/ Shifting of HT Side Accessories as per SDI (11KV Jumpers, Dropout Cutout, X-Arms etc.)	EACH	5	0	1	2	5	7			0	0	
	(4) Replacement/ Shifting of LT Side Accessories as per SDI (LT Bus Bars along with thimbles for LT Side T/F Bushing)	EACH	5	0	1	2	5	7			0	0	
	(5) Earthing of Transformer substation as per Specification	EACH	5	0	1	2	5	7			0	0	

**BIFURCATION OF 11-kV IMAM SHAH FEEDER
EMANATING FROM 132kV GRID STATIONSHUJABAD**

Sr No.	SCOPE OF WORK	
A	NEW (PROP) IMAM SHAH FEEDER FROM SHUJA ABAD GRID STATION	
a). New Line		
i.	Installation of New 11-KV Panel and 0.100 KM HT Power cable 500MCM has been proposed from Segment # 1 to 2	
ii.	0.291 KM ACSR "Osprey" conductor has been proposed from Segment # 2 to 3	
iii.	0.030 KM HT Power cable 500MCM has been proposed from Segment # 3 to 4	
iv.	1.592 KM ACSR "Osprey" conductor has been proposed from Segment # 4 to 5	
v.	0.069 KM HT Power cable 500MCM has been proposed from Segment # 5 to 6	
vi.	6.348 KM ACSR "Osprey" conductor has been proposed from Segment # 6 to 7	
vii.	6.077 KM ACSR "Osprey" conductor has been proposed from Segment # 8 to 9	
viii.	0.701 KM ACSR "Dog" conductor has been proposed from Segment # 9 to 10	
Total Length of New Line		15.208 KM
b). Reconductoring		
i.	0.927 KM Reconductoring of 11-KV Line from ACSR Rabbit to Osprey conductor from Segment #7 to 8	
ii.	2.895 KM Reconductoring of 11-KV Line from from ACSR Rabbit to ACSR "Dog" conductor from Segment #10 to 11	
iii.	2.500 KM Reconductoring of 11-KV Line from from ACSR Rabbit to ACSR "Dog" conductor Segment #12 to 13	
iv.	0.390 KM Reconductoring of 11-KV Line from from ACSR Gopher to ACSR Rabbit conductorSegment #14 to 15 with ACSR "Rabbit" conductor	
Total Lengthof Reconductoring		6.712 KM
c). Capacitor		
i.	05 No. 450-KVAR fixed capacitor	

Bif./Reh. of 11-KV Khan Bela Feeder Emanating From 132-KV Grid Station Jalal Pur	
Sr. No.	SCOPE OF WORK
	Proposed Feeder-1
<u>A. NEW (PROP) KHAN BELA FEEDER FROM 132-KV GRID STATION JALAL PUR</u>	
<u>a). New Line</u>	
i.	Installation of New 11-KV Panel and 0.100 KM HT Power cable 500MCM has been proposed from Node#A to B (01-Segment) due to connectivity of existing Khan Bela Feeder
ii.	6.800 KM New 11KV line of ACSR "Osprey" conductor has been proposed from Node # B to C (01-Segment)
iii.	1.611 KM New 11KV line of ACSR "Osprey" conductor has been proposed from Node # E to F (01-Segment)
iv.	0.339 KM New 11KV line of ACSR "Osprey" conductor has been proposed from Node # G to H (01-Segment)
v.	0.610 KM New 11KV line of ACSR "Osprey" conductor has been proposed from Node # K to M (01-Segment)
vi.	0.523 KM New 11KV line of ACSR "Dog" conductor has been proposed from Node # N to O (01-Segment)
vii.	0.610 KM New 11KV line of ACSR "Dog" conductor has been proposed from Node # O to P (01-Segment)
viii.	0.318 KM New 11KV line of ACSR "Rabbit" conductor has been proposed from Node # I to J (01-Segment)
Total Length New Line	
10.911 Km	
a) Fixed capacitor proposed	
02 No. 450-KVAR fixed capacitor	
<u>b). Reconductoring</u>	
i.	0.180 KM Reconductoring of 11-KV Line from ACSR Dog to ACSR Osprey has been proposed from Node#C to D (01-Segment)
ii.	0.799 KM Reconductoring of 11-KV Line from ACSR Rabbit to ACSR Osprey has been proposed from Node#D to E (01-Segment)

iii.	1.321 KM Reconductoring of 11-KV Line from ACSR Rabbit to ACSR Osprey has been proposed from Node#F to G (01-Segment)
iv.	3.503 KM Reconductoring of 11-KV Line from ACSR Rabbit to ACSR Osprey has been proposed from Node#H to K (01-Segment)
v.	0.607 KM Reconductoring of 11-KV Line from ACSR Rabbit to ACSR Dog has been proposed from Node#M to N (01-Segment)
vi.	1.200 KM Reconductoring of 11-KV Line from ACSR Rabbit to ACSR Dog has been proposed from Node#P to Q (01-Segment)
vii.	0.022 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Dog has been proposed from Node#Q to R (01-Segment)
viii.	4.600 KM Reconductoring of 11-KV Line from ACSR Rabbit to ACSR Dog has been proposed from Node#R to V (01-Segment)
ix.	0.519 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#L to S (01-Segment)
x.	0.339 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#S to T (01-Segment)
Total Length of Reconductoring	
10.79 Km	
Proposed Feeder-2	
Bif./Reh. of 11-KV Jalal Pur Feeder Emanating From 132-KV Grid Station Jalal Pur	
Fixed Capacitor Proposed	1
New Line	
i.	0.711 KM New 11KV line of ACSR "Rabbit" conductor has been proposed from Node # F to G (01-Segment)
ii.	1.098 KM New 11KV line of ACSR "Rabbit" conductor has been proposed from Node # H to I (01-Segment)

iii.	0.580 KM New 11KV line of ACSR “Rabbit” conductor has been proposed from Node # J to K (01-Segment)	
iv.	0.883 KM New 11KV line of ACSR “Rabbit” conductor has been proposed from Node # M to N (01-Segment)	
v.	0.365 KM New 11KV line of ACSR “Rabbit” conductor has been proposed from Node # O to P (01-Segment)	
vi.	0.790 KM New 11KV line of ACSR “Rabbit” conductor has been proposed from Node # P to Q (01-Segment)	
Total Length of New Line		4.427 Km
Reconductoring		
i.	1.890 KM Reconductoring of 11-KV Line from ACSR Dog to ACSR Osprey has been proposed from Node#A to B (01-Segment)	
ii.	0.636 KM Reconductoring of 11-KV Line from ACSR Rabbit to ACSR Dog has been proposed from Node#C to D (01-Segment)	
iii.	0.320 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#D1 to E (01-Segment)	
iv.	0.800 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#R to S (01-Segment)	
v.	2.411 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#T to U (01-Segment)	
vi.	0.575 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#V to W (01-Segment)	
Total Lengthof Reconductoring		6.632 Km
11-KV Panel		

