



ภาคผนวก

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่

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ตารางที่ 1 แสดงประมาณการค่าใช้จ่ายและประมาณการรายได้ของโครงการหรือ Cash Flow ของโครงการผลิตไฟฟ้าจากการบำบัดน้ำเสียในโรงงานสกัดน้ำมันปาล์ม

Cash flow	ปีที่ 0	ปีที่ 1	ปีที่ 2	ปีที่ 3	ปีที่ 4	ปีที่ 5	ปีที่ 6
รายรับ							
ผลได้จากการผลิตไฟฟ้า	-	7,765,714.29	8,154,000.00	8,561,700.00	8,989,785.00	9,439,274.25	9,911,237.96
มูลค่าซาก	-	-	-	-	-	-	-
รวมรายรับสุทธิ	0.00	7,765,714.29	8,154,000.00	8,561,700.00	8,989,785.00	9,439,274.25	9,911,237.96
รายจ่าย							
ค่าลงทุน	21,800,000.00	0.00	0.00	0.00	0.00	0.00	0.00
ค่าแรงงาน	-	1,812,000.00	1,902,600.00	1,997,730.00	2,097,616.50	2,202,497.33	2,312,622.19
ค่าวัสดุอุปกรณ์/วัสดุสิ้นเปลือง	-	201,600.00	211,680.00	222,264.00	233,377.20	245,046.06	257,298.36
ค่าสาธารณูปโภค	-	108,000.00	113,400.00	119,070.00	125,023.50	131,274.68	137,838.41
ค่าซ่อมบำรุง	-	500,000.00	525,000.00	551,250.00	578,812.50	607,753.13	638,140.78
รวมรายจ่าย	21,800,000.00	2,621,600.00	2,752,680.00	2,890,314.00	3,034,829.70	3,186,571.19	3,345,899.74
กำไร/ขาดทุน สุทธิ	-21,800,000.00	5,144,114.29	5,401,320.00	5,671,386.00	5,954,955.30	6,252,703.07	6,565,338.22

ตารางที่ 1 (ต่อ)

Cash flow	ปีที่ 7	ปีที่ 8	ปีที่ 9	ปีที่ 10	ปีที่ 11	ปีที่ 12	ปีที่ 13
รายรับ							
ผลได้จากการผลิตไฟฟ้า	10,406,799.86	10,927,139.85	11,473,496.85	12,047,171.69	12,649,530.27	13,282,006.79	13,946,107.13
มูลค่าซาก	-	-	-	-	-	-	-
รวมรายรับสุทธิ	10,406,799.86	10,927,139.85	11,473,496.85	12,047,171.69	12,649,530.27	13,282,006.79	13,946,107.13
รายจ่าย							
ค่าลงทุน	0.00	0.00	0.00	18,162,235.00	0.00	0.00	0.00
ค่าแรงงาน	2,428,253.30	2,549,665.97	2,677,149.26	2,811,006.73	2,951,557.06	3,099,134.92	3,254,091.66
ค่าวัสดุอุปกรณ์/วัสดุสิ้นเปลือง	270,163.28	283,671.45	297,855.02	312,747.77	328,385.16	344,804.41	362,044.64
ค่าสาธารณูปโภค	144,730.33	151,966.85	159,565.19	167,543.45	175,920.62	184,716.65	193,952.48
ค่าซ่อมบำรุง	670,047.82	703,550.21	738,727.72	775,664.11	814,447.31	855,169.68	897,928.16
รวมรายจ่าย	3,513,194.73	3,688,854.47	3,873,297.19	22,229,197.05	4,270,310.15	4,483,825.66	4,708,016.94
กำไร/ขาดทุน สุทธิ	6,893,605.13	7,238,285.39	7,600,199.65	-10,182,025.36	8,379,220.12	8,798,181.13	9,238,090.18

ตารางที่ 1 (ต่อ)

Cash flow	ปีที่ 14	ปีที่ 15	ปีที่ 16	ปีที่ 17	ปีที่ 18	ปีที่ 19	ปีที่ 20
รายรับ							
ผลได้จากการผลิตไฟฟ้า	14,643,412.48	15,375,583.11	16,144,362.26	16,951,580.37	17,799,159.39	18,689,117.36	19,623,573.23
มูลค่าซาก	-	-	-	-	-	-	766,666.67
รวมรายรับสุทธิ	14,643,412.48	15,375,583.11	16,144,362.26	16,951,580.37	17,799,159.39	18,689,117.36	20,390,239.90
รายจ่าย							
ค่าลงทุน	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ค่าแรงงาน	3,416,796.25	3,587,636.06	3,767,017.86	3,955,368.75	4,153,137.19	4,360,794.05	4,578,833.75
ค่าวัสดุอุปกรณ์/วัสดุสิ้นเปลือง	380,146.87	399,154.21	419,111.92	440,067.52	462,070.89	485,174.44	509,433.16
ค่าสาธารณูปโภค	203,650.11	213,832.61	224,524.24	235,750.46	247,537.98	259,914.88	272,910.62
ค่าซ่อมบำรุง	942,824.57	989,965.80	1,039,464.09	1,091,437.29	1,146,009.16	1,203,309.62	1,263,475.10
รวมรายจ่าย	4,943,417.79	5,190,588.68	5,450,118.12	5,722,624.02	6,008,755.22	6,309,192.98	6,624,652.63
กำไร/ขาดทุน สุทธิ	9,699,994.69	10,184,994.43	10,694,244.15	11,228,956.35	11,790,404.17	12,379,924.38	13,765,587.27

