PROJECT NAME : PINARIPAD
PROJECT ID : 2- 8-26-50-0-1
TYPE : RESERVOIR

BASIN NAME : CAGAYAN
RIVER NAME : ADDALAM

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.44	0.41	0.41	0.41	0.38	0.38	0.38	0.35	0.35	0.35
FULL SUPPLY LEVEL (M) :	194.0	189.1	191.5	194.0	187.0	190.4	194.0	184.8	189.1	194.0
MIN. OPERATING LEVEL(M) :	156.3	148.4	154.5	160.6	148.2	156.1	164.0	148.0	157.6	167.3
POWER										
FIRM DISCHARGE (M3/S) :	24.8	23.9	23.8	23.8	22.9	22.8	22.8	21.9	21.8	21.7
PLANT PEAK DIS. (M3/S) :	148.7	143.4	143.0	142.6	137.6	137.0	136.5	131.6	130.9	130.2
AVERAGE NET HEAD (M) :	65.6	59.9	63.4	67.0	58.3	63.1	68.1	56.8	62.8	69.2
INSTALLED CAPACITY (MW) :	80.3	70.6	74.6	78.7	66.0	71.2	76.5	61.5	67.7	74.2
GUARANTEED POWER (MW) :	47.2	36.8	43.4	50.0	35.0	43.3	51.5	33.3	42.9	52.5
AVERAGE FIRM POWER (MW):	13.4	11.8	12.4	13.1	11.0	11.9	12.8	10.3	11.3	12.4
FIRM ENERGY (MIL KWH/Y) :	117.	103.	109.	115.	96.	104.	112.	90.	99.	108.
SECONDARY ENERGY (") :	96.	94.	98.	101.	96.	101.	106.	97.	103.	111.
ANNUAL AVERAGE E-GY (") :	214.	197.	207.	216.	192.	205.	218.	187.	202.	219.
D A M										
DAM HEIGHT (M) :	86.7	81.8	84.2	86.7	79.7	83.1	86.7	77.5	81.8	86.7
EMBANKMENT VOL.(MIL M3) :	6.852	5.980	6.407	6.852	5.589	6.202	6.852	5.197	5.969	6.852
EVALUATION INDICES										
CH/V :	8919.	9251.	8883.	8548.	9216.	8662.	8181.	9188.	8446.	7801.
C/V :	114.	126.	117.	109.	129.	116.	105.	133.	115.	100.
P/(20VT+VD) :	8.6	8.3	8.4	8.4	8.2	8.2	8.2	8.0	8.0	8.0
E(FIRM)/(20VT+VD) :	12.5	12.1	12.2	12.3	11.9	12.0	12.0	11.7	11.7	11.6
E(F+SEC*0.3)/(20VT+VD) :	15.6	15.5	15.5	15.5	15.5	15.4	15.4	15.5	15.4	15.2

PROJECT NAME : DIBULUAN
PROJECT ID : 2- 8-27-51-0-1
TYPE : RESERVOIR

BASIN NAME : CAGAYAN
RIVER NAME : DIBULUAN

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.68	0.63	0.63	0.63	0.58	0.58	0.58	0.53	0.53	0.53
FULL SUPPLY LEVEL (M) :	321.0	300.5	309.0	321.0	296.5	306.6	321.0	292.5	304.2	321.0
MIN. OPERATING LEVEL(M) :	265.9	221.2	246.5	271.7	221.0	249.0	277.0	220.9	251.5	282.0
POWER										
FIRM DISCHARGE (M3/S) :	9.2	8.9	8.9	8.8	8.6	8.6	8.5	8.3	8.3	8.2
PLANT PEAK DIS. (M3/S) :	54.9	53.5	53.3	53.0	51.7	51.4	51.1	49.8	49.5	49.1
AVERAGE NET HEAD (M) :	111.1	82.9	96.8	113.0	80.2	96.0	114.7	77.5	95.2	116.3
INSTALLED CAPACITY (MW) :	50.2	36.5	42.5	49.3	34.1	40.7	48.2	31.8	38.8	47.0
GUARANTEED POWER (MW) :	32.0	12.6	23.0	33.3	12.1	23.2	34.2	11.6	23.3	34.8
AVERAGE FIRM POWER (MW) :	8.4	6.1	7.1	8.2	5.7	6.8	8.0	5.3	6.5	7.8
FIRM ENERGY (MIL KWH/Y) :	73.	53.	62.	72.	50.	59.	70.	46.	57.	69.
SECONDARY ENERGY (") :	35.	31.	34.	37.	32.	35.	40.	33.	37.	42.
ANNUAL AVERAGE E-GY (") :	108.	84.	96.	109.	82.	95.	110.	79.	93.	111.
D A M										
DAM HEIGHT (M) :	138.7	118.2	126.7	138.7	114.2	124.3	138.7	110.2	121.9	138.7
EMBANKMENT VOL.(MIL M3) :	7.057	4.468	5.426	7.057	4.070	5.146	7.057	3.682	4.873	7.057
EVALUATION INDICES										
CH/V :	5297.	6887.	6077.	5106.	7033.	6051.	4919.	7207.	6027.	4731.
C/V :	41.	63.	52.	39.	67.	53.	38.	71.	53.	37.
P/(20VT+VD) :	5.8	6.1	6.1	5.7	6.1	6.1	5.6	6.1	6.1	5.5
E(FIRM)/(20VT+VD) :	8.5	8.9	8.9	8.4	8.9	8.9	8.2	8.9	8.8	8.0
E(F+SEC*0.3)/(20VT+VD) :	9.7	10.4	10.3	9.7	10.6	10.4	9.6	10.8	10.5	9.5

PROJECT NAME : CABINGATAN
PROJECT ID : 2- 8-28-52-0-1
TYPE : RESERVOIR

BASIN NAME : CAGAYAN
RIVER NAME : CONWAP

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.70	0.65	0.65	0.65	0.60	0.60	0.60	0.55	0.55	0.55
FULL SUPPLY LEVEL (M) :	303.0	285.9	293.2	303.0	282.3	291.2	303.0	278.6	289.0	303.0
MIN. OPERATING LEVEL(M) :	247.7	211.3	232.4	253.5	211.1	235.0	259.0	210.9	237.3	263.8
POWER										
FIRM DISCHARGE (M3/S) :	67.7	66.0	65.7	65.4	63.7	63.4	63.0	61.4	61.1	60.7
PLANT PEAK DIS. (M3/S) :	271.0	263.9	262.9	261.5	254.8	253.7	252.0	245.7	244.5	242.6
AVERAGE NET HEAD (M) :	119.0	95.8	107.5	120.9	93.4	107.1	122.7	90.8	106.4	124.2
INSTALLED CAPACITY (MW) :	265.5	208.1	232.8	260.2	195.8	223.6	254.5	183.7	214.1	248.1
GUARANTEED POWER (MW) :	174.6	95.3	138.1	180.2	91.6	138.4	184.4	87.9	137.8	186.6
AVERAGE FIRM POWER (MW) :	66.4	52.0	58.2	65.1	49.0	55.9	63.6	45.9	53.5	62.0
FIRM ENERGY (MIL KWH/Y) :	581.	456.	510.	570.	429.	490.	557.	402.	469.	543.
SECONDARY ENERGY (") :	237.	220.	235.	255.	228.	247.	272.	234.	258.	290.
ANNUAL AVERAGE E-GY (") :	819.	675.	744.	825.	657.	736.	830.	637.	726.	833.
D A M										
DAM HEIGHT (M) :	145.8	128.7	136.0	145.8	125.1	134.0	145.8	121.4	131.8	145.8
EMBANKMENT VOL.(MIL M3) :	9.066	6.684	7.662	9.066	6.242	7.397	9.066	5.813	7.101	9.066
EVALUATION INDICES										
CH/V :	32385.	37548.	34584.	31244.	37684.	34021.	30104.	37785.	33549.	28970.
C/V :	236.	311.	271.	227.	322.	270.	219.	333.	271.	211.
P/(20VT+VD) :	21.5	21.0	21.3	21.1	20.7	21.1	20.7	20.4	20.8	20.2
E(FIRM)/(20VT+VD) :	47.1	45.9	46.7	46.3	45.4	46.1	45.4	44.7	45.6	44.3
E(F+SEC*0.3)/(20VT+VD) :	52.9	52.6	53.2	52.5	52.6	53.1	52.0	52.5	53.1	51.4

PROJECT NAME : GANIP
PROJECT ID : 2- 8-28-53-0-2
TYPE : RUN-OF-RIVER

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5
HEAD PONDAGE					
OUTPUT FACTOR	0.973	0.900	0.800	0.700	0.656
FULL SUPPLY LEVEL (M)	705.4	705.7	706.0	706.3	706.4
NORMAL OPERATING LEVEL(M)	705.1	705.4	705.7	706.0	706.1
MINIMUM OPERATING LEVEL (M)	704.7	705.0	705.3	705.6	705.7
DIVERSION WEIR HEIGHT INC. 3M F-B	5.4	5.7	6.0	6.3	6.4
WATER DEPTH AT TRASHRACK (M)	2.4	2.7	3.0	3.3	3.4
CHANNEL WIDTH AT TRASHRACK (M)	2.8	4.0	5.3	6.5	7.0
PONDAGE STORAGE VOLUME (1000 M3)	59.9	67.5	75.5	82.8	85.8
WATERWAY					
NUMBER OF WATERWAY	1	1	1	1	1
INSIDE DIAMETER OF HEADRACE (M)	1.8	1.8	1.8	2.0	2.1
HEADRACE TUNNEL LENGTH (M)	3000.0	3000.0	3000.0	3000.0	3000.0
INSIDE DIAMETER OF PENSTOCK (M)	1.3	1.3	1.3	1.5	1.6
PENSTOCK LENGTH (HORIZONTAL) (M)	350.0	350.0	350.0	350.0	350.0
EXCAVATION VOLUME (1000 M3)	8.2	8.2	8.2	9.9	11.1
POWER					
FIRM DISCHARGE (M3/S)	0.6	0.6	0.6	0.6	0.6
DEPENDABLE DISCHARGE (M3/S)	1.0	1.0	1.0	1.0	1.0
PLANT PEAK DISCHARGE (M3/S)	1.0	2.0	3.5	5.3	6.1
TAIL WATER LEVEL (M)	540.0	540.0	540.0	540.0	540.0
NET HEAD (M)	162.9	161.7	158.0	156.8	157.0
INSTALLED CAPACITY (MW)	1.3	2.7	4.6	6.8	7.9
DEPENDABLE PEAK POWER (MW)	1.3	1.3	1.3	1.3	1.3
FIRM POWER (MW)	0.8	0.8	0.8	0.8	0.8
GUARANTEED POWER OUTPUT (MW)	0.7	0.7	0.7	0.7	0.7
FIRM ENERGY/YEAR (10**6 KWH)	7.0	7.0	6.8	6.7	6.8
SECONDARY ENERGY/YEAR (10**6 KWH)	4.0	13.1	23.0	31.5	34.8
ANNUAL ENERGY (MIL KWH/YR)	11.0	20.1	29.8	38.2	41.5
PARAMETERS					
P(INSTALLED)/(20VT) (W/M3)	8.2	16.6	28.1	34.3	35.6
P(DEPENDABLE)/(20VT) (W/M3)	8.1	8.1	7.9	6.5	5.8
E(FIRM)/(20VT) (KWH/M3)	42.8	42.5	41.5	34.0	30.5
E(F+0.3*SECONDARY)/(20VT) (")	50.1	66.5	83.7	81.7	77.6

PROJECT NAME : DAKGAN
PROJECT ID : 2- 8-29-54-0-1
TYPE : RESERVOIR

BASIN NAME : CAGAYAN
RIVER NAME : CASECNAN

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.75	0.70	0.70	0.70	0.65	0.65	0.65	0.60	0.60	0.60
FULL SUPPLY LEVEL (M) :	433.0	420.4	425.4	433.0	417.0	423.4	433.0	413.5	421.4	433.0
MIN. OPERATING LEVEL(M) :	373.5	340.4	360.3	380.2	340.2	363.0	385.8	340.0	365.5	391.1
POWER										
FIRM DISCHARGE (M3/S) :	28.5	28.0	27.9	27.7	27.1	26.9	26.8	26.1	26.0	25.8
PLANT PEAK DIS. (M3/S) :	171.1	168.1	167.3	166.5	162.5	161.6	160.6	156.9	155.9	154.8
AVERAGE NET HEAD (M) :	119.9	100.7	110.6	122.1	98.4	110.2	123.9	96.1	109.7	125.7
INSTALLED CAPACITY (MW) :	169.0	139.4	152.3	167.3	131.7	145.6	163.9	124.1	140.8	160.2
GUARANTEED POWER (MW) :	107.7	62.5	88.1	113.4	60.2	88.5	116.4	57.9	88.5	118.7
AVERAGE FIRM POWER (MW):	28.2	23.2	25.4	27.9	21.9	24.4	27.3	20.7	23.5	26.7
FIRM ENERGY (MIL KWH/Y) :	247.	203.	222.	244.	192.	214.	239.	181.	206.	234.
SECONDARY ENERGY (") :	104.	98.	103.	110.	103.	109.	118.	107.	115.	126.
ANNUAL AVERAGE E-GY (") :	350.	302.	326.	354.	295.	323.	358.	288.	320.	360.
D A M										
DAM HEIGHT (M) :	148.1	135.5	140.5	148.1	132.1	138.5	148.1	128.6	136.5	148.1
EMBANKMENT VOL.(MIL M3) :	14.805	11.849	12.976	14.805	11.122	12.512	14.805	10.397	12.077	14.805
EVALUATION INDICES										
CH/V :	8492.	9498.	8967.	8257.	9524.	8848.	7966.	9568.	8707.	7675.
C/V :	61.	75.	68.	59.	77.	68.	57.	79.	68.	55.
P/(20VT+VD) :	10.3	10.3	10.4	10.2	10.3	10.4	10.0	10.3	10.3	9.7
E(FIRM)/(20VT+VD) :	15.0	15.1	15.2	14.8	15.1	15.1	14.6	15.1	15.0	14.2
E(F+SEC*0.3)/(20VT+VD) :	16.9	17.3	17.3	16.9	17.5	17.4	16.7	17.7	17.5	16.5

PROJECT NAME : MADDELA
PROJECT ID : 2- 8-29-55-0-1
TYPE : RESERVOIR

BASIN NAME : CAGAYAN
RIVER NAME : TABOYONG

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.80	0.69	0.69	0.69	0.64	0.64	0.64	0.59	0.59	0.59
FULL SUPPLY LEVEL (M) :	486.0	471.3	476.8	486.0	468.1	474.7	486.0	464.7	472.6	486.0
MIN. OPERATING LEVEL(M) :	424.7	391.3	414.7	438.1	391.3	417.2	443.1	391.3	419.5	447.7
POWER										
FIRM DISCHARGE (M3/S) :	5.5	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.9	4.8
PLANT PEAK DIS. (M3/S) :	11.0	10.5	10.4	10.4	10.2	10.1	10.0	9.8	9.7	9.7
AVERAGE NET HEAD (M) :	121.3	100.8	112.2	125.8	98.8	111.7	127.5	96.7	111.1	129.1
INSTALLED CAPACITY (MW) :	11.0	8.7	9.6	10.8	8.3	9.3	10.5	7.8	8.9	10.3
GUARANTEED POWER (MW) :	7.0	3.9	5.8	7.6	3.8	5.8	7.8	3.7	5.8	7.8
AVERAGE FIRM POWER (MW) :	5.5	4.4	4.8	5.4	4.1	4.6	5.3	3.9	4.5	5.1
FIRM ENERGY (MIL KWH/Y) :	48.	38.	42.	47.	36.	41.	46.	34.	39.	45.
SECONDARY ENERGY (") :	11.	11.	12.	13.	12.	13.	14.	12.	13.	15.
ANNUAL AVERAGE E-GY (") :	59.	50.	54.	60.	48.	53.	60.	46.	52.	60.
D A M										
DAM HEIGHT (M) :	152.0	137.3	142.8	152.0	134.1	140.7	152.0	130.7	138.6	152.0
EMBANKMENT VOL.(MIL M3) :	12.629	9.358	10.515	12.629	8.753	10.046	12.629	8.107	9.610	12.629
EVALUATION INDICES										
CH/V :	1952.	2256.	2082.	1839.	2276.	2073.	1774.	2310.	2057.	1710.
C/V :	14.	18.	16.	13.	18.	15.	13.	19.	16.	12.
P/(20VT+VD) :	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7
E(FIRM)/(20VT+VD) :	3.5	3.6	3.6	3.4	3.6	3.6	3.3	3.7	3.6	3.2
E(F+SEC*0.3)/(20VT+VD) :	3.7	3.9	3.9	3.7	4.0	3.9	3.6	4.1	4.0	3.6

PROJECT NAME : KAGIPSIPAN
PROJECT ID : 2- 8-29-56-0-1
TYPE : RESERVOIR

BASIN NAME : CAGAYAN
RIVER NAME : CASECNAN

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.75	0.70	0.70	0.70	0.65	0.65	0.65	0.60	0.60	0.60
FULL SUPPLY LEVEL (M) :	525.0	509.9	515.9	525.0	506.2	513.6	525.0	502.4	511.2	525.0
MIN. OPERATING LEVEL(M) :	460.7	416.9	443.2	467.5	416.8	446.2	473.6	416.6	449.0	479.3
POWER										
FIRM DISCHARGE (M3/S) :	22.9	22.5	22.4	22.3	21.7	21.7	21.5	21.0	20.9	20.7
PLANT PEAK DIS. (M3/S) :	137.5	135.0	134.5	133.8	130.5	129.9	129.1	126.0	125.4	124.5
AVERAGE NET HEAD (M) :	139.9	116.2	128.1	142.1	113.7	127.6	144.0	111.1	126.9	145.9
INSTALLED CAPACITY (MW) :	158.4	129.1	141.9	156.5	122.1	136.4	153.1	115.3	131.0	149.5
GUARANTEED POWER (MW) :	104.6	58.8	84.0	108.8	56.7	84.2	111.1	54.6	83.9	112.7
AVERAGE FIRM POWER (MW) :	26.4	21.5	23.6	26.1	20.4	22.7	25.5	19.2	21.8	24.9
FIRM ENERGY (MIL KWH/Y) :	231.	189.	207.	228.	178.	199.	224.	168.	191.	218.
SECONDARY ENERGY (") :	95.	91.	95.	101.	95.	100.	109.	98.	105.	116.
ANNUAL AVERAGE E-GY (") :	327.	279.	302.	330.	273.	299.	333.	267.	297.	335.
D A M										
DAM HEIGHT (M) :	171.0	155.9	161.9	171.0	152.2	159.6	171.0	148.4	157.2	171.0
EMBANKMENT VOL.(MIL M3) :	14.691	11.684	12.815	14.691	11.020	12.376	14.691	10.368	11.926	14.691
EVALUATION INDICES										
CH/V :	7937.	8898.	8405.	7719.	8889.	8279.	7447.	8884.	8158.	7175.
C/V :	49.	61.	55.	48.	62.	55.	46.	64.	55.	45.
P/(20VT+VD) :	8.6	8.4	8.6	8.5	8.4	8.5	8.4	8.3	8.5	8.2
E(FIRM)/(20VT+VD) :	12.6	12.3	12.6	12.5	12.2	12.5	12.2	12.1	12.3	12.0
E(F+SEC*0.3)/(20VT+VD) :	14.2	14.1	14.3	14.1	14.2	14.4	14.0	14.2	14.4	13.9

PROJECT NAME : GADENG
PROJECT ID : 2- 8-29-57-0-1
TYPE : RESERVOIR

BASIN NAME : CAGAYAN
RIVER NAME : CASECNAN

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.75	0.70	0.70	0.70	0.65	0.65	0.65	0.60	0.60	0.60
FULL SUPPLY LEVEL (M) :	555.0	541.2	546.9	555.0	537.6	544.6	555.0	533.9	542.4	555.0
MIN. OPERATING LEVEL(M) :	490.5	454.0	475.7	497.5	453.8	478.8	503.9	453.6	481.7	509.8
POWER										
FIRM DISCHARGE (M3/S) :	21.7	21.3	21.2	21.1	20.6	20.5	20.3	19.9	19.8	19.6
PLANT PEAK DIS. (M3/S) :	130.0	127.6	127.1	126.5	123.4	122.8	122.1	119.2	118.5	117.7
AVERAGE NET HEAD (M) :	130.7	109.7	120.6	133.0	107.3	120.1	135.1	104.8	119.6	137.0
INSTALLED CAPACITY (MW) :	140.0	115.3	126.2	138.5	109.0	121.4	135.8	102.8	116.6	132.7
GUARANTEED POWER (MW) :	89.4	51.6	72.9	94.0	49.7	73.4	96.7	47.9	73.5	98.6
AVERAGE FIRM POWER (MW) :	23.3	19.2	21.0	23.1	18.2	20.2	22.6	17.1	19.4	22.1
FIRM ENERGY (MIL KWH/Y) :	204.	168.	184.	202.	159.	177.	198.	150.	170.	194.
SECONDARY ENERGY (") :	85.	81.	85.	91.	85.	90.	97.	88.	94.	104.
ANNUAL AVERAGE E-GY (") :	290.	249.	269.	293.	244.	267.	296.	238.	265.	298.
D A M										
DAM HEIGHT (M) :	161.4	147.6	153.3	161.4	144.0	151.0	161.4	140.3	148.8	161.4
EMBANKMENT VOL.(MIL M3) :	19.838	15.669	17.313	19.838	14.698	16.628	19.838	13.686	16.008	19.838
EVALUATION INDICES										
CH/V :	5246.	5941.	5567.	5101.	5967.	5512.	4921.	6020.	5439.	4742.
C/V :	34.	43.	39.	34.	44.	39.	32.	46.	39.	31.
P/(20VT+VD) :	6.4	6.5	6.5	6.3	6.5	6.5	6.2	6.5	6.4	6.0
E(FIRM)/(20VT+VD) :	9.3	9.5	9.5	9.2	9.5	9.5	9.0	9.5	9.4	8.8
E(F+SEC*0.3)/(20VT+VD) :	10.5	10.8	10.8	10.4	11.0	10.9	10.4	11.2	11.0	10.2

PROJECT NAME : CASECNAN
PROJECT ID : 2- 8-29-58-0-2
TYPE : RUN-OF-RIVER

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5
HEAD PONDAGE					
OUTPUT FACTOR	0.973	0.900	0.800	0.700	0.656
FULL SUPPLY LEVEL (M)	546.5	547.0	547.5	543.0	548.2
NORMAL OPERATING LEVEL(M)	545.8	546.3	546.8	547.3	547.5
MINIMUM OPERATING LEVEL (M)	545.1	545.6	546.1	546.6	546.8
DIVERSION WEIR HEIGHT INC. 3M F-B	6.5	7.0	7.5	8.0	8.2
WATER DEPTH AT TRASHRACK (M)	3.5	4.0	4.5	5.0	5.2
CHANNEL WIDTH AT TRASHRACK (M)	4.5	6.4	8.4	10.3	11.0
PONDAGE STORAGE VOLUME (1000 M3)	106.4	120.9	136.0	149.8	155.7
WATERWAY					
NUMBER OF WATERWAY	1	1	1	1	1
INSIDE DIAMETER OF HEADRACE (M)	1.8	2.0	2.5	2.8	3.0
HEADRACE TUNNEL LENGTH (M)	5650.0	5650.0	5650.0	5650.0	5650.0
INSIDE DIAMETER OF PENSTOCK (M)	1.3	1.5	1.9	2.2	2.3
PENSTOCK LENGTH (HORIZONTAL) (M)	205.0	205.0	205.0	205.0	205.0
EXCAVATION VOLUME (1000 M3)	14.7	17.4	27.4	36.9	41.2
POWER					
FIRM DISCHARGE (M3/S)	1.5	1.5	1.5	1.5	1.5
DEPENDABLE DISCHARGE (M3/S)	2.5	2.5	2.5	2.5	2.5
PLANT PEAK DISCHARGE (M3/S)	2.5	5.1	8.9	13.2	15.2
TAIL WATER LEVEL (M)	448.0	448.0	448.0	448.0	448.0
NET HEAD (M)	93.0	87.5	89.1	89.6	89.8
INSTALLED CAPACITY (MW)	1.9	3.7	6.5	9.7	11.2
DEPENDABLE PEAK POWER (MW)	1.9	1.8	1.8	1.8	1.8
FIRM POWER (MW)	1.1	1.1	1.1	1.1	1.1
GUARANTEED POWER OUTPUT (MW)	1.0	1.0	1.0	1.0	1.0
FIRM ENERGY/YEAR (10**6 KWH)	10.0	9.4	9.6	9.6	9.7
SECONDARY ENERGY/YEAR (10**6 KWH)	5.7	17.8	32.6	45.2	50.0
ANNUAL ENERGY (MIL KWH/YR)	15.7	27.2	42.2	54.8	59.6
PARAMETERS					
P(INSTALLED)/(20VT) (W/M3)	6.5	10.6	11.8	13.1	13.7
P(DEPENDABLE)/(20VT) (W/M3)	6.5	5.2	3.3	2.5	2.2
E(FIRM)/(20VT) (KWH/M3)	34.0	27.1	17.4	13.0	11.7
E(F+0.3*SECONDARY)/(20VT) (")	39.8	42.5	35.3	31.4	29.9

PROJECT NAME : UPPER CASECNAN
PROJECT ID : 2- 8-29-59-0-2
TYPE : RUN-OF-RIVER

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5
HEAD PONDAGE					
OUTPUT FACTOR	0.973	0.900	0.800	0.700	0.656
FULL SUPPLY LEVEL (M)	673.5	674.0	674.4	674.9	675.0
NORMAL OPERATING LEVEL(M)	672.8	673.2	673.7	674.1	674.3
MINIMUM OPERATING LEVEL (M)	672.0	672.5	673.0	673.4	673.6
DIVERSION WEIR HEIGHT INC. 3M F-B	6.5	7.0	7.4	7.9	8.0
WATER DEPTH AT TRASHRACK (M)	3.5	4.0	4.4	4.9	5.0
CHANNEL WIDTH AT TRASHRACK (M)	4.1	5.9	7.8	9.5	10.2
PONDAGE STORAGE VOLUME (1000 M3)	88.0	99.1	110.9	121.5	126.1
WATERWAY					
NUMBER OF WATERWAY	1	1	1	1	1
INSIDE DIAMETER OF HEADRACE (M)	1.8	1.8	2.3	2.7	2.8
HEADRACE TUNNEL LENGTH (M)	6800.0	6800.0	6800.0	6800.0	6800.0
INSIDE DIAMETER OF PENSTOCK (M)	1.3	1.4	1.7	2.0	2.2
PENSTOCK LENGTH (HORIZONTAL) (M)	200.0	200.0	200.0	200.0	200.0
EXCAVATION VOLUME (1000 M3)	17.6	18.6	28.1	39.6	44.2
POWER					
FIRM DISCHARGE (M3/S)	1.3	1.3	1.3	1.3	1.3
DEPENDABLE DISCHARGE (M3/S)	2.1	2.1	2.1	2.1	2.1
PLANT PEAK DISCHARGE (M3/S)	2.2	4.4	7.6	11.3	13.1
TAIL WATER LEVEL (M)	550.0	550.0	550.0	550.0	550.0
NET HEAD (M)	118.2	110.3	110.9	112.5	112.7
INSTALLED CAPACITY (MW)	2.1	4.0	7.0	10.5	12.2
DEPENDABLE PEAK POWER (MW)	2.1	1.9	2.0	2.0	2.0
FIRM POWER (MW)	1.3	1.2	1.2	1.2	1.2
GUARANTEED POWER OUTPUT (MW)	1.1	1.0	1.0	1.1	1.1
FIRM ENERGY/YEAR (10**6 KWH)	11.0	10.2	10.3	10.4	10.4
SECONDARY ENERGY/YEAR (10**6 KWH)	6.3	19.3	35.0	48.9	54.0
ANNUAL ENERGY (MIL KWH/YR)	17.2	29.6	45.2	59.3	64.5
PARAMETERS					
P(INSTALLED)/(20VT) (W/M3)	5.9	10.7	12.4	13.3	13.8
P(DEPENDABLE)/(20VT) (W/M3)	5.9	5.2	3.5	2.5	2.2
E(FIRM)/(20VT) (KWH/M3)	31.1	27.4	18.3	13.2	11.6
E(F+0.3*SECONDARY)/(20VT) (")	36.4	43.0	36.9	31.7	30.2

PROJECT NAME : UPPER CASECNAN-2
PROJECT ID : 2- 8-29-60-0-1
TYPE : RESERVOIR

BASIN NAME : CAGAYAN
RIVER NAME : CASIGNAN

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.95	0.88	0.88	0.88	0.85	0.85	0.85	0.80	0.80	0.80
FULL SUPPLY LEVEL (M) :	795.0	793.3	794.0	795.0	792.5	793.5	795.0	791.3	792.6	795.0
MIN. OPERATING LEVEL(M) :	731.9	731.7	739.7	747.7	731.7	742.1	752.6	731.6	745.2	758.7
POWER										
FIRM DISCHARGE (M3/S) :	9.9	9.7	9.6	9.6	9.5	9.5	9.4	9.3	9.2	9.2
PLANT PEAK DIS. (M3/S) :	39.8	38.7	38.5	38.4	38.1	37.9	37.7	37.2	37.0	36.7
AVERAGE NET HEAD (M) :	195.2	193.8	196.8	200.1	193.1	197.1	201.5	192.0	197.3	203.2
INSTALLED CAPACITY (MW) :	64.0	61.7	62.4	63.2	60.6	61.5	62.5	58.8	60.0	61.4
GUARANTEED POWER (MW) :	47.8	46.3	48.5	50.7	45.6	48.4	51.2	44.4	48.0	51.5
AVERAGE FIRM POWER (MW):	16.0	15.4	15.6	15.8	15.1	15.4	15.6	14.7	15.0	15.3
FIRM ENERGY (MIL KWH/Y) :	140.	135.	137.	138.	133.	135.	137.	129.	131.	134.
SECONDARY ENERGY (") :	35.	38.	38.	39.	39.	40.	41.	42.	42.	44.
ANNUAL AVERAGE E-GY (") :	175.	173.	175.	177.	172.	175.	178.	170.	174.	178.
D A M										
DAM HEIGHT (M) :	121.0	119.3	120.0	121.0	118.5	119.5	121.0	117.3	118.6	121.0
EMBANKMENT VOL.(MIL M3) :	6.753	6.521	6.604	6.753	6.414	6.536	6.753	6.250	6.425	6.753
EVALUATION INDICES										
CH/V :	10049.	10019.	9881.	9665.	9992.	9792.	9488.	9951.	9668.	9225.
C/V :	46.	47.	46.	45.	47.	46.	44.	47.	45.	43.
P/(20VT+VD) :	6.5	6.5	6.5	6.5	6.4	6.5	6.4	6.4	6.4	6.4
E(FIRM)/(20VT+VD) :	14.3	14.2	14.2	14.2	14.1	14.2	14.1	14.0	14.1	13.9
E(F+SEC*0.3)/(20VT+VD) :	15.3	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.3

PROJECT NAME : UPPER CASECNAN-3
PROJECT ID : 2- 8-29-61-0-1
TYPE : RESERVOIR

BASIN NAME : CAGAYAN
RIVER NAME : CASIGNAN

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.91	0.85	0.85	0.85	0.85	0.85	0.80	0.80	0.80	0.80
FULL SUPPLY LEVEL (M) :	796.0	794.7	794.9	795.1	795.6	796.0	793.6	794.0	795.3	796.0
MIN. OPERATING LEVEL(M) :	756.6	756.5	758.3	760.0	761.8	763.6	756.4	759.3	765.1	767.9
POWER										
FIRM DISCHARGE (M3/S) :	6.8	6.7	6.7	6.6	6.6	6.6	6.5	6.5	6.5	6.4
PLANT PEAK DIS. (M3/S) :	27.4	26.6	26.6	26.6	26.5	26.5	26.0	26.0	25.9	25.7
AVERAGE NET HEAD (M) :	310.2	308.7	309.5	310.2	311.0	311.8	307.5	308.7	311.3	312.7
INSTALLED CAPACITY (MW) :	70.0	67.7	67.8	67.9	68.0	68.1	65.9	66.0	66.3	66.3
GUARANTEED POWER (MW) :	61.0	59.2	59.5	59.8	60.0	60.3	57.7	58.2	59.0	59.3
AVERAGE FIRM POWER (MW) :	17.5	16.9	16.9	17.0	17.0	17.0	16.5	16.5	16.6	16.6
FIRM ENERGY (MIL KWH/Y) :	153.	148.	148.	149.	149.	149.	144.	145.	145.	145.
SECONDARY ENERGY (") :	40.	43.	44.	44.	44.	44.	46.	46.	47.	47.
ANNUAL AVERAGE E-GY (") :	194.	192.	192.	192.	193.	193.	190.	191.	192.	192.
D A M										
DAM HEIGHT (M) :	85.0	83.7	83.9	84.1	84.6	85.0	82.6	83.0	84.3	85.0
EMBANKMENT VOL.(MIL M3) :	4.094	3.942	3.968	3.995	4.045	4.094	3.824	3.862	4.014	4.094
EVALUATION INDICES										
CH/V :	17057.	17127.	17004.	16881.	16674.	16472.	17166.	16982.	16331.	15967.
C/V :	53.	53.	53.	52.	52.	51.	54.	53.	51.	50.
P/(20VT+VD) :	9.5	9.5	9.5	9.5	9.4	9.4	9.5	9.5	9.3	9.2
E(FIRM)/(20VT+VD) :	20.9	20.9	20.8	20.8	20.7	20.6	20.8	20.8	20.4	20.2
E(F+SEC*0.3)/(20VT+VD) :	22.6	22.7	22.7	22.6	22.5	22.4	22.8	22.7	22.4	22.2

PROJECT NAME : TABOAN
PROJECT ID : 2- 32- 0- 1-0-1
TYPE : RESERVOIR

BASIN NAME : TABOAN
RIVER NAME : TABOAN

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.92	0.67	0.67	0.67	0.62	0.62	0.62	0.57	0.57	0.57
FULL SUPPLY LEVEL (M) :	103.0	91.7	96.2	103.0	89.3	94.6	103.0	86.7	92.9	103.0
MIN. OPERATING LEVEL(M) :	36.6	36.2	51.9	67.7	36.1	53.8	71.5	35.9	55.3	74.7
POWER										
FIRM DISCHARGE (M3/S) :	20.7	19.3	19.1	19.0	19.0	18.8	18.7	18.5	18.3	18.2
PLANT PEAK DIS. (M3/S) :	82.9	77.1	76.6	76.0	76.0	75.4	74.7	74.1	73.3	72.6
AVERAGE NET HEAD (M) :	70.2	62.6	70.7	80.4	61.0	70.3	81.6	59.2	69.6	82.5
INSTALLED CAPACITY (MW) :	47.9	39.7	44.6	50.3	38.2	43.6	50.2	36.1	42.0	49.4
GUARANTEED POWER (MW) :	16.9	15.5	24.7	33.9	15.2	25.4	35.5	14.7	25.6	36.3
AVERAGE FIRM POWER (MW) :	12.0	9.9	11.1	12.6	9.5	10.9	12.5	9.0	10.5	12.3
FIRM ENERGY (MIL KWH/Y) :	105.	87.	98.	110.	84.	95.	110.	79.	92.	108.
SECONDARY ENERGY (") :	34.	36.	39.	42.	36.	39.	44.	37.	41.	47.
ANNUAL AVERAGE E-GY (") :	139.	123.	136.	153.	120.	135.	154.	116.	133.	155.
D A M										
DAM HEIGHT (M) :	99.9	88.6	93.1	99.9	86.2	91.5	99.9	83.6	89.8	99.9
EMBANKMENT VOL.(MIL M3) :	5.428	4.063	4.576	5.428	3.811	4.381	5.428	3.531	4.191	5.428
EVALUATION INDICES										
CH/V :	11116.	12139.	11270.	10171.	12381.	11374.	9998.	12584.	11335.	9713.
C/V :	120.	150.	132.	110.	157.	136.	109.	165.	138.	106.
P/(20VT+VD) :	7.4	7.8	8.0	7.8	7.9	8.1	7.8	8.0	8.1	7.7
E(FIRM)/(20VT+VD) :	16.2	17.1	17.5	17.1	17.3	17.7	17.1	17.4	17.7	16.8
E(F+SEC*0.3)/(20VT+VD) :	17.8	19.3	19.5	19.1	19.6	19.9	19.1	19.9	20.1	19.0

