

Bill No:1	PRELIMINARY AND GENERAL ITEMS						
No	FIXED CHARGE ITEMS	DESCRIPTION	UNIT	QTY	RATE	TOTAL	
A							
A.1	Site Establishment:	The Contractor shall establish the site camp and maintain throughout the construction period and allow for removal of such upon completion of Works. The Eskom Representative reserves the right to negotiate the rates for rental arrangements based on the project scope and magnitude.					
A.1.1.		Office and Meeting Room complete as per P&G's Guideline	Sum		R 20 371.98	R -	
A.1.2.		Stores	Sum		R 17 693.45	R -	
A.1.3.		Sanitation/Abution facilities	Sum		R 2 576.20	R -	
A.1.4.		Electricity (Eskom/Munic supply)	Sum		R 2 862.44	R -	
A.1.5.		Electricity (Generator 5.5KVA)	Sum		R 2 000.00	R -	
A.1.6.		Temporary water supply	Sum		R 2 150.00	R -	
A.1.7.		The supply and complete installation of Diamond mesh fencing including fence posts at 1.8 meters high	m		R 216.76	R -	
A.1.8.		The supply and complete installation of a Diamond mesh Lockable Gate including fence posts 1.8m high x 3.6m wide, including lock	each		R 2 486.42	R -	
A.2.	Sign Board Labour					R -	
A.2.1		Contractor shall erect on site, maintain throughout the construction duration(Safety)	each		R 454.50	R -	
A.2.2		Construction Name Board - The Contractor shall supply, install and maintain one project signboard bearing the name of the project, the name and logo of Eskom, and the Contractor.	each		R 479.03	R -	
A.3	Sample Board and Stubby Line						
A.3.1		Construct a sample board and stubby line as per the drawings and specification stated in the latest revision of MVL-EL-048 published by Eskom Standards Implementation Department.	Sum		R2 825.42	R -	
A.4.	Health and Safety measures (In terms of 34-333)	Safety & Health, Environmental				R -	
A.4.1		Compliance with OH&S Act & Construction Regulations. (for projects where task order value exceed R100,000.00)	Sum		R 16 520.06	R -	
A.4.2		H&S compliance for projects where task orders are below R100k. Excl P&G's	Sum		R 7 156.69	R -	
A.4.3		Maintenance of H&S file (only applicable for projects exceeding 2 months in duration)	Monthly		R 1 652.01	R -	
A.5.	Materials Management					R -	

The Contractor shall make all necessary arrangements to ensure that the work is completed in accordance with the contract documents.

B.		TIME RELATED ITEMS				
B.1	Site Establishment					
B.1.1.	Site office 6m x 3m with aircon	Weeks		R	550.00	R
B.1.2.	Site Storage 6m x 3m	Weeks		R	275.00	R
B.1.3.	Water	Weeks		R	513.95	R
B.1.4.	Sanitation (service)	Weeks		R	1 558.22	R
B.1.5.	Electricity (Eskom/Munic supply)	Weeks		R	384.33	R
B.1.6.	Electricity (Generator 6.5kVA)	Weeks		R	226.02	R
B.2	Accommodation		Accommodation Allowance is for the Contractors Staff excluding the casual labourers which are assumed to be residing in the area where the works are executed.			
B.2.1.	Staff Accommodation Allowance	Weeks		R	1 431.30	R
B.3	Security		Security on site - 24 Hour Unarmed Security (Must be registered with the appropriate body)			
B.3.1.		Weeks		R	11 550.28	R
B.4.	Labour		The Contractor need to submit Weekly Time Sheets for all hourly compensation claims and a Daily attendance register			
B.4.1.	Supervisor per team	hourly		R	130.54	R
B.4.2.	Construction Manager (SACPMP Registered )	hourly		R	248.14	R
B.4.3.	Construction Manager (non registered)	hourly		R	124.07	R
B.4.4.	Storeman	hourly	Storeman is required to reconcile and quantify All material on site including Eskom supplied material using the correct material return to stores forms. The Storeman shall adhere to the implementation and maintenance plan for Materials Management System for the duration of the contract.			
B.4.5.	Community Liaison Officer	Daily (Max)		R	246.82	R
B.4.6.	Safety Officer (SACPMP Registered)	hourly		R	129.00	R
				<b>Sub-Total B</b>		
				<b>Total P &amp; G's Carried To Summary</b>		

Verified By: \_\_\_\_\_ DATE \_\_\_\_\_

Clerk of Works \_\_\_\_\_ DATE \_\_\_\_\_

Checked By: \_\_\_\_\_ DATE \_\_\_\_\_

Quantity Surveyor \_\_\_\_\_ DATE \_\_\_\_\_

Accepted By: \_\_\_\_\_ DATE \_\_\_\_\_

Contractor \_\_\_\_\_ DATE \_\_\_\_\_

BILL NO: 2		EXCAVATIONS, PLANTING & INSTALLATION OF STAYS AND STRUTS		LABOUR RATE	
NO.		D-D-T	DESCRIPTION		UNIT
		<p>Note:  a) All installations, assemblies and activities shall be as per Eskom DDT series, Eskom national or Eskom local technical instructions where applicable  b) Eskom will advise what is free issue material and what is contractor supplied material</p>			
EXCAVATIONS & TRENCHING			Manually excavate, backfill and compact as . Import backfill soil where required as per Eskom standard for holes and trenches for poles, stays, struts, flying stays and earth electrodes. All material will be measured elsewhere. Cable systems excavations and trenching will be measured elsewhere. Soil types are defined as Class1, class 2, class3 and class 4 as per Eskom standard 240-75883148.		
2.1	0332		Excavation, backfilling & compacting of a hole 1m for 5 meter pole in soil type compacted.		
2.1.1.			Class 1	Ea	
2.1.2.			Class 2	R 89.81	
2.1.3.			Class 3	R 126.69	
2.1.4.			Class 4	R 163.58	
2.2	0332		Excavation, backfilling and compacting of a hole 1.3 meter (7 meter pole) in soil type.		
2.2.1			Class 1	R 111.94	
2.2.2			Class 2	R 148.83	
2.2.3			Class 3	R 185.71	
2.2.4			Class 4	R 299.36	
2.3	0332		Excavation, backfilling and compacting of a hole 1.5 meter (6 meter pole) in soil type.		
				R 327.70	

2.11.1		Class 1		Ea	R	193.09
2.11.2		Class 2		Ea	R	229.98
2.11.3		Class 3		Ea	R	266.87
2.11.4		Class 4		Ea	R	431.58
2.12	0350	Excavation, backfilling and compacting of a non-augured LV stay hole 1,3 meters (rod diameter 12mm) in soil type.				
2.12.1		Class 1				
2.12.2		Class 2		Ea	R	274.24
2.12.3		Class 3		Ea	R	348.02
2.12.4		Class 4		Ea	R	421.79
2.13	0350	Excavation, backfilling and compacting of a non-augured MV stay hole 1,75 meters (rod diameters 20mm) in soil type				
2.13.1		Class 1				
2.13.2		Class 2		Ea	R	321.46
2.13.3		Class 3		Ea	R	395.24
2.13.4		Class 4		Ea	R	469.01
2.14	0350	Excavation, backfilling and compacting of a non-augured MV stay hole 2,15 meters (rod diameters 24mm) in soil type				
2.14.1		Class 1				
2.14.2		Class 2		Ea	R	392.28
2.14.3		Class 3		Ea	R	482.29
2.14.4		Class 4		Ea	R	573.77
2.15	0342	Excavation, backfilling & compacting of a MV 0.5m deep strut hole in soil type				
2.15.1		Class 1				
2.15.2		Class 2		Ea	R	31.33
2.15.3		Class 3		Ea	R	62.67
2.15.4		Class 4		Ea	R	94.00
2.16	0342	Excavation, backfilling & compacting of a LV strut hole 0.5 deep meters in soil type				
2.16.1		Class 1				
2.16.2		Class 2		Ea	R	31.33
2.16.3		Class 3		Ea	R	62.67
2.16.4		Class 4		Ea	R	94.00
				Ea	R	181.84

2.17	Excavation, backfilling & compacting of wood poles, stay holes and cable trenches using Mechanical boring/Rock Drill, Jack Hammer or Blasting. The handling fee will only be applicable to the supplier's invoice where the service is outsourced. Where the machinery is owned by the contractor a quotation with no handling fee is to be submitted. PC/QS to do due diligence in verifying quotations.		
2.17.1	Rock drilling (Irrespective of depth of hole, each hole to be verified by Eskom's Clerk of Works as per Supplier's invoice+10% handling) Inclusive of equipment and labour	Ea	
2.17.2	Rock drilling for cable trench to be verified by Eskom's Clerk of Works as per Supplier's invoice+10% handling) Inclusive of equipment and labour	m	
2.17.3	Excavate using a mechanical boring (Auger) device (Irrespective of depth of hole, each hole to be verified by Eskom's Clerk of Works as per Supplier's invoice+10% handling) Inclusive of equipment and labour	Ea	
2.17.4	Excavate using a jack hammer and compressor (Irrespective of depth of hole, each hole to be verified by Eskom's Clerk of Works as per Supplier's invoice+10% handling) Inclusive of equipment and labour	Ea	
2.17.5	Excavate using a jack hammer and compressor for cable trench, to be verified by Eskom's Clerk of Works as per Supplier's invoice+10% handling. Inclusive of equipment and labour	m	
2.17.6	Blasting (Irrespective of depth of hole, each hard rock hole to be verified by Eskom's Clerk of Works as per Supplier's invoice+10% handling) Inclusive of equipment and labour	Ea	
2.17.7	Blasting for cable trenches hard rock hole to be verified by Eskom's Clerk of Works as per Supplier's invoice+10% handling) Inclusive of equipment and labour	m	
2.17.8	Clean out and make suitable the excavation after blasting	Ea	R
2.17.9	Supply of imported soil (Class 2) - To be verified by Clerk of Works (Subject to supplier's invoice +10% handling)	m³	57.03
2.17.10	Pumping water from excavation (subject to supplier's invoice +10% handling) Inclusive of equipment and labour	litre	
2.17.11	Application of tar according to municipal standard - Supplier's Invoice + 5% Inclusive of equipment and labour	m²	

2.20.21	0054	POLE,WOOD 14.0 x 180-199	Ea	R	335.60
2.20.22	0054	POLE,WOOD 14.0 x 200-219	Ea	R	335.60
2.20.23	0057	POLE,WOOD 15.0 x 200-219	Ea	R	335.60
2.20.24	0049	POLE,WOOD 16.0 x 180-199	Ea	R	335.60
2.20.25	0049	POLE,WOOD 16.0 x 200-219	Ea	R	335.60
2.20.26	0048	POLE,WOOD 18.0 x 180-199	Ea	R	335.60
2.20.27	0048	POLE,WOOD 18.0 x 200-219	Ea	R	335.60
2.21		<b>Planting by Crane</b>			
2.21.1	0055	POLE,WOOD 9.0m x 140-159	Ea	R	394.86
2.21.2	0055	POLE,WOOD 9.0m x 160-179	Ea	R	483.93
2.21.3	0055	POLE,WOOD 9.0m x 180-199	Ea	R	483.93
2.21.4	0052	POLE,WOOD 10.0m x 160-179	Ea	R	483.93
2.21.5	0052	POLE,WOOD 10.0m x 180-199	Ea	R	483.93
2.21.6	0052	POLE,WOOD 10.0m x 200-219	Ea	R	483.93
2.21.7	0051	POLE:140-159MM TOP DIA X LG 11M ;WOOD	Ea	R	504.59
2.21.8	0051	POLE:160-179MM TOP DIA X LG 11M ;WOOD	Ea	R	504.59
2.21.9	0051	POLE:180-199MM TOP DIA X LG 11M ;WOOD	Ea	R	504.59
2.21.10	0051	POLE:200-219MM TOP DIA X LG 11M ;WOOD	Ea	R	504.59
2.21.11	0053	POLE:160-179MM TOP DIA LG 12 M;WOOD	Ea	R	504.59
2.21.12	0053	POLE:180-199MM TOP DIA X LG 12 M;WOOD	Ea	R	504.59
2.21.13	0053	POLE:200-219MM TOP DIA X LG 12 M;WOOD	Ea	R	504.59
2.21.14	0056	POLE,WOOD 13.0 x 160-179	Ea	R	690.81
2.21.15	0056	POLE,WOOD 13.0 x 180-199	Ea	R	690.81
2.21.16	0056	POLE,WOOD 13.0 x 200-219	Ea	R	690.81
2.21.17	0054	POLE,WOOD 14.0 x 160-179	Ea	R	690.81
2.21.18	0054	POLE,WOOD 14.0 x 180-199	Ea	R	690.81
2.21.19	0054	POLE,WOOD 14.0 x 200-219	Ea	R	690.81
2.21.20	0057	POLE,WOOD 15.0 x 200-219	Ea	R	897.69
2.21.21	0049	POLE,WOOD 16.0 x 180-199	Ea	R	897.69
2.21.22	0049	POLE,WOOD 16.0 x 200-219	Ea	R	897.69
2.21.23	0048	POLE,WOOD 18.0 x 180-199	Ea	R	897.69
2.21.24	0048	POLE,WOOD 18.0 x 200-219	Ea	R	897.69

STAYS AND STRUTS		Install stays, flying stays, struts. Accessories include staywire, stayrods, stay plates, stay anchors, stay insulators, guy grips, stay mounting brackets, mounting hardware, anti climbing devices, stayguards and danger labels. Poles and excavations are measured elsewhere. The installation and erection of strut poles are measured here		
Installing Stay and strut assemblies				
2.22				
2.22.1	0341 (Sh 1 of 5)	STAY ASSEMBLY (LV - 35kN) WOOD POLES	Ea	R 190.80
2.22.2	0341 (Sh 2 of 5)	STAY ASSEMBLY (MV - 97kN) WOOD POLES	Ea	R 206.70
2.22.3	0341 (Sh 4 of 5)	MV HEAVY / HV LINES CONDUCTOR STAY ASSEMBLY (MV - 115kN) WOOD POLES	Ea	R 222.60
2.22.4	0341 (Sh 5 of 5)	STAY GUARD APPLICATION (IF REQUIRED)	Ea	R 108.56
2.22.5	0342 (Sh 1 of 3)	STRUT ASSEMBLY FLAT 45 DEG. BRACKET 7m AND 9m POLES	Ea	R 217.70
2.22.6	0342 (Sh 2 of 3)	STRUT ASSEMBLY SWIVEL BRACKET 11m, 12m AND 13m WOOD POLES	Ea	R 326.55
2.22.7	0342 (Sh 3 of 3)	STRUT ASSEMBLY WOOD H - POLE FOR -11m , 12m and 13m poles	Ea	R 435.41
2.22.8	0343	LV/MV - OVERHEAD FLYING STAY ARRANGEMENT	Ea	R 435.40
2.22.9	0344	HIP STAY FROM WOOD POLE FOUNDATION AND ASSEMBLY	Ea	R 740.99
2.22.10	0357 (Sh 1 of 3)	LV/MV-ROCK ANCHOR INSTALLATION (EXPANDABLE SHELL & RESIN TYPE)	Ea	R 1 068.77
2.22.11	0357 (Sh 2 of 3)	LV/MV-ROCK ANCHOR INSTALLATION (2 EYED ROD AND PIN TYPE)	Ea	R 1 068.77
2.22.12	0357	MV/ SOFT ROCK ANCHOR INSTALLATION	Ea	R 1 068.77

