

APPENDIX V

BREAKDOWN OF EQUIPMENT USED IN MEA'S DISTRIBUTION SUBSTATION

Subproject-No. 88.1.01 : Klongsarn Distribution Substation, 69-12 kV  
 : New Substation, 2x40 MVA Capacity, Indoor Type

Subproject Cost  
 Unit : Million Baht

Item	Description	Unit	Qty	FC		LC			Total		
				Mat	Tax	Mat	Labour	Eqmt	Other	Tot (FC+LC)	
Civil Work											
1)	Indoor Land Elevating, Fence, Road & Guard House	Sub	1	-	-	0.75	0.22	0.03	-	0.99	0.99
2)	Foudation for Power Transformer	Ea	3	-	-	0.81	0.13	0.02	-	0.96	0.96
Building											
3)	Indoor Substation Building (3 Bay)	Sub	1	-	-	4.37	1.67	0.21	-	7.26	6.26
4)	Steel Tower and UHF Radio System	Sub	1	0.37	0.14	0.37	0.07	0.03	-	0.61	0.98
SFG Gas Insulated Part of Substation											
5)	69 kV 3 Bay SFG Metal Clad Switchgear	Sub	1	17.77	4.02	-	0.12	0.01	-	4.16	21.92
Indoor Metalclad Switchgear											
6)	12 kV Incoming (2500A 25kA)	Set	2	0.77	0.39	-	0.01	0.01	-	0.41	1.18
7)	12 kV Bus-Section (2500A 25kA)	Set	3	1.16	0.59	-	0.01	0.01	-	0.61	1.76
8)	12 kV Feeder (800A 25 kA)	Set	12	3.41	1.73	-	0.06	0.03	-	1.81	5.22
9)	12 kV Capacitor-Bank (800A 25kA)	Set	2	0.57	0.29	-	0.01	0.01	-	0.31	0.88
10)	12 kV Station Service Tran.(45 kVA)	Set	2	0.85	0.43	-	0.01	0.01	-	0.45	1.30
Control Board											
11)	12 kV Control Board	Set	19	3.79	1.92	-	0.06	0.03	-	2.01	5.81
12)	69 kV Control Board	Set	5	1.27	0.65	-	0.05	0.02	-	0.72	1.99
Control Cable											
13)	Control Cable for Indoor Substation	Board	24	0.25	0.13	-	0.09	0.02	-	0.24	0.49
Power Transformer											
14)	69-12/24 kV 30/40 MVA LTC.	Ea	2	11.03	2.28	-	0.19	0.05	-	2.52	13.55
Power Cable and Terminator											
15)	Underground Cable, 25 kV 800 Sq.mm. CU. XLPE	M	360	0.29	0.16	-	0.04	0.01	-	0.21	0.50
16)	Underground Cable, 69 kV 800 Sq.mm. CU. XLPE	M	180	0.23	0.06	-	0.03	0.01	-	0.10	0.33
Battery											
17)	Battery 125 V. 210 AH.	Set	1	0.66	0.13	-	0.05	-	-	0.18	0.84
18)	Battery Charger	Set	1	0.10	0.03	-	0.01	-	-	0.04	0.14
Distribution Panel											
19)	AC Distribution Panel	Phl	1	0.04	0.02	-	-	-	-	0.02	0.06
20)	DC Distribution Panel	Phl	1	0.03	0.01	-	-	-	-	0.01	0.04