PROJECT NAME : DIKATAYAN
PROJECT ID : 2- 39- 0- 1-0-1.
TYPE : RESERVOIR

BASIN NAME : DIKATAYAN
RIVER NAME : DIKATAYAN

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.70	0.59	0.59	0.59	0.49	0.49	0.49	0.39	0.39	0.39
FULL SUPPLY LEVEL (M) :	166.0	140.8	149.3	166.0	132.4	143.4	166.0	123.8	138.4	166.0
MIN. OPERATING LEVEL(M) :	108.9	50.0	85.6	121.2	49.6	90.2	130.7	53.0	96.1	139.2
POWER										
FIRM DISCHARGE (M3/S) :	18.5	18.0	17.9	17.8	16.8	16.7	16.5	15.6	15.4	15.3
PLANT PEAK DIS. (M3/S) :	110.9	108.0	107.3	106.6	100.7	100.0	99.0	93.4	92.6	91.5
AVERAGE NET HEAD (M) :	128.6	92.8	110.0	132.7	87.1	108.0	136.2	82.9	106.6	138.9
INSTALLED CAPACITY (MW) :	117.5	82.5	97.2	116.4	72.2	88.9	111.0	63.7	81.2	104.6
GUARANTEED POWER (MW) :	78.8	27.3	56.8	85.9	25.2	56.9	87.5	26.1	56.9	86.8
AVERAGE FIRM POWER (MW) :	19.6	13.7	16.2	19.4	12.0	14.8	18.5	10.6	13.5	17.4
FIRM ENERGY (MIL KWH/Y) :	172.	120.	142.	170.	105.	130.	162.	93.	119.	153.
SECONDARY ENERGY (") :	68.	61.	65.	75.	65.	72.	86.	68.	78.	97.
ANNUAL AVERAGE E-GY (") :	240.	181.	207.	245.	170.	202.	248.	161.	197.	250.
D A M										
DAM HEIGHT (M) :	157.0	131.8	140.3	157.0	123.4	134.4	157.0	114.8	129.4	157.0
EMBANKMENT VOL.(MIL M3) :	14.166	9.101	10.628	14.166	7.732	9.530	14.166	6.478	8.698	14.166
EVALUATION INDICES										
CH/V :	6079.	7673.	6966.	5836.	7848.	6933.	5435.	8065.	6752.	5019.
C/V :	41.	62.	53.	40.	68.	55.	37.	76.	56.	34.
P/(20VT+VD) :	7.4	7.7	8.0	7.4	7.8	8.0	7.1	8.0	8.0	6.7
E(FIRM)/(20VT+VD) :	10.9	11.3	11.6	10.8	11.3	11.7	10.3	11.6	11.6	9.7
E(F+SEC*0.3)/(20VT+VD) :	12.2	13.0	13.2	12.2	13.4	13.7	12.0	14.2	13.9	11.5

PROJECT NAME : PALANAN
PROJECT ID : 2- 47- 0- 1-0-1
TYPE : RESERVOIR

BASIN NAME : PALANAN
RIVER NAME : PINACANAUAN

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.18	0.14	0.14	0.14	0.12	0.12	0.12	0.09	0.09	0.09
FULL SUPPLY LEVEL (M) :	94.0	90.4	92.2	94.0	88.0	91.1	94.0	84.1	89.0	94.0
MIN. OPERATING LEVEL(M) :	72.6	72.0	75.5	79.0	71.6	76.6	81.5	70.9	77.9	85.0
POWER										
FIRM DISCHARGE (M3/S) :	9.4	8.2	8.2	8.2	7.6	7.5	7.5	6.4	6.3	6.3
PLANT PEAK DIS. (M3/S) :	56.4	49.2	49.1	49.0	45.3	45.2	45.0	38.2	38.0	37.7
AVERAGE NET HEAD (M) :	50.3	47.7	50.0	52.3	45.9	49.6	53.1	43.0	48.5	54.2
INSTALLED CAPACITY (MW) :	23.4	19.3	20.2	21.1	17.1	18.4	19.7	13.5	15.2	16.8
GUARANTEED POWER (MW) :	15.9	13.6	15.0	16.3	12.4	14.1	15.8	10.2	12.3	14.2
AVERAGE FIRM POWER (MW) :	3.9	3.2	3.4	3.5	2.9	3.1	3.3	2.3	2.5	2.8
FIRM ENERGY (MIL KWH/Y) :	34.	28.	29.	31.	25.	27.	29.	20.	22.	25.
SECONDARY ENERGY (") :	31.	33.	34.	35.	34.	36.	38.	34.	38.	42.
ANNUAL AVERAGE E-GY (") :	65.	61.	64.	66.	59.	63.	66.	54.	60.	66.
D A M										
DAM HEIGHT (M) :	65.0	61.4	63.2	65.0	59.0	62.1	65.0	55.1	60.0	65.0
EMBANKMENT VOL.(MIL M3) :	1.040	0.900	0.970	1.040	0.810	0.928	1.040	0.675	0.847	1.040
EVALUATION INDICES										
CH/V :	16376.	15439.	14772.	14193.	15113.	13919.	13032.	14100.	12310.	10903.
C/V :	285.	287.	266.	248.	294.	256.	227.	298.	236.	191.
P/(20VT+VD) :	11.1	9.9	10.1	10.2	9.3	9.4	9.5	8.1	8.2	8.3
E(FIRM)/(20VT+VD) :	16.2	14.5	14.7	14.8	13.6	13.8	13.9	11.8	12.0	12.1
E(F+SEC*0.3)/(20VT+VD) :	20.6	19.6	19.8	19.9	19.1	19.3	19.4	17.9	18.2	18.2

PROJECT NAME : MALUPA
PROJECT ID : 3- 13- 0- 1-0-1
TYPE : RESERVOIR

BASIN NAME : CABATANGAN
RIVER NAME : MALUPA

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.95	0.66	0.66	0.61	0.61	0.61	0.61	0.61	0.56	0.56
FULL SUPPLY LEVEL (M) :	224.0	209.3	224.0	206.1	208.8	212.6	217.5	224.0	202.9	224.0
MIN. OPERATING LEVEL(M) :	125.0	124.8	180.7	124.8	140.0	155.2	170.4	185.6	124.7	190.4
POWER										
FIRM DISCHARGE (M3/S) :	9.4	8.5	8.4	8.3	8.3	8.3	8.2	8.2	8.1	7.9
PLANT PEAK DIS. (M3/S) :	18.7	17.0	16.7	16.7	16.6	16.6	16.5	16.4	16.2	15.8
AVERAGE NET HEAD (M) :	92.2	82.3	110.2	80.2	86.9	94.4	102.6	111.8	78.0	113.3
INSTALLED CAPACITY (MW) :	14.2	11.5	15.2	11.0	11.9	12.9	13.9	15.1	10.4	14.8
GUARANTEED POWER (MW) :	3.9	3.5	10.7	3.4	5.4	7.3	9.2	11.1	3.3	11.3
AVERAGE FIRM POWER (MW) :	7.1	5.8	7.6	5.5	6.0	6.4	7.0	7.5	5.2	7.4
FIRM ENERGY (MIL KWH/Y) :	62.	51.	67.	48.	52.	56.	61.	66.	46.	65.
SECONDARY ENERGY (") :	22.	23.	26.	23.	23.	24.	25.	27.	23.	25.
ANNUAL AVERAGE E-GY (") :	84.	73.	93.	71.	75.	81.	86.	93.	68.	93.
D A M										
DAM HEIGHT (M) :	136.0	121.3	136.0	118.1	120.8	124.6	129.5	136.0	114.9	136.0
EMBANKMENT VOL.(MIL M3) :	35.566	27.522	35.566	25.912	27.255	29.196	31.860	35.566	24.360	35.566
EVALUATION INDICES										
CH/V :	1041.	1077.	925.	1090.	1058.	1016.	965.	904.	1090.	873.
C/V :	8.	10.	7.	10.	10.	9.	8.	7.	10.	7.
P/(20VT+VD) :	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
E(FIRM)/(20VT+VD) :	1.7	1.7	1.8	1.7	1.8	1.8	1.8	1.8	1.7	1.7
E(F+SEC*0.3)/(20VT+VD) :	1.8	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0

PROJECT NAME : UMIRAY-3
PROJECT ID : 3- 23- 0- 1-0-1
TYPE : RESERVOIR

BASIN NAME : UMIRAY
RIVER NAME : UMIRAY

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.62	0.42	0.42	0.42	0.32	0.32	0.32	0.22	0.22	0.22
FULL SUPPLY LEVEL (M) :	201.0	155.2	175.4	201.0	143.2	169.1	201.0	129.4	161.7	201.0
MIN. OPERATING LEVEL(M) :	145.4	87.2	127.3	167.5	86.7	131.7	176.6	85.8	135.4	184.9
POWER										
FIRM DISCHARGE (M3/S) :	39.7	35.5	35.3	35.1	32.6	32.4	32.1	27.5	27.3	27.0
PLANT PEAK DIS. (M3/S) :	158.6	141.8	141.3	140.3	130.3	129.6	128.5	109.9	109.2	107.9
AVERAGE NET HEAD (M) :	117.7	68.5	94.9	124.8	60.3	92.0	127.7	50.8	88.2	130.2
INSTALLED CAPACITY (MW) :	153.7	80.0	110.4	144.2	64.7	98.2	135.1	46.0	79.3	115.6
GUARANTEED POWER (MW) :	100.3	25.7	69.6	112.7	23.2	68.2	112.3	18.8	60.5	101.0
AVERAGE FIRM POWER (MW) :	38.4	20.0	27.6	36.0	16.2	24.6	33.8	11.5	19.8	28.9
FIRM ENERGY (MIL KWH/Y) :	337.	175.	242.	315.	142.	215.	296.	101.	174.	253.
SECONDARY ENERGY (") :	56.	58.	72.	90.	63.	84.	111.	70.	105.	149.
ANNUAL AVERAGE E-GY (") :	393.	233.	313.	405.	205.	299.	407.	171.	278.	402.
D A M										
DAM HEIGHT (M) :	147.0	101.2	121.4	147.0	89.2	115.1	147.0	75.4	107.7	147.0
EMBANKMENT VOL.(MIL M3) :	25.907	9.734	15.572	25.907	7.084	13.568	25.907	4.731	11.425	25.907
EVALUATION INDICES										
CH/V :	6578.	10473.	7934.	5808.	11478.	7873.	5312.	11967.	7306.	4448.
C/V :	46.	115.	72.	43.	145.	75.	39.	183.	75.	33.
P/(20VT+VD) :	5.2	6.2	5.9	5.0	6.4	5.9	4.7	6.0	5.5	4.0
E(FIRM)/(20VT+VD) :	11.5	13.5	12.9	10.8	13.9	12.9	10.2	13.2	12.1	8.8
E(F+SEC*0.3)/(20VT+VD) :	12.1	14.9	14.0	11.8	15.8	14.4	11.4	15.9	14.3	10.3

PROJECT NAME : UPPER UMIRAY
PROJECT ID : 3- 23- 0- 2-0-1
TYPE : RESERVOIR

BASIN NAME : UMIRAY
RIVER NAME : UMIRAY

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.80	0.75	0.75	0.75	0.70	0.70	0.70	0.65	0.65	0.65
FULL SUPPLY LEVEL (M) :	322.0	308.2	312.9	322.0	305.0	310.6	322.0	301.9	308.1	322.0
MIN. OPERATING LEVEL(M) :	248.2	187.7	222.5	257.2	187.6	226.3	264.9	187.5	229.6	271.7
POWER										
FIRM DISCHARGE (M3/S) :	27.8	27.6	27.5	27.3	27.1	27.0	26.9	26.7	26.6	26.4
PLANT PEAK DIS. (M3/S) :	166.5	165.4	164.9	164.1	162.9	162.3	161.3	160.3	159.6	158.6
AVERAGE NET HEAD (M) :	157.1	128.2	142.7	160.0	126.0	142.3	162.5	123.9	141.8	164.8
INSTALLED CAPACITY (MW) :	215.3	174.5	193.7	216.1	169.0	190.1	215.8	163.5	186.4	215.1
GUARANTEED POWER (MW) :	140.9	62.0	106.4	150.3	61.0	109.6	157.4	59.9	112.0	163.2
AVERAGE FIRM POWER (MW) :	35.9	29.1	32.3	36.0	28.2	31.7	36.0	27.2	31.1	35.8
FIRM ENERGY (MIL KWH/Y) :	314.	255.	283.	316.	247.	278.	315.	239.	272.	314.
SECONDARY ENERGY (") :	38.	37.	39.	43.	41.	43.	48.	44.	47.	53.
ANNUAL AVERAGE E-GY (") :	352.	292.	322.	358.	287.	321.	363.	283.	319.	366.
D A M										
DAM HEIGHT (M) :	191.0	177.2	181.9	191.0	174.0	179.6	191.0	170.9	177.1	191.0
EMBANKMENT VOL.(MIL M3) :	20.499	17.208	18.286	20.499	16.486	17.747	20.499	15.800	17.187	20.499
EVALUATION INDICES										
CH/V :	7758.	8505.	8191.	7639.	8576.	8191.	7509.	8639.	8201.	7380.
C/V :	43.	51.	47.	42.	52.	48.	41.	53.	49.	41.
P/(20VT+VD) :	9.5	9.0	9.5	9.5	9.1	9.5	9.5	9.1	9.6	9.5
E(FIRM)/(20VT+VD) :	13.9	13.1	13.8	13.9	13.2	13.9	13.9	13.3	14.1	13.9
E(F+SEC*0.3)/(20VT+VD) :	14.4	13.7	14.4	14.5	13.9	14.6	14.5	14.0	14.8	14.5

PROJECT NAME : CATMON
PROJECT ID : 3- 25- 1- 1-0-1
TYPE : RESERVOIR

BASIN NAME : PAMPANGA
RIVER NAME : ANGAT

****
* SUMMARY TABLE OF OUTPUTS *
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ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.90	0.80	0.80	0.80	0.70	0.70	0.70	0.60	0.60	0.60
FULL SUPPLY LEVEL (M) :	300.0	296.3	298.0	300.0	292.7	295.8	300.0	288.8	293.3	300.0
MIN. OPERATING LEVEL(M) :	246.4	246.1	252.3	258.5	246.1	256.5	266.9	246.1	259.9	273.7
POWER										
FIRM DISCHARGE (M3/S) :	4.3	4.1	4.1	4.1	3.9	3.9	3.8	3.7	3.7	3.6
PLANT PEAK DIS. (M3/S) :	8.6	8.2	8.2	8.1	7.8	7.8	7.7	7.4	7.3	7.2
AVERAGE NET HEAD (M) :	65.2	62.7	65.9	69.2	60.4	65.8	72.0	57.9	65.3	74.3
INSTALLED CAPACITY (MW) :	4.6	4.2	4.4	4.6	3.9	4.2	4.6	3.5	3.9	4.4
GUARANTEED POWER (MW) :	2.0	1.9	2.3	2.6	1.8	2.4	3.0	1.7	2.5	3.2
AVERAGE FIRM POWER (MW) :	2.3	2.1	2.2	2.3	1.9	2.1	2.3	1.8	2.0	2.2
FIRM ENERGY (MIL KWH/Y) :	20.	19.	19.	20.	17.	18.	20.	15.	17.	19.
SECONDARY ENERGY (") :	12.	12.	12.	12.	12.	12.	13.	12.	12.	14.
ANNUAL AVERAGE E-GY (") :	32.	30.	31.	33.	29.	31.	33.	27.	30.	33.
D A M										
DAM HEIGHT (M) :	91.0	87.3	89.0	91.0	83.7	86.8	91.0	79.8	84.3	91.0
EMBANKMENT VOL.(MIL M3) :	2.561	2.309	2.424	2.561	2.075	2.272	2.561	1.847	2.107	2.561
EVALUATION INDICES										
CH/V :	4396.	4456.	4314.	4162.	4514.	4252.	3930.	4548.	4178.	3676.
C/V :	53.	56.	53.	50.	59.	54.	47.	63.	55.	44.
P/(20VT+VD) :	1.3	1.3	1.3	1.4	1.3	1.3	1.3	1.3	1.3	1.3
E(FIRM)/(20VT+VD) :	5.9	5.8	5.9	5.9	5.8	5.9	5.8	5.7	5.8	5.6
E(F+SEC*0.3)/(20VT+VD) :	6.9	6.9	7.0	7.0	7.0	7.0	7.0	7.0	7.0	6.8

PROJECT NAME : BALINTINGON
PROJECT ID : 3- 25- 2- 2-0-1
TYPE : RESERVOIR

BASIN NAME : PAMPANGA
RIVER NAME : SUMACBAO

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.75	0.66	0.66	0.66	0.61	0.61	0.61	0.56	0.56	0.56
FULL SUPPLY LEVEL (M) :	160.0	148.8	153.7	160.0	146.2	152.6	160.0	143.6	151.4	160.0
MIN. OPERATING LEVEL(M) :	118.5	97.3	111.5	125.7	97.3	113.5	129.6	97.3	115.2	133.0
POWER										
FIRM DISCHARGE (M3/S) :	6.4	6.2	6.2	6.1	6.1	6.0	6.0	5.9	5.9	5.8
PLANT PEAK DIS. (M3/S) :	12.7	12.4	12.3	12.2	12.1	12.1	12.0	11.9	11.8	11.7
AVERAGE NET HEAD (M) :	69.1	54.9	62.8	71.6	53.2	62.8	72.9	51.6	62.6	74.1
INSTALLED CAPACITY (MW) :	7.3	5.6	6.4	7.2	5.3	6.2	7.2	5.0	6.1	7.1
GUARANTEED POWER (MW) :	4.1	2.0	3.4	4.7	2.0	3.5	4.9	1.9	3.6	5.1
AVERAGE FIRM POWER (MW) :	3.6	2.8	3.2	3.6	2.7	3.1	3.6	2.5	3.0	3.6
FIRM ENERGY (MIL KWH/Y) :	32.	24.	28.	32.	23.	27.	31.	22.	27.	31.
SECONDARY ENERGY (") :	11.	10.	11.	12.	10.	11.	12.	10.	11.	13.
ANNUAL AVERAGE E-GY (") :	43.	35.	39.	43.	33.	38.	44.	32.	38.	44.
D A M										
DAM HEIGHT (M) :	92.0	80.8	85.7	92.0	78.2	84.6	92.0	75.6	83.4	92.0
EMBANKMENT VOL.(MIL M3) :	4.479	3.264	3.745	4.479	3.010	3.637	4.479	2.763	3.521	4.479
EVALUATION INDICES										
CH/V :	3723.	4307.	3989.	3578.	4418.	3968.	3496.	4545.	3953.	3415.
C/V :	45.	60.	52.	43.	64.	52.	42.	68.	53.	41.
P/(20VT+VD) :	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
E(FIRM)/(20VT+VD) :	5.7	5.6	5.8	5.7	5.7	5.8	5.6	5.7	5.8	5.6
E(F+SEC*0.3)/(20VT+VD) :	6.3	6.3	6.4	6.3	6.4	6.5	6.3	6.5	6.5	6.3

PROJECT NAME : PAPAYA
PROJECT ID : 3- 25- 2- 3-0-1
TYPE : RESERVOIR

BASIN NAME : PAMPANGA
RIVER NAME : CHICO

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* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.90	0.77	0.77	0.77	0.70	0.70	0.70	0.60	0.60	0.60
FULL SUPPLY LEVEL (M) :	161.0	158.0	159.4	161.0	156.3	158.2	161.0	153.8	156.2	161.0
MIN. OPERATING LEVEL(M) :	117.2	117.2	125.3	133.3	117.2	127.9	138.5	117.2	130.3	142.4
POWER										
FIRM DISCHARGE (M3/S) :	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3
PLANT PEAK DIS. (M3/S) :	5.5	5.2	5.1	5.1	5.1	5.0	4.9	4.9	4.8	4.7
AVERAGE NET HEAD (M) :	52.5	50.6	54.1	57.8	49.5	54.2	59.5	47.8	53.7	61.1
INSTALLED CAPACITY (MW) :	2.4	2.2	2.3	2.4	2.1	2.2	2.4	1.9	2.1	2.3
GUARANTEED POWER (MW) :	1.0	1.0	1.3	1.6	0.9	1.3	1.7	0.9	1.4	1.8
AVERAGE FIRM POWER (MW) :	1.2	1.1	1.1	1.2	1.0	1.1	1.2	1.0	1.1	1.2
FIRM ENERGY (MIL KWH/Y) :	10.	9.	10.	11.	9.	10.	11.	8.	9.	10.
SECONDARY ENERGY (") :	3.	3.	4.	4.	3.	4.	4.	4.	4.	4.
ANNUAL AVERAGE E-GY (") :	14.	13.	14.	14.	12.	13.	14.	12.	13.	14.
D A M										
DAM HEIGHT (M) :	75.0	72.0	73.4	75.0	70.3	72.2	75.0	67.8	70.2	75.0
EMBANKMENT VOL.(MIL M3) :	2.334	2.105	2.211	2.334	1.973	2.119	2.334	1.780	1.962	2.334
EVALUATION INDICES										
CH/V :	2478.	2501.	2405.	2297.	2532.	2394.	2216.	2589.	2401.	2105.
C/V :	37.	39.	37.	34.	41.	37.	33.	43.	39.	31.
P/(20VT+VD) :	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
E(FIRM)/(20VT+VD) :	3.5	3.5	3.6	3.6	3.5	3.6	3.6	3.5	3.6	3.5
E(F+SEC*0.3)/(20VT+VD) :	3.8	3.9	3.9	4.0	3.9	4.0	4.0	4.0	4.0	3.9

PROJECT NAME : LUBINGAN
PROJECT ID : 3- 25- 3- 4-0-1
TYPE : RESERVOIR

BASIN NAME : PAMPANGA
RIVER NAME : LUBINGAN

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* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.75	0.26	0.26	0.26	0.16	0.16	0.16	0.06	0.06	0.06
FULL SUPPLY LEVEL (M) :	386.0	306.0	336.3	386.0	288.3	327.2	386.0	263.7	317.8	386.0
MIN. OPERATING LEVEL(M) :	298.1	236.8	299.5	362.1	236.8	304.3	371.9	236.8	309.0	381.3
POWER										
FIRM DISCHARGE (M3/S) :	6.7	4.9	4.8	4.8	4.3	4.2	4.2	2.7	2.6	2.5
PLANT PEAK DIS. (M3/S) :	13.4	9.8	9.7	9.6	8.6	8.5	8.3	5.3	5.2	5.1
AVERAGE NET HEAD (M) :	181.5	109.7	150.2	203.3	98.3	146.0	206.7	82.6	141.8	210.1
INSTALLED CAPACITY (MW) :	20.1	8.8	11.9	16.0	6.9	10.2	14.2	3.6	6.1	8.8
GUARANTEED POWER (MW) :	13.0	4.9	9.5	14.0	4.3	8.7	12.9	2.7	5.6	8.2
AVERAGE FIRM POWER (MW) :	10.0	4.4	6.0	8.0	3.5	5.1	7.1	1.8	3.0	4.4
FIRM ENERGY (MIL KWH/Y) :	88.	39.	52.	70.	30.	45.	62.	16.	27.	38.
SECONDARY ENERGY (") :	32.	29.	35.	46.	27.	37.	51.	16.	27.	38.
ANNUAL AVERAGE E-GY (") :	120.	67.	88.	116.	58.	81.	113.	32.	53.	77.
D A M										
DAM HEIGHT (M) :	222.0	142.0	172.3	222.0	124.3	163.2	222.0	99.7	153.8	222.0
EMBANKMENT VOL.(MIL M3) :	32.490	9.735	16.413	32.490	6.850	14.186	32.490	3.838	12.073	32.490
EVALUATION INDICES										
CH/V :	1375.	2098.	1507.	980.	2277.	1444.	855.	2011.	986.	521.
C/V :	7.	16.	9.	5.	20.	9.	4.	22.	7.	2.
P/(20VT+VD) :	0.6	0.8	0.7	0.5	0.8	0.7	0.4	0.7	0.5	0.3
E(FIRM)/(20VT+VD) :	2.6	3.5	2.9	2.1	3.7	2.9	1.8	3.1	2.0	1.1
E(F+SEC*0.3)/(20VT+VD) :	2.9	4.3	3.5	2.5	4.7	3.6	2.3	4.0	2.6	1.5

PROJECT NAME : GUMAIN
PROJECT ID : 3- 27- 0- 1-0-1
TYPE : RESERVOIR

BASIN NAME : COLO
RIVER NAME : GUMAIN

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* SUMMARY TABLE OF OUTPUTS *
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ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.87	0.71	0.71	0.71	0.61	0.61	0.61	0.51	0.51	0.51
FULL SUPPLY LEVEL (M) :	133.0	126.5	129.7	133.0	122.4	127.1	133.0	118.0	124.7	133.0
MIN. OPERATING LEVEL(M) :	90.9	90.6	96.0	101.4	90.6	96.6	106.5	90.6	101.0	111.4
POWER										
FIRM DISCHARGE (M3/S) :	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7
PLANT PEAK DIS. (M3/S) :	4.0	3.7	3.7	3.7	3.6	3.6	3.5	3.4	3.4	3.4
AVERAGE NET HEAD (M) :	66.2	61.9	65.8	69.7	59.2	64.9	71.3	56.3	64.2	73.0
INSTALLED CAPACITY (MW) :	2.2	1.9	2.0	2.1	1.7	1.9	2.1	1.6	1.8	2.0
GUARANTEED POWER (MW) :	1.2	1.1	1.3	1.4	1.1	1.3	1.5	1.0	1.3	1.5
AVERAGE FIRM POWER (MW) :	1.1	0.9	1.0	1.1	0.9	1.0	1.0	0.8	0.9	1.0
FIRM ENERGY (MIL KWH/Y) :	9.	8.	9.	9.	8.	8.	9.	7.	8.	9.
SECONDARY ENERGY (") :	3.	3.	3.	3.	3.	3.	4.	3.	3.	4.
ANNUAL AVERAGE E-GY (") :	12.	11.	12.	13.	11.	12.	13.	10.	11.	13.
D A M										
DAM HEIGHT (M) :	88.0	81.5	84.7	88.0	77.4	82.1	88.0	73.0	79.7	88.0
EMBANKMENT VOL.(MIL M3) :	3.849	3.202	3.524	3.849	2.819	3.267	3.849	2.462	3.026	3.849
EVALUATION INDICES										
CH/V :	1300.	1352.	1278.	1217.	1394.	1279.	1166.	1424.	1269.	1106.
C/V :	16.	18.	17.	15.	20.	17.	15.	22.	18.	14.
P/(20VT+VD) :	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4
E(FIRM)/(20VT+VD) :	2.1	2.1	2.1	2.1	2.2	2.1	2.0	2.2	2.1	2.0
E(F+SEC*0.3)/(20VT+VD) :	2.3	2.4	2.3	2.3	2.4	2.4	2.3	2.5	2.4	2.2

PROJECT NAME : PILA
PROJECT ID : 3- 77- 0- 2-0-1
TYPE : RESERVOIR

BASIN NAME : AGNO
RIVER NAME : PILA

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.75	0.70	0.70	0.70	0.65	0.65	0.65	0.60	0.60	0.60
FULL SUPPLY LEVEL (M) :	193.0	182.6	186.9	193.0	180.3	185.3	193.0	177.5	183.7	193.0
MIN. OPERATING LEVEL(M) :	147.5	118.6	135.5	152.5	118.6	137.7	156.9	118.6	139.8	161.0
POWER										
FIRM DISCHARGE (M3/S) :	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.6	3.6	3.5
PLANT PEAK DIS. (M3/S) :	8.0	7.9	7.8	7.8	7.5	7.5	7.4	7.2	7.2	7.1
AVERAGE NET HEAD (M) :	88.8	72.5	80.9	90.4	71.0	80.6	91.9	69.2	80.2	93.3
INSTALLED CAPACITY (MW) :	5.8	4.7	5.2	5.8	4.4	5.0	5.6	4.1	4.7	5.4
GUARANTEED POWER (MW) :	3.7	1.8	2.9	3.9	1.8	2.9	4.0	1.7	2.9	4.0
AVERAGE FIRM POWER (MW) :	2.9	2.3	2.6	2.9	2.2	2.5	2.8	2.1	2.4	2.7
FIRM ENERGY (MIL KWH/Y) :	26.	21.	23.	25.	19.	22.	25.	18.	21.	24.
SECONDARY ENERGY (") :	6.	6.	6.	7.	6.	7.	7.	7.	7.	8.
ANNUAL AVERAGE E-GY (") :	32.	26.	29.	32.	26.	29.	32.	25.	28.	32.
D A M										
DAM HEIGHT (M) :	113.0	102.6	106.9	113.0	100.3	105.3	113.0	97.5	103.7	113.0
EMBANKMENT VOL.(MIL M3) :	17.353	13.864	15.291	17.353	13.181	14.741	17.353	12.355	14.192	17.353
EVALUATION INDICES										
CH/V :	756.	838.	790.	733.	827.	774.	702.	818.	755.	670.
C/V :	7.	9.	8.	7.	9.	8.	7.	9.	8.	6.
P/(20VT+VD) :	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
E(FIRM)/(20VT+VD) :	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.3
E(F+SEC*0.3)/(20VT+VD) :	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4

PROJECT NAME : SAN NICOLAS
PROJECT ID : 3- 77- 0- 3-0-1
TYPE : RESERVOIR

BASIN NAME : AGNO
RIVER NAME : AMBAYAOAN

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.65	0.55	0.55	0.55	0.50	0.50	0.50	0.45	0.45	0.45
FULL SUPPLY LEVEL (M) :	260.0	230.9	242.7	260.0	226.3	240.1	260.0	221.7	237.2	260.0
MIN. OPERATING LEVEL(M) :	205.2	155.0	185.5	216.1	154.8	188.0	221.1	154.7	190.2	225.7
POWER										
FIRM DISCHARGE (M3/S) :	10.9	10.3	10.2	10.2	9.8	9.8	9.7	9.4	9.3	9.3
PLANT PEAK DIS. (M3/S) :	21.8	20.5	20.4	20.3	19.6	19.5	19.4	18.8	18.6	18.5
AVERAGE NET HEAD (M) :	120.6	84.9	102.7	124.0	81.8	101.7	125.6	78.6	100.4	127.0
INSTALLED CAPACITY (MW) :	21.7	14.4	17.3	20.8	13.2	16.4	20.1	12.1	15.4	19.3
GUARANTEED POWER (MW) :	14.4	5.5	10.3	15.1	5.3	10.3	15.2	5.0	10.1	15.1
AVERAGE FIRM POWER (MW) :	10.8	7.2	8.6	10.4	6.6	8.2	10.0	6.1	7.7	9.7
FIRM ENERGY (MIL KWH/Y) :	95.	63.	76.	91.	58.	72.	88.	53.	68.	85.
SECONDARY ENERGY (") :	24.	22.	24.	28.	22.	25.	30.	23.	27.	32.
ANNUAL AVERAGE E-GY (") :	119.	84.	100.	119.	80.	97.	118.	76.	94.	117.
D A M										
DAM HEIGHT (M) :	150.0	120.9	132.7	150.0	116.3	130.1	150.0	111.7	127.2	150.0
EMBANKMENT VOL.(MIL M3) :	22.869	13.339	16.788	22.869	12.152	16.004	22.869	10.941	15.103	22.869
EVALUATION INDICES										
CH/V :	2091.	2677.	2338.	1945.	2694.	2293.	1856.	2729.	2259.	1766.
C/V :	15.	24.	19.	14.	25.	19.	13.	27.	19.	13.
P/(20VT+VD) :	0.9	1.0	0.9	0.8	1.0	0.9	0.8	1.0	0.9	0.8
E(FIRM)/(20VT+VD) :	3.9	4.2	4.1	3.7	4.2	4.0	3.6	4.2	4.0	3.4
E(F+SEC*0.3)/(20VT+VD) :	4.2	4.6	4.5	4.0	4.7	4.5	3.9	4.8	4.5	3.8

PROJECT NAME : TABU
PROJECT ID : 3- 77- 0- 4-0-1
TYPE : RESERVOIR

BASIN NAME : AGNO
RIVER NAME : AGNO

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6
RESERVOIR						
RESERVOIR DEVELOP. COEF :	0.06	0.01	0.01	0.01	0.01	0.01
FULL SUPPLY LEVEL (M) :	414.0	394.9	399.7	404.2	409.2	414.0
MIN. OPERATING LEVEL(M) :	385.1	387.5	392.9	398.2	403.6	408.9
POWER						
FIRM DISCHARGE (M3/S) :	12.5	7.8	7.8	7.8	7.7	7.7
PLANT PEAK DIS. (M3/S) :	75.1	46.8	46.6	46.5	46.4	46.3
AVERAGE NET HEAD (M) :	109.0	96.0	100.8	105.5	110.6	115.5
INSTALLED CAPACITY (MW) :	67.4	36.9	38.7	40.4	42.3	44.1
GUARANTEED POWER (MW) :	52.8	33.4	35.2	37.0	38.9	40.7
AVERAGE FIRM POWER (MW) :	11.2	6.2	6.5	6.7	7.0	7.3
FIRM ENERGY (MIL KWH/Y) :	98.	54.	57.	59.	62.	64.
SECONDARY ENERGY (") :	362.	179.	188.	195.	205.	213.
ANNUAL AVERAGE E-GY (") :	460.	233.	244.	254.	266.	277.
D A M						
DAM HEIGHT (M) :	108.0	88.9	93.7	98.2	103.2	108.0
EMBANKMENT VOL.(MIL M3) :	3.083	1.895	2.155	2.426	2.753	3.083
EVALUATION INDICES						
CH/V :	15184.	12764.	11727.	10837.	9972.	9257.
C/V :	128.	130.	114.	101.	89.	79.
P/(20VT+VD) :	9.7	7.2	7.1	7.1	7.0	6.9
E(FIRM)/(20VT+VD) :	14.2	10.4	10.4	10.4	10.3	10.1
E(F+SEC*0.3)/(20VT+VD) :	29.8	20.9	20.8	20.7	20.5	20.2

PROJECT NAME : AGNO-1
PROJECT ID : 3- 77- 0- 5-0-2
TYPE : RUN-OF-RIVER

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6
HEAD PONDAGE						
OUTPUT FACTOR	0.982	0.900	0.800	0.700	0.600	0.555
FULL SUPPLY LEVEL (M)	822.8	823.4	823.8	824.3	824.9	825.2
NORMAL OPERATING LEVEL(M)	822.4	822.9	823.4	823.8	824.4	824.8
MINIMUM OPERATING LEVEL (M)	821.9	822.5	822.9	823.4	824.0	824.3
DIVERSION WEIR HEIGHT INC. 3M F-B	5.8	6.4	6.8	7.3	7.9	8.2
WATER DEPTH AT TRASHRACK (M)	2.8	3.4	3.8	4.3	4.9	5.2
CHANNEL WIDTH AT TRASHRACK (M)	3.6	5.9	7.6	9.5	11.9	13.1
PONDAGE STORAGE VOLUME (1000 M3)	85.2	102.4	114.7	129.3	147.5	156.5
WATERWAY						
NUMBER OF WATERWAY	1	1	1	1	1	1
INSIDE DIAMETER OF HEADRACE (M)	1.8	1.8	2.2	2.7	3.2	3.4
HEADRACE TUNNEL LENGTH (M)	2300.0	2300.0	2300.0	2300.0	2300.0	2300.0
INSIDE DIAMETER OF PENSTOCK (M)	1.3	1.4	1.8	2.1	2.5	2.7
PENSTOCK LENGTH (HORIZONTAL) (M)	165.0	165.0	165.0	165.0	165.0	165.0
EXCAVATION VOLUME (1000 M3)	6.1	6.4	9.3	13.7	19.3	22.3
POWER						
FIRM DISCHARGE (M3/S)	1.0	1.0	1.0	1.0	1.0	1.0
DEPENDABLE DISCHARGE (M3/S)	1.6	1.6	1.6	1.6	1.6	1.6
PLANT PEAK DISCHARGE (M3/S)	1.6	4.4	7.2	11.3	17.8	21.6
TAIL WATER LEVEL (M)	770.0	770.0	770.0	770.0	770.0	770.0
NET HEAD (M)	51.0	48.0	48.5	49.4	50.1	50.4
INSTALLED CAPACITY (MW)	0.7	1.7	2.9	4.6	7.3	8.9
DEPENDABLE PEAK POWER (MW)	0.7	0.6	0.6	0.7	0.7	0.7
FIRM POWER (MW)	0.4	0.4	0.4	0.4	0.4	0.4
GUARANTEED POWER OUTPUT (MW)	0.4	0.3	0.3	0.4	0.4	0.4
FIRM ENERGY/YEAR (10**6 KWH)	3.6	3.4	3.4	3.5	3.5	3.5
SECONDARY ENERGY/YEAR (10**6 KWH)	2.2	9.4	15.1	22.4	31.8	36.4
ANNUAL ENERGY (MIL KWH/YR)	5.8	12.7	18.5	25.9	35.3	39.9
PARAMETERS						
P(INSTALLED)/(20VT) (W/M3)	5.7	13.4	15.3	16.7	19.0	20.0
P(DEPENDABLE)/(20VT) (W/M3)	5.6	5.0	3.5	2.4	1.7	1.5
E(FIRM)/(20VT) (KWH/M3)	29.3	26.1	18.2	12.6	9.1	7.9
E(F+0.3*SECONDARY)/(20VT) (")	34.7	47.8	42.5	37.1	33.8	32.3