**Bif./ of 11-KV Muhammad Pur Feeder
Emanating From 132-KV Suraj Miani Grid Station Multan**

Sr.	SCOPE OF WORK
A. REM. MUHAMMAD PUR FEEDER FROM 132-KV SURAJ MIANI GRID STATION MULTAN	
a). New Line	
i.	0.073 KM New 11KV line of ACSR “Rabbit” conductor has been proposed from Node # A to B (01-Segment)
ii.	0.506 KM New 11KV line of ACSR “Rabbit” conductor has been proposed from Node # G to I (01-Segment)
iii.	1.006 KM New 11KV line of ACSR “Rabbit” conductor has been proposed from Node # I to H (01-Segment)
iv.	0.289 KM New 11KV line of ACSR “Dog” conductor has been proposed from Node # C to C1 (01-Segment)
v.	0.362 KM New 11KV line of ACSR “Dog” conductor has been proposed from Node # C2 to C3 (01-Segment)
vi.	0.256 KM New 11KV line of ACSR “Dog” conductor has been proposed from Node # C4 to C5 (01-Segment)
Total LengthOf New Line	
2.492 Km	
b). Reconductoring	
i.	0.060 KM Reconductoring of 11-KV Line from ACSR Rabbit to ACSR Dog has been proposed from Node#C1 to C2 (01-Segment)
ii.	0.157 KM Reconductoring of 11-KV Line from ACSR Rabbit to ACSR Dog has been proposed from Node#C3 to C4 (01-Segment)
iii.	0.091 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Dog has been proposed from Node#C5 to C6 (01-Segment)
Total Length of Reconductoring	
0.308 Km	
Proposed Feeder	
B.NEW CREATED FEEDER FROM 132-KV SURAJ MIANI GRID STATION MULTAN	
a)No.of fixed Capacitor Proposed	
b). New Line	
a). New Line	
i.	0.100 KM HT Power cable 500MCM has been proposed from Node#A to B (01-Segment)
ii.	3.770 KM New 11KV line of ACSR “Osprey” conductor has been proposed from Node # B to C (01-Segment)
iii.	0.030 KM HT Power cable 500MCM has been proposed from Node#C to C1 (01-Segment)
iv.	0.750 KM New 11KV line of ACSR “Osprey” conductor has been proposed from Node # C1 to C2 (01-Segment)
v.	0.030 KM HT Power cable 500MCM has been proposed from Node#C2 to C3 (01-Segment)
vi.	0.493 KM New 11KV line of ACSR “Osprey” conductor has been proposed from Node # C3 to C4 (01-Segment)

vii.	0.182 KM New 11KV line of ACSR “ Osprey ” conductor has been proposed from Node # C4 to C5 (01-Segment)	
viii.	0.359 KM New 11KV line of ACSR “ Osprey ” conductor has been proposed from Node # C5 to C6 (01-Segment)	
ix.	0.265 KM New 11KV line of ACSR “ Osprey ” conductor has been proposed from Node # C6 to C7 (01-Segment)	
x.	0.347 KM New 11KV line of ACSR “ Osprey ” conductor has been proposed from Node # C7 to C8 (01-Segment)	
xi.	0.640 KM New 11KV line of ACSR “ Osprey ” conductor has been proposed from Node # C8 to C9 (01-Segment)	
xii.	0.762 KM New 11KV line of ACSR “Rabbit” conductor has been proposed from Node # K to M (01-Segment)	
xiii.	0.609 KM New 11KV line of ACSR “Rabbit” conductor has been proposed from Node # O to P (01-Segment)	
xiv.	0.771 KM New 11KV line of ACSR “Rabbit” conductor has been proposed from Node # Q to R (01-Segment)	
xv.	0.021 KM New 11KV line of ACSR “Rabbit” conductor has been proposed from Node # C4 to Y (01-Segment)	
xvi.	0.121 KM New 11KV line of ACSR “Rabbit” conductor has been proposed from Node # C5 to Y1 (01-Segment)	
xvii.	0.106 KM New 11KV line of ACSR “Rabbit” conductor has been proposed from Node # C6 to Y2 (01-Segment)	
xviii.	0.097 KM New 11KV line of ACSR “Rabbit” conductor has been proposed from Node # C8 to Y3 (01-Segment)	
xix.	0.681 KM New 11KV line of ACSR “Dog” conductor has been proposed from Node # C10 to C12 (01-Segment)	
xx.	0.030 KM New 11KV line of ACSR “Rabbit” conductor has been proposed from Node # C10 to Y4 (01-Segment)	
xxi.	0.024 KM New 11KV line of ACSR “Rabbit” conductor has been proposed from Node # C11 to Y5 (01-Segment)	
Total Length of New Line		10.188 Km
b). Reconductoring		
i.	0.433 KM Reconductoring of 11-KV Line from ACSR Rabbit to ACSR Osprey has been proposed from Node#C9 to C10 (01-Segment)	
ii.	1.600 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#H to I (01-Segment)	
iii.	0.518 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#S to T (01-Segment)	
iv.	0.201 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#U to V (01-Segment)	
Total Length of Reconductoring		2.752 Km

Connectivity and Reconductoring of 11-KV New Sanghi Feeder Emanating From 132-KV Buch Villas Grid Station		
Sr.	SCOPE OF WORK	
<u>A. 11-KV FEEDER EMANATING FROM 132-KV BUCH VILLAS GRID STATION</u>		
<u>a). New Line</u>		
i.	01 No. 450-KVAR fixed capacitor	
ii.	Installation of New 11-KV Panel and 0.100 KM HT Power cable 500MCM has been proposed from Node#A to B (01-Segment)	
iii.	6.373 KM New 11KV line of ACSR “Osprey” conductor has been proposed from Node # B to C (01-Segment)	
iv.	0.200 KM New 11KV line of ACSR “Rabbit” conductor has been proposed from Node # I to J (01-Segment)	
v.	0.238 KM New 11KV line of ACSR “Rabbit” conductor has been proposed from Node # S to T (01-Segment)	
vi.	0.856 KM New 11KV line of ACSR “Rabbit” conductor has been proposed from Node # U to V (01-Segment)	
Total Length of New Line		7.329 Km
<u>b). Reconductoring</u>		
i.	0.224 KM Reconductoring of 11-KV Line from ACSR Rabbit to ACSR Osprey has been proposed from Node#C to D (01-Segment)	
ii.	0.273 KM Reconductoring of 11-KV Line from ACSR Rabbit to ACSR Dog has been proposed from Node#D to E (01-Segment)	
iii.	0.259 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Dog has been proposed from Node#E to G (01-Segment)	
iv.	1.300 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#G to H (01-Segment)	
v.	0.847 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#F to K (01-Segment)	

vi.	2.080 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#M to N (01-Segment)	
vii.	0.157 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#W to X (01-Segment)	
	0.00 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#Y to Z (01-Segment)	
Total Length of Reconductoring		5.140 Km

