

Annexure: I
Arun-3 HEP (4 x 225 MW)

WEIGHTS & DIMENSIONS OF HYDRO GENERATOR CONSIGNMENTS

S. No.	NAME OF COMPONENT	PACKAGE WT.	DIMENSIONS (MM)			CASE PER M/C	QTY	TOTAL CASES (FOR 4 M/C)	TOTAL Weight
		Kg.	L	W	H				
1	Stator frame Segment	13000	7500	4200	3200	4	4	16	208000
2	Stator lifting beam center	12000	4000	4000	1000	1	1	1	12000
3	Top Shaft	10500	2300	1700	2000	1	4	4	42000
4	Top bracket center	10000	4000	4000	1000	1	4	4	40000
5	Spring plate assembly	7000	2500	2500	1000	1	4		0
6	Poles	6000	3200	1100	800	24	4	96	576000
7	Lifting shaft assembly	6000	3000	1800	1800	1	1	1	6000
8	Large Packages	3000	2500	2200	1000	15	4	60	180000
9	Rim punching	2600	2000	1000	410	60	4	240	624000
10	Bottom bracket arm	2500	1800	800	2500	8	4	32	80000
11	Stator punching	2000	1500	1000	1500	60	4	240	480000
12	Top bracket arm	2000	3200	600	1000	8	4	32	64000
13	Medium Packages	2000	2000	1500	800	30	4	120	240000
14	Stator lifting beam arm assembly	1600	3200	500	1000	8	1	8	12800
15	Air coolers	1500	2500	2200	600	8	4	32	48000
16	Small Packages	1000	1500	1000	800	20	4	80	80000
17	Stator bars	800	4000	1500	1500	40	4	160	128000
18	Plug in type oil coolers	500	1000	900	900	8	4	32	16000
19	Small Packages	300	500	500	500	30	4	120	36000
20	Plug in type oil coolers	250	800	600	500	2	4	8	2000

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Annexure :II									
Arun-3 HEP (4 x 225 MW)									
WEIGHTS & DIMENSIONS OF HYDRO TURBINE CONSIGNMENTS									
S. No.	NAME OF COMPONENT	PACKAGE WT	DIMENSIONS (MM)			CASE PER M/C	QTY	TOTAL CASES (FOR 4 M/C)	TOTAL WEIGHT
		Kg.	L	W	H				
1	DT Cone								
1.1	Installation of DT Cone	7345	3920	3920	1190	1	4	4	29380
1.10	Installation of DT Cone	206	6000	1000	500	1	4	4	824
1.11	Installation of DT Cone	170	1000	1000	300	1	4	4	680
1.2	Installation of DT Cone	9825	5520	4200	2000	1	4	4	39300
1.3	Installation of DT Cone	2265	4750	4750	350	1	4	4	9060
1.4	Installation of DT Cone	905	3920	3920	70	1	4	4	3620
1.5	Installation of DT Cone	15	1200	800	200	1	4	4	60
1.6	Installation of DT Cone	680	1000	1000	500	1	4	4	2720
1.7	Installation of DT Cone	10	600	600	200	1	4	4	40
1.8	Installation of DT Cone	6.32	500	500	200	1	4	4	25.28
1.9	Installation of DT Cone	5.6	300	300	300	1	4	4	22.4
2	DT Elbow Liner								0
2.1	Installation of DT Elbow Liner	2520	4500	4500	1250	1	4	4	10080
2.2	Installation of DT Elbow Liner	2992	4500	4500	2180	1	4	4	11968
2.3	Installation of DT Elbow Liner	3145	4050	4500	2180	1	4	4	12580
2.4	Installation of DT Elbow Liner	2880	3700	4010	3270	1	4	4	11520
2.5	Installation of DT Elbow Liner	2880	3700	4010	3270	1	4	4	11520
2.6	Installation of DT Elbow Liner	2830	3760	3220	2645	1	4	4	11320
2.7	Installation of DT Elbow Liner	2830	3760	3220	2645	1	4	4	11320
3	Pipes & Embedments in First Stage	16918	6000	4000	2500	1	4	4	67672
3.1	Pipes & Embedments in First Stage	16918	6000	4000	2500	1	4	4	67672
3.10	Pipes & Embedments in First Stage	297	750	750	500	1	4	4	1188
3.11	Pipes & Embedments in First Stage	761	1200	1200	500	1	4	4	3044
3.12	Pipes & Embedments in First Stage	770	2500	2500	1000	1	4	4	3080
3.2	Pipes & Embedments in First Stage	570	3000	2000	2000	1	4	4	2280
3.3	Pipes & Embedments in First Stage	3710	3000	3000	2000	1	4	4	14840
3.4	Pipes & Embedments in First Stage	2340	6000	1000	500	1	4	4	9360
3.5	Pipes & Embedments in First Stage	431	6000	500	500	1	4	4	1724
3.6	Pipes & Embedments in First Stage	20	500	300	300	1	4	4	80
3.7	Pipes & Embedments in First Stage	500	2500	750	750	1	4	4	2000
3.8	Pipes & Embedments in First Stage	337	1135	500	500	1	4	4	1348
3.9	Pipes & Embedments in First Stage	34	1500	1500	100	1	4	4	136
4	Tubes & Embedments for Field								0
4.1	Tubes & Embedments for Field	863	6000	2000	1000	1	4	4	3452
4.10	Tubes & Embedments for Field	0.35	300	300	100	1	4	4	1.4
4.2	Tubes & Embedments for Field	170	6000	1000	500	1	4	4	680
4.3	Tubes & Embedments for Field	170	1000	1000	1000	1	4	4	680
4.4	Tubes & Embedments for Field	284	1500	500	200	1	4	4	1136
4.5	Tubes & Embedments for Field	58.5	500	500	500	1	4	4	234
4.6	Tubes & Embedments for Field	33.6	500	500	300	1	4	4	134.4
4.7	Tubes & Embedments for Field	11	620	300	150	1	4	4	44
4.8	Tubes & Embedments for Field	115	1000	500	300	1	4	4	460
4.9	Tubes & Embedments for Field	896	1500	1000	200	1	4	4	3584
5	Stay Ring								0
5.1	Installation of Stay Ring	20500	7000	4500	2200	1	4	4	82000
5.2	Installation of Stay Ring	17500	7000	3500	1500	1	4	4	70000
5.3	Installation of Stay Ring	617	1000	600	400	1	4	4	2468
5.4	Installation of Stay Ring	35	300	300	100	1	4	4	140
5.5	Installation of Stay Ring	783	1000	1000	500	1	4	4	3132
5.6	Installation of Stay Ring	1420	1800	500	350	1	4	4	5680
5.7	Installation of Stay Ring	800	1000	500	500	1	4	4	3200
6	Spiral Casing								0
6.1	Installation of Spiral Casing	14740	4000	3300	3300	1	4	4	58960
6.10	Installation of Spiral Casing	4485	1000	3300	3300	1	4	4	17940
6.11	Installation of Spiral Casing	12240	2800	3300	3300	1	4	4	48960
6.12	Installation of Spiral Casing	5350	1200	3300	3300	1	4	4	21400
6.13	Installation of Spiral Casing	282	1100	500	500	1	4	4	1128
6.14	Installation of Spiral Casing	1685	6000	750	250	1	4	4	6740
6.15	Installation of Spiral Casing	452	4600	500	50	1	4	4	1808
6.16	Installation of Spiral Casing	2155	2500	1000	250	1	4	4	8620
6.17	Installation of Spiral Casing	535	1350	650	150	1	4	4	2140
6.2	Installation of Spiral Casing	14255	4000	3200	3200	1	4	4	57020
6.3	Installation of Spiral Casing	11720	3600	3100	3100	1	4	4	46880
6.4	Installation of Spiral Casing	12920	5300	2800	2800	1	4	4	51680
6.5	Installation of Spiral Casing	8450	6000	2400	2400	1	4	4	33800
6.6	Installation of Spiral Casing	6465	2100	3000	3000	1	4	4	25860
6.7	Installation of Spiral Casing	5265	2000	2700	2700	1	4	4	21060
6.8	Installation of Spiral Casing	3425	2200	2200	1800	1	4	4	13700
6.9	Installation of Spiral Casing	1245	1400	1400	1500	1	4	4	4980
7	Spiral Inlet Pipe	10800	4000	4000	1600	1	4	4	43200
8	Pit Liner								0
8.1	Installation of Pit Liner	6200	8000	3600	4100	1	4	4	24800
8.2	Installation of Pit Liner	6050	8000	3600	4100	1	4	4	24200
8.3	Installation of Pit Liner	32	300	300	300	1	4	4	128
8.4	Installation of Pit Liner	542	1000	700	500	1	4	4	2168
8.5	Installation of Pit Liner	98	700	500	200	1	4	4	392
8.6	Installation of Pit Liner	1700	1000	1000	500	1	4	4	6800
9	Embedded pipes in second stage								0
9.1	Embedded pipes in second stage	4402	7000	2000	1000	1	4	4	17608
9.10	Embedded pipes in second stage	250	500	500	500	1	4	4	1000
9.11	Embedded pipes in second stage	4590	6500	250	600	1	4	4	18360
9.2	Embedded pipes in second stage	209	1000	1000	1000	1	4	4	836
9.3	Embedded pipes in second stage	228	1250	500	500	1	4	4	912
9.4	Embedded pipes in second stage	885	1000	500	500	1	4	4	3540
9.5	Embedded pipes in second stage	237	1200	800	400	1	4	4	948
9.6	Embedded pipes in second stage	450	1400	750	500	1	4	4	1800
9.7	Embedded pipes in second stage	27	1500	1500	200	1	4	4	108
9.8	Embedded pipes in second stage	562	6000	300	100	1	4	4	2248
9.9	Embedded pipes in second stage	496	1000	700	700	1	4	4	1984
10	Tools tackles erection and testing								0
10.10	Tools tackles and Testing Devices	4375	5950	5950	100	1	1	1	4375
10.1	Tools tackles and Testing Devices	515	2000	1000	500	1	1	1	515
10.11	Tools tackles and Testing Devices	1200	1000	500	500	1	1	1	1200
10.12	Tools tackles and Testing Devices	1200	1000	500	500	1	1	1	1200
10.13	Tools tackles and Testing Devices	450	500	500	500	1	1	1	450
10.14	Tools tackles and Testing Devices	450	500	500	500	1	1	1	450
10.2	Tools tackles and Testing Devices	185	750	500	300	1	1	1	185
10.3	Tools tackles and Testing Devices	408	1000	500	500	1	1	1	408
10.4	Tools tackles and Testing Devices	208	500	500	500	1	1	1	208