PROJECT NAME : AGNO-2
PROJECT ID : 3- 77- 0- 6-0-2
TYPE : RUN-OF-RIVER

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6
HEAD PONDAGE						
OUTPUT FACTOR	0.982	0.900	0.800	0.700	0.600	0.555
FULL SUPPLY LEVEL (M)	1012.9	1013.4	1013.7	1014.1	1014.7	1014.9
NORMAL OPERATING LEVEL(M)	1012.3	1012.8	1013.2	1013.6	1014.1	1014.4
MINIMUM OPERATING LEVEL (M)	1011.8	1012.3	1012.7	1013.1	1013.6	1013.9
DIVERSION WEIR HEIGHT INC. 3M F-B	5.9	6.4	6.7	7.1	7.7	7.9
WATER DEPTH AT TRASHRACK (M)	2.9	3.4	3.7	4.1	4.7	4.9
CHANNEL WIDTH AT TRASHRACK (M)	3.2	5.2	6.6	8.3	10.4	11.5
PONDAGE STORAGE VOLUME (1000 M3)	57.2	67.2	74.4	82.9	93.5	98.7
WATERWAY						
NUMBER OF WATERWAY	1	1	1	1	1	1
INSIDE DIAMETER OF HEADRACE (M)	1.8	1.8	2.0	2.4	2.9	3.1
HEADRACE TUNNEL LENGTH (M)	7950.0	7950.0	7950.0	7950.0	7950.0	7950.0
INSIDE DIAMETER OF PENSTOCK (M)	1.3	1.3	1.5	1.8	2.2	2.3
PENSTOCK LENGTH (HORIZONTAL) (M)	385.0	385.0	385.0	385.0	385.0	385.0
EXCAVATION VOLUME (1000 M3)	20.8	20.8	25.8	38.0	53.5	61.9
POWER						
FIRM DISCHARGE (M3/S)	0.7	0.7	0.7	0.7	0.7	0.7
DEPENDABLE DISCHARGE (M3/S)	1.2	1.2	1.2	1.2	1.2	1.2
PLANT PEAK DISCHARGE (M3/S)	1.3	3.3	5.5	8.6	13.6	16.5
TAIL WATER LEVEL (M)	850.0	850.0	850.0	850.0	850.0	850.0
NET HEAD (M)	159.2	150.9	146.5	148.5	149.2	149.6
INSTALLED CAPACITY (MW)	1.6	4.1	6.6	10.5	16.7	20.3
DEPENDABLE PEAK POWER (MW)	1.6	1.5	1.5	1.5	1.5	1.5
FIRM POWER (MW)	1.0	0.9	0.9	0.9	0.9	0.9
GUARANTEED POWER OUTPUT (MW)	0.9	0.8	0.8	0.8	0.8	0.8
FIRM ENERGY/YEAR (10**6 KWH)	8.5	8.1	7.8	7.9	8.0	8.0
SECONDARY ENERGY/YEAR (10**6 KWH)	5.2	22.3	34.6	51.2	72.0	82.0
ANNUAL ENERGY (MIL KWH/YR)	13.7	30.4	42.5	59.1	80.0	90.0
PARAMETERS						
P(INSTALLED)/(20VT) (W/M3)	4.0	10.0	12.7	13.8	15.6	16.4
P(DEPENDABLE)/(20VT) (W/M3)	3.9	3.7	2.9	2.0	1.4	1.2
E(FIRM)/(20VT) (KWH/M3)	20.4	19.4	15.2	10.4	7.4	6.5
E(F+0.3*SECONDARY)/(20VT) (")	24.2	35.4	35.3	30.6	27.6	26.3

PROJECT NAME : AGNO-3
PROJECT ID : 3- 77- 0- 7-0-2
TYPE : RUN-OF-RIVER

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6
HEAD PONDAGE						
OUTPUT FACTOR	0.982	0.900	0.800	0.700	0.600	0.555
FULL SUPPLY LEVEL (M)	1214.1	1214.5	1214.9	1215.2	1215.7	1215.9
NORMAL OPERATING LEVEL(M)	1212.9	1213.3	1213.6	1214.0	1214.4	1214.7
MINIMUM OPERATING LEVEL (M)	1211.7	1212.1	1212.4	1212.8	1213.2	1213.4
DIVERSION WEIR HEIGHT INC. 3M F-B	7.1	7.5	7.9	8.2	8.7	8.9
WATER DEPTH AT TRASHRACK (M)	4.1	4.5	4.9	5.2	5.7	5.9
CHANNEL WIDTH AT TRASHRACK (M)	2.7	4.4	5.6	7.0	8.8	9.7
PONDAGE STORAGE VOLUME (1000 M3)	25.8	28.4	30.3	32.6	35.4	36.8
WATERWAY						
NUMBER OF WATERWAY	1	1	1	1	1	1
INSIDE DIAMETER OF HEADRACE (M)	1.8	1.8	1.8	2.1	2.5	2.7
HEADRACE TUNNEL LENGTH (M)	7250.0	7250.0	7250.0	7250.0	7250.0	7250.0
INSIDE DIAMETER OF PENSTOCK (M)	1.3	1.3	1.3	1.5	1.9	2.0
PENSTOCK LENGTH (HORIZONTAL) (M)	335.0	335.0	335.0	335.0	335.0	335.0
EXCAVATION VOLUME (1000 M3)	19.0	19.0	19.0	25.9	38.0	44.0
POWER						
FIRM DISCHARGE (M3/S)	0.5	0.5	0.5	0.5	0.5	0.5
DEPENDABLE DISCHARGE (M3/S)	0.9	0.9	0.9	0.9	0.9	0.9
PLANT PEAK DISCHARGE (M3/S)	0.9	2.4	3.9	6.2	9.8	11.8
TAIL WATER LEVEL (M)	1015.0	1015.0	1015.0	1015.0	1015.0	1015.0
NET HEAD (M)	195.2	191.5	183.6	183.0	184.9	185.2
INSTALLED CAPACITY (MW)	1.5	3.8	5.9	9.3	14.8	18.0
DEPENDABLE PEAK POWER (MW)	1.4	1.4	1.3	1.3	1.3	1.4
FIRM POWER (MW)	0.9	0.8	0.8	0.8	0.8	0.8
GUARANTEED POWER OUTPUT (MW)	0.8	0.7	0.7	0.7	0.7	0.7
FIRM ENERGY/YEAR (10**6 KWH)	7.5	7.3	7.0	7.0	7.1	7.1
SECONDARY ENERGY/YEAR (10**6 KWH)	4.6	20.4	31.3	45.4	64.3	73.1
ANNUAL ENERGY (MIL KWH/YR)	12.1	27.7	38.3	52.4	71.3	80.2
PARAMETERS						
P(INSTALLED)/(20VT) (W/M3)	3.8	9.9	15.6	18.0	19.5	20.5
P(DEPENDABLE)/(20VT) (W/M3)	3.7	3.7	3.5	2.6	1.8	1.5
E(FIRM)/(20VT) (KWH/M3)	19.7	19.3	18.5	13.6	9.3	8.1
E(F+0.3*SECONDARY)/(20VT) (")	23.3	35.4	43.2	39.9	34.7	33.0

PROJECT NAME : CAMILING-1
PROJECT ID : 3- 77- 1- 8-0-1
TYPE : RESERVOIR

BASIN NAME : AGNO
RIVER NAME : CAMILING

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.75	0.70	0.70	0.70	0.65	0.65	0.55	0.60	0.60	0.60
FULL SUPPLY LEVEL (M) :	210.0	199.3	203.7	210.0	196.5	202.2	210.0	193.7	200.7	210.0
MIN. OPERATING LEVEL(M) :	160.6	134.8	150.2	165.7	134.8	152.7	170.6	134.8	154.8	174.8
POWER										
FIRM DISCHARGE (M3/S) :	7.2	7.0	7.0	7.0	6.8	6.7	6.7	6.5	6.4	6.4
PLANT PEAK DIS. (M3/S) :	14.4	14.1	14.0	13.9	13.5	13.5	13.4	12.9	12.9	12.7
AVERAGE NET HEAD (M) :	83.8	68.4	76.4	85.6	66.8	76.4	87.4	65.2	76.3	89.0
INSTALLED CAPACITY (MW) :	9.9	7.9	8.8	9.8	7.4	8.5	9.6	6.9	8.1	9.3
GUARANTEED POWER (MW) :	5.7	2.8	4.5	6.1	2.7	4.6	6.4	2.6	4.6	6.5
AVERAGE FIRM POWER (MW) :	5.0	4.0	4.4	4.9	3.7	4.2	4.8	3.5	4.0	4.7
FIRM ENERGY (MIL KWH/Y) :	43.	35.	39.	43.	33.	37.	42.	30.	35.	41.
SECONDARY ENERGY (") :	11.	10.	11.	12.	11.	12.	13.	11.	12.	14.
ANNUAL AVERAGE E-GY (") :	54.	45.	49.	55.	43.	49.	55.	42.	48.	55.
D A M										
DAM HEIGHT (M) :	112.8	102.1	106.5	112.8	99.3	105.0	112.8	96.5	103.5	112.8
EMBANKMENT VOL.(MIL M3) :	22.342	17.396	19.272	22.342	16.214	18.661	22.342	15.050	17.987	22.342
EVALUATION INDICES										
CH/V :	1017.	1147.	1081.	987.	1149.	1057.	948.	1149.	1032.	905.
C/V :	10.	13.	11.	10.	13.	11.	9.	14.	11.	9.
P/(20VT+VD) :	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
E(FIRM)/(20VT+VD) :	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.7
E(F+SEC*0.3)/(20VT+VD) :	2.0	2.0	2.0	1.9	2.0	2.0	1.9	2.0	2.0	1.9

PROJECT NAME : CAMILING-2
PROJECT ID : 3- 77- 1- 9-0-1
TYPE : RESERVOIR

BASIN NAME : AGNO
RIVER NAME : CAMILING

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.75	0.70	0.70	0.70	0.65	0.65	0.65	0.60	0.60	0.60
FULL SUPPLY LEVEL (M) :	254.0	243.2	247.8	254.0	240.8	246.2	254.0	238.0	244.6	254.0
MIN. OPERATING LEVEL(M) :	208.6	185.6	199.3	213.0	185.6	201.3	217.1	185.6	203.3	221.0
POWER										
FIRM DISCHARGE (M3/S) :	5.6	5.5	5.5	5.5	5.3	5.3	5.2	5.1	5.0	5.0
PLANT PEAK DIS. (M3/S) :	11.3	11.0	11.0	10.9	10.6	10.6	10.5	10.1	10.1	10.0
AVERAGE NET HEAD (M) :	87.1	72.5	80.0	88.5	70.9	79.7	89.9	69.2	79.3	91.3
INSTALLED CAPACITY (MW) :	8.1	6.6	7.2	8.0	6.2	6.9	7.8	5.8	6.6	7.5
GUARANTEED POWER (MW) :	5.0	3.0	4.1	5.3	2.8	4.1	5.4	2.7	4.1	5.4
AVERAGE FIRM POWER (MW) :	4.0	3.3	3.6	4.0	3.1	3.5	3.9	2.9	3.3	3.8
FIRM ENERGY (MIL KWH/Y) :	35.	29.	32.	35.	27.	30.	34.	25.	29.	33.
SECONDARY ENERGY (") :	9.	8.	9.	9.	9.	9.	10.	9.	10.	11.
ANNUAL AVERAGE E-GY. (") :	44.	37.	40.	44.	36.	40.	44.	34.	39.	44.
D A M										
DAM HEIGHT (M) :	112.0	101.2	105.8	112.0	98.8	104.2	112.0	96.0	102.6	112.0
EMBANKMENT VOL.(MIL M3) :	7.046	5.417	6.095	7.046	5.097	5.852	7.046	4.739	5.614	7.046
EVALUATION INDICES										
CH/V :	2581.	2948.	2735.	2503.	2931.	2690.	2400.	2924.	2636.	2290.
C/V :	25.	32.	28.	24.	33.	28.	23.	34.	28.	22.
P/(20VT+VD) :	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9
E(FIRM)/(20VT+VD) :	4.4	4.6	4.5	4.4	4.5	4.5	4.3	4.5	4.4	4.1
E(F+SEC*0.3)/(20VT+VD) :	4.8	5.0	4.9	4.7	4.9	4.9	4.7	5.0	4.9	4.6

PROJECT NAME : PAMPANG
PROJECT ID : 3- 77- 4-10-0-2
TYPE : RUN-OF-RIVER

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6
HEAD PONDAGE						
OUTPUT FACTOR	0.982	0.900	0.800	0.700	0.600	0.555
FULL SUPPLY LEVEL (M)	362.5	362.9	363.2	363.5	363.9	364.1
NORMAL OPERATING LEVEL(M)	362.1	362.4	362.7	363.1	363.5	363.7
MINIMUM OPERATING LEVEL (M)	361.6	362.0	362.3	362.6	363.0	363.2
DIVERSION WEIR HEIGHT INC. 3M F-B	5.5	5.9	6.2	6.5	6.9	7.1
WATER DEPTH AT TRASHRACK (M)	2.5	2.9	3.2	3.5	3.9	4.1
CHANNEL WIDTH AT TRASHRACK (M)	2.5	4.0	5.2	6.5	8.2	9.0
PONDAGE STORAGE VOLUME (1000 M3)	37.4	43.2	47.5	52.4	58.7	61.7
WATERWAY						
NUMBER OF WATERWAY	1	1	1	1	1	1
INSIDE DIAMETER OF HEADRACE (M)	1.8	1.8	1.8	2.0	2.3	2.6
HEADRACE TUNNEL LENGTH (M)	5060.0	5060.0	5060.0	5060.0	5060.0	5060.0
INSIDE DIAMETER OF PENSTOCK (M)	1.3	1.3	1.3	1.5	1.8	1.9
PENSTOCK LENGTH (HORIZONTAL) (M)	215.0	215.0	215.0	215.0	215.0	215.0
EXCAVATION VOLUME (1000 M3)	13.2	13.2	13.2	16.0	22.6	27.2
POWER						
FIRM DISCHARGE (M3/S)	0.5	0.5	0.5	0.5	0.5	0.5
DEPENDABLE DISCHARGE (M3/S)	0.8	0.8	0.8	0.8	0.8	0.8
PLANT PEAK DISCHARGE (M3/S)	0.8	2.0	3.3	5.3	8.3	10.1
TAIL WATER LEVEL (M)	206.0	206.0	206.0	206.0	206.0	206.0
NET HEAD (M)	154.1	152.4	148.6	146.0	146.6	147.7
INSTALLED CAPACITY (MW)	1.0	2.6	4.1	6.3	10.0	12.3
DEPENDABLE PEAK POWER (MW)	1.0	0.9	0.9	0.9	0.9	0.9
FIRM POWER (MW)	0.6	0.6	0.6	0.5	0.5	0.6
GUARANTEED POWER OUTPUT (MW)	0.5	0.5	0.5	0.5	0.5	0.5
FIRM ENERGY/YEAR (10**6 KWH)	5.0	5.0	4.9	4.8	4.8	4.8
SECONDARY ENERGY/YEAR (10**6 KWH)	3.1	13.8	21.5	30.8	43.3	49.5
ANNUAL ENERGY (MIL KWH/YR)	8.1	18.8	26.4	35.6	48.1	54.4
PARAMETERS						
P(INSTALLED)/(20VT) (W/M3)	3.7	9.7	15.4	19.8	22.2	22.5
P(DEPENDABLE)/(20VT) (W/M3)	3.6	3.6	3.5	2.8	2.0	1.7
E(FIRM)/(20VT) (KWH/M3)	19.0	18.8	18.4	14.9	10.6	8.9
E(F+0.3*SECONDARY)/(20VT) (")	22.5	34.4	42.7	43.7	39.4	36.2

PROJECT NAME : KANAN
PROJECT ID : 4- 7- 0- 1-0-1
TYPE : RESERVOIR

BASIN NAME : AGOS
RIVER NAME : KANAN

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.98	0.85	0.85	0.85	0.75	0.75	0.75	0.65	0.65	0.65
FULL SUPPLY LEVEL (M) :	294.0	286.9	289.1	294.0	281.6	285.0	294.0	274.5	280.8	294.0
MIN. OPERATING LEVEL(M) :	161.0	158.1	185.5	212.9	158.0	194.5	231.0	157.8	201.1	244.5
POWER										
FIRM DISCHARGE (M3/S) :	53.7	52.7	52.6	52.5	51.6	51.5	51.3	50.0	49.8	49.5
PLANT PEAK DIS. (M3/S) :	161.1	158.2	157.8	157.4	154.9	154.4	153.8	150.1	149.5	148.4
AVERAGE NET HEAD (M) :	146.0	140.4	150.8	163.0	136.9	151.0	168.9	132.1	150.4	173.3
INSTALLED CAPACITY (MW) :	193.7	182.9	195.9	211.3	174.5	192.0	213.9	163.3	185.2	211.8
GUARANTEED POWER (MW) :	72.5	67.6	101.2	134.5	66.1	109.8	153.1	63.9	114.1	163.2
AVERAGE FIRM POWER (MW) :	64.6	60.9	65.3	70.4	58.2	64.0	71.3	54.4	61.7	70.6
FIRM ENERGY (MIL KWH/Y) :	565.	534.	572.	617.	510.	561.	624.	477.	541.	618.
SECONDARY ENERGY (") :	44.	51.	53.	55.	59.	61.	66.	70.	74.	83.
ANNUAL AVERAGE E-GY (") :	610.	585.	625.	672.	569.	622.	691.	546.	615.	701.
D A M										
DAM HEIGHT (M) :	200.0	192.9	195.1	200.0	187.6	191.0	200.0	180.5	186.8	200.0
EMBANKMENT VOL.(MIL M3) :	27.232	24.572	25.373	27.232	22.568	23.831	27.232	20.223	22.283	27.232
EVALUATION INDICES										
CH/V :	11837.	12409.	12117.	11549.	12850.	12343.	11273.	13344.	12484.	10875.
C/V :	62.	68.	65.	61.	72.	68.	59.	78.	71.	57.
P/(20VT+VD) :	6.2	6.5	6.7	6.8	6.6	7.0	6.9	6.8	7.1	6.8
E(FIRM)/(20VT+VD) :	18.2	18.9	19.6	19.9	19.4	20.3	20.2	19.9	20.8	20.0
E(F+SEC*0.3)/(20VT+VD) :	18.7	19.4	20.2	20.4	20.1	21.0	20.8	20.8	21.7	20.8

PROJECT NAME : DARAITAN
PROJECT ID : 4- 7- 0- 2-0-1
TYPE : RESERVOIR

BASIN NAME : AGOS
RIVER NAME : KALIWA

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.40	0.38	0.38	0.38	0.33	0.33	0.33	0.28	0.28	0.28
FULL SUPPLY LEVEL (M) :	234.0	228.2	230.7	234.0	224.3	228.5	234.0	220.4	225.8	234.0
MIN. OPERATING LEVEL(M) :	197.4	182.7	191.6	200.6	182.4	194.6	206.7	182.0	197.1	212.2
POWER										
FIRM DISCHARGE (M3/S) :	24.0	23.7	23.6	23.6	22.7	22.6	22.6	21.1	21.0	20.9
PLANT PEAK DIS. (M3/S) :	96.0	94.8	94.6	94.3	90.9	90.6	90.2	84.5	84.1	83.6
AVERAGE NET HEAD (M) :	77.5	68.8	73.5	78.5	66.2	72.9	80.6	63.5	72.0	82.3
INSTALLED CAPACITY (MW) :	61.2	53.7	57.2	61.0	49.6	54.4	59.8	44.1	49.8	56.6
GUARANTEED POWER (MW) :	40.0	28.6	35.1	41.6	27.3	35.7	44.1	25.0	34.8	44.4
AVERAGE FIRM POWER (MW) :	15.3	13.4	14.3	15.2	12.4	13.6	15.0	11.0	12.5	14.2
FIRM ENERGY (MIL KWH/Y) :	134.	118.	125.	134.	109.	119.	131.	97.	109.	124.
SECONDARY ENERGY (") :	42.	41.	43.	44.	43.	46.	49.	48.	52.	57.
ANNUAL AVERAGE E-GY (") :	177.	159.	168.	178.	152.	165.	180.	145.	161.	181.
D A M										
DAM HEIGHT (M) :	97.5	91.7	94.2	97.5	87.8	92.0	97.5	83.9	89.3	97.5
EMBANKMENT VOL.(MIL M3) :	2.747	2.351	2.525	2.747	2.090	2.370	2.747	1.869	2.190	2.747
EVALUATION INDICES										
CH/V :	24708.	26697.	25534.	24280.	27495.	25375.	23221.	27178.	24672.	21485.
C/V :	275.	318.	295.	271.	343.	301.	259.	356.	303.	240.
P/(20VT+VD) :	13.5	13.0	13.3	13.5	12.9	13.2	13.3	12.2	12.7	12.6
E(FIRM)/(20VT+VD) :	29.6	28.5	29.1	29.5	28.2	28.8	29.1	26.8	27.7	27.6
E(F+SEC*0.3)/(20VT+VD) :	32.5	31.5	32.1	32.5	31.6	32.2	32.4	30.8	31.7	31.5

PROJECT NAME : UPPER AGOS-1M
PROJECT ID : 4- 7- 0- 3-0-1
TYPE : RESERVOIR

BASIN NAME : AGOS
RIVER NAME : LENATIN

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.92	0.70	0.70	0.70	0.67	0.67	0.67	0.64	0.64	0.64
FULL SUPPLY LEVEL (M) :	252.0	245.2	248.0	252.0	244.2	247.4	252.0	243.2	246.7	252.0
MIN. OPERATING LEVEL(M) :	204.8	204.5	214.6	224.7	204.4	215.5	226.5	204.4	216.3	228.3
POWER										
FIRM DISCHARGE (M3/S) :	12.7	12.2	12.1	12.0	12.1	12.0	11.9	12.0	11.9	11.8
PLANT PEAK DIS. (M3/S) :	76.5	73.1	72.7	72.3	72.4	72.0	71.5	71.7	71.3	70.7
AVERAGE NET HEAD (M) :	68.7	64.1	69.2	75.2	63.4	69.1	75.7	62.7	68.9	76.3
INSTALLED CAPACITY (MW) :	43.2	38.5	41.4	44.7	37.8	40.9	44.6	37.0	40.4	44.4
GUARANTEED POWER (MW) :	22.3	21.2	26.7	32.2	20.9	27.0	32.9	20.7	27.2	33.6
AVERAGE FIRM POWER (MW):	7.2	6.4	6.9	7.5	6.3	6.8	7.4	6.2	6.7	7.4
FIRM ENERGY (MIL KWH/Y) :	63.	56.	60.	65.	55.	60.	65.	54.	59.	65.
SECONDARY ENERGY (") :	7.	9.	10.	11.	10.	11.	12.	10.	11.	12.
ANNUAL AVERAGE E-GY (") :	71.	66.	71.	76.	65.	70.	77.	64.	70.	77.
D A M										
DAM HEIGHT (M) :	77.7	70.9	73.7	77.7	69.9	73.1	77.7	68.9	72.4	77.7
EMBANKMENT VOL.(MIL M3) :	1.842	1.474	1.621	1.842	1.427	1.584	1.842	1.380	1.547	1.842
EVALUATION INDICES										
CH/V :	18426.	20233.	18944.	17372.	20441.	19036.	17184.	20668.	19135.	16994.
C/V :	216.	261.	236.	206.	267.	239.	204.	273.	242.	202.
P/(20VT+VD) :	13.6	13.8	14.1	14.2	13.8	14.2	14.2	13.8	14.2	14.2
E(FIRM)/(20VT+VD) :	19.8	20.2	20.6	20.7	20.2	20.7	20.7	20.2	20.8	20.7
E(F+SEC*0.3)/(20VT+VD) :	20.5	21.2	21.7	21.8	21.3	21.8	21.8	21.3	21.9	21.9

PROJECT NAME : UPPER AGOS-1S
PROJECT ID : 4- 7- 0- 4-0-1
TYPE : RESERVOIR

BASIN NAME : AGOS
RIVER NAME : LIMUTAN

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.22	0.20	0.20	0.20	0.17	0.17	0.17	0.14	0.14	0.14
FULL SUPPLY LEVEL (M) :	252.0	244.1	247.8	252.0	240.3	245.5	252.0	235.8	242.9	252.0
MIN. OPERATING LEVEL(M) :	220.3	207.1	215.6	224.2	206.7	218.4	230.0	206.4	220.5	234.5
POWER										
FIRM DISCHARGE (M3/S) :	8.2	7.9	7.8	7.8	7.3	7.3	7.2	6.7	6.7	6.6
PLANT PEAK DIS. (M3/S) :	49.3	47.1	47.0	46.9	43.7	43.6	43.4	40.2	40.0	39.8
AVERAGE NET HEAD (M) :	59.5	49.9	55.1	60.7	47.3	54.5	62.6	44.1	53.4	64.0
INSTALLED CAPACITY (MW) :	24.1	19.4	21.4	23.5	17.0	19.5	22.4	14.6	17.6	21.0
GUARANTEED POWER (MW) :	14.8	9.3	12.4	15.5	8.5	12.4	16.3	7.7	12.1	16.4
AVERAGE FIRM POWER (MW):	4.0	3.2	3.6	3.9	2.8	3.3	3.7	2.4	2.9	3.5
FIRM ENERGY (MIL KWH/Y) :	35.	28.	31.	34.	25.	29.	33.	21.	26.	31.
SECONDARY ENERGY (") :	25.	24.	25.	27.	24.	26.	29.	24.	27.	32.
ANNUAL AVERAGE E-GY (") :	60.	52.	56.	61.	49.	55.	62.	46.	53.	62.
D A M										
DAM HEIGHT (M) :	77.7	69.8	73.5	77.7	66.0	71.2	77.7	61.5	68.6	77.7
EMBANKMENT VOL.(MIL M3) :	1.576	1.225	1.380	1.576	1.077	1.280	1.576	0.917	1.178	1.576
EVALUATION INDICES										
CH/V :	11512.	12588.	11799.	10958.	12472.	11363.	10127.	12422.	10869.	9277.
C/V :	164.	202.	179.	157.	213.	179.	145.	231.	179.	133.
P/(20VT+VD) :	10.1	9.6	9.8	9.9	9.1	9.5	9.5	8.6	9.0	8.9
E(FIRM)/(20VT+VD) :	14.8	14.0	14.3	14.4	13.3	13.8	13.8	12.6	13.2	13.1
E(F+SEC*0.3)/(20VT+VD) :	18.0	17.5	17.8	17.8	17.3	17.7	17.6	16.9	17.4	17.1

PROJECT NAME : UPPER AGOS-2
PROJECT ID : 4- 7- 0- 5-0-1
TYPE : RESERVOIR

BASIN NAME : AGOS
RIVER NAME : KANAN

****
* SUMMARY TABLE OF OUTPUTS *
****

ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.98	0.85	0.85	0.85	0.75	0.75	0.75	0.65	0.65	0.65
FULL SUPPLY LEVEL (M) :	316.0	310.5	312.5	316.0	305.6	309.2	316.0	300.6	305.3	316.0
MIN. OPERATING LEVEL(M) :	205.7	205.0	227.9	250.7	204.9	236.1	267.3	204.7	241.6	278.6
POWER										
FIRM DISCHARGE (M3/S) :	44.1	43.3	43.2	42.9	42.4	42.2	41.8	41.1	40.9	40.3
PLANT PEAK DIS. (M3/S) :	132.4	130.0	129.5	128.8	127.3	126.6	125.5	123.3	122.6	121.0
AVERAGE NET HEAD (M) :	110.8	106.9	115.7	125.5	103.6	116.2	130.9	100.3	115.4	134.6
INSTALLED CAPACITY (MW) :	120.7	114.4	123.3	133.0	108.6	121.2	135.2	101.8	116.5	134.1
GUARANTEED POWER (MW) :	38.7	37.3	60.2	82.8	36.4	67.0	96.9	35.1	70.2	104.0
AVERAGE FIRM POWER (MW):	40.2	38.1	41.1	44.3	36.2	40.4	45.1	33.9	38.8	44.7
FIRM ENERGY (MIL KWH/Y) :	352.	334.	360.	388.	317.	354.	395.	297.	340.	392.
SECONDARY ENERGY (") :	28.	32.	34.	37.	37.	40.	44.	44.	47.	55.
ANNUAL AVERAGE E-GY (") :	380.	366.	394.	425.	354.	394.	439.	342.	388.	446.
D A M										
DAM HEIGHT (M) :	156.0	150.5	152.5	156.0	145.6	149.2	156.0	140.6	145.3	156.0
EMBANKMENT VOL.(MIL M3) :	10.708	9.797	10.119	10.708	9.022	9.601	10.708	8.295	8.967	10.708
EVALUATION INDICES										
CH/V :	19170.	19806.	19353.	18614.	20344.	19492.	18119.	20669.	19629.	17473.
C/V :	130.	139.	134.	126.	148.	139.	123.	156.	144.	119.
P/(20VT+VD) :	9.6	9.8	10.3	10.6	10.0	10.6	10.8	10.1	10.8	10.7
E(FIRM)/(20VT+VD) :	28.0	26.7	30.1	30.9	29.2	30.9	31.4	29.3	31.5	31.2
E(F+SEC*0.3)/(20VT+VD) :	28.7	29.5	30.9	31.8	30.2	31.9	32.5	30.7	32.8	32.5

PROJECT NAME : WAWA
PROJECT ID : 4-115- 1- 1-0-1
TYPE : RESERVOIR

BASIN NAME : PASIG
RIVER NAME : WAWA

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* SUMMARY TABLE OF OUTPUTS *
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ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.95	0.77	0.77	0.77	0.67	0.67	0.67	0.57	0.57	0.57
FULL SUPPLY LEVEL (M) :	151.0	143.0	146.2	151.0	138.1	143.1	151.0	132.5	139.8	151.0
MIN. OPERATING LEVEL(M) :	59.8	59.7	78.2	96.7	59.5	84.2	108.8	59.3	89.1	118.9
POWER										
FIRM DISCHARGE (M3/S) :	24.1	23.4	23.3	23.2	22.6	22.6	22.4	21.8	21.7	21.4
PLANT PEAK DIS. (M3/S) :	72.2	70.1	69.9	69.6	67.9	67.7	67.1	65.3	65.0	64.3
AVERAGE NET HEAD (M) :	94.1	86.8	96.9	106.2	85.5	96.9	110.1	81.7	96.3	113.4
INSTALLED CAPACITY (MW) :	55.9	51.2	55.8	60.8	47.8	54.0	60.9	43.9	51.6	60.0
GUARANTEED POWER (MW) :	18.9	18.2	28.3	38.2	17.6	30.5	43.2	16.8	31.8	46.3
AVERAGE FIRM POWER (MW) :	18.6	17.1	18.6	20.3	15.9	18.0	20.3	14.6	17.2	20.0
FIRM ENERGY (MIL KWH/Y) :	163.	150.	163.	178.	140.	158.	178.	128.	151.	175.
SECONDARY ENERGY (") :	14.	17.	18.	19.	20.	22.	24.	24.	26.	30.
ANNUAL AVERAGE E-GY (") :	177.	167.	181.	197.	160.	179.	202.	152.	176.	205.
D A M										
DAM HEIGHT (M) :	132.7	124.7	127.9	132.7	119.8	124.8	132.7	114.2	121.5	132.7
EMBANKMENT VOL.(MIL M3) :	6.206	5.315	5.654	6.206	4.802	5.325	6.206	4.250	4.973	6.206
EVALUATION INDICES										
CH/V :	15215.	16157.	15549.	14654.	16608.	15569.	14122.	17137.	15561.	13511.
C/V :	122.	139.	130.	118.	149.	134.	114.	162.	137.	109.
P/(20VT+VD) :	7.0	7.2	7.5	7.6	7.2	7.6	7.6	7.2	7.6	7.5
E(FIRM)/(20VT+VD) :	20.3	20.9	21.8	22.1	21.1	22.1	22.1	21.2	22.2	21.8
E(F+SEC*0.3)/(20VT+VD) :	20.8	21.7	22.5	22.8	22.0	23.0	23.0	22.3	23.3	23.0

PROJECT NAME : BOSIGON
PROJECT ID : 5- 14- 1- 1-0-1
TYPE : RESERVOIR

BASIN NAME : MATOGDON
RIVER NAME : BOSIGON

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* SUMMARY TABLE OF OUTPUTS *
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ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.38	0.35	0.35	0.35	0.30	0.30	0.30	0.25	0.25	0.25
FULL SUPPLY LEVEL (M) :	80.0	77.1	78.4	80.0	74.7	76.8	80.0	72.4	75.1	80.0
MIN. OPERATING LEVEL(M) :	56.8	51.7	56.2	60.6	51.5	57.9	64.3	51.2	59.6	68.1
POWER										
FIRM DISCHARGE (M3/S) :	19.0	18.6	18.5	18.3	17.7	17.5	17.3	16.5	16.3	16.0
PLANT PEAK DIS. (M3/S) :	114.1	111.6	110.8	110.1	106.0	105.0	103.8	99.2	97.8	96.1
AVERAGE NET HEAD (M) :	47.6	44.0	46.3	48.8	42.3	45.8	50.0	41.0	45.5	51.6
INSTALLED CAPACITY (MW) :	44.7	40.4	42.3	44.2	37.0	39.5	42.7	33.5	36.7	40.8
GUARANTEED POWER (MW) :	28.8	23.7	27.4	30.9	22.3	27.3	32.2	20.9	27.0	32.9
AVERAGE FIRM POWER (MW) :	7.4	6.7	7.0	7.4	6.2	6.6	7.1	5.6	6.1	6.8
FIRM ENERGY (MIL KWH/Y) :	65.	59.	62.	65.	54.	58.	62.	49.	54.	60.
SECONDARY ENERGY (") :	58.	56.	58.	60.	56.	59.	63.	57.	61.	68.
ANNUAL AVERAGE E-GY (") :	123.	115.	119.	124.	110.	117.	126.	106.	115.	127.
D A M										
DAM HEIGHT (M) :	63.0	60.1	61.4	63.0	57.7	59.8	63.0	55.4	58.1	63.0
EMBANKMENT VOL.(MIL M3) :	1.451	1.290	1.366	1.451	1.163	1.273	1.451	1.056	1.180	1.451
EVALUATION INDICES										
CH/V :	22853.	23833.	22930.	22039.	24012.	22553.	20753.	23754.	22077.	19334.
C/V :	413.	455.	426.	399.	479.	433.	376.	494.	435.	348.
P/(20VT+VD) :	18.2	17.7	17.9	18.1	17.3	17.6	17.7	16.8	17.4	17.2
E(FIRM)/(20VT+VD) :	26.5	25.8	26.2	26.4	25.3	25.8	25.8	24.6	25.4	25.1
E(F+SEC*0.3)/(20VT+VD) :	33.6	33.2	33.5	33.8	33.2	33.7	33.7	33.2	34.0	33.6

PROJECT NAME : PULANTUNA
PROJECT ID : 5- 20- 0- 1-0-1
TYPE : RESERVOIR

BASIN NAME : BICOL
RIVER NAME : PULANTUNA

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* SUMMARY TABLE OF OUTPUTS *
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ITEMS	CASE 1	2	3	4	5	6	7	8	9	10
RESERVOIR										
RESERVOIR DEVELOP. COEF :	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.05	0.05
FULL SUPPLY LEVEL (M) :	65.0	64.1	65.0	63.8	64.1	64.4	64.7	65.0	52.7	65.0
MIN. OPERATING LEVEL(M) :	45.5	45.5	48.6	45.4	46.5	47.5	48.6	49.7	43.2	61.9
POWER										
FIRM DISCHARGE (M3/S) :	7.7	7.5	7.5	7.5	7.5	7.4	7.4	7.4	1.1	0.9
PLANT PEAK DIS. (M3/S) :	30.7	30.1	30.0	29.8	29.8	29.8	29.8	29.8	4.6	3.8
AVERAGE NET HEAD (M) :	35.8	35.2	36.8	35.0	35.5	36.1	36.6	37.2	27.6	41.9
INSTALLED CAPACITY (MW) :	9.1	8.7	9.1	8.6	8.7	8.8	9.0	9.1	1.0	1.3
GUARANTEED POWER (MW) :	5.5	5.4	6.1	5.3	5.6	5.8	6.0	6.3	0.8	1.2
AVERAGE FIRM POWER (MW) :	2.3	2.2	2.3	2.1	2.2	2.2	2.2	2.3	0.3	0.3
FIRM ENERGY (MIL KWH/Y) :	20.	19.	20.	19.	19.	19.	20.	20.	2.	3.
SECONDARY ENERGY (") :	26.	26.	26.	26.	26.	26.	26.	27.	7.	9.
ANNUAL AVERAGE E-GY (") :	46.	45.	46.	45.	45.	46.	46.	47.	9.	11.
D A M										
DAM HEIGHT (M) :	50.2	49.3	50.2	49.0	49.3	49.6	49.9	50.2	37.9	50.2
EMBANKMENT VOL.(MIL M3) :	0.568	0.542	0.568	0.534	0.542	0.550	0.559	0.568	0.300	0.568
EVALUATION INDICES										
CH/V :	18048.	18120.	17617.	18107.	17974.	17802.	17635.	17473.	3704.	2261.
C/V :	427.	437.	417.	440.	434.	427.	420.	413.	121.	53.
P/(20VT+VD) :	8.1	8.0	8.1	7.9	8.0	8.1	8.1	8.2	1.3	1.2
E(FIRM)/(20VT+VD) :	17.7	17.5	17.8	17.4	17.5	17.6	17.7	17.9	2.9	2.7
E(F+SEC*0.3)/(20VT+VD) :	24.7	24.6	24.9	24.5	24.7	24.8	24.9	25.0	5.5	5.2

