MAE HAT HYDROPOWER PROJECT

GROUP No.	GROUP TITLE	TOTAL AMOUNT (BAHT)
	CONTRACT C1 CIVIL WORK	
1	GENERAL	
2	WEIR IMPROVEMENT AND INTAKE STRUCTURE	
3	HEADRACE AND O&M ROAD 1	
4	O&M ROAD AND ACCESS ROAD	
5	SURGE TANK	
6	PENSTOCK	
7	POWERHOUSE	
8	TAILRACE	
	BID AMOUNT GROUP 1 TO 8	
	VAT 7 %	
	TOTAL OF BID AMOUNT GROUP 1 TO 8	
	SUM CONTRACT C1	
	CONTRACT C2 E&M	
1	TOTAL PRICE OF EQUIPMENT	
2	TOTAL PRICE OF SPARE PARTS	
3	TOTAL PRICE OF MAINTENANCE TOOLS AND INSTRUMENTS*	
4	PRICE OF FACTORY TESTS	
5	PRICE OF ERECTION	
6	PRICE OF FIELD PERFORMANCE TESTS	
	TOTAL	
	VAT 7 %	
	SUM CONTRACT C2	
	TOTAL C1 AND C2	

MAE HAT HYDROPOWER PROJECT
CONTRACT C1
CONSTRUCTION OF CIVIL WORKS

GROUP SCHEDULE OF BID AMOUNT

GROUP No.	GROUP TITLE	TOTAL AMOUNT (BAHT)
1	GENERAL	
2	WEIR IMPROVEMENT AND INTAKE STRUCTURE	
3	HEADRACE AND O&M ROAD 1	
4	O&M ROAD AND ACCESS ROAD	
5	SURGE TANK	
6	PENSTOCK	
7	POWERHOUSE	
8	TAILRACE	
	BID AMOUNT GROUP 1 TO 8	
	TOTAL OF BID AMOUNT GROUP 1 TO 8	
GRAND TOTAL		

SCHEDULE OF QUANTITIES, RATES AND PRICES-SUMMARY OF BID AMOUNT FOR

GROUP 1 : GENERAL

SECTION NO.	SECTION TITLE	SUB-TOTAL AMOUNT BAHT
1	GENERAL	
TOTAL OF BID AMOUNT GROUP 1		

SCHEDULE OF QUANTITIES, RATES AND PRICES

GROUP 1 : GENERAL

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE BATH	AMOUNT BATH
	Section 1 : General Requirement				
S1.15(3)	Field offices and permanent housing				
	i) Field office for Employer&Engineer according standard plan	LS	1		
	- Solar Rooftop 10 kW	LS	1		
	ii) Yard Area	LS	1		
	iii) Temporary Fence	m.	365		
	iv) งานระบบไฟฟ้าสาธารณะสำหรับชุมชนรอบโรงไฟฟ้า				
	- ติดตั้งหม้อแปลง 50 kVA 3 เฟส พร้อมชุดฟิวส์และอุปกรณ์ประกอบ รวมติดตั้ง	set	1		
	- ติดตั้งหม้อแปลง 30 kVA 1 เฟส พร้อมชุดฟิวส์และอุปกรณ์ประกอบ รวมติดตั้ง	set	1		
	- ตู้ควบคุมไฟฟ้าแสงสว่างอัตโนมัติ พร้อมอุปกรณ์ประกอบ และติดตั้ง	set	3		
	- โคมไฟฟ้าถนน LED ขนาด 50W พร้อมติดตั้งคาร์ทริดฟิวส์กันฝน, กิ่งโคมชุบกัลวาไนซ์ ขาจับกิ่งโคมแบบปรับได้ชุบกัลวาไนซ์ สายไฟฟ้าต่อเข้าโคม และอุปกรณ์ประกอบครบชุด พร้อมติดตั้ง	set	251		
	- เสาไฟฟ้า ค.อ.ร. 8 เมตร พร้อมอุปกรณ์ประกอบครบชุด พร้อมติดตั้ง	set	40		
	- สาย THW-A 70 sq.mm. พร้อมอุปกรณ์ประกอบครบชุด พร้อมติดตั้ง	m.	14,700		
	- แรค พร้อมลูกถ้วย 4 ชุด และอุปกรณ์ประกอบครบชุด พร้อมติดตั้ง	set	62		
	- แรค พร้อมลูกถ้วย 2 ชุด และอุปกรณ์ประกอบครบชุด พร้อมติดตั้ง	set	328		
	v) งานระบบประปาสาธารณะสำหรับชุมชนรอบโรงไฟฟ้า	m.	3,380		
	vi) Elevated Tank	LS	1		
	- Water Filter System	LS	1		
	vii) Entrance Gate with Name Board	set	2		
	viii) Garage	LS	1		
	ix) Guard House	LS	1		
	x) Easy Pass	LS	1		
	xi) Wiremess Fence	m.	11		
	xii) Permanent Fence	m.	245		
	Sub - total Section 1				
	GRAND TOTAL OF GROUP 1				