10.5	Tools tackles and Testing Devices	14500	4000	4000	2000	1	1	1	14500
10.6	Tools tackles and Testing Devices	18100	5950	5950	900	1	1	1	18100
10.7	Tools tackles and Testing Devices	4375	5950	5950	100	1	1	1	4375
10.8	Tools tackles and Testing Devices	14500	4000	4000	2000	1	1	1	14500
10.9	Tools tackles and Testing Devices	18100	5950	5950	900	1	1	1	18100
13	Guide Apparatus								0
13.1	Pivot Ring (in halves)	8000	3000	6000	1000	2	4	8	64000
13.2	Top Cover (in halves)	30000	3000	6000	2000	2	4	8	240000
13.3	Regulating Ring	9000	4600	4100	1200	1	4	4	36000
13.4	G.V. Servomotor	5000	2000	1000	1000	2	4	8	40000
14	Spherical Valve/MIV (Assembled)								0
14.2	Spherical Valve U/S body	16700	4500	4500	1150	1	4	4	66800
14.4	Levers	8000	4000	3000	1000	2	4	8	64000
14.5	MIV Servomotor	5000	4000	1500	1500	2	4	8	40000
14.6	Spherical Valve Inlet Pipe	20000	3000	4000	4000	1	4	4	80000
14.7	Spherical Valve Outlet Pipe	15000	2500	4000	4000	1	4	4	60000
15	B.F.Valve / Penstock Valve								0
15.2	B.F.Valve Body	16000	6625	3515	2130	2	2	4	64000
15.3	B.F.Valve Lever	3500	4000	2000	600	2	2	4	14000
15.4	B.F.Valve Servomotor	3500	4500	800	800	2	2	4	14000
15.5	Inlet Pipe to BF Valve	11000	6200	3100	2000	1	2	2	22000
15.6	Outlet Pipe to BF Valve	12000	5600	2900	3100	1	2	2	24000
15.7	Anti-Vacuum Valve	600	1000	1000	800	2	2	4	2400
16	Large Packages	4000	2500	2000	1000	50	4	200	800000
17	Medium Packages	2000	2000	1500	800	50	4	200	400000
18	Small Packages	1000	1500	1000	800	50	4	200	200000

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ANNEXURE :III
Arun-3 HEP (4 x 225 MW)

WEIGHTS & DIMENSIONS OF MAJOR GOVERNING ITEMS

S. No.	DESCRIPTION	QTY.	DIMENSIONS (MM) FOR EACH UNIT			PACKAGE WEIGHT (Approx.)	TOTAL WEIGHT (Approx.)
			L	W	H	Kg.	Kg.
1	HYDRO MECHANICAL CABINET (H.M.C.)	4	1200	1400	2500	1650	6600
2	MICROPROCESSOR BASED DIGITAL GOVERNOR (EHGC)	4	1200	1000	2500	900	3600
3	OIL SUMP TANK FOR GOV. AND MIV	4	2850	2550	3250	4500	18000
4	OIL PRESSURE ACCUMULATOR FOR GOV AND MIV	4	2750	2500	4000	9000	36000
5	NITROGEN BOTTLE BANK FOR GOV AND MIV	4	3000	2100	3300	6500	26000
9	MIV HYDRAULIC CONTROL PANEL	4	1200	1100	2350	900	3600
10	MIV ELECTRICAL CONTROL PANEL	4	800	1000	2500	300	1200
11	OIL SUMP TANK FOR BFV	2	2700	2300	2700	3500	7000
12	OIL PRESSURE ACCUMULATOR FOR BFV	2	5000	1800	3250	8000	16000
13	NITROGEN BOTTLE BANK (BFV)	2	3700	2100	3200	5300	10600
13	AIR DRYER FOR LP COMP. AIR SYSTEM	2	750	600	1600	300	600
14	BFV HYDRAULIC CONTROL PANEL	2	900	1100	2350	550	1100
15	BFV ELECTRICAL CONTROL PANEL	2	800	1000	2500	300	600
15	ELECTROSTATIC TYPE OIL PURIFIER	1	950	650	1000	200	200
16	LUB. OIL PURIFIER CENTRIFUGAL TYPE (1000 LPH) (common for Powerhouse)	1	2600	1500	2000	2250	2250
16	PIPING FOR HEAD RACE, TAIL RACE, DRAINAGE, DEWATERING & FLOOD LEVEL SYSTEM (common for Powerhouse)	1	3000	1000	1000	400	400
17	INSTRUMENTS FOR TURBINE, COOLING WATER, D&D AND COMPRESSED AIR SYSTEM	4	500	300	200	1750	7000

ANNEXURE:IV
Arun-3 HEP (4 x 225 MW)
WEIGHTS & DIMENSIONS OF SCR

Equipment Description (Switchgear)	Qty	Package dimension	Weight Kg	Total Weight
11 KV, 630A SWITCHGEAR AT SWITCHYARD	3	3100mm(H)*1900mm(W) * 2100mm(D)	3600	10800
	1	3100mm(H)*1170mm(W) * 2100mm(D)	2000	2000
11 KV, 630A SWITCHGEAR AT POWERHOUSE	4	3100mm(H)*1900mm(W) * 2100mm(D)	3600	14400
	2	3100mm(H)*1900mm(W) * 2600mm(D)	2500	5000
	2	3100mm(H)*1170mm(W) * 2100mm(D)	2000	4000
33 KV, 630A SWITCHGEAR AT SWITCHYARD	5	3050mm(H)*3000mm(W) * 3100mm(D)	4500	22500
33 KV, 630A SWITCHGEAR AT DAM	3	3050mm(H)*3000mm(W) * 3100mm(D)	4500	13500
	1	3050mm(H)*1800mm(W) * 3100mm(D)	2500	2500
FEEDER EARTHING TRUCK 11kv	1	1800mm(H)*1100mm(W) *1100mm(D)	1200	1200
BUSBAR EARTHING TRUCK 11kv	1	1800mm(H)*1100mm(W) *1100mm(D)	1200	1200
FEEDER EARTHING TRUCK 33kv	1	1900mm(H)*1200mm(W) *1200mm(D)	1600	1600
BUSBAR EARTHING TRUCK 33kv	1	1900mm(H)*1200mm(W) *1200mm(D)	1600	1600
NETWORKING EQUIPMENT FOR 11KV & 33KV SWITCHGEAR	1	2000mm(H)*2000mm(W) * 2000mm(D)	2500	2500
SET OF ACCESSORIES FOR 11KV & 33KV SWITCHBOARDS	1	2000mm(H)*1000mm(W) * 500mm(D)	1000	1000
SET OF COMMISSIONING SPARES FOR 11KV & 33KV SWITCHBOARDS	1	1000mm(H)*1000mm(W) * 500mm(D)	500	500
INSULATING MAT FOR 11KV SWITCHBOARD	1	1000mm(H)*1000mm(W) * 500mm(D)	300	300
INSULATING MAT FOR 33KV SWITCHBOARD	1	1000mm(H)*1400mm(W) * 500mm(D)	300	300
MANDATORY SPARES	7	500mm (H)*750mm(W)* 1000mm(D)	500	3500
Generator, GT, UAT & SAT Protection Panel (GRP1 to GRP4) # U-1 & 4	8	2500mm(H)*1150mm (W) * 950mm (D)	850	6800
Generator, GT & UAT Protection Panel (GRP1 to GRP4) # U-2 & 3	8	2500mm(H)*1150mm (W) * 950mm (D)	850	6800
400kv Line Relay Panel (LRPA, LRPB)	4	2500mm(H)*1150mm (W) * 950mm (D)	850	3400
400kv Line Reactor Relay Panel (LRRPA, LRRPB)	4	2500mm(H)*1150mm (W) * 950mm (D)	850	3400
400kv Bus Reactor Relay Panel (BRRPA, BRRPB)	4	2500mm(H)*1150mm (W) * 950mm (D)	850	3400
400kv Side GT Relay Panel (GTRPA, GTRPB)	8	2500mm(H)*900mm (W) * 950mm (D)	600	4800
400kv Bus Coupler Relay Panel (BCRP)	1	2500mm(H)*900mm (W) * 950mm (D)	600	600
400kv Bus bar Relay Panel (BBRP1 to 4)	4	2500mm(H)*900mm (W) * 950mm (D)	600	2400
Centralized Monitoring System comprising of PC, cables etc	1	2000mm (H)*2000mm(W)*2000mm(D)	2500	2500
Mandatory Spares	2	500mm (H)*1000mm(W)*2000mm(D)	500	1000
				123500

ANNEXURE V
4 X 225 MW Arun-3 HEP, Nepal
Tentative package details CFP

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[illegible]