C - 4 PRELIMINARY COST ESTIMATE

PROJECT NAME : RIZAL
PROJECT ID : 1-002-00-01-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE (UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(19.9)	(14.1)	(16.4)	(19.3)	(12.6)	(15.1)	(18.5)	(10.6)	(13.3)	(16.9)
STORAGE DAM	114.47	80.29	90.16	114.47	69.79	82.17	114.47	59.07	73.97	114.47
SPILLWAY	13.96	12.27	12.79	13.96	11.66	12.38	13.96	10.96	11.90	13.96
DIVERSION TUNNEL	16.22	16.22	16.22	16.22	16.22	16.22	16.22	16.22	16.22	16.22
INTAKE (PRESSURE TYPE)	0.83	0.98	0.83	0.70	0.91	0.74	0.61	0.80	0.64	0.51
HEADRACE TUNNEL (PRESSURE)	1.66	1.60	1.59	1.58	1.53	1.53	1.51	1.43	1.42	1.40
SURGE TANK	0.43	0.41	0.41	0.40	0.39	0.38	0.38	0.35	0.35	0.34
PENSTOCK	1.15	0.89	1.01	1.15	0.84	0.98	1.14	0.79	0.92	1.09
(PRESSURE SHAFT)	(0.49)	(0.44)	(0.47)	(0.50)	(0.43)	(0.47)	(0.50)	(0.42)	(0.46)	(0.49)
(STEEL LINER)	(0.65)	(0.45)	(0.54)	(0.65)	(0.42)	(0.51)	(0.64)	(0.37)	(0.47)	(0.60)
POWERHOUSE BUILDING	0.96	0.75	0.83	0.92	0.68	0.77	0.88	0.59	0.68	0.80
(SUPER STRUCTURE)	(0.43)	(0.33)	(0.37)	(0.41)	(0.30)	(0.34)	(0.39)	(0.26)	(0.30)	(0.35)
(SUB STRUCTURE)	(0.54)	(0.42)	(0.46)	(0.51)	(0.38)	(0.43)	(0.49)	(0.33)	(0.38)	(0.44)
MISCELLANEOUS CIVIL WORK	7.48	5.67	6.19	7.47	5.10	5.76	7.46	4.61	5.30	7.44
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	5.42	4.52	4.82	5.18	4.18	4.54	4.94	3.71	4.09	4.52
ENGINEERING/ADMINISTRATION	20.32	15.45	16.86	20.26	13.91	15.68	20.20	12.30	14.44	20.09
CONTINGENCIES	36.58	27.81	30.34	36.46	25.04	28.23	36.35	22.15	25.98	36.17
S U B T O T A L	219.50	166.86	182.05	218.78	150.27	169.38	218.12	132.88	155.90	217.02
ACCESS ROAD (ROAD LENGTH 5.0 KM)										
CONSTRUCTION COST	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
ENGINEERING ADMINSITRATION	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
CONTINEGENCIES	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
S U B T O T A L	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43
TRANSMISSION LINE SYSTEM (T/L LENGTH 4.0 KM)										
TRANSMISSION LINE	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
CONTINGENCIES	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
S U B T O T A L	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
T O T A L	221.39	168.75	183.94	220.67	152.16	171.27	220.01	134.77	157.80	218.92
EVALUATION INDICES										
U S D / K W	11117.2	11973.5	11243.9	11437.2	12093.4	11306.7	11877.7	12676.1	11851.5	12922.7
U S D / K W H	2.424	2.558	2.415	2.462	2.546	2.398	2.526	2.598	2.456	2.687

PROJECT NAME : BAGULIN
PROJECT ID : 1-003-00-01-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD.)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(183.8)	(127.4)	(148.5)	(175.8)	(120.2)	(142.8)	(172.3)	(111.3)	(135.2)	(166.2)
STORAGE DAM	182.14	117.65	137.75	182.14	109.09	131.51	182.14	99.76	125.21	182.14
SPILLWAY	22.94	19.53	20.69	22.94	18.98	20.34	22.94	18.39	19.96	22.94
DIVERSION TUNNEL	28.43	28.43	28.43	28.43	28.43	28.43	28.43	28.43	28.43	28.43
INTAKE (PRESSURE TYPE)	4.30	4.68	4.13	3.69	4.49	3.91	3.46	4.24	3.65	3.20
HEADRACE TUNNEL (PRESSURE)	7.64	7.27	7.25	7.22	7.12	7.10	7.06	6.89	6.87	6.83
SURGE TANK	2.90	2.74	2.71	2.68	2.66	2.63	2.60	2.55	2.51	2.48
PENSTOCK	6.51	4.48	5.36	6.46	4.31	5.24	6.42	4.10	5.06	6.29
(PRESSURE SHAFT)	(1.44)	(1.24)	(1.35)	(1.46)	(1.23)	(1.35)	(1.46)	(1.22)	(1.34)	(1.46)
(STEEL LINER)	(5.06)	(3.24)	(4.01)	(5.00)	(3.08)	(3.89)	(4.96)	(2.88)	(3.72)	(4.83)
POWERHOUSE BUILDING	11.57	8.86	9.80	10.95	8.44	9.45	10.69	7.90	8.97	10.27
(SUPER STRUCTURE)	(5.14)	(3.94)	(4.35)	(4.87)	(3.75)	(4.20)	(4.75)	(3.51)	(3.99)	(4.56)
(SUB STRUCTURE)	(6.43)	(4.92)	(5.44)	(6.08)	(4.69)	(5.25)	(5.94)	(4.39)	(4.99)	(5.71)
MISCELLANEOUS CIVIL WORK	13.32	9.68	10.81	13.23	9.18	10.43	13.19	8.61	10.03	13.13
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	35.79	29.44	31.48	33.88	28.30	30.51	33.11	26.79	29.16	31.89
ENGINEERING/ADMINISTRATION	31.27	26.62	28.13	31.06	25.90	27.62	30.98	25.06	27.05	30.85
CONTINGENCIES	69.36	51.88	57.31	68.54	49.38	55.43	68.20	46.54	53.39	67.69
SUB TOTAL	416.16	311.25	343.84	411.21	296.26	332.60	409.21	279.25	320.31	406.14
ACCESS ROAD (ROAD LENGTH 10.0 KM)										
CONSTRUCTION COST	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20
ENGINEERING ADMINSITRATION	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
CONTINEGENCIES	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
SUB TOTAL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
TRANSMISSION LINE SYSTEM (T/L LENGTH 18.0 KM)										
TRANSMISSION LINE	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
SWITCHYARD AND SUBSTATION	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
ENGINEERING/ADMINISTRATION	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
CONTINGENCIES	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
SUB TOTAL	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83
TOTAL	422.84	317.93	350.51	417.89	302.94	339.28	415.89	285.93	326.99	412.82
EVALUATION INDICES										
USD / KW	2300.4	2495.7	2360.9	2376.5	2520.0	2376.0	2413.4	2568.2	2419.2	2484.5
USD / KWH	1.454	1.522	1.452	1.467	1.520	1.447	1.476	1.522	1.450	1.496

PROJECT NAME : NAGUILIAN
PROJECT ID : 1-003-00-02-0
TYPE : RUN-OF-RIVER

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1	CASE 2	CASE 3	CASE 4	CASE 5	CASE 6
POWER DEVELOPMENT (INST.CAP(MW))	(4.3)	(5.2)	(7.9)	(12.4)	(21.8)	(37.2)
DIVERSION DAM/WEIR	0.46	0.48	0.51	0.55	0.62	0.71
INTAKE (NON-PRESSURE TYPE)	0.11	0.13	0.17	0.23	0.33	0.47
HEADRACE TUNNEL (NON-PRES.)	5.76	5.76	5.76	6.37	8.55	11.73
HEAD TANK	0.10	0.11	0.14	0.19	0.27	0.37
PENSTOCK	2.68	2.80	3.13	3.76	5.20	7.40
(PRESSURE SHAFT)	(1.52)	(1.52)	(1.52)	(1.60)	(1.89)	(2.21)
(STEEL LINER)	(1.16)	(1.28)	(1.61)	(2.16)	(3.32)	(5.20)
POWERHOUSE BUILDING	0.15	0.19	0.29	0.64	1.38	2.70
(SUPER STRUCTURE)	(0.07)	(0.08)	(0.13)	(0.28)	(0.61)	(1.20)
(SUB STRUCTURE)	(0.08)	(0.10)	(0.16)	(0.36)	(0.77)	(1.50)
MISCELLANEOUS CIVIL WORK	0.46	0.47	0.50	0.59	0.82	1.17
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	0.90	1.09	1.60	2.42	4.01	6.47
ENGINEERING/ADMINISTRATION	1.33	1.38	1.51	1.84	2.65	3.88
CONTINGENCIES	2.39	2.48	2.72	3.32	4.76	6.98
S U B T O T A L	14.35	14.88	16.31	19.90	28.58	41.89
ACCESS ROAD (ROAD LENGTH 12.4 KM)						
CONSTRUCTION COST	2.73	2.73	2.73	2.73	2.73	2.73
ENGINEERING ADMINSITRATION	0.22	0.22	0.22	0.22	0.22	0.22
CONTINEGENCIES	0.59	0.59	0.59	0.59	0.59	0.59
S U B T O T A L	3.54	3.54	3.54	3.54	3.54	3.54
TRANSMISSION LINE SYSTEM (T/L LENGTH 17.4 KM)						
TRANSMISSION LINE	0.40	0.40	0.40	0.40	0.40	0.80
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.54
ENGINEERING/ADMINISTRATION	0.08	0.08	0.08	0.08	0.08	0.17
CONTINGENCIES	0.11	0.11	0.11	0.11	0.11	0.23
S U B T O T A L	0.87	0.87	0.87	0.87	0.87	1.73
T O T A L	18.76	19.28	20.71	24.30	32.99	47.16
EVALUATION INDICES						
U S D / K W	4387.9	3673.0	2612.6	1960.3	1510.5	1268.6
U S D / K W H	0.724	0.701	0.669	0.675	0.708	0.780

PROJECT NAME : LUYA
PROJECT ID : 1-010-00-01-0
TYPE : RESERVOIR

****
* SUMMARY TABLE OF COST ESTIMATE *
****

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(411.7)	(278.2)	(333.5)	(397.3)	(261.8)	(321.0)	(389.9)	(241.6)	(303.9)	(376.7)
STORAGE DAM	439.50	292.62	348.25	439.50	273.49	335.24	439.50	252.17	321.21	439.50
SPILLWAY	33.32	27.89	30.11	33.32	27.06	29.60	33.32	26.14	29.06	33.32
DIVERSION TUNNEL	34.06	34.06	34.06	34.06	34.06	34.06	34.06	34.06	34.06	34.06
INTAKE (PRESSURE TYPE)	8.18	8.67	7.79	6.98	8.32	7.40	6.50	7.87	6.92	6.07
HEADRACE TUNNEL (PRESSURE)	14.05	13.38	13.35	13.30	13.10	13.06	13.01	12.68	12.64	12.58
SURGE TANK	5.62	5.31	5.25	5.19	5.15	5.09	5.02	4.92	4.86	4.80
PENSTOCK	16.31	10.86	13.37	16.37	10.40	13.05	16.27	9.82	12.58	15.97
(PRESSURE SHAFT)	(2.84)	(2.46)	(2.68)	(2.88)	(2.44)	(2.68)	(2.89)	(2.42)	(2.66)	(2.88)
(STEEL LINER)	(13.47)	(8.39)	(10.69)	(13.48)	(7.96)	(10.38)	(13.38)	(7.41)	(9.92)	(13.08)
POWERHOUSE BUILDING	30.22	22.75	25.65	28.77	21.63	24.75	28.12	20.20	23.50	27.06
(SUPER STRUCTURE)	(13.43)	(10.11)	(11.40)	(12.79)	(9.61)	(11.00)	(12.50)	(8.98)	(10.45)	(12.03)
(SUB STRUCTURE)	(16.79)	(12.64)	(14.25)	(15.98)	(12.02)	(13.75)	(15.62)	(11.22)	(13.06)	(15.03)
MISCELLANEOUS CIVIL WORK	29.06	20.78	23.89	28.87	19.66	23.11	28.79	18.39	22.24	28.67
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	69.23	56.28	60.97	65.82	54.03	59.12	64.36	51.06	56.51	62.06
ENGINEERING/ADMINISTRATION	46.93	39.58	42.47	46.66	38.47	41.73	46.54	37.16	40.88	46.36
CONTINGENCIES	145.30	106.43	121.03	143.77	101.07	117.25	143.11	94.90	112.90	142.09
S U B T O T A L	871.78	638.60	726.19	862.60	606.43	703.47	858.68	569.38	677.38	852.54
ACCESS ROAD (ROAD LENGTH 0. KM)										
CONSTRUCTION COST	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
ENGINEERING ADMINSITRATION	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CONTINEGENCIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
S U B T O T A L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TRANSMISSION LINE SYSTEM (T/L LENGTH 45.0 KM)										
TRANSMISSION LINE	9.90	9.90	9.90	9.90	9.90	9.90	9.90	9.90	9.90	9.90
SWITCHYARD AND SUBSTATION	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
ENGINEERING/ADMINISTRATION	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36
CONTINGENCIES	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
S U B T O T A L	14.05	14.05	14.05	14.05	14.05	14.05	14.05	14.05	14.05	14.05
T O T A L	885.83	652.65	740.24	876.65	620.48	717.52	872.73	583.43	691.43	866.59
EVALUATION INDICES										
U S D / K W	2151.9	2346.2	2219.7	2206.6	2369.9	2235.3	2238.3	2414.6	2275.2	2308.3
U S D / K W H	1.360	1.429	1.364	1.363	1.426	1.360	1.370	1.427	1.363	1.367

PROJECT NAME : LUYA (ROR ALT.)
PROJECT ID : 1-010-00-01-1
TYPE : RUN-OF-RIVER

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6
POWER DEVELOPMENT (INST.CAP(MW))	(4.2)	(5.2)	(8.1)	(13.2)	(23.2)	(39.6)
DIVERSION DAM/WEIR	0.67	0.68	0.69	0.71	0.74	0.78
INTAKE (NON-PRESSURE TYPE)	0.21	0.24	0.32	0.44	0.66	0.96
HEADRACE TUNNEL (NON-PRES.)	4.57	5.06	6.24	8.49	11.86	16.28
HEAD TANK	0.18	0.20	0.26	0.35	0.49	0.68
PENSTOCK	0.58	0.63	0.76	0.97	1.35	1.91
(PRESSURE SHAFT)	(0.34)	(0.36)	(0.41)	(0.48)	(0.56)	(0.66)
(STEEL LINER)	(0.24)	(0.27)	(0.35)	(0.50)	(0.78)	(1.25)
POWERHOUSE BUILDING	0.21	0.26	0.40	0.93	1.99	3.92
(SUPER STRUCTURE)	(0.09)	(0.12)	(0.18)	(0.41)	(0.89)	(1.74)
(SUB STRUCTURE)	(0.12)	(0.14)	(0.22)	(0.52)	(1.11)	(2.18)
MISCELLANEOUS CIVIL WORK	0.32	0.35	0.43	0.59	0.85	1.23
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	1.40	1.69	2.51	3.89	6.43	10.38
ENGINEERING/ADMINISTRATION	1.02	1.14	1.45	2.05	3.05	4.52
CONTINGENCIES	1.83	2.05	2.61	3.68	5.48	8.13
S U B T O T A L	10.97	12.29	15.68	22.11	32.91	48.77
ACCESS ROAD (ROAD LENGTH 15.0 KM)						
CONSTRUCTION COST	3.30	3.30	3.30	3.30	3.30	3.30
ENGINEERING ADMINSITRATION	0.26	0.26	0.26	0.26	0.26	0.26
CONTINEGENCIES	0.71	0.71	0.71	0.71	0.71	0.71
S U B T O T A L	4.28	4.28	4.28	4.28	4.28	4.28
TRANSMISSION LINE SYSTEM (T/L LENGTH 35.0 KM)						
TRANSMISSION LINE	0.80	0.80	0.80	0.80	0.80	1.61
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.54
ENGINEERING/ADMINISTRATION	0.13	0.13	0.13	0.13	0.13	0.27
CONTINGENCIES	0.18	0.18	0.18	0.18	0.18	0.36
S U B T O T A L	1.39	1.39	1.39	1.39	1.39	2.78
T O T A L	16.64	17.96	21.35	27.78	38.58	55.83
EVALUATION INDICES						
U S D / K W	3961.3	3456.1	2646.8	2102.6	1663.0	1410.2
U S D / K W H	0.651	0.656	0.673	0.717	0.771	0.858

PROJECT NAME : BAKUM
PROJECT ID : 1-010-00-02-0
TYPE : RUN-OF-RIVER

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1	CASE 2	CASE 3	CASE 4	CASE 5	CASE 6
POWER DEVELOPMENT (INST.CAP(MW))	(3.8)	(4.7)	(7.2)	(11.5)	(19.9)	(33.9)
DIVERSION DAM/WEIR	0.37	0.38	0.40	0.42	0.47	0.53
INTAKE (NON-PRESSURE TYPE)	0.09	0.10	0.13	0.17	0.25	0.36
HEADRACE TUNNEL (NON-PRES.)	3.04	3.04	3.04	3.04	3.64	4.90
HEAD TANK	0.08	0.09	0.11	0.15	0.21	0.29
PENSTOCK	1.20	1.25	1.39	1.62	2.15	3.05
(PRESSURE SHAFT)	(0.69)	(0.69)	(0.69)	(0.69)	(0.76)	(0.89)
(STEEL LINER)	(0.51)	(0.56)	(0.70)	(0.93)	(1.39)	(2.15)
POWERHOUSE BUILDING	0.12	0.15	0.24	0.53	1.14	2.23
(SUPER STRUCTURE)	(0.05)	(0.07)	(0.10)	(0.24)	(0.50)	(0.99)
(SUB STRUCTURE)	(0.07)	(0.08)	(0.13)	(0.30)	(0.63)	(1.24)
MISCELLANEOUS CIVIL WORK	0.25	0.25	0.27	0.30	0.39	0.57
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	0.72	0.87	1.28	1.96	3.23	5.20
ENGINEERING/ADMINISTRATION	0.73	0.77	0.86	1.03	1.44	2.14
CONTINGENCIES	1.32	1.38	1.54	1.85	2.58	3.85
SUB TOTAL	7.91	8.27	9.25	11.08	15.50	23.11
ACCESS ROAD (ROAD LENGTH 7.0 KM)						
CONSTRUCTION COST	1.54	1.54	1.54	1.54	1.54	1.54
ENGINEERING ADMINSITRATION	0.12	0.12	0.12	0.12	0.12	0.12
CONTINEGENCIES	0.33	0.33	0.33	0.33	0.33	0.33
SUB TOTAL	2.00	2.00	2.00	2.00	2.00	2.00
TRANSMISSION LINE SYSTEM (T/L LENGTH 18.2 KM)						
TRANSMISSION LINE	0.42	0.42	0.42	0.42	0.42	0.84
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.54
ENGINEERING/ADMINISTRATION	0.09	0.09	0.09	0.09	0.09	0.17
CONTINGENCIES	0.12	0.12	0.12	0.12	0.12	0.23
SUB TOTAL	0.89	0.89	0.89	0.89	0.89	1.78
TOTAL	10.80	11.15	12.13	13.96	18.39	26.89
EVALUATION INDICES						
USD / KW	2855.8	2389.4	1685.7	1214.6	923.5	793.3
USD / KWH	0.471	0.456	0.432	0.418	0.433	0.488

PROJECT NAME : TIBUNEC
PROJECT ID : 1-010-01-03-0
TYPE : RESERVOIR

****
* SUMMARY TABLE OF COST ESTIMATE *
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(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(124.7)	(87.5)	(101.5)	(119.4)	(82.7)	(97.7)	(117.0)	(76.6)	(92.4)	(112.8)
STORAGE DAM	179.05	117.64	137.87	179.05	109.75	131.75	179.05	101.51	126.20	179.05
SPILLWAY	20.54	17.43	18.55	20.54	16.95	18.24	20.54	16.43	17.92	20.54
DIVERSION TUNNEL	15.32	15.32	15.32	15.32	15.32	15.32	15.32	15.32	15.32	15.32
INTAKE (PRESSURE TYPE)	3.24	3.45	3.07	2.78	3.31	2.91	2.61	3.13	2.72	2.42
HEADRACE TUNNEL (PRESSURE)	2.46	2.34	2.33	2.32	2.29	2.28	2.27	2.22	2.21	2.20
SURGE TANK	1.75	1.66	1.64	1.61	1.61	1.58	1.56	1.54	1.51	1.49
PENSTOCK	4.15	2.90	3.44	4.12	2.79	3.36	4.09	2.64	3.24	4.00
(PRESSURE SHAFT)	(0.79)	(0.69)	(0.75)	(0.80)	(0.69)	(0.75)	(0.80)	(0.68)	(0.74)	(0.80)
(STEEL LINER)	(3.36)	(2.21)	(2.69)	(3.32)	(2.10)	(2.61)	(3.29)	(1.96)	(2.50)	(3.20)
POWERHOUSE BUILDING	5.64	4.35	4.80	5.34	4.15	4.63	5.21	3.89	4.40	5.01
(SUPER STRUCTURE)	(2.51)	(1.94)	(2.13)	(2.37)	(1.84)	(2.06)	(2.32)	(1.73)	(1.95)	(2.23)
(SUB STRUCTURE)	(3.13)	(2.42)	(2.67)	(2.97)	(2.31)	(2.57)	(2.90)	(2.16)	(2.44)	(2.78)
MISCELLANEOUS CIVIL WORK	11.61	8.26	9.35	11.55	7.81	9.00	11.53	7.33	8.68	11.50
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	25.78	21.33	22.76	24.42	20.51	22.06	23.86	19.42	21.08	22.99
ENGINEERING/ADMINISTRATION	28.77	24.22	25.78	28.63	23.06	25.28	28.57	21.68	24.78	28.48
CONTINGENCIES	59.66	43.78	48.98	59.14	41.51	47.28	58.92	39.02	45.61	58.60
S U B T O T A L	357.95	262.69	293.90	354.81	249.07	283.71	353.54	234.13	273.66	351.59
ACCESS ROAD (ROAD LENGTH 0. KM)										
CONSTRUCTION COST	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
ENGINEERING ADMINSITRATION	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CONTINEGENCIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
S U B T O T A L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TRANSMISSION LINE SYSTEM (T/L LENGTH 27.0 KM)										
TRANSMISSION LINE	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
SWITCHYARD AND SUBSTATION	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
ENGINEERING/ADMINISTRATION	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
CONTINGENCIES	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
S U B T O T A L	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12
T O T A L	363.07	267.81	299.02	359.93	254.19	288.82	358.66	239.25	278.78	356.71
EVALUATION INDICES										
U S D / K W	2912.7	3059.3	2945.5	3015.5	3074.5	2957.5	3065.5	3122.2	3015.8	3162.2
U S D / K W H	1.840	1.868	1.812	1.861	1.856	1.801	1.874	1.853	1.808	1.904

PROJECT NAME : AMBURAYAN
PROJECT ID : 1-010-01-04-0
TYPE : RUN-OF-RIVER

*** SUMMARY TABLE OF COST ESTIMATE ***

(UNIT : MILLION USD)

ITEM	CASE 1	CASE 2	CASE 3	CASE 4	CASE 5	CASE 6
POWER DEVELOPMENT (INST.CAP(MW))	(6.6)	(8.0)	(12.5)	(20.4)	(35.8)	(61.1)
DIVERSION DAM/WEIR	0.59	0.61	0.66	0.72	0.83	0.97
INTAKE (NON-PRESSURE TYPE)	0.19	0.21	0.29	0.40	0.59	0.86
HEADRACE TUNNEL (NON-PRES.)	8.38	8.92	11.01	14.71	20.55	28.21
HEAD TANK	0.16	0.18	0.24	0.32	0.45	0.62
PENSTOCK	1.16	1.25	1.56	2.06	2.96	4.36
(PRESSURE SHAFT)	(0.60)	(0.62)	(0.70)	(0.81)	(0.96)	(1.12)
(STEEL LINER)	(0.56)	(0.63)	(0.85)	(1.24)	(2.00)	(3.24)
POWERHOUSE BUILDING	0.27	0.33	0.51	1.18	2.53	4.98
(SUPER STRUCTURE)	(0.12)	(0.15)	(0.23)	(0.53)	(1.13)	(2.21)
(SUB STRUCTURE)	(0.15)	(0.18)	(0.28)	(0.66)	(1.41)	(2.77)
MISCELLANEOUS CIVIL WORK	0.54	0.58	0.71	0.97	1.40	2.00
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	1.60	1.92	2.85	4.42	7.31	11.79
ENGINEERING/ADMINISTRATION	1.61	1.75	2.23	3.10	4.58	6.72
CONTINGENCIES	2.90	3.15	4.01	5.57	8.24	12.10
S U B T O T A L	17.39	18.92	24.06	33.45	49.44	72.61
ACCESS ROAD (ROAD LENGTH 15.4 KM)						
CONSTRUCTION COST	3.39	3.39	3.39	3.39	3.39	3.39
ENGINEERING ADMINSITRATION	0.27	0.27	0.27	0.27	0.27	0.27
CONTINEGENCIES	0.73	0.73	0.73	0.73	0.73	0.73
S U B T O T A L	4.39	4.39	4.39	4.39	4.39	4.39
TRANSMISSION LINE SYSTEM (T/L LENGTH 32.8 KM)						
TRANSMISSION LINE	0.75	0.75	0.75	0.75	1.51	2.23
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.54	0.62
ENGINEERING/ADMINISTRATION	0.13	0.13	0.13	0.13	0.26	0.36
CONTINGENCIES	0.17	0.17	0.17	0.17	0.35	0.48
S U B T O T A L	1.32	1.32	1.32	1.32	2.65	3.68
T O T A L	23.11	24.63	29.78	39.16	56.48	80.69
EVALUATION INDICES						
U S D / K W	3498.8	3065.8	2387.9	1917.4	1575.8	1320.4
U S D / K W H	0.577	0.584	0.611	0.659	0.737	0.811

PROJECT NAME : USO
PROJECT ID : 1-011-00-01-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(10.1)	(6.8)	(8.2)	(9.9)	(6.0)	(7.7)	(9.6)	(5.2)	(6.9)	(9.0)
STORAGE DAM	126.24	80.14	97.37	126.24	69.88	90.96	126.24	59.94	83.89	126.24
SPILLWAY	10.63	8.73	9.51	10.63	8.23	9.22	10.63	7.70	8.91	10.63
DIVERSION TUNNEL	14.61	14.61	14.61	14.61	14.61	14.61	14.61	14.61	14.61	14.61
INTAKE (PRESSURE TYPE)	0.55	0.64	0.57	0.51	0.59	0.51	0.45	0.52	0.45	0.39
HEADRACE TUNNEL (PRESSURE)	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
SURGE TANK	0.25	0.26	0.26	0.26	0.25	0.24	0.24	0.23	0.22	0.22
PENSTOCK	0.80	0.66	0.73	0.80	0.63	0.71	0.80	0.60	0.68	0.78
(PRESSURE SHAFT)	(0.43)	(0.39)	(0.41)	(0.43)	(0.38)	(0.41)	(0.43)	(0.37)	(0.40)	(0.42)
(STEEL LINER)	(0.38)	(0.27)	(0.32)	(0.38)	(0.25)	(0.31)	(0.37)	(0.23)	(0.29)	(0.36)
POWERHOUSE BUILDING	0.54	0.41	0.47	0.53	0.37	0.44	0.51	0.33	0.39	0.47
(SUPER STRUCTURE)	(0.24)	(0.18)	(0.21)	(0.23)	(0.17)	(0.19)	(0.23)	(0.14)	(0.18)	(0.21)
(SUB STRUCTURE)	(0.30)	(0.23)	(0.26)	(0.29)	(0.21)	(0.24)	(0.28)	(0.18)	(0.22)	(0.26)
MISCELLANEOUS CIVIL WORK	7.72	5.31	6.22	7.72	4.77	5.88	7.72	4.24	5.50	7.71
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	3.35	2.77	3.02	3.28	2.57	2.86	3.15	2.30	2.61	2.93
ENGINEERING/ADMINISTRATION	20.69	14.30	16.70	20.68	12.84	15.78	20.65	11.41	14.76	20.60
CONTINGENCIES	37.25	25.73	30.06	37.22	23.12	28.41	37.17	20.54	26.58	37.08
S U B T O T A L	223.50	154.41	180.34	223.33	138.71	170.48	223.02	123.27	159.46	222.50
ACCESS ROAD (ROAD LENGTH 0. KM)										
CONSTRUCTION COST	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
ENGINEERING ADMINSITRATION	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CONTINEGENCIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
S U B T O T A L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TRANSMISSION LINE SYSTEM (T/L LENGTH 40.0 KM)										
TRANSMISSION LINE	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
CONTINGENCIES	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
S U B T O T A L	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54
T O T A L	225.03	155.95	181.88	224.87	140.25	172.02	224.56	124.81	161.00	224.04
EVALUATION INDICES										
U S D / K W	22307.5	22999.3	22098.5	22616.5	23191.2	22352.7	23315.0	24186.8	23311.1	24991.8
U S D / K W H	4.792	4.870	4.706	4.830	4.846	4.706	4.925	4.935	4.807	5.173

PROJECT NAME : CHICO-R
PROJECT ID : 1-011-00-02-0
TYPE : RUN-OF-RIVER

SUMMARY TABLE OF COST ESTIMATE (UNIT : MILLION USD)

ITEM	CASE 1	CASE 2	CASE 3	CASE 4	CASE 5	CASE 6
POWER DEVELOPMENT (INST.CAP(MW))	(1.7)	(2.1)	(3.2)	(5.0)	(8.3)	(14.3)
DIVERSION DAM/WEIR	0.44	0.45	0.47	0.50	0.55	0.61
INTAKE (NON-PRESSURE TYPE)	0.09	0.10	0.12	0.17	0.24	0.34
HEADRACE TUNNEL (NON-PRES.)	7.05	7.05	7.05	7.05	8.12	10.81
HEAD TANK	0.07	0.08	0.11	0.14	0.20	0.28
PENSTOCK	1.51	1.55	1.64	1.78	2.15	2.83
(PRESSURE SHAFT)	(0.99)	(0.99)	(0.99)	(0.99)	(1.08)	(1.27)
(STEEL LINER)	(0.53)	(0.56)	(0.65)	(0.79)	(1.07)	(1.57)
POWERHOUSE BUILDING	0.07	0.09	0.13	0.30	0.62	1.22
(SUPER STRUCTURE)	(0.03)	(0.04)	(0.06)	(0.13)	(0.27)	(0.54)
(SUB STRUCTURE)	(0.04)	(0.05)	(0.07)	(0.17)	(0.34)	(0.68)
MISCELLANEOUS CIVIL WORK	0.46	0.47	0.48	0.50	0.59	0.80
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	0.48	0.58	0.86	1.30	2.10	3.39
ENGINEERING/ADMINISTRATION	1.27	1.30	1.36	1.47	1.82	2.54
CONTINGENCIES	2.29	2.33	2.44	2.64	3.28	4.57
S U B T O T A L	13.74	13.99	14.66	15.84	19.66	27.40
ACCESS ROAD (ROAD LENGTH 8.5 KM)						
CONSTRUCTION COST	1.87	1.87	1.87	1.87	1.87	1.87
ENGINEERING ADMINSITRATION	0.15	0.15	0.15	0.15	0.15	0.15
CONTINEGENCIES	0.40	0.40	0.40	0.40	0.40	0.40
S U B T O T A L	2.42	2.42	2.42	2.42	2.42	2.42
TRANSMISSION LINE SYSTEM (T/L LENGTH 37.0 KM)						
TRANSMISSION LINE	0.85	0.85	0.85	0.85	0.85	0.85
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.14	0.14	0.14	0.14	0.14	0.14
CONTINGENCIES	0.19	0.19	0.19	0.19	0.19	0.19
S U B T O T A L	1.45	1.45	1.45	1.45	1.45	1.45
T O T A L	17.62	17.86	18.53	19.72	23.54	31.27
EVALUATION INDICES						
U S D / K W	10341.3	8515.3	5787.6	3969.0	2839.9	2191.6
U S D / K W H	1.706	1.624	1.481	1.365	1.330	1.347

PROJECT NAME : BANAOANG
PROJECT ID : 1-022-00-01-0
TYPE : RESERVOIR

*** SUMMARY TABLE OF COST ESTIMATE ***

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(264.5)	(224.9)	(242.1)	(261.5)	(213.3)	(233.5)	(256.7)	(200.0)	(223.5)	(250.1)
STORAGE DAM	43.47	37.38	39.79	43.47	35.81	38.84	43.47	33.99	37.87	43.47
SPILLWAY	26.56	25.04	25.70	26.56	24.62	25.44	26.56	24.13	25.17	26.56
DIVERSION TUNNEL	82.70	82.70	82.70	82.70	82.70	82.70	82.70	82.70	82.70	82.70
INTAKE (PRESSURE TYPE)	11.59	11.93	11.50	11.11	11.51	11.01	10.57	11.01	10.46	9.97
HEADRACE TUNNEL (PRESSURE)	15.84	15.69	15.62	15.56	15.36	15.29	15.20	14.97	14.88	14.78
SURGE TANK	10.06	9.96	9.88	9.81	9.68	9.59	9.50	9.34	9.24	9.14
PENSTOCK	11.28	10.20	10.69	11.22	9.91	10.47	11.11	9.56	10.21	10.94
(PRESSURE SHAFT)	(3.95)	(3.83)	(3.89)	(3.95)	(3.80)	(3.87)	(3.94)	(3.76)	(3.84)	(3.92)
(STEEL LINER)	(7.33)	(6.37)	(6.80)	(7.27)	(6.11)	(6.60)	(7.17)	(5.80)	(6.37)	(7.02)
POWERHOUSE BUILDING	40.74	36.40	38.17	40.10	34.81	36.89	39.19	32.95	35.38	38.01
(SUPER STRUCTURE)	(18.11)	(16.18)	(16.96)	(17.82)	(15.47)	(16.39)	(17.42)	(14.64)	(15.72)	(16.89)
(SUB STRUCTURE)	(22.64)	(20.22)	(21.21)	(22.28)	(19.34)	(20.49)	(21.77)	(18.30)	(19.66)	(21.12)
MISCELLANEOUS CIVIL WORK	12.11	11.47	11.70	12.03	11.22	11.51	11.92	10.93	11.30	11.78
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	79.19	73.17	75.45	77.89	70.52	73.23	76.15	67.41	70.59	73.94
ENGINEERING/ADMINISTRATION	32.20	31.18	31.56	32.04	30.77	31.24	31.83	30.28	30.86	31.57
CONTINGENCIES	73.15	69.02	70.55	72.50	67.38	69.24	71.64	65.45	67.73	70.57
S U B T O T A L	438.89	414.14	423.32	434.98	404.28	415.43	429.85	392.72	406.39	423.43
ACCESS ROAD (ROAD LENGTH 0.5 KM)										
CONSTRUCTION COST	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
ENGINEERING ADMINSITRATION	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CONTINEGENCIES	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
S U B T O T A L	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
TRANSMISSION LINE SYSTEM (T/L LENGTH 24.0 KM)										
TRANSMISSION LINE	5.28	2.66	5.28	5.28	2.66	5.28	5.28	2.66	2.66	5.28
SWITCHYARD AND SUBSTATION	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
ENGINEERING/ADMINISTRATION	0.78	0.45	0.78	0.78	0.45	0.78	0.78	0.45	0.45	0.78
CONTINGENCIES	1.05	0.61	1.05	1.05	0.61	1.05	1.05	0.61	0.61	1.05
S U B T O T A L	8.07	4.69	8.07	8.07	4.69	8.07	8.07	4.69	4.69	8.07
T O T A L	447.11	418.97	431.53	443.19	409.12	423.65	438.06	397.55	411.22	431.65
EVALUATION INDICES										
U S D / K W	1690.5	1863.1	1782.4	1695.0	1917.9	1814.1	1706.3	1987.5	1839.6	1725.7
U S D / K W H	0.547	0.598	0.573	0.545	0.611	0.578	0.544	0.626	0.580	0.545

PROJECT NAME : LANGIDEN
PROJECT ID : 1-022-00-02-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(2.9)	(2.5)	(3.0)	(2.4)	(2.5)	(2.7)	(2.8)	(3.0)	(2.3)	(2.9)
STORAGE DAM	36.67	29.93	36.67	28.34	29.72	31.62	33.99	36.67	26.63	36.67
SPILLWAY	7.84	7.27	7.84	7.11	7.25	7.41	7.61	7.84	6.94	7.84
DIVERSION TUNNEL	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79
INTAKE (PRESSURE TYPE)	0.31	0.28	0.23	0.27	0.25	0.24	0.23	0.21	0.26	0.20
HEADRACE TUNNEL (PRESSURE)	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
SURGE TANK	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08
PENSTOCK	0.35	0.34	0.38	0.34	0.35	0.36	0.37	0.38	0.33	0.38
(PRESSURE SHAFT)	(0.23)	(0.22)	(0.24)	(0.22)	(0.23)	(0.23)	(0.24)	(0.24)	(0.22)	(0.24)
(STEEL LINER)	(0.13)	(0.12)	(0.14)	(0.12)	(0.12)	(0.13)	(0.13)	(0.14)	(0.11)	(0.14)
POWERHOUSE BUILDING	0.17	0.15	0.17	0.14	0.15	0.15	0.16	0.17	0.14	0.15
(SUPER STRUCTURE)	(0.08)	(0.07)	(0.08)	(0.06)	(0.07)	(0.07)	(0.07)	(0.07)	(0.06)	(0.07)
(SUB STRUCTURE)	(0.09)	(0.08)	(0.09)	(0.08)	(0.08)	(0.09)	(0.09)	(0.09)	(0.08)	(0.09)
MISCELLANEOUS CIVIL WORK	2.59	2.23	2.59	2.14	2.21	2.32	2.44	2.59	2.04	2.59
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	1.23	1.12	1.21	1.08	1.11	1.13	1.16	1.19	1.04	1.16
ENGINEERING/ADMINISTRATION	6.97	5.98	6.95	5.74	5.95	6.22	6.56	6.95	5.49	6.94
CONTINGENCIES	12.54	10.77	12.52	10.34	10.70	11.20	11.81	12.51	9.88	12.49
S U B T O T A L	75.23	64.61	75.11	62.04	64.22	67.18	70.88	75.04	59.28	74.96
ACCESS ROAD (ROAD LENGTH 12.5 KM)										
CONSTRUCTION COST	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75
ENGINEERING ADMINSITRATION	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
CONTINEGENCIES	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
S U B T O T A L	3.56	3.56	3.56	3.56	3.56	3.56	3.56	3.56	3.56	3.56
TRANSMISSION LINE SYSTEM (T/L LENGTH 21.0 KM)										
TRANSMISSION LINE	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
CONTINGENCIES	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
S U B T O T A L	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
T O T A L	79.77	69.14	79.65	66.58	68.76	71.72	75.41	79.58	63.82	79.50
EVALUATION INDICES										
U S D / K W	27468.9	27481.3	26360.7	27837.3	27215.6	26866.2	26710.5	26661.1	28326.1	27303.8
U S D / K W H	6.066	5.981	5.750	6.019	5.892	5.821	5.791	5.782	6.075	5.878