ตารางที่ 2 แสดงค่า NPV IRR และ B/C Ratio ณ อัตราคิดลด 4%

ปีที่	ต้นทุน(C)	ผลตอบแทน(B)	กำไร(B-C)	4%	PVของC	PVของB	PVของ(B-C)	กำไร/ขาดทุนสะสม
0	21,800,000.00	0.00	-21,800,000.00	1	21,800,000.00	0.00	-21,800,000.00	-21,800,000.00
1	2,621,600.00	7,765,714.29	5,144,114.29	0.9615	2,520,668.40	7,466,734.29	4,946,065.89	-16,853,934.11
2	2,752,680.00	8,154,000.00	5,401,320.00	0.9246	2,545,127.93	7,539,188.40	4,994,060.47	-11,859,873.64
3	2,890,314.00	8,561,700.00	5,671,386.00	0.8890	2,569,489.15	7,611,351.30	5,041,862.15	-6,818,011.49
4	3,034,829.70	8,989,785.00	5,954,955.30	0.8548	2,594,172.43	7,684,468.22	5,090,295.79	-1,727,715.70
5	3,186,571.19	9,439,274.25	6,252,703.07	0.8219	2,619,042.86	7,758,139.51	5,139,096.65	3,411,380.95
6	3,345,899.74	9,911,237.96	6,565,338.22	0.7903	2,644,264.57	7,832,851.36	5,188,586.79	8,599,967.75
7	3,513,194.73	10,406,799.86	6,893,605.13	0.7599	2,669,676.68	7,908,127.21	5,238,450.54	13,838,418.28
8	3,688,854.47	10,927,139.85	7,238,285.39	0.7307	2,695,445.96	7,984,461.09	5,289,015.13	19,127,433.41
9	3,873,297.19	11,473,496.85	7,600,199.65	0.7026	2,721,378.61	8,061,278.88	5,339,900.28	24,467,333.69
10	22,229,197.05	12,047,171.69	-10,182,025.36	0.6756	15,018,045.53	8,139,069.19	-6,878,976.33	17,588,357.36
11	4,270,310.15	12,649,530.27	8,379,220.12	0.6496	2,773,993.48	8,217,134.87	5,443,141.39	23,031,498.75
12	4,483,825.66	13,282,006.79	8,798,181.13	0.6246	2,800,597.51	8,295,941.44	5,495,343.93	28,526,842.68
13	4,708,016.94	13,946,107.13	9,238,090.18	0.6006	2,827,634.98	8,376,031.94	5,548,396.96	34,075,239.64
14	4,943,417.79	14,643,412.48	9,699,994.69	0.5775	2,854,823.77	8,456,570.71	5,601,746.93	39,676,986.57
15	5,190,588.68	15,375,583.11	10,184,994.43	0.5553	2,882,333.89	8,538,061.30	5,655,727.40	45,332,713.98
16	5,450,118.12	16,144,362.26	10,694,244.15	0.5339	2,909,818.06	8,619,475.01	5,709,656.95	51,042,370.93
17	5,722,624.02	16,951,580.37	11,228,956.35	0.5134	2,937,995.17	8,702,941.36	5,764,946.19	56,807,317.12
18	6,008,755.22	17,799,159.39	11,790,404.17	0.4936	2,965,921.58	8,785,665.08	5,819,743.50	62,627,060.62
19	6,309,192.98	18,689,117.36	12,379,924.38	0.4746	2,994,342.99	8,869,855.10	5,875,512.11	68,502,572.73
20	6,624,652.63	20,390,239.90	13,765,587.27	0.4564	3,023,491.46	9,306,105.49	6,282,614.03	74,785,186.76
รวม	126,647,940.28	257,547,418.81	130,899,478.54		89,368,264.99	164,153,451.75	NPV	74,785,186.76
							B/C	1.84
							IRR	26.30%

ตารางที่ 3 แสดงค่า NPV IRR และ B/C Ratio กรณีที่ต้นทุนของโครงการเพิ่มขึ้น 10% โดยสมมติให้ผลตอบแทนของโครงการคงที่ ณ อัตราคิดลด 4%