SCHEDULE OF QUANTITIES, RATES AND PRICES-SUMMARY OF BID AMOUNT FOR GROUP 2 : WEIR IMPROVEMENT AND INTAKE STRUCTURE

SECTION NO.	SECTION TITLE	SUB-TOTAL AMOUNT BAHT
2	WATER CONTROL AND DEWATERING	
3	SURFACE EXCAVATION	
4	FILL AND BACKFILL	
7	PROTECTION AND SUPPORT EXCAVATION	
9	CONCRTETE WORKS	
12	PERMANENT EQUIMENT AND MISCELLANEOUS METAL WORKS	
TOTAL OF BID AMOUNT GROUP 2		

SCHEDULE OF QUANTITIES, RATES AND PRICES

GROUP 2 : WEIR IMPROVEMENT AND INTAKE STRUCTURE

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE BATH	AMOUNT BAHT
	Section 2 : Water Control and Dewatering				
S2.06(1)	Diversion and control of River during construction	LS	1		
S2.06(4)	Dewatering of surface construction	LS	1		
	Sub - total Section 2				
	Section 3 : Surface Excavation				
S3.09(2)	Clearing and Grubbing	sq.m	128		
S3.09(3)	Stripping	cu.m	35		
S3.09(4)	Common Excavation	cu.m	737		
S3.09(5)	Rock Excavation				
	i) Weathered rock	cu.m	211		
	ii) Sound rock	cu.m	105		
S3.09(6)	Drilling hole for drainage	m	113		
S3.09(9)	Demolish Existing Structure				
	i) Remove exiting weir surface	cu.m	4		
	ii) Headwall	cu.m	142		
	Sub - total Section 3				
	Section 4 : Fill and Backfill				
S4.07(1)	Compacted backfill and fill	cu.m	526		
	Sub - total Section 4				
	Section 7 : Protection and Support Excavation				
S7.04(8)	Anchor bar dia. 12 mm, L = 0.50 m	set	101		
	Sub - total Section 7				
	Section 9 : Concrete Works				
S9.10(3)	Reinforcing bars	kg.	25,724		
S9.10(6)	Structure concrete				
	i) Concrete fc' = 210 ksc.	cu.m	177		
	ii) Non-Shrink Mortar grout	cum	0.1		
S9.10(8)	Miscellaneous concrete				
	i) Lean concrete	cum	11		
	ii) Concrete filled fc' = 140 ksc.	cum	18		
S9.10(9)	Waterstops				
	i) PVC waterstop type A	m.	9		
S9.10(11)	Joint fillers and sealer				
	i) Sealing compound	sq.m	56		
	Sub - total Section 9				
	Section 12 : Permanent Equipment and Miscellaneous Works				
S12.12(8)	Supply and installation vertical gates				
	i) Sand Sluice gate size 1.50 x 1.50 m w/predestal lift 6.5 tons	set	1		
	ii) Vertical gate dia. 1.20 m with predestal lift 1.75 tons	set	1		
S12.12(9)	Miscellaneous metal works				
	i) Supply and installation Steel structure	kg.	1,777		
	ii) Supply and installation handrail	m.	40		
	Sub - total Section 12				
	GRAND TOTAL OF GROUP 2				

SCHEDULE OF QUANTITIES, RATES AND PRICES-SUMMARY OF BID AMOUNT FOR GROUP 3 : HEADRACE AND O&M ROAD 1

SECTION NO.	SECTION TITLE	SUB-TOTAL AMOUNT BAHT
3	SURFACE EXCAVATION	
4	FILL AND BACKFILL	
7	PROTECTION AND SUPPORT EXCAVATION	
9	CONCRTETE WORKS	
12	PERMANENT EQUIMENT AND MISCELLANEOUS METAL WORKS	
13	STEEL LINERS AND STEEL CONDUIT PIPES	
TOTAL OF BID AMOUNT GROUP 3		