PROJECT NAME : BANDI
PROJECT ID : 1-022-00-03-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1 (3.1)	2 (2.5)	3 (2.8)	4 (3.1)	5 (2.4)	6 (2.7)	7 (3.1)	8 (2.2)	9 (2.6)	10 (3.0)
POWER DEVELOPMENT (INST.CAP(MW))										
STORAGE DAM	109.35	88.82	97.07	109.35	84.41	94.44	109.35	79.98	91.97	109.35
SPILLWAY	7.22	6.50	6.80	7.22	6.33	6.71	7.22	6.17	6.62	7.22
DIVERSION TUNNEL	7.61	7.61	7.61	7.61	7.61	7.61	7.61	7.61	7.61	7.61
INTAKE (PRESSURE TYPE)	0.27	0.29	0.26	0.24	0.27	0.25	0.22	0.26	0.23	0.21
HEADRACE TUNNEL (PRESSURE)	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
SURGE TANK	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11
PENSTOCK	0.36	0.33	0.35	0.37	0.33	0.35	0.37	0.32	0.34	0.36
(PRESSURE SHAFT)	(0.23)	(0.22)	(0.23)	(0.23)	(0.22)	(0.23)	(0.23)	(0.22)	(0.22)	(0.23)
(STEEL LINER)	(0.13)	(0.11)	(0.12)	(0.13)	(0.11)	(0.12)	(0.13)	(0.11)	(0.12)	(0.13)
POWERHOUSE BUILDING	0.19	0.16	0.17	0.18	0.15	0.17	0.18	0.14	0.16	0.17
(SUPER STRUCTURE)	(0.08)	(0.07)	(0.08)	(0.08)	(0.07)	(0.07)	(0.08)	(0.06)	(0.07)	(0.08)
(SUB STRUCTURE)	(0.10)	(0.09)	(0.10)	(0.10)	(0.08)	(0.09)	(0.10)	(0.08)	(0.09)	(0.10)
MISCELLANEOUS CIVIL WORK	6.30	5.24	5.67	6.30	5.01	5.53	6.30	4.78	5.40	6.30
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	1.37	1.22	1.28	1.34	1.18	1.24	1.31	1.13	1.20	1.27
ENGINEERING/ADMINISTRATION	16.72	13.91	15.04	16.71	13.30	14.67	16.71	12.68	14.33	16.70
CONTINGENCIES	30.10	25.03	27.07	30.08	23.94	26.41	30.07	22.83	25.79	30.06
S U B T O T A L	180.60	150.20	162.41	180.51	143.62	158.46	180.44	136.99	154.73	180.35
ACCESS ROAD (ROAD LENGTH 0.5 KM)										
CONSTRUCTION COST	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
ENGINEERING ADMINSITRATION	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CONTINEGENCIES	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
S U B T O T A L	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
TRANSMISSION LINE SYSTEM (T/L LENGTH 35.0 KM)										
TRANSMISSION LINE	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
CONTINGENCIES	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
S U B T O T A L	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39
T O T A L	182.13	151.73	163.95	182.04	145.16	159.99	181.97	138.52	156.26	181.88
EVALUATION INDICES										
U S D / K W	57849.3	60616.7	58842.0	58582.9	61281.1	59475.9	59609.0	62286.2	60640.3	61151.4
U S D / K W H	12.696	13.179	12.814	12.765	13.239	12.874	12.912	13.346	13.027	13.146

PROJECT NAME : ALIP
PROJECT ID : 1-022-00-04-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE

(UNIT ; MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(16.0)	(14.6)	(16.9)	(14.2)	(14.8)	(15.5)	(16.2)	(17.0)	(13.9)	(17.0)
STORAGE DAM	77.23	68.05	77.23	64.71	66.90	69.78	73.43	77.23	63.21	77.23
SPILLWAY	15.16	14.38	15.16	14.10	14.28	14.52	14.83	15.16	13.96	15.16
DIVERSION TUNNEL	20.33	20.33	20.33	20.33	20.33	20.33	20.33	20.33	20.33	20.33
INTAKE (PRESSURE TYPE)	1.02	0.96	0.84	0.94	0.90	0.86	0.82	0.79	0.92	0.76
HEADRACE TUNNEL (PRESSURE)	0.80	0.78	0.78	0.77	0.77	0.77	0.77	0.77	0.77	0.76
SURGE TANK	0.37	0.35	0.35	0.35	0.35	0.34	0.34	0.34	0.34	0.34
PENSTOCK	0.77	0.74	0.85	0.73	0.76	0.79	0.83	0.86	0.73	0.87
(PRESSURE SHAFT)	(0.36)	(0.36)	(0.39)	(0.36)	(0.37)	(0.38)	(0.39)	(0.39)	(0.36)	(0.40)
(STEEL LINER)	(0.41)	(0.38)	(0.46)	(0.37)	(0.40)	(0.42)	(0.44)	(0.47)	(0.37)	(0.47)
POWERHOUSE BUILDING	0.82	0.77	0.85	0.75	0.77	0.79	0.82	0.84	0.74	0.84
(SUPER STRUCTURE)	(0.37)	(0.34)	(0.38)	(0.33)	(0.34)	(0.35)	(0.36)	(0.38)	(0.33)	(0.37)
(SUB STRUCTURE)	(0.46)	(0.43)	(0.47)	(0.42)	(0.43)	(0.44)	(0.46)	(0.47)	(0.41)	(0.47)
MISCELLANEOUS CIVIL WORK	5.83	5.32	5.82	5.13	5.25	5.41	5.61	5.82	5.05	5.81
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	4.85	4.60	4.89	4.50	4.59	4.68	4.78	4.87	4.44	4.84
ENGINEERING/ADMINISTRATION	15.90	14.54	15.89	14.04	14.36	14.79	15.32	15.88	13.81	15.87
CONTINGENCIES	28.62	26.16	28.60	25.27	25.85	26.62	27.58	28.58	24.86	28.56
S U B T O T A L	171.69	156.99	171.57	151.63	155.13	159.70	165.48	171.48	149.15	171.38
ACCESS ROAD (ROAD LENGTH 8.0 KM)										
CONSTRUCTION COST	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
ENGINEERING ADMINSITRATION	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
CONTINEGENCIES	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
S U B T O T A L	2.28	2.28	2.28	2.28	2.28	2.28	2.28	2.28	2.28	2.28
TRANSMISSION LINE SYSTEM (T/L LENGTH 10.0 KM)										
TRANSMISSION LINE	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
CONTINGENCIES	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
S U B T O T A L	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
T O T A L	174.62	159.92	174.50	154.56	158.05	162.62	168.41	174.40	152.07	174.31
EVALUATION INDICES										
U S D / K W	10938.8	10924.6	10320.1	10914.7	10681.2	10500.8	10370.2	10257.4	10971.0	10280.2
U S D / K W H	2.430	2.410	2.281	2.401	2.351	2.313	2.285	2.261	2.407	2.262

PROJECT NAME : SUPO
PROJECT ID : 1-022-00-05-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(142.3)	(132.1)	(134.5)	(136.9)	(139.5)	(142.1)	(119.5)	(123.4)	(132.1)	(137.0)
STORAGE DAM	55.55	51.56	52.43	53.36	54.46	55.55	47.29	48.62	52.76	55.55
SPILLWAY	23.16	22.53	22.66	22.81	22.98	23.16	21.81	22.05	22.72	23.16
DIVERSION TUNNEL	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
INTAKE (PRESSURE TYPE)	5.31	4.92	4.83	4.75	4.66	4.58	4.54	4.39	4.11	3.97
HEADRACE TUNNEL (PRESSURE)	5.38	5.18	5.17	5.17	5.16	5.16	4.94	4.93	4.91	4.90
SURGE TANK	3.41	3.23	3.22	3.22	3.21	3.20	3.03	3.01	2.98	2.97
PENSTOCK	5.41	5.16	5.25	5.35	5.44	5.54	4.82	4.97	5.29	5.47
(PRESSURE SHAFT)	(1.48)	(1.46)	(1.47)	(1.48)	(1.49)	(1.50)	(1.43)	(1.45)	(1.49)	(1.51)
(STEEL LINER)	(3.94)	(3.70)	(3.78)	(3.86)	(3.95)	(4.04)	(3.39)	(3.52)	(3.81)	(3.97)
POWERHOUSE BUILDING	10.79	10.08	10.20	10.32	10.44	10.56	9.22	9.41	9.83	10.07
(SUPER STRUCTURE)	(4.79)	(4.48)	(4.53)	(4.58)	(4.64)	(4.70)	(4.10)	(4.18)	(4.37)	(4.47)
(SUB STRUCTURE)	(5.99)	(5.60)	(5.66)	(5.73)	(5.80)	(5.87)	(5.12)	(5.23)	(5.46)	(5.59)
MISCELLANEOUS CIVIL WORK	6.95	6.63	6.69	6.75	6.82	6.89	6.28	6.37	6.63	6.80
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	36.53	34.47	34.73	34.99	35.27	35.54	31.98	32.41	33.34	33.85
ENGINEERING/ADMINISTRATION	22.81	21.72	21.90	22.09	22.31	22.52	20.49	20.77	21.57	22.09
CONTINGENCIES	41.06	39.10	39.42	39.76	40.15	40.54	36.88	37.39	38.83	39.77
S U B T O T A L	246.38	234.57	236.51	238.56	240.91	243.24	221.28	224.33	232.99	238.61
ACCESS ROAD (ROAD LENGTH 3.1 KM)										
CONSTRUCTION COST	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68
ENGINEERING ADMINSITRATION	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
CONTINEGENCIES	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
S U B T O T A L	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
TRANSMISSION LINE SYSTEM (T/L LENGTH 31.7 KM)										
TRANSMISSION LINE	3.52	3.52	3.52	3.52	3.52	3.52	3.52	3.52	3.52	3.52
SWITCHYARD AND SUBSTATION	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
ENGINEERING/ADMINISTRATION	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56
CONTINGENCIES	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
S U B T O T A L	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79
T O T A L	253.06	241.25	243.19	245.24	247.59	249.92	227.96	231.00	239.67	245.29
EVALUATION INDICES										
U S D / K W	1778.0	1826.8	1808.5	1791.0	1774.6	1758.7	1908.1	1872.2	1814.0	1790.5
U S D / K W H	0.734	0.741	0.734	0.727	0.721	0.715	0.756	0.743	0.722	0.714

PROJECT NAME : ETEB
PROJECT ID : 1-022-00-06-0
TYPE : RESERVOIR

* SUMMARY TABLE OF COST ESTIMATE *

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(108.7)	(80.6)	(93.4)	(107.1)	(74.8)	(89.1)	(104.7)	(69.0)	(84.9)	(102.2)
STORAGE DAM	58.77	39.30	47.69	58.77	36.01	45.73	58.77	32.81	43.70	58.77
SPILLWAY	18.74	16.04	17.29	18.74	15.51	17.01	18.74	14.96	16.71	18.74
DIVERSION TUNNEL	33.28	33.28	33.28	33.28	33.28	33.28	33.28	33.28	33.28	33.28
INTAKE (PRESSURE TYPE)	4.40	4.45	4.30	4.18	4.23	4.07	3.94	4.00	3.83	3.70
HEADRACE TUNNEL (PRESSURE)	4.54	4.45	4.45	4.44	4.34	4.33	4.32	4.22	4.21	4.21
SURGE TANK	2.96	2.89	2.88	2.87	2.79	2.78	2.76	2.69	2.67	2.66
PENSTOCK	4.96	4.10	4.50	4.93	3.94	4.38	4.87	3.77	4.26	4.81
(PRESSURE SHAFT)	(1.55)	(1.48)	(1.52)	(1.55)	(1.47)	(1.51)	(1.55)	(1.45)	(1.50)	(1.54)
(STEEL LINER)	(3.41)	(2.62)	(2.98)	(3.38)	(2.47)	(2.87)	(3.33)	(2.32)	(2.76)	(3.27)
POWERHOUSE BUILDING	8.65	7.03	7.75	8.48	6.61	7.42	8.25	6.18	7.09	8.01
(SUPER STRUCTURE)	(3.85)	(3.12)	(3.44)	(3.77)	(2.94)	(3.30)	(3.67)	(2.75)	(3.15)	(3.56)
(SUB STRUCTURE)	(4.81)	(3.91)	(4.30)	(4.71)	(3.67)	(4.12)	(4.58)	(3.43)	(3.94)	(4.45)
MISCELLANEOUS CIVIL WORK	6.82	5.58	6.11	6.78	5.34	5.95	6.75	5.10	5.79	6.71
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	30.63	26.46	28.24	30.02	25.17	27.20	29.22	23.86	26.16	28.40
ENGINEERING/ADMINISTRATION	21.72	17.95	19.56	21.56	17.15	19.02	21.36	16.36	18.47	21.16
CONTINGENCIES	39.09	32.31	35.21	38.81	30.87	34.23	38.45	29.45	33.24	38.09
S U B T O T A L	234.57	193.85	211.27	232.88	185.24	205.40	230.73	176.68	199.43	228.53
ACCESS ROAD (ROAD LENGTH 0.2 KM)										
CONSTRUCTION COST	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
ENGINEERING ADMINSITRATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONTINEGENCIES	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
S U B T O T A L	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
TRANSMISSION LINE SYSTEM (T/L LENGTH 36.5 KM)										
TRANSMISSION LINE	4.05	4.05	4.05	4.05	4.05	4.05	4.05	2.48	4.05	4.05
SWITCHYARD AND SUBSTATION	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.62	0.96	0.96
ENGINEERING/ADMINISTRATION	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.39	0.63	0.63
CONTINGENCIES	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.52	0.85	0.85
S U B T O T A L	6.48	6.48	6.48	6.48	6.48	6.48	6.48	4.01	6.48	6.48
T O T A L	241.12	200.40	217.82	239.43	191.79	211.95	237.28	180.76	205.98	235.09
EVALUATION INDICES										
U S D / K W	2218.9	2484.9	2333.1	2235.6	2563.5	2377.8	2266.5	2618.7	2425.1	2301.0
U S D / K W H	0.947	1.046	0.985	0.946	1.066	0.993	0.949	1.075	1.001	0.953

PROJECT NAME : BUCNIT
PROJECT ID : 1-022-00-07-0
TYPE : RESERVOIR

*** SUMMARY TABLE OF COST ESTIMATE ***

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(142.8)	(130.4)	(150.8)	(125.4)	(149.6)	(120.1)	(126.4)	(132.8)	(139.8)	(148.1)
STORAGE DAM	143.46	125.18	143.46	120.08	143.46	113.90	118.96	124.33	131.74	143.46
SPILLWAY	20.42	19.39	20.42	19.07	20.42	18.69	19.00	19.33	19.77	20.42
DIVERSION TUNNEL	25.63	25.63	25.63	25.63	25.63	25.63	25.63	25.63	25.63	25.63
INTAKE (PRESSURE TYPE)	5.60	5.26	4.62	5.11	4.39	4.96	4.75	4.54	4.33	4.15
HEADRACE TUNNEL (PRESSURE)	5.99	5.82	5.79	5.73	5.69	5.64	5.63	5.61	5.60	5.59
SURGE TANK	3.36	3.23	3.17	3.16	3.09	3.09	3.07	3.05	3.03	3.01
PENSTOCK	4.02	3.80	4.49	3.70	4.52	3.60	3.81	4.03	4.26	4.53
(PRESSURE SHAFT)	(1.09)	(1.08)	(1.17)	(1.07)	(1.18)	(1.06)	(1.09)	(1.13)	(1.16)	(1.19)
(STEEL LINER)	(2.94)	(2.72)	(3.32)	(2.63)	(3.34)	(2.53)	(2.71)	(2.90)	(3.11)	(3.34)
POWERHOUSE BUILDING	10.60	9.85	10.82	9.53	10.68	9.18	9.50	9.80	10.14	10.52
(SUPER STRUCTURE)	(4.71)	(4.38)	(4.81)	(4.23)	(4.74)	(4.08)	(4.22)	(4.36)	(4.50)	(4.67)
(SUB STRUCTURE)	(5.89)	(5.47)	(6.01)	(5.29)	(5.93)	(5.10)	(5.28)	(5.45)	(5.63)	(5.84)
MISCELLANEOUS CIVIL WORK	10.95	9.91	10.92	9.60	10.89	9.23	9.52	9.82	10.23	10.87
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	35.63	33.61	35.75	32.69	35.23	31.74	32.44	33.12	33.85	34.68
ENGINEERING/ADMINISTRATION	28.55	27.15	28.51	26.71	28.45	26.18	26.59	27.01	27.56	28.39
CONTINGENCIES	58.84	53.76	58.72	52.20	58.49	50.37	51.78	53.26	55.23	58.25
S U B T O T A L	353.05	322.58	352.31	313.21	350.93	302.21	310.67	319.54	331.38	349.50
ACCESS ROAD (ROAD LENGTH 15.0 KM)										
CONSTRUCTION COST	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30
ENGINEERING ADMINSITRATION	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
CONTINEGENCIES	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
S U B T O T A L	4.28	4.28	4.28	4.28	4.28	4.28	4.28	4.28	4.28	4.28
TRANSMISSION LINE SYSTEM (T/L LENGTH 50.0 KM)										
TRANSMISSION LINE	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55
SWITCHYARD AND SUBSTATION	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
ENGINEERING/ADMINISTRATION	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
CONTINGENCIES	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
S U B T O T A L	8.42	8.42	8.42	8.42	8.42	8.42	8.42	8.42	8.42	8.42
T O T A L	365.75	335.28	365.01	325.91	363.63	314.91	323.37	332.24	344.08	362.20
EVALUATION INDICES										
U S D / K W	2560.4	2571.1	2420.2	2599.0	2431.4	2622.4	2558.2	2501.6	2460.6	2446.1
U S D / K W H	1.673	1.658	1.565	1.663	1.561	1.665	1.626	1.592	1.568	1.559

PROJECT NAME : UPPER BUCNIT
PROJECT ID : 1-022-00-08-0
TYPE : RESERVOIR

****
* SUMMARY TABLE OF COST ESTIMATE *
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(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(120.7)	(111.0)	(125.4)	(109.1)	(112.8)	(116.9)	(121.2)	(125.6)	(104.7)	(124.4)
STORAGE DAM	98.11	86.87	98.11	84.83	87.05	90.43	94.17	98.11	80.93	98.11
SPILLWAY	17.96	17.11	17.96	16.96	17.12	17.38	17.66	17.96	16.65	17.96
DIVERSION TUNNEL	32.64	32.64	32.64	32.64	32.64	32.64	32.64	32.64	32.64	32.64
INTAKE (PRESSURE TYPE)	5.16	4.87	4.45	4.81	4.69	4.57	4.46	4.34	4.67	4.13
HEADRACE TUNNEL (PRESSURE)	7.07	6.90	6.86	6.86	6.86	6.85	6.83	6.82	6.75	6.71
SURGE TANK	3.38	3.27	3.23	3.24	3.23	3.22	3.21	3.20	3.17	3.12
PENSTOCK	6.26	5.95	6.57	5.89	6.05	6.22	6.40	6.59	5.74	6.57
(PRESSURE SHAFT)	(1.85)	(1.84)	(1.90)	(1.84)	(1.85)	(1.87)	(1.89)	(1.90)	(1.83)	(1.90)
(STEEL LINER)	(4.40)	(4.11)	(4.67)	(4.05)	(4.20)	(4.35)	(4.52)	(4.68)	(3.91)	(4.66)
POWERHOUSE BUILDING	9.38	8.77	9.49	8.65	8.84	9.05	9.26	9.47	8.35	9.34
(SUPER STRUCTURE)	(4.17)	(3.90)	(4.22)	(3.84)	(3.93)	(4.02)	(4.12)	(4.21)	(3.71)	(4.15)
(SUB STRUCTURE)	(5.21)	(4.87)	(5.27)	(4.81)	(4.91)	(5.03)	(5.14)	(5.26)	(4.64)	(5.19)
MISCELLANEOUS CIVIL WORK	9.00	8.32	8.97	8.19	8.32	8.52	8.73	8.96	7.94	8.93
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	32.58	30.89	32.55	30.56	31.00	31.48	31.96	32.44	29.69	31.95
ENGINEERING/ADMINISTRATION	25.93	24.92	25.89	24.74	24.94	25.23	25.54	25.87	24.34	25.80
CONTINGENCIES	49.49	46.10	49.34	45.47	46.14	47.11	48.17	49.28	44.17	49.05
S U B T O T A L	296.95	276.61	296.04	272.84	276.87	282.68	289.03	295.66	265.05	294.30
ACCESS ROAD (ROAD LENGTH 10.5 KM)										
CONSTRUCTION COST	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31
ENGINEERING ADMINSITRATION	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
CONTINEGENCIES	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
S U B T O T A L	2.99	2.99	2.99	2.99	2.99	2.99	2.99	2.99	2.99	2.99
TRANSMISSION LINE SYSTEM (T/L LENGTH 53.0 KM)										
TRANSMISSION LINE	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88
SWITCHYARD AND SUBSTATION	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
ENGINEERING/ADMINISTRATION	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
CONTINGENCIES	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
S U B T O T A L	8.85	8.85	8.85	8.85	8.85	8.85	8.85	8.85	8.85	8.85
T O T A L	308.80	288.45	307.89	284.69	288.72	294.53	300.87	307.51	276.89	306.14
EVALUATION INDICES										
U S D / K W	2558.7	2599.8	2454.4	2609.3	2560.6	2519.4	2482.7	2449.2	2645.8	2461.0
U S D / K W H	1.672	1.679	1.588	1.681	1.651	1.626	1.602	1.581	1.692	1.578

PROJECT NAME : DAYAPAN
PROJECT ID : 1-022-00-09-0
TYPE : RESERVOIR

****
* SUMMARY TABLE OF COST ESTIMATE *
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(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(24.1)	(18.6)	(21.1)	(23.9)	(17.7)	(20.6)	(23.8)	(16.8)	(19.9)	(23.4)
STORAGE DAM	189.22	148.55	163.94	189.22	139.92	158.00	189.22	131.17	152.55	189.22
SPILLWAY	18.82	17.05	17.75	18.82	16.64	17.50	18.82	16.21	17.24	18.82
DIVERSION TUNNEL	19.51	19.51	19.51	19.51	19.51	19.51	19.51	19.51	19.51	19.51
INTAKE (PRESSURE TYPE)	0.96	1.14	1.01	0.90	1.10	0.96	0.84	1.06	0.91	0.78
HEADRACE TUNNEL (PRESSURE)	1.84	1.81	1.81	1.81	1.79	1.78	1.78	1.75	1.74	1.74
SURGE TANK	0.44	0.44	0.44	0.43	0.43	0.43	0.42	0.42	0.41	0.41
PENSTOCK	2.45	2.06	2.25	2.46	2.02	2.23	2.46	1.96	2.19	2.45
(PRESSURE SHAFT)	(0.97)	(0.91)	(0.94)	(0.97)	(0.91)	(0.94)	(0.97)	(0.90)	(0.94)	(0.97)
(STEEL LINER)	(1.48)	(1.15)	(1.31)	(1.49)	(1.11)	(1.29)	(1.49)	(1.07)	(1.26)	(1.48)
POWERHOUSE BUILDING	1.09	0.92	0.99	1.08	0.88	0.97	1.07	0.84	0.94	1.05
(SUPER STRUCTURE)	(0.49)	(0.41)	(0.44)	(0.48)	(0.39)	(0.43)	(0.47)	(0.37)	(0.42)	(0.46)
(SUB STRUCTURE)	(0.61)	(0.51)	(0.55)	(0.60)	(0.49)	(0.54)	(0.59)	(0.47)	(0.52)	(0.58)
MISCELLANEOUS CIVIL WORK	11.72	9.57	10.39	11.71	9.11	10.07	11.71	8.65	9.78	11.70
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	5.90	5.21	5.51	5.82	5.05	5.39	5.75	4.86	5.24	5.63
ENGINEERING/ADMINISTRATION	27.76	24.97	26.06	27.75	24.33	25.64	27.74	23.30	25.24	27.72
CONTINGENCIES	55.94	46.25	49.93	55.90	44.16	48.50	55.86	41.95	47.15	55.81
S U B T O T A L	335.66	277.48	299.60	335.43	264.93	290.97	335.18	251.67	282.91	334.83
ACCESS ROAD (ROAD LENGTH 4.0 KM)										
CONSTRUCTION COST	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
ENGINEERING ADMINSITRATION	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
CONTINEGENCIES	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
S U B T O T A L	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
TRANSMISSION LINE SYSTEM (T/L LENGTH 12.0 KM)										
TRANSMISSION LINE	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
CONTINGENCIES	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
S U B T O T A L	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
T O T A L	337.51	279.33	301.45	337.27	266.78	292.82	337.02	253.52	284.75	336.68
EVALUATION INDICES										
U S D / K W	14033.5	15002.9	14280.0	14083.3	15031.6	14240.6	14155.7	15111.2	14344.8	14373.8
U S D / K W H	3.098	3.283	3.134	3.096	3.272	3.111	3.099	3.267	3.116	3.129

PROJECT NAME : ABRA
PROJECT ID : 1-022-00-10-0
TYPE : RUN-OF-RIVER

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6
POWER DEVELOPMENT (INST.CAP(MW))	(2.4)	(3.4)	(4.8)	(6.6)	(9.7)	(10.7)
DIVERSION DAM/WEIR	0.44	0.46	0.48	0.51	0.55	0.56
INTAKE (NON-PRESSURE TYPE)	0.11	0.13	0.16	0.20	0.26	0.28
HEADRACE TUNNEL (NON-PRES.)	3.93	3.93	3.93	4.00	4.79	5.04
HEAD TANK	0.09	0.11	0.14	0.17	0.22	0.23
PENSTOCK	0.91	0.96	1.02	1.12	1.34	1.41
(PRESSURE SHAFT)	(0.57)	(0.57)	(0.57)	(0.58)	(0.65)	(0.67)
(STEEL LINER)	(0.34)	(0.38)	(0.45)	(0.54)	(0.69)	(0.74)
POWERHOUSE BUILDING	0.10	0.14	0.20	0.40	0.58	0.65
(SUPER STRUCTURE)	(0.05)	(0.06)	(0.09)	(0.18)	(0.26)	(0.29)
(SUB STRUCTURE)	(0.06)	(0.08)	(0.11)	(0.22)	(0.32)	(0.36)
MISCELLANEOUS CIVIL WORK	0.28	0.29	0.30	0.32	0.39	0.41
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	0.67	0.90	1.24	1.69	2.37	2.61
ENGINEERING/ADMINISTRATION	0.82	0.86	0.93	1.05	1.31	1.40
CONTINGENCIES	1.47	1.56	1.68	1.89	2.36	2.52
S U B T O T A L	8.82	9.33	10.07	11.34	14.17	15.09
ACCESS ROAD (ROAD LENGTH 10.0 KM)						
CONSTRUCTION COST	2.20	2.20	2.20	2.20	2.20	2.20
ENGINEERING ADMINSITRATION	0.18	0.18	0.18	0.18	0.18	0.18
CONTINEGENCIES	0.48	0.48	0.48	0.48	0.48	0.48
S U B T O T A L	2.85	2.85	2.85	2.85	2.85	2.85
TRANSMISSION LINE SYSTEM (T/L LENGTH 8.0 KM)						
TRANSMISSION LINE	0.18	0.18	0.18	0.18	0.18	0.18
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.06	0.06	0.06	0.06	0.06	0.06
CONTINGENCIES	0.08	0.08	0.08	0.08	0.08	0.08
S U B T O T A L	0.59	0.59	0.59	0.59	0.59	0.59
T O T A L	12.26	12.77	13.51	14.78	17.61	18.53
EVALUATION INDICES						
U S D / K W	5019.8	3787.6	2844.8	2237.3	1819.6	1724.5
U S D / K W H	0.816	0.771	0.742	0.742	0.775	0.788

PROJECT NAME : NAGLIBACAN
PROJECT ID : 1-022-01-11-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD.)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(11.3)	(10.5)	(11.2)	(12.0)	(10.2)	(11.0)	(12.1)	(9.8)	(10.6)	(12.0)
STORAGE DAM	79.10	69.92	73.68	79.10	66.27	71.15	79.10	63.11	68.51	79.10
SPILLWAY	13.59	12.98	13.23	13.59	12.74	13.06	13.59	12.50	12.88	13.59
DIVERSION TUNNEL	13.83	13.83	13.83	13.83	13.83	13.83	13.83	13.83	13.83	13.83
INTAKE (PRESSURE TYPE)	0.76	0.72	0.67	0.61	0.70	0.64	0.58	0.68	0.61	0.54
HEADRACE TUNNEL (PRESSURE)	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
SURGE TANK	0.26	0.25	0.25	0.25	0.25	0.25	0.25	0.24	0.24	0.24
PENSTOCK	0.50	0.48	0.52	0.56	0.48	0.53	0.57	0.47	0.52	0.58
(PRESSURE SHAFT)	(0.26)	(0.25)	(0.27)	(0.28)	(0.25)	(0.27)	(0.29)	(0.25)	(0.27)	(0.29)
(STEEL LINER)	(0.25)	(0.23)	(0.26)	(0.28)	(0.23)	(0.26)	(0.29)	(0.22)	(0.25)	(0.29)
POWERHOUSE BUILDING	0.58	0.54	0.57	0.59	0.53	0.56	0.59	0.51	0.55	0.59
(SUPER STRUCTURE)	(0.26)	(0.24)	(0.25)	(0.26)	(0.24)	(0.25)	(0.26)	(0.23)	(0.24)	(0.26)
(SUB STRUCTURE)	(0.32)	(0.30)	(0.32)	(0.33)	(0.29)	(0.31)	(0.33)	(0.28)	(0.30)	(0.33)
MISCELLANEOUS CIVIL WORK	5.47	4.98	5.18	5.47	4.78	5.04	5.40	4.61	4.90	5.46
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	3.51	3.34	3.44	3.54	3.28	3.40	3.53	3.19	3.32	3.48
ENGINEERING/ADMINISTRATION	14.80	13.48	14.02	14.79	12.96	13.65	14.79	12.49	13.27	14.77
CONTINGENCIES	26.64	24.26	25.23	26.62	23.32	24.58	26.61	22.48	23.88	26.59
S U B T O T A L	159.82	145.57	151.40	159.75	139.92	147.46	159.68	134.89	143.29	159.55
ACCESS ROAD (ROAD LENGTH 38.0 KM)										
CONSTRUCTION COST	8.36	8.36	8.36	8.36	8.36	8.36	8.36	8.36	8.36	8.36
ENGINEERING ADMINSITRATION	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
CONTINEGENCIES	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81
S U B T O T A L	10.83	10.83	10.83	10.83	10.83	10.83	10.83	10.83	10.83	10.83
TRANSMISSION LINE SYSTEM (T/L LENGTH 27.0 KM)										
TRANSMISSION LINE	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
CONTINGENCIES	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
S U B T O T A L	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
T O T A L	171.81	157.56	163.38	171.73	151.91	159.45	171.67	146.88	155.28	171.54
EVALUATION INDICES										
U S D / K W	15149.3	15032.2	14580.1	14297.3	14948.5	14443.1	14227.5	15047.6	14432.4	14320.6
U S D / K W H	3.365	3.317	3.220	3.160	3.289	3.182	3.137	3.295	3.166	3.145

PROJECT NAME : TINEG-1
PROJECT ID : 1-022-01-12-0
TYPE : RESERVOIR

*** SUMMARY TABLE OF COST ESTIMATE ***

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(367.9)	(301.6)	(330.9)	(364.9)	(289.0)	(322.1)	(361.3)	(274.4)	(311.3)	(355.1)
STORAGE DAM	237.96	190.95	209.26	237.96	181.66	202.38	237.96	171.24	195.53	237.96
SPILLWAY	33.36	30.59	31.69	33.36	29.98	31.30	33.36	29.30	30.89	33.36
DIVERSION TUNNEL	49.76	49.76	49.76	49.76	49.76	49.76	49.76	49.76	49.76	49.76
INTAKE (PRESSURE TYPE)	8.15	8.81	8.25	7.75	8.54	7.91	7.36	8.22	7.54	6.94
HEADRACE TUNNEL (PRESSURE)	14.89	14.69	14.67	14.64	14.45	14.43	14.39	14.16	14.13	14.08
SURGE TANK	5.97	5.90	5.87	5.83	5.77	5.73	5.68	5.61	5.56	5.51
PENSTOCK	10.61	8.34	9.44	10.70	8.08	9.32	10.76	7.78	9.14	10.74
(PRESSURE SHAFT)	(2.04)	(1.83)	(1.95)	(2.06)	(1.82)	(1.95)	(2.08)	(1.80)	(1.95)	(2.09)
(STEEL LINER)	(8.57)	(6.51)	(7.49)	(8.64)	(6.26)	(7.37)	(8.68)	(5.98)	(7.19)	(8.65)
POWERHOUSE BUILDING	28.66	24.95	26.52	28.28	24.06	25.65	27.87	23.02	25.02	27.27
(SUPER STRUCTURE)	(12.74)	(11.09)	(11.79)	(12.57)	(10.70)	(11.49)	(12.38)	(10.23)	(11.12)	(12.12)
(SUB STRUCTURE)	(15.92)	(13.86)	(14.74)	(15.71)	(13.37)	(14.36)	(15.48)	(12.79)	(13.90)	(15.15)
MISCELLANEOUS CIVIL WORK	19.47	16.70	17.77	19.41	16.12	17.33	19.36	15.45	16.88	19.28
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	67.77	61.47	64.03	66.81	59.68	62.60	65.79	57.54	60.83	64.39
ENGINEERING/ADMINISTRATION	38.89	36.02	37.16	38.80	35.36	36.68	38.71	34.60	36.16	38.58
CONTINGENCIES	103.10	89.64	94.89	102.66	86.69	92.66	102.20	83.34	90.29	101.57
S U B T O T A L	618.58	537.81	569.31	615.95	520.15	555.95	613.18	500.02	541.72	609.43
ACCESS ROAD (ROAD LENGTH 16.0 KM)										
CONSTRUCTION COST	3.52	3.52	3.52	3.52	3.52	3.52	3.52	3.52	3.52	3.52
ENGINEERING ADMINSITRATION	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
CONTINEGENCIES	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
S U B T O T A L	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56
TRANSMISSION LINE SYSTEM (T/L LENGTH 15.0 KM)										
TRANSMISSION LINE	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30
SWITCHYARD AND SUBSTATION	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
ENGINEERING/ADMINISTRATION	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
CONTINGENCIES	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
S U B T O T A L	5.51	5.51	5.51	5.51	5.51	5.51	5.51	5.51	5.51	5.51
T O T A L	628.65	547.88	579.39	626.02	530.23	566.02	623.25	510.10	551.80	619.50
EVALUATION INDICES										
U S D / K W	1708.6	1816.3	1750.8	1715.5	1834.7	1757.1	1725.0	1859.1	1772.5	1744.7
U S D / K W H	1.107	1.164	1.125	1.104	1.166	1.121	1.102	1.170	1.120	1.105