BILL NO: 3		MV OVERHEAD SYSTEM		LABOUR RATE
a) All installations, assemblies and activities shall be as per Eskom DDT series, Eskom national or Eskom local technical instructions where applicable b) Eskom will advise what is free issue material and what is contractor supplied material				
NO.	D-D-T	DESCRIPTION	UNIT	
<b>MV CONDUCTOR</b>				
Install Eskom issued marked conductor. Material quantity to allow for 5% sag in addition to actual conductor length quantity. Installation includes handling, stringing and final sagging.				
<b>3.1</b>				
3.1.1	3136	MV Bare ACSR Fox Ungreased	m	R 2.87
3.1.2	3136	MV Bare ACSR Fox Greased	m	R 2.87
3.1.3	3136	MV Bare AAAC 35mmisq Greased	m	R 2.87
3.1.4	3136	MV Bare AAAC Pine Greased	m	R 2.87
3.1.5	3136	MV Bare ACSR Mink Greased	m	R 2.87
3.1.6	3136	MV Bare ACSR Mink Ungreased	m	R 2.87
3.1.7	3136	MV Bare AAAC Oak Greased	m	R 2.87
3.1.8	3136	MV Bare ACSR Hare Greased	m	R 3.04
3.1.9	3136	MV Bare ACSR Hare Ungreased	m	R 3.04
3.1.10	3136	MV Bare Chicadee conductor- Greased	m	R 5.19
3.1.11	3136	MV Bare Chicadee conductor- Ungreased	m	R 5.19
3.1.12	3136	MV ABC 11 KV 35 mmisq 3 Core	m	R 6.31
3.1.13	3136	MV ABC 11 KV 95 mmisq 3 Core	m	R 8.26
3.1.14	3136	MV ABC 22 KV 35 mmisq 3 Core	m	R 6.31
3.1.15	3136	MV ABC 22 KV 95 mmisq 3 Core	m	R 8.26
<b>MV CONDUCTOR</b> Erect MV support structures. Auxiliary equipment such as bonding, BIL downwire, jumpers, jumper terminations, pole and x-arm mounting and mounting hardware, conductor attachment hardware and				



3.2.31	1310	Phase / phase – Staggered Vertical (600mm spacing) – Intermediate - 0° Deviation Rx	Ea	R	300.63
3.2.32	1310	Phase / phase – Staggered Vertical (600mm spacing) – Intermediate - 0° Deviation Rx With Spark Gap Device	Ea	R	300.63
3.2.33	1311	Phase / phase – Vertical (600mm spacing) – Intermediate - Small-(1±10°) Deviation	Ea	R	300.63
3.2.34	1311	Phase / phase – Vertical (600mm spacing) – Intermediate - Small-(1±10°) Deviation Rx	Ea	R	300.63
3.2.35	1312	Phase / phase – Vertical (600mm spacing) – Intermediate - Medium (10-30°) Deviation	Ea	R	300.63
3.2.36	1312	Phase / phase – Vertical (600mm spacing) – Intermediate - Medium (10-30°) Deviation Rx	Ea	R	300.63
3.2.37	1313	Phase / phase – Vertical (600mm spacing) – Strain - 0° Deviation	Ea	R	490.96
3.2.38	1313	Phase / phase – Vertical (600mm spacing) – Strain - 0° Deviation Rx	Ea	R	490.96
3.2.39	1314	Phase / phase – Vertical (600mm spacing) – Strain-Small (1-30°) Deviation	Ea	R	490.96
3.2.40	1314	Phase / phase – Vertical (600mm spacing) – Strain-Small (1-30°) Deviation Rx	Ea	R	490.96
3.2.41	1315	Phase / phase – Vertical (600mm spacing) – Strain - Large (30-90°) Deviation	Ea	R	490.96
3.2.42	1315	Phase / phase – Vertical (600mm spacing) – Strain - Large (30-90°) Deviation Rx	Ea	R	490.96
3.2.43	1316	Phase / phase – Vertical (600mm spacing) – Strain - Terminal	Ea	R	245.48
3.2.44	1316	Phase / phase – Vertical (600mm spacing) – Strain - Terminal Rx	Ea	R	245.48
3.2.45	1340B	Phase / phase – Delta/2.5M Wooden X-arm – Strain - 0° Deviation	Ea	R	533.05
3.2.46	1340B	Phase / phase – Delta/2.5M Wooden X-arm – Strain - 0° Deviation Rx	Ea	R	533.05
3.2.47	1340B	Phase / phase – Delta/2.5M Wooden X-arm – Strain - 0° Deviation With Spark Gap Device	Ea	R	561.11
3.2.48	1340B	Phase / phase – Delta/2.5M Wooden X-arm – Strain - 0° Deviation With Spark Gap Device-Rx	Ea	R	561.11
3.2.49	1343	Phase / phase – Delta/2.5M Wooden X-arm – Strain - 0° Deviation	Ea	R	533.05
3.2.50	1343	Phase / phase – Delta/2.5M Wooden X-arm – Strain - 0° Deviation - Rx	Ea	R	533.05
3.2.51	1344	Phase / phase – Delta/2.5M Wooden X-arm – Strain - Medium (1-60°) Deviation	Ea	R	533.05
3.2.52	1344	Phase / phase – Delta/2.5M Wooden X-arm – Strain - Medium (1-60°) Deviation - Rx	Ea	R	533.05
3.2.53	1346	Phase / phase – Delta/2.5M Wooden X-arm – Strain - Terminal	Ea	R	451.59
3.2.54	1346	Phase / phase – Delta/2.5M Wooden X-arm – Strain - Terminal -Rx	Ea	R	451.59
3.2.55	1370	Phase / phase – H-Pole / 4.5m Wood X-arm – Intermediate - 0° Deviation	Ea	R	654.63
3.2.56	1370	Phase / phase – H-Pole / 4.5m Wood X-arm – Intermediate - 0° Deviation -Rx	Ea	R	654.63
3.2.57	1370	Phase / phase – H-Pole / 4.5m Wood X-arm – Intermediate - 0° Deviation -With Spark Gap device	Ea	R	701.38
3.2.58	1370	Phase / phase – H-Pole / 4.5m Wood X-arm – Intermediate - 0° Deviation -With Spark Gap device-Rx	Ea	R	701.38
3.2.59	1371	Phase / phase – H-Pole / 4.5m Wood x-arm – Intermediate - Small (1 – 10°) deviation	Ea	R	654.63
3.2.60	1371	Phase / phase – H-Pole / 4.5m Wood x-arm – Intermediate - Small (1 – 10°) deviation-Rx	Ea	R	701.38
3.2.61	1373	Phase / phase – H-Pole / 4.5m Wood X-arm – Strain - 0° Deviation	Ea	R	757.49
3.2.62	1373	Phase / phase – H-Pole / 4.5m Wood X-arm – Strain - 0° Deviation -Rx	Ea	R	757.49
3.2.63	1374	Phase / phase – H-Pole / 4.5m Wood X-arm – Strain - Medium (1° - 60°) Deviation	Ea	R	757.49
3.2.64	1374	Phase / phase – H-Pole / 4.5m Wood X-arm – Strain - Medium (1° - 60°) Deviation -Rx	Ea	R	757.49
3.2.65	1376	Phase / phase – H-Pole / 4.5m Wood X-arm – Strain - Terminal	Ea	R	430.13

3.2.101	1740B	3 Phase - Delta / 2.5m Wood X-arm - Intermediate - 0° Deviation	Ea	R	561.11
3.2.102	1740B	3 Phase - Delta / 2.5m Wood X-arm - Intermediate - 0° Deviation -RX	Ea	R	561.11
3.2.103	1740B	3 Phase - Delta / 2.5m Wood X-arm - Intermediate - 0° Deviation -With Spark Gap Device	Ea	R	583.55
3.2.104	1740B	3 Phase - Delta / 2.5m Wood X-arm - Intermediate - 0° Deviation -With Spark Gap Device-RX	Ea	R	583.55
3.2.105	1740# (V)	3 Phase - Delta / 2.5m Wood X-arm - Intermediate - 0° Deviation	Ea	R	700.26
3.2.106	1740# (V)	3 Phase - Delta / 2.5m Wood X-arm - Intermediate - 0° Deviation -RX	Ea	R	700.26
3.2.107	1740# (V)	3 Phase - Delta / 2.5m Wood X-arm - Intermediate - 0° Deviation -With Spark Gap Device	Ea	R	700.26
3.2.108	1740# (V)	3 Phase - Delta / 2.5m Wood X-arm - Intermediate - 0° Deviation -With Spark Gap Device-RX	Ea	R	700.26
3.2.109	1743	3 Phase - Delta / 2.5m Wood X-arm - Strain - 0° Deviation	Ea	R	561.11
3.2.110	1743	3 Phase - Delta / 2.5m Wood X-arm - Strain - 0° Deviation -RX	Ea	R	561.11
3.2.111	1743A	3 Phase - Delta / 2.5m Wood X-arm - Strain - 0° Deviation	Ea	R	561.11
3.2.112	1743A	3 Phase - Delta / 2.5m Wood X-arm - Strain - 0° Deviation -RX	Ea	R	561.11
3.2.113	1744	3 Phase - Delta / 2.5m Wood X-arm - Strain - Medium (1°-60°) Deviation	Ea	R	561.11
3.2.114	1744	3 Phase - Delta / 2.5m Wood X-arm - Strain - Medium (1°-60°) Deviation -RX	Ea	R	561.11
3.2.115	1744A	3 Phase - Delta / 2.5m Wood X-arm - Strain - Small (1°-10°) Deviation	Ea	R	561.11
3.2.116	1744A	3 Phase - Delta / 2.5m Wood X-arm - Strain - Small (1°-10°) Deviation -RX	Ea	R	561.11
3.2.117	1744B	3 Phase - Delta / 2.5m Wood X-arm - Strain - Medium (11°-30°) Deviation	Ea	R	561.11
3.2.118	1744B	3 Phase - Delta / 2.5m Wood X-arm - Strain - Medium (11°-30°) Deviation -RX	Ea	R	561.11
3.2.119	1744C	3 Phase - Delta / 2.5m Wood X-arm - Strain - Large (31°-60°) Deviation	Ea	R	561.11
3.2.120	1744C	3 Phase - Delta / 2.5m Wood X-arm - Strain - Large (31°-60°) Deviation -RX	Ea	R	561.11
3.2.121	1745	3 Phase - Delta / 2 x 2.5m wood x-arms/ 2 x 2.5 wood x-arms - strain - (60° - 90°) deviation (for Mink and Hare conductors)	Ea	R	700.26
3.2.122	1745	3 Phase - Delta / 2 x 2.5m wood x-arms/ 2 x 2.5 wood x-arms - strain - (60° - 90°) deviation (for Mink and Hare conductors) - Rx	Ea	R	700.26
3.2.123	1745	3 Phase - Delta / 2.5m wood x-arms (2.5 wood x-arms - strain - (60° - 90°) deviation (for Fox and 35 conductors)	Ea	R	700.26
3.2.124	1745	3 Phase - Delta / 2.5m wood x-arms (2.5 wood x-arms - strain - (60° - 90°) deviation (for Fox and 35 conductors) - Rx	Ea	R	700.26
3.2.125	1745d	3 Phase - Delta / 2 x 2.5m wood x-arms - strain - (61° - 90°) deviation (for Fox and 35 conductors)	Ea	R	700.26
3.2.126	1745d	3 Phase - Delta / 2 x 2.5m wood x-arms - strain - (61° - 90°) deviation (for Fox and 35 conductors) - Rx	Ea	R	700.26
3.2.127	1746	3 Phase - Delta / 2.5m Wood X-arm - Strain - Terminal	Ea	R	417.32
3.2.128	1746	3 Phase - Delta / 2.5m Wood X-arm - Strain - Terminal -RX	Ea	R	417.32
3.2.129	1746A	3 Phase - Delta / 2.5m Wood X-arm - Strain - Terminal	Ea	R	417.32
3.2.130	1746A	3 Phase - Delta / 2.5m Wood X-arm - Strain - Terminal -RX	Ea	R	417.32
3.2.131	1746B	3 Phase - Delta / 2.5m Wood X-arm - Strain - Terminal	Ea	R	417.32