SCHEDULE OF QUANTITIES, RATES AND PRICES
GROUP 3 : HEADRACE AND O&M ROAD 1

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE BATH	AMOUNT BATH
	Section 3 : Surface Excavation				
S3.09(2)	Clearing and Grubbing	sq.m	2,081		
S3.09(3)	Stripping	cu.m	624		
S3.09(4)	Common Excavation	cu.m	34,093		
S3.09(9)	Demolished Existing Structure				
	i) Remove Existing Headrace	cu.m.	2,246		
	Drain Culvert STA.0+413.534, STA.0+515.748, STA.0+651.663, STA.0+948.448, STA.1+320.961, STA.1+508.437, STA.1+903.095, STA.1+944.718				
S3.09(2)	Clearing and Grubbing	sq.m	1,748		
S3.09(3)	Stripping	cu.m	525		
S3.09(4)	Common Excavation	cu.m	2,603		
S3.09(5)	Rock Excavation				
	i) Weathered rock	cu.m	264		
	Sub - total Section 3				
	Section 4 : Fill and Backfill				
S4.07(1)	Compacted backfill and fill	cu.m	23,162		
S4.07(3)	Compacted coarse sand	cu.m	830		
	Drain Culvert STA.0+413.534, STA.0+515.748, STA.0+651.663, STA.0+948.448, STA.1+320.961, STA.1+508.437, STA.1+903.095, STA.1+944.718				
S4.07(1)	Compacted backfill and fill	cu.m	2,148		
	Sub - total Section 4				
	Section 7 : Protection and Support Excavation				
	Drain Culvert STA.0+413.534, STA.0+515.748, STA.0+651.663, STA.0+948.448, STA.1+320.961, STA.1+508.437, STA.1+903.095, STA.1+944.718				
S7.04(1)	Riprap	cu.m	111		
S7.04(1)	Mattress 6.00x2.00x0.30 m.	set	88		
	Sub - total Section 7				
	Section 9 : Concrete Works				
S9.10(3)	Reinforcing bars	kg.	332,270		
S9.10(6)	Structure concrete				
	i) Concrete fc' = 280 ksc.	cu.m	1,258		
	ii) Concrete fc' = 210 ksc.	cu.m	5,220		
S9.10(8)	Miscellaneous concrete				
	i) Lean concrete	cu.m	349		
S9.10(11)	Joint fillers and sealer				
	i) Elastic filler	sq.m	53		
	ii) Joint sealer	m	728		
	iii) Plastic Sheet	sq.m	874		
	Drain Culvert STA.0+413.534, STA.0+515.748, STA.0+651.663, STA.0+948.448, STA.1+320.961, STA.1+508.437, STA.1+903.095, STA.1+944.718				
S9.10(3)	Reinforcing bars	kg.	23,574		
S9.10(6)	Structure concrete				
	ii) Concrete fc' = 210 ksc.	cu.m	210		
S9.10(8)	Miscellaneous concrete				
	i) Lean concrete	cu.m	28		
S9.10(9)	Waterstops				
	i) PVC waterstop type A	m.	91		
S9.10(11)	Joint fillers and sealer				
	i) Elastic filler	sq.m	24		
	ii) Joint sealer	m	72		

SCHEDULE OF QUANTITIES, RATES AND PRICES
GROUP 3 : HEADRACE AND O&M ROAD 1

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE BATH	AMOUNT BATH
	Sub - total Section 9				
S12.12(9)	**Section 12 : Permanent Equipment and Miscellaneous Works** Miscellaneous metal works - Ring girder **Sub - total Section 12**	kg.	13,684		
S13.14(2)	**Section 13 : Steel Liners and Steel Conduit Pipes** Steel Liners and steel conduit pipes i) Steel liners dia.1.20 m. 11.10 mm. Thk. **Sub - total Section 13**	m.	2,203		
GRAND TOTAL OF GROUP 4					

SCHEDULE OF QUANTITIES, RATES AND PRICES-SUMMARY OF BID AMOUNT FOR GROUP 4 : O&M ROAD AND ACCESS ROAD

SECTION NO.	SECTION TITLE	SUB-TOTAL AMOUNT BAHT
3	SURFACE EXCAVATION	
4	FILL AND BACKFILL	
6	ROAD CONSTRUCTION	
9	CONCRETE WORKS	
TOTAL OF BID AMOUNT GROUP 4		