ปีที่	ต้นทุน(C)	ต้นทุนเพิ่มขึ้น 10%	ผลตอบแทน(B)	กำไร(B-C)	4%	PVของC	PVของB	PVของ(B-C)	กำไร/ขาดทุน สะสม
0	21,800,000.00	23,980,000.00	0.00	-23,980,000.00	1	23,980,000.00	0.00	-23,980,000.00	-23,980,000.00
1	2,621,600.00	2,883,760.00	7,765,714.29	4,881,954.29	0.9615	2,772,735.24	7,466,734.29	4,693,999.05	-19,286,000.95
2	2,752,680.00	3,027,948.00	8,154,000.00	5,126,052.00	0.9246	2,799,640.72	7,539,188.40	4,739,547.68	-14,546,453.28
3	2,890,314.00	3,179,345.40	8,561,700.00	5,382,354.60	0.8890	2,826,438.06	7,611,351.30	4,784,913.24	-9,761,540.04
4	3,034,829.70	3,338,312.67	8,989,785.00	5,651,472.33	0.8548	2,853,589.67	7,684,468.22	4,830,878.55	-4,930,661.49
5	3,186,571.19	3,505,228.30	9,439,274.25	5,934,045.95	0.8219	2,880,947.14	7,758,139.51	4,877,192.36	-53,469.12
6	3,345,899.74	3,680,489.72	9,911,237.96	6,230,748.24	0.7903	2,908,691.02	7,832,851.36	4,924,160.34	4,870,691.21
7	3,513,194.73	3,864,514.20	10,406,799.86	6,542,285.66	0.7599	2,936,644.34	7,908,127.21	4,971,482.87	9,842,174.08
8	3,688,854.47	4,057,739.91	10,927,139.85	6,869,399.94	0.7307	2,964,990.56	7,984,461.09	5,019,470.54	14,861,644.62
9	3,873,297.19	4,260,626.91	11,473,496.85	7,212,869.94	0.7026	2,993,516.47	8,061,278.88	5,067,762.42	19,929,407.03
10	22,229,197.05	24,452,116.76	12,047,171.69	-12,404,945.07	0.6756	16,519,850.08	8,139,069.19	-8,380,780.89	11,548,626.15
11	4,270,310.15	4,697,341.17	12,649,530.27	7,952,189.10	0.6496	3,051,392.82	8,217,134.87	5,165,742.04	16,714,368.19
12	4,483,825.66	4,932,208.23	13,282,006.79	8,349,798.56	0.6246	3,080,657.26	8,295,941.44	5,215,284.18	21,929,652.37
13	4,708,016.94	5,178,818.64	13,946,107.13	8,767,288.49	0.6006	3,110,398.47	8,376,031.94	5,265,633.47	27,195,285.83
14	4,943,417.79	5,437,759.57	14,643,412.48	9,205,652.91	0.5775	3,140,306.15	8,456,570.71	5,316,264.56	32,511,550.39
15	5,190,588.68	5,709,647.55	15,375,583.11	9,665,935.56	0.5553	3,170,567.28	8,538,061.30	5,367,494.01	37,879,044.41
16	5,450,118.12	5,995,129.93	16,144,362.26	10,149,232.34	0.5339	3,200,799.87	8,619,475.01	5,418,675.14	43,297,719.55
17	5,722,624.02	6,294,886.42	16,951,580.37	10,656,693.95	0.5134	3,231,794.69	8,702,941.36	5,471,146.67	48,768,866.23
18	6,008,755.22	6,609,630.74	17,799,159.39	11,189,528.65	0.4936	3,262,513.74	8,785,665.08	5,523,151.34	54,292,017.57
19	6,309,192.98	6,940,112.28	18,689,117.36	11,749,005.08	0.4746	3,293,777.29	8,869,855.10	5,576,077.81	59,868,095.38
20	6,624,652.63	7,287,117.90	20,390,239.90	13,103,122.00	0.4564	3,325,840.61	9,306,105.49	5,980,264.88	65,848,360.26
รวม	126,647,940.28	139,312,734.30	257,547,418.81	118,234,684.51		98,305,091.49	164,153,451.75	NPV	65,848,360.26
								B/C	1.67
								IRR	22.52%

ตารางที่ 4 แสดงค่า NPV IRR และ B/C Ratio กรณีที่ต้นทุนของโครงการเพิ่มขึ้น 20% โดยสมมติให้ผลตอบแทนของโครงการคงที่ ณ อัตราคิดลด 4%