442	Assy. Of Encl. & Cond. (Tap- run)	1000	1000	3500	3.500	280	3500
443	Assy. Of Encl. & Cond. (Tap- run)	1000	1000	3500	3.500	280	3500
444	Assy. Of Encl. & Cond. (Tap- run)	1000	1000	3500	3.500	280	3500
445	Assy. Of Encl. & Cond. (Tap- run)	1000	1000	3500	3.500	280	3500
446	Assy. Of Encl. & Cond. (Tap- run)	1000	1000	3500	3.500	280	3500
447	Assy. Of Encl. & Cond. (Tap- run)	1000	1000	3500	3.500	280	3500
448	Assy. Of Encl. & Cond. (Tap- run)	1000	1000	3500	3.500	280	3500
449	Assy. Of Encl. & Cond. (Tap- run)	1000	1000	3500	3.500	280	3500
450	Assy. Of Encl. & Cond. (Tap- run)	1000	1000	3500	3.500	280	3500
451	Assy. Of Encl. & Cond. (Tap- run)	1000	1000	3500	3.500	280	3500
452	Assy. Of Encl. & Cond. (Tap- run)	1000	1000	3500	3.500	280	3500
453	Assy. Of Encl. & Cond. (Tap- run)	1000	1000	3500	3.500	280	3500
454	Assy. Of Encl. & Cond. (Tap- run)	1000	1000	3500	3.500	280	3500
455	Assy. Of Encl. & Cond. (Tap- run)	1000	1000	3500	3.500	280	3500
456	Assy. Of Encl. & Cond. (Tap- run)	1000	1000	3500	3.500	280	3500
457	Assy. Of Encl. & Cond. (Tap- run)	1000	1000	3500	3.500	280	3500
458	Assy. Of Encl. & Cond. (Tap- run)	1000	1000	3500	3.500	280	3500
459	Cu. Flexibles	1000	1000	1000	1.000	1000	1000
460	Cu. Flexibles	1000	1000	1000	1.000	1000	1000
461	Cu. Flexibles	1000	1000	1000	1.000	1000	1000
462	Cu. Flexibles	1000	1000	1000	1.000	1000	1000
463	Cu. Flexibles	1000	1000	1000	1.000	1000	1000
464	Cu. Flexibles	1000	1000	1000	1.000	1000	1000
465	Cu. Flexibles	1000	1000	1000	1.000	1000	1000
466	Cu. Flexibles	1000	1000	1000	1.000	1000	1000
467	Cu. Flexibles	1000	1000	1000	1.000	1000	1000
468	Cu. Flexibles	1000	1000	1000	1.000	1000	1000
469	Cu. Flexibles	1000	1000	1000	1.000	1000	1000
470	Cu. Flexibles	1000	1000	1000	1.000	1000	1000
471	Cu. Flexibles	1000	1000	1000	1.000	1000	1000
472	Cu. Flexibles	1000	1000	1000	1.000	1000	1000
473	Cu. Flexibles	1000	1000	1000	1.000	1000	1000
474	Cu. Flexibles	1000	1000	1000	1.000	1000	1000
475	Cu. Flexibles	1000	1000	1000	1.000	1000	1000
476	Cu. Flexibles	1000	1000	1000	1.000	1000	1000
477	Voltage Transformers	1000	1000	1000	1.000	500	1000
478	Voltage Transformers	1000	1000	1000	1.000	500	1000
479	Voltage Transformers	1000	1000	1000	1.000	500	1000
480	Voltage Transformers	1000	1000	1000	1.000	500	1000
481	Voltage Transformers	1000	1000	1000	1.000	500	1000
482	Voltage Transformers	1000	1000	1000	1.000	500	1000
483	Voltage Transformers	1000	1000	1000	1.000	500	1000
484	Voltage Transformers	1000	1000	1000	1.000	500	1000
485	LA & SC	1000	1000	1050	1.050	300	1050
486	LA & SC	1000	1000	1050	1.050	300	1050
487	LA & SC	1000	1000	1050	1.050	300	1050
488	LA & SC	1000	1000	1050	1.050	300	1050
489	NGT	1500	1500	1000	2.250	300	1000
490	NGT	1500	1500	1000	2.250	300	1000
491	NGT	1500	1500	1000	2.250	300	1000
492	NGT	1500	1500	1000	2.250	300	1000
493	NGR	1000	1000	1000	1.000	300	1000
494	NGR	1000	1000	1000	1.000	300	1000
495	NGR	1000	1000	1000	1.000	300	1000
496	NGR	1000	1000	1000	1.000	300	1000
497	LAVT	2500	2500	1200	7.500	800	1200

498	LAVT	2500	2500	1200	7.500	800	1200
499	LAVT	2500	2500	1200	7.500	800	1200
500	LAVT	2500	2500	1200	7.500	800	1200
501	LAVT	2500	2500	1200	7.500	800	1200
502	LAVT	2500	2500	1200	7.500	800	1200
503	LAVT	2500	2500	1200	7.500	800	1200
504	LAVT	2500	2500	1200	7.500	800	1200
505	LAVT	2500	2500	1200	7.500	800	1200
506	LAVT	2500	2500	1200	7.500	800	1200
507	LAVT	2500	2500	1200	7.500	800	1200
508	LAVT	2500	2500	1200	7.500	800	1200
509	NGC	2500	2500	1500	9.375	1200	1500
510	NGC	2500	2500	1500	9.375	1200	1500
511	NGC	2500	2500	1500	9.375	1200	1500
512	NGC	2500	2500	1500	9.375	1200	1500
513	Main R.B.	1400	1400	1200	2.352	500	1200
514	Main R.B.	1400	1400	1200	2.352	500	1200
515	Main R.B.	1400	1400	1200	2.352	500	1200
516	Main R.B.	1400	1400	1200	2.352	500	1200
517	Main R.B.	1400	1400	1200	2.352	500	1200
518	Main R.B.	1400	1400	1200	2.352	500	1200
519	Main R.B.	1400	1400	1200	2.352	500	1200
520	Main R.B.	1400	1400	1200	2.352	500	1200
521	Delta R.B	1050	1050	1000	1.103	500	1000
522	Delta R.B	1050	1050	1000	1.103	500	1000
523	Delta R.B	1050	1050	1000	1.103	500	1000
524	Delta R.B	1050	1050	1000	1.103	500	1000
525	Delta R.B	1050	1050	1000	1.103	500	1000
526	Delta R.B	1050	1050	1000	1.103	500	1000
527	Delta R.B	1050	1050	1000	1.103	500	1000
528	Delta R.B	1050	1050	1000	1.103	500	1000
529	Tap-Off R.B	1000	1000	1000	1.000	350	1000
530	Tap-Off R.B	1000	1000	1000	1.000	350	1000
531	Tap-Off R.B	1000	1000	1000	1.000	350	1000
532	Tap-Off R.B	1000	1000	1000	1.000	350	1000
533	Tap-Off R.B	1000	1000	1000	1.000	350	1000
534	Tap-Off R.B	1000	1000	1000	1.000	350	1000
535	Tap-Off R.B	1000	1000	1000	1.000	350	1000
536	Tap-Off R.B	1000	1000	1000	1.000	350	1000
537	Tap-Off R.B	1000	1000	1000	1.000	350	1000
538	Tap-Off R.B	1000	1000	1000	1.000	350	1000
539	Tap-Off R.B	1000	1000	1000	1.000	350	1000
540	Tap-Off R.B	1000	1000	1000	1.000	350	1000
541	Metallic Bellow	1400	1400	1200	2.352	500	1200
542	Metallic Bellow	1400	1400	1200	2.352	500	1200
543	Metallic Bellow	1400	1400	1200	2.352	500	1200
544	Metallic Bellow	1400	1400	1200	2.352	500	1200
545	S.O.B Main	1400	1400	1200	2.352	500	1200
546	S.O.B Main	1400	1400	1200	2.352	500	1200
547	S.O.B Main	1400	1400	1200	2.352	500	1200
548	S.O.B Main	1400	1400	1200	2.352	500	1200
549	S.O.B Main	1400	1400	1200	2.352	500	1200
550	S.O.B Main	1400	1400	1200	2.352	500	1200
551	S.O.B Main	1400	1400	1200	2.352	500	1200
552	S.O.B Main	1400	1400	1200	2.352	500	1200
553	S.O.B Delta	1050	1050	1000	1.103	500	1000

554	S.O.B Delta	1050	1050	1000	1.103	500	1000
555	S.O.B Delta	1050	1050	1000	1.103	500	1000
556	S.O.B Delta	1050	1050	1000	1.103	500	1000
557	S.O.B Delta	1050	1050	1000	1.103	500	1000
558	S.O.B Delta	1050	1050	1000	1.103	500	1000
559	S.O.B Delta	1050	1050	1000	1.103	500	1000
560	S.O.B Delta	1050	1050	1000	1.103	500	1000
561	S.O.B Tap-Off	1000	1000	1000	1.000	350	1000
562	S.O.B Tap-Off	1000	1000	1000	1.000	350	1000
563	S.O.B Tap-Off	1000	1000	1000	1.000	350	1000
564	S.O.B Tap-Off	1000	1000	1000	1.000	350	1000
565	S.O.B Tap-Off	1000	1000	1000	1.000	350	1000
566	S.O.B Tap-Off	1000	1000	1000	1.000	350	1000
567	S.O.B Tap-Off	1000	1000	1000	1.000	350	1000
568	S.O.B Tap-Off	1000	1000	1000	1.000	350	1000
569	S.O.B Tap-Off	1000	1000	1000	1.000	350	1000
570	S.O.B Tap-Off	1000	1000	1000	1.000	350	1000
571	S.O.B Tap-Off	1000	1000	1000	1.000	350	1000
572	S.O.B Tap-Off	1000	1000	1000	1.000	350	1000
573	C.T Main	1400	1400	1200	2.352	400	1200
574	C.T Main	1400	1400	1200	2.352	400	1200
575	C.T Main	1400	1400	1200	2.352	400	1200
576	C.T Main	1400	1400	1200	2.352	400	1200
577	C.T Main	1400	1400	1200	2.352	400	1200
578	C.T Main	1400	1400	1200	2.352	400	1200
579	C.T Main	1400	1400	1200	2.352	400	1200
580	C.T Main	1400	1400	1200	2.352	400	1200
581	C.T Main	1400	1400	1200	2.352	400	1200
582	C.T Main	1400	1400	1200	2.352	400	1200
583	C.T Main	1400	1400	1200	2.352	400	1200
584	C.T Main	1400	1400	1200	2.352	400	1200
585	C.T Main	1400	1400	1200	2.352	400	1200
586	C.T Main	1400	1400	1200	2.352	400	1200
587	C.T Main	1400	1400	1200	2.352	400	1200
588	C.T Main	1400	1400	1200	2.352	400	1200
589	C.T Main	1400	1400	1200	2.352	400	1200
590	C.T Main	1400	1400	1200	2.352	400	1200
591	C.T Main	1400	1400	1200	2.352	400	1200
592	C.T Main	1400	1400	1200	2.352	400	1200
593	C.T Main	1400	1400	1200	2.352	400	1200
594	C.T Main	1400	1400	1200	2.352	400	1200
595	C.T Main	1400	1400	1200	2.352	400	1200
596	C.T Main	1400	1400	1200	2.352	400	1200
597	C.T. Tap-Off	1000	1000	1000	1.000	400	1000
598	C.T. Tap-Off	1000	1000	1000	1.000	400	1000
599	C.T. Tap-Off	1000	1000	1000	1.000	400	1000
600	C.T. Tap-Off	1000	1000	1000	1.000	400	1000
601	C.T. Tap-Off	1000	1000	1000	1.000	400	1000
602	C.T. Tap-Off	1000	1000	1000	1.000	400	1000
603	C.T. Tap-Off	1000	1000	1000	1.000	400	1000
604	C.T. Tap-Off	1000	1000	1000	1.000	400	1000
605	C.T. Tap-Off	1000	1000	1000	1.000	400	1000
606	C.T. Tap-Off	1000	1000	1000	1.000	400	1000
607	C.T. Tap-Off	1000	1000	1000	1.000	400	1000
608	C.T. Tap-Off	1000	1000	1000	1.000	400	1000
609	Isolator Cubicle	2500	2500	2500	15.625	1800	2500