3.2.169	1764	3 Phase - H-Pole / 3.5m Wood X-arm - Strain - Medium (1°-60°) Deviation	Ea	R	779.58
3.2.170	1764	3 Phase - H-Pole / 3.5m Wood X-arm - Strain - Medium (1°-60°) Deviation -RX	Ea	R	779.58
3.2.171	1766	3 Phase - H-Pole / 3.5m Wood X-arm - Strain - Terminal	Ea	R	779.58
3.2.172	1766	3 Phase - H-Pole / 3.5m Wood X-arm - Strain - Terminal -RX	Ea	R	779.58
3.2.173	1767	3 Phase - H-Pole / 2 x 3.5m Wood X-arm - Strain - 0° Deviation	Ea	R	779.58
3.2.174	1767	3 Phase - H-Pole / 2 x 3.5m Wood X-arm - Strain - 0° Deviation -RX	Ea	R	779.58
3.2.175	1768	3 Phase - H-Pole / 2 x 3.5m Wood X-arm - Strain - Medium (1°-60°) Deviation	Ea	R	779.58
3.2.176	1768	3 Phase - H-Pole / 2 x 3.5m Wood X-arm - Strain - Medium (1°-60°) Deviation -RX	Ea	R	779.58
3.2.177	1769	3 Phase - H-Pole / 2 x 3.5m Wood X-arm - Strain - Terminal	Ea	R	779.58
3.2.178	1769	3 Phase - H-Pole / 2 x 3.5m Wood X-arm - Strain - Terminal -RX	Ea	R	779.58
3.2.179	1770	3 Phase - H-Pole / 4.5m Wood X-arm - Intermediate - 0° Deviation	Ea	R	779.58
3.2.180	1770	3 Phase - H-Pole / 4.5m Wood X-arm - Intermediate - 0° Deviation -RX	Ea	R	779.58
3.2.181	1770	3 Phase - H-Pole / 4.5m Wood X-arm - Intermediate - 0° Deviation - With Spark Gap Device	Ea	R	779.58
3.2.182	1770	3 Phase - H-Pole / 4.5m Wood X-arm - Intermediate - 0° Deviation - With Spark Gap Device -RX	Ea	R	779.58
3.2.183	1770# (Y)	3 Phase - H-Pole / 4.5m Wood X-arm - Intermediate - 0° Deviation	Ea	R	779.58
3.2.184	1770# (Y)	3 Phase - H-Pole / 4.5m Wood X-arm - Intermediate - 0° Deviation -RX	Ea	R	779.58
3.2.185	1770# (Y)	3 Phase - H-Pole / 4.5m Wood X-arm - Intermediate - 0° Deviation - With Spark Gap Device	Ea	R	779.58
3.2.186	1770# (Y)	3 Phase - H-Pole / 4.5m Wood X-arm - Intermediate - 0° Deviation - With Spark Gap Device -RX	Ea	R	779.58
3.2.187	1771	3 Phase - H-Pole / 4.5m Wood X-arm - Intermediate - Small (1°-±10°) Deviation	Ea	R	779.58
3.2.188	1771	3 Phase - H-Pole / 4.5m Wood X-arm - Intermediate - Small (1°-±10°) Deviation -RX	Ea	R	779.58
3.2.189	1771A	3 Phase - H-Pole / 4.5m Wood X-arm - Intermediate - Small (1°-±5°) Deviation	Ea	R	779.58
3.2.190	1771A	3 Phase - H-Pole / 4.5m Wood X-arm - Intermediate - Small (1°-±5°) Deviation -RX	Ea	R	779.58
3.2.191	1773	3 Phase - H-Pole / 4.5m Wood X-arm - Strain - 0° Deviation	Ea	R	779.58
3.2.192	1773	3 Phase - H-Pole / 4.5m Wood X-arm - Strain - 0° Deviation -RX	Ea	R	779.58
3.2.193	1774	3 Phase - H-Pole / 4.5m Wood X-arm - Strain - Medium (1°-60°) Deviation	Ea	R	779.58
3.2.194	1774	3 Phase - H-Pole / 4.5m Wood X-arm - Strain - Medium (1°-60°) Deviation -RX	Ea	R	779.58
3.2.195	1774A	3 Phase - H-Pole / 4.5m Wood X-arm - Strain - Small (1°-10°) Deviation	Ea	R	779.58
3.2.196	1774A	3 Phase - H-Pole / 4.5m Wood X-arm - Strain - Small (1°-10°) Deviation -RX	Ea	R	779.58
3.2.197	1774B	3 Phase - H-Pole / 4.5m Wood X-arm - Strain - Medium (11°-30°) Deviation	Ea	R	779.58
3.2.198	1774B	3 Phase - H-Pole / 4.5m Wood X-arm - Strain - Medium (11°-30°) Deviation -RX	Ea	R	779.58
3.2.199	1774C	3 Phase - H-Pole / 4.5m Wood X-arm - Strain - Large (31°-60°) Deviation	Ea	R	779.58
3.2.200	1774C	3 Phase - H-Pole / 4.5m Wood X-arm - Strain - Large (31°-60°) Deviation -RX	Ea	R	413.88
3.2.201	1776	3 Phase - H-Pole / 4.5m Wood X-arm - Strain - Terminal	Ea	R	430.13
3.2.202	1776	3 Phase - H-Pole / 4.5m Wood X-arm - Strain - Terminal -RX	Ea	R	779.58
3.2.203	1777	3 Phase - H-Pole / 2 x 4.5m Wood X-arm - Strain - 0° Deviation	Ea	R	779.58

3.2.240	1791	MV heavy conductor - 22kv 3 phase - vertical 800mm spacing strain - Large (60° - 90°) Deviation (double wood poles)	Ea	R	651.38
3.2.241	1792	MV heavy conductor - 22kv 3 phase - vertical 800mm spacing strain - Large (30° - 60°) Deviation (double wood poles)	Ea	R	651.38
3.2.242	1793	Heavy Conductor H-Pole Suspension Structure	Ea	R	841.66
3.2.243	1793	Heavy Conductor H-Pole Suspension Structure- With Spark Gap Device	Ea	R	841.66
3.2.244	1794	Heavy Conductor H-Pole Braced In-Line strain	Ea	R	1 066.10
3.2.245	1795	Heavy Conductor H-Pole Braced Angle strain (1-60°)	Ea	R	1 066.10
3.2.246	1796	Heavy Conductor H-Pole Braced Terminal structure	Ea	R	701.38
3.2.247	1873	3 Phase H-pole /2X4.5m Wooden X-arm Strain Large (60-90°) Deviation	Ea	R	701.38
3.2.248	1873	3 Phase H-pole /2X4.5m Wooden X-arm Strain Large (60-90°) Deviation Rx	Ea	R	138.97
3.2.249	0450	SWER - Take-Off from Intermediate	Ea	R	138.97
3.2.250	0450	SWER - Take-Off from Intermediate - Rx	Ea	R	138.97
3.2.251	0450	SWER - Take-Off from strain	Ea	R	138.97
3.2.252	0450	SWER - Take-Off from strain - Rx	Ea	R	138.97
3.2.253	0451	SWER - Take-Off With Earthwire from Intermediate	Ea	R	138.97
3.2.254	0451	SWER - Take-Off With Earthwire from Intermediate - Rx	Ea	R	138.97
3.2.255	0451	SWER - Take-Off With Earthwire from strain	Ea	R	138.97
3.2.256	0451	SWER - Take-Off With Earthwire from strain - Rx	Ea	R	138.97
3.2.257	1801	3 Phase Take-off - Vertical 600mm Spacing	Ea	R	272.60
3.2.258	1801	3 Phase Take-off - Vertical 600mm Spacing Rx	Ea	R	272.60
3.2.259	1804	3 Phase Take-off - 2.5m Wooden X-arm-RX	Ea	R	272.60
3.2.260	1804	3 Phase Take-off - 2.5m Wooden X-arm	Ea	R	272.60
3.2.261	1805	3 Phase Take-off - 2 x 2.5m Wooden X-arm	Ea	R	272.60
3.2.262	1805	3 Phase Take-off - 2 x 2.5m Wooden X-arm-RX	Ea	R	272.60
3.2.263	1806	3 Phase Take-off - H-Pole (3.5m Wooden X-arm)	Ea	R	272.60
3.2.264	1806	3 Phase Take-off - H-Pole (3.5m Wooden X-arm)-RX	Ea	R	272.60
3.2.265	1807	3 Phase Take-off - H-Pole (2 x 3.5m Wooden X-arm)	Ea	R	272.60
3.2.266	1807	3 Phase Take-off - H-Pole (2 x 3.5m Wooden X-arm)-RX	Ea	R	272.60
3.2.267	1811	Phase /phase Take-off - Vertical (600mm spacing)	Ea	R	272.60
3.2.268	1811	Phase /phase Take-off - Vertical (600mm spacing)-RX	Ea	R	272.60
3.2.269	1814	Phase /phase Take-off - 2.5m Wooden X-arm	Ea	R	194.42
3.2.270	1814	Phase /phase Take-off - 2.5m Wooden X-arm-RX	Ea	R	194.42
3.2.271	1815	Phase /phase Take-off - 2 x 2.5m Wooden X-arm	Ea	R	194.42
3.2.272	1815	Phase /phase Take-off - 2 x 2.5m Wooden X-arm-RX	Ea	R	194.42
3.2.273	1816	Phase /phase Take-off - H-Pole (3.5m Wooden X-arm)	Ea	R	194.42
3.2.274	1816	Phase /phase Take-off - H-Pole (3.5m Wooden X-arm)-RX	Ea	R	194.42
3.2.275	1817	Phase /phase Take-off - H-Pole (2 x 3.5m Wooden X-arm)	Ea	R	272.60
3.2.276	1817	Phase /phase Take-off - H-Pole (2 x 3.5m Wooden X-arm)-RX	Ea	R	272.60

3.3.26	374	MV heavy strain assembly - (conductor above hare) single wood pole strain bracket (strain insulator sub assembly) (adjustable and non-adjustable)	Ea	R	325.69
3.3.27	374	MV heavy strain assembly - (conductor above hare) h-wood pole with double crossarms strain bracket (strain insulator sub assembly) (adjustable and non-adjustable)	Ea	R	325.69
3.3.28	375	MV-terminal assembly - wood crossarm - eyebolt	Ea	R	108.56
3.3.29	376	MV-terminal assembly - (up to and including hare conductor) 2 x wood cross - threaded rod and non-adjustable insulator string sub assembly)	Ea	R	108.56
3.3.30	376	MV heavy terminal assembly - (conductor above hare) single wood pole strain bracket adjustable and non-adjustable insulator string sub assembly)	Ea	R	217.13
3.3.31	376	MV heavy terminal assembly - (conductor above hare) h-pole with double crossarms strain bracket adjustable and non-adjustable insulator string sub assembly)	Ea	R	217.13
3.3.32		Installation of raptor protector	Ea	R	162.84
3.3.33	399	MV - equipment mounting assembly anti-climbing - device barbed wire	Ea	R	162.84
3.3.34	399	MV - equipment mounting assembly anti-climbing device - barbed wire for stay assembly	Ea	R	162.84
3.3.35	399	MV - equipment mounting assembly anti-climbing device - for parallel stay assembly	Ea	R	244.27
3.3.36	310	Install broken/damage bonding & BIL on existing structure	Ea	R	162.84
3.3.37	310	Install broken/damage bonding & BIL on existing structure with spark gap device	Ea	R	244.27
3.3.38		Pegging of MV poles and stays	Ea	R	71.09
			<b>TOTAL</b>		
			<b>CARRIED TO</b>		
			<b>CURRENT PAGE</b>		
Verified By:					
Clerk of Works					
Checked By:					
Quantity Surveyor					
Accepted By:					
Contractor					
Approved By:					
PM / PC					

BILL NO: 4		LV OVERHEAD SYSTEM		LABOUR RATE
Note: a) All installations, assemblies and activities shall be as per Eskom DDT series, Eskom national or Eskom local technical instructions where applicable b) Eskom will advise what is free issue material and what is contractor supplied material				
NO.	D-D-T	DESCRIPTION	UNIT	
LV CONDUCTOR		Install Eskom issued specified conductor. Material quantity to allow for 5% sag in addition to actual conductor length quantity. Installation includes handling, stringing and final sagging.		
4.1		A. Handling, stringing and final sagging.		R 4.16
4.1.1	3141	COND,ABC 2C XLPE 35SQ INS NEUT	m	R 5.00
4.1.2	3141	COND,ABC 3C XLPE 35SQ INS NEUT	m	R 5.84
4.1.3	3141	COND,ABC 4C XLPE 35SQ INS NEUT	m	R 6.68
4.1.4	3141	COND,ABC 5C XLPE 35SQ INS NFUIT	m	R 6.68

4.3.3	0942	LV 2 phase Bare Wire 1-100 Deg Angle Assembly	Ea	R	160.27
4.3.4	0944	LV 2 phase Bare Wire Terminal Assembly	Ea	R	160.27
4.3.5	0945	LV 2 phase Bare Wire T-Off Assembly from Intermediate	Ea	R	160.27
4.3.6	0946	LV 2 phase Bare Wire Intermediate Right Angle Crossing	Ea	R	360.61
4.3.7	0947	LV 2 phase Bare Wire T-Off Assembly from Strain	Ea	R	160.27
4.3.8	0948	LV 2 phase Bare Wire Cable Connection	Ea	R	160.27
4.3.9	0949	LV 2 phase Bare Wire Service Distribution Box Connection	Ea	R	110.19
4.3.10	0950	LV 2 phase Bare Wire Open Wire/ABC Connection	Ea	R	160.27
4.3.11	0951	LV 2 phase Bare Wire Intermediate Strain Crossing	Ea	R	260.44
4.3.12	0952	LV 2 phase Bare Wire Strain-Strain Crossing	Ea	R	310.52
<b>4.4.</b>		<b>C. List of Single-phase Bare Wire wood pole</b>			
4.4.1	0960	LV 1 phase Bare Wire Suspension Assembly 0 Deg	Ea	R	120.20
4.4.2	0961	LV 1 phase Bare Wire in-line Strain Assembly	Ea	R	120.20
4.4.3	0962	LV 1 phase Bare Wire 1-100 Deg Angle Assembly	Ea	R	120.20
4.4.4	0964	LV 1 phase Bare Wire Terminal Assembly	Ea	R	120.20
4.4.5	0965	LV 1 phase Bare Wire T-Off Assembly from Intermediate	Ea	R	120.20
4.4.6	0966	LV 1 phase Bare Wire Intermediate Right Angle Crossing	Ea	R	320.54
4.4.7	0967	LV 1 phase Bare Wire T-Off Assembly from Strain	Ea	R	120.20
4.4.8	0968	LV 1 phase Bare Wire Cable Connection	Ea	R	120.20
4.4.9	0969	LV 1 phase Bare Wire Service Distribution Box Connection	Ea	R	66.11
4.4.10	0970	LV 1 phase Bare Wire Open Wire/ABC Connection	Ea	R	120.20
4.4.11	0971	LV 1 phase Bare Wire Intermediate Strain Crossing	Ea	R	220.37
4.4.12	0972	LV 1 phase Bare Wire Strain-Strain Crossing	Ea	R	270.45

**Erect LV support structures. (Only use insulated neutral ABC).  
Auxiliary equipment such as strain clamps, suspension clamps,  
LV cable insulators, binding**

<b>4.6.</b>	<b>B. List of Dual - phase ABC wood pole</b>			
4.6.1	LV 2 phase insulated/bare neutral ABC Suspension Assembly (0°-30°)	Ea	R	100.17
4.6.2	LV 2 phase insulated/bare neutral ABC Terminal Assembly	Ea	R	130.22
4.6.3	LV 2 phase insulated/bare neutral ABC Strain Assembly (0° - 60°)	Ea	R	190.32
4.6.4	LV 2 phase insulated/bare neutral ABC Strain Assembly (60° - 90°)	Ea	R	190.32
4.6.5	LV 2 phase insulated/bare neutral ABC T from Intermediate	Ea	R	130.22
4.6.6	LV 2 phase insulated/bare neutral ABC Intermediate Suspension Assembly	Ea	R	220.37
4.6.7	LV 2 phase insulated/bare neutral ABC T from Strain	Ea	R	130.22
4.6.8	LV 2 phase insulated/bare neutral ABC X Intermediate-Strain Assembly	Ea	R	220.37
<b>4.7.</b>	<b>C. List of Three-phase ABC wood pole</b>			
4.7.1	LV 3 phase insulated/bare neutral ABC Suspension Assembly (0° - 30°)	Ea	R	100.17
4.7.2	LV 3 phase insulated/bare neutral ABC Terminal Assembly	Ea	R	140.24
4.7.3	LV 3 phase insulated/bare neutral ABC Strain Assembly (0° - 60°)	Ea	R	210.35
4.7.4	LV 3 phase insulated/bare neutral ABC Strain Assembly (60° - 90°)	Ea	R	210.35
4.7.5	LV 3 phase insulated/bare neutral ABC T from Intermediate	Ea	R	140.24
4.7.6	LV 3 phase insulated/bare neutral ABC Intermediate Suspension Assembly	Ea	R	240.40
4.7.7	LV 3 phase insulated/bare neutral ABC T from Strain	Ea	R	140.24
4.7.8	LV 3 phase insulated/bare neutral ABC X Intermediate-Strain	Ea	R	240.40