ปีที่	ต้นทุน(C)	ต้นทุนเพิ่มขึ้น 20%	ผลตอบแทน(B)	กำไร(B-C)	4%	PVของC	PVของB	PVของ(B-C)	กำไร/ขาดทุน สะสม
0	21,800,000.00	26,160,000.00	0.00	-26,160,000.00	1	26,160,000.00	0.00	-26,160,000.00	-26,160,000.00
1	2,621,600.00	3,145,920.00	7,765,714.29	4,619,794.29	0.9615	3,024,802.08	7,466,734.29	4,441,932.21	-21,718,067.79
2	2,752,680.00	3,303,216.00	8,154,000.00	4,850,784.00	0.9246	3,054,153.51	7,539,188.40	4,485,034.89	-17,233,032.91
3	2,890,314.00	3,468,376.80	8,561,700.00	5,093,323.20	0.8890	3,083,386.98	7,611,351.30	4,527,964.32	-12,705,068.58
4	3,034,829.70	3,641,795.64	8,989,785.00	5,347,989.36	0.8548	3,113,006.91	7,684,468.22	4,571,461.30	-8,133,607.28
5	3,186,571.19	3,823,885.42	9,439,274.25	5,615,388.83	0.8219	3,142,851.43	7,758,139.51	4,615,288.08	-3,518,319.20
6	3,345,899.74	4,015,079.69	9,911,237.96	5,896,158.27	0.7903	3,173,117.48	7,832,851.36	4,659,733.88	1,141,414.68
7	3,513,194.73	4,215,833.68	10,406,799.86	6,190,966.18	0.7599	3,203,612.01	7,908,127.21	4,704,515.20	5,845,929.88
8	3,688,854.47	4,426,625.36	10,927,139.85	6,500,514.49	0.7307	3,234,535.15	7,984,461.09	4,749,925.94	10,595,855.82
9	3,873,297.19	4,647,956.63	11,473,496.85	6,825,540.22	0.7026	3,265,654.33	8,061,278.88	4,795,624.56	15,391,480.38
10	22,229,197.05	26,675,036.46	12,047,171.69	-14,627,864.77	0.6756	18,021,654.63	8,139,069.19	-9,882,585.44	5,508,894.94
11	4,270,310.15	5,124,372.18	12,649,530.27	7,525,158.09	0.6496	3,328,792.17	8,217,134.87	4,888,342.69	10,397,237.63
12	4,483,825.66	5,380,590.79	13,282,006.79	7,901,415.99	0.6246	3,360,717.01	8,295,941.44	4,935,224.43	15,332,462.06
13	4,708,016.94	5,649,620.33	13,946,107.13	8,296,486.79	0.6006	3,393,161.97	8,376,031.94	4,982,869.97	20,315,332.03
14	4,943,417.79	5,932,101.35	14,643,412.48	8,711,311.13	0.5775	3,425,788.53	8,456,570.71	5,030,782.18	25,346,114.21
15	5,190,588.68	6,228,706.42	15,375,583.11	9,146,876.69	0.5553	3,458,800.67	8,538,061.30	5,079,260.63	30,425,374.83
16	5,450,118.12	6,540,141.74	16,144,362.26	9,604,220.52	0.5339	3,491,781.67	8,619,475.01	5,127,693.34	35,553,068.17
17	5,722,624.02	6,867,148.83	16,951,580.37	10,084,431.55	0.5134	3,525,594.21	8,702,941.36	5,177,347.16	40,730,415.33
18	6,008,755.22	7,210,506.27	17,799,159.39	10,588,653.13	0.4936	3,559,105.89	8,785,665.08	5,226,559.18	45,956,974.51
19	6,309,192.98	7,571,031.58	18,689,117.36	11,118,085.78	0.4746	3,593,211.59	8,869,855.10	5,276,643.51	51,233,618.03
20	6,624,652.63	7,949,583.16	20,390,239.90	12,440,656.74	0.4564	3,628,189.75	9,306,105.49	5,677,915.74	56,911,533.76
รวม	126,647,940.28	151,977,528.33	257,547,418.81	105,569,890.48		107,241,917.99	164,153,451.75	NPV	56,911,533.76
								B/C	1.53
								IRR	19.24%

ตารางที่ 5 แสดงค่า NPV IRR และ B/C Ratio กรณีที่ต้นทุนของโครงการเพิ่มขึ้น 30% โดยสมมติให้ผลตอบแทนของโครงการคงที่ ณ อัตราคิดลด 4%

ปีที่	ต้นทุน(C)	ต้นทุนเพิ่มขึ้น 30%	ผลตอบแทน(B)	กำไร(B-C)	4%	PVของC	PVของB	PVของ(B-C)	กำไร/ขาดทุน สะสม
0	21,800,000.00	28,340,000.00	0.00	-28,340,000.00	1	28,340,000.00	0.00	-28,340,000.00	-28,340,000.00
1	2,621,600.00	3,408,080.00	7,765,714.29	4,357,634.29	0.9615	3,276,868.92	7,466,734.29	4,189,865.37	-24,150,134.63
2	2,752,680.00	3,578,484.00	8,154,000.00	4,575,516.00	0.9246	3,308,666.31	7,539,188.40	4,230,522.09	-19,919,612.54
3	2,890,314.00	3,757,408.20	8,561,700.00	4,804,291.80	0.8890	3,340,335.89	7,611,351.30	4,271,015.41	-15,648,597.13
4	3,034,829.70	3,945,278.61	8,989,785.00	5,044,506.39	0.8548	3,372,424.16	7,684,468.22	4,312,044.06	-11,336,553.07
5	3,186,571.19	4,142,542.54	9,439,274.25	5,296,731.71	0.8219	3,404,755.71	7,758,139.51	4,353,383.79	-6,983,169.28
6	3,345,899.74	4,349,669.67	9,911,237.96	5,561,568.29	0.7903	3,437,543.94	7,832,851.36	4,395,307.42	-2,587,861.85
7	3,513,194.73	4,567,153.15	10,406,799.86	5,839,646.71	0.7599	3,470,579.68	7,908,127.21	4,437,547.53	1,849,685.68
8	3,688,854.47	4,795,510.81	10,927,139.85	6,131,629.05	0.7307	3,504,079.75	7,984,461.09	4,480,381.34	6,330,067.03
9	3,873,297.19	5,035,286.35	11,473,496.85	6,438,210.50	0.7026	3,537,792.19	8,061,278.88	4,523,486.70	10,853,553.72
10	22,229,197.05	28,897,956.17	12,047,171.69	-16,850,784.48	0.6756	19,523,459.19	8,139,069.19	-11,384,389.99	-530,836.27
11	4,270,310.15	5,551,403.20	12,649,530.27	7,098,127.07	0.6496	3,606,191.52	8,217,134.87	4,610,943.35	4,080,107.07
12	4,483,825.66	5,828,973.36	13,282,006.79	7,453,033.43	0.6246	3,640,776.76	8,295,941.44	4,655,164.68	8,735,271.75
13	4,708,016.94	6,120,422.03	13,946,107.13	7,825,685.10	0.6006	3,675,925.47	8,376,031.94	4,700,106.47	13,435,378.22
14	4,943,417.79	6,426,443.13	14,643,412.48	8,216,969.35	0.5775	3,711,270.91	8,456,570.71	4,745,299.80	18,180,678.02
15	5,190,588.68	6,747,765.29	15,375,583.11	8,627,817.82	0.5553	3,747,034.06	8,538,061.30	4,791,027.24	22,971,705.26
16	5,450,118.12	7,085,153.55	16,144,362.26	9,059,208.71	0.5339	3,782,763.48	8,619,475.01	4,836,711.53	27,808,416.79
17	5,722,624.02	7,439,411.23	16,951,580.37	9,512,169.15	0.5134	3,819,393.72	8,702,941.36	4,883,547.64	32,691,964.43
18	6,008,755.22	7,811,381.79	17,799,159.39	9,987,777.61	0.4936	3,855,698.05	8,785,665.08	4,929,967.03	37,621,931.46
19	6,309,192.98	8,201,950.88	18,689,117.36	10,487,166.49	0.4746	3,892,645.89	8,869,855.10	4,977,209.21	42,599,140.67
20	6,624,652.63	8,612,048.42	20,390,239.90	11,778,191.48	0.4564	3,930,538.90	9,306,105.49	5,375,566.59	47,974,707.26
รวม	126,647,940.28	164,642,322.36	257,547,418.81	92,905,096.46		116,178,744.49	164,153,451.75	NPV	47,974,707.26
								B/C	1.41
								IRR	16.33%