[illegible]

666		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
667		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
668		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
669		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
670		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
671		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
672		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
673		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
674		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
675		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
676		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
677		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
678		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
679		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
680		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
681		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
682		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
683		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
684		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
685		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
686		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
687		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
688		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
689		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
690		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
691		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
692		Make Up piece & Shunts	2500	2500	1200	7.500	500	1200
		Total					389080	2159400

Note: For Storage: Total open area of 45mtrX 45mtrs and Closed area of 10mtrs X 10mtrs are required.
Some items will be fragile in nature and shall be handled accordingly. Stickers for the same shall be on package.

ANNEXURE VI

Tentative package details EDN

S.No.	Package Description	No. of Package	L (mm)	B (mm)	H (mm)	CBM	Weight (MT)	FRT	Remark
1	Regulation	4	1700	1050	2800	5.00	2.00	5.00	
2	Regulation		1700	1050	2800	5.00	2.00	5.00	
3	Regulation		1700	1050	2800	5.00	2.00	5.00	
4	Regulation		1700	1050	2800	5.00	2.00	5.00	
5	Field Breaker + Field Flashing (FB + FF)	4	2450	1050	2800	7.20	2.00	7.20	
6	Field Breaker + Field Flashing (FB + FF)		2450	1050	2800	7.20	2.00	7.20	
7	Field Breaker + Field Flashing (FB + FF)		2450	1050	2800	7.20	2.00	7.20	
8	Field Breaker + Field Flashing (FB + FF)		2450	1050	2800	7.20	2.00	7.20	
9	Thyristor Panel	4	3950	1050	2800	11.61	3.50	11.61	
10	Thyristor Panel		3950	1050	2800	11.61	3.50	11.61	
11	Thyristor Panel		3950	1050	2800	11.61	3.50	11.61	
12	Thyristor Panel		3950	1050	2800	11.61	3.50	11.61	
13	Transformer Cubicle	4	2500	2200	4000	22.00	3.50	22.00	
14	Transformer Cubicle		2500	2200	4000	22.00	3.50	22.00	
15	Transformer Cubicle		2500	2200	4000	22.00	3.50	22.00	
16	Transformer Cubicle		2500	2200	4000	22.00	3.50	22.00	
17	Cable Box	4	1000	1000	1000	1.00	1.00	1.00	
18	Cable Box		1000	1000	1000	1.00	1.00	1.00	
19	Cable Box		1000	1000	1000	1.00	1.00	1.00	
20	Cable Box		1000	1000	1000	1.00	1.00	1.00	
21	Mandatory Spares for SEE	5	1350	1050	1500	2.13	0.50	2.13	
22	Mandatory Spares for SEE		1350	1050	1500	2.13	0.50	2.13	
23	Mandatory Spares for SEE		1350	1050	1500	2.13	0.50	2.13	
24	Mandatory Spares for SEE		1350	1050	1500	2.13	0.50	2.13	
25	Mandatory Spares for SEE		1350	1050	1500	2.13	0.50	2.13	
26	Tools & Tackles for SEE	3	1350	1050	1500	2.13	0.50	2.13	
27	Tools & Tackles for SEE		1350	1050	1500	2.13	0.50	2.13	
28	Tools & Tackles for SEE		1350	1050	1500	2.13	0.50	2.13	
29	Loose Items and other miscellaneous Items of SEE	7	1350	1050	1500	2.13	0.50	2.13	
30	Loose Items and other miscellaneous Items of SEE		1350	1050	1500	2.13	0.50	2.13	
31	Loose Items and other miscellaneous Items of SEE		1350	1050	1500	2.13	0.50	2.13	
32	Loose Items and other miscellaneous Items of SEE		1350	1050	1500	2.13	0.50	2.13	
33	Loose Items and other miscellaneous Items of SEE		1350	1050	1500	2.13	0.50	2.13	
34	Loose Items and other miscellaneous Items of SEE		1350	1050	1500	2.13	0.50	2.13	
35	Loose Items and other miscellaneous Items of SEE		1350	1050	1500	2.13	0.50	2.13	
36	Auto sequencer Equipment (UCB) with Built in HMI	4	3950	1050	2500	10.37	3.00	10.37	
37	Auto sequencer Equipment (UCB) with Built in HMI		3950	1050	2500	10.37	3.00	10.37	
38	Auto sequencer Equipment (UCB) with Built in HMI		3950	1050	2500	10.37	3.00	10.37	
39	Auto sequencer Equipment (UCB) with Built in HMI		3950	1050	2500	10.37	3.00	10.37	
40	Instrument panel	4	2450	1050	2800	7.20	2.00	7.20	
41	Instrument panel		2450	1050	2800	7.20	2.00	7.20	
42	Instrument panel		2450	1050	2800	7.20	2.00	7.20	
43	Instrument panel		2450	1050	2800	7.20	2.00	7.20	
44	Temperature Measurement panel	4	2450	1050	2800	7.20	2.00	7.20	
45	Temperature Measurement panel		2450	1050	2800	7.20	2.00	7.20	
46	Temperature Measurement panel		2450	1050	2800	7.20	2.00	7.20	
47	Temperature Measurement panel		2450	1050	2800	7.20	2.00	7.20	
48	Gauge panel	4	2450	1050	2800	7.20	2.00	7.20	
49	Gauge panel		2450	1050	2800	7.20	2.00	7.20	
50	Gauge panel		2450	1050	2800	7.20	2.00	7.20	
51	Gauge panel		2450	1050	2800	7.20	2.00	7.20	
52	Loose items and other miscellaneous items for UCB	15	850	1050	2500	2.23	0.50	2.23	
53	Loose items and other miscellaneous items for UCB		850	1050	2500	2.23	0.50	2.23	
54	Loose items and other miscellaneous items for UCB		850	1050	2500	2.23	0.50	2.23	