BIFURCATION / RECONDUCTORING OF 11-KV MUHAMMAD PUR FEEDER EMANATING FROM 132-KV MANKOT GRID STATION, MULTAN.	
Sr. No.	SCOPE OF WORK
a). New Line(Remaining NEW SANGHI)	
i.	2.310 KM HT ACSR "Rabbit has been proposed from Segment B to C
b)Reconductoring (Remaining NEW SANGHI)	
i.	9.01 KM Reconductoring of 11-KV Line from Segment A to B with ACSR "Osprey" conductor (Existing: Dog)
ii.	0.134 KM Reconductoring of 11-KV Line from Segment D to D1 with ACSR "Dog" conductor (Existing: Rabbit)
iii.	0.198 KM Reconductoring of 11-KV Line from Segment D to E1 with ACSR "Dog" conductor (Existing: Gopher)
c) Cost Estimation of Capacitor	
i.	01 No. 450-KVAR fixed capacitor
Proposed Feeder	
a). Cost Estimation of Capacitor	
i.	01 No. 450-KVAR fixed capacitor
b). New Line 11kV feeder Emanating from 132 KV Maan kot Grid	
i.	0.140 KM HT Power cable 500MCM has been proposed from Segment A to B
ii.	2.350 KM ACSR "Osprey" conductor has been proposed from Segment B to C
iii.	0.320 KM ACSR "Rabbit" conductor has been proposed from Segment H to I
iv.	0.914 KM ACSR "Rabbit" conductor has been proposed from Segment J to K
v.	1.585 KM ACSR "Rabbit" conductor has been proposed from Segment M1 to N
vi.	10.852 KM ACSR "Osprey" conductor has been proposed from Segment B to C
vii.	16.161 KM ACSR "Osprey" conductor has been proposed from remaining new line segments

b) Total Length of New Line	11.312 Km
c). Reconductoring	
i.	1.143 KM Reconductoring of 11-KV Line from Segment C to D with ACSR "Osprey" conductor (Existing: Rabbit)
ii.	1.378 KM Reconductoring of 11-KV Line from Segment D to E with ACSR "Dog" conductor (Existing: Rabbit)
iii.	0.597 KM Reconductoring of 11-KV Line from Segment D to G with ACSR "Dog" conductor (Existing: Rabbit)
iv.	0.353 KM Reconductoring of 11-KV Line from Segment M to M1 with ACSR "Rabbit" conductor (Existing: Gopher)
v.	0.365 KM Reconductoring of 11-KV Line from Segment E1 to F with ACSR "Rabbit" conductor (Existing: Gopher)
Total Length of Reconductoring	3.836

**Connectivity and Reconductoring of 11-KV Pir Bux Maral Feeder
Emanating From 132-KV Laar Grid Station Multan**

Sr.	SCOPE OF WORK
A. 11-KV FEEDER EMANATING FROM 132-KV LAAR GRID STATION MULTAN	
Proposed Feeder-1	
a). New Line	
i.	0.100 KM HT Power cable 500MCM has been proposed from Node#A to B (01-Segment)
ii.	7.624 KM New 11KV line of ACSR "Osprey" conductor has been proposed from Node # B to C (01-Segment)
iii.	0.741 KM New 11KV line of ACSR "Rabbit" conductor has been proposed from Node # N to O (01-Segment)
iv.	0.534 KM New 11KV line of ACSR "Rabbit" conductor has been proposed from Node # M to G (01-Segment)
Total Length of New Line	
8.999 Km	
c). Reconductoring	
i.	0.564 KM Reconductoring of 11-KV Line from ACSR Rabbit to ACSR Osprey has been proposed from Node#C to D (01-Segment)
ii.	3.033 KM Reconductoring of 11-KV Line from ACSR Rabbit to ACSR Dog has been proposed from Node#D to E (01-Segment)
iii.	0.117 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#F to G (01-Segment)
iv.	1.830 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#G to H (01-Segment)
v.	1.297 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#J to I (01-Segment)
vi.	0.793 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#I to K (01-Segment)
Total Length of Reconductoring	
6.841 Km	

a) Fixed capacitor proposed		
i.	01 No. 450-KVAR fixed capacitor has been proposed for Proposed Feeder-1	
Remaining Pir Bux Maral Feeder		
a). New Line		
i.	No new line has been proposed for Remaining Pir Bux Maral Feeder	
Total Length of New Line		0.000 Km
c). Reconductoring		
i.	10.565 KM Reconductoring of 11-KV Line from ACSR Dog to ACSR Osprey has been proposed from Node#A to B (01-Segment)	
ii.	0.148 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#C to D (01-Segment)	
iii.	0.095 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#D1 to J (01-Segment)	
iv.	0.168 KM Reconductoring of 11-KV Line from ACSR Rabbit to ACSR Dog has been proposed from Node#E to F (01-Segment)	
v.	0.115 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#G to H (01-Segment)	
vi.	0.681 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#H to I (01-Segment)	
vii.	0.246 KM Reconductoring of 11-KV Line from ACSR Gopher to ACSR Rabbit has been proposed from Node#H to R (01-Segment)	
Total Length of Reconductoring		12.018 Km
a) Fixed capacitor proposed		
i.	01 No. 450-KVAR fixed capacitor has been proposed for Remaining Pir Bux Maral Feeder	

**Bifurcation of 11-KV Pir Jaggi feeder
Emanating from 132-KV Grid Station Kot Sultan.**

Sr. No.	AS PER SCOPE OF WORK
A	New Line
	1. Installation of New 11-KV Panel and 0.345 KM HT Power Cable 500 MCM for creation of new 11-KV feeder.
	2. Construction of 1.280 KM New ACSR “Osprey” Conductor HT Line from F to G.
	3. Construction of 3.231 KM New ACSR “Osprey” Conductor HT Line from H to I.
	4. Construction of 1.00 KM New ACSR “Dog” Conductor HT Line from O to P.
	5. Construction of 1.524 KM New ACSR “Osprey” Conductor HT Line from G2 to G3.
	6. Construction of 1.158 KM New ACSR “Osprey” Conductor HT Line from G6 to G7.
	7. Construction of 1.00 KM New ACSR “Rabbit” Conductor HT Line from R to S
	8. Construction of 1.067 KM New ACSR “Osprey” Conductor HT Line from G to G2
B	Reconductoring
	1. Construction of 2.560 KM New ACSR “Osprey” Conductor HT Line from A to A1.
	2. Reconductoring of 9.141 KM existing ACSR “Dog” Conductor HT line with “Osprey” Conductor from A1 to B.
	3. Reconductoring of 4.969 KM existing ACSR “Gopher” Conductor HT line with “Osprey” Conductor from B to C.
	4. Reconductoring of 3.99 KM existing ACSR “Rabbit” Conductor HT line with “Dog” Conductor from C to D.
	5. Reconductoring of 0.506 KM existing ACSR “Gopher” Conductor HT line with “Dog” Conductor from D to E.
C	Reconductoring (New Feeder)
	1. 3.676 KM existing ACSR Rabbit Conductor HT line with Osprey Conductor from G to H.

**Bifurcation of 11-KV Pir Jaggi feeder
Emanating from 132-KV Grid Station Kot Sultan.**

Sr. No.	AS PER SCOPE OF WORK
	2. 0.990 KM existing ACSR Gopher Conductor HT line with Osprey Conductor from I to J.
	3. 1.454 KM existing ACSR Rabbit Conductor HT line with Osprey Conductor from J to K.
	4. 2.408 KM existing ACSR Rabbit Conductor HT line with Dog Conductor from L to M.
	5. 1.367 KM existing ACSR Gopher Conductor HT line with Dog Conductor from M to N.
	6. 0.953 KM existing ACSR Rabbit Conductor HT line with Dog Conductor from N to O.
	7. 1.035 KM existing ACSR Rabbit Conductor HT line with Dog Conductor from P to Q.
	8. 0.951 KM existing ACSR Rabbit Conductor HT line with Osprey Conductor from G3 to G4.
	9. 2.585 KM existing ACSR Gopher Conductor HT line with Osprey Conductor from G4 to G5
	10. 6.606 KM existing ACSR Rabbit Conductor HT line with Osprey Conductor from G5 to G6.
	11. 2.16 KM existing ACSR Gopher Conductor HT line with Rabbit Conductor from T to U.
D	Installation of Capacitor
	New Proposed 01 No. 450 KVAR Capacitor on remaining feeder & 02 Nos. 450 KVAR Capacitors on new proposed feeder as shown on sketch.