ตารางที่ 6 แสดงค่า NPV IRR และ B/C Ratio กรณีที่ต้นทุนของโครงการเพิ่มขึ้น 40% โดยสมมติให้ผลตอบแทนของโครงการคงที่ ณ อัตราคิดลด 4%

ปีที่	ต้นทุน(C)	ต้นทุนเพิ่มขึ้น 40%	ผลตอบแทน(B)	กำไร(B-C)	4%	PVของC	PVของB	PVของ(B-C)	กำไร/ขาดทุน สะสม
0	21,800,000.00	30,520,000.00	0.00	-30,520,000.00	1	30,520,000.00	0.00	-30,520,000.00	-30,520,000.00
1	2,621,600.00	3,670,240.00	7,765,714.29	4,095,474.29	0.9615	3,528,935.76	7,466,734.29	3,937,798.53	-26,582,201.47
2	2,752,680.00	3,853,752.00	8,154,000.00	4,300,248.00	0.9246	3,563,179.10	7,539,188.40	3,976,009.30	-22,606,192.17
3	2,890,314.00	4,046,439.60	8,561,700.00	4,515,260.40	0.8890	3,597,284.80	7,611,351.30	4,014,066.50	-18,592,125.68
4	3,034,829.70	4,248,761.58	8,989,785.00	4,741,023.42	0.8548	3,631,841.40	7,684,468.22	4,052,626.82	-14,539,498.86
5	3,186,571.19	4,461,199.66	9,439,274.25	4,978,074.59	0.8219	3,666,660.00	7,758,139.51	4,091,479.51	-10,448,019.35
6	3,345,899.74	4,684,259.64	9,911,237.96	5,226,978.32	0.7903	3,701,970.40	7,832,851.36	4,130,880.97	-6,317,138.39
7	3,513,194.73	4,918,472.62	10,406,799.86	5,488,327.24	0.7599	3,737,547.35	7,908,127.21	4,170,579.87	-2,146,558.52
8	3,688,854.47	5,164,396.26	10,927,139.85	5,762,743.60	0.7307	3,773,624.34	7,984,461.09	4,210,836.75	2,064,278.23
9	3,873,297.19	5,422,616.07	11,473,496.85	6,050,880.78	0.7026	3,809,930.05	8,061,278.88	4,251,348.83	6,315,627.06
10	22,229,197.05	31,120,875.87	12,047,171.69	-19,073,704.18	0.6756	21,025,263.74	8,139,069.19	-12,886,194.55	-6,570,567.48
11	4,270,310.15	5,978,434.21	12,649,530.27	6,671,096.06	0.6496	3,883,590.87	8,217,134.87	4,333,544.00	-2,237,023.48
12	4,483,825.66	6,277,355.93	13,282,006.79	7,004,650.86	0.6246	3,920,836.51	8,295,941.44	4,375,104.93	2,138,081.45
13	4,708,016.94	6,591,223.72	13,946,107.13	7,354,883.40	0.6006	3,958,688.97	8,376,031.94	4,417,342.97	6,555,424.42
14	4,943,417.79	6,920,784.91	14,643,412.48	7,722,627.57	0.5775	3,996,753.28	8,456,570.71	4,459,817.42	11,015,241.84
15	5,190,588.68	7,266,824.15	15,375,583.11	8,108,758.95	0.5553	4,035,267.45	8,538,061.30	4,502,793.85	15,518,035.69
16	5,450,118.12	7,630,165.36	16,144,362.26	8,514,196.90	0.5339	4,073,745.29	8,619,475.01	4,545,729.73	20,063,765.41
17	5,722,624.02	8,011,673.63	16,951,580.37	8,939,906.75	0.5134	4,113,193.24	8,702,941.36	4,589,748.12	24,653,513.54
18	6,008,755.22	8,412,257.31	17,799,159.39	9,386,902.08	0.4936	4,152,290.21	8,785,665.08	4,633,374.87	29,286,888.40
19	6,309,192.98	8,832,870.18	18,689,117.36	9,856,247.19	0.4746	4,192,080.19	8,869,855.10	4,677,774.91	33,964,663.32
20	6,624,652.63	9,274,513.69	20,390,239.90	11,115,726.21	0.4564	4,232,888.05	9,306,105.49	5,073,217.44	39,037,880.76
รวม	126,647,940.28	177,307,116.39	257,547,418.81	80,240,302.43		125,115,570.99	164,153,451.75	NPV	39,037,880.76
								B/C	1.31
								IRR	13.70%