SCHEDULE OF QUANTITIES, RATES AND PRICES
GROUP 4 : O&M ROAD AND ACCESS ROAD

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE BATH	AMOUNT BATH
	Section 3 : Surface Excavation				
	Access Road				
S3.09(4)	Common Excavation	cu.m	1,308		
	O&M Road 2				
S3.09(4)	Common Excavation	cu.m	7,160		
	O&M Road 3				
S3.09(4)	Common Excavation	cu.m	138		
	Sub - total Section 3				
	Section 4 : Fill and Backfill				
	Access Road				
S4.07(1)	Compacted backfill and fill	cu.m	12,040		
S4.07(3)	Compacted coarse sand	cu.m	701		
	O&M Road 2				
S4.07(1)	Compacted backfill and fill	cu.m	2,486		
S4.07(3)	Compacted coarse sand	cu.m	1,952		
	O&M Road 3				
S4.07(1)	Compacted backfill and fill	cu.m	53		
S4.07(3)	Compacted coarse sand	cu.m	86		
	Sub - total Section 4				
	Section 6 : Fill and Backfill				
	Access Road				
S6.13(4)	Compacted Laterite	cu.m	26,336		
	O&M Road 2				
S6.13(4)	Compacted Laterite	cu.m	2,421		
	O&M Road 3				
S6.13(4)	Compacted Laterite	cu.m	68		
	Sub - total Section 6				
	Section 9 : Concrete Works				
	Access Road				
S9.10(3)	Reinforcing bars	kg.	21,718		
S9.10(6)	Structure concrete				
	i) Concrete fc' = 280 ksc.	cu.m	903		
S9.10(11)	Joint for access roads				
	i) Mastic Joint Sealer	m	574		
	ii) Plastic sheet	sq.m	689		
	iii) Elastic filler	sq.m	11		
	O&M Road 2				
S9.10(3)	Reinforcing bars	kg.	61,218		
S9.10(6)	Structure concrete				
	i) Concrete fc' = 280 ksc.	cu.m	2,543		
S9.10(11)	Joint for access roads				
	i) Mastic Joint Sealer	m	1,470		
	ii) Plastic sheet	sq.m	1,764		
	iii) Elastic filler	sq.m	26		
	O&M Road 3				
S9.10(3)	Reinforcing bars	kg.	2,770		
S9.10(6)	Structure concrete				
	i) Concrete fc' = 280 ksc.	cu.m	111.00		
S9.10(11)	Joint for access roads				
	i) Mastic Joint Sealer	m	67		
	ii) Plastic sheet	sq.m	80		
	iii) Elastic filler	sq.m	1		
	Sub - total Section 9				
	GRAND TOTAL OF GROUP 4				

SCHEDULE OF QUANTITIES, RATES AND PRICES-SUMMARY OF BID AMOUNT FOR GROUP 5 : SURGE TANK

SECTION NO.	SECTION TITLE	SUB-TOTAL AMOUNT BAHT
3	SURFACE EXCAVATION	
4	FILL AND BACKFILL	
7	PROTECTION AND SUPPORT EXCAVATION	
9	CONCRTETE WORKS	
12	PERMANENT EQUIMENT AND MISCELLANEOUS METAL WORKS	
13	STEEL LINERS AND STEEL CONDUIT PIPES	
14	MISCELLANEOUS WORKS	
TOTAL OF BID AMOUNT GROUP 5		

