

SUBSTATION EQUIPMENT and Labor
(1,000's)

Project Name: Barinas I Power Plant
Customer: PDVSA
Location: Barinas, Venn
Bid Due Date:

Date: 26-Oct-11
Quote No: T 1003
Est By:

Item No.	Description	Mfgr	Loc	Qty	Unit Price	Total Price	Unit Frt Pr	Frt Price	Hours (day)	Qty (men)	Qty (days)	Qty (mhrs)	Rate (hour)	Total Labor
1							3.0%		10					
2	Main Power Transformer _115 KV, _75_ MVA			2	-	-	-	-	10	4	10.00	800	58	46,415
3	SF6 Circuit Breaker(s) ___ KV			2	60,000	120,000	3,600	7,200	10	2	7.00	280	58	16,245
4	Disconnect Switches ___ KV			2	25,000	50,000	1,500	3,000	10	2	5.00	200	58	11,604
5	Station Post Insulators ___ KV			6	550	3,300	99	594	10	2	0.05	6	58	348
6	Insulator Stanchons ___ High			6	550	3,300	99	594	10	1	0.50	30	58	1,741
7	Insulator Stanchons ___ High			-	-	-	-	-	10	1	0.40	-	58	-
8	Dead End Tower(s)			-	-	-	-	-	10	6	5.00	-	58	-
9	Alum Bus ___ Dia Lot of Bus and fittings			1	125,000	125,000	3,750	3,750	10	6	30.00	1,800	58	104,434
10	Alum Bus Conn's			-	-	-	-	-	10	1	0.10	-	58	-
11	Alum Bus End Plugs ___ Dia			-	-	-	-	-	10	1	0.05	-	58	-
12	Alum Bus Support Clamps			-	-	-	-	-	10	1	0.10	-	58	-
13	Alum Bus "V" Conn's			-	-	-	-	-	10	1	0.08	-	58	-
14	Static Wire Poles, ___ High			-	-	-	-	-	10	4	1.00	-	58	-
15	Area Lighting Poles, ___ High			-	-	-	-	-	10	4	1.00	-	58	-
16	Flood Lights, ___ Watts			-	-	-	-	-	10	2	2.00	-	58	-
17	#4/0 Grounding Conductor			-	-	-	-	-	10	2	0.03	-	58	-
18	3/4"x10'-0" Ground Rods & Clamps			-	-	-	-	-	10	1	0.04	-	58	-
19	#90 Cadweld Shots			-	-	-	-	-	10	2	0.30	-	58	-
20	Metering CT's & CPT's			2	35,000	70,000	2,100	4,200	10	2	3.00	120	58	6,962
21	Station Metering w/ In & Out Capabilities			1	50,000	50,000	1,500	1,500	10	2	5.00	100	58	5,802
22	Station Protective Relay(s)			1	50,000	50,000	1,500	1,500	10	2	5.00	100	58	5,802
23	Station RTU			-	-	-	-	-	10	2	5.00	-	58	-
24	125V DC System			-	-	-	-	-	10	2	2.00	-	58	-
25	Transmission Line Poles			-	-	-	-	-	10	6	2.00	-	58	-
26	Transmission Line Strain Insulators			-	-	-	-	-	10	1	0.00	-	58	-
27	Cable Bus, Type ___, Size ___			-	-	-	-	-	10	6	6.00	-	58	-
28	Main Power Transformer Oil, ___ Gal			2	55,000	110,000	3,300	6,600	10	2	5.00	200	58	11,604
29	Main Power Transformer Dress Out & Test			2	50,000	100,000	3,000	6,000	10	2	0.00	-	58	-
30	Fiber Optic Cable w/ Messenger Cable			-	-	-	-	-	10	4	5.00	-	58	-
31	Fiber Optic Cable Fittings & Terminations			-	-	-	-	-	10	2	2.00	-	58	-
32									10				58	
33									10				58	
34	Final TSD scope adder negotiation					520,000			10				58	
35									10				58	
36	Total Cost of Substation Equipment					1,202		35				3,636		211

Total Hours 3,636
 Prod Factor 1.80 6,545 **58** **380**

Price per hour based with all labor burdens as follows:

Local Hrly Cost **30.00**
 Fringes 2.50
 Small Tools 1.50
 Labor Burden 35% 10.50
 44.50
 Contr G&A 8% 3.56
 Contr Mark up 15% 6.68
 54.74
45 Hour Work Week = 58.02

Work Week Hours Multiplier
 45 50 60
1.06 1.1 1.17