4.8.12	0309	Single phase trf and LV fuse holder connection - ABC conductor- 63A NH00	Set	R	133.61
4.8.13	0309	Single phase trf and LV fuse holder connection - ABC conductor- 80A NH00	Set	R	133.61
4.8.14	0309	Single phase trf and LV fuse holder connection - ABC conductor- 125A NH00	Set	R	133.61
4.8.15	0309	Single phase trf and LV fuse holder connection - ABC conductor- 160A NH00	Set	R	133.61
4.8.16	0309	Three phase trf and LV fuse holder connection - Bare wire conductor- 40A NH00	Set	R	133.61
4.8.17	0309	Three phase trf and LV fuse holder connection - Bare wire conductor- 63A NH00	Set	R	133.61
4.8.18	0309	Three phase trf and LV fuse holder connection - Bare wire conductor- 80A NH00	Set	R	133.61
4.8.19	0309	Three phase trf and LV fuse holder connection - Bare wire conductor- 125A NH00	Set	R	133.61
4.8.20	0309	Three phase trf and LV fuse holder connection - Bare wire conductor- 160A NH00	Set	R	133.61
4.8.21	0309	Dual phase trf and LV fuse holder connection - Bare wire conductor- 40A NH00	Set	R	133.61
4.8.22	0309	Dual phase trf and LV fuse holder connection - Bare wire conductor- 63A NH00	Set	R	133.61
4.8.23	0309	Dual phase trf and LV fuse holder connection - Bare wire conductor- 80A NH00	Set	R	133.61
4.8.24	0309	Dual phase trf and LV fuse holder connection - Bare wire conductor- 125A NH00	Set	R	133.61
4.8.25	0309	Dual phase trf and LV fuse holder connection - Bare wire conductor-	Set	R	133.61

4.10.1	LV continuity test		Ea	R	133.61
4.10.2	LV phasing test		Ea	R	133.61
<b>MISCELLANEOUS</b>					
Allow for the following end items to be applied as per relevant Eskom DDT series, Eskom national or Eskom local technical instructions where applicable					
4.11.					
4.11.1	POLE TOP BOX PHASING LABELS		Ea	R	21.79
4.11.2	3049 ALUMINIUM POLE TAG 25x150MM WITH POLE NUMBER		Ea	R	43.56
4.11.3	3089 JOINT,MSPN SET 3x35+35SQ B/N ABC		Ea	R	180.12
4.11.4	3089 JOINT,MSPN SET 3x70+50SQ B/N ABC		Ea	R	180.12
4.11.5	3089 JOINT,MSPN SET 2x35+35SQ B/N ABC		Ea	R	135.09
4.11.6	3089 JOINT,MSPN SET 1x35+35SQ B/N ABC		Ea	R	45.03
4.11.7	3089 JOINT,MSPN SET 3x35+54.6SQ INSNEUT		Ea	R	180.12
4.11.8	3089 JOINT,MSPN SET 3x70+54.6SQ INSNEUT		Ea	R	180.12
4.11.9	JOINT,MSPN SET 3x95+54.6SQ INSNEUT		Ea	R	180.12
4.11.10	JOINT,MSPN SET 3x35+54.6SQ+aux core INSNEUT		Ea	R	180.12
4.11.11	JOINT,MSPN SET 3x70+54.6SQ+aux core INSNEUT		Ea	R	180.12
4.11.12	JOINT,MSPN SET 3x95+54.6SQ+aux core INSNEUT		Ea	R	180.12
4.11.13	0980 LV Bare Wire - MV/LV Bare Wire Staying Technology		Ea	R	135.09
4.11.14	0981 LV Bare Wire - LV Metering 3Phase, 2Phase and 1Phase Connections		Ea	R	135.09
4.11.15	0982 LV Bare Wire - Eye Nut Assembly		Ea	R	97.71

4.11.16	0983	LV Bare Wire - Binding Techniques	Ea	R	135.09
4.11.17	3073	Joint, M/Span Mink/Pine I/C	Ea	R	180.12
4.11.18	3073	Joint, M/Span Fox /35 I/C	Ea	R	135.09
4.11.19	3228	Joint, Full Ten Auto 5.82 TO 8.64mm	Ea	R	45.03
4.11.20	3228	Joint, Full Ten Auto Mink/Pine	Ea	R	135.09
4.11.21		Pegging of LV poles and stays	Ea	R	71.09
<b>TOTAL</b>				<b>CARRIED TO</b>	

Verified By:	
Clerk of Works	DATE
Checked By:	
Quantity Surveyor	DATE
Accepted By:	
Contractor	DATE
Approved By:	
PM / PC	DATE

BILL NO: 5		MV EQUIPMENT AND SWITCHGEAR		LABOUR RATE
Note: a) All installations, assemblies and activities shall be as per Eskom DDT series, Eskom national or Eskom local technical instructions where applicable b) Eskom will advise what is free issue material and what is contractor supplied material		DESCRIPTION		UNIT
NO.	Eskom D-DT			
MV EQUIPMENT		Install transformer/recloser/voltage regulator/MV metering units. All auxiliary equipment to include station and distribution MV Surge arrestors as applicable, LV surge arrestors, control boxes, metering kiosks, jumper terminations, anti climbing devices, LDPE pipe covered jumpers, danger labels, channel irons, cradles, standoff insulators, conductor busbars, suitable equipment labels and other ancillary equipment as required by the relevant assembly and sub assembly drawings. Poles, stays, xarms, struts, isolators and earthing material and excavations are measured elsewhere. Transformers/reclosers/voltage regulators and MV metering units will be Eskom free issue material. Main line structures and auxiliary equipment are measured elsewhere		
5.1				
5.1.1	0420	SWER - Single Pole-mounted Isolation Transformer		Ea R 842.18
5.1.2	0421	SWER - 4 Pole-mounted Isolation Transformer		Ea R 1 261.44
5.1.3	0460	SWER - Single Pole-mounted Isolation Transformer Substation Auxiliary		Ea R 935.76
5.1.4	0461	SWER - H-pole mounted Isolation Transformer Substation Auxiliary		Ea R 935.76
5.1.5	0462	SWER-Distribution Transformer (16 or 32kVA)		Ea R 842.18
5.1.6	0463	SWER-Back-to-Back 64kVA Dual Phase Supply from a 19kV SWER Line		Ea R 1 428.42
5.1.7	0464	SWER- Single Phase Recloser on a Single Pole		Ea R 842.18
				R 695.62

5.1.29	1867	Transformer - Single pole mount 'back-to-back- 2 x 64kVA - General arrangement	Ea	R	2 296.36
5.1.30	1868	Transformer - Extended double platform mount - >500kVA - General arrangement	Ea	R	2 197.20
5.1.31	1844	Line Arrestors H-pole Configuration	Ea	R	1 415.55
5.1.32	1845	Line Arrestors Delta Configuration	Ea	R	1 252.71
<b>5.2 MV ISOLATORS</b>		<b>Install MV isolators. Accessories to include: solid inserts or expulsion type fuses, jumper terminations, mounting hardware, LDPE pipe covered jumpers. Disconnectors to be supplied with suitable labels. Crossarms are included.</b>			
5.2.1	0465	SWER - Cut out	Ea	R	217.13
5.2.2	1847	Section Links - Cut-outs - 3.5m / 4.5m Wood X-arm / H-pole (dual phase)-200A	set	R	533.02
5.2.3	1847	Section Links - Cut-outs - 3.5m / 4.5m Wood X-arm / H-pole (three phase)-200A	set	R	695.86
5.2.4	1847	Section Links - Cut-outs - 3.5m / 4.5m Wood X-arm / H-pole (three phase)-630A	set	R	695.86
5.2.5	1848	Section Links - Cut-outs - 2.5m Wood X-arm / Single Pole (dual phase)-200A	set	R	467.88
5.2.6	1848	Section Links - Cut-outs - 2.5m Wood X-arm / Single Pole (three phase)- 200A	set	R	630.72
5.2.7	1848	Section Links - Cut-outs - 3.5m / 4.5m Wood X-arm / H-pole-200A	set	R	630.72
5.2.8	1852	By-pass Links - Cut-outs - 3.5m / 4.5m Wood X-arm / H-pole-630A	set	R	695.86
5.2.9	1852	By-pass Links - Cut-outs - 3.5m / 4.5m Wood X-arm / H-pole-630A	set	R	695.86
5.2.10	1853	Equipment Isolating (in-out) Links - Cut-outs - 2 x 2.5m Wood X-arm / H-pole - 3 ph-200A	set	R	695.86
5.2.11	1853	Equipment Isolating (in-out) Links - Cut-outs - 2 x 2.5m Wood X-arm / H-pole - 3 ph-630A	set	R	695.86
5.2.12	1853	Equipment Isolating (in-out) Links - Cut-outs - 2 x 2.5m Wood X-arm / H-pole- ph-ph-200A	set	R	675.21
5.2.13	1857	Section / By-pass switch - Tri-switch - Single pole- 400A	set	R	630.72
5.2.14	1857	Section / By-pass switch - Tri-switch - Single pole- 630A	set	R	630.72
5.2.15	1858	Section / By-pass switch - Tri-switch - H-pole 1800 spacing- 400A	set	R	838.05
5.2.16	1858	Section / By-pass switch - Tri-switch - H-pole 1800 spacing- 630A	set	R	838.05

5.3 MV / LV EARTHING		<p>Install equipment earthing. All auxiliary equipment such as earth electrodes, earth connectors and conductor to be included. All excavations are measured elsewhere. The MV and LV earth installation shall be split into two activities, activity one is to connect the earth conductors electrically to the equipment and take the conductor down to the ground and then activity two is to lay the conductor in the trench and install earth electrodes(earth spikes) and connect the earth electrodes to the earthing conductor. A standard 15m length electrode is allowed for and the rate is per meter. If a longer electrode is required to obtain the Eskom required readings then the electrode must be extended.</p>	R	43.43	
5.3.1	0627/0642		Conventional Transformer MV Earth	m	43.43
5.3.2	0627/0642 1825,		Conventional & SWER Transformer LV earth	m	43.43
5.3.3	DER1825CBL, 1829B, 1829		Recloser MV earth	m	43.43
5.3.4	1833B/1834B/1 833/1834		MV Earth for regulator - 100 / 200A Open/Closed Delta	m	43.43
5.3.5	1840/1841/1846		MV Earth for MV CT VT Bulk/Stats metering	m	43.43
5.3.6	1832		MV Earth for MV capacitor bank	m	43.43
5.3.7	210		MV SWER isolation and distribution transformer main earth rod type electrode assembly - electrode to be specified by designer	m	65.14
5.3.8	211		MV SWER isolation and distribution transformer main earth trench type electrode assembly - electrode to be specified by designer	m	54.28
5.3.9	212		MV SWER isolation and distribution transformer understrung main earth rod type electrode assembly -electrode to be specified by designer	m	70.57
5.3.10	213		MV SWER isolation and distribution transformer understrung earth wire trench type electrode assembly -electrode to be specified by designer	m	59.71
<b>5.4 TESTING</b>			<b>Allowance shall be made( where applicable) for the complete testing and commissioning of equipment</b>		

BILL NO: 6		HOUSE SERVICE CONNECTIONS		LABOUR RATE
Note: a) All installations, assemblies and activities shall be as per Eskom DDT series, Eskom national or Eskom local technical instructions where applicable b) Eskom will advise what is free issue material and what is contractor supplied material				
NO.	D-D-T	DESCRIPTION	UNIT	
		<p>Install House Connections (Type A &amp; Type B). Accessories include house labels, pigtail bolts, strain clamps, cable saddles, passive base/ready board mounting hardware, threaded rods. Meters, Customer interface units, ready boards, service cable, poles, cable protection pipe. Excavations are measured elsewhere. For LV underground cable connections the excavations are measured elsewhere. The underground service connection activity shall be to install cable in pipe on pole and secure to pole, connect to the pole top box or feed the service cable into the pipe. Then fit cable in pipe and attach to dwelling wall and connect cable to the Electricity dispenser. The service cable must be installed in a protective pipe for service cable underground connection on pole and dwelling wall. The pipe shall be 2.9 m long and 25mm in diameter and included in the supply rate. The excavation of the service cable trench, laying of the cable and installation of the cable warning tape is measured elsewhere. NOTE: Excavations for underground cable is measured in this section under service cable.</p>		
		DIRECT & INDIRECT CONNECTIONS		
6.1				
6.1.1	0360	LV service connection direct to dwelling (from the pole top box to the pre-paid meter) (Type A) to brick dwelling	Ea	R 325.69

6.2.20		BS FOOTPRINT SINGLE PHASE SMART SPLIT METER WITH CIU + EXTERNAL GSM MODEM	Ea	R	162.84
6.2.21		BS FOOTPRINT THREE PHASE SMART PLC SPLIT METER WITH CIU	Ea	R	244.27
6.2.22		BS FOOTPRINT THREE PHASE SMART SPLIT METER WITH CIU + EXTERNAL GSM MODEM	Ea	R	244.27
6.2.23	1878/0639	GATEWAY/DATA CONCENTRATORS (DCU) + INTERNAL/PLUG-IN GSM MODEM	Ea	R	325.69
6.2.24	1878/0639	GATEWAY/DATA CONCENTRATORS (DCU) + EXTERNAL GSM MODEM	Ea	R	325.69
6.2.25	3145	CUSTOMER INTERFACE UNIT(CIU) WS	Ea	R	81.42
6.2.26	3145	CUSTOMER INTERFACE UNIT(CIU) PLC	Ea	R	162.84
6.2.27	3145	CUSTOMER INTERFACE UNIT(CIU) RF	Ea	R	162.84
<b>SERVICE CABLE</b>					
Install conductor. Material quantity to allow for 5% sag in addition to actual conductor length quantity. Installation includes handling, stringing and final sagging. The quantity shall be conductor length.					
6.3					
6.3.1	3140	CABLE ELECT:1000 V; TCU GSW;10 MM2 -Overhead line service cable connection	m	R	2.84
6.3.2	3140	CABLE ELECT:1000 V; TCU GSW;6 MM2 -Overheadline service cable connection	m	R	2.84
6.3.3	3140	CABLE ELECT:1000 V; TCU GSW;10 MM2 in 2.9m long, 25mm pipe(DDT3127). Underground service cable.	m	R	1.96
6.3.4	3140	CABLE ELECT:1000 V; TCU GSW;6 MM2 in 2.9m long, 25mm pipe(DDT3127). Underground service cable.	m	R	2.49
6.3.5	0360 sheet 8/DDT 0854	Excavation, backfilling, installation of cable warning tape and compacting. Class 1 soil, 600mm deep	m	R	44.60
6.3.6	0360 sheet 8/DDT 0854	Excavation, backfilling, installation of cable warning tape and compacting. Class 2 soil, 600mm deep	m	R	59.36
6.3.7	0360 sheet 8/DDT 0854	Excavation, backfilling, installation of cable warning tape and compacting. Class 3 soil, 600mm deep	m	R	88.87
6.3.8	0360 sheet 8/DDT 0854	Excavation, backfilling, installation of cable warning tape and compacting. Class 4 soil, 600mm deep	m	R	118.38
<b>CUSTOMER DATA COLLECTION</b>					
Capturing and handing over of customer data and updated PCS file					
6.4					