SCHEDULE OF QUANTITIES, RATES AND PRICES
GROUP 5 : SURGE TANK

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE BATH	AMOUNT BATH
	Section 3 : Surface Excavation				
S3.09(2)	Clearing and Grubbing	sq.m	58		
S3.09(3)	Stripping	cu.m	18		
S3.09(4)	Common Excavation	cu.m	2,871		
S3.09(9)	Demolish Existing Structure				
	i) Existing Forebay	cu.m	11		
	Sub - total Section 3				
	Section 4 : Fill and Backfill				
S4.07(1)	Compacted backfill and fill	cu.m	2,323		
	Sub - total Section 4				
	Section 7 : Protection and Support Excavation				
S7.04(1)	Riprap	cu.m	26		
S7.04(4)	6.00x2.00x0.30 Mattress	set	22		
	Sub - total Section 7				
	Section 9 : Concrete Works				
S9.10(3)	Reinforcing bars	kg.	21,138		
S9.10(6)	Structure concrete				
	i) Concrete fc' = 210 ksc.	cu.m	447		
S9.10(8)	Miscellaneous concrete				
	i) Lean concrete	cu.m	5		
	ii) Plain Concrete With 0.30 (min.) Dump Rock	cu.m	145		
S9.10(11)	Joint fillers and sealer				
	i) Mastic Joint Sealer	m	30		
	ii) Plastic sheet	sq.m	20		
	Sub - total Section 9				
	Section 12 : Permanent Equipment and Miscellaneous Works				
S12.12(9)	Miscellaneous metal works				
	i) Ring Girder Stiffener & Side Column	kg.	20,456		
	ii) Surge Tank Cover Plate	kg.	2,612		
	iii) Steel Tank 18 mm. THK.	kg.	40,716		
	iv) Ladder Rungs	kg.	1,388		
	v) Cover Plate for Penstock Valve Chamber	kg.	318		
	vi) Cover Plate for Sediment Valve Chamber	kg.	77		
	vii) Gate Valve Ø 1.10 m.(Emergency valve chamber)	set	1		
	viii) Gate Valve Ø 0.30 m.(Sediment valve chamber)	set	1		
	Sub - total Section 12				
	Section 13 : Steel Liners and Steel Conduit Pipes				
S13.14(2)	Steel Liners and steel conduit pipes				
	i) Steel liners dia.1.20 m. 11.1 mm. THK.	m.	4		
	ii) Steel liners dia.1.10 m. 11.1 mm. THK.	m.	8		
	iii) Steel Pipe dia.0.30 m.	m.	387		
	Sub - total Section 13				
	Section 14 : Miscellaneous Works				
S14.06(5)	PVC pipe and component dia. 100 mm.	m.	9		
	Sub - total Section 14				
	GRAND TOTAL OF GROUP 5				

SCHEDULE OF QUANTITIES, RATES AND PRICES-SUMMARY OF BID AMOUNT FOR GROUP 6 : PENSTOCK

SECTION NO.	SECTION TITLE	SUB-TOTAL AMOUNT BAHT
3	SURFACE EXCAVATION	
4	FILL AND BACKFILL	
9	CONCRTETE WORKS	
12	PERMANENT EQUIMENT AND MISCELLANEOUS METAL WORKS	
13	STEEL LINERS AND STEEL CONDUIT PIPES	
TOTAL OF BID AMOUNT GROUP 6		

SCHEDULE OF QUANTITIES, RATES AND PRICES
GROUP 6 : PENSTOCK

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE BATH	AMOUNT BATH
	Section 3 : Surface Excavation				
S3.09(2)	Clearing and Grubbing	sq.m	3,763		
S3.09(3)	Stripping	cu.m	1,129		
S3.09(4)	Common Excavation	cu.m	5,244		
S3.09(5)	Rock Excavation				
	i) Weathered rock	cu.m	1,048		
	ii) Sound rock	cu.m	699		
S3.09(9)	Demolish Existing Structure				
	i) Existing Thrust Block	cu.m	199		
	ii) Remove Existing Penstock	cu.m	416		
	Sub - total Section 3				
	Section 4 : Fill and Backfill				
S4.07(1)	Compacted backfill and fill	cu.m	1,783		
	Sub - total Section 4				
	Section 9 : Concrete Works				
S9.10(3)	Reinforcing bars	kg.	60,149		
S9.10(6)	Structure concrete				
	i) Concrete fc' = 210 ksc.	cu.m	2,576		
S9.10(8)	Miscellaneous concrete				
	i) Lean concrete	cu.m	59		
	ii) Plain Concrete With 0.30 (min.) Dump Rock	cu.m	61		
	Sub - total Section 9				
	Section 12 : Permanent Equipment and Miscellaneous Works				
S12.12(9)	Miscellaneous metal works				
	i) Ring Girder	kg.	30,408		
	ii) Wye (Ring and Beam)	kg.	5,993		
	Sub - total Section 12				
	Section 13 : Steel Liners and Steel Conduit Pipes				
S13.14(2)	Steel Liners and steel conduit pipes				
	i) Steel liners dia.1.10 m.	m.	404		
	ii) Steel liners dia.0.55 m.	m.	30		
	Sub - total Section 13				
	GRAND TOTAL OF GROUP 6				

SCHEDULE OF QUANTITIES, RATES AND PRICES-SUMMARY OF BID AMOUNT FOR GROUP 7 : POWERHOUSE

SECTION NO.	SECTION TITLE	SUB-TOTAL AMOUNT BAHT
3	SURFACE EXCAVATION	
4	FILL AND BACKFILL	
5	DRAINAGE	
7	PROTECTION AND SUPPORT EXCAVATION	
9	CONCRTETE WORKS	
11	BUILDING CONSTRUCTION	
12	PERMANENT EQUIMENT AND MISCELLANEOUS METAL WORKS	
15	ILLUMINATION EQUIPMENT	
16	22 KV TRANSMISSION LINE AND LOW TENSION CABLE	
TOTAL OF BID AMOUNT GROUP 7		