Bifurcation of 11-KV Lala Zar feeder Emanating from 132-KV Grid Station Chowk Azam.	
Sr. No.	SCOPE OF PROPOSED WORK:
A	New Line
i.	<u>01 No.</u> New 11kV Outgoing Panel to energize the new proposed feeder that will come into existence due to bifurcation of existing feeder. (If spare panel not available)
ii.	<u>0.180</u> KM instead of <u>00.100</u> New HT Power cable 500MCM has been proposed from Node# A to B (01-Segment)
iii.	<u>10.02</u> KM instead of <u>07.800</u> Km New 11kV line of ACSR ‘‘Dog’’ conductor has been proposed from Node# B to C (01-Segment).
iv.	<u>7.00</u> KM instead of <u>6.400</u> Km New 11kV line of ACSR ‘‘Rabbit’’ conductor has been proposed from Node# E to F, G to H, K to L (03-Segment).
B	Installation of Capacitor
i.	<u>02 Nos.</u> Capacitor Proposed
C	Reconductoring
i.	<u>4.250</u> KM instead of <u>5.630</u> Km Reconductoring of 11KV line ACSR ‘‘Rabbit’’ to ‘‘Dog’’ has been proposed from Node# C to D (01-Segment).
D	REMAINING 11KV LALA ZAR, MULTAN GARDAN & LADHANA FEEDERS FROM 132KV GRID STATION CHOWK AZAM
i.	1.00 KM Re-Use of 11-KV ACSR "Rabbit" Conductor from Node# B to B1. 3.040 KM Re-Use of 11-KV ACSR "Osp" Conductor from Node# B to B1 to B2. 1.323 KM Re-Use of 11-KV ACSR "Dog" Conductor from Node# B2 to B3.

RECONDUCTORING OF 11KV KOTLA GAMOON FEEDER

Sr.#	SCOPE OF WORK
1	0.1 KM Replacement of 04-AWG 3/Core Cable with 500MCM Power Cable from Node No. "A" to "B"
2	Reconductoring: 5.299 KM Reconductoring of 11KV Line from ACSR Dog to ACSR Osprey from Node No. "B" to "B-1", "B-2" to "B-3" & "B-4" to "C" (03 Segments) New Line: i. 0.230 KM Construction of New 11KV Line with ACSR Osprey Conductor from Node No. "B-1" to "B-2" (01 Segment) to remove the house crossing by re-routing the 11 KV Line for execution of work. ii. 0.161 KM Construction of New 11KV Line with ACSR Osprey Conductor from Node No. "B-3" to "B-4" (01 Segment) to remove the house crossing by re-routing the 11 KV Line for execution of work.
3	0.979 KM Reconductoring of 11KV Line from ACSR Gopher to ACSR Dog from Node No. "C" to "D" (01 Segment)
4	0.93 KM Reconductoring of 11KV Line from ACSR Rabbit to ACSR Dog from Node No. "D" to "E"
5	1.23 KM Construction of New 11KV Line with ACSR Dog from Node No. "E" to "F"
6	Reconductoring: i. 0.021 KM Reconductoring of 11KV Line from ACSR Rabbit to ACSR Dog from Node No. "F" to "F1" (01 Segment) ii. 1.757 KM Reconductoring of 11KV Line from ACSR Gopher to ACSR Dog from Node No. "F1" to "F2" & "F-7" to "G" (02 Segments) iii. 0.058 KM Reconductoring of 11KV Line from ACSR Rabbit to ACSR Dog from Node No. "F3" to "F4" (01 Segment) regarding removal of Housing Crossing. New Line: i. 0.066 KM Construction of New 11KV Line with ACSR Dog Conductor from Node No. "F2" to "F3" (01 Segment) to remove the house crossing by re-routing the 11 KV Line for execution of work. ii. 0.138 KM Construction of New 11KV Line with ACSR Dog Conductor from Node No. "F4" to "F5" (01 Segment) to remove the house crossing by re-routing the 11 KV Line for execution of work. iii. 0.152 KM Construction of New 11KV Line with ACSR Dog Conductor from Node No. "F5" to "F7" (01 Segment) to remove the house crossing by re-routing the 11 KV Line for execution of work. iv. 0.024 KM Construction of New 11KV Line with ACSR Rabbit Conductor from Node No. "F5" to "F6" (01 Segment) to remove the house crossing by re-routing the 11 KV Line for execution of work.
7	i. 0.25 KM Reconductoring from ACSR Gopher to ACSR Dog is not required because ACSR Dog Conductor already exists

RECONDUCTORING OF 11KV KOTLA GAMOON FEEDER	
Sr.#	SCOPE OF WORK
	at site form Node No. "H" to "I" (01 Segement) ii. 0.231 KM Reconductoring from ACSR Gopher to ACSR Dog is required from Node No. "G" to "G1" (01 Segment)
8	1.342 KM Construction of New 11KV Line with ACSR Rabbit from Node No. "I" to "J" (01 Segment)
9	0.6 KM Reconductoring of 11KV Line from ACSR Gopher to ACSR Rabbit from Node No. "J" to "K"
10	0.798 KM Construction of New 11KV Line with ACSR Rabbit from Node No. "L" to "M" (01 Segment)

RECONDUCTORING OF 11KV KOTLA GAMOON FEEDER	
Sr. #	SCOPE OF WORK
1	0.1 KM Replacement of 04-AWG 3/Core Cable with 500MCM Power Cable from Node No. "A" to "B"
2	Reconductoring: 5.299 KM Reconductoring of 11KV Line from ACSR Dog to ACSR Osprey from Node No. "B" to "B-1", "B-2" to "B-3" & "B-4" to "C" (03 Segments New Line i. 0.230 KM Construction of New 11KV Line with ACSR Osprey Conductor from Node No. "B-1" to "B-2" (01 Segment) to remove the house crossing by re-routing the 11 KV Line for execution of work ii. 0.161 KM Construction of New 11KV Line with ACSR Osprey Conductor from Node No. "B-3" to "B-4" (01 Segment) to remove the house crossing by re-routing the 11 KV Line for execution of work.
3	0.979 KM Reconductoring of 11KV Line from ACSR Gopher to ACSR Dog from Node No. "C" to "D" (01 Segment)
4	0.93 KM Reconductoring of 11KV Line from ACSR Rabbit to ACSR Dog from Node No. "D" to "E"
5	1.23 KM Construction of New 11KV Line with ACSR Dog from Node No. "E" to "F"
6	Reconductoring i. 0.021 KM Reconductoring of 11KV Line from ACSR Rabbit to ACSR Dog from Node No. "F" to "F1" (01 Segment) ii. 1.757 KM Reconductoring of 11KV Line from ACSR Gopher to ACSR Dog from Node No. "F1" to "F2" & "F-7" to "G" (02 Segments) iii. 0.058 KM Reconductoring of 11KV Line from ACSR Rabbit to ACSR Dog from Node No. "F3" to "F4" (01 Segment) regarding removal of Housing Crossing. New Line: i. 0.066 KM Construction of New 11KV Line with ACSR Dog Conductor from Node No. "F2" to "F3" (01 Segment) to remove the house crossing by re-routing the 11 KV Line for execution of work. ii. 0.138 KM Construction of New 11KV Line with ACSR Dog Conductor from Node No. "F4" to "F5" (01 Segment) to remove the house crossing by re-routing the 11 KV Line for execution of work. iii. 0.152 KM Construction of New 11KV Line with ACSR Dog Conductor from Node No. "F5" to "F7" (01 Segment) to remove the house crossing by re-routing the 11 KV Line for execution of work. iv. 0.024 KM Construction of New 11KV Line with ACSR Rabbit Conductor from Node No. "F5" to "F6" (01 Segment) to remove the house crossing by re-routing the 11 KV Line for execution of work.
7	i. 0.25 KM Reconductoring from ACSR Gopher to ACSR Dog is not required because ACSR Dog Conductor already