ตารางที่ 7 แสดงค่า NPV IRR และ B/C Ratio กรณีที่ต้นทุนของโครงการเพิ่มขึ้น 50% โดยสมมติให้ผลตอบแทนของโครงการคงที่ ณ อัตราคิดลด 4%

ปีที่	ต้นทุน(C)	ต้นทุนเพิ่มขึ้น 50%	ผลตอบแทน(B)	กำไร(B-C)	4%	PVของC	PVของB	PVของ(B-C)	กำไร/ขาดทุน สะสม
0	21,800,000.00	32,700,000.00	0.00	-32,700,000.00	1	32,700,000.00	0.00	-32,700,000.00	-32,700,000.00
1	2,621,600.00	3,932,400.00	7,765,714.29	3,833,314.29	0.9615	3,781,002.60	7,466,734.29	3,685,731.69	-29,014,268.31
2	2,752,680.00	4,129,020.00	8,154,000.00	4,024,980.00	0.9246	3,817,691.89	7,539,188.40	3,721,496.51	-25,292,771.81
3	2,890,314.00	4,335,471.00	8,561,700.00	4,226,229.00	0.8890	3,854,233.72	7,611,351.30	3,757,117.58	-21,535,654.23
4	3,034,829.70	4,552,244.55	8,989,785.00	4,437,540.45	0.8548	3,891,258.64	7,684,468.22	3,793,209.58	-17,742,444.65
5	3,186,571.19	4,779,856.78	9,439,274.25	4,659,417.47	0.8219	3,928,564.29	7,758,139.51	3,829,575.22	-13,912,869.43
6	3,345,899.74	5,018,849.62	9,911,237.96	4,892,388.35	0.7903	3,966,396.85	7,832,851.36	3,866,454.51	-10,046,414.92
7	3,513,194.73	5,269,792.10	10,406,799.86	5,137,007.76	0.7599	4,004,515.01	7,908,127.21	3,903,612.20	-6,142,802.72
8	3,688,854.47	5,533,281.70	10,927,139.85	5,393,858.15	0.7307	4,043,168.94	7,984,461.09	3,941,292.15	-2,201,510.57
9	3,873,297.19	5,809,945.79	11,473,496.85	5,663,551.06	0.7026	4,082,067.91	8,061,278.88	3,979,210.97	1,777,700.41
10	22,229,197.05	33,343,795.58	12,047,171.69	-21,296,623.89	0.6756	22,527,068.29	8,139,069.19	-14,387,999.10	-12,610,298.69
11	4,270,310.15	6,405,465.23	12,649,530.27	6,244,065.04	0.6496	4,160,990.21	8,217,134.87	4,056,144.65	-8,554,154.04
12	4,483,825.66	6,725,738.49	13,282,006.79	6,556,268.29	0.6246	4,200,896.26	8,295,941.44	4,095,045.18	-4,459,108.86
13	4,708,016.94	7,062,025.42	13,946,107.13	6,884,081.71	0.6006	4,241,452.47	8,376,031.94	4,134,579.47	-324,529.39
14	4,943,417.79	7,415,126.69	14,643,412.48	7,228,285.80	0.5775	4,282,235.66	8,456,570.71	4,174,335.05	3,849,805.66
15	5,190,588.68	7,785,883.02	15,375,583.11	7,589,700.08	0.5553	4,323,500.84	8,538,061.30	4,214,560.46	8,064,366.12
16	5,450,118.12	8,175,177.17	16,144,362.26	7,969,185.09	0.5339	4,364,727.09	8,619,475.01	4,254,747.92	12,319,114.03
17	5,722,624.02	8,583,936.03	16,951,580.37	8,367,644.34	0.5134	4,406,992.76	8,702,941.36	4,295,948.61	16,615,062.64
18	6,008,755.22	9,013,132.83	17,799,159.39	8,786,026.56	0.4936	4,448,882.37	8,785,665.08	4,336,782.71	20,951,845.35
19	6,309,192.98	9,463,789.47	18,689,117.36	9,225,327.89	0.4746	4,491,514.48	8,869,855.10	4,378,340.62	25,330,185.97
20	6,624,652.63	9,936,978.95	20,390,239.90	10,453,260.95	0.4564	4,535,237.19	9,306,105.49	4,770,868.30	30,101,054.26
รวม	126,647,940.28	189,971,910.41	257,547,418.81	67,575,508.40		134,052,397.48	164,153,451.75	NPV	30,101,054.26
								B/C	1.22
								IRR	11.27%