SCHEDULE OF QUANTITIES, RATES AND PRICES
GROUP 7 : POWERHOUSE

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE BATH	AMOUNT BATH
	Section 3 : Surface Excavation				
S3.09(2)	Clearing and Grubbing	sq.m	377		
S3.09(3)	Stripping	cu.m	113		
S3.09(4)	Common Excavation	cu.m	3,581		
S3.09(5)	Rock Excavation				
	i) Weathered rock	cu.m	1,534		
S3.09(9)	Demolish Existing Structure				
	i) Existing Power House	cu.m	308		
	ii) Existing Retaining Wall	cu.m	128		
	iii) Existing Drain	cu.m	84		
	Sub - total Section 3				
	Section 4 : Fill and Backfill				
S4.07(1)	Compacted backfill and fill	cu.m	5,245		
	Sub - total Section 4				
	Section 5 : Drainage				
S5.10(6)	Drain pipes				
	i) Furnishing and installing RC. Ø 0.60 m.	m.	50		
	ii) MH for Ø 0.60 Drain Culvert	unit	4		
	iii) Gutter drain	m.	226		
	Sub - total Section 5				
	Section 7 : Protection and Support Excavation				
S7.04(1)	Mattress - 6.00x2.00x0.30 m	set	63		
S7.04(1)	Riprap	cu.m	44		
S7.04(1)	Geotextile	sq.m.	274		
S7.04(1)	Dump Rock	sq.m.	136		
S7.04(6)	Sodding	sq.m.	48		
	Sub - total Section 7				
	Section 9 : Concrete Works				
S9.10(3)	Reinforcing bars	kg.	105,674		
S9.10(6)	Structure concrete				
	i) Concrete fc' = 280 ksc.	cu.m	66		
	ii) Concrete fc' = 210 ksc.	cu.m	690		
	iii) Plain Concrete	cu.m	42		
	ix) Plain Concrete with 0.30 (min) Dump Rock	cu.m	64		
S9.10(8)	Miscellaneous concrete				
	i) Lean concrete	cu.m	12		
S9.10(9)	Waterstops				
	i) PVC waterstop type A	m.	66		
	Sub - total Section 9				
	Section 11 : Building Construction				
	Metal Sheet Sprayed with Polyurethane Foam 1" thk.	sq.m.	631		
	Roof Structure	kg.	20,226		
S11.14(2)	Brick walls				

SCHEDULE OF QUANTITIES, RATES AND PRICES
GROUP 7 : POWERHOUSE

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE BATH	AMOUNT BATH
S11.14(4)	i) Cement plastering brick walls	sq m	1,946		
	Doors and windows				
	i) D3-Aluminium door 1.80x2.25 m	set	1		
	ii) D4-Hardwood 0.90x2.00 m.	set	5		
	iii) D5-Hardwood 0.90x2.00 m. (opening door)	set	2		
	iv) D6-PVC door 0.80x2.00 m.	set	1		
	v) D7-Hardwood 1.80x2.25 m. (opening door)	set	2		
	vi) W1-Opening window 3.40 x 1.50 m	set	8		
	vii) W2-Opening window 1.70 x 1.50 m	set	1		
	viii) W3-Opening window 3.40 x 0.50 m	set	3		
	ix) W4 Fixed glass window 3.40 x 1.50 m	set	8		
	x) W5 Fixed glass window 1.20 x 0.50 m	set	1		
	xi) W6 Sliding window 1.70 x 1.00 m	set	5		
	Amount Carried Forward				