RECONDUCTORING OF 11KV KOTLA GAMOON FEEDER	
Sr. #	SCOPE OF WORK
	exists at site form Node No. "H" to "I" (01 Segement) ii. 0.231 KM Reconductoring from ACSR Gopher to ACSR Dog is required from Node No. "G" to "G1" (01 Segment)
8	1.342 KM Construction of New 11KV Line with ACSR Rabbit from Node No. "I" to "J" (01 Segment)
9	0.6 KM Reconductoring of 11KV Line from ACSR Gopher to ACSR Rabbit from Node No. "J" to "K"
10	0.798 KM Construction of New 11KV Line with ACSR Rabbit from Node No. "L" to "M" (01 Segment)

SCOPE OF WORK FOR LOT-V INSTALLATION, TESTING, COMMISSIONING AND CIVIL WORKS OF 6 NOS FEEDERS OF BAHAWALNAGAR CIRCLE AND 3 NOS. FEEDERS OF BAHAWALPUR CIRCLE

ITEM NO.	DESCRIPTION	UNIT	Bahawalnagar Circle						Bahawalpur Circle			TOTAL QTY					
			Name of Grid Station														
			132 KV Minchan Abad	132 kV Dahranwala	132 kV Haroon Abad	132 kV Noor Sar	132 kV Chistian	132 kV Baghdad-ul-Jadid	132 kV Uch Sharif	132 kV Baghdad-ul-Jadid							
											Name of 11-KV Feeders						
											11-KV Fidai Shah		11-KV Mehmood	11-KV Al Murad	11-KV Pul Murad	11-KV Muqeen Shah	11-KV Mohar Shareef
1	Installation/ Replacemenet HT Steel Structures and Dismantlement of HT Structures / Tubular Poles / Spun Poles / PCC Poles (where Required) as per Specification	-	-	-	-	-	-	-	-	-	-	-					
01 – A	Collection of HT Structures from MEPCO Designated Store, Safe Handling / Transportation, Assembleing, Excavation, Erection, Concrete Foundation, back filling, curing &Dismantlement of existing damaged/ Off Size HT Structures / Tubular Poles / PCC Poles/ P.S.C Spun Poles as per site requirement and return to designated store.	-	-	-	-	-	-	-	-	-	-	-					
	(1) HT Structures 58’	EACH	0	0	0	6	1	0	0	8	0	15					
	(2) HT Structures 45’	EACH	0	0	0	0	0	0	6	0	0	6					
	(3) HT Structures 36’	EACH	0	0	0	0	0	0	0	0	0	0					

ITEM NO	DESCRIPTION	UNIT	Bahawalnagar Circle						Bahawalpur Circle			TOTAL QTY
	(4) LT Structures 31'	EACH	0	0	0	0	0	0	0	0	0	0
2	Installation/ Replacement HT/ LT P.S.C Spun Poles and Dismantlement of HT Structures / Tubular Poles / Spun Poles / PCC Poles (where Required) as per Specification	-	-	-	-	-	-	-	-	-	-	-
02 – B	Collection of HT/LT P.S.C Spun Poles from MEPCO Designated Store, Safe Handling / Transportation, Excavation, Erection, back filling & Dismantlement of existing damaged HT Structures / Tubular Poles / PCC Poles/ P.C Spun Poles as per site requirement and return to designated store.	-	-	-	-	-	-	-	-	-	-	-
	(1) HT P.C Spun Pole 45'	EACH	89	5	104	49	27	54	58	35	50	471
	(2) HT P.C Spun Poles 36'	EACH	76	201	274	271	152	315	221	28	157	1695
	(3) LT P.C Spun Poles 31'	EACH	0	0	0	0	2	0	0	0	0	2
3	Installation and Dismantlement of HT Bare/ Insulated Conductors / Cables.	-	-	-	-	-	-	-	-	-	-	-
03 – A	Collection of HT Bare/ Insulated Conductors / Cables from MEPCO Designated Store, Safe Handling / Transportation and Their Installation/ Replacement of existing HT Line inclusive of Allied Accessories / Hardware, P.G Connectors& Return of Dismantled Material to designated Store as per site requirement.	-	-	-	-	-	-	-	-	-	-	-

ITEM NO	DESCRIPTION	UNIT	Bahawalnagar Circle						Bahawalpur Circle			TOTAL QTY
	11 KV Line Reconductoring:	-	11-KV Fidai Shah	11-KV Mehmood	11-KV Al Murad	11-KV Pul Murad	11-KV Muqem Shah	11-KV Mohar Shareef	11-KV Darbar Mahal	11-KV Punjnad	11-KV Jhangi Wala	-
	(1) ACSR Osprey Bare / Insulated Conductor	KM	0	0	6.035	0.454	0	0	0	3.007	0.680	10.176
	(2) ACSR Dog Bare / Insulated Conductor	KM	3.045	0	6.428	0	3.755	0	0	0	0.316	13.544
	(3) ACSR Rabbit Bare / Insulated Conductor	KM	0	0	1.527	0.494	1.794	1.076	0	0	0.486	5.377
4	Installation of HT Bare/ Insulated Conductors / Cables.	-	-	-	-	-	-	-	-	-	-	-
04 – A	Collection of HT Bare/ Insulated Conductors / Cables from MEPCO Designated Store, Safe Handling / Transportation and Their Installation inclusive of Allied Accessories / Hardware, P.G Connectors in New/ Extension of HT Line as per site requirement and Specifications.	-	-	-	-	-	-	-	-	-	-	-
	11 KV New Line:	-	11-KV Fidai Shah	11-KV Mehmood	11-KV Al Murad	11-KV Pul Murad	11-KV Muqem Shah	11-KV Mohar Shareef	11-KV Darbar Mahal	11-KV Punjnad	11-KV Jhangi Wala	-
	(1) ACSR Osprey Bare / Insulated Conductor	KM	3.503	11.926	5.687	3.955	6.376	11.129	8.890	12.008	10.360	73.834
	(2) ACSR Dog Bare / Insulated Conductor	KM	2.075	0	6.503	0	0	0	0	0	0	8.578
	(3) ACSR Rabbit Bare / Insulated Conductor	KM	1.537	0	1.416	7.286	0	6.608	0	1.717	1.024	19.588
5	Installation of LT Bare/ Insulated Conductors.	-							-	-	-	-