ตารางที่ 8 แสดงค่า NPV IRR และ B/C Ratio กรณีที่ต้นทุนของโครงการเพิ่มขึ้น 60% โดยสมมติให้ผลตอบแทนของโครงการคงที่ ณ อัตราคิดลด 4%

ปีที่	ต้นทุน(C)	ต้นทุนเพิ่มขึ้น 60%	ผลตอบแทน(B)	กำไร(B-C)	4%	PVของC	PVของB	-PVของ(B-C)	กำไร/ขาดทุน สะสม
0	21,800,000.00	34,880,000.00	0.00	-34,880,000.00	1	34,880,000.00	0.00	-34,880,000.00	-34,880,000.00
1	2,621,600.00	4,194,560.00	7,765,714.29	3,571,154.29	0.9615	4,033,069.44	7,466,734.29	3,433,664.85	-31,446,335.15
2	2,752,680.00	4,404,288.00	8,154,000.00	3,749,712.00	0.9246	4,072,204.68	7,539,188.40	3,466,983.72	-27,979,351.44
3	2,890,314.00	4,624,502.40	8,561,700.00	3,937,197.60	0.8890	4,111,182.63	7,611,351.30	3,500,168.67	-24,479,182.77
4	3,034,829.70	4,855,727.52	8,989,785.00	4,134,057.48	0.8548	4,150,675.88	7,684,468.22	3,533,792.33	-20,945,390.44
5	3,186,571.19	5,098,513.90	9,439,274.25	4,340,760.35	0.8219	4,190,468.57	7,758,139.51	3,567,670.93	-17,377,719.50
6	3,345,899.74	5,353,439.59	9,911,237.96	4,557,798.37	0.7903	4,230,823.31	7,832,851.36	3,602,028.05	-13,775,691.45
7	3,513,194.73	5,621,111.57	10,406,799.86	4,785,688.29	0.7599	4,271,482.68	7,908,127.21	3,636,644.53	-10,139,046.92
8	3,688,854.47	5,902,167.15	10,927,139.85	5,024,972.70	0.7307	4,312,713.54	7,984,461.09	3,671,747.56	-6,467,299.36
9	3,873,297.19	6,197,275.51	11,473,496.85	5,276,221.34	0.7026	4,354,205.77	8,061,278.88	3,707,073.11	-2,760,226.25
10	22,229,197.05	35,566,715.28	12,047,171.69	-23,519,543.59	0.6756	24,028,872.84	8,139,069.19	-15,889,803.65	-18,650,029.90
11	4,270,310.15	6,832,496.25	12,649,530.27	5,817,034.03	0.6496	4,438,389.56	8,217,134.87	3,778,745.30	-14,871,284.60
12	4,483,825.66	7,174,121.06	13,282,006.79	6,107,885.73	0.6246	4,480,956.01	8,295,941.44	3,814,985.43	-11,056,299.17
13	4,708,016.94	7,532,827.11	13,946,107.13	6,413,280.02	0.6006	4,524,215.96	8,376,031.94	3,851,815.98	-7,204,483.19
14	4,943,417.79	7,909,468.47	14,643,412.48	6,733,944.02	0.5775	4,567,718.04	8,456,570.71	3,888,852.67	-3,315,630.52
15	5,190,588.68	8,304,941.89	15,375,583.11	7,070,641.22	0.5553	4,611,734.23	8,538,061.30	3,926,327.07	610,696.54
16	5,450,118.12	8,720,188.98	16,144,362.26	7,424,173.28	0.5339	4,655,708.90	8,619,475.01	3,963,766.11	4,574,462.66
17	5,722,624.02	9,156,198.43	16,951,580.37	7,795,381.94	0.5134	4,700,792.28	8,702,941.36	4,002,149.09	8,576,611.74
18	6,008,755.22	9,614,008.36	17,799,159.39	8,185,151.04	0.4936	4,745,474.52	8,785,665.08	4,040,190.55	12,616,802.30
19	6,309,192.98	10,094,708.77	18,689,117.36	8,594,408.59	0.4746	4,790,948.78	8,869,855.10	4,078,906.32	16,695,708.61
20	6,624,652.63	10,599,444.21	20,390,239.90	9,790,795.69	0.4564	4,837,586.34	9,306,105.49	4,468,519.15	21,164,227.77
รวม	126,647,940.28	202,636,704.44	257,547,418.81	54,910,714.37		142,989,223.98	164,153,451.75	NPV	21,164,227.77
								B/C	1.15
								IRR	9.00%

ตารางที่ 9 แสดงค่า NPV IRR และ B/C Ratio กรณีที่ต้นทุนของโครงการเพิ่มขึ้น 70% โดยสมมติให้ผลตอบแทนของโครงการคงที่ ณ อัตราคิดลด 4%