SCHEDULE OF QUANTITIES, RATES AND PRICES
GROUP 7 : POWERHOUSE

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE BATH	AMOUNT BATH
	Amount Brought Forward				
S11.14(5)	Furnishing and Installing Steel Rolling Shutter Doors				
	i) D1-Steel roller shutter door size 5.15x5.85 m.	set	1		
	ii) D2-Steel roller shutter door size 2.85x3.50 m.	set	1		
S11.14(7)	Floor finishes				
	i) Floor 1-Coarse finished	sq m	84		
	ii) Floor 2-Coated with Epoxy Resin	sq m	407		
	iii) Floor 12"x12" CERAMIC FLOOR TILES	sq m	9		
S11.14(8)	Wall finished				
	ii) 8"x8" CERAMIC WALL TILES	sq m	22		
S11.14(8)	Ceiling works				
	Gypsum board with T-bar stud 0.60 x 0.60 m, 9.0 mm thk.	sq m	141		
S11.14(11)	Signboard	LS	1		
S11.14(14)	Water supply and sanitary services	LS	1		
S11.14(15)	Seepage tank	LS	1		
S11.14(17)	Lightning protection system	LS	1		
	Sub - total Section 11				
	Section 12 : Permanent Equipment and Miscellaneous Works				
S12.12(9)	Miscellaneous metal works				
	i) Galvanize steel Handrail	m.	127		
	ii) Cable trench type A	m.	35		
	iii) Outdoor Cable trench	m.	7		
	iv) Steel Stair	kg.	400		
	Sub - total Section 12				
	Section 15 : Illumination Equipment				
S15.05(1)	Indoor illumination equipment	L.S.	1		
S15.05(2)	Outdoor illumination equipment and main low power cable				
	i) Main low power cable in powerhouse	L.S.	1		
S15.05(3)	Air- condition				
	i) Air condition 36,000 BTU	set	2		
	ii) Air condition 24,000 BTU	set	1		
S15.05(4)	Ventilator 12"	set	7		
S15.05(5)	Miscellaneous equipments	L.S.	1		
	Sub - total Section 15				
	Section 16 : 22 kV Transmission Line and Low Tension Cable				
16.10(2)	Furnishing and Installing of 22 kV Transmission Line	km.	8		
16.10(3)	Main Power Cable Low Voltage ที่ AC. Distribution-Load Schedule of Panel Boa	L.S.	1		
16.10(5)	Load Schedule of Panel Board ที่ Power House	L.S.	1		
16.10(6)	Electric Device ที่ Switchyard	L.S.	1		
	Solar Rooftop 20 kW	L.S.	1		
	Sub - total Section 16				
	GRAND TOTAL OF GROUP 7				

SCHEDULE OF QUANTITIES, RATES AND PRICES-SUMMARY OF BID AMOUNT FOR GROUP 8 : TAILRACE

SECTION NO.	SECTION TITLE	SUB-TOTAL AMOUNT BAHT
9	CONCRTETE WORKS	
12	PERMANENT EQUIMENT AND MISCELLANEOUS METAL WORKS	
TOTAL OF BID AMOUNT GROUP 8		

SCHEDULE OF QUANTITIES, RATES AND PRICES
GROUP 8 : TAILRACE

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE BATH	AMOUNT BATH
	Section 9 : Concrete Works				
S9.10(3)	Reinforcing bars	kg.	35,619		
S9.10(6)	Structure concrete				
	ii) Concrete fc' = 210 ksc.	cu.m	250		
S9.10(8)	Miscellaneous concrete				
	i) Lean concrete	cu.m	13		
S9.10(9)	Waterstops				
	i) PVC waterstop type A	m.	14		
S9.10(11)	Joint fillers and sealer				
	i) Elastic filler	sq.m	4		
	Sub - total Section 9				
	Section 12 : Permanent Equipment and Miscellaneous Works				
S12.12(8)	Supply and installation gate and hoist				
	Vertical gate size 1.50 x 1.50 m with 6500 Kg. Vertical Scew-Lift	set	2		
S12.12(9)	Miscellaneous metal works				
	Ladder Rungs	kg.	20		
	Sub - total Section 12				
	GRAND TOTAL OF GROUP 8				

MAE HAT HYDROPOWER PROJECT

CONTRACT C-2
SCHEDULE 3 - Summary of Prices

Item No.	Details	Total Price (Baht)
1 2 3	TOTAL PRICE OF EQUIPMENT TOTAL PRICE OF SPARE PARTS TOTAL PRICE OF MAINTENANCE TOOLS AND INSTRUMENTS*	
	SUB - TOTAL VAT 7%	
GRAND TOTAL BID PRICE		

Note : ราคาที่เสนอจะต้องรวมค่าแรง ค่าติดตั้ง ค่าทดสอบ และค่าใช้จ่ายอื่น ๆ ทั้งปวงแล้ว