ITEM NO	DESCRIPTION	UNIT	Bahawalnagar Circle						Bahawalpur Circle			TOTAL QTY
05 – B	Collection of LT Bare/ Insulated Conductors from MEPCO Designated Store, Safe Handling / Transportation and Their Installation inclusive of Allied Accessories / Hardware, P.G Connectors in New/ Extension of LT Line as per site requirement and Specifications.	-	-	-	-	-	-	-	-	-	-	-
	LT New Line	-	-	-	-	-	-	-	-	-	-	-
	(1) All Aluminum WASP (Bare / Insulated Conductor)	KM	0	0	0	0	0	0	0	0	0	0
	(2) All Aluminum ANT (Bare / Insulated Conductor)	KM	0	0	0	0	0	0	0	0	0	0
6	Proper Installation of 11KV Termination Kits	-	-	-	-	-	-	-	-	-	-	-
06 – A	Collection of Termination Kits from Designated MEPCO store, Safe Handling / Transportation and proper Installation of 11KV Termination Kits as per Specifications.	-	-	-	-	-	-	-	-	-	-	-
	(1) 11 KV TERMINATION KIT S/C CABLE 500MCM (OUT DOOR)	EACH	9	3	3	3	15	3	9	15	15	75
	(2) 11 KV TERMINATION KIT S/C CABLE 500MCM (IN DOOR)	EACH	3	3	3	3	3	3	3	3	3	27
7	Proper Installation of 11KV US. CAPACITOR BANK 3X150 KVAR	-	-	-	-	-	-	-	-	-	-	-
07 – A	Collection of 11KV US. CAPACITOR BANK 3X150 KVAR from Designated MEPCO store,	-	-	-	-	-	-	-	-	-	-	-

ITEM NO	DESCRIPTION	UNIT	Bahawalnagar Circle						Bahawalpur Circle			TOTAL QTY
	Safe Handling / Transportation and proper installation as per Specifications.											
	(1) 11KV US. CAPACITOR BANK 3X150 KVAR	SET	4	4	7	6	3	4	0	0	2	30
8	Proper Installation of 11KV Switch Panel (Outgoing)	-	-	-	-	-	-	-	-	-	-	-
8-A	One (1) set of complete metal-clad switchgear 11 kV shall be designed, supplied, delivered, installed, tested and commissioned, under this contract, as per WAPDA/NTDC spec P-44:2018 (amended to date) comprise the following:	-	-	-	-	-	-	-	-	-	-	-
	A complete indoor Bus coupler panel 11 kV, 2500 A busbars, 25 kA, 1 sec, 50Hz, 95/36 kV BIL, equipped with:	SET	1	0	1	1	0	1	1	1	1	7
	Q0 - One (1) set of three pole, draw-out, vacuum type, 11 kV, 2500 A, 25 kA, 1 sec, circuit breaker with spring-stored energy operating mechanism		1	0	1	1	0	1	1	1	1	7
	Two (2) Load Break Switches		1	0	1	1	0	1	1	1	1	7
	All other necessary material and equipment required for completing Bus Coupler Panel.		1	0	1	1	0	1	1	1	1	7
	A complete indoor Incoming panel 11 kV, 2500 A busbars, 2500 A feeder, 25 kA, 1 sec, 50 Hz, 36/95 kV BIL, equipped with:	SET	1	0	1	1	0	1	1	1	1	7

ITEM NO	DESCRIPTION	UNIT	Bahawalnagar Circle						Bahawalpur Circle			TOTAL QTY
	Q0 - One (1) set of three pole, draw-out, vaccum type, 11 kV, 2500 A, 25 kA, 1 sec, circuit breaker with spring-stored energy operating mechanism		1	0	1	1	0	1	1	1	1	7
	T90 -Three (3) single-phase, 2-core, multi ratio, 1600-800/5 A, cl. 0.5 FS10 / 5P20, 10 & 15 VA, 1 sec, dry type current transformers		1	0	1	1	0	1	1	1	1	7
	T92 - Three (3) single-phase, 1-core, multi ratio, 1600-800/5 A, cl. 5P20, 15 VA 1 sec, dry type current transformers		1	0	1	1	0	1	1	1	1	7
	T5 - Three (3) single-phase, 1-secondary winding, 11/√3 / 0.11/√3 kV, cl. 0.5, 100 VA, 1 sec, dry type voltage transformers		1	0	1	1	0	1	1	1	1	7
	All other necessary material and equipment required for completing Incoming Panel.		1	0	1	1	0	1	1	1	1	7
	A complete indoor Outgoing panel 11 kV, 2500 A busbars, 630 A feeder, 25 kA, 1 sec, 50Hz, 36/95 kV BIL, equipped with:		1	0	1	1	0	1	1	1	1	7
	Q0 - One (1) set of three pole, draw-out, vaccum type, 11 kV, 630 A, 25 kA, 1 sec, circuit breaker with spring-stored energy operating mechanism	SET	1	0	1	1	0	1	1	1	1	7
	T91 -One (1) single-phase, 2-core, single ratio, 600-300/5-5A, cl. 0.5 FS10 / 5P20, 10/15 VA 1 sec, dry type current transformers		1	0	1	1	0	1	1	1	1	7

ITEM NO	DESCRIPTION	UNIT	Bahawalnagar Circle						Bahawalpur Circle			TOTAL QTY
	Three (3) AIS Surge arrester 11 kV, single phase, gapless, metal oxide type, with surge counter as per WAPDA/NTDC spec P-181:2012 (amended to date)		1	0	1	1	0	1	1	1	1	7
	All other necessary material and equipment required for completing Outgoing Panel.		1	0	1	1	0	1	1	1	1	7
	A complete indoor Capacitor control panel 11 kV, 2500 A busbars, 630 A feeder, 25 kA, 1 sec, 50Hz, 36/95 kV BIL, equipped with:	SET	1	0	1	1	0	1	1	1	1	7
	Q0 - one (1) set of three pole, draw-out, vacuum type, 11 kV, 630 A, 25 kA, 1 sec, circuit breaker with spring-stored energy operating mechanism		1	0	1	1	0	1	1	1	1	7
	T91 -Three (3) single-phase, 2-core, multi ratio, 600-300/5-5A, cl. 0.5 FS10 / 5P20, 10 & 15 VA 1 sec, dry type current transformers		1	0	1	1	0	1	1	1	1	7
	Three (3) AIS Surge arrester 11 kV, single phase, gapless, metal oxide type, with surge counter as per NTDC Specification P-181:2012.		1	0	1	1	0	1	1	1	1	7
	All other necessary material and equipment required for completing Capacitor Control Panel.		1	0	1	1	0	1	1	1	1	7
	11 kV Capacitor Bank	-	-	-	-	-	-	-	-	-	-	-