55	Loose items and other miscellaneous items for UCB		850	1050	2500	2.23	0.50	2.23
56	Loose items and other miscellaneous items for UCB		850	1050	2500	2.23	0.50	2.23
57	Loose items and other miscellaneous items for UCB		850	1050	2500	2.23	0.50	2.23
58	Loose items and other miscellaneous items for UCB		850	1050	2500	2.23	0.50	2.23
59	Loose items and other miscellaneous items for UCB		850	1050	2500	2.23	0.50	2.23
60	Loose items and other miscellaneous items for UCB		850	1050	2500	2.23	0.50	2.23
61	Loose items and other miscellaneous items for UCB		850	1050	2500	2.23	0.50	2.23
62	Loose items and other miscellaneous items for UCB		850	1050	2500	2.23	0.50	2.23
63	Loose items and other miscellaneous items for UCB		850	1050	2500	2.23	0.50	2.23
64	Loose items and other miscellaneous items for UCB		850	1050	2500	2.23	0.50	2.23
65	Loose items and other miscellaneous items for UCB		850	1050	2500	2.23	0.50	2.23
66	Loose items and other miscellaneous items for UCB		850	1050	2500	2.23	0.50	2.23
67	RTU/RIO for SS	1	1350	1050	2750	3.90	1.00	3.90
68	RTU/RIO for BFV	1	1350	1050	2750	3.90	1.00	3.90
69	RTU/RIO for TRT	1	1350	1050	2750	3.90	1.00	3.90
70	RTU/RIO for Colony Offices at power house	1	1350	1050	2750	3.90	1.00	3.90
71	LCB for Common Control Panel with Built-in HMI	1	3950	1050	2500	10.37	2.50	10.37
72	LCB for 400kV Switchyard with builtin HMI alongwith all necessary auxiliaries	1	3950	1050	2500	10.37	2.50	10.37
73	Loose items for RTUs and LCBs	10	850	1050	2500	2.23	1.00	2.23
74	Loose items for RTUs and LCBs		850	1050	2500	2.23	1.00	2.23
75	Loose items for RTUs and LCBs		850	1050	2500	2.23	1.00	2.23
76	Loose items for RTUs and LCBs		850	1050	2500	2.23	1.00	2.23
77	Loose items for RTUs and LCBs		850	1050	2500	2.23	1.00	2.23
78	Loose items for RTUs and LCBs		850	1050	2500	2.23	1.00	2.23
79	Loose items for RTUs and LCBs		850	1050	2500	2.23	1.00	2.23
80	Loose items for RTUs and LCBs		850	1050	2500	2.23	1.00	2.23
81	Loose items for RTUs and LCBs		850	1050	2500	2.23	1.00	2.23
82	Loose items for RTUs and LCBs		850	1050	2500	2.23	1.00	2.23
83	HMI Network Panel	1	850	1050	2500	2.23	1.00	2.23
84	HMI Accessories (OWS for all locations, EWS, PC's, Laptops, Printers, Online data storage & retrieval system, Plant computers, routers, gateways, printers ,Power house LAN , etc)	10	1350	1050	1500	2.13	0.50	2.13
85	HMI Accessories (OWS for all locations, EWS, PC's, Laptops, Printers, Online data storage & retrieval system, Plant computers, routers, gateways, printers ,Power house LAN , etc)		1350	1050	1500	2.13	0.50	2.13
86	HMI Accessories (OWS for all locations, EWS, PC's, Laptops, Printers, Online data storage & retrieval system, Plant computers, routers, gateways, printers ,Power house LAN , etc)		1350	1050	1500	2.13	0.50	2.13
87	HMI Accessories (OWS for all locations, EWS, PC's, Laptops, Printers, Online data storage & retrieval system, Plant computers, routers, gateways, printers ,Power house LAN , etc)		1350	1050	1500	2.13	0.50	2.13
88	HMI Accessories (OWS for all locations, EWS, PC's, Laptops, Printers, Online data storage & retrieval system, Plant computers, routers, gateways, printers ,Power house LAN , etc)		1350	1050	1500	2.13	0.50	2.13
89	HMI Accessories (OWS for all locations, EWS, PC's, Laptops, Printers, Online data storage & retrieval system, Plant computers, routers, gateways, printers ,Power house LAN , etc)		1350	1050	1500	2.13	0.50	2.13
90	HMI Accessories (OWS for all locations, EWS, PC's, Laptops, Printers, Online data storage & retrieval system, Plant computers, routers, gateways, printers ,Power house LAN , etc)		1350	1050	1500	2.13	0.50	2.13
91	HMI Accessories (OWS for all locations, EWS, PC's, Laptops, Printers, Online data storage & retrieval system, Plant computers, routers, gateways, printers ,Power house LAN , etc)		1350	1050	1500	2.13	0.50	2.13

92	HMI Accessories (OWS for all locations, EWS, PC's, Laptops, Printers, Online data storage & retrieval system, Plant computers, routers, gateways, printers ,Power house LAN , etc)		1350	1050	1500	2.13	0.50	2.13
93	HMI Accessories (OWS for all locations, EWS, PC's, Laptops, Printers, Online data storage & retrieval system, Plant computers, routers, gateways, printers ,Power house LAN , etc)		1350	1050	1500	2.13	0.50	2.13
94	Online Data Storage and Retrieval System	2	1350	1050	1500	2.13	0.50	2.13
95	Online Data Storage and Retrieval System		1350	1050	1500	2.13	0.50	2.13
96	Energy Accounting System (PCs ,Servers, Softwares, and ABT typ energy meter)	2	1350	1050	1500	2.13	0.50	2.13
97	Energy Accounting System (PCs ,Servers, Softwares, and ABT typ energy meter)		1350	1050	1500	2.13	0.50	2.13
98	Training Simulator Software & Hardware	2	1350	1050	1500	2.13	0.50	2.13
99	Training Simulator Software & Hardware		1350	1050	1500	2.13	0.50	2.13
100	Misc HMI Loose items	5	2000	1500	2400	7.20	0.50	7.20
101	Misc HMI Loose items		2000	1500	2400	7.20	0.50	7.20
102	Misc HMI Loose items		2000	1500	2400	7.20	0.50	7.20
103	Misc HMI Loose items		2000	1500	2400	7.20	0.50	7.20
104	Misc HMI Loose items		2000	1500	2400	7.20	0.50	7.20
105	GPS - Panels	10	1400	1000	2400	3.36	0.50	3.36
106	GPS - Panels		1400	1000	2400	3.36	0.50	3.36
107	GPS - Panels		1400	1000	2400	3.36	0.50	3.36
108	GPS - Panels		1400	1000	2400	3.36	0.50	3.36
109	GPS - Panels		1400	1000	2400	3.36	0.50	3.36
110	GPS - Panels		1400	1000	2400	3.36	0.50	3.36
111	GPS - Panels		1400	1000	2400	3.36	0.50	3.36
112	GPS - Panels		1400	1000	2400	3.36	0.50	3.36
113	GPS - Panels		1400	1000	2400	3.36	0.50	3.36
114	GPS - Panels		1400	1000	2400	3.36	0.50	3.36
115	GPS - Eletronics with Slave clock system	5	1350	1050	1500	2.13	0.50	2.13
116	GPS - Eletronics with Slave clock system		1350	1050	1500	2.13	0.50	2.13
117	GPS - Eletronics with Slave clock system		1350	1050	1500	2.13	0.50	2.13
118	GPS - Eletronics with Slave clock system		1350	1050	1500	2.13	0.50	2.13
119	GPS - Eletronics with Slave clock system		1350	1050	1500	2.13	0.50	2.13
120	GPS- Cable Drums	25	850	850	450	0.33	0.50	0.50
121	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
122	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
123	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
124	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
125	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
126	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
127	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
128	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
129	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
130	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
131	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
132	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
133	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
134	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
135	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
136	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
137	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
138	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
139	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
140	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
141	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
142	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
143	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
144	GPS- Cable Drums		850	850	450	0.33	0.50	0.50
145	GPS - Other Misc Loose items	5	1350	1050	1500	2.13	0.50	2.13
146	GPS - Other Misc Loose items		1350	1050	1500	2.13	0.50	2.13
147	GPS - Other Misc Loose items		1350	1050	1500	2.13	0.50	2.13
148	GPS - Other Misc Loose items		1350	1050	1500	2.13	0.50	2.13
149	GPS - Other Misc Loose items		1350	1050	1500	2.13	0.50	2.13
150	LVS System (Screen)	4	2000	1500	1500	4.50	1.00	4.50
151	LVS System (Screen)		2000	1500	1500	4.50	1.00	4.50
152	LVS System (Screen)		2000	1500	1500	4.50	1.00	4.50
153	LVS System (Screen)		2000	1500	1500	4.50	1.00	4.50
154	LVS System (other loose items)	10	850	850	500	0.36	0.50	0.50
155	LVS System (other loose items)		850	850	500	0.36	0.50	0.50
156	LVS System (other loose items)		850	850	500	0.36	0.50	0.50
157	LVS System (other loose items)		850	850	500	0.36	0.50	0.50

Non stacakble closed storage

158	LVS System (other loose items)		850	850	500	0.36	0.50	0.50
159	LVS System (other loose items)		850	850	500	0.36	0.50	0.50
160	LVS System (other loose items)		850	850	500	0.36	0.50	0.50
161	LVS System (other loose items)		850	850	500	0.36	0.50	0.50
162	LVS System (other loose items)		850	850	500	0.36	0.50	0.50
163	LVS System (other loose items)		850	850	500	0.36	0.50	0.50
164	LVS System (Electronics)	5	1350	1050	1500	2.13	0.30	2.13
165	LVS System (Electronics)		1350	1050	1500	2.13	0.30	2.13
166	LVS System (Electronics)		1350	1050	1500	2.13	0.30	2.13
167	LVS System (Electronics)		1350	1050	1500	2.13	0.30	2.13
168	LVS System (Electronics)		1350	1050	1500	2.13	0.30	2.13
169	Fiber Optic Cable drums	45	850	850	350	0.25	0.30	0.30
170	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
171	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
172	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
173	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
174	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
175	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
176	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
177	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
178	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
179	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
180	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
181	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
182	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
183	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
184	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
185	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
186	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
187	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
188	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
189	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
190	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
191	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
192	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
193	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
194	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
195	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
196	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
197	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
198	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
199	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
200	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
201	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
202	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
203	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
204	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
205	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
206	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
207	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
208	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
209	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
210	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
211	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
212	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
213	Fiber Optic Cable drums		850	850	350	0.25	0.30	0.30
214	Accessories for FOC with all necessary accessories and interfaces for all locations & interconnections	4	1050	1050	1500	1.65	0.30	1.65
215	Accessories for FOC with all necessary accessories and interfaces for all locations & interconnections		1050	1050	1500	1.65	0.30	1.65
216	Accessories for FOC with all necessary accessories and interfaces for all locations & interconnections		1050	1050	1500	1.65	0.30	1.65
217	Accessories for FOC with all necessary accessories and interfaces for all locations & interconnections		1050	1050	1500	1.65	0.30	1.65
218	Operator Desk for Central Control Room					10.00	5.00	10.00
219	Furniture in CCR,Switchyard, BFV,Dam Control Room					10.00	3.00	10.00
220	LCB for DAM with builtin HMI alongwith all necessary auxiliaries	1	2450	1050	2500	6.43	3.00	6.43

[illegible]