MAE HAT HYDROPOWER PROJECT

CONTRACT C-2
SCHEDULE 4 - SUMMARY PRICES OF EQUIPMENT

Item No.	**Details**	**Total Price (Baht)**
1	TURBINE AND GOVERNOR	
2	INLET VALVE	
3	MECHANICAL AUXILIARY EQUIPMENT	
4	GENERATOR AND AUXILIARIES	
5	AC STATION SERVICE TRANSFORMERS & SWITCHBOARDS	
6	TRANSFORMER TERMINAL CUBICLES, GENERATOR TERMINAL CUBICLES, BUS DUCTS AND NEUTRAL	
7	DC STATION SERVICES	
8	CONTROL, PROTECTION AND ALARM SYSTEM	
9	MAIN TRANSFORMER	
10	LINE PROTECTION AND SWITCHYARD EQUIPMENT	
11	COMMUNICATION SYSTEM	
12	GROUNDING SYSTEM	
13	ELECTRICAL AUXILIARY EQUIPMENT	
SUB - TOTAL		

MAE HAT HYDROPOWER PROJECT
CONTRACT C-2
SCHEDULE 4 - PRICES OF EQUIPMENT

Item No.	Details	Quantity	Unit	Uint Rate Baht/Unit	Total (Baht)
1	Turbine and Governor				
	(1) Pelton Turbine	2	Set		
	(2) Hydraulic Governing System	2	Set		
	(3) PLC Governor Cubicle	2	Set		
	Sub - Total				
2	Inlet Valve				
	(1) Inet Valve and Bypass Valve	2	Set		
	Sub - Total				
3	Mechanical Auxiliary Equipment				
	(1) Unit Cooling Water System	2	Set		
	(2) Compressed Air System	1	LS		
	(3) Portable Fire Extinguishers	1	LS		
	(4) Overhead Traveling Crane	1	Set		
	(5) Diesel-driven Standby Electric Power System	1	Set		
	Sub - Total				
4	Generator and Auxiliaries				
	(1) Generator with Flywheel	2	Set		
	(2) Oil Lubrication System	2	Set		
	(3) Excitation System	2	Set		
	Sub - Total				
5	AC Station Service Transformers & Switchboard				
	(1) Station Service Transformer 160kVA	1	Set		
	(2) AC Distribution Board	1	Lot		
	Sub - Total				

MAE HAT HYDROPOWER PROJECT
CONTRACT C-2
SCHEDULE 4 - PRICES OF EQUIPMENT

Item No.	Details	Quantity	Unit	Uint Rate Baht/Unit	Total (Baht)
6	Transformer Terminal Cubicle, Generator Terminal Cubicles, Bus Ducts and Neutral Cubicles				
	(1) Generator CB and CT, PT Cubicle	2	Set		
	(2) Generator Neutral Cubicles	2	Set		
	(3) Station Service DS Cubicle	2	Set		
	Sub - Total				
7	DC Station Services				
	(1) Battery Cells with Rack, 400 AH	1	set		
	(2) Battery Charger	1	set		
	(3) DC Distribution Panel Board	1	set		
	Sub - Total				
8	Control, Protection and Alarm System				
	(1) Control, Protection and Alarm Equipment	1	Lot		
	Sub - Total				
9	Main Transformer				
	(1) Main Transformer	2	Set		
	Sub - Total				
10	22 kV Line Protection and Switchyard Equipment				
	(1) 22kV Drop Out fuse	9	Sets		
	(2) 22kV Lightning Arrester	9	Sets		
	(3) 22kV Voltage Transformer	3	Sets		
	(4) 22kV Current Transformer	6	Sets		
	(5) 22kV Disconnecting Switch	1	Set		
	(6) 22kV SF6 Circuit Breaker	1	Set		
	(7) 22kV Protection Cubicle	1	Set		
	(8) Energy Meter with Auxiliary Equipment	1	Lot		
	Sub - Total				

MAE HAT HYDROPOWER PROJECT
CONTRACT C-2
SCHEDULE 4 - PRICES OF EQUIPMENT

Item No.	Details	Quantity	Unit	Uint Rate Baht/Unit	Total (Baht)
11	Communication System				
	(1) Communication System	1	Set		
	Sub - Total				
12	Ground System				
	(1) Ground System	1	LS		
	Sub - Total				
13	Electrical Auxiliary Equipment				
	(1) Cable Trays and Support	1	lot		
	(2) Conduit, Boxes and Fitting	1	lot		
	(3) HV and MV Cable	1	Lot		
	(4) 750 V Wire and Cable	1	lot		
	(5) Control Cable	1	lot		
	(6) Station Clocks	4	sets		
	(7) Water Level Transmitter (Forebay)	1	set		
	(8) Motor Control Center Panels	1	Lot		
	Sub - Total				