ITEM NO	DESCRIPTION	UNIT	Bahawalnagar Circle						Bahawalpur Circle			TOTAL QTY
	11 kV, 3.6 MVAR (18 x 200 kVAR), 25 Fuses, Capacitor Bank comprising of 1-phase capacitors (200 kVAR) complete with mounting racks, fuses and bus works with Neutral CT as per WAPDA/NTDC Specifications P-165:89 (amended to date).	SET	1	0	1	1	0	1	1	1	1	7
	Digital over current Earth Fault Protection Relay with Broken Conductor Feature and Minimum Earth Fault Setting=0.25A		1	0	1	1	0	1	1	1	1	7
	All other necessary material and equipment required for completing 11kV capacitor bank		1	0	1	1	0	1	1	1	1	7
9	Proper Installation of Stay Rod SET with accessories (Complete).	-	-	-	-	-	-	-	-	-	-	-
9-A	Collection of Stay Rod SET with accessories (Complete) from Designated MEPCO store, Safe Handling / Transportation and proper Installation as per Specifications.	EACH	114	81	148	174	169	220	138	92	188	1324
10	Proper Installation of Earthing SET with accessories (Complete).	-	-	-	-	-	-	-	-	-	-	-
10-A	Collection of Earthing SET with accessories (Complete) from Designated MEPCO store, Safe Handling / Transportation and proper Installation as per Specifications.	EACH	0	0	0	8	13	0	9	71	8	109

ITEM NO	DESCRIPTION	UNIT	Bahawalnagar Circle						Bahawalpur Circle			TOTAL QTY
11	Shifting of Sub-Station of Different Capacities of Transformers Alongwith Allied accessories as per Specification	-	-	-	-	-	-	-	-	-	-	-
11 – A	Shifting of Transformer Sub Station alongwith accessories of different Capacities of Transformers exists alongwith 11KV Feeder & Proper Installtion at Newly Installed HT/ LT Structures/ Poles, Safe Handling / Transportation and their Installation and return of Dismantled Material (Allied Accessories where Replaced) to MEPCO Designated Store & Providing thimbles to LT bushes of T/F.	-	-	-	-	-	-	-	-	-	-	-
	(1) Construction of complete Double Structure Platform (For 100 / 200 KVA T/F)	EACH	0	0	0	0	0	0	0	0	4	4
	(2) Construction of complete Single Structure Platform (For 50 / 25 / 15 / 10 KVA T/F)	EACH	0	0	0	1	0	0	0	0	0	1
	(3) Replacement/ Shifting of HT Side Accessories as per SDI (11KV Jumpers, Dropout Cutout, X-Arms etc.)	EACH	0	0	0	1	0	0	0	0	4	5
	(4) Replacement/ Shifting of LT Side Accessories as per SDI (LT Bus Bars along with thimbles for LT Side T/F Bushing)	EACH	0	0	0	1	0	0	0	0	4	5

ITEM NO	DESCRIPTION	UNIT	Bahawalnagar Circle						Bahawalpur Circle			TOTAL QTY
	(5) Earthing of Transformer substation as per Specification	EACH	0	0	0	1	0	0	0	0	4	5

BIFURCATION / REHABILITATION OF 11KV PULL MURAD & DAHRAN WALA ROAD FEEDER EMANATING FROM 132KV GRID STATION HAROON ABAD	
Sr. No.	SCOPE OF WORK
A.	New Line
1	01 No. 11-KV Outgoing Panal for New Feeder
2	New III 11-KV Power Cable 500 MCM S/C Proposed at Node "A to B". (0.100 KM)
3	New 11-KV Line proposed with ACSR OSPRAY at Node No. "B to B1 to B2 to C" (3.955 KM)
4	New 11-KV Line proposed with ACSR Rabbit (5.886 KM)
5	01 Set of 450 KVAR fixed capacitor have been proposed.
B.	Reconductoring
1	New 11-KV Line proposed with ACSR OSPRAY at Node No."C to C1 to C2 to C3 to C4 to C5", "C6 to D"(5.494 KM)
2	Reconducting of 11-KV line from ACSR "Rabbit " to ACSR OSPRAY" has been proposed (0.454 KM)
3	Reconducting of 11-KV line from ACSR "Ghopher " to ACSR Rabbit" has been proposed (0.494 KM)
REMAINING 11-KV PULL MURAD FEEDER	
C.	New Line
1	The Said Area of this branch already shifted to 11-KV College Feeder Chishtian
2	03 Set of 450 KVAR fixed capacitor have been proposed.
REMAINING 11-KV DAHRAN WALA ROAD FEEDER	
D.	New Line
1	New 11-KV Line proposed with ACSR Rabbit (1.4 KM)
2	02 Set of 450 KVAR fixed capacitor have been proposed.

BIFURCATION / REHABILITATION / RECONDUCTORING OF 11KV MOHAR SHARIF FEEDER EMANATING FROM 132KV GRID STATION CHISHTIAN	
Sr. No.	SCOPE OF WORK
A. New Line	
1	01 No. 11-KV Outgoing Panal for New Feeder
2	New III 11-KV Power Cable 500 MCM S/C Proposed at Node "A to B". (0.8 KM)
3	New 11-KV Line proposed with ACSR OSPRAY at Node No. "B to C"(11.129 KM)
4	New 11-KV Line proposed with ACSR Rabbit (3.378 KM)
5	03 Sets of 450 KVAR fixed capacitor have been proposed.
B. Reconductoring	
1	Reconducting of 11-KV line from ACSR "Ghopher " to ACSR Rabbit" has been proposed (0.506 KM)
REMAINING 11-KV MOHAR SHARIF FEEDER	
A. New Line	
1	New 11-KV Line proposed with ACSR Rabbit (3.230 KM)
2	01 Set of 450 KVAR fixed capacitor have been proposed.
B. Reconductoring	
3	Reconducting of 11-KV line from ACSR "Ghopher " to ACSR Rabbit" has been proposed (0.570 KM)

Bifurcation / Rehabilitation of 11-KV Fidai Shah Feeder
Emanating from 132-KV Grid Station Minchinabad

Sr. No	SCOPE OF WORK
A. 11-KV NEW PROPOSED	
1	New 11-KV Power Cable 500 MCM S/C Proposed (0.510 KM) at Node No. "A to B" to "C to D"
2	New 11-KV Line proposed with ACSR OSPRAY (3.503 KM) at node No. "B to C & "D to E"
3	New 11-KV Line proposed with ACSR DOG (2.075 KM) at node No. "H to I.
4	New 11-KV Line proposed with ACSR Rabbit (1.537 KM) at node No. "J to K", "L to M".
5	Installation of New 04 No. 11-KV 450 KVAR Capacitors.
6	01 No. 11-KV Outgoing Panal for New Feeder
B. REMAINING 11-KV FIDAI SHAH FEEDER	
1	New 11-KV Line proposed with ACSR DOG (0.351 KM) at node No. "F to G"
2	Reconducting of 11-KV line from ACSR "Rabbit " to DOG" has been proposed (1.649 KM) at Node No. "E to F" , "A to B", "C to D".
3	Reconducting of 11-KV line from ACSR "Ghopher " to ACSR DOG" has been proposed (1.396 KM) at Node No. "B to C"