ANNEXURE VII
4 X 225 MW Arun-3 HEP, Nepal
Tentative package details Jhansi

Sl No.	Box No.	Package Description	L (mm)	B (mm)	H (mm)	weight	CBM	FRT	Remarks
1		2500KVA, 11/0.433KV (SST)	3100	2500	3250	8750	71.09	3250	Transformer with Enclosure with base wooden pallet for transportation
2		2500KVA, 11/0.433KV (SST)	3100	2500	3250	8750	71.09	3250	Transformer with Enclosure with base wooden pallet for transportation
3		Spares - 2500KVA, 11/0.433KV (SST)	500	500	500	100	0.03	500	With complete wooden packing for transportation
4		250KVA, 33/0.433KV (SST)	3350	3100	3100	5250	50.45	3100	Transformer with Enclosure with base wooden pallet for transportation
5		250KVA, 33/0.433KV (SST)	3350	3100	3100	5250	50.45	3100	Transformer with Enclosure with base wooden pallet for transportation
6		250KVA, 33/0.433KV (SST)	3350	3100	3100	5250	50.45	3100	Transformer with Enclosure with base wooden pallet for transportation
7		Spares - 250KVA, 33/0.433KV (SST)	500	500	500	100	0.03	500	With complete wooden packing for transportation
8		3150KVA, 33/11KV (IDT)	4000	3400	3300	13750	154.28	3300	Transformer with Enclosure with base wooden pallet for transportation
9		3150KVA, 33/11KV (IDT)	4000	3400	3300	13750	154.28	3300	Transformer with Enclosure with base wooden pallet for transportation
10		Spares - 3150KVA, 33/11KV (IDT)	500	500	500	100	0.03	500	With complete wooden packing for transportation
11		630KVA, 33/0.433KV (SST)	3350	3100	3100	5750	55.26	3100	Transformer with Enclosure with base wooden pallet for transportation
12		630KVA, 33/0.433KV (SST)	3350	3100	3100	5750	55.26	3100	Transformer with Enclosure with base wooden pallet for transportation
13		Spares - 630KVA, 33/0.433KV (SST)	500	500	500	100	0.03	500	With complete wooden packing for transportation
14		630KVA, 15.75/0.433KV (UAT)	3800	2200	3100	4750	32.40	3100	Transformer with Enclosure with base wooden pallet for transportation
15		630KVA, 15.75/0.433KV (UAT)	3800	2200	3100	4750	32.40	3100	Transformer with Enclosure with base wooden pallet for transportation
16		630KVA, 15.75/0.433KV (UAT)	3800	2200	3100	4750	32.40	3100	Transformer with Enclosure with base wooden pallet for transportation
17		630KVA, 15.75/0.433KV (UAT)	3800	2200	3100	4750	32.40	3100	Transformer with Enclosure with base wooden pallet for transportation
18		Spares - 630KVA, 15.75/0.433KV (UAT)	500	500	500	100	0.03	500	With complete wooden packing for transportation
19		5000KVA, 15.75/11KV (SAT)	4000	3050	3650	15250	169.77	3650	Transformer with Enclosure with base wooden pallet for transportation
20		5000KVA, 15.75/11KV (SAT)	4000	3050	3650	15250	169.77	3650	Transformer with Enclosure with base wooden pallet for transportation
21		Spares - 5000KVA, 15.75/11KV (SAT)	500	500	500	100	0.03	500	With complete wooden packing for transportation
22		1680KVA, 15.75/0.415KV (ET)	2500	1500	2800	7000	29.40	2800	Transformer without Enclosure with complete wooden packing for transportation
23		1680KVA, 15.75/0.415KV (ET)	2500	1500	2800	7000	29.40	2800	Transformer without Enclosure with complete wooden packing for transportation
24		1680KVA, 15.75/0.415KV (ET)	2500	1500	2800	7000	29.40	2800	Transformer without Enclosure with complete wooden packing for transportation
25		1680KVA, 15.75/0.415KV (ET)	2500	1500	2800	7000	29.40	2800	Transformer without Enclosure with complete wooden packing for transportation
26		Spare - 1680KVA, 15.75/0.415KV (ET)	2500	1500	2800	7000	29.40	2800	Transformer without Enclosure with complete wooden packing for transportation
		Total				157350	1328.88	65300	

Note: For Storage: Dry type transformers (all types with & without enclosure) is "INDOOR".

"OUTDOOR" STORAGE IS RESTRICTLY AVOIDED

ANNEXURE VIII**Project: Arun-3 HEP, Nepal****Tentative packing list PEM****EOT Cranes:****PPV area crane:**

1 no. 150/30T capacity, 12.5m lift, 10.5m span, 82.05m baylength.

Total erection weight for PPV area crane- 85 tons approx. (including crane, rail & DSL)

Transformer Cavern area:

1 no. 100/20T capacity, 11 m lift, 14.5m span, 17.84m baylength

Total erection weight for Transformer area crane- 75 tons approx (including crane, rail & DSL)

Workshop area crane:

1 no. 50/10T capacity, 12m lift, 10m span, 32m baylength.

Total erection weight for PPV Workshop area crane- 40 tons approx. (including crane, rail & DSL)

Illumination System:

1. Tentative weight to be considered for illumination system is approx. 275 MT

2. Illumination system contains various items of different dimension. However dimensions of few heavy items are :

i. Lighting Distribution Board – 2200 L x 1200 W x 2200 H

ii. Street light poles – 9 M / 11 M

iii. Vehicle mounted platform with ladder – dimension can informed after placement of order

HVAC Package:**Total Weight in Tons (Approx.) = 240****Please note that these packages have not been ordered and the given weights are tentative.****Note: All illumination items to be stored in closed storage.**

ANNEXURE IX									
Project: Arun-3 HEP, Nepal									
Tentative packing list PSED									
SL. NO.	BRIEF DESCRIPTION	UNIT	QTY.	Dimension (approx.)			UNIT WEIGHT (Kg)	TOTAL WEIGHT (Kg)	REMARKS
				L (m)	B (m)	H (m)			
A	Hydrant System for Power House Building								
1	Hydrant & Spray Pipes: MS ERW								
1.1	200 NB	Mtrs.	450				43	19350	
1.2	100 NB	Mtrs.	700				17	11900	
1.3	80 NB	Mtrs.	350				11	3850	
2	Gate Valves								
2.1	200 NB	Nos.	10	0.4	0.2	0.4	215	2150	
2.2	150 NB	Nos.	18	0.4	0.15	0.4	82	1476	
2.3	100 NB	Nos.	6	0.3	0.1	0.4	48	288	
2.4	80 NB	Nos.	8	0.3	0.1	0.4	30	240	
3	Pipe Fittings and accessories	Lot	1	5	5	4	7851	7851	
4	S.S. Hydrant Valve as per IS:5290, Type- A- Internal	Nos.	48	0.2	0.1	0.2	20	960	
5	S.S. Hydrant Valve as per IS:5290, Type- A- External	Nos.	40	0.2	0.1	0.2	20	800	
6	15 Mtr. Long Hose with S.S. Coupling as per IS:636	Nos.	80	0.5	0.5	0.2	15	1200	
7	7.5 Mtr. Long Hose with S.S. Coupling as per IS:636	Nos.	96	0.4	0.4	0.2	15	1440	
8	S.S. Branch Pipe with Nozzle .	Nos.	88	0.4	dia-0.15		10	880	
9	M.S. Hose Cabinet - External	Nos.	40	0.75	0.25	0.6	10	400	
10	M.S. Hose Cabinet - Internal	Nos.	48	0.75	0.25	0.6	10	480	
11	Fire hose reel swinging wall mounting type MS drum	Nos.	20	0.75	0.75	0.75	25	500	
12	Air relief valve 25 NB	Nos.	8	0.25	0.25	0.25	2	16	
13	Wrapping & Coating with Anti Corrossion tape (4 mm thick) in two layers as per IS : 10221	M2	600	1	1	0.04	0.35	210	Owing to shelf life, storage space consumption and progressive procurement are required depending on site progress, therefore supply of Wrapping and coating and Paint material shall be in scope of PS Region.
B	MVWS System for : (i) Cable Tunnel and cable trays, (ii) Governor/MIV OPU , (iii) Oil tanks of DG sets								
1	MS ERW Galvanized to IS:1239, Part-1, Medium grade; Galvanized as per IS: 4736								
1.1	150 NB	Mtrs.	0					0	
1.2	100 NB	Mtrs.	100				15	1450	
1.3	80 NB	Mtrs.	460				10	4554	
1.4	65 NB	Mtrs.	0					0	
1.5	50 NB	Mtrs.	2800				6	17332	
1.6	40 NB	Mtrs.	0					0	
1.7	25 NB	Mtrs.	0					0	
1.8	25 NB (MS FOR DETECTION)	Mtrs.	0					0	
2	ERW, MS black pipe as per IS:1239 Part-1 medium grade (For Pylon Support)								
2.1	150 NB	No.	0					0	
2.2	100 NB	No.	0					0	
2.3	80 NB	No.	0					0	