## LV UNDERGROUND CABLE WORK, TRENCHING & INSTALLATION

BILL NO:7	LV UNDERGROUND CABLE WORK, TRENCHING & INSTALLATION			LABOUR RATE
NO.	D-D-T	DESCRIPTION	UNIT	LABOUR RATE
		LV CABLE		
		Take delivery of and safely store LV cables on site. Install LV cable in trench. Excavations, joints and terminations are measured elsewhere. Cable rollers are required to pull cable into and in trench. This activity is only for the laying of the cable into the trench and positioning the cable in the trench.		
7.1				
7.1.1		CABLE ELECT:1 KV;2C;CU;16 MM2;	m	1.98
7.1.2		CABLE ELECT:1 KV;2C;CU;25 MM2;	m	2.05
7.1.3		CABLE ELECT:1 KV;2C;CU;35 MM2;	m	2.26
7.1.4		CABLE ELECT:1 KV;3C;CU;16 MM2;	m	2.40
7.1.5		CABLE ELECT:1 KV;3C;CU;25 MM2;	m	2.49
7.1.6		CABLE ELECT:1 KV;3C;CU;35 MM2;	m	2.75
7.1.7		CABLE ELECT:1 KV;3C;CU;70 MM2;	m	3.89
7.1.8		CABLE ELECT:1 KV;4C;CU;16 MM2;	m	2.54
7.1.9		CABLE ELECT:1 KV;4C;CU;25 MM2;	m	2.89
7.1.10		CABLE ELECT:1 KV;4C;CU;35 MM2;	m	3.24
7.1.11		CABLE ELECT:1 KV;4C;CU;50 MM2;	m	3.73
7.1.12		CABLE ELECT:1 KV;4C;CU;70 MM2;	m	4.64
7.1.13		CABLE ELECT 1.0KV 4C;CU;95 MM2	m	5.55

**Note:**

- a) All installations, assemblies and activities shall be as per Eskom DDT series, Eskom national or Eskom local technical instructions where applicable
- b) Eskom will advise what is free issue material and what is contractor supplied material

7.2.15	DDT 3236	KIOSK METER:3PH ;50 KVA ;RURAFLEX-POLE MOUNT	Ea	R	325.69
7.2.16	DDT 3236	KIOSK METER:3PH ;50KVA ;RURAFLEX-GROUND MOUNT	Ea	R	651.38
7.2.17	DDT 3236	KSK MTR:3PH ;25 KVA ;SPU NO METER-POLE MOUNT	Ea	R	569.95
7.2.18	DDT 3236	KSK MTR:3PH ;25 KVA ;SPU NO METER-GROUND MOUNT	Ea	R	895.64
7.2.19	DDT 3236	KSK MTR:3PH ;50 KVA ;SPU NO METER-POLE MOUNT	Ea	R	569.95
7.2.20	DDT 3236	KSK MTR:3PH ;50 KVA ;SPU NO METER-GROUND MOUNT	Ea	R	895.64
7.2.21	DDT 3236	KSK MTR:3PH ;50 KVA ;SPU DC & METER-POLE MOUNT	Ea	R	569.95
7.2.22	DDT 3236	KSK MTR:3PH ;100 KVA ;SPU DC & METER	Ea	R	814.22
7.2.23	DDT 3236	KIOSK METER:3PH ;100 KVA ;SPU-POLE MOUNT	Ea	R	488.53
7.2.24	DDT 3236	KIOSK METER:3PH ;100 KVA ;SPU-GROUND MOUNT	Ea	R	651.38
7.2.25	DDT 3236	KIOSK METER:3PH ;100 KVA ;EMPTY-POLE MOUNT	Ea	R	651.38
7.2.26	DDT 3236	KIOSK METER:3PH ;100 KVA ;EMPTY-GROUND MOUNT	Ea	R	977.06
7.2.27	DDT 3236	KSK MTR:3PH ;100 KVA ;SPU NO METER-POLE MOUNT	Ea	R	569.95
7.2.28	DDT 3236	KSK MTR:3PH ;100 KVA ;SPU NO METER-GROUND MOUNT	Ea	R	895.64
7.2.29	DDT 3236	KIOSK METER:1PH ;16 KVA ;2 WAY ; BS METERS-GROUND MOUNT	Ea	R	651.38
7.2.30	DDT 3236	KIOSK METER:1PH ;16 KVA ;3 WAY ; BS METERS-GROUND MOUNT	Ea	R	732.80
7.2.31	DDT 3236	KIOSK METER:1PH ;16 KVA ;4 WAY ; BS METERS-GROUND MOUNT	Ea	R	814.22
7.2.32	DDT 3236	KIOSK METER:1PH ;16 KVA ;6 WAY ; BS METERS-GROUND MOUNT	Ea	R	895.64
7.2.33	DDT 3236	KIOSK METER:1PH ;16 KVA ;15 WAY-GROUND MOUNT	Ea	R	1 302.75
7.2.34	DDT 3236	KIOSK METER:1PH ;2 WAY ;EMPTY ; BS METERS-GROUND MOUNT	Ea	R	651.38
7.2.35	DDT 3236	KIOSK METER:1PH ;4 WAY ;EMPTY ; BS METERS-GROUND MOUNT	Ea	R	814.22
7.2.36	DDT 3236	KIOSK METER:1PH ;6 WAY ;EMPTY ; BS METERS-GROUND MOUNT	Ea	R	895.64
7.2.37	DDT 3236	KSK MTR:1PH ;16 KVA ;2 WAY NO BS METERS-GROUND MOUNT	Ea	R	651.38
7.2.38	DDT 3236	KSK MTR:1PH ;16 KVA ;3 WAY NO BS METERS-GROUND MOUNT	Ea	R	814.22
7.2.39	DDT 3236	KSK MTR:1PH ;16 KVA ;4 WAY NO BS METERS-GROUND MOUNT	Ea	R	895.64
7.2.40	DDT 3236	KSK MTR:1PH ;16 KVA ;6 WAY NO BS METERS-GROUND MOUNT	Ea	R	977.06
7.2.41	DDT 3236	KSK MTR:1PH ;16 KVA ;15 WAY NO BS METERS-GROUND METERS	Ea	R	1 628.44
7.2.42	DDT 3236	KIOSK METER:3PH ;25 KVA ;2 WAY-FULLY WIRED - GROUND MOUNT	Ea	R	651.38
7.2.43	DDT 3236	KIOSK METER:3PH ;50 KVA ;2 WAY-FULLY WIRED - GROUND MOUNT	Ea	R	651.38
7.2.44	DDT 3236	KIOSK METER:3PH ;2 WAY ;EMPTY-GROUND MOUNT	Ea	R	814.22
7.2.45	DDT 3236	KIOSK METER:3PH ;25 KVA ;4 WAY-GROUND MOUNT	Ea	R	651.38
7.2.46	DDT 3236	KIOSK METER:3PH ;50 KVA ;4 WAY-GROUND MOUNT	Ea	R	651.38

7.3.8	833	Dual phase LV cable termination onto transformer- unfused	Ea	R	217.13
7.3.9	833	Three phase LV cable termination onto transformer- unfused	Ea	R	325.69
7.3.10	834	Single phase LV cable termination onto LV ABC- fused,	Ea	R	162.84
7.3.11	834	Dual phase LV cable termination onto LV ABC- fused,	Ea	R	325.69
7.3.12	834	Three phase LV cable termination onto LV ABC- fused,	Ea	R	488.53
7.3.13	836	Single phase LV cable termination onto transformer-fused,	Ea	R	162.84
7.3.14	836	Dual phase LV cable termination onto transformer-fused,	Ea	R	325.69
7.3.15	836	Three phase LV cable termination onto transformer-fused,	Ea	R	488.53
<b>7.4</b>		<b>Perform outdoor termination on cable</b>			
		<b>Supply and Complete an outdoor termination on the LV cable. This is only performing the termination by a cable joiner. LV terminations less than 70mmsq shall use phase cover tubes as per Eskom DDT 3138 and a cable end from DDT 3148. Three phase Cables 70mmsq and larger shall use LV OD term kits as per Eskom 3147</b>			
		<b>Terminations less than 70mmsq</b>			
7.4.1	3138/3148	TUBING SET 16-25 SQ 2C LV CABLE D3138 AND CABLE END	Ea	R	325.69
7.4.2	3138/3148	TUBING SET 16-25 SQ 3C LV CABLE D3138 AND CABLE END	Ea	R	407.11
7.4.3	3138/3148	TUBING SET 16-25 SQ 4C LV CABLE D3138 AND CABLE END	Ea	R	488.53
7.4.4	3138/3148	TUBING SET 35-50 SQ 2C LV CABLE D3138 AND CABLE END	Ea	R	407.11
7.4.5	3138/3148	TUBING SET 35-50 SQ 3C LV CABLE D3138 AND CABLE END	Ea	R	488.53
7.4.6	3138/3148	TUBING SET 35-50 SQ 4C LV CABLE D3138 AND CABLE END	Ea	R	569.95
7.4.7	3138/3148	TUBING SET 70-95 SQ 3C LV CABLE D3138 AND CABLE END	Ea	R	569.95
		<b>Terminations less than 70mmsq</b>			
7.4.8	3147	TERM KIT 4CORE 1KV 70-95 SQ OD HSH D3147	Ea	R	651.38
7.4.9	3147	TERM KIT 4CCORE 1KV 120-150 SQ OD HSH D3147	Ea	R	732.80
7.4.10	3147	TERM KIT 4CORE 1KV 185-240 SQ OD HSH D3147	Ea	R	814.22

7.5	<p><b>Perform indoor termination on cable</b></p> <p>Perform LV cable terminations and install into ground mounted kiosks and m/subs. LV cables shall be terminated using mechanical glands &amp; cable gland reducers where necessary. The rate includes performing the termination on the cable, mounting it to the equipment. Allow for backfilling of trench, screeding.</p>	
7.5.1	16 mmsq 2-core - gland size = No.2	Ea R 325.69
7.5.2	16 or 25 mmsq 4-core, 3 core 25mmsq, 2 core 35mmsq 4 core 35mmsq -gland size = No.3	Ea R 488.53
7.5.3	70 mmsq 3-core -gland size = No.4	Ea R 651.38
7.5.4	70 mmsq 4-core -gland size = No.5	Ea R 651.38
7.5.5	70mmsq 4 core - gland =No.5 gland reducer =M63-M50	Ea R 732.80
7.5.6	120mmsq 4 core- gland =No.5 gland reducer =M63-M50	Ea R 814.22
7.5.7	150mmsq 4 core - gland =No.6	Ea R 895.64
7.5.8	185mmsq 4 core -gland =No.6	Ea R 977.06
7.5.9	240 mmsq 4 core - gland No 7	Ea R 1 058.48
7.6	<p><b>LV Earthing</b></p> <p>Install equipment earthing. All auxiliary equipment such as earth electrodes, earth connectors and conductor to be included. All excavations are measured elsewhere. The MV and LV earth installation shall be split into two activities, activity one is to connect the earth conductors electrically to the equipment and take the conductor down to the ground and then activity two is to lay the conductor in the trench and install earth electrodes(earth spikes) and connect the earth electrodes to the earthing conductor.</p>	
7.6.1	LV earth	m R 43.43
7.7	<p><b>LV Joints</b></p> <p>Install resin cast and or heatshrink LV joint kits for jointing of all LV cables as per Eskom DDT Standards. Joint bay excavation, backfilling and compaction should be costed separate as excavations.</p>	

<b>7.8</b>	<b>LV Cable Trenching</b>		
	<b>Excavate LV cable Trenches, backfilling and compacting. Any damage to existing services shall be made good by the Contractor at his own expense and to the approval of the appointed Project Manager or Project Co-ordinator. Soil types are defined as Class1, class 2, class3 and class 4 as per Eskom standard 240-75883148.</b>		
7.8.1	Class 1 - non road crossing	m	R 57.47
7.8.2	Class 2- non road crossing	m	R 75.91
7.8.3	Class 3 - non road crossing	m	R 112.80
7.8.4	Class 4- non road crossing	m	R 149.69
7.8.5	Class 1 - rail/ road crossing	m	R 101.73
7.8.6	Class 2- rail/road crossing	m	R 134.93
7.8.7	Class 3 - rail/ road crossing	m	R 201.33
7.8.8	Class 4 - rail/ road crossing	m	R 267.73
<b>7.9</b>	<b>Equipment Labelling ;Supply where required and install equipment labels on LV kiosks and LV cable according to Eskom KZN OU labelling standard KZN16SGS017</b>		
7.9.1	Labels in LV compartment at fuses	Ea	R 23.70
7.9.2	Labels on LV cable ends and joints	Ea	R 34.12
7.9.3	Kiosk labels	Ea	R 71.09
<b>7.10</b>	<b>LV Fuses</b>		
	<b>Supply and install LV fuses, vertical fuse pillars for LV fuse configured m/subs as follows and LV MCCB's for LV breaker configured minisubs</b>		
7.10.1	Fuse, 200A 500V 120KA Size NH 2	Ea	R 23.70
7.10.2	Fuse, 250A 500V 120KA Size NH 2	Ea	R 23.70
7.10.3	Fuse, 315A 500V 120KA Size NH 2	Ea	R 23.70
7.10.4	Fuse, 355A 500V 120KA Size NH 2	Ea	R 23.70
7.10.5	LV cable vertical fuse pillar	Ea	R 162.84
		Ea	R 244.27

BILL NO: 8		MV UNDERGROUND CABLE WORK, TRENCHING & INSTALLATION		LABOUR RATE
Note:		<p>a) All installations, assemblies and activities shall be as per Eskom DDT series, Eskom national or Eskom local technical instructions where applicable</p> <p>b) Eskom will advise what is free issue material and what is contractor supplied material</p>		
NO.	D-D-T			
8.1		Miniature Substations and Plinths		
		Take delivery of and safely store on site miniature substations and pre-cast plinths. Install miniature substations. All civil work to be included. Cable terminations and earthing are measured elsewhere.		
8.1.1	8052	M/Sub 200kVA, 11kV/420V Type A FH CSTL	Ea	R 692.74
8.1.2	8052	M/Sub 315kVA, 11kV/420V Type A FH CSTL	Ea	R 1 243.30
8.1.3	8052	M/Sub 500kVA, 11kV/420V Type A FH CSTL	Ea	R 1 793.85
8.1.4	8052	M/Sub 1000kVA, 11kV/420V Type A FH CSTL	Ea	R 2 770.98
8.1.5	8053	M/Sub 200kVA, 22kV/420V Type A FH CSTL	Ea	R 977.13
8.1.6	8053	M/Sub 315kVA, 22kV/420V Type A FH CSTL	Ea	R 1 527.68