BIFURCATION / REHABILITATION OF 11KV AL-MURAD FEEDER EMANATING FROM 132KV GRID STATION DAHRAN WALA	
Sr. No.	SCOPE OF WORK
11-KV NEW PROPOSED FEEDER	
A. Capacitor	
1	03 Sets of 450 KVAR fixed capacitor have been proposed.
B. New Line	
1	New III 11-KV Power Cable 500 MCM S/C Proposed (0.180 KM)
2	New 11-KV Line proposed with ACSR OSPRAY (5.687 KM)
3	New 11-KV Line proposed with ACSR DOG (6.274 KM)
C. Reconductoring	
1	Reconducting of 11-KV line from ACSR "Rabbit" to ACSR DOG" has been proposed (1.896 KM)
D. Reconductoring	
1	01 No. 11-KV Outgoing Panal for New Feeder
REMAINING 11-KV AL-MURAD FEEDER	
A. Capacitor	
1	04 Sets of 450 KVAR fixed capacitor have been proposed.
B. New Line	
1	New 11-KV Line proposed with ACSR DOG (0.229 KM)
2	New 11-KV Line proposed with ACSR Rabbit (1.416 KM)
C. Reconductoring	
1	Reconducting of 11-KV line from ACSR "DOG" to ACSR OSPRAY" has been proposed (6.035 KM)
2	Reconducting of 11-KV line from ACSR "Rabbit" to ACSR DOG" has been proposed (1.660 KM)
3	Reconducting of 11-KV line from ACSR "Ghopher " to ACSR Rabbit" has been proposed (1.527 KM)
4	Reconducting of 11-KV line from ACSR "Ghopher " to ACSR DOG" has been proposed (2.872 KM)

BIFURCATION / REHABILITATION / RECONDUCTORING OF 11KV MUQEEM SHAH FEEDER EMANATING FROM 132KV GRID STATION NOOR SAR	
Sr. No.	Scope of Work
A. NEW (PROPOSED) FEEDER FROM 132KV GRID STATION NOOR SAR	
a. New Line: -	
1	01 No. Spare Panel is available at 132KV G/S Noor Sar.
2	0.670 KM new 11KV Power Cable 500MCM has been proposed due to bifurcation of existing Muqeem Shah Feeder & crossing of 132KV line & at railway crossing.
3	6.376 KM New 11KV Line of ACSR Osprey conductor has been proposed.
4	03 sets of 450KVAR fixed capacitor have been proposed.
5	1.406 Km Reconductoring from ACSR "Rabbit" to "Dog" has been proposed due to house crossing of existing feeder.
b. RECONDUCTORING.	
1	2.349 Km Reconductoring from ACSR "Rabbit" to "Dog" has been proposed.
B. REMAINING MUQEEM SHAH FEEDER EMANATING FROM 132KV GRID STATION NOOR SAR.	
a. RECONDUCTORING.	
1	1.794 Km Reconductoring from ACSR "Gopher" to "Rabbit" has been proposed.

BIFURCATION / REHABILITATION OF 11KV MEHMOOD FEEDER EMANATING FROM 132KV GRID STATION MINCHANABAD	
Sr. No.	AS PER SITE / Scope of Work
A. NEW (PROPOSED) FEEDER FROM 132KV GRID STATION MINCHAN ABAD	
a. New Line: -	
i	01 No. Spare Panel is available at 132KV G/S Minchan Abad.
ii	0.3 KM new 11KV Power Cable 500MCM has been proposed from Node A to B due to bifurcation of existing Mehmood Feeder.
iii	11.926 KM New 11KV Line of ACSR Osprey conductor has been proposed from Node B to C & C to D (02-segments)
iv	02 sets of 450KVAR fixed capacitor have been proposed.
B. Mehmood (REMAINING) EMANATING FROM 132KV GRID STATION Minchanabad	
a. Capacitor.	
1	02 sets of 450KVAR fixed capacitor have been proposed.

11 KV PUNJNAD EMANATING FROM 132 KV GRID STATION UCH SHARIF	
Sr. No.	AS PER SCOPE OF WORK
A. NEW (PROP:) FEEDER FROM 132 KV GRID STATION UCH SHARIF	
a. New Line: -	
i	01 No New 11KV Outgoing pannel to Energize the new 11 KV proposed 1 feeder that will come into existence due to Area Planning of Existing Punjnad Feeder Required.
ii	i). 0.300 KM New HT Power Cable 500 MCM has been proposed from Node # 0 to 1 (1-Segment) ii). 0.500 KM for Motor Way Crossing
iii	i). 12.008 KM New 11KV Line of ACSR "OSPRAY" conductor has been proposed Section 1 to 2, 3.2, 3.3 to 4 (04 Segment). ii). 1.227 KM reconductoring ACSR "Rabbit" Conductor to ACSR "OSPRAY" from # 3 to 3.1 & 3.2 to 3.3 (02 Segment).
iv	1.717 KM New 11KV Line of ACSR "Rabbit" Conductor has been proposed Section 5 to 6 and 12 to 13 (02Segment).
b. Reconductoring: -	
i	1.780 Reconductoring of 11KV Line From ACSR "RABBIT" to "OSPRAY" Conductor from Node # 2 to 3 has been proposed.

11 KV JHANGI WALA EMANATING FROM 132KV GRID STATION BAGHDAD	
Sr. No.	AS PER SITE / ESTIMATE/SCOPE OF WORK
A. NEW (PROPOSED) FEEDER FROM 132KV GRID STATION BAGHDAD.	
a. New Line: -	
i	01 No. New 11KV Outgoing panel to energize the new propose feeder that will come into existence due to area planning of existing Jhangi Wala Feeder.
ii	0.165 KM New HT Power cable " 500MCM " has been proposed from Node # 3.1 to 3.2 & 3.3 to 3.4 (02 Segment) due to 132KV Line crossing.
iii	10.360 KM New 11KV Line of ACSR " Osprey " conductor has been proposed section 1 to 2, 3 to 3.1, 3.2 to 3.3, & 3.4 to 4 (04-Segments).
iv	1.024 KM New Line of ACSR " Rabbit " conductor has been proposed Section 8 to 9, 10 to 11 and 12 to 13 (03 Segments).
b. Reconductoring.	
i	0.680 KM Reconductoring of from ACSR " Rabbit " to " Ospray " from Node # 2 to 3 has been proposed
ii	0.064 KM Reconductoring of from ACSR " Rabbit " to " Dog " from Node # 4 to 5 has been proposed
iii	0.252 KM Reconductoring of from ACSR " Gopher " to " Dog " from Node # 5 to 6 has been proposed
iv	0.486 KM Reconductoring of from ACSR " Gopher " to " Rabbit " from Node # 6 to 7 has been proposed
v	02 Nos. 11KV Bank Capacitor set of 450KVAR has been proposed to relocate.

BIFURCATION / REHABILITATION / RECONDUCTORING OF 11KV DARBAR MEHAL FEEDER EMANATING FROM 132KV GRID STATION BAGHDAD UL JADEED BAHAWALPUR	
Sr. No.	AS PER SITE / ESTIMATE/SCOPE OF WORK
A. NEW (PROPOSED) FEEDER FROM 132KV GRID STATION BAGHDAD.	
a. New Line:-	
i	01 No. New 11KV Outgoing panel to energize the new propose feeder that will come into existence due to bifurcation of 11KV existing Darbar Mehal Feeder. Spare Panel not available.
ii	0.300 KM New HT Power cable " 500MCM " has been proposed from Node # 0 to 1, 2 to 3 & 4to 5 (03 Segments).
iii	8.89 KM New 11KV Line of ACSR " Osprey " conductor has been proposed from Node # 1 to 2,3 to 4 & 5 to 6 (03 Segments).
b. Reconductoring: -	
i	No Reconductoring has been proposed.