3	Gate Valve								
3.1	150 NB	No.	0					0	
3.2	100 NB	No.	52	0.4	0.15	0.2	43.9	2282	
3.3	80 NB	No.	0					0	
4	Cast Iron Wafer Type Butterfly Valves as per BS :5155								
4.1	150 NB	NA	0					0	
4.2	100 NB	NA	26	0.4	0.15	0.2	39.0	1014	
4.3	80 NB	NA	0					0	
5	Deluge Valve (Wet Pilot Actuated) complete with necessary Trims,Water Motor gong								
5.1	150 NB	No.	0					0	
5.2	100 NB	No.	26	0.3	0.5	0.6	77.0	2002	
5.3	80 NB	No.	0					0	
6	Y Strainer								
6.1	150 NB	No.	0					0	
6.2	100 NB	No.	26	0.45	0.1	0.5	28.0	728	
6.3	80 NB	No.	0					0	
7	MVW SPRAY NOZZLE (SS Construction)								
7.1	K-18	No.	0					0	
7.2	K-22 ANGLE-140°	No.	1280	0.03	0.03	0.05	0.2	192	
7.3	K-30	No.	0					0	
7.4	K-35	No.	0					0	
8	QB Detector (79 Deg C)	No.	0					0	
9	Pressure Switch	No.	52	0.1	0.1	0.1	0.3	13	
10	Limit Switch	No.	0					0	
11	15 NB Solenoid Valve	No.	26	0.04	0.04	0.06	1.5	39	
12	DV Local Control Panel	Nos	26	0.25	0.25	0.2	5.0	130	
13	2 C x1.5 mm2 Armoured Control Cabling As per IS:1554 Part 1)	Mtrs	0					0	
14	2 C x1.5 mm2 Armoured Control Cabling As per IS:1554 Part 1)	Mtrs	0					0	
15	SS Orifice Plate								
15.1	150 NB	Nos.	2	dia: 150	thick : 3		0.5	1	
15.2	100 NB	Nos.	2	dia: 150	thick : 3		0.35	1	
15.3	80 NB	Nos.	2	dia: 150	thick : 3		0.25	1	
16	Cabling Accessories								
16.1	Gland (2 Nos for each cable)	NOS	52	0.05	0.05	0.05	0.1	5	
16.2	Lug (4 Nos for each cable)	NOS	104	0.05	0.05	0.05	0.1	10	
17	Pipe Fittings and Accessories	Lot	1	5	2	2	8809	8809	
C	HVWS System for at Transformer Caveran								
1	MS ERW Galvanized to IS:1239, Part-1, Medium grade; Galvanized as per IS: 4736								
1.1	150 NB	Mtrs.	0					0	
1.2	100 NB	Mtrs.	40				14.5	580	
1.3	80 NB	Mtrs.	266				9.9	2633	
1.4	65 NB	Mtrs.	266				7.93	2109	
1.5	50 NB	Mtrs.	747				6.19	4624	
1.6	40 NB	Mtrs.	407				4.37	1779	
1.7	32 NB	Mtrs.	0						
1.8	25 NB	Mtrs.	1734				2.93	5081	
2	ERW, MS black pipe as per IS:1239 Part-1 medium grade (For Pylon Support)								
2.1	80 NB	Mtrs.	0					0	
2.2	65 NB	Mtrs.	108				13	1404	
2.3	50 NB	Mtrs.	771				8	6168	
2.4	40 NB	Mtrs.	72				5	360	
3	Gate Valve								
3.1	150 NB	No.	0						
3.2	100 NB	No.	30	0.4	0.15	0.4	43.88	1316	
3.3	80 NB	No.	0					0	

4	Cast Iron Wafer Type Butterfly Valves as per BS :5155								
4.1	150 NB	NA	0						
4.2	100 NB	NA	15	0.4	0.15	0.2	39	585	
4.3	80 NB	NA	0						
5	Deluge Valve (Wet Pilot Actuated) complete with necessary Trims,Water Motor gong								
5.1	150 NB	No.	0					0	
5.2	100 NB	No.	15	0.3	0.5	0.2	77	1155	
5.3	80 NB	No.	0					0	
6	Y Strainer								
6.1	150 NB	No.	0					0	
6.2	100 NB	No.	15	0.45	0.1	0.2	28	420	
6.3	80 NB	No.	0					0	
7	HWW SPRAY NOZZLE with Strainer(SS Construction)								
7.1	K-23 Angle - 120	No.	0					0	
7.2	K-26 Angle - 100	No.	0					0	
7.3	K-42 Angle - 115	No.	0					0	
7.4	K-18 Angle - 80	No.	823	0.03	0.03	0.05	0.15	123	
8	Q. B . Detector 79 degree	No.	443	0.03	0.03	0.05	0.11	49	
9	Pressure Switch	No.	52	0.1	0.1	0.1	0.25	13	
10	Limit Switch	No.	0						
11	15 NB Solenoid Valve	No.	26	0.04	0.04	0.06	1.5	39	
12	DV Local Control Panel	Nos	26	0.25	0.25	0.2	5	130	
13	2 C x1.5 mm2 Armoured Control Cabling As per IS:1554 Part 1)	Mtrs	0					0	
14	2 C x2.5 mm2 Armoured Control Cabling As per IS:1554 Part 1)	Mtrs	0					0	
15	SS Orifice Plate								
15.1	150 NB	No.	2	dia: 0.15	thick : 3		0.5	1	
15.2	100 NB	No.	5	dia: 0.1	thick : 3		0.35	2	
15.3	80 NB	No.	3	dia: 0.08	thick : 3		0.25	1	
16	Cabling Accessories								
16.1	Gland (2 Nos for each cable)	Nos.	30	0.05	0.05	0.05	0.1	3	
16.2	Lugs (4 Nos for each cable)	Nos.	60	0.05	0.05	0.05	0.1	6	
17	Pipe Fittings and Accessories	Lot	1	5	2	2	8464	8464	
D	Sprinkler System								
1	MS ERW Galvanized to IS:1239, Part-1, Medium grade; Galvanized as per IS: 4736								
1.1	150 NB	Mtrs.	0						
1.2	100 NB	Mtrs.	672				14.5	9744	
1.3	80 NB	Mtrs.	300				9.9	2970	
1.4	65 NB	Mtrs.	0					0	
1.5	50 NB	Mtrs.	587.6				6.19	3637	
1.6	40 NB	Mtrs.	0						
1.7	32 NB	Mtrs.	188				3.79	713	
1.8	25 NB	Mtrs.	426				2.93	1248	
1.9	25 NB (MS FOR DETECTION)	Mtrs.	0					0	
2	Gate Valve								
2.1	150 NB	No.	0					0	
2.2	100 NB	No.	6	0.4	0.15	1.2	43.88	263	
2.3	80 NB	No.	6	0.3	0.1	0.8	27.09	163	
3	Cast Iron Wafer Type Butterfly Valves as per BS :5155								
3.1	150 NB	NA	0					0	
3.2	100 NB	NA	0					0	
3.3	80 NB	NA	0					0	
4	Alarm Valve complete with necessary Trims,Water Motor gong								
4.1	150 NB	No.	0					0	
4.2	100 NB	No.	3	0.3	0.12	1	65	195	

4.3	80 NB	No.	3	0.25	0.1	1	40	120	
5	Y Strainer								
5.1	150 NB	No.	0					0	
5.2	100 NB	No.	3	0.3	0.5	0.6	28	84	
4.3	80 NB	No.	3	0.25	0.4	0.5	16	48	
6	Sprinkler	No.							
6.1	79°C	No.	694	0.03	0.03	0.05	0.15	104	
7	QB Detector (79 Deg C)	No.	0					0	
8	Pressure Switch with root valve	No.	0					0	
9	Flow Switch								
9.1	100 NB	No.	3	0.1	0.1	0.1	0.25	1	
9.2	80 NB	No.	3	0.1	0.1	0.1	0.25	1	
10	15 NB Solenoid Valve	No.	0					0	
11	DV Control Panel	Nos	0					0	
12	2 C x1.5 mm2 Armoured Control Cabling As per IS:1554 Part 1)	Mtrs.	0					0	
13	2 C x1.5 mm2 Armoured Control Cabling As per IS:1554 Part 1)	Mtrs.	0					0	
14	SS Orifice Plate								
14.1	150 NB	No.	0					0	
14.2	100 NB	No.	2	dia: 0.1	thick : 3		0.35	1	
14.3	80 NB	No.	2	dia: 0.08	thick : 3		0.25	1	
15	Cabling Accessories								
15.1	Gland (2 Nos for each cable)	NOS	0					0	
15.2	Lug (4 Nos for each cable)	NOS	0					0	
16	Pipe Fittings and Accessories	Lot	1	3	3	2	5755	5755	
17	Paint Material for total FPS								
17.1	Primer coat (1 coat)	Ltrs	450				1	450	
17.2	Intermediate coat (2 coats)	Ltrs	650				1	650	
17.3	Finish coats	Ltrs	350				1	350	
17.4	Thinners	Ltrs	150				1	150	
18	M.S. Channel and Angles								
18.1	ISMC 100	Mtrs	20	0.65	thick : 6		15	300	
18.2	ISA 75	Mtrs	1500	1500	thick : 6		12	18000	
18.3	65 X 65 X 6 MM THIK	Mtrs	150	150	thick : 6		5	750	
18.4	50 X 50 X 6 MM THIK	Mtrs	1200	1200	thick : 6		4	4800	
18.5	40 X 40 X 6 MM THIK	Mtrs	600	600	thick : 6		3.5	2100	
19	M.S. PLATE								
19.1	200 X 100 X 10 MM THIK	Nos.	250	0.2	0.1	0.01	2	500	
19.2	200 X 200 X 10 MM THIK	Nos.	250	0.2	0.2	0.01	2.5	625	
19.3	600 X 100 X 10 MM THIK	Nos.	25	0.6	0.1	0.01	2.8	70	
19.4	150 X 150 X 10 MM THIK	Nos.	2100	0.15	0.15	0.01	2	4200	
19.5	150 X 75 X 6 MMTHIK	Nos.	200	0.15	0.075	0.006	1.5	300	
19.6	75 X 75 X 6 MM THIK	Nos.	120	0.075	0.075	0.006	0.65	78	
E	Fire Detection and Alarm System								
1	Main Fire Alarm Panel	No.	1	0.8	0.8	1.2	100	100	Since these items are Electronic components, the same may be stored in closed store
2	Repeater Panel	No.	1	0.5	0.1	0.3	20	20	
3	Addressable Multisensor Detector	Nos.	280	0.12	0.12	0.07	0.2	56	
4	Addressable Heat Detector	Nos.	6	0.12	0.12	0.07	0.2	1	
5	Aspirator Detector	Nos.	4	0.5	0.3	0.1	0.2	1	
6	Beam Detector	Nos.	18	0.1	0.15	0.1	0.3	5	
7	Manual Call Point (Indoor)	Nos.	90	0.1	0.7	0.1	0.2	18	
8	Manual Call Point (Outdoor)	Nos.	5	0.1	0.7	0.1	0.2	1	
9	Hooter	Nos.	49	0.07	0.05	0.15	0.25	12	
10	Control Module (NAC)	Nos.	42	0.1	0.1	0.05	0.1	4	
11	Control Module (Relay)	Nos.	54	0.1	0.1	0.05	0.1	5	
12	Monitor Module	Nos.	124	0.1	0.1	0.05	0.1	12	
13	Isolator Module	Nos.	25	0.1	0.1	0.05	0.1	3	
14	EXIT SIGN BOARD	Nos.	28	0.3	0.2	0.05	0.2	6	