8.1.25	8025	Plinth pre cast type A 1MVA plinth	Ea	R	1 669.87
8.1.26	8025	Plinth pre cast type B 1MVA plinth	Ea	R	1 669.87
<b>8.2</b>		<b>Ring Main Units and Plinths</b>			
		<b>Take delivery of and safely store on site ring main units and pre-cast plinths. Install the plinths. All civil work to be included. Cable terminations and earthing are measured elsewhere.</b>			
8.2.1	8060	RMU 11kV 630A 3R CSTL O/D	Ea	R	834.93
8.2.2	8060	RMU 11kV 630A 4R CSTL O/D	Ea	R	1 181.31
8.2.3	8060	RMU 11kV 630A 2R 1B CSTL O/D	Ea	R	834.93
8.2.4	8060	RMU 11kV 630A 2R 2B CSTL O/D	Ea	R	1 181.31
8.2.5	8060	RMU 22kV 630A 3R CSTL O/D	Ea	R	977.13
8.2.6	8060	RMU 22kV 630A 4R CSTL O/D	Ea	R	1 323.50
8.2.7	8060	RMU 22kV 630A 2R 1B CSTL O/D	Ea	R	977.13
8.2.8	8060	RMU 22kV 630A 2R 2B CSTL O/D	Ea	R	1 323.50
8.2.9	8060	RMU 11kV 630A 3R CSTL ID	Ea	R	692.74
8.2.10	8060	RMU 11kV 630A 4R CSTL ID	Ea	R	1 039.12
8.2.11	8060	RMU 11kV 630A 2R 1B CSTL ID	Ea	R	692.74
8.2.12	8060	RMU 11kV 630A 2R 2B CSTL ID	Ea	R	1 039.12
8.2.13	8060	RMU 22kV 630A 3R CSTL ID	Ea	R	834.93
8.2.14	8060	RMU 22kV 630A 4R CSTL ID	Ea	R	1 181.31
8.2.15	8060	RMU 22kV 630A 2R 1B CSTL ID	Ea	R	834.93
			Fa	R	1 181.31

8.3.4	3118	CT+VT 11KV-110V C 3VT+3CT CBL CSTL D3118	Ea	R	794.83
8.3.5	3118	CT+VT 22KV-110V C 3VT+3CT CBL CSTL D3118	Ea	R	896.93
8.3.6	8022	TFR 100kVA 11KV/415V W/CBL BOX CSTL	Ea	R	896.93
8.3.7	8022	TFR 100kVA 22KV/415V W/CBL BOX CSTL	Ea	R	896.93
8.3.8	8022	TFR 200kVA 11KV/415V W/CBL BOX CSTL	Ea	R	999.02
8.3.9	8022	TFR 200kVA 22KV/415V W/CBL BOX CSTL	Ea	R	999.02
8.3.10	8022	TFR 315kVA 11KV/415V W/CBL BOX CSTL	Ea	R	1 101.11
8.3.11	8022	TFR 315kVA 22KV/415V W/CBL BOX CSTL	Ea	R	1 101.11
8.3.12	8022	TFR 500kVA 11KV/415V W/CBL BOX CSTL	Ea	R	1 203.20
8.3.13	8022	TFR 500kVA 22KV/415V W/CBL BOX CSTL	Ea	R	1 203.20
8.3.14	8022	TFR 1000kVA 11KV/415V W/CBL BOX CSTL	Ea	R	1 305.29
8.3.15	8022	TFR 1000kVA 22KV/415V W/CBL BOX CSTL	Ea	R	1 305.29
8.3.16	8025	PLINTH,PRE-CAST 100-1000kVA TFR	Ea	R	590.65
				R	-

#### 8.4 MV cable equipment and outdoor termination earthing

Install all materials for the complete MV, LV and equipotential earthing of minisubs and RMUs for U/G networks as specified. Included in the rate shall be all required spikes, insulated copper conductor, bare copper. Earthing to be installed as per referenced



8.5.9	8000	CABLE,ELECT:22 KV ;PILC ;95 MM2 ;3C ;CU	m	R	10.16
8.5.10	8000	CABLE,ELECT:22 KV ;PILC ;185 MM2 ;3C	m	R	13.79
8.5.11	8000	CABLE,ELECT:22 KV;PILC;1C;630 MM2;CU	m	R	10.58
8.5.12	8000	CABLE,ELECT:33 KV ;PILC;95MM2;3C ;CU	m	R	11.00
8.5.13	8000	CABLE,ELECT:33 KV ;PILC ;1C;630 MM2	m	R	11.07
8.5.14	8001	CABLE,ELECT:EUX3KCC 11KV 3C;CU;25 MM2 XLPE	m	R	4.57
8.5.15	8001	CABLE,ELECT:EUX3MCQ 11KV 3C;CU;50 MM2 XLPE	m	R	5.38
8.5.16	8001	CABLE,ELECT:EUX3PCQ 11KV 3C;CU;95 MM2 XLPE	m	R	6.93
8.5.17	8001	CABLE,ELECT:EUX3SCQ 11KV 3C;CU;185 MM2 XLPE	m	R	10.14
8.5.18	8001	CABLE,ELECT:EUX3UCQ 11KV 3C;CU;300 MM2 XLPE	m	R	13.46
8.5.19	8001	CABLE,ELECT:EUX1MCQ 11KV 1C;CU;50 MM2 XLPE	m	R	2.40
8.5.20	8001	CABLE,ELECT:EUX1PCQ 11KV 1C;CU;95 MM2 XLPE	m	R	2.78
8.5.21	8001	CABLE,ELECT:EUX1SCQ 11KV 1C;CU;185 MM2 XLPE	m	R	3.59
8.5.22	8001	CABLE,ELECT:EUX1UCQ 11KV 1C;CU;300 MM2 XLPE	m	R	4.50
8.5.23	8001	CABLE,ELECT:EUX1XCQ 11KV 1C;CU;630 MM2 XLPE	m	R	7.36
8.5.24	8001	CABLE,ELECT:EUX3PAQ 11KV 3C;AL;95 MM2 XLPE	m	R	5.69
8.5.25	8001	CABLE,ELECT:EUX3SAQ 11KV 3C;AL;185 MM2 XLPE	m	R	7.57
8.5.26	8001	CABLE,ELECT:EUX3UAQ 11KV 3C;AL;300 MM2 XLPE	m	R	9.25
8.5.27	8001	CABLE,ELECT:FUX3KCC 22KV 3C;CU;25 MM2 XLPE	m	R	5.55
8.5.28	8001	CABLE,ELECT:FUX3MCQ 22KV 3C;CU;50 MM2 XLPE	m	R	6.10
8.5.29	8001	CABLE,ELECT:FUX3PCQ 22KV 3C;CU;95 MM2 XLPE	m	R	8.62
8.5.30	8001	CABLE,ELECT:FUX3SCQ;22 kv 3C CU;185 MM2 XLPE	m	R	11.42

8.5.46	8001	CABLE,ELECT:GUX1SCQ 33KV 1C;CU;185 MM2 XLPE	m	R	4.29
8.5.47	8001	CABLE,ELECT:GUX1UCQ 33KV 1C;CU;300 MM2 XLPE	m	R	5.34
8.5.48	8001	CABLE,ELECT:GUX1XCQ 33KV 1C;CU;630 MM2 XLPE	m	R	7.99
8.5.49	8001	CABLE,ELECT:GUX3MAQ 33KV 3C;AL;50 MM2 XLPE	m	R	7.57
8.5.50	8001	CABLE,ELECT:GUX3PAQ 33KV 3C;AL;95 MM2 XLPE	m	R	9.11
8.5.51	8001	CABLE,ELECT:GUX3SAQ 33KV 3C;AL;185 MM2 XLPE	m	R	10.72
8.5.52	8001	CABLE,ELECT:GUX3UAQ 33KV 3C;AL;300 MM2 XLPE	m	R	12.60
<b>8.6</b>		<b>Install Outdoor MV Cable Terminations</b>			
		Install Cable Termination onto Delta or H-pole structure with equipment links, termination support brackets, surge arrestors, stand off insulators and other ancillary equipment. Connect the termination. Install a galvanised steel pipe at ground level. Install anti climbing device. Install ladders. This is only for a single 3 phase cable.			
8.6.1	850	Termination onto Delta single pole structure-station class SA's	Ea	R	1 509.47
8.6.2	850	Termination onto H-pole pole structure - station class SA's	Ea	R	1 509.47
8.6.3	851	Termination onto Overhead Line termination bracket with cut-out link onto single pole structure - Dist class SA's	Ea	R	1 509.47

8.7.15	8006	KIT,TERM:3C ;XLPE ;11KV; OD ;50-120 MM2	Ea	R	651.38
8.7.16	8006	KIT,TERM:3C ;XLPE ;11KV; OD ;95-185 MM2	Ea	R	814.22
8.7.17	8006	KIT,TERM:3C ;XLPE ;33 kv OD ;95-185 ;XLPE	Ea	R	814.22
8.7.18	8006	KIT,TERM:3C ;XLPE ;11KV; OD ;185-300 MM2	Ea	R	977.06
8.7.19	8006	KIT,TERM:3C ;XLPE ;22KV; OD ;25-70 MM2	Ea	R	651.38
8.7.20	8006	KIT,TERM:3C ;OD ;50-120 ;22 KV ;XLPE	Ea	R	814.22
8.7.21	8006	KIT,TERM:3C ;XLPE ;22KV; OD ;95-185 MM2	Ea	R	814.22
8.7.22	8006	KIT,TERM:3C ;XLPE ;OD ;185-300 ;22 KV	Ea	R	977.06
8.7.23	8006	KIT,TERM:3C ;XLPE ;OD ;50-120 ;33 KV	Ea	R	814.22
8.7.24	8006	KIT,TERM:3C ;XLPE ;OD ;185-300 ;33 KV	Ea	R	977.06
8.7.25	8006	KIT TERM:3C;OD;25-70 MM2;11 KV;XLPE	Ea	R	651.38

8.8		Indoor MV Cable Terminations		
		<p>Complete the indoor MV termination . Allow for , backfilling of trench, screeding. ES (Extended earth kits needs to be used for RMU's with CT's in the MV cable termination compartments) The rate includes performing the termination on the cable, mounting it to the equipment. For single core cables the rate is for performing the task on three cables that will make up a three phase system. The rate for fitting the unscreened and screened connectors and performing the trifurcating are all separate and each component to deliver a completed termination must be accounted. Note that MV single core cable terminations have the components to complete three terminations to establish a three phase termination,</p>		
8.8.1	2805	KIT, TERM:ID 3C 16-35MM2 PILC ES;11 KV	Ea	R 1 139.91
8.8.2	2805	TERM KIT 3C 11KV 16-35SQ ID PILC D2805	Ea	R 977.06
8.8.3	2806	TERM KIT 3C 11KV 16-35SQ ID XLPE D2806	Ea	R 977.06

8.8.30	8006	KIT,TERM:1C ;LCC ;ID ;95-185 MM2;33 KV	Set of 3	R	1 302.75
8.8.31	8006	KIT,TERM:1C;XLPE;ID;95-185 MM2;33 KV	Set of 3	R	1 302.75
8.8.32	8006	KIT,TERM:1C;XLPE;ID;185-300 MM2;33 KV	Set of 3	R	1 465.59
8.8.33	8006	KIT,TERM:1C ;LCC ;ID ;185-300 MM2;33 KV	Set of 3	R	1 465.59
8.8.34	8006	KIT,TERM:1C;XLPE;ID;630 MM2;33 KV	Set of 3	R	1 628.44
8.8.35	8006	KIT,TERM:3C ;XLPE;11KV; ID 50-120 MM2	Set of 3	R	1 302.75
8.8.36	8006	KIT,TERM:3C ;XLPE; ;11KV; ID 95-185	Set of 3	R	1 302.75
8.8.37	8006	KIT,TERM:3C ;ID ;185-300 ;11 KV ;XLPE	Set of 3	R	1 465.59
8.8.38	8006	KIT,TERM:3C ;XLPE ;22KV; ID ;25-70 MM2	Set of 3	R	1 302.75
8.8.39	8006	KIT,TERM:3C ;XLPE ;22KV; ID ;95-185	Set of 3	R	1 465.59
8.8.40	8006	KIT,TERM:3C ;ID ;185-300 ;22 KV ;XLPE	Ea	R	1 465.59
8.8.41	8006	KIT,TERM:3C ;ID ;50-120 ;33 KV ;XLPE	Ea	R	1 302.75
8.8.42	8006	KIT,TERM:3C ;ID ;95-185 ;33 KV ;XLPE	Ea	R	1 302.75
8.8.43	8006	KIT,TERM:3C ;ID ;185-300 ;33 KV ;XLPE	Ea	R	1 465.59
8.8.44	8006	KIT TERM:3C;ID;25-70 MM2;11 KV;XLPE	Ea	R	1 302.75
8.8.45	8006	KIT,TERM:3C ;XLPE; ES;11KV; ID ;50-120 MM2	Ea	R	1 302.75
8.8.46	8006	KIT,TERM:3C ;XLPE; ES ;11KV; ID ;95-185 MM2	Ea	R	1 302.75
8.8.47	8006	KIT TERM:3C;ID;25-70 MM2;11 KV;ES;XLPE	Ea	R	1 465.59
8.8.48	8006	KIT TERM:3C;ID;185-300 MM2;11 KV;ES;XLPE	Ea	R	1 628.44
8.8.49	8004	TRIFUR KIT,SCR MV 2.5m XLPE 95-300 D8004	Ea	R	651.38
8.8.50	8017	TRIFURCATING KIT,SCR 22KV 3C 25-50 D8017	Ea	R	651.38
8.8.51	8017	TRIFURCATING KIT,SCR 22KV 3C 70-185D8017	Ea	R	651.38
8.8.52	2816	CONNECTOR KIT SFP I INSCR 11kv 16-35 D2816	Set of 3	R	244.27