PROJECT NAME : TINEG-2
PROJECT ID : 1-022-01-13-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE (UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(134.5)	(105.9)	(118.1)	(132.2)	(100.6)	(113.8)	(129.9)	(94.9)	(108.9)	(126.6)
STORAGE DAM	211.74	156.78	178.41	211.74	146.90	170.17	211.74	137.29	162.29	211.74
SPILLWAY	26.00	23.31	24.40	26.00	22.77	24.01	26.00	22.22	23.61	26.00
DIVERSION TUNNEL	30.13	30.13	30.13	30.13	30.13	30.13	30.13	30.13	30.13	30.13
INTAKE (PRESSURE TYPE)	3.30	3.53	3.22	2.94	3.40	3.06	2.77	3.25	2.87	2.58
HEADRACE TUNNEL (PRESSURE)	4.46	4.33	4.32	4.31	4.24	4.23	4.22	4.13	4.12	4.10
SURGE TANK	1.89	1.83	1.81	1.80	1.78	1.76	1.74	1.71	1.69	1.68
PENSTOCK	5.72	4.46	5.06	5.75	4.30	4.94	5.72	4.11	4.80	5.64
(PRESSURE SHAFT)	(1.02)	(0.93)	(0.98)	(1.03)	(0.93)	(0.98)	(1.03)	(0.92)	(0.98)	(1.03)
(STEEL LINER)	(4.70)	(3.53)	(4.08)	(4.73)	(3.37)	(3.96)	(4.69)	(3.19)	(3.82)	(4.62)
POWERHOUSE BUILDING	5.79	4.87	5.23	5.64	4.66	5.05	5.51	4.43	4.85	5.35
(SUPER STRUCTURE)	(2.57)	(2.17)	(2.32)	(2.50)	(2.07)	(2.25)	(2.45)	(1.97)	(2.15)	(2.38)
(SUB STRUCTURE)	(3.22)	(2.71)	(2.91)	(3.13)	(2.59)	(2.81)	(3.06)	(2.46)	(2.69)	(2.97)
MISCELLANEOUS CIVIL WORK	14.45	11.46	12.63	14.42	10.91	12.17	14.39	10.36	11.72	14.36
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	25.83	22.78	23.88	25.09	21.97	23.18	24.56	21.05	22.35	23.87
ENGINEERING/ADMINISTRATION	31.98	28.42	29.85	31.91	27.70	29.28	31.85	26.97	28.70	31.78
CONTINGENCIES	72.26	58.38	63.79	71.94	55.75	61.59	71.73	53.13	59.43	71.45
S U B T O T A L	433.55	350.28	382.72	431.67	334.50	369.57	430.36	318.80	356.56	428.70
ACCESS ROAD (ROAD LENGTH 36.0 KM)										
CONSTRUCTION COST	7.92	7.92	7.92	7.92	7.92	7.92	7.92	7.92	7.92	7.92
ENGINEERING ADMINSITRATION	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63
CONTINEQENCIES	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71
S U B T O T A L	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26
TRANSMISSION LINE SYSTEM (T/L LENGTH 27.0 KM)										
TRANSMISSION LINE	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
SWITCHYARD AND SUBSTATION	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
ENGINEERING/ADMINISTRATION	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
CONTINGENCIES	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
S U B T O T A L	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12
T O T A L	448.93	365.66	398.11	447.05	349.88	384.95	445.74	334.18	371.95	444.09
EVALUATION INDICES										
U S D / K W	3336.7	3451.7	3372.1	3380.6	3476.5	3382.4	3431.3	3522.4	3416.3	3507.2
U S D / K W H	2.163	2.196	2.152	2.162	2.189	2.138	2.174	2.189	2.134	2.197

PROJECT NAME : TINEG-3
PROJECT ID : 1-022-01-14-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(16.8)	(15.0)	(17.9)	(14.4)	(17.8)	(13.8)	(14.7)	(15.6)	(16.6)	(17.6)
STORAGE DAM	121.53	102.73	121.53	97.83	121.53	93.13	97.62	108.93	112.29	121.53
SPILLWAY	15.88	14.89	15.88	14.61	15.88	14.33	14.60	14.95	15.40	15.88
DIVERSION TUNNEL	22.59	22.59	22.59	22.59	22.59	22.59	22.59	22.59	22.59	22.59
INTAKE (PRESSURE TYPE)	1.06	0.97	0.82	0.95	0.76	0.92	0.86	0.81	0.76	0.71
HEADRACE TUNNEL (PRESSURE)	0.72	0.70	0.70	0.69	0.68	0.68	0.68	0.68	0.67	0.67
SURGE TANK	0.38	0.36	0.36	0.36	0.35	0.35	0.35	0.34	0.34	0.34
PENSTOCK	2.20	2.10	2.32	2.06	2.31	2.02	2.09	2.16	2.23	2.31
(PRESSURE SHAFT)	(1.03)	(1.02)	(1.05)	(1.01)	(1.05)	(1.00)	(1.02)	(1.03)	(1.04)	(1.04)
(STEEL LINER)	(1.18)	(1.08)	(1.27)	(1.05)	(1.27)	(1.02)	(1.07)	(1.13)	(1.20)	(1.26)
POWERHOUSE BUILDING	0.88	0.80	0.90	0.77	0.89	0.75	0.78	0.81	0.84	0.87
(SUPER STRUCTURE)	(0.39)	(0.36)	(0.40)	(0.34)	(0.39)	(0.33)	(0.34)	(0.36)	(0.37)	(0.39)
(SUB STRUCTURE)	(0.49)	(0.44)	(0.50)	(0.43)	(0.49)	(0.41)	(0.43)	(0.45)	(0.47)	(0.49)
MISCELLANEOUS CIVIL WORK	8.26	7.26	8.25	6.99	8.25	6.74	6.98	7.31	7.76	8.25
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	5.15	4.80	5.17	4.66	5.10	4.52	4.65	4.77	4.90	5.03
ENGINEERING/ADMINISTRATION	22.33	19.65	22.31	18.94	22.29	18.25	18.90	19.79	20.97	22.27
CONTINGENCIES	40.20	35.37	40.16	34.09	40.13	32.86	34.02	35.63	37.75	40.09
S U B T O T A L	241.19	212.22	240.98	204.53	240.77	197.13	204.10	213.77	226.51	240.54
ACCESS ROAD (ROAD LENGTH 51.0 KM)										
CONSTRUCTION COST	11.22	11.22	11.22	11.22	11.22	11.22	11.22	11.22	11.22	11.22
ENGINEERING ADMINSITRATION	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
CONTINEGENCIES	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42
S U B T O T A L	14.54	14.54	14.54	14.54	14.54	14.54	14.54	14.54	14.54	14.54
TRANSMISSION LINE SYSTEM (T/L LENGTH 39.0 KM)										
TRANSMISSION LINE	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
CONTINGENCIES	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
S U B T O T A L	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51
T O T A L	257.24	228.27	257.03	220.58	256.82	213.18	220.15	229.82	242.56	256.59
EVALUATION INDICES										
U S D / K W	15330.2	15213.5	14395.6	15329.6	14468.2	15467.7	15022.8	14750.2	14630.5	14575.0
U S D / K W H	3.408	3.348	3.175	3.357	3.178	3.371	3.279	3.222	3.198	3.188

PROJECT NAME : BINONGAN-R
PROJECT ID : 1-022-02-15-0
TYPE : RUN-OF-RIVER

****
* SUMMARY TABLE OF COST ESTIMATE *
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(UNIT : MILLION USD)

ITEM	CASE 1	CASE 2	CASE 3	CASE 4	CASE 5	CASE 6
POWER DEVELOPMENT (INST.CAP(MW))	(3.1)	(3.9)	(5.7)	(8.3)	(12.3)	(13.6)
DIVERSION DAM/WEIR	1.03	1.07	1.13	1.21	1.31	1.34
INTAKE (NON-PRESSURE TYPE)	0.16	0.20	0.26	0.33	0.43	0.46
HEADRACE TUNNEL (NON-PRES.)	11.45	11.75	13.97	17.05	21.40	22.78
HEAD TANK	0.14	0.17	0.22	0.27	0.34	0.36
PENSTOCK	0.68	0.72	0.84	0.99	1.20	1.26
(PRESSURE SHAFT)	(0.41)	(0.43)	(0.48)	(0.53)	(0.60)	(0.61)
(STEEL LINER)	(0.26)	(0.29)	(0.36)	(0.46)	(0.60)	(0.65)
POWERHOUSE BUILDING	0.15	0.20	0.29	0.59	0.87	0.97
(SUPER STRUCTURE)	(0.07)	(0.09)	(0.13)	(0.26)	(0.39)	(0.43)
(SUB STRUCTURE)	(0.09)	(0.11)	(0.16)	(0.33)	(0.48)	(0.54)
MISCELLANEOUS CIVIL WORK	0.68	0.71	0.83	1.02	1.28	1.36
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	1.05	1.35	1.86	2.61	3.68	4.04
ENGINEERING/ADMINISTRATION	1.92	2.02	2.42	3.01	3.81	4.07
CONTINGENCIES	3.45	3.64	4.36	5.42	6.86	7.33
S U B T O T A L	20.71	21.84	26.19	32.50	41.18	43.98
ACCESS ROAD (ROAD LENGTH 27.0 KM)						
CONSTRUCTION COST	5.94	5.94	5.94	5.94	5.94	5.94
ENGINEERING ADMINSITRATION	0.48	0.48	0.48	0.48	0.48	0.48
CONTINEGENCIES	1.28	1.28	1.28	1.28	1.28	1.28
S U B T O T A L	7.70	7.70	7.70	7.70	7.70	7.70
TRANSMISSION LINE SYSTEM (T/L LENGTH 36.0 KM)						
TRANSMISSION LINE	0.83	0.83	0.83	0.83	0.83	0.83
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.14	0.14	0.14	0.14	0.14	0.14
CONTINGENCIES	0.19	0.19	0.19	0.19	0.19	0.19
S U B T O T A L	1.42	1.42	1.42	1.42	1.42	1.42
T O T A L	29.83	30.96	35.30	41.62	50.30	53.10
EVALUATION INDICES						
U S D / K W	9556.1	7870.3	6244.4	4984.6	4104.2	3899.7
U S D / K W H	1.552	1.600	1.624	1.649	1.741	1.774

PROJECT NAME : PAGANAO
PROJECT ID : 1-022-03-16-0
TYPE : RESERVOIR

****
* SUMMARY TABLE OF COST ESTIMATE *
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(UNIT : MILLION USD)

ITEM	CASE 1 (9.7)	2 (8.7)	3 (10.2)	4 (8.4)	5 (10.1)	6 (8.0)	7 (8.5)	8 (8.9)	9 (9.4)	10 (10.0)
POWER DEVELOPMENT (INST.CAP(MW))										
STORAGE DAM	67.42	56.54	67.42	53.78	67.42	51.22	53.50	56.69	61.14	67.42
SPILLWAY	12.21	11.45	12.21	11.25	12.21	11.04	11.22	11.46	11.79	12.21
DIVERSION TUNNEL	16.67	16.67	16.67	16.67	16.67	16.67	16.67	16.67	16.67	16.67
INTAKE (PRESSURE TYPE)	0.70	0.64	0.53	0.62	0.50	0.60	0.56	0.53	0.50	0.47
HEADRACE TUNNEL (PRESSURE)	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
SURGE TANK	0.27	0.26	0.26	0.25	0.25	0.25	0.25	0.25	0.24	0.24
PENSTOCK	1.03	0.99	1.09	0.98	1.09	0.96	0.99	1.02	1.05	1.08
(PRESSURE SHAFT)	(0.55)	(0.55)	(0.57)	(0.55)	(0.57)	(0.54)	(0.55)	(0.56)	(0.56)	(0.57)
(STEEL LINER)	(0.48)	(0.44)	(0.51)	(0.43)	(0.51)	(0.42)	(0.44)	(0.46)	(0.49)	(0.51)
POWERHOUSE BUILDING	0.53	0.48	0.54	0.47	0.53	0.45	0.47	0.48	0.50	0.52
(SUPER STRUCTURE)	(0.23)	(0.21)	(0.24)	(0.21)	(0.23)	(0.20)	(0.21)	(0.21)	(0.22)	(0.23)
(SUB STRUCTURE)	(0.29)	(0.27)	(0.30)	(0.26)	(0.29)	(0.25)	(0.26)	(0.27)	(0.28)	(0.29)
MISCELLANEOUS CIVIL WORK	4.98	4.40	4.98	4.24	4.98	4.10	4.23	4.40	4.64	4.97
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	3.31	3.09	3.31	3.01	3.26	2.92	2.99	3.06	3.13	3.21
ENGINEERING/ADMINISTRATION	13.50	11.92	13.48	11.52	13.47	11.14	11.47	11.93	12.57	13.46
CONTINGENCIES	24.30	21.46	24.27	20.73	24.25	20.05	20.64	21.47	22.62	24.22
SUB TOTAL	145.78	126.78	145.62	124.39	145.48	120.27	123.80	128.83	135.72	145.35
ACCESS ROAD (ROAD LENGTH 17.0 KM)										
CONSTRUCTION COST	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.74
ENGINEERING ADMINSITRATION	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
CONTINEGENCIES	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
SUB TOTAL	4.85	4.85	4.85	4.85	4.85	4.85	4.85	4.85	4.85	4.85
TRANSMISSION LINE SYSTEM (T/L LENGTH 15.0 KM)										
TRANSMISSION LINE	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
CONTINGENCIES	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
SUB TOTAL	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
TOTAL	151.42	134.43	151.26	130.03	151.13	125.92	129.50	134.47	141.36	150.99
EVALUATION INDICES										
USD / KW	15658.3	15465.5	14812.0	15562.0	14934.1	15689.2	15319.0	15079.6	14977.3	15079.1
USD / KWH	3.477	3.402	3.263	3.407	3.276	3.419	3.341	3.291	3.270	3.293

PROJECT NAME : MALANAS (LICUANO)
PROJECT ID : 1-022-03-17-C
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1 (5.0)	2 (4.5)	3 (5.3)	4 (4.3)	5 (5.2)	6 (4.1)	7 (4.3)	8 (4.6)	9 (4.9)	10 (5.2)
POWER DEVELOPMENT (INST.CAP(MW))										
STORAGE DAM	55.51	46.98	55.51	44.77	55.51	42.65	44.55	47.30	51.19	55.51
SPILLWAY	9.02	8.45	9.02	8.29	9.02	8.12	8.27	8.47	8.73	9.02
DIVERSION TUNNEL	11.98	11.98	11.98	11.98	11.98	11.98	11.98	11.98	11.98	11.98
INTAKE (PRESSURE TYPE)	0.46	0.43	0.36	0.41	0.34	0.40	0.38	0.36	0.34	0.32
HEADRACE TUNNEL (PRESSURE)	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
SURGE TANK	0.18	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16
PENSTOCK	0.54	0.52	0.57	0.52	0.57	0.51	0.53	0.54	0.56	0.58
(PRESSURE SHAFT)	(0.33)	(0.32)	(0.34)	(0.32)	(0.34)	(0.32)	(0.33)	(0.33)	(0.34)	(0.34)
(STEEL LINER)	(0.21)	(0.20)	(0.23)	(0.19)	(0.23)	(0.19)	(0.20)	(0.21)	(0.22)	(0.23)
POWERHOUSE BUILDING	0.29	0.26	0.29	0.25	0.29	0.24	0.25	0.26	0.27	0.28
(SUPER STRUCTURE)	(0.13)	(0.12)	(0.13)	(0.11)	(0.13)	(0.11)	(0.11)	(0.12)	(0.12)	(0.13)
(SUB STRUCTURE)	(0.16)	(0.15)	(0.16)	(0.14)	(0.16)	(0.14)	(0.14)	(0.15)	(0.15)	(0.16)
MISCELLANEOUS CIVIL WORK	3.95	3.49	3.95	3.37	3.95	3.26	3.36	3.51	3.71	3.94
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	1.97	1.84	1.97	1.79	1.94	1.73	1.78	1.82	1.87	1.91
ENGINEERING/ADMINISTRATION	10.62	9.40	10.61	9.07	10.60	8.76	9.04	9.43	9.98	10.59
CONTINGENCIES	19.11	16.91	19.09	16.33	19.08	15.77	16.27	16.98	17.97	19.07
S U B T O T A L	114.67	101.47	114.57	97.99	114.49	94.64	97.60	101.85	107.80	114.41
ACCESS ROAD (ROAD LENGTH 17.0 KM)										
CONSTRUCTION COST	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.74
ENGINEERING ADMINSITRATION	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
CONTINEGENCIES	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
S U B T O T A L	4.85	4.85	4.85	4.85	4.85	4.85	4.85	4.85	4.85	4.85
TRANSMISSION LINE SYSTEM (T/L LENGTH 20.0 KM)										
TRANSMISSION LINE	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
CONTINGENCIES	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
S U B T O T A L	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
T O T A L	120.64	107.44	120.54	103.96	120.46	100.61	103.57	107.82	113.77	120.38
EVALUATION INDICES										
U S D / K W	24241.9	24079.3	22944.9	24294.2	23088.1	24538.5	23871.3	23444.2	23310.4	23262.3
U S D / K W H	5.378	5.292	5.051	5.314	5.060	5.340	5.202	5.113	5.085	5.076

PROJECT NAME : TAPING
PROJECT ID : 1-022-04-18-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(6.7)	(5.2)	(5.9)	(6.6)	(4.9)	(5.6)	(6.5)	(4.6)	(5.4)	(6.3)
STORAGE DAM	118.82	86.94	99.75	118.82	81.90	95.71	118.82	76.45	91.65	118.82
SPILLWAY	10.30	9.18	9.64	10.30	8.96	9.50	10.30	8.73	9.35	10.30
DIVERSION TUNNEL	18.71	18.71	18.71	18.71	18.71	18.71	18.71	18.71	18.71	18.71
INTAKE (PRESSURE TYPE)	0.43	0.46	0.42	0.37	0.45	0.39	0.35	0.42	0.37	0.33
HEADRACE TUNNEL (PRESSURE)	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
SURGE TANK	0.19	0.19	0.19	0.18	0.18	0.18	0.18	0.18	0.17	0.17
PENSTOCK	1.04	0.94	0.99	1.04	0.92	0.98	1.03	0.91	0.96	1.02
(PRESSURE SHAFT)	(0.60)	(0.57)	(0.58)	(0.59)	(0.57)	(0.58)	(0.59)	(0.56)	(0.57)	(0.59)
(STEEL LINER)	(0.44)	(0.37)	(0.40)	(0.44)	(0.36)	(0.40)	(0.44)	(0.35)	(0.39)	(0.43)
POWERHOUSE BUILDING	0.36	0.30	0.33	0.35	0.29	0.32	0.35	0.27	0.30	0.34
(SUPER STRUCTURE)	(0.16)	(0.13)	(0.15)	(0.16)	(0.13)	(0.14)	(0.15)	(0.12)	(0.13)	(0.15)
(SUB STRUCTURE)	(0.20)	(0.17)	(0.18)	(0.20)	(0.16)	(0.18)	(0.19)	(0.15)	(0.17)	(0.19)
MISCELLANEOUS CIVIL WORK	7.54	5.89	6.55	7.54	5.62	6.34	7.54	5.33	6.13	7.54
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	2.37	2.07	2.18	2.30	2.00	2.12	2.25	1.91	2.04	2.19
ENGINEERING/ADMINISTRATION	20.10	15.71	17.47	20.08	15.01	16.91	20.07	14.24	16.34	20.05
CONTINGENCIES	36.18	28.28	31.45	36.14	27.01	30.43	36.12	25.63	29.41	36.10
S U B T O T A L	217.06	169.69	188.70	216.87	162.06	182.61	216.74	153.81	176.45	216.58
ACCESS ROAD (ROAD LENGTH 4.0 KM)										
CONSTRUCTION COST	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
ENGINEERING ADMINSITRATION	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
CONTINEGENCIES	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
S U B T O T A L	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
TRANSMISSION LINE SYSTEM (T/L LENGTH 18.0 KM)										
TRANSMISSION LINE	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
CONTINGENCIES	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
S U B T O T A L	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
T O T A L	219.08	171.71	190.73	218.89	164.09	184.63	218.77	155.83	178.48	218.61
EVALUATION INDICES										
U S D / K W	32622.2	33141.3	32597.4	33093.3	33379.7	32723.4	33660.5	33738.1	33040.5	34494.8
U S D / K W H	7.184	7.213	7.109	7.226	7.218	7.095	7.307	7.236	7.110	7.433

PROJECT NAME : UPPER MAGUYEPYEP
PROJECT ID : 1-022-05-19-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE (UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(9.7)	(8.7)	(10.2)	(8.3)	(10.1)	(8.0)	(8.4)	(8.9)	(9.5)	(10.0)
STORAGE DAM	70.75	59.07	70.75	55.63	70.75	52.46	55.33	59.43	64.31	70.75
SPILLWAY	12.29	11.53	12.29	11.30	12.29	11.06	11.28	11.56	11.89	12.29
DIVERSION TUNNEL	15.55	15.55	15.55	15.55	15.55	15.55	15.55	15.55	15.55	15.55
INTAKE (PRESSURE TYPE)	0.71	0.66	0.56	0.64	0.53	0.61	0.58	0.55	0.52	0.49
HEADRACE TUNNEL (PRESSURE)	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28
SURGE TANK	0.30	0.29	0.28	0.28	0.28	0.28	0.27	0.27	0.27	0.27
PENSTOCK	1.03	0.99	1.08	0.98	1.08	0.96	0.99	1.02	1.05	1.08
(PRESSURE SHAFT)	(0.55)	(0.55)	(0.57)	(0.55)	(0.57)	(0.54)	(0.55)	(0.56)	(0.56)	(0.57)
(STEEL LINER)	(0.47)	(0.44)	(0.51)	(0.43)	(0.51)	(0.42)	(0.44)	(0.46)	(0.49)	(0.51)
POWERHOUSE BUILDING	0.53	0.48	0.54	0.47	0.53	0.45	0.47	0.49	0.50	0.52
(SUPER STRUCTURE)	(0.23)	(0.22)	(0.24)	(0.21)	(0.24)	(0.20)	(0.21)	(0.22)	(0.22)	(0.23)
(SUB STRUCTURE)	(0.29)	(0.27)	(0.30)	(0.26)	(0.30)	(0.25)	(0.26)	(0.27)	(0.28)	(0.29)
MISCELLANEOUS CIVIL WORK	5.12	4.49	5.12	4.31	5.11	4.13	4.29	4.51	4.77	5.11
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	3.33	3.11	3.34	3.03	3.29	2.94	3.01	3.08	3.16	3.24
ENGINEERING/ADMINISTRATION	13.86	12.18	13.85	11.68	13.84	11.22	11.63	12.22	12.91	13.82
CONTINGENCIES	24.95	21.93	24.93	21.03	24.91	20.19	20.94	21.99	23.24	24.88
S U B T O T A L	149.70	131.57	149.56	126.16	149.43	121.12	125.61	131.95	139.47	149.30
ACCESS ROAD (ROAD LENGTH 14.0 KM)										
CONSTRUCTION COST	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08
ENGINEERING ADMINSITRATION	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
CONTINEGENCIES	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
S U B T O T A L	3.99	3.99	3.99	3.99	3.99	3.99	3.99	3.99	3.99	3.99
TRANSMISSION LINE SYSTEM (T/L LENGTH 55.0 KM)										
TRANSMISSION LINE	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
CONTINGENCIES	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
S U B T O T A L	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99
T O T A L	155.67	137.55	155.54	132.14	155.41	127.10	131.59	137.93	145.44	155.28
EVALUATION INDICES										
U S D / K W	16130.0	15827.2	15252.7	15855.3	15334.5	15918.0	15590.5	15427.7	15349.5	15454.4

PROJECT NAME : BUCLOC
PROJECT ID : 1-022-05-20-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE (UNIT : MILLION USD)

ITEM	CASE 1 (5.9)	2 (5.4)	3 (6.3)	4 (5.1)	5 (6.2)	6 (4.9)	7 (5.2)	8 (5.5)	9 (5.8)	10 (6.2)
POWER DEVELOPMENT (INST.CAP(MW))										
STORAGE DAM	82.35	70.91	82.35	67.49	82.35	64.04	66.75	70.61	75.46	82.35
SPILLWAY	9.87	9.30	9.87	9.12	9.87	8.94	9.08	9.29	9.54	9.87
DIVERSION TUNNEL	12.65	12.65	12.65	12.65	12.65	12.65	12.65	12.65	12.65	12.65
INTAKE (PRESSURE TYPE)	0.50	0.46	0.38	0.45	0.35	0.43	0.40	0.38	0.35	0.33
HEADRACE TUNNEL (PRESSURE)	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
SURGE TANK	0.18	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16
PENSTOCK	0.55	0.53	0.59	0.53	0.59	0.52	0.54	0.55	0.57	0.59
(PRESSURE SHAFT)	(0.32)	(0.32)	(0.34)	(0.32)	(0.34)	(0.32)	(0.32)	(0.33)	(0.34)	(0.34)
(STEEL LINER)	(0.23)	(0.21)	(0.25)	(0.21)	(0.25)	(0.20)	(0.21)	(0.22)	(0.24)	(0.25)
POWERHOUSE BUILDING	0.33	0.31	0.34	0.30	0.33	0.28	0.29	0.31	0.32	0.33
(SUPER STRUCTURE)	(0.15)	(0.14)	(0.15)	(0.13)	(0.15)	(0.13)	(0.13)	(0.14)	(0.14)	(0.15)
(SUB STRUCTURE)	(0.18)	(0.17)	(0.19)	(0.16)	(0.19)	(0.16)	(0.16)	(0.17)	(0.18)	(0.18)
MISCELLANEOUS CIVIL WORK	5.36	4.76	5.36	4.57	5.35	4.39	4.53	4.74	4.99	5.35
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	2.22	2.08	2.22	2.02	2.19	1.96	2.00	2.05	2.10	2.15
ENGINEERING/ADMINISTRATION	14.35	12.74	14.34	12.26	14.33	11.77	12.15	12.69	13.35	14.32
CONTINGENCIES	25.82	22.94	25.81	22.06	25.79	21.18	21.87	22.84	24.06	25.78
S U B T O T A L	154.95	137.62	154.83	132.38	154.74	127.10	131.21	137.03	144.33	154.65
ACCESS ROAD (ROAD LENGTH 25.0 KM)										
CONSTRUCTION COST	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
ENGINEERING ADMINSITRATION	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
CONTINEGENCIES	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
S U B T O T A L	7.13	7.13	7.13	7.13	7.13	7.13	7.13	7.13	7.13	7.13
TRANSMISSION LINE SYSTEM (T/L LENGTH 38.0 KM)										
TRANSMISSION LINE	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
CONTINGENCIES	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
S U B T O T A L	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48
T O T A L	163.56	146.23	163.44	140.98	163.35	135.71	139.82	145.64	152.94	163.26
EVALUATION INDICES										
U S D / K W	27529.5	27271.1	25997.3	27406.6	26201.4	27522.5	26912.2	26526.8	26345.8	26505.3
U S D / K W H	6.111	5.997	5.726	5.998	5.746	5.994	5.867	5.787	5.750	5.786

PROJECT NAME : DAGUIOMAN
PROJECT ID : 1-022-05-21-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE (UNIT : MILLION USD)

ITEM	CASE 1 (2.9)	2 (2.3)	3 (2.5)	4 (2.9)	5 (2.1)	6 (2.5)	7 (2.8)	8 (2.0)	9 (2.4)	10 (2.7)
POWER DEVELOPMENT (INST.CAP(MW))										
STORAGE DAM	49.94	37.40	41.67	49.94	35.27	40.27	49.94	32.65	39.09	49.94
SPILLWAY	6.63	5.96	6.22	6.63	5.82	6.14	6.63	5.66	6.06	6.63
DIVERSION TUNNEL	12.89	12.89	12.89	12.89	12.89	12.89	12.89	12.89	12.89	12.89
INTAKE (PRESSURE TYPE)	0.24	0.28	0.25	0.23	0.27	0.24	0.21	0.25	0.22	0.19
HEADRACE TUNNEL (PRESSURE)	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58
SURGE TANK	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09
PENSTOCK	0.53	0.49	0.51	0.53	0.48	0.51	0.53	0.48	0.50	0.53
(PRESSURE SHAFT)	(0.34)	(0.33)	(0.34)	(0.34)	(0.32)	(0.33)	(0.34)	(0.32)	(0.33)	(0.34)
(STEEL LINER)	(0.19)	(0.16)	(0.18)	(0.19)	(0.16)	(0.17)	(0.19)	(0.16)	(0.17)	(0.19)
POWERHOUSE BUILDING	0.17	0.15	0.16	0.17	0.14	0.15	0.17	0.13	0.15	0.16
(SUPER STRUCTURE)	(0.08)	(0.06)	(0.07)	(0.08)	(0.06)	(0.07)	(0.07)	(0.06)	(0.06)	(0.07)
(SUB STRUCTURE)	(0.10)	(0.08)	(0.09)	(0.09)	(0.08)	(0.08)	(0.09)	(0.07)	(0.08)	(0.09)
MISCELLANEOUS CIVIL WORK	3.55	2.89	3.13	3.55	2.78	3.04	3.55	2.64	2.98	3.55
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	1.26	1.13	1.18	1.24	1.09	1.15	1.22	1.04	1.11	1.18
ENGINEERING/ADMINISTRATION	9.49	7.73	8.36	9.48	7.43	8.13	9.48	7.05	7.96	9.47
CONTINGENCIES	17.08	13.92	15.05	17.07	13.37	14.64	17.06	12.69	14.33	17.04
S U B T O T A L	102.47	83.51	90.30	102.41	80.21	87.83	102.34	76.16	85.97	102.25
ACCESS ROAD (ROAD LENGTH 30.0 KM)										
CONSTRUCTION COST	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60
ENGINEERING ADMINSITRATION	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
CONTINEGENCIES	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43
S U B T O T A L	8.55	8.55	8.55	8.55	8.55	8.55	8.55	8.55	8.55	8.55
TRANSMISSION LINE SYSTEM (T/L LENGTH 41.0 KM)										
TRANSMISSION LINE	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
CONTINGENCIES	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
S U B T O T A L	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57
T O T A L	112.59	93.63	100.42	112.53	90.34	97.96	112.46	86.28	96.09	112.38
EVALUATION INDICES										
U S D / K W	39084.0	41323.3	39564.6	39448.8	42031.5	39938.8	40116.0	42878.3	40802.3	41104.5
U S D / K W H	8.555	8.982	8.617	8.595	9.076	8.647	8.688	9.182	8.767	8.835

PROJECT NAME : BOYAN
PROJECT ID : 1-022-05-22-0
TYPE : RESERVOIR

*** SUMMARY TABLE OF COST ESTIMATE ***

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(15.2)	(12.5)	(13.7)	(15.1)	(12.0)	(13.4)	(15.0)	(11.4)	(13.0)	(14.8)
STORAGE DAM	175.85	140.21	153.61	175.85	131.82	148.56	175.85	123.71	143.82	175.85
SPILLWAY	15.85	14.59	15.09	15.85	14.27	14.91	15.85	13.96	14.73	15.85
DIVERSION TUNNEL	22.13	22.13	22.13	22.13	22.13	22.13	22.13	22.13	22.13	22.13
INTAKE (PRESSURE TYPE)	0.70	0.79	0.72	0.65	0.76	0.68	0.61	0.73	0.65	0.57
HEADRACE TUNNEL (PRESSURE)	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26
SURGE TANK	0.34	0.33	0.33	0.33	0.33	0.32	0.32	0.32	0.31	0.31
PENSTOCK	1.77	1.58	1.67	1.76	1.55	1.65	1.76	1.52	1.63	1.75
(PRESSURE SHAFT)	(0.83)	(0.79)	(0.81)	(0.83)	(0.79)	(0.81)	(0.82)	(0.78)	(0.80)	(0.82)
(STEEL LINER)	(0.94)	(0.79)	(0.86)	(0.94)	(0.77)	(0.85)	(0.94)	(0.74)	(0.83)	(0.93)
POWERHOUSE BUILDING	0.75	0.65	0.69	0.74	0.63	0.68	0.73	0.60	0.65	0.71
(SUPER STRUCTURE)	(0.33)	(0.29)	(0.31)	(0.33)	(0.28)	(0.30)	(0.32)	(0.27)	(0.29)	(0.32)
(SUB STRUCTURE)	(0.41)	(0.36)	(0.38)	(0.41)	(0.35)	(0.38)	(0.40)	(0.33)	(0.36)	(0.40)
MISCELLANEOUS CIVIL WORK	10.93	9.08	9.78	10.93	8.64	9.51	10.93	8.21	9.26	10.92
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	4.33	3.94	4.10	4.27	3.82	4.01	4.21	3.69	3.90	4.12
ENGINEERING/ADMINISTRATION	26.69	24.21	25.17	26.68	23.15	24.80	26.67	22.02	24.46	26.66
CONTINGENCIES	52.12	43.75	46.91	52.09	41.67	45.70	52.06	39.63	44.56	52.03
S U B T O T A L	312.73	262.53	281.45	312.55	250.04	274.22	312.38	237.77	267.36	312.17
ACCESS ROAD (ROAD LENGTH 20.0 KM)										
CONSTRUCTION COST	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40
ENGINEERING ADMINSITRATION	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
CONTINEGENCIES	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
S U B T O T A L	5.70	5.70	5.70	5.70	5.70	5.70	5.70	5.70	5.70	5.70
TRANSMISSION LINE SYSTEM (T/L LENGTH 56.0 KM)										
TRANSMISSION LINE	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
CONTINGENCIES	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
S U B T O T A L	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02
T O T A L	320.45	270.25	289.17	320.27	257.76	281.94	320.10	245.49	275.08	319.88
EVALUATION INDICES										
U S D / K W	21015.5	21576.2	21050.9	21157.6	21489.7	21053.8	21343.9	21506.8	21205.9	21678.5
U S D / K W H	4.635	4.727	4.619	4.646	4.685	4.599	4.667	4.658	4.605	4.713

PROJECT NAME : IKMIN
PROJECT ID : 1-022-05-23-0
TYPE : RUN-OF-RIVER

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1	CASE 2	CASE 3	CASE 4	CASE 5	CASE 6
POWER DEVELOPMENT (INST.CAP(MW))	(2.4)	(3.2)	(4.3)	(6.2)	(9.1)	(10.2)
DIVERSION DAM/WEIR	0.78	0.81	0.85	0.87	0.89	0.90
INTAKE (NON-PRESSURE TYPE)	0.13	0.15	0.19	0.25	0.32	0.34
HEADRACE TUNNEL (NON-PRES.)	6.97	6.97	6.97	8.21	9.85	10.70
HEAD TANK	0.11	0.13	0.17	0.21	0.26	0.28
PENSTOCK	0.83	0.87	0.93	1.08	1.28	1.36
(PRESSURE SHAFT)	(0.53)	(0.53)	(0.54)	(0.60)	(0.67)	(0.69)
(STEEL LINER)	(0.30)	(0.34)	(0.39)	(0.48)	(0.61)	(0.67)
POWERHOUSE BUILDING	0.11	0.15	0.21	0.42	0.62	0.69
(SUPER STRUCTURE)	(0.05)	(0.07)	(0.09)	(0.19)	(0.27)	(0.31)
(SUB STRUCTURE)	(0.06)	(0.08)	(0.12)	(0.23)	(0.34)	(0.38)
MISCELLANEOUS CIVIL WORK	0.45	0.45	0.47	0.55	0.66	0.71
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	0.76	1.01	1.36	1.88	2.65	2.92
ENGINEERING/ADMINISTRATION	1.27	1.32	1.39	1.68	2.07	2.24
CONTINGENCIES	2.28	2.38	2.51	3.03	3.72	4.03
S U B T O T A L	13.69	14.25	15.04	18.18	22.31	24.16
ACCESS ROAD (ROAD LENGTH 20.5 KM)						
CONSTRUCTION COST	4.51	4.51	4.51	4.51	4.51	4.51
ENGINEERING ADMINSITRATION	0.36	0.36	0.36	0.36	0.36	0.36
CONTINEGENCIES	0.97	0.97	0.97	0.97	0.97	0.97
S U B T O T A L	5.84	5.84	5.84	5.84	5.84	5.84
TRANSMISSION LINE SYSTEM (T/L LENGTH 40.0 KM)						
TRANSMISSION LINE	0.92	0.92	0.92	0.92	0.92	0.92
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.15	0.15	0.15	0.15	0.15	0.15
CONTINGENCIES	0.20	0.20	0.20	0.20	0.20	0.20
S U B T O T A L	1.54	1.54	1.54	1.54	1.54	1.54
T O T A L	21.08	21.64	22.42	25.56	29.70	31.55
EVALUATION INDICES						
U S D / K W	8813.3	6702.6	5180.0	4126.7	3272.2	3088.8
U S D / K W H	1.431	1.362	1.347	1.365	1.388	1.406

PROJECT NAME : TOQUENG
PROJECT ID : 1-022-05-24-0
TYPE : RESERVOIR

****
* SUMMARY TABLE OF COST ESTIMATE *
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(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(8.7)	(7.9)	(9.2)	(7.6)	(9.2)	(7.2)	(7.6)	(8.1)	(8.6)	(9.1)
STORAGE DAM	109.40	93.40	109.40	88.40	109.40	83.24	87.88	93.71	100.63	109.40
SPILLWAY	12.12	11.37	12.12	11.12	12.12	10.87	11.10	11.39	11.71	12.12
DIVERSION TUNNEL	16.02	16.02	16.02	16.02	16.02	16.02	16.02	16.02	16.02	16.02
INTAKE (PRESSURE TYPE)	0.66	0.61	0.53	0.59	0.50	0.57	0.54	0.52	0.49	0.47
HEADRACE TUNNEL (PRESSURE)	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
SURGE TANK	0.25	0.24	0.24	0.24	0.23	0.23	0.23	0.23	0.23	0.23
PENSTOCK	1.07	1.03	1.12	1.02	1.12	1.00	1.03	1.06	1.09	1.12
(PRESSURE SHAFT)	(0.59)	(0.58)	(0.60)	(0.58)	(0.60)	(0.57)	(0.58)	(0.59)	(0.59)	(0.60)
(STEEL LINER)	(0.48)	(0.45)	(0.52)	(0.44)	(0.52)	(0.43)	(0.45)	(0.47)	(0.49)	(0.52)
POWERHOUSE BUILDING	0.47	0.44	0.48	0.42	0.48	0.40	0.42	0.44	0.45	0.47
(SUPER STRUCTURE)	(0.21)	(0.19)	(0.21)	(0.19)	(0.21)	(0.18)	(0.19)	(0.19)	(0.20)	(0.21)
(SUB STRUCTURE)	(0.26)	(0.24)	(0.27)	(0.23)	(0.26)	(0.22)	(0.23)	(0.24)	(0.25)	(0.26)
MISCELLANEOUS CIVIL WORK	7.05	6.21	7.05	5.94	7.05	5.67	5.91	6.22	6.58	7.04
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	3.00	2.81	3.01	2.73	2.97	2.65	2.71	2.78	2.85	2.92
ENGINEERING/ADMINISTRATION	18.89	16.65	18.88	15.94	18.87	15.21	15.80	16.68	17.64	18.86
CONTINGENCIES	34.00	29.97	33.98	28.69	33.96	27.38	28.55	30.02	31.75	33.94
S U B T O T A L	203.98	179.80	203.87	172.17	203.75	164.29	171.30	180.11	190.50	203.63
ACCESS ROAD (ROAD LENGTH 30.0 KM)										
CONSTRUCTION COST	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60
ENGINEERING ADMINSITRATION	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
CONTINEGENCIES	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43
S U B T O T A L	8.55	8.55	8.55	8.55	8.55	8.55	8.55	8.55	8.55	8.55
TRANSMISSION LINE SYSTEM (T/L LENGTH 36.0 KM)										
TRANSMISSION LINE	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
CONTINGENCIES	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
S U B T O T A L	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42
T O T A L	213.95	189.78	213.84	182.14	213.73	174.26	181.27	190.08	200.47	213.61
EVALUATION INDICES										
U S D / K W	24462.8	24043.6	23208.5	24111.4	23307.2	24140.3	23733.8	23481.5	23392.5	23488.6
U S D / K W H	5.426	5.287	5.114	5.277	5.114	5.257	5.174	5.124	5.108	5.131