15	Cable (2C x 1.5 sq. mm., armoured) Fire Survival	Mtrs.	13000	dia: 0.016			0.15	1950	
16	Cable (2C x 2.5 sq. mm., armoured) Fire Survival	Mtrs.	10000	dia: 0.016			0.15	1500	
17	Digital LHS Cable	Mtrs.	4900	dia: 0.015			0.15	735	
18	Graphics Software	Nos.	1				0	0	
19	P.C & Printer	Nos.	1	1	0.5	0.25	50	50	
20	Siren	Nos.	1	0.1	0.1	0.1	50	50	
21	Response Indicator	Nos.	1	0.07	0.07	0.05	0.1	0	
22	Fire man suit	Nos.	5	0.1	0.1	0.1	5	25	
23	Breathing apparatus	Nos.	5	0.1	0.1	0.1	10	50	
24	External power supply	Nos.	7	0.1	0.1	0.1	1	7	
G	Inert Gas Extinguishing System								
1	Inert Gas Cylinder with pneumatic valve	Nos.	46	2	dia: .25		255	11730	
2	Discharge Hose	Nos.	46	20 NB dia of 700 mm length			0.9	41	
3	Check Valve	Nos.	46	'20 NB dia valve of 100 mm			0.2	9	
4	Contact Pressure Gauge Unit	Nos.	42	0.07	0.10	0.06	0.7	29	
5	Release Unit with Solenoid, CPG & Actuator	Nos.	4	0.20	0.20	0.15	2.5	10	
6	Leak / Bleeder unit	Nos.	4	0.05	0.05	0.03	0.08	0	
7	Non Return Valve	Nos.	2	'15 NB dia valve of 50 mm			0.1	0	
8	Hi-flex hoses	Nos.	50	'20 NB dia of 700 mm length			0.32	16	
9	Ball Valve with dual action pneumatic actuator	Nos.	2	0.15	0.12	0.18	17	34	
10	Pressure Relief device	Nos.	1	25 NB dia valve of 60 mm			0.37	0	
11	Pressure Gauge	Nos.	1	0.12	0.10	0.05	0.6	1	
12	Discharge Nozzle	Nos.	150	0.10	0.10	0.10	0.67	101	
13	Pressure Regulator	Nos.	1	0.15	0.15	0.08	4	4	
14	Solenoid valve	Nos.	4	0.10	0.08	0.05	0.3	1	
15	Restrictor	Nos.	4	0.90	0.90	0.90	3.6	14	
16	T-Piece for Pilot Line	Nos.	42	0.05	0.05	0.03	0.125	5	
17	Cros for Pilot Line	Nos.	4	0.05	0.05	0.03	0.2	1	
18	Pipes								
18.1	100 NB	Mtrs.	36				16.07	579	
18.2	80 NB	Mtrs.	120				11.3	1356	
18.3	65 NB	Mtrs.	6				8.63	52	
18.4	50 NB	Mtrs.	48				5.44	261	
18.5	40 NB	Mtrs.	42				4.05	170	
18.6	25 NB	Mtrs.	24				2.5	60	
18.7	20 NB	Mtrs.	36				1.69	61	
18.8	15 NB	Mtrs.	6				1.3	8	
19	Pipe Fittings	Lot	1				2000	2000	
20	Pipe Supports	Lot	1				2000	2000	
21	Cylinder Manifolds 100NB pipe (ASTM A 106 Gr.B SCH-XXS)	Mtrs.	12				42.2	506	
22	DV manifold	Nos.	1	1.60	0.20	0.06	10	10	
23	Pilot Line Manifold	No.	1	1.60	0.20	0.06	1000	1000	
24	Structural Steel for Cyl. Mounting Frame Bracket	kg	2000	3.00	2.00	1.50	2000	2000	
25	Gas Release Panel	Nos.	1	1.00	0.65	0.45	150	150	
26	Ni-Cad batteries	Nos.	1	0.80	0.80	0.40	10	10	
27	Pressure Operated Switch	Nos.	2	0.16	0.10	0.50	1	2	
28	Pressure Relief Vent	Nos.	4	0.40	0.40	0.10	2	8	
29	Gas Discharge EPB	Nos.	2	0.1	0.7	0.1	5	10	
30	Inhibitor unit	Nos.	2	0.1	0.7	0.1	5	10	
31	Discharge Indicator	Nos.	2	0.1	0.7	0.1	5	10	
32	Pre-Discharge Indicator	Nos.	2	0.1	0.7	0.1	5	10	
33	Warning sign	Nos.	4	0.1	0.7	0.1	0.5	2	
34	Junction box	Nos.	3	0.40	0.40	0.10	10	30	
35	Cables	Mtrs.	800	dia:0.01 6			0.25	200	
36	Cable Fittings & fixtures	Lot	1	1.00	1.00	1.00	50	50	
F	Portable Fire Extinguisher In Mechanical & Electrical Utility Area								
1.0	22.5 Kg. CO2 Fire Extinguisher	Nos.	18	1	dia:0.03 5		70	1260	Owing to shelf life, storage space consumption and progressive procurement
2.0	4.5 Kg. CO2 Fire Extinguisher	Nos.	120	0.8	dia:0.02		17.5	2100	

3.0	6 Kg. DCP Fire Extinguisher	Nos.	120	0.8	dia:0.02 5		10.5	1260	are required depending on site progress, therefore supply of Paint material shall be
3.0	9 Kg. mechanical foam Fire Extinguisher	Nos.	3	0.8	dia:0.03 5		12.5	38	
G	Mandatory Spares Items								
1.0	Mandatory Spares Items	Lot	1	5	5	3	25000	25000	
	Note : i) This document is meant for preliminary planning purpose only. ii) All civil works related to site establishment for FPS works is not included in this BOM								
	Total							244790	

ANNEXURE X
Project: Arun-3 HEP, Nepal

Tentative packing list TBG

S.No.	Box No.	Page Descri	Dimension			CBM	Weight (MT)	FRT	Remark
			L (mm)	B (mm)	H (mm)				
1		GIS -Indoor	5898.0	2352.0	2394.0	33.2	24.0	33	25 container of the dimension specified shall be used.Indoor Stoarge required
2		GIS _Outdoor	5898.0	2352.0	2394.0	33.2	24.0	33	10 container of the dimension specified shall be used. Outdoor Storage required
3		400kV Cab	5000.0	5000.0	3000.0	75.0	12.0	75.0	Dimension of each Drums is marked.Items are Non Stackable . 15 drums in all shall be supplied
4		400kV Cab	4000	3000	3000	36	2	36	The Area marked here is consolidated requirement of accessories .The consolidated weight of the accessories may weight upto the weight marked in table
5		Illuminatio	15000	15000	3000	675	2	675	Closed Storage Area is specified here Required for housing the material
6		BPI	4000	5000	3000	60	2	60	The Area marked here is consolidated requirement of 18 nos BPI ,The items are stackable.
7		Wave Trap	2500	2500	1500	9.4	4.5	9.375	The items are not stackable. The area marked is open stoarge requirement and the weight marked is the consolidated weght of all the Wave Traps
8		CVT	6000	4000	2000	48	4.5	48	The items are not stackable. The area marked is open stoarge requirement and the weight marked is the consolidated weight of all the CVT
9		Control, Monitoring and Metering System				0		0	To be furnished by EDN
10		LA	4000	5000	3000	60	4.5	60	The items are not stackable. The area marked is open stoarge requirement and the weight marked is the consolidated weight of all the LA.
11		Cables	4000	3000	2000	24	20	24	Outdoor Storage Required
12		Protection	1000	1000	2500	2.5	1	2.5	The Value provided in the table alongside is space requirement for 1 panel . However in all 30 panels are envisaged .
13		Trench Ma	10000	10000	2000	200	5	200	The values provided alongside is consolidated outdoor area requirement for components
14		Marshalling Kiosk/JB				0		0	Included above
15		Conductor				0		0	Included above
16		DCDB	8000	2000	2000	32	2	32	Indoor Stororage required . Items are non stackable
17		ACDB	8000	2000	2000	32	2	32	Indoor Stororage required . Items are non stackable

18		Structures	10000	10000	2000	200	50	200	Outdoor area required .The weight provided along side is the consolidated weight of the components.
19		Fire-Fighting	5000	5000	5000	125	4	125	50 Percent indoor area required Largest package size of the components shall be 2x2x1 with and approximate weight of 500kG
20		Air Conditioning	5000	5000	5000	125	2	125	50 Percent indoor area required Largest package size of the components shall be 2x2x1 with and approximate weight of 500kG
21		Ventilation	10000	15000	5000	750	3	750	50 Percent indoor area required Largest package size of the components shall be 2x2x1 with and approximate weight of 500kG

168.5

WEIGHTS & DIMENSIONS OF ITEMS MORE THAN 35 MT

SN	ITEM DESCRIPTION	ITEM SIZE (mm)			WEIGHT (Kg)	QUANTIT Y	TOTAL WEIGHT
		L	W	H			
1	92 MVA Generator Transform	4100	3600	3850	75000	13	975000
2	80 MVR Shunt Reactor	6850	3400	3350	80000	3	240000
3	Bottom shaft	4500	2800	3400	53000	4	212000
4	Rotor spider	5700	2900	2500	45000	8	360000
5	Bottom bracket center	4800	4800	3000	38000	4	152000
6	B.F.Valve Door	7500	5520	2000	64500	4	258000
7	Spherical Valve Door	2850	3050	3500	44700	4	178800
8	Runner	4460	4460	1800	38000	4	152000
9	Shaft	5600	1800	1800	37500	4	150000
10	Spherical Valve D/S body	5100	5000	2500	35700	4	142800
							2820600