8.8.79	8017	CONNECTOR ELECT:SSC;50-120 MM2;33 KV	Set of 3	R	651.38
8.8.80	8017	CONNECTOR ELECT:SSC;95-185 MM2;33 KV	Set of 3	R	814.22
8.8.81	8017	CONNECTOR ELECT:EXT;95-185 MM2;33 KV	Set of 3	R	814.22
8.8.82	8017	CONNECTOR ELECT:EXT;630 MM2;33 KV;CU/AL	Set of 3	R	1 139.91
8.8.83	8017	CONNECTOR ELECT:SARR;630 MM2;33 KV;CU/AL	Set of 3	R	1 465.59
8.8.84	8017	CONNECTOR ELECT:SARR;185-300 MM2;33 KV	Set of 3	R	1 302.75
8.8.85	8017	CONNECTOR ELECT:SARR;50-120 MM2;33 KV	Set of 3	R	977.06
8.8.86	8017	CONNECTOR ELECT:SARR;95-185 MM2;33 KV	Set of 3	R	1 139.91
8.8.87	8011	SHROUD,STRAIGHT 95-300 3 CORE D8011	Set of 3	R	325.69
8.8.88	8011	SHROUD,STRAIGHT 630 1 CORE D8011	Set of 3	R	325.69
		<b>MV Cable Joints</b>			
<b>8.9</b>		<b>Complete and install joint kits for jointing of all MV cables</b> Joint bay excavation, backfilling and compaction should be costed separate as excavations. Note that MV single core cable joints have the components to complete one joint for one single core cable. A "TRI" joint is a joint that will convert a 3 core cable to 3single core cables.			
8.9.1	8008	KIT,CABLE JOINT:3C ;11 KV ;50-120 ;TRIF	Ea	R	1 468.10
8.9.2	8008	KIT,CABLE JOINT:3C ;11 KV ;185-300;TRIF	Ea	R	1 835.13
8.9.3	8008	KIT,CARLF JOINT:3C ;22 KV ;185-300 TRIF	Ea	R	1 835.13

8.9.30	8008	KIT,CABLE JOINT:1C ;22 KV ;185-300	Ea	R	1 101.08
8.9.31	8008	KIT,CABLE JOINT:1C ;22 KV ;630 ;XLPE	Ea	R	1 284.59
8.9.32	8008	KIT,CABLE JOINT:3C ;22 KV ;50-120 ;XLPE	Ea	R	1 468.10
8.9.33	8008	KIT,CABLE JOINT:3C ;22 KV ;95-185 ;XLPE	Ea	R	1 651.61
8.9.34	8008	KIT,CABLE JOINT:3C ;22 KV ;185-300	Ea	R	1 835.13
8.9.35	8008	KIT,CABLE JOINT:3C ;33 KV ;50-120 ;CU/AL	Ea	R	1 651.61
8.9.36	8008	KIT,CABLE JOINT:1C ;33 KV ;185-300 ;XLPE	Ea	R	1 101.08
8.9.37	8008	KIT,CABLE JOINT:1C ;33 KV ;630 ;CU/AL	Ea	R	1 284.59
8.9.38	8008	KIT,CABLE JOINT:3C ;33 KV ;25-70 ;XLPE	Ea	R	1 468.10
8.9.39	8008	KIT,CABLE JOINT:3C ;33 KV ;50-120 ;XLPE	Ea	R	1 468.10
8.9.40	8008	KIT,CABLE JOINT:3C ;33 KV ;95-185 ;XLPE	Ea	R	1 651.61
8.9.41	8008	KIT,CABLE JOINT:3C ;33 KV ;185-300	Ea	R	1 835.13
8.9.42	8008	KIT,CABLE JOINT:3C ;11 KV ;25-70 MM2 ;XLPE	Ea	R	1 468.10
8.9.43	8008	KIT,CABLE JOINT:3C ;11 KV ;50-120 MM2 ;XLPE	Ea	R	1 468.10
8.9.44	8008	KIT,CABLE JOINT:3C ;22 KV ;25-70 MM2 ;XLPE	Ea	R	1 468.10
8.9.45	8008	KIT,CABLE JOINT:1C ;33 KV ;95-185 MM2 ;XLPE	Ea	R	1 651.61
8.9.46	8021	JOINT KIT,TRANS 3C 11kv 16-35 D8021	Ea	R	1 101.08
8.9.47	8021	JOINT KIT,TRANS 3C 11kv 50-95 D8021	Ea	R	1 468.10
8.9.48	8021	JOINT KIT,TRANS 3C 11kv 120-185 D8021	Ea	R	1 651.61
8.9.49	8021	JOINT KIT,TRANS 3C 11kv 240-400 D8021	Ea	R	1 835.13
8.9.50	8021	JOINT KIT,TRANS 3C 22kv 25 D8021	Ea	R	1 101.08
8.9.51	8021	JOINT KIT,TRANS 3C 22kv 35-70 D8021	Ea	R	1 468.10
8.9.52	8021	JOINT KIT,TRANS 3C 22kv 95-240 D8021	Ea	R	1 651.61

8.9.54	8021	KIT,CABLE JOINT:6.35/11 KV;TRTR120-185	Ea	R	1 651.61
8.9.55	8021	KIT,CABLE JOINT:6.35/11 KV;TRTR240-400	Ea	R	1 835.13
8.9.56	8021	KIT,CABLE JOINT:12.7/22 KV;TRATR50-95	Ea	R	1 468.10
8.9.57	8021	KIT,CABLE JOINT:12.7/22 KV;TRTR120-185	Ea	R	1 651.61
8.9.58	8021	KIT,CABLE JOINT:12.7/22 KV;TRTR240-400	Ea	R	1 835.13
8.9.59	8021	KIT,CABLE JOINT:19/33 KV;TRATR50-95	Ea	R	1 468.10
8.9.60	8021	KIT,CABLE JOINT:19/33 KV;TRTR120-185	Ea	R	1 651.61
8.9.61	8021	KIT,CABLE JOINT:19/33 KV;TRTR240-400	Ea	R	1 835.13
8.9.62	8021	KIT,CABLE JOINT:1C;33 KV;630 MM2;TRANS	Ea	R	1 284.59
8.9.63	8021	KIT,CABLE JOINT:3C;11 KV;185-300 MM2	Ea	R	1 835.13
8.9.64	8021	KIT,CABLE JOINT:3;11 KV;25-70 MM2;TRANS	Ea	R	1 468.10
<b>8.10</b>		<b>MV Cable Trenching</b>			
		<b>Excavate, backfill and compact MV cable trenches. Any damage to existing services shall be made good by the Contractor at his own expense and to the approval of the appointed Project Manager or Project Co-ordinator. Soil types are defined as Class 1, class 2, class 3 and class 4 as per Eskom standard 240-75883148.</b>			
8.10.1	0854	Class 1 - non road crossing	m	R	75.91
8.10.2	0854	Class 2- non road crossing	m	R	112.80
8.10.3	0854	Class 3 - non road crossing	m	R	149.69



8.13.4		Concrete	m	R	244.27
8.13.5	8018	Lay PVC piping, 110mm, 6 metre length's	Ea	R	81.42
8.13.6	8018	Lay PVC piping, 160mm, 6 metre length's	Ea	R	108.56
8.13.7	8018	Lay PVC piping, 250mm, 6 metre length's	Ea	R	135.70
8.13.8	8076	Concrete slabs, pre-cast cable cover	Ea	R	27.14
8.13.9		Install Shoring for trenches as required	m	R	81.42
8.13.10		Barricading	m	R	81.42
8.13.11		Barricading - High Speed	m	R	54.28
8.13.12		Installation of trench covers	Ea	R	81.42
8.13.13	8010	S/ARR DIST 11kV 10KA POLYMER I/D D8010	Ea	R	81.42
8.13.14	8010	S/ARR DIST 22kV 10KA POLYMER I/D D8010	Ea	R	81.42
8.13.15	8077	SLEEVE, CABLE REPAIR 60-120 1m LG. D8077	Ea	R	162.84
8.13.16		Installation and marking of cable route marker	Ea	R	244.27
8.13.17		Cart away rubble and excavated soil to a registered dumping site	ton/km	R	23.00
<b>TOTAL</b>			<b>CANNIL</b>		
<b>DATE</b>					

Verified By:

Clerk of Works

Checked By:

Quantity Surveyor

Accepted By:

Contractor

DATE

DATE

DATE

BILL NO: 9		DISMANTLING		UNIT	LABOUR RATE
NO.	D-D-T	DESCRIPTION			
		Prices are to include the recovery in good condition of poles, crossarms, insulators and line hardware, excluding the transporting of these items to the nearest Eskom Operating Unit store - it is measured somewhere else, and the backfilling consolidation and levelling of soil from excavations.			
		Prices shall be in terms of meters of conductor/cable recovered and shall include for the coiling of the recovered conductor onto drums, and exclude the transporting of the conductor/cable as coiled to the nearest Eskom Operating Unit store it is measured else where .			
9.1		Removal of wooden poles by hand. Cut pole into sizes that can be carried onto truck. This is for areas inaccessible for crane trucks. Assumed and avg distance of 100m to carry the cut wood poles to truck			
9.1.1		POLE,WOOD 5m		Ea	R 252.14
9.1.2		POLE,WOOD 7m		Ea	R 267.25
9.1.3		POLE,WOOD 9m		Ea	R 284.25
9.1.4		POLE,WOOD 10.0m		Ea	R 361.37
9.1.5		POLE,WOOD 11.0m		Ea	R 538.58
9.1.6		POLE,WOOD 12.0m		Ea	R 664.29
9.1.7		POLE,WOOD 13.0m		Ea	R 724.51
9.1.8		POLE,WOOD 14.0m		Ea	R 784.73
9.1.9		POLE,WOOD 15.0 m		Ea	R 784.73
9.1.10		POLE,WOOD 16.0 m		Ea	R 784.73
9.1.11		POLE,WOOD 18.0 m		Ea	R 834.32
9.2		Removal of wooden poles by crane. Poles loaded directly loaded onto crane truck			
9.2.1		POLE,WOOD 5m			

<b>9.5</b>	<b>Dismantling and recovering of LV conductor</b>				
9.5.1	3141	COND.ABC 2C XLPE 35SQ INS NEUT	m	R	4.16
9.5.2	3141	COND.ABC 3C XLPE 35SQ INS NEUT	m	R	5.00
9.5.3	3141	COND.ABC 4C XLPE 35SQ INS NEUT	m	R	5.84
9.5.4	3141	COND.ABC 5C XLPE 35SQ INS NEUT	m	R	6.68
9.5.5	3141	COND.ABC 3C XLPE 70SQ INS NEUT	m	R	7.52
9.5.6	3141	COND.ABC 4C XLPE 70SQ INS NEUT	m	R	8.35
9.5.7	3141	COND.ABC 5C XLPE 70SQ INS NEUT	m	R	10.03
9.5.8	3141	COND.ABC 4C XLPE 95SQ INS NEUT	m	R	10.87
9.5.9	3141	COND.ABC 5C XLPE 95SQ INS NEUT	m	R	11.70
9.5.10	3136	MV Bare ACSR Fox Ungreased	m	R	4.73
9.5.11	3136	MV Bare ACSR Fox Greased	m	R	4.73
9.5.12	3136	MV Bare AAAC 35mm <sup>2</sup> Greased	m	R	4.73
9.5.13	3136	MV Bare AAAC Pine Greased	m	R	6.41
9.5.14	3136	MV Bare ACSR Mink Greased	m	R	6.41
9.5.15	3136	MV Bare ACSR Mink Ungreased	m	R	6.41
<b>9.6</b>	<b>Dismantling of auxiliary equipment, excluding the structures.</b>				
9.6.1	0420	SWER - Single Pole-mounted Isolation Transformer	Ea	R	610.07
9.6.2	0421	SWER - 4 Pole-mounted Isolation Transformer	Ea	R	935.76
9.6.3	0460	SWER - Single Pole-mounted Isolation Transformer Substation Auxiliary	Ea	R	610.07
9.6.4	0461	SWER - H-pole mounted Isolation Transformer Substation Auxiliary	Ea	R	610.07
9.6.5	0462	SWER-Distribution Transformer (16 or 32kVA)	Ea	R	610.07
9.6.6	0463	SWER-Back-to-Back 64kVA Dual Phase Supply from a 19kV SWER Line	Ea	R	1 261.44
9.6.7	0464	SWER- Single Phase Recloser on a Single Pole	Ea	R	610.07
9.6.8	0468	SWER-Distribution Transformer (5kVA)	Ea	R	447.23
9.6.9	1825	Recloser Structure -In-line arrangement	Ea	R	1 587.13
9.6.10	DER1825CBL	MV Cable bypass Recloser Structure -Out-of-line arrangement (excluding the main line structures but including the in. out and bypass links on the main line structure)	Ea	R	2 413.88
9.6.11	1829B	Eskom KZN Out of line recloser structure (excluding the main line structures but including the in. out and bypass links on the main line structure)	Ea	R	1 917.83
9.6.12	1829	Eskom national Out of line recloser structure (excluding the main line structures but including the in. out and bypass links on the main line structure)	Ea	R	1 917.83
9.6.13	1832	Single Pole-mounted Capacitor Bank	Ea	R	772.91
9.6.14	1833B	Eskom KZN Out of line Regulator - 100 / 200A Open Delta (excluding the main line structures but including the in. out and bypass links on the main line structure)	Ea	R	1 917.83

9.6.32	8052	M/Sub 315kVA, 11kV/420V Type A FH CSTL	Ea	R	541.97
9.6.33	8052	M/Sub 500kVA, 11kV/420V Type A FH CSTL	Ea	R	994.86
9.6.34	8052	M/Sub 1000kVA, 11kV/420V Type A FH CSTL	Ea	R	1 173.00
9.6.35	8053	M/Sub 200kVA, 22kV/420V Type A FH CSTL	Ea	R	586.50
9.6.36	8053	M/Sub 315kVA, 22kV/420V Type A FH CSTL	Ea	R	631.03
9.6.37	8053	M/Sub 500kVA, 22kV/420V Type A FH CSTL	Ea	R	879.75
9.6.38	8053	M/Sub 1000kVA, 22kV/420V Type A FH CSTL	Ea	R	1 262.07
9.6.39	8050	M/Sub 315kVA, 11kV/420V Type B CSTL	Ea	R	790.68
9.6.40	8050	M/Sub 500kVA, 11kV/420V Type B CSTL	Ea	R	1 083.93
9.6.41	8050	M/Sub 1000kVA, 11kV/420V Type B CSTL	Ea	R	1 466.25
9.6.42	8051	M/Sub 315kVA, 22kV/420V Type B CSTL	Ea	R	879.75
9.6.43	8051	M/Sub 500kVA, 22kV/420V Type B CSTL	Ea	R	1 173.00
9.6.44	8051	M/Sub 1000kVA, 22kV/420V Type B CSTL	Ea	R	1 555.32
9.6.45	8054	HIGHRISK M/SUB WITH RTU 500kVA 1C:B CSTL,CB:11kV	Ea	R	1 083.93
9.6.46	8054	HIGHRISK M/SUB WITH RTU 500kVA 3C:B CSTL,CB:11kV	Ea	R	1 083.93
9.6.47	8054	HIGHRISK M/SUB WITH RTU 1MVA 1C:B CSTL,CB:11kV	Ea	R	1 466.25
9.6.48	8054	HIGHRISK M/SUB WITH RTU 1MVA 3C:B CSTL,CB:11kV	Ea	R	1 466.25
9.6.49	8055	HIGHRISK M/SUB WITH RTU 500kVA 1C:B CSTL,CB:22kV	Ea	R	1 173.00
9.6.50	8055	HIGHRISK M/SUB WITH RTU 500kVA 3C:B CSTL,CB:22kV	Ea	R	1 173.00
9.6.51	8055	HIGHRISK M/SUB WITH RTU 1MVA 1C:B CSTL,CB:22kV	Ea	R	1 555.32
9.6.52	8055	HIGHRISK M/SUB WITH RTU 1MVA 3C:B CSTL,CB:22kV	Ea	R	1 555.32
9.6.53	8025	Plinth Pre-cast Type A M/SUB	Ea	R	586.50
9.6.54	8025	Plinth Pre-cast Type B M/SUB	Ea	R	586.50
9.6.55	8025	Plinth pre cast type A 1MVA plinth	Ea	R	675.57
9.6.56	8025	Plinth pre cast type B 1MVA plinth	Ea	R	675.57
9.6.57	8060	RMU 11kV 630A 3R CSTL O/D	Ea	R	541.97
9.6.58	8060	RMU 11kV 630A 4R CSTL O/D	Ea	R	586.50
9.6.59	8060	RMU 11kV 630A 2R 1B CSTL O/D	Ea	R	541.97
9.6.60	8060	RMU 11kV 630A 2R 2B CSTL O/D	Ea	R	586.50
9.6.61	8060	RMU 22kV 630A 3R CSTL O/D	Ea	R	586.50
9.6.62	8060	RMU 22kV 630A 4R CSTL O/D	Ea	R	631.03
9.6.63	8060	RMU 22kV 630A 2R 1B CSTL O/D	Ea	R	586.50
9.6.64	8060	RMU 22kV 630A 2R 2B CSTL O/D	Ea	R	631.03
9.6.65	8060	RMU 11kV 630A 3R CSTL ID	Ea	R	497.43
9.6.66	8060	RMU 11kV 630A 4R CSTL ID	Ea	R	541.97