PROJECT NAME : DANAC
PROJECT ID : 1-022-05-25-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1 (5.6)	2 (5.1)	3 (5.9)	4 (4.9)	5 (5.8)	6 (4.7)	7 (4.9)	8 (5.2)	9 (5.4)	10 (5.8)
POWER DEVELOPMENT (INST.CAP(MW))										
STORAGE DAM	51.71	43.81	51.71	41.80	51.71	39.49	41.43	43.84	47.33	51.71
SPILLWAY	10.26	9.64	10.26	9.46	10.26	9.26	9.43	9.64	9.92	10.26
DIVERSION TUNNEL	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28
INTAKE (PRESSURE TYPE)	0.46	0.42	0.36	0.41	0.33	0.39	0.37	0.35	0.33	0.31
HEADRACE TUNNEL (PRESSURE)	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
SURGE TANK	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14
PENSTOCK	0.64	0.62	0.67	0.61	0.68	0.60	0.62	0.64	0.66	0.68
(PRESSURE SHAFT)	(0.37)	(0.37)	(0.39)	(0.37)	(0.39)	(0.37)	(0.37)	(0.38)	(0.38)	(0.39)
(STEEL LINER)	(0.26)	(0.25)	(0.28)	(0.24)	(0.29)	(0.24)	(0.25)	(0.26)	(0.27)	(0.29)
POWERHOUSE BUILDING	0.30	0.28	0.31	0.27	0.30	0.26	0.27	0.28	0.29	0.30
(SUPER STRUCTURE)	(0.13)	(0.12)	(0.14)	(0.12)	(0.13)	(0.12)	(0.12)	(0.12)	(0.13)	(0.13)
(SUB STRUCTURE)	(0.17)	(0.15)	(0.17)	(0.15)	(0.17)	(0.14)	(0.15)	(0.15)	(0.16)	(0.17)
MISCELLANEOUS CIVIL WORK	3.74	3.31	3.73	3.20	3.73	3.07	3.18	3.31	3.50	3.73
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	2.00	1.87	2.00	1.82	1.97	1.77	1.81	1.85	1.89	1.94
ENGINEERING/ADMINISTRATION	10.06	8.92	10.05	8.62	10.05	8.28	8.56	8.91	9.41	10.04
CONTINGENCIES	18.11	16.05	18.10	15.52	18.08	14.90	15.41	16.04	16.94	18.07
S U B T O T A L	108.68	96.31	108.58	93.09	108.50	89.41	92.46	96.24	101.66	108.42
ACCESS ROAD (ROAD LENGTH 36.5 KM)										
CONSTRUCTION COST	8.03	8.03	8.03	8.03	8.03	8.03	8.03	8.03	8.03	8.03
ENGINEERING ADMINSITRATION	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
CONTINEGENCIES	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73
S U B T O T A L	10.41	10.41	10.41	10.41	10.41	10.41	10.41	10.41	10.41	10.41
TRANSMISSION LINE SYSTEM (T/L LENGTH 32.0 KM)										
TRANSMISSION LINE	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
CONTINGENCIES	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
S U B T O T A L	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
T O T A L	120.39	108.02	120.29	104.80	120.21	101.12	104.17	107.95	113.36	120.13
EVALUATION INDICES										
U S D / K W	21506.3	21359.4	20506.4	21570.6	20638.6	21737.4	21274.1	20929.1	20806.7	20840.7
U S D / K W H	4.776	4.702	4.521	4.726	4.531	4.739	4.643	4.571	4.547	4.556

PROJECT NAME : AMLUAGAN
PROJECT ID : 1-022-06-26-0
TYPE : RESERVOIR

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* SUMMARY TABLE OF COST ESTIMATE *
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(UNIT : MILLION USD)

ITEM	CASE 1 (7.2)	2 (5.2)	3 (6.1)	4 (7.0)	5 (4.9)	6 (5.8)	7 (6.3)	8 (4.6)	9 (5.5)	10 (6.7)
POWER DEVELOPMENT (INST.CAP(MW))										
STORAGE DAM	122.34	85.06	99.04	122.34	79.59	95.03	122.34	73.60	91.11	122.34
SPILLWAY	11.06	9.51	10.13	11.06	9.24	9.96	11.06	8.95	9.79	11.06
DIVERSION TUNNEL	17.47	17.47	17.47	17.47	17.47	17.47	17.47	17.47	17.47	17.47
INTAKE (PRESSURE TYPE)	0.43	0.47	0.42	0.38	0.45	0.39	0.35	0.42	0.37	0.32
HEADRACE TUNNEL (PRESSURE)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
SURGE TANK	0.19	0.18	0.18	0.18	0.17	0.17	0.17	0.17	0.17	0.16
PENSTOCK	1.21	1.07	1.13	1.20	1.05	1.12	1.19	1.03	1.10	1.18
(PRESSURE SHAFT)	(0.68)	(0.65)	(0.66)	(0.68)	(0.64)	(0.66)	(0.67)	(0.64)	(0.65)	(0.67)
(STEEL LINER)	(0.53)	(0.43)	(0.47)	(0.53)	(0.41)	(0.46)	(0.52)	(0.39)	(0.45)	(0.51)
POWERHOUSE BUILDING	0.38	0.30	0.33	0.37	0.29	0.32	0.36	0.27	0.31	0.35
(SUPER STRUCTURE)	(0.17)	(0.13)	(0.15)	(0.16)	(0.13)	(0.14)	(0.16)	(0.12)	(0.14)	(0.15)
(SUB STRUCTURE)	(0.21)	(0.17)	(0.18)	(0.20)	(0.16)	(0.18)	(0.20)	(0.15)	(0.17)	(0.19)
MISCELLANEOUS CIVIL WORK	7.70	5.75	6.48	7.69	5.46	6.27	7.69	5.14	6.06	7.69
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	2.43	2.07	2.20	2.35	1.97	2.12	2.28	1.88	2.04	2.22
ENGINEERING/ADMINISTRATION	20.51	15.35	17.29	20.49	14.58	16.72	20.48	13.73	16.16	20.46
CONTINGENCIES	36.92	27.63	31.12	36.89	26.24	30.09	36.86	24.71	29.10	36.83
SUB TOTAL	221.54	165.77	186.70	221.31	157.41	180.56	221.15	148.29	174.58	220.98
ACCESS ROAD (ROAD LENGTH 13.0 KM)										
CONSTRUCTION COST	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86
ENGINEERING ADMINSITRATION	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
CONTINEGENCIES	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
SUB TOTAL	3.71	3.71	3.71	3.71	3.71	3.71	3.71	3.71	3.71	3.71
TRANSMISSION LINE SYSTEM (T/L LENGTH 24.0 KM)										
TRANSMISSION LINE	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
CONTINGENCIES	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
SUB TOTAL	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
TOTAL	226.31	170.54	191.47	226.08	162.18	185.33	225.92	153.06	179.35	225.75
EVALUATION INDICES										
USD / KW	31423.5	32501.5	31570.4	32117.8	32977.0	31951.3	32884.0	33361.5	32362.1	33725.1
USD / KWH	6.892	7.027	6.845	6.974	7.070	6.876	7.088	7.090	6.909	7.214

PROJECT NAME : DAMANIT
PROJECT ID : 1-022-06-27-0
TYPE : RUN-OF-RIVER

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1	CASE 2	CASE 3	CASE 4	CASE 5	CASE 6
POWER DEVELOPMENT (INST.CAP(MW))	(1.4)	(1.9)	(2.8)	(3.9)	(5.7)	(6.3)
DIVERSION DAM/WEIR	0.27	0.27	0.28	0.29	0.31	0.31
INTAKE (NON-PRESSURE TYPE)	0.06	0.07	0.08	0.10	0.13	0.13
HEADRACE TUNNEL (NON-PRES.)	2.78	2.78	2.78	2.78	2.78	2.78
HEAD TANK	0.04	0.05	0.07	0.08	0.11	0.11
PENSTOCK	1.87	1.92	2.00	2.11	2.29	2.35
(PRESSURE SHAFT)	(1.21)	(1.21)	(1.21)	(1.21)	(1.21)	(1.21)
(STEEL LINER)	(0.65)	(0.70)	(0.78)	(0.90)	(1.07)	(1.13)
POWERHOUSE BUILDING	0.05	0.07	0.09	0.19	0.28	0.31
(SUPER STRUCTURE)	(0.02)	(0.03)	(0.04)	(0.09)	(0.12)	(0.14)
(SUB STRUCTURE)	(0.03)	(0.04)	(0.05)	(0.11)	(0.16)	(0.17)
MISCELLANEOUS CIVIL WORK	0.25	0.26	0.27	0.28	0.29	0.30
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	0.31	0.42	0.58	0.80	1.12	1.23
ENGINEERING/ADMINISTRATION	0.70	0.73	0.77	0.83	0.91	0.94
CONTINGENCIES	1.27	1.31	1.38	1.49	1.64	1.69
S U B T O T A L	7.60	7.89	8.30	8.96	9.85	10.15
ACCESS ROAD (ROAD LENGTH 30.5 KM)						
CONSTRUCTION COST	6.71	6.71	6.71	6.71	6.71	6.71
ENGINEERING ADMINSITRATION	0.54	0.54	0.54	0.54	0.54	0.54
CONTINEGENCIES	1.45	1.45	1.45	1.45	1.45	1.45
S U B T O T A L	8.70	8.70	8.70	8.70	8.70	8.70
TRANSMISSION LINE SYSTEM (T/L LENGTH 44.0 KM)						
TRANSMISSION LINE	1.01	1.01	1.01	1.01	1.01	1.01
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.16	0.16	0.16	0.16	0.16	0.16
CONTINGENCIES	0.22	0.22	0.22	0.22	0.22	0.22
S U B T O T A L	1.66	1.66	1.66	1.66	1.66	1.66
T O T A L	17.96	18.24	18.66	19.32	20.21	20.51
EVALUATION INDICES						
U S D / K W	12975.7	9480.1	6776.9	4904.9	3527.5	3233.6
U S D / K W H	2.111	1.932	1.769	1.629	1.504	1.479

PROJECT NAME : NAINA
PROJECT ID : 1-022-06-28-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(21.2)	(13.2)	(16.2)	(19.8)	(12.2)	(15.4)	(19.2)	(11.2)	(14.4)	(18.4)
STORAGE DAM	209.14	121.06	151.56	209.14	110.63	144.44	209.14	101.17	137.06	209.14
SPILLWAY	17.45	14.10	15.39	17.45	13.61	15.11	17.45	13.12	14.80	17.45
DIVERSION TUNNEL	17.76	17.76	17.76	17.76	17.76	17.76	17.76	17.76	17.76	17.76
INTAKE (PRESSURE TYPE)	0.82	0.90	0.77	0.66	0.85	0.72	0.61	0.80	0.66	0.55
HEADRACE TUNNEL (PRESSURE)	2.31	2.16	2.15	2.14	2.10	2.09	2.08	2.03	2.02	2.00
SURGE TANK	0.47	0.43	0.43	0.43	0.42	0.41	0.41	0.40	0.39	0.39
PENSTOCK	1.40	1.04	1.19	1.37	1.01	1.17	1.35	0.97	1.13	1.32
(PRESSURE SHAFT)	(0.59)	(0.52)	(0.56)	(0.59)	(0.52)	(0.55)	(0.58)	(0.51)	(0.55)	(0.58)
(STEEL LINER)	(0.81)	(0.52)	(0.64)	(0.78)	(0.49)	(0.61)	(0.77)	(0.46)	(0.59)	(0.75)
POWERHOUSE BUILDING	1.01	0.72	0.82	0.93	0.67	0.78	0.90	0.62	0.74	0.86
(SUPER STRUCTURE)	(0.45)	(0.32)	(0.36)	(0.41)	(0.30)	(0.35)	(0.40)	(0.28)	(0.33)	(0.38)
(SUB STRUCTURE)	(0.56)	(0.40)	(0.45)	(0.52)	(0.37)	(0.43)	(0.50)	(0.35)	(0.41)	(0.48)
MISCELLANEOUS CIVIL WORK	12.52	7.91	9.50	12.49	7.35	9.12	12.49	6.84	8.73	12.47
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	5.64	4.36	4.77	5.21	4.14	4.58	5.04	3.89	4.35	4.83
ENGINEERING/ADMINISTRATION	28.71	21.31	24.85	28.66	19.82	24.32	28.64	18.45	23.46	28.61
CONTINGENCIES	59.45	38.35	45.84	59.25	35.67	44.10	59.17	33.21	42.22	59.08
S U B T O T A L	356.69	230.10	275.04	355.49	214.05	264.61	355.04	199.27	253.32	354.49
ACCESS ROAD (ROAD LENGTH 14.0 KM)										
CONSTRUCTION COST	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08
ENGINEERING ADMINSITRATION	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
CONTINEGENCIES	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
S U B T O T A L	3.99	3.99	3.99	3.99	3.99	3.99	3.99	3.99	3.99	3.99
TRANSMISSION LINE SYSTEM (T/L LENGTH 33.0 KM)										
TRANSMISSION LINE	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
CONTINGENCIES	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
S U B T O T A L	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
T O T A L	362.01	235.42	280.36	360.81	219.37	269.93	360.37	204.59	258.64	359.82
EVALUATION INDICES										
U S D / K W	17058.1	17846.0	17332.6	18229.2	17949.9	17547.8	18762.2	18312.1	17926.2	19545.2
U S D / K W H	3.730	3.792	3.704	3.905	3.778	3.720	3.987	3.806	3.759	4.109

PROJECT NAME : UTIP
PROJECT ID : 1-022-06-29-0
TYPE : RUN-OF-RIVER

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6
POWER DEVELOPMENT (INST.CAP(MW))	(2.6)	(3.6)	(5.0)	(7.0)	(10.3)	(11.4)
DIVERSION DAM/WEIR	0.57	0.60	0.63	0.67	0.72	0.73
INTAKE (NON-PRESSURE TYPE)	0.12	0.14	0.18	0.22	0.29	0.31
HEADRACE TUNNEL (NON-PRES.)	4.80	4.80	4.80	5.29	6.34	6.67
HEAD TANK	0.10	0.12	0.15	0.19	0.24	0.26
PENSTOCK	1.27	1.34	1.43	1.62	1.95	2.05
(PRESSURE SHAFT)	(0.79)	(0.79)	(0.79)	(0.85)	(0.95)	(0.98)
(STEEL LINER)	(0.48)	(0.55)	(0.64)	(0.77)	(1.00)	(1.07)
POWERHOUSE BUILDING	0.11	0.16	0.22	0.44	0.64	0.71
(SUPER STRUCTURE)	(0.05)	(0.07)	(0.10)	(0.19)	(0.28)	(0.32)
(SUB STRUCTURE)	(0.06)	(0.09)	(0.12)	(0.24)	(0.36)	(0.39)
MISCELLANEOUS CIVIL WORK	0.35	0.36	0.37	0.42	0.51	0.54
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	0.75	1.00	1.36	1.67	2.63	2.89
ENGINEERING/ADMINISTRATION	1.01	1.06	1.14	1.34	1.66	1.77
CONTINGENCIES	1.82	1.92	2.06	2.41	3.00	3.19
S U B T O T A L	10.90	11.49	12.34	14.47	17.97	19.11
ACCESS ROAD (ROAD LENGTH 34.0 KM)						
CONSTRUCTION COST	7.48	7.48	7.48	7.48	7.48	7.48
ENGINEERING ADMINSITRATION	0.60	0.60	0.60	0.60	0.60	0.60
CONTINEGENCIES	1.62	1.62	1.62	1.62	1.62	1.62
S U B T O T A L	9.69	9.69	9.69	9.69	9.69	9.69
TRANSMISSION LINE SYSTEM (T/L LENGTH 45.0 KM)						
TRANSMISSION LINE	1.03	1.03	1.03	1.03	1.03	1.03
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.16	0.16	0.16	0.16	0.16	0.16
CONTINGENCIES	0.22	0.22	0.22	0.22	0.22	0.22
S U B T O T A L	1.69	1.69	1.69	1.69	1.69	1.69
T O T A L	22.28	22.87	23.72	25.85	29.36	30.49
EVALUATION INDICES						
U S D / K W	8452.3	6330.6	4737.1	3680.0	2850.6	2666.3
U S D / K W H	1.374	1.289	1.235	1.221	1.213	1.217

PROJECT NAME : KUMANGA
PROJECT ID : 1-022-07-30-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(6.8)	(5.1)	(5.8)	(6.6)	(4.8)	(5.6)	(6.5)	(4.5)	(5.3)	(6.4)
STORAGE DAM	86.02	60.42	69.75	86.02	56.44	66.80	86.02	52.20	63.82	86.02
SPILLWAY	10.44	9.08	9.61	10.44	8.84	9.45	10.44	8.58	9.29	10.44
DIVERSION TUNNEL	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.46	11.46
INTAKE (PRESSURE TYPE)	0.41	0.44	0.39	0.36	0.42	0.37	0.34	0.40	0.35	0.32
HEADRACE TUNNEL (PRESSURE)	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
SURGE TANK	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.15	0.15	0.15
PENSTOCK	0.60	0.52	0.56	0.60	0.51	0.55	0.60	0.50	0.55	0.60
(PRESSURE SHAFT)	(0.34)	(0.31)	(0.33)	(0.34)	(0.31)	(0.33)	(0.34)	(0.31)	(0.32)	(0.34)
(STEEL LINER)	(0.26)	(0.21)	(0.23)	(0.26)	(0.20)	(0.23)	(0.26)	(0.19)	(0.22)	(0.26)
POWERHOUSE BUILDING	0.35	0.29	0.31	0.34	0.27	0.30	0.33	0.26	0.29	0.32
(SUPER STRUCTURE)	(0.16)	(0.13)	(0.14)	(0.15)	(0.12)	(0.13)	(0.15)	(0.12)	(0.13)	(0.14)
(SUB STRUCTURE)	(0.19)	(0.16)	(0.17)	(0.19)	(0.15)	(0.17)	(0.19)	(0.14)	(0.16)	(0.18)
MISCELLANEOUS CIVIL WORK	5.52	4.16	4.66	5.52	3.95	4.50	5.51	3.72	4.34	5.51
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	2.25	1.95	2.06	2.18	1.87	2.00	2.14	1.79	1.92	2.08
ENGINEERING/ADMINISTRATION	14.77	11.17	12.48	14.75	10.61	12.06	14.74	10.00	11.63	14.73
CONTINGENCIES	26.58	20.11	22.47	26.55	19.09	21.71	26.53	17.99	20.94	26.51
SUB TOTAL	159.48	120.69	134.83	159.31	114.54	130.27	159.19	107.97	125.66	159.05
ACCESS ROAD (ROAD LENGTH 10.0 KM)										
CONSTRUCTION COST	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20
ENGINEERING ADMINSITRATION	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
CONTINEGENCIES	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
SUB TOTAL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
TRANSMISSION LINE SYSTEM (T/L LENGTH 40.0 KM)										
TRANSMISSION LINE	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
CONTINGENCIES	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
SUB TOTAL	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54
TOTAL	163.87	125.08	139.22	163.70	118.93	134.66	163.58	112.36	130.05	163.44
EVALUATION INDICES										
USD / KW	24243.1	24436.3	24019.2	24674.0	24555.4	24111.8	25085.9	24746.1	24358.1	25719.2
USD / KWH	5.342	5.321	5.241	5.390	5.312	5.231	5.449	5.310	5.245	5.546

PROJECT NAME : SUYSUYAN
PROJECT ID : 1-022-07-31-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(10.0)	(7.6)	(8.7)	(10.0)	(7.2)	(8.4)	(9.8)	(6.7)	(8.0)	(9.6)
STORAGE DAM	97.04	71.02	80.14	97.04	66.19	76.94	97.04	61.31	74.04	97.04
SPILLWAY	11.66	10.29	10.81	11.66	10.01	10.64	11.66	9.73	10.47	11.66
DIVERSION TUNNEL	13.99	13.99	13.99	13.99	13.99	13.99	13.99	13.99	13.99	13.99
INTAKE (PRESSURE TYPE)	0.55	0.65	0.58	0.52	0.62	0.55	0.49	0.59	0.51	0.45
HEADRACE TUNNEL (PRESSURE)	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
SURGE TANK	0.26	0.26	0.26	0.25	0.25	0.25	0.25	0.24	0.24	0.24
PENSTOCK	0.87	0.74	0.80	0.87	0.73	0.79	0.87	0.71	0.78	0.86
(PRESSURE SHAFT)	(0.46)	(0.43)	(0.44)	(0.46)	(0.42)	(0.44)	(0.46)	(0.42)	(0.44)	(0.46)
(STEEL LINER)	(0.41)	(0.32)	(0.36)	(0.41)	(0.31)	(0.35)	(0.41)	(0.29)	(0.34)	(0.40)
POWERHOUSE BUILDING	0.53	0.44	0.48	0.52	0.42	0.46	0.51	0.39	0.44	0.50
(SUPER STRUCTURE)	(0.24)	(0.19)	(0.21)	(0.23)	(0.19)	(0.20)	(0.23)	(0.18)	(0.20)	(0.22)
(SUB STRUCTURE)	(0.29)	(0.24)	(0.27)	(0.29)	(0.23)	(0.26)	(0.28)	(0.22)	(0.25)	(0.28)
MISCELLANEOUS CIVIL WORK	6.29	4.92	5.40	6.29	4.66	5.23	6.29	4.40	5.07	6.28
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	3.29	2.88	3.05	3.24	2.77	2.96	3.18	2.65	2.86	3.09
ENGINEERING/ADMINISTRATION	16.93	13.26	14.56	16.92	12.57	14.09	16.90	11.87	13.67	16.88
CONTINGENCIES	30.47	23.88	26.20	30.45	22.63	25.37	30.42	21.36	24.60	30.39
S U B T O T A L	182.81	143.25	157.20	182.69	135.76	152.19	182.52	128.17	147.60	182.31
ACCESS ROAD (ROAD LENGTH 13.0 KM)										
CONSTRUCTION COST	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86
ENGINEERING ADMINSITRATION	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
CONTINEGENCIES	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
S U B T O T A L	3.71	3.71	3.71	3.71	3.71	3.71	3.71	3.71	3.71	3.71
TRANSMISSION LINE SYSTEM (T/L LENGTH 46.0 KM)										
TRANSMISSION LINE	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
CONTINGENCIES	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
S U B T O T A L	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72
T O T A L	188.24	148.68	162.62	188.11	141.19	157.62	187.94	133.60	153.02	187.74
EVALUATION INDICES										
U S D / K W	18737.9	19580.7	18757.6	18852.9	19679.1	18839.3	19128.8	19860.6	19088.2	19553.6
U S D / K W H	4.110	4.259	4.090	4.117	4.252	4.084	4.154	4.255	4.107	4.215

PROJECT NAME : DINGRAS
PROJECT ID : 1-037-00-01-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE (UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(6.8)	(4.3)	(5.3)	(6.6)	(4.0)	(5.1)	(6.5)	(3.7)	(4.9)	(6.3)
STORAGE DAM	83.68	45.03	59.90	83.68	40.59	56.73	83.68	36.73	53.61	83.68
SPILLWAY	11.20	8.79	9.81	11.20	8.46	9.62	11.20	8.12	9.42	11.20
DIVERSION TUNNEL	13.92	13.92	13.92	13.92	13.92	13.92	13.92	13.92	13.92	13.92
INTAKE (PRESSURE TYPE)	0.42	0.45	0.39	0.35	0.42	0.37	0.33	0.40	0.34	0.30
HEADRACE TUNNEL (PRESSURE)	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
SURGE TANK	0.17	0.16	0.16	0.16	0.16	0.16	0.15	0.15	0.15	0.15
PENSTOCK	0.93	0.78	0.85	0.92	0.78	0.85	0.92	0.76	0.84	0.92
(PRESSURE SHAFT)	(0.53)	(0.50)	(0.52)	(0.53)	(0.50)	(0.51)	(0.53)	(0.49)	(0.51)	(0.53)
(STEEL LINER)	(0.40)	(0.29)	(0.34)	(0.39)	(0.28)	(0.33)	(0.39)	(0.27)	(0.33)	(0.39)
POWERHOUSE BUILDING	0.37	0.26	0.31	0.35	0.25	0.30	0.35	0.24	0.29	0.34
(SUPER STRUCTURE)	(0.16)	(0.12)	(0.14)	(0.16)	(0.11)	(0.13)	(0.15)	(0.11)	(0.13)	(0.15)
(SUB STRUCTURE)	(0.20)	(0.15)	(0.17)	(0.20)	(0.14)	(0.17)	(0.19)	(0.13)	(0.16)	(0.19)
MISCELLANEOUS CIVIL WORK	5.56	3.50	4.29	5.56	3.26	4.12	5.55	3.04	3.96	5.55
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	2.40	1.90	2.09	2.29	1.82	2.04	2.25	1.74	1.97	2.19
ENGINEERING/ADMINISTRATION	14.90	9.42	11.53	14.87	8.77	11.08	14.86	8.21	10.63	14.85
CONTINGENCIES	26.82	16.95	20.76	26.77	15.79	19.94	26.75	14.77	19.13	26.73
SUB TOTAL	160.90	101.71	124.57	160.60	94.76	119.65	160.49	88.62	114.80	160.36
ACCESS ROAD (ROAD LENGTH 5.5 KM)										
CONSTRUCTION COST	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21
ENGINEERING ADMINSITRATION	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
CONTINEGENCIES	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
SUB TOTAL	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57
TRANSMISSION LINE SYSTEM (T/L LENGTH 16.0 KM)										
TRANSMISSION LINE	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
CONTINGENCIES	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
SUB TOTAL	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
TOTAL	163.29	104.10	126.96	162.99	97.16	122.05	162.89	91.01	117.19	162.75
EVALUATION INDICES										
USD / KW	24160.6	24430.9	23794.1	24842.1	24336.3	23713.0	25156.2	24535.8	23740.6	25632.2
USD / KWH	4.807	4.699	4.636	4.869	4.650	4.595	4.903	4.648	4.568	4.959

PROJECT NAME : VINTAR
PROJECT ID : 1-039-00-01-0
TYPE : RESERVOIR

*** SUMMARY TABLE OF COST ESTIMATE ***

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(2.5)	(1.8)	(2.1)	(2.4)	(1.7)	(2.0)	(2.4)	(1.6)	(2.0)	(2.4)
STORAGE DAM	21.46	14.86	17.74	21.46	13.71	17.20	21.46	12.54	16.58	21.46
SPILLWAY	5.17	4.43	4.76	5.17	4.30	4.70	5.17	4.17	4.63	5.17
DIVERSION TUNNEL	10.07	10.07	10.07	10.07	10.07	10.07	10.07	10.07	10.07	10.07
INTAKE (PRESSURE TYPE)	0.28	0.30	0.27	0.25	0.29	0.26	0.23	0.28	0.25	0.22
HEADRACE TUNNEL (PRESSURE)	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
SURGE TANK	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13
PENSTOCK	0.51	0.47	0.49	0.50	0.46	0.48	0.50	0.46	0.48	0.50
(PRESSURE SHAFT)	(0.35)	(0.33)	(0.34)	(0.34)	(0.33)	(0.34)	(0.34)	(0.33)	(0.33)	(0.34)
(STEEL LINER)	(0.16)	(0.14)	(0.15)	(0.16)	(0.13)	(0.15)	(0.16)	(0.13)	(0.14)	(0.16)
POWERHOUSE BUILDING	0.18	0.14	0.16	0.18	0.14	0.16	0.17	0.13	0.15	0.17
(SUPER STRUCTURE)	(0.08)	(0.06)	(0.07)	(0.08)	(0.06)	(0.07)	(0.08)	(0.06)	(0.07)	(0.07)
(SUB STRUCTURE)	(0.10)	(0.08)	(0.09)	(0.10)	(0.08)	(0.09)	(0.10)	(0.07)	(0.08)	(0.09)
MISCELLANEOUS CIVIL WORK	1.91	1.54	1.70	1.91	1.48	1.67	1.91	1.41	1.64	1.91
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	1.45	1.23	1.32	1.40	1.18	1.29	1.37	1.14	1.25	1.34
ENGINEERING/ADMINISTRATION	5.20	4.20	4.64	5.19	4.03	4.55	5.18	3.85	4.45	5.17
CONTINGENCIES	9.36	7.57	8.35	9.34	7.25	8.19	9.33	6.92	8.01	9.31
S U B T O T A L	56.17	45.39	50.07	56.03	43.48	49.15	55.96	41.54	48.08	55.89
ACCESS ROAD (ROAD LENGTH 1.0 KM)										
CONSTRUCTION COST	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
ENGINEERING ADMINSITRATION	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
CONTINEGENCIES	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
S U B T O T A L	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
TRANSMISSION LINE SYSTEM (T/L LENGTH 13.0 KM)										
TRANSMISSION LINE	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
CONTINGENCIES	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
S U B T O T A L	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
T O T A L	57.19	46.42	51.09	57.05	44.50	50.17	56.98	42.56	49.10	56.91
EVALUATION INDICES										
U S D / K W	22904.8	26370.1	24325.9	23327.7	26902.5	24675.0	23659.2	27440.9	25022.2	24019.9
U S D / K W H	4.490	5.054	4.704	4.521	5.122	4.743	4.556	5.189	4.781	4.595

PROJECT NAME : TAMDAGAN
PROJECT ID : 1-039-00-02-0
TYPE : RESERVOIR

*** SUMMARY TABLE OF COST ESTIMATE ***

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(17.4)	(11.5)	(14.1)	(17.0)	(10.2)	(13.1)	(16.5)	(8.4)	(11.5)	(15.2)
STORAGE DAM	113.34	74.09	89.15	113.34	63.36	81.24	113.34	52.24	73.81	113.34
SPILLWAY	15.17	12.57	13.64	15.17	11.72	13.11	15.17	10.74	12.54	15.17
DIVERSION TUNNEL	15.73	15.73	15.73	15.73	15.73	15.73	15.73	15.73	15.73	15.73
INTAKE (PRESSURE TYPE)	0.84	0.93	0.81	0.71	0.85	0.72	0.62	0.74	0.61	0.51
HEADRACE TUNNEL (PRESSURE)	1.51	1.46	1.45	1.44	1.41	1.40	1.38	1.31	1.30	1.28
SURGE TANK	0.44	0.42	0.41	0.41	0.40	0.39	0.39	0.36	0.36	0.35
PENSTOCK	0.78	0.59	0.69	0.80	0.57	0.67	0.80	0.53	0.64	0.78
(PRESSURE SHAFT)	(0.36)	(0.31)	(0.34)	(0.37)	(0.31)	(0.34)	(0.37)	(0.30)	(0.33)	(0.37)
(STEEL LINER)	(0.42)	(0.28)	(0.35)	(0.43)	(0.26)	(0.33)	(0.43)	(0.23)	(0.31)	(0.41)
POWERHOUSE BUILDING	0.89	0.67	0.76	0.86	0.61	0.71	0.83	0.51	0.63	0.76
(SUPER STRUCTURE)	(0.40)	(0.30)	(0.34)	(0.38)	(0.27)	(0.32)	(0.37)	(0.23)	(0.28)	(0.34)
(SUB STRUCTURE)	(0.50)	(0.37)	(0.42)	(0.48)	(0.34)	(0.40)	(0.46)	(0.29)	(0.35)	(0.42)
MISCELLANEOUS CIVIL WORK	7.44	5.32	6.13	7.42	4.73	5.70	7.41	4.11	5.28	7.40
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	5.21	4.24	4.61	5.00	3.92	4.37	4.82	3.43	3.94	4.43
ENGINEERING/ADMINISTRATION	20.17	14.50	16.67	20.11	12.91	15.51	20.06	11.21	14.36	19.97
CONTINGENCIES	36.31	26.10	30.01	36.20	23.24	27.91	36.11	20.18	25.84	35.94
S U B T O T A L	217.83	156.60	180.08	217.17	139.44	167.47	216.67	121.10	155.05	215.66
ACCESS ROAD (ROAD LENGTH 7.0 KM)										
CONSTRUCTION COST	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54
ENGINEERING ADMINSITRATION	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
CONTINEGENCIES	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
S U B T O T A L	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
TRANSMISSION LINE SYSTEM (T/L LENGTH 22.0 KM)										
TRANSMISSION LINE	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
CONTINGENCIES	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
S U B T O T A L	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T O T A L	220.83	159.60	183.08	220.17	142.44	170.47	219.67	124.10	158.05	218.66
EVALUATION INDICES										
U S D / K W	12705.4	13820.2	13012.1	12978.6	13984.8	13015.4	13298.6	14853.2	13726.7	14384.9
U S D / K W H	2.543	2.673	2.551	2.563	2.667	2.524	2.598	2.745	2.593	2.735

PROJECT NAME : BULU-1(ILOCOS)
PROJECT ID : 1-047-00-01-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(20.7)	(13.4)	(16.1)	(19.6)	(11.9)	(14.9)	(18.9)	(9.6)	(12.7)	(16.6)
STORAGE DAM	146.06	90.34	107.20	146.06	76.73	96.43	146.06	62.08	85.85	146.06
SPILLWAY	18.33	15.27	16.30	18.33	14.32	15.65	18.33	13.19	14.97	18.33
DIVERSION TUNNEL	18.18	18.18	18.18	18.18	18.18	18.18	18.18	18.18	18.18	18.18
INTAKE (PRESSURE TYPE)	0.80	0.89	0.72	0.58	0.81	0.64	0.50	0.69	0.52	0.39
HEADRACE TUNNEL (PRESSURE)	1.25	1.17	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16
SURGE TANK	0.36	0.33	0.33	0.32	0.32	0.31	0.30	0.27	0.27	0.26
PENSTOCK	1.64	1.25	1.43	1.64	1.19	1.38	1.62	1.08	1.28	1.51
(PRESSURE SHAFT)	(0.68)	(0.61)	(0.65)	(0.69)	(0.60)	(0.65)	(0.68)	(0.58)	(0.62)	(0.66)
(STEEL LINER)	(0.96)	(0.64)	(0.78)	(0.95)	(0.59)	(0.74)	(0.94)	(0.50)	(0.65)	(0.85)
POWERHOUSE BUILDING	0.94	0.68	0.77	0.88	0.62	0.72	0.84	0.51	0.61	0.73
(SUPER STRUCTURE)	(0.42)	(0.30)	(0.34)	(0.39)	(0.28)	(0.32)	(0.37)	(0.23)	(0.27)	(0.32)
(SUB STRUCTURE)	(0.52)	(0.38)	(0.43)	(0.49)	(0.34)	(0.40)	(0.47)	(0.28)	(0.34)	(0.41)
MISCELLANEOUS CIVIL WORK	9.38	6.41	7.30	9.36	5.67	6.72	9.35	4.86	6.14	9.33
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	5.17	4.07	4.41	4.79	3.77	4.16	4.59	3.21	3.62	4.05
ENGINEERING/ADMINISTRATION	24.70	17.32	19.73	24.65	15.35	18.17	24.62	13.15	16.57	24.56
CONTINGENCIES	45.37	31.18	35.51	45.19	27.62	32.70	45.11	23.68	29.83	44.91
S U B T O T A L	272.19	187.08	213.04	271.13	165.74	196.23	270.66	142.07	179.01	269.48
ACCESS ROAD (ROAD LENGTH 2.0 KM)										
CONSTRUCTION COST	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
ENGINEERING ADMINSITRATION	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
CONTINEGENCIES	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
S U B T O T A L	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
TRANSMISSION LINE SYSTEM (T/L LENGTH 8.0 KM)										
TRANSMISSION LINE	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
CONTINGENCIES	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
S U B T O T A L	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
T O T A L	273.35	188.24	214.20	272.29	166.90	197.38	271.82	143.22	180.17	270.64
EVALUATION INDICES										
U S D / K W	13200.4	14067.7	13272.4	13872.2	14004.6	13204.4	14372.3	14931.0	14226.9	16286.6
U S D / K W H	2.667	2.713	2.600	2.737	2.658	2.554	2.798	2.707	2.643	3.043