9.7	Recovering MV and LV cables. This includes excavating the trench and removing the cable and backfilling the trench.			
9.7.1	LV Cables		m	R 75.91
9.7.2	MV Cables		m	R 112.80
<b>9.8</b>	<b>Disconnecting and removing MV terminations and LV terminations.</b>			
9.8.1	3 core Indoor terminations 16-35mmsq		Ea	R 162.84
9.8.2	3 core Indoor terminations 25-50mmsq		Ea	R 244.27
9.8.3	3 core Indoor terminations 50-95mmsq		Ea	R 309.40
9.8.4	3 core Indoor terminations 70-185mmsq		Ea	R 325.69
9.8.5	3 core Indoor terminations 120-185mmsq		Ea	R 407.11
9.8.6	3 core Indoor terminations 300mmsq		Ea	R 488.53
9.8.7	1 core Indoor terminations 630mmsq		Ea	R 325.69
9.8.8	1 core Indoor terminations 16-35mmsq		Ea	R 81.42
9.8.9	1 core Indoor terminations 25-50mmsq		Ea	R 81.42
9.8.10	1 core Indoor terminations 50-95mmsq		Ea	R 162.84
9.8.11	1 core Indoor terminations 70-185mmsq		Ea	R 162.84
9.8.12	1 core Indoor terminations 120-185mmsq		Ea	R 244.27
9.8.13	1 core Indoor terminations 300mmsq		Ea	R 244.27
9.8.14	1 core Indoor terminations 630mmsq		Ea	R 244.27

9.9		Removal of ground and pole mount LV kiosks and pole top boxes				
9.9.1	3214	KIOSK, DIST. 12 WAY HIGH RISK D3214 -GROUND MOUNT	Ea	R	325.69	
9.9.2	3214	KIOSK, DIST. LOAD MNGMNT.16 WAY D3214 -GROUND MOUNT	Ea	R	325.69	
9.9.3	3214	KIOSK, DIST. LOAD MNGMNT.24 WAY D3214- GROUND MOUNT	Ea	R	325.69	
9.9.4	3236	KIOSK METER:1PH ;16 KVA ;EMPTY-POLE MOUNT	Ea	R	325.69	
9.9.5	3236	KIOSK METER:1PH;16 KVA;SPU-POLE MOUNT	Ea	R	325.69	
9.9.6	3236	KSK MTR:1PH.16 KVA.SPU NO METER	Ea	R	325.69	
9.9.7	3236	KIOSK METER:3PH;25 KVA;EMPTY-POLE MOUNT	Ea	R	325.69	
9.9.8	3236	KIOSK METER:3PH;25 KVA;EMPTY-GROUND MOUNT	Ea	R	325.69	
9.9.9	3236	KIOSK METER:3PH ;25 KVA ;SPU-POLE MOUNT	Ea	R	325.69	
9.9.10	3236	KIOSK METER:3PH ;25 KVA ;SPU-GROUND MOUNT	Ea	R	325.69	
9.9.11	3236	KIOSK METER:3PH ;50 KVA ;SPU-POLE MOUNT	Ea	R	325.69	
9.9.12	3236	KIOSK METER:3PH ;50 KVA ;SPU-GROUND MOUNT	Ea	R	325.69	
9.9.13	3236	KIOSK METER:3PH ;25 KVA ;RURAFLEX-POLE MOUNT	Ea	R	325.69	
9.9.14	3236	KIOSK METER:3PH ;25 KVA ;RURAFLEX-GROUND MOUNT	Ea	R	325.69	
9.9.15	3236	KIOSK METER:3PH ;50 KVA ;RURAFLEX-POLE MOUNT	Ea	R	325.69	
9.9.16	3236	KIOSK METER:3PH ;50KVA ;RURAFLEX-GROUND MOUNT	Ea	R	325.69	
9.9.17	3236	KSK MTR:3PH;25 KVA.SPU NO METER-POLE MOUNT	Ea	R	325.69	
9.9.18	3236	KSK MTR:3PH;25 KVA.SPU NO METER-GROUND MOUNT	Ea	R	325.69	
9.9.19	3236	KSK MTR:3PH;50 KVA.SPU NO METER-POLE MOUNT	Ea	R	325.69	
9.9.20	3236	KSK MTR:3PH;50 KVA.SPU NO METER-GROUND MOUNT	Ea	R	325.69	
9.9.21	3236	KSK MTR:3PH;50 KVA.SPU DC & METER-POLE MOUNT	Ea	R	325.69	
9.9.22	3236	KSK MTR:3PH;100 KVA.SPU DC & METER	Ea	R	325.69	
9.9.23	3236	KIOSK METER:3PH ;100 KVA ;SPU-POLE MOUNT	Ea	R	325.69	
9.9.24	3236	KIOSK METER:3PH ;100 KVA ;SPU-GROUND MOUNT	Ea	R	325.69	
9.9.25	3236	KIOSK METER:3PH;100 KVA;EMPTY-POLE MOUNT	Ea	R	325.69	
9.9.26	3236	KIOSK METER:3PH;100 KVA;EMPTY-GROUND MOUNT	Ea	R	325.69	
9.9.27	3236	KSK MTR:3PH;100 KVA.SPU NO METER-POLE MOUNT	Ea	R	325.69	
9.9.28	3236	KSK MTR:3PH;100 KVA.SPU NO METER-GROUND MOUNT	Ea	R	325.69	
9.9.29	3236	KIOSK METER:1PH ;16 KVA ;2 WAY ; BS METERS-GROUND MOUNT	Ea	R	325.69	
9.9.30	3236	KIOSK METER:1PH ;16 KVA ;3 WAY ; BS METERS-GROUND MOUNT	Ea	R	325.69	
9.9.31	3236	KIOSK METER:1PH ;16 KVA ;4 WAY ; BS METERS-GROUND MOUNT	Ea	R	325.69	
9.9.32	3236	KIOSK METER:1PH ;16 KVA ;6 WAY ; BS METERS-GROUND MOUNT	Ea	R	325.69	
9.9.33	3236	KIOSK METER:1PH ;16 KVA ;15 WAY-GROUND MOUNT	Ea	R	325.69	
9.9.34	3236	KIOSK METER:1PH ;2 WAY ;EMPTY ; BS METERS-GROUND MOUNT	Ea	R	325.69	

9.9.70	Removal of a post / pin insulator	Ea	R	81.42
9.9.71	Removal of a long rod	Ea	R	81.42
9.9.72	Removal of SPU unit with rails	Ea	R	162.84
9.9.73	Removal of MV link	Ea	R	162.84
9.9.74	Removal of LV fuse unit	Ea	R	488.53
9.9.75	Removal of MV & LV Stay assemblies- complete	Ea	R	673.71
9.9.76	Removal of MV & LV Strut assemblies- complete	Ea	R	530.61
9.9.77	Removal of LV circuit breaker	Ea	R	81.42
9.9.78	Removal of poly meter	Ea	R	81.42
9.9.79	Removal of split/smart meter	Ea	R	81.42
9.9.80	Removal of ED / ECU	Ea	R	81.42
9.9.81	Removal of single phase meter box	Ea	R	244.27
9.9.82	AP4 meter box + pipe	Ea	R	9.77
9.9.83	Remove broken/damage bonding & BIL on existing structure	Ea	R	9.77
9.9.84	Remove broken/damage bonding & BIL on existing structure with spark gap device	Ea	R	294.15
9.9.85	Removal - complete of one Voltage Regulator can	Ea	R	9.15
9.9.86	Removal of service connection type A - direct to house	Ea	R	9.15
9.9.87	Removal of service connection type B - with house service pole(excluding the service pole that should be measured under pole removal)	Ea	R	9.46
9.9.88	Removal of box,pole top split meter 2-way 50A	Ea	R	162.84
9.9.89	Removal of box,pole top split meter 4-way 50A	Ea	R	244.27
9.9.90	Removal of box,pole top split meter 4-way 120A	Ea	R	244.27
9.9.91	Removal of box,pole top split meter 8-way 50A	Ea	R	325.69
9.9.92	Removal of box distr;pole top splitmeter 2-way 60A	Ea	R	162.84
9.9.93	Removal of box distr;pole top split meter 6-way 20A	Ea	R	195.41
9.9.94	Removal of box distr;pole top split meter 6-way 60A	Ea	R	195.41
9.9.94	Removal of cable concrete slab	Ea	R	27.14
<b>TOTAL</b>				<b>CARRIED TO SUMMARY PAGE</b>

Verified By: \_\_\_\_\_

Clerk of Works \_\_\_\_\_

Checked By: \_\_\_\_\_

Quantity Surveyor \_\_\_\_\_

Accepted By: \_\_\_\_\_

DATE

DATE

ITEM Y	INFILLS	UNIT	QTY	RATE	TOTAL
No	DESCRIPTION				
P&G's		lump sum		P&G's at 10% of TO value	P&G's at 10% of TO value
1.1	Provision of 10% Allowance for all P&G's Expenses (Excluding Transport, Running Costs)				
			<b>SUB-TOTAL 1</b>		
<b>DIRECT &amp; INDIRECT CONNECTIONS</b>	<b>House Connections (Type 1 &amp; 2). Accessories include House Labels, Pigtail Bolts, Strain clamps, Cable Saddles, Ready Board Mounting Hardware, Threaded Rods, Meters, Customer Interface Units, Ready Boards, Service Cable, Poles and Excavations are all inclusive.All Free Issue Material will be issued. Capturing and Handing over of Customer Data and updated PCS file is included.</b>				
2.1	Type 1 connection can involve service cable and / or a meter.The main infrastructure must be on the boundary of the property applying for point of supply.	e.a.		R 1 070.30	R0.00
2.3	Type 2 Only LV Infrastructure required connections can only involve extension of the main LV Overhead Line,Cable or Bundle Conductor in order to supply the Customer.(connecting this customer must not require the increase of a Transformer Capacity-Pole Mounted or Mini Sub). Service Cable and Meter included.	e.a.		R 1 872.73	R0.00
			<b>SUB-TOTAL 2</b>		
<b>TRANSPORT</b>	<b>Transport of resources to and from site will be done in terms of OHS Act (T). The cost to the Contractor to provide safe transport for his employees should be in terms of the Construction Regulations Clause 21 (2) (a) and (i) &amp; adhere to Eskom Life Saving rules. Tracker records to be provided as proof of km's travelled.</b>				
1.1	LDV 4x2	km		R 5.56	R 0.00
1.2	LDV/4x4	km		R 5.56	R 0.00
1.4	10 m³ Tipper Truck	km		R 33.85	R 0.00



BILL OF ACTIVITIES						
ITEM	DESCRIPTION	UNIT	QTY	RATE	TOTAL	
W	TRANSPORT					
Unless otherwise specified, transport is to be used under specific instruction from the Project Manager only. This excludes staff transport. Staff transport is to be paid to transport workers from base location to site only. LDV/4x4 will only be paid for justifiable use and will be to the sole discretion of the Project Manager						
1.1	LDV 4x2	km		R 5.56	R 0.00	
1.2	LDV/4x4	km		R 5.56	R 0.00	
1.3	Personnel Transport for Staff	km		R 8.80	R 0.00	
1.4	10 m³ Tipper Truck	km		R 33.85	R 0.00	
1.5	6 m³ Tipper Truck	km		R 30.09	R 0.00	
1.6	Transport Truck 2-4 ton	km		R 8.08	R 0.00	
1.7	Transport Truck 5-8 ton	km		R 13.45	R 0.00	
1.8	Transport Truck 5-8 ton with crane	km		R 15.86	R 0.00	
1.9	Transport Truck 9-14 ton	km		R 24.73	R 0.00	
1.10	Transport Truck 9-14 ton with crane	km		R 36.88	R 0.00	
1.11	Transport-22-ton crane truck	km		R 43.09	R 0.00	
<b>SUB-TOTAL W</b>					<b>R 0.00</b>	

Verified By:		
Clerk of Works		DATE
Checked By:		
Quantity Surveyor		DATE

Additional Items			
BILL NO: 11	D-D-T	DESCRIPTION	LABOUR RATE
NO.			
<b>This schedule is used to assist with the valuation of Compensation Events</b>			
10.1.1		Electrician (qualified trade test)	hour R 134.64
10.1.2		MV & LV authorisation permit holder (Responsible Person)	hour R 134.64
10.1.3		Linesman (Proof of qualification required)	hour R 107.67
10.1.4		Cable Jointer (Proof of qualification required)	hour R 123.99
10.1.6		Semi-skilled Labour	hour R 78.44
10.1.7		Unskilled Labour - no formal NQF qualification	hour R 27.57
10.1.8		4X2 Single Cab	day R 523.52
10.1.9		4X4 Double Cab	day R 654.41
10.1.10		8-ton crane truck	day R 3 049.55
10.1.11		Mini Bus	day R 1 752.31
<b>Totals</b>			<b>Carried to Summary Page</b>

Verified By: ..... Clerk of Works ..... DATE

Cost Checked by: ..... Quantity Surveyor ..... DATE

Accepted By: .....