PROJECT NAME : BULU-2(ILOCOS)
PROJECT ID : 1-047-00-02-0
TYPE : RUN-OF-RIVER

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6
POWER DEVELOPMENT (INST.CAP(MW))	(0.8)	(1.9)	(2.9)	(4.4)	(7.5)	(11.9)
DIVERSION DAM/WEIR	0.48	0.53	0.56	0.61	0.68	0.76
INTAKE (NON-PRESSURE TYPE)	0.08	0.12	0.16	0.21	0.30	0.41
HEADRACE TUNNEL (NON-PRES.)	3.21	3.21	3.21	3.39	4.36	5.79
HEAD TANK	0.06	0.10	0.14	0.18	0.25	0.33
PENSTOCK	0.50	0.53	0.57	0.64	0.80	1.00
(PRESSURE SHAFT)	(0.35)	(0.35)	(0.35)	(0.37)	(0.44)	(0.50)
(STEEL LINER)	(0.15)	(0.18)	(0.22)	(0.26)	(0.36)	(0.50)
POWERHOUSE BUILDING	0.04	0.09	0.20	0.38	0.74	1.57
(SUPER STRUCTURE)	(0.02)	(0.04)	(0.09)	(0.17)	(0.33)	(0.70)
(SUB STRUCTURE)	(0.02)	(0.05)	(0.11)	(0.21)	(0.41)	(0.87)
MISCELLANEOUS CIVIL WORK	0.22	0.23	0.24	0.27	0.36	0.49
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	0.31	0.65	0.97	1.46	2.33	3.54
ENGINEERING/ADMINISTRATION	0.61	0.68	0.76	0.89	1.23	1.74
CONTINGENCIES	1.10	1.23	1.36	1.61	2.21	3.13
S U B T O T A L	6.61	7.38	8.16	9.64	13.35	18.76
ACCESS ROAD (ROAD LENGTH 15.5 KM)						
CONSTRUCTION COST	3.41	3.41	3.41	3.41	3.41	3.41
ENGINEERING ADMINSITRATION	0.27	0.27	0.27	0.27	0.27	0.27
CONTINEGENCIES	0.74	0.74	0.74	0.74	0.74	0.74
S U B T O T A L	4.42	4.42	4.42	4.42	4.42	4.42
TRANSMISSION LINE SYSTEM (T/L LENGTH 42.0 KM)						
TRANSMISSION LINE	0.97	0.97	0.97	0.97	0.97	0.97
SWITCHYARD AND SUBSTATION	0.27	0.27	0.27	0.27	0.27	0.27
ENGINEERING/ADMINISTRATION	0.15	0.15	0.15	0.15	0.15	0.15
CONTINGENCIES	0.21	0.21	0.21	0.21	0.21	0.21
S U B T O T A L	1.60	1.60	1.60	1.60	1.60	1.60
T O T A L	12.63	13.40	14.18	15.66	19.27	24.78
EVALUATION INDICES						
U S D / K W	15684.4	7222.3	4947.6	3549.9	2581.5	2075.7
U S D / K W H	2.502	1.890	1.669	1.524	1.421	1.417

PROJECT NAME : LUNA
PROJECT ID : 2-005-00-01-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(51.7)	(38.3)	(43.8)	(50.2)	(35.0)	(41.2)	(48.4)	(31.2)	(37.6)	(45.4)
STORAGE DAM	69.41	50.86	57.83	69.41	46.87	55.31	69.41	42.93	52.31	69.41
SPILLWAY	11.76	10.38	10.93	11.76	10.04	10.73	11.76	9.69	10.50	11.76
DIVERSION TUNNEL	7.56	7.56	7.56	7.56	7.56	7.56	7.56	7.56	7.56	7.56
INTAKE (PRESSURE TYPE)	2.33	2.51	2.31	2.14	2.36	2.15	1.97	2.18	1.95	1.76
HEADRACE TUNNEL (PRESSURE)	3.49	3.40	3.38	3.37	3.28	3.26	3.24	3.11	3.09	3.07
SURGE TANK	1.64	1.59	1.58	1.56	1.52	1.50	1.49	1.41	1.39	1.38
PENSTOCK	2.03	1.64	1.80	2.00	1.56	1.74	1.96	1.46	1.65	1.88
(PRESSURE SHAFT)	(0.65)	(0.61)	(0.63)	(0.65)	(0.60)	(0.62)	(0.65)	(0.59)	(0.61)	(0.64)
(STEEL LINER)	(1.37)	(1.03)	(1.18)	(1.35)	(0.96)	(1.12)	(1.31)	(0.87)	(1.04)	(1.24)
POWERHOUSE BUILDING	2.97	2.40	2.62	2.87	2.23	2.48	2.75	2.01	2.27	2.57
(SUPER STRUCTURE)	(1.32)	(1.07)	(1.17)	(1.27)	(0.99)	(1.10)	(1.22)	(0.39)	(1.01)	(1.14)
(SUB STRUCTURE)	(1.65)	(1.33)	(1.46)	(1.59)	(1.24)	(1.38)	(1.53)	(1.12)	(1.26)	(1.43)
MISCELLANEOUS CIVIL WORK	5.06	4.02	4.40	5.03	3.77	4.24	5.01	3.52	4.04	4.97
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	16.16	13.87	14.70	15.59	13.04	13.98	14.98	11.96	12.97	14.05
ENGINEERING/ADMINISTRATION	15.30	12.28	13.39	15.16	11.53	12.87	15.02	10.73	12.22	14.80
CONTINGENCIES	27.54	22.10	24.10	27.29	20.75	23.17	27.03	19.31	21.99	26.64
S U B T O T A L	165.25	132.62	144.62	163.74	124.50	139.00	162.16	115.86	131.93	159.85
ACCESS ROAD (ROAD LENGTH 13.5 KM)										
CONSTRUCTION COST	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97
ENGINEERING ADMINSITRATION	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
CONTINEGENCIES	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
S U B T O T A L	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85
TRANSMISSION LINE SYSTEM (T/L LENGTH 30.0 KM)										
TRANSMISSION LINE	2.04	1.38	2.04	2.04	1.38	2.04	2.04	1.38	1.38	2.04
SWITCHYARD AND SUBSTATION	0.62	0.54	0.62	0.62	0.54	0.62	0.62	0.54	0.54	0.62
ENGINEERING/ADMINISTRATION	0.33	0.24	0.33	0.33	0.24	0.33	0.33	0.24	0.24	0.33
CONTINGENCIES	0.45	0.32	0.45	0.45	0.32	0.45	0.45	0.32	0.32	0.45
S U B T O T A L	3.44	2.48	3.44	3.44	2.48	3.44	3.44	2.48	2.48	3.44
T O T A L	172.54	138.95	151.91	171.03	130.83	146.30	169.46	122.19	138.27	167.14
EVALUATION INDICES										
U S D / K W	3336.8	3630.7	3471.3	3406.5	3733.8	3550.7	3499.8	3920.1	3673.2	3677.4
U S D / K W H	1.404	1.493	1.436	1.413	1.509	1.445	1.429	1.541	1.458	1.466

PROJECT NAME : ZIMIGUI
PROJECT ID : 2-005-00-02-0
TYPE : RESERVOIR

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* SUMMARY TABLE OF COST ESTIMATE *
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(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(64.7)	(40.3)	(51.3)	(62.7)	(36.3)	(48.3)	(60.6)	(32.3)	(45.0)	(58.1)
STORAGE DAM	54.85	31.76	41.97	54.85	28.56	40.15	54.85	25.76	38.40	54.85
SPILLWAY	10.15	8.06	9.07	10.15	7.72	8.90	10.15	7.38	8.72	10.15
DIVERSION TUNNEL	10.07	10.07	10.07	10.07	10.07	10.07	10.07	10.07	10.07	10.07
INTAKE (PRESSURE TYPE)	3.46	3.48	3.35	3.24	3.27	3.13	3.01	3.04	2.90	2.77
HEADRACE TUNNEL (PRESSURE)	5.48	5.32	5.31	5.30	5.14	5.12	5.11	4.94	4.92	4.90
SURGE TANK	2.72	2.61	2.60	2.59	2.49	2.48	2.47	2.36	2.35	2.33
PENSTOCK	2.73	2.15	2.41	2.69	2.06	2.34	2.64	1.96	2.26	2.57
(PRESSURE SHAFT)	(1.08)	(1.01)	(1.04)	(1.08)	(0.99)	(1.03)	(1.07)	(0.98)	(1.02)	(1.06)
(STEEL LINER)	(1.65)	(1.15)	(1.37)	(1.61)	(1.06)	(1.31)	(1.57)	(0.98)	(1.24)	(1.52)
POWERHOUSE BUILDING	5.82	4.19	4.91	5.61	3.84	4.64	5.39	3.49	4.35	5.14
(SUPER STRUCTURE)	(2.59)	(1.86)	(2.18)	(2.49)	(1.71)	(2.06)	(2.40)	(1.55)	(1.93)	(2.29)
(SUB STRUCTURE)	(3.23)	(2.33)	(2.73)	(3.12)	(2.13)	(2.58)	(2.99)	(1.94)	(2.41)	(2.86)
MISCELLANEOUS CIVIL WORK	4.76	3.38	3.98	4.72	3.16	3.84	4.68	2.95	3.70	4.64
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	22.63	17.96	19.99	21.85	16.75	19.02	21.03	15.51	17.98	20.11
ENGINEERING/ADMINISTRATION	15.33	11.12	12.96	15.13	10.38	12.46	14.92	9.68	11.96	14.69
CONTINGENCIES	27.60	20.02	23.32	27.24	18.69	22.43	26.86	17.43	21.52	26.45
S U B T O T A L	165.61	120.13	139.93	163.43	112.12	134.57	161.19	104.56	129.12	158.70
ACCESS ROAD (ROAD LENGTH 10.5 KM)										
CONSTRUCTION COST	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31
ENGINEERING ADMINSITRATION	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
CONTINEGENCIES	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
S U B T O T A L	2.99	2.99	2.99	2.99	2.99	2.99	2.99	2.99	2.99	2.99
TRANSMISSION LINE SYSTEM (T/L LENGTH 21.0 KM)										
TRANSMISSION LINE	1.43	1.43	1.43	1.43	0.97	1.43	1.43	0.97	1.43	1.43
SWITCHYARD AND SUBSTATION	0.62	0.62	0.62	0.62	0.54	0.62	0.62	0.54	0.62	0.62
ENGINEERING/ADMINISTRATION	0.26	0.26	0.26	0.26	0.19	0.26	0.26	0.19	0.26	0.26
CONTINGENCIES	0.35	0.35	0.35	0.35	0.25	0.35	0.35	0.25	0.35	0.35
S U B T O T A L	2.65	2.65	2.65	2.65	1.95	2.65	2.65	1.95	2.65	2.65
T O T A L	171.26	125.77	145.58	169.08	117.06	140.22	166.83	109.50	134.76	164.34
EVALUATION INDICES										
U S D / K W	2648.1	3117.3	2837.1	2696.5	3225.7	2904.9	2753.2	3392.2	2993.1	2829.0
U S D / K W H	1.124	1.292	1.183	1.129	1.315	1.193	1.135	1.355	1.208	1.147

PROJECT NAME : SISIRITAN
PROJECT ID : 2-006-00-01-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(444.8)	(298.5)	(356.6)	(418.3)	(245.8)	(314.2)	(386.3)	(195.9)	(268.6)	(344.7)
STORAGE DAM	102.38	66.80	82.50	102.38	56.08	76.06	102.38	46.93	69.91	102.38
SPILLWAY	19.91	16.75	18.24	19.91	15.63	17.65	19.91	14.52	17.08	19.91
DIVERSION TUNNEL	21.44	21.44	21.44	21.44	21.44	21.44	21.44	21.44	21.44	21.44
INTAKE (PRESSURE TYPE)	16.41	15.46	14.96	14.51	13.63	13.07	12.58	11.60	11.04	10.55
HEADRACE TUNNEL (PRESSURE)	26.69	24.11	24.07	24.03	22.35	22.31	22.25	19.39	19.33	19.25
SURGE TANK	14.22	13.00	12.94	12.89	11.72	11.66	11.59	10.18	10.11	10.04
PENSTOCK	22.99	17.34	19.25	21.32	15.55	17.79	20.22	13.04	15.38	17.93
(PRESSURE SHAFT)	(7.18)	(6.16)	(6.30)	(6.44)	(5.99)	(6.16)	(6.32)	(5.17)	(5.34)	(5.50)
(STEEL LINER)	(15.81)	(11.18)	(12.94)	(14.88)	(9.57)	(11.63)	(13.90)	(7.87)	(10.04)	(12.44)
POWERHOUSE BUILDING	73.20	50.94	57.32	63.70	43.21	50.84	58.28	32.84	40.47	47.71
(SUPER STRUCTURE)	(32.53)	(22.64)	(25.48)	(28.31)	(19.20)	(22.60)	(25.90)	(14.59)	(17.99)	(21.20)
(SUB STRUCTURE)	(40.67)	(28.30)	(31.84)	(35.39)	(24.00)	(28.24)	(32.38)	(18.24)	(22.49)	(26.51)
MISCELLANEOUS CIVIL WORK	14.86	11.29	12.54	14.01	9.98	11.54	13.43	8.50	10.24	12.46
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	113.82	91.37	98.89	106.14	79.84	89.05	97.56	67.75	77.94	86.99
ENGINEERING/ADMINISTRATION	36.65	31.94	33.63	35.47	29.87	32.09	34.48	27.42	30.06	32.96
CONTINGENCIES	92.51	72.09	79.16	87.16	63.86	72.70	82.83	54.72	64.60	76.33
S U B T O T A L	555.09	432.52	474.94	522.95	383.16	436.19	496.96	328.32	387.62	457.97
ACCESS ROAD (ROAD LENGTH 0. KM)										
CONSTRUCTION COST	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
ENGINEERING ADMINSITRATION	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CONTINEGENCIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
S U B T O T A L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TRANSMISSION LINE SYSTEM (T/L LENGTH 44.4 KM)										
TRANSMISSION LINE	9.77	9.77	9.77	9.77	9.77	9.77	9.77	4.93	9.77	9.77
SWITCHYARD AND SUBSTATION	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
ENGINEERING/ADMINISTRATION	1.34	1.34	1.34	1.34	1.34	1.34	1.34	0.74	1.34	1.34
CONTINGENCIES	1.81	1.81	1.81	1.81	1.81	1.81	1.81	0.99	1.81	1.81
S U B T O T A L	13.88	13.88	13.88	13.88	13.88	13.88	13.88	7.62	13.88	13.88
T O T A L	568.97	446.40	488.81	536.83	397.03	450.07	510.84	335.94	401.50	471.85
EVALUATION INDICES										
U S D / K W	1279.0	1495.2	1370.6	1283.4	1615.4	1432.5	1322.3	1715.2	1495.0	1369.0
U S D / K W H	0.736	0.816	0.757	0.714	0.841	0.758	0.706	0.838	0.747	0.691

PROJECT NAME : BUBULAYAN
PROJECT ID : 2-005-00-02-0
TYPE : RESERVOIR

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* SUMMARY TABLE OF COST ESTIMATE *
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(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(577.1)	(487.9)	(528.5)	(575.2)	(470.4)	(516.7)	(571.9)	(451.0)	(501.7)	(564.4)
STORAGE DAM	219.45	184.67	198.34	219.45	176.46	191.81	219.45	168.19	185.45	219.45
SPILLWAY	34.58	32.39	33.26	34.58	31.81	32.86	34.58	31.22	32.44	34.58
DIVERSION TUNNEL	29.35	29.35	29.35	29.35	29.35	29.35	29.35	29.35	29.35	29.35
INTAKE (PRESSURE TYPE)	12.07	13.10	12.29	11.51	12.76	11.83	10.98	12.38	11.35	10.45
HEADRACE TUNNEL (PRESSURE)	26.28	26.04	25.98	25.91	25.70	25.62	25.54	25.26	25.18	25.09
SURGE TANK	9.77	9.72	9.64	9.57	9.54	9.45	9.38	9.31	9.23	9.14
PENSTOCK	34.12	29.09	31.50	34.24	28.34	31.07	34.27	27.49	30.47	34.06
(PRESSURE SHAFT)	(6.80)	(6.48)	(6.65)	(6.82)	(6.45)	(6.64)	(6.83)	(6.41)	(6.62)	(6.82)
(STEEL LINER)	(27.32)	(22.61)	(24.85)	(27.42)	(21.89)	(24.43)	(27.44)	(21.08)	(23.85)	(27.24)
POWERHOUSE BUILDING	58.48	52.07	54.86	57.97	50.50	53.69	57.37	48.72	52.23	56.39
(SUPER STRUCTURE)	(25.99)	(23.14)	(24.38)	(25.77)	(22.44)	(23.86)	(25.50)	(21.65)	(23.21)	(25.06)
(SUB STRUCTURE)	(32.49)	(28.93)	(30.48)	(32.21)	(28.06)	(29.83)	(31.87)	(27.06)	(29.02)	(31.33)
MISCELLANEOUS CIVIL WORK	21.20	18.82	19.76	21.13	18.22	19.28	21.05	17.60	18.79	20.93
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	102.69	94.67	98.00	101.63	92.35	96.17	100.47	89.66	93.88	98.75
ENGINEERING/ADMINISTRATION	41.88	39.46	40.44	41.77	38.83	39.94	41.65	38.13	39.40	41.48
CONTINGENCIES	117.97	105.87	110.68	117.42	102.77	108.22	116.82	99.46	105.55	115.93
S U B T O T A L	707.84	635.25	664.09	704.53	616.62	649.31	700.90	596.77	633.32	695.60
ACCESS ROAD (ROAD LENGTH 2.0 KM)										
CONSTRUCTION COST	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
ENGINEERING ADMINSITRATION	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
CONTINEGENCIES	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
S U B T O T A L	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
TRANSMISSION LINE SYSTEM (T/L LENGTH 56.0 KM)										
TRANSMISSION LINE	25.70	25.70	25.70	25.70	25.70	25.70	25.70	12.32	25.70	25.70
SWITCHYARD AND SUBSTATION	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
ENGINEERING/ADMINISTRATION	3.33	3.33	3.33	3.33	3.33	3.33	3.33	1.66	3.33	3.33
CONTINGENCIES	4.50	4.50	4.50	4.50	4.50	4.50	4.50	2.24	4.50	4.50
S U B T O T A L	34.50	34.50	34.50	34.50	34.50	34.50	34.50	17.18	34.50	34.50
T O T A L	742.91	670.31	699.16	739.60	651.69	684.37	735.96	614.52	668.39	730.67
EVALUATION INDICES										
U S D / K W	1287.3	1373.9	1322.8	1285.8	1385.4	1324.5	1286.8	1362.6	1332.2	1294.7
U S D / K W H	0.427	0.453	0.436	0.424	0.454	0.435	0.423	0.444	0.435	0.423

PROJECT NAME : BULU
PROJECT ID : 2-006-00-03-0
TYPE : RESERVOIR

*** SUMMARY TABLE OF COST ESTIMATE ***

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(408.0)	(304.6)	(349.9)	(404.3)	(287.7)	(338.3)	(398.8)	(271.9)	(325.1)	(389.7)
STORAGE DAM	136.46	101.11	113.85	136.46	94.63	109.57	136.46	89.13	106.02	136.46
SPILLWAY	26.98	23.85	25.05	26.98	23.22	24.67	26.98	22.64	24.32	26.98
DIVERSION TUNNEL	24.37	24.37	24.37	24.37	24.37	24.37	24.37	24.37	24.37	24.37
INTAKE (PRESSURE TYPE)	10.68	11.75	10.91	10.17	11.33	10.46	9.67	10.84	9.90	9.10
HEADRACE TUNNEL (PRESSURE)	15.14	14.96	14.92	14.87	14.66	13.73	13.67	13.42	13.38	13.32
SURGE TANK	8.13	8.09	8.00	7.92	7.86	7.71	7.62	7.53	7.44	7.35
PENSTOCK	13.19	9.91	11.43	13.24	9.56	10.66	12.61	8.72	10.42	12.49
(PRESSURE SHAFT)	(3.28)	(2.91)	(3.11)	(3.30)	(2.89)	(2.65)	(2.83)	(2.45)	(2.64)	(2.83)
(STEEL LINER)	(9.91)	(7.00)	(8.32)	(9.94)	(6.67)	(8.01)	(9.78)	(6.27)	(7.78)	(9.66)
POWERHOUSE BUILDING	45.33	37.10	40.64	44.68	35.39	35.21	39.22	30.12	33.88	38.15
(SUPER STRUCTURE)	(20.15)	(16.49)	(18.06)	(19.86)	(15.73)	(15.65)	(17.43)	(13.39)	(15.06)	(16.96)
(SUB STRUCTURE)	(25.18)	(20.61)	(22.58)	(24.82)	(19.66)	(19.56)	(21.79)	(16.73)	(18.82)	(21.19)
MISCELLANEOUS CIVIL WORK	14.01	11.56	12.46	13.93	11.05	11.82	13.53	10.34	11.49	13.41
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	85.10	74.06	78.69	83.80	71.28	76.53	82.20	68.39	73.98	80.02
ENGINEERING/ADMINISTRATION	34.47	31.33	32.54	34.33	30.62	31.75	33.84	29.66	31.25	33.61
CONTINGENCIES	82.77	69.62	74.57	82.15	66.80	71.29	80.04	63.03	69.29	79.05
S U B T O T A L	496.64	417.69	447.45	492.90	400.79	427.75	480.21	378.20	415.74	474.31
ACCESS ROAD (ROAD LENGTH 4.0 KM)										
CONSTRUCTION COST	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
ENGINEERING ADMINSITRATION	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
CONTINEGENCIES	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
S U B T O T A L	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
TRANSMISSION LINE SYSTEM (T/L LENGTH 65.5 KM)										
TRANSMISSION LINE	14.41	14.41	14.41	14.41	14.41	14.41	14.41	14.41	14.41	14.41
SWITCHYARD AND SUBSTATION	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
ENGINEERING/ADMINISTRATION	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92
CONTINGENCIES	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59
S U B T O T A L	19.88	19.88	19.88	19.88	19.88	19.88	19.88	19.88	19.88	19.88
T O T A L	517.66	438.72	468.47	513.92	421.82	448.78	501.24	399.22	436.77	495.34
EVALUATION INDICES										
U S D / K W	1268.8	1440.2	1338.9	1271.2	1466.0	1326.6	1256.7	1468.4	1343.3	1271.1
U S D / K W H	0.416	0.468	0.436	0.415	0.472	0.429	0.407	0.468	0.430	0.408

PROJECT NAME : NABABARAYAN
PROJECT ID : 2-006-01-04-0
TYPE : RESERVOIR

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* SUMMARY TABLE OF COST ESTIMATE *
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(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(304.0)	(222.4)	(253.7)	(291.5)	(196.6)	(231.3)	(274.1)	(170.7)	(207.7)	(253.7)
STORAGE DAM	143.26	105.09	119.16	143.26	94.88	111.99	143.26	85.24	105.22	143.26
SPILLWAY	24.09	21.23	22.35	24.09	20.37	21.80	24.09	19.48	21.24	24.09
DIVERSION TUNNEL	16.30	16.30	16.30	16.30	16.30	16.30	16.30	16.30	16.30	16.30
INTAKE (PRESSURE TYPE)	8.11	8.55	7.91	7.35	7.83	7.13	6.55	7.07	6.33	5.75
HEADRACE TUNNEL (PRESSURE)	14.54	12.86	12.82	12.78	12.15	12.11	12.06	11.38	11.33	11.28
SURGE TANK	6.38	6.01	5.95	5.90	5.56	5.50	5.45	5.08	5.02	4.97
PENSTOCK	7.56	5.07	5.96	7.01	4.66	5.63	6.81	4.24	5.26	6.52
(PRESSURE SHAFT)	(1.95)	(1.36)	(1.48)	(1.59)	(1.33)	(1.46)	(1.59)	(1.30)	(1.44)	(1.58)
(STEEL LINER)	(5.62)	(3.71)	(4.48)	(5.42)	(3.33)	(4.17)	(5.22)	(2.95)	(3.81)	(4.94)
POWERHOUSE BUILDING	30.17	20.81	22.69	24.86	18.67	20.77	23.22	16.48	18.75	21.38
(SUPER STRUCTURE)	(13.41)	(9.25)	(10.08)	(11.05)	(8.30)	(9.23)	(10.32)	(7.33)	(8.33)	(9.50)
(SUB STRUCTURE)	(16.76)	(11.56)	(12.61)	(13.81)	(10.37)	(11.54)	(12.90)	(9.16)	(10.42)	(11.88)
MISCELLANEOUS CIVIL WORK	12.52	9.80	10.66	12.08	9.02	10.06	11.89	8.26	9.47	11.68
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	65.19	55.18	58.45	62.10	50.38	54.09	58.24	45.38	49.43	53.92
ENGINEERING/ADMINISTRATION	31.92	28.27	29.48	31.28	27.04	28.53	30.86	25.77	27.55	30.40
CONTINGENCIES	72.01	57.83	62.34	69.40	53.37	58.78	67.74	48.94	55.18	65.91
S U B T O T A L	432.04	346.99	374.06	416.40	320.24	352.69	406.46	293.62	331.07	395.43
ACCESS ROAD (ROAD LENGTH 6.0 KM)										
CONSTRUCTION COST	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32
ENGINEERING ADMINSITRATION	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
CONTINEGENCIES	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
S U B T O T A L	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71
TRANSMISSION LINE SYSTEM (T/L LENGTH 75.0 KM)										
TRANSMISSION LINE	16.50	8.32	16.50	16.50	8.32	16.50	16.50	8.32	8.32	16.50
SWITCHYARD AND SUBSTATION	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
ENGINEERING/ADMINISTRATION	2.18	1.16	2.18	2.18	1.16	2.18	2.18	1.16	1.16	2.18
CONTINGENCIES	2.95	1.57	2.95	2.95	1.57	2.95	2.95	1.57	1.57	2.95
S U B T O T A L	22.59	12.01	22.59	22.59	12.01	22.59	22.59	12.01	12.01	22.59
T O T A L	456.34	360.71	398.36	440.70	333.96	376.99	430.76	307.34	344.80	419.73
EVALUATION INDICES										
U S D / K W	1501.3	1622.1	1570.0	1511.8	1699.1	1629.7	1571.7	1800.1	1660.1	1654.1
U S D / K W H	0.618	0.647	0.631	0.610	0.658	0.638	0.619	0.672	0.629	0.631

PROJECT NAME : DIBAGAT
PROJECT ID : 2-006-01-05-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(297.7)	(254.1)	(275.9)	(301.7)	(244.7)	(270.0)	(301.1)	(235.5)	(263.8)	(299.5)
STORAGE DAM	156.43	131.74	140.19	156.43	125.19	135.59	156.43	119.24	130.99	156.43
SPILLWAY	29.28	27.45	28.13	29.28	26.93	27.76	29.28	26.40	27.39	29.28
DIVERSION TUNNEL	15.64	15.64	15.64	15.64	15.64	15.64	15.64	15.64	15.64	15.64
INTAKE (PRESSURE TYPE)	7.68	8.09	7.58	7.12	7.89	7.29	6.77	7.68	7.02	6.45
HEADRACE TUNNEL (PRESSURE)	10.31	10.11	10.09	10.07	9.98	9.96	9.93	9.85	9.82	9.79
SURGE TANK	4.93	4.83	4.79	4.75	4.74	4.69	4.65	4.65	4.60	4.55
PENSTOCK	7.58	6.29	7.11	8.06	6.12	7.08	8.20	5.96	7.02	8.29
(PRESSURE SHAFT)	(1.64)	(1.50)	(1.61)	(1.72)	(1.50)	(1.63)	(1.75)	(1.49)	(1.63)	(1.77)
(STEEL LINER)	(5.94)	(4.78)	(5.50)	(6.33)	(4.62)	(5.45)	(6.45)	(4.47)	(5.39)	(6.52)
POWERHOUSE BUILDING	23.70	21.13	22.30	23.65	20.48	21.85	23.47	19.84	21.37	23.23
(SUPER STRUCTURE)	(10.53)	(9.39)	(9.91)	(10.51)	(9.10)	(9.71)	(10.43)	(8.82)	(9.50)	(10.32)
(SUB STRUCTURE)	(13.16)	(11.74)	(12.39)	(13.14)	(11.38)	(12.14)	(13.04)	(11.02)	(11.87)	(12.91)
MISCELLANEOUS CIVIL WORK	12.79	11.26	11.79	12.75	10.85	11.49	12.72	10.46	11.19	12.68
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	57.67	53.05	54.99	57.17	51.73	54.00	56.63	50.43	52.98	55.99
ENGINEERING/ADMINISTRATION	31.82	29.88	30.58	31.76	29.33	30.19	31.69	28.80	29.79	31.62
CONTINGENCIES	71.61	63.89	66.64	71.34	61.77	65.11	71.08	59.79	63.56	70.80
S U B T O T A L	429.64	383.35	399.82	428.02	370.64	390.64	426.49	358.75	381.37	424.77
ACCESS ROAD (ROAD LENGTH 3.6 KM)										
CONSTRUCTION COST	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
ENGINEERING ADMINSITRATION	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
CONTINEGENCIES	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
S U B T O T A L	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
TRANSMISSION LINE SYSTEM (T/L LENGTH 75.6 KM)										
TRANSMISSION LINE	16.63	16.63	16.63	16.63	16.63	16.63	16.63	16.63	16.63	16.63
SWITCHYARD AND SUBSTATION	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
ENGINEERING/ADMINISTRATION	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20
CONTINGENCIES	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97
S U B T O T A L	22.76	22.76	22.76	22.76	22.76	22.76	22.76	22.76	22.76	22.76
T O T A L	453.43	407.14	423.61	451.80	394.43	414.43	450.27	382.54	405.16	448.56
EVALUATION INDICES										
U S D / K W	1523.2	1602.2	1535.6	1497.5	1611.6	1535.0	1495.3	1624.1	1536.0	1497.5
U S D / K W H	0.509	0.530	0.509	0.497	0.531	0.506	0.494	0.532	0.504	0.492

PROJECT NAME : AGBULU
PROJECT ID : 2-006-01-06-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(216.4)	(168.6)	(189.2)	(215.5)	(160.6)	(183.5)	(213.4)	(151.9)	(177.2)	(210.1)
STORAGE DAM	91.68	70.17	77.13	91.68	66.12	73.91	91.68	61.58	71.20	91.68
SPILLWAY	24.99	22.50	23.36	24.99	21.98	22.99	24.99	21.39	22.63	24.99
DIVERSION TUNNEL	16.37	16.37	16.37	16.37	16.37	16.37	16.37	16.37	16.37	16.37
INTAKE (PRESSURE TYPE)	5.81	6.48	5.97	5.54	6.28	5.71	5.26	6.05	5.45	4.97
HEADRACE TUNNEL (PRESSURE)	8.73	8.65	8.63	8.61	8.51	8.48	8.46	8.34	8.31	8.28
SURGE TANK	3.98	3.96	3.93	3.89	3.87	3.83	3.80	3.76	3.72	3.69
PENSTOCK	4.98	3.61	4.26	5.05	3.50	4.21	5.09	3.37	4.14	5.10
(PRESSURE SHAFT)	(1.05)	(0.89)	(0.98)	(1.07)	(0.89)	(0.98)	(1.08)	(0.88)	(0.99)	(1.09)
(STEEL LINER)	(3.93)	(2.72)	(3.28)	(3.99)	(2.61)	(3.22)	(4.01)	(2.49)	(3.15)	(4.02)
POWERHOUSE BUILDING	14.52	12.25	13.21	14.39	11.76	12.84	14.18	11.23	12.43	13.90
(SUPER STRUCTURE)	(6.45)	(5.44)	(5.87)	(6.40)	(5.23)	(5.71)	(6.30)	(4.99)	(5.52)	(6.18)
(SUB STRUCTURE)	(8.07)	(6.80)	(7.34)	(7.99)	(6.54)	(7.13)	(7.88)	(6.24)	(6.90)	(7.72)
MISCELLANEOUS CIVIL WORK	8.55	7.20	7.64	8.53	6.92	7.42	8.49	6.60	7.21	8.45
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	45.20	40.17	42.25	44.72	38.89	41.22	44.02	37.45	40.06	43.15
ENGINEERING/ADMINISTRATION	26.13	23.92	24.74	26.07	23.02	24.37	25.98	22.02	23.94	25.87
CONTINGENCIES	50.19	43.06	45.50	49.97	41.44	44.27	49.66	39.63	43.09	49.29
S U B T O T A L	301.15	258.36	273.01	299.82	248.66	265.63	297.99	237.79	258.56	295.76
ACCESS ROAD (ROAD LENGTH 6.5 KM)										
CONSTRUCTION COST	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43
ENGINEERING ADMINSITRATION	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
CONTINEGENCIES	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
S U B T O T A L	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85
TRANSMISSION LINE SYSTEM (T/L LENGTH 78.6 KM)										
TRANSMISSION LINE	8.72	8.72	8.72	8.72	8.72	8.72	8.72	8.72	8.72	8.72
SWITCHYARD AND SUBSTATION	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
ENGINEERING/ADMINISTRATION	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21
CONTINGENCIES	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63
S U B T O T A L	12.53	12.53	12.53	12.53	12.53	12.53	12.53	12.53	12.53	12.53
T O T A L	315.53	272.74	287.39	314.21	263.04	280.01	312.37	252.18	272.94	310.14
EVALUATION INDICES										
U S D / K W	1458.2	1617.8	1518.6	1457.8	1637.6	1525.9	1464.1	1660.3	1540.4	1476.3
U S D / K W H	0.481	0.529	0.498	0.479	0.532	0.497	0.478	0.535	0.498	0.479

PROJECT NAME : AOAN
PROJECT ID : 2-006-01-07-0
TYPE : RESERVOIR

SUMMARY TABLE OF COST ESTIMATE

(UNIT : MILLION USD)

ITEM	CASE 1	2	3	4	5	6	7	8	9	10
POWER DEVELOPMENT (INST.CAP(MW))	(193.7)	(169.3)	(182.9)	(197.9)	(158.6)	(176.4)	(196.8)	(145.7)	(166.5)	(190.9)
STORAGE DAM	220.60	196.81	205.84	220.60	183.68	195.41	220.60	169.18	185.34	220.60
SPILLWAY	23.37	22.33	22.72	23.37	21.70	22.27	23.37	20.98	21.78	23.37
DIVERSION TUNNEL	11.99	11.99	11.99	11.99	11.99	11.99	11.99	11.99	11.99	11.99
INTAKE (PRESSURE TYPE)	5.29	5.50	5.07	4.63	5.25	4.67	4.09	4.94	4.27	3.60
HEADRACE TUNNEL (PRESSURE)	9.88	9.69	9.67	9.64	9.43	9.41	9.36	9.09	9.06	8.99
SURGE TANK	3.29	3.21	3.19	3.16	3.10	3.07	3.03	2.94	2.91	2.86
PENSTOCK	6.13	5.24	5.87	6.57	5.00	5.83	6.77	4.71	5.65	6.76
(PRESSURE SHAFT)	(1.33)	(1.23)	(1.32)	(1.39)	(1.22)	(1.33)	(1.43)	(1.21)	(1.33)	(1.45)
(STEEL LINER)	(4.81)	(4.01)	(4.56)	(5.18)	(3.78)	(4.50)	(5.34)	(3.50)	(4.32)	(5.31)
POWERHOUSE BUILDING	12.28	11.12	11.70	12.32	10.52	11.28	12.10	9.77	10.67	11.64
(SUPER STRUCTURE)	(5.46)	(4.94)	(5.20)	(5.47)	(4.67)	(5.01)	(5.38)	(4.34)	(4.74)	(5.17)
(SUB STRUCTURE)	(6.82)	(6.18)	(6.50)	(6.84)	(5.84)	(6.27)	(6.72)	(5.43)	(5.93)	(6.47)
MISCELLANEOUS CIVIL WORK	14.64	13.29	13.80	14.61	12.53	13.20	14.56	11.68	12.58	14.49
CONSTRUCTION FACILITIES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
POWER EQUIPMENT	37.89	35.21	36.43	37.67	33.63	35.23	36.88	31.63	33.52	35.47
ENGINEERING/ADMINISTRATION	32.80	31.21	31.83	32.76	30.27	31.10	32.67	29.18	30.32	32.52
CONTINGENCIES	75.63	69.12	71.63	75.47	65.42	68.69	75.08	61.22	65.62	74.46
S U B T O T A L	453.79	414.73	429.76	452.79	392.52	412.15	450.49	367.31	393.73	446.75
ACCESS ROAD (ROAD LENGTH 18.0 KM)										
CONSTRUCTION COST	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96
ENGINEERING ADMINSITRATION	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
CONTINEGENCIES	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
S U B T O T A L	5.13	5.13	5.13	5.13	5.13	5.13	5.13	5.13	5.13	5.13
TRANSMISSION LINE SYSTEM (T/L LENGTH 49.0 KM)										
TRANSMISSION LINE	5.44	5.44	5.44	5.44	5.44	5.44	5.44	5.44	5.44	5.44
SWITCHYARD AND SUBSTATION	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
ENGINEERING/ADMINISTRATION	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
CONTINGENCIES	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
S U B T O T A L	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28
T O T A L	467.21	428.14	443.17	466.20	405.93	425.56	463.90	380.72	407.14	460.16
EVALUATION INDICES										
U S D / K W	2412.1	2529.4	2422.8	2356.1	2560.1	2412.3	2356.8	2613.0	2445.5	2410.3
U S D / K W H	1.603	1.662	1.594	1.551	1.660	1.569	1.534	1.663	1.565	1.544