ปีที่	ต้นทุน(C)	ต้นทุนเพิ่มขึ้น 70%	ผลตอบแทน(B)	กำไร(B-C)	4%	PVของC	PVของB	PVของ(B-C)	กำไร/ขาดทุน สะสม
0	21,800,000.00	37,060,000.00	0.00	-37,060,000.00	1	37,060,000.00	0.00	-37,060,000.00	-37,060,000.00
1	2,621,600.00	4,456,720.00	7,765,714.29	3,308,994.29	0.9615	4,285,136.28	7,466,734.29	3,181,598.01	-33,878,401.99
2	2,752,680.00	4,679,556.00	8,154,000.00	3,474,444.00	0.9246	4,326,717.48	7,539,188.40	3,212,470.92	-30,665,931.07
3	2,890,314.00	4,913,533.80	8,561,700.00	3,648,166.20	0.8890	4,368,131.55	7,611,351.30	3,243,219.75	-27,422,711.32
4	3,034,829.70	5,159,210.49	8,989,785.00	3,830,574.51	0.8548	4,410,093.13	7,684,468.22	3,274,375.09	-24,148,336.23
5	3,186,571.19	5,417,171.01	9,439,274.25	4,022,103.24	0.8219	4,452,372.86	7,758,139.51	3,305,766.65	-20,842,569.58
6	3,345,899.74	5,688,029.57	9,911,237.96	4,223,208.40	0.7903	4,495,249.77	7,832,851.36	3,337,601.60	-17,504,967.98
7	3,513,194.73	5,972,431.04	10,406,799.86	4,434,368.82	0.7599	4,538,450.35	7,908,127.21	3,369,676.86	-14,135,291.12
8	3,688,854.47	6,271,052.60	10,927,139.85	4,656,087.26	0.7307	4,582,258.13	7,984,461.09	3,402,202.96	-10,733,088.16
9	3,873,297.19	6,584,605.23	11,473,496.85	4,888,891.62	0.7026	4,626,343.63	8,061,278.88	3,434,935.25	-7,298,152.91
10	22,229,197.05	37,789,634.99	12,047,171.69	-25,742,463.30	0.6756	25,530,677.40	8,139,069.19	-17,391,608.20	-24,689,761.11
11	4,270,310.15	7,259,527.26	12,649,530.27	5,390,003.01	0.6496	4,715,788.91	8,217,134.87	3,501,345.96	-21,188,415.15
12	4,483,825.66	7,622,503.62	13,282,006.79	5,659,503.16	0.6246	4,761,015.76	8,295,941.44	3,534,925.68	-17,653,489.48
13	4,708,016.94	8,003,628.81	13,946,107.13	5,942,478.32	0.6006	4,806,979.46	8,376,031.94	3,569,052.48	-14,084,437.00
14	4,943,417.79	8,403,810.25	14,643,412.48	6,239,602.24	0.5775	4,853,200.42	8,456,570.71	3,603,370.29	-10,481,066.71
15	5,190,588.68	8,824,000.76	15,375,583.11	6,551,582.35	0.5553	4,899,967.62	8,538,061.30	3,638,093.68	-6,842,973.03
16	5,450,118.12	9,265,200.80	16,144,362.26	6,879,161.47	0.5339	4,946,690.70	8,619,475.01	3,672,784.31	-3,170,188.72
17	5,722,624.02	9,728,460.84	16,951,580.37	7,223,119.54	0.5134	4,994,591.79	8,702,941.36	3,708,349.57	538,160.85
18	6,008,755.22	10,214,883.88	17,799,159.39	7,584,275.52	0.4936	5,042,066.68	8,785,665.08	3,743,598.39	4,281,759.24
19	6,309,192.98	10,725,628.07	18,689,117.36	7,963,489.29	0.4746	5,090,383.08	8,869,855.10	3,779,472.02	8,061,231.26
20	6,624,652.63	11,261,909.47	20,390,239.90	9,128,330.42	0.4564	5,139,935.48	9,306,105.49	4,166,170.01	12,227,401.27
รวม	126,647,940.28	215,301,498.47	257,547,418.81	42,245,920.34		151,926,050.48	164,153,451.75	NPV	12,227,401.27
								B/C	1.08
								IRR	6.84%

ตารางที่ 10 แสดงค่า NPV IRR และ B/C Ratio กรณีที่ต้นทุนของโครงการเพิ่มขึ้น 80% โดยสมมติให้ผลตอบแทนของโครงการคงที่ ณ อัตราคิดลด 4%

ปีที่	ต้นทุน(C)	ต้นทุนเพิ่มขึ้น 80%	ผลตอบแทน(B)	กำไร(B-C)	4%	PVของC	PVของB	PVของ(B-C)	กำไร/ขาดทุน สะสม
0	21,800,000.00	39,240,000.00	0.00	-39,240,000.00	1	39,240,000.00	0.00	-39,240,000.00	-39,240,000.00
1	2,621,600.00	4,718,880.00	7,765,714.29	3,046,834.29	0.9615	4,537,203.12	7,466,734.29	2,929,531.17	-36,310,468.83
2	2,752,680.00	4,954,824.00	8,154,000.00	3,199,176.00	0.9246	4,581,230.27	7,539,188.40	2,957,958.13	-33,352,510.70
3	2,890,314.00	5,202,565.20	8,561,700.00	3,359,134.80	0.8890	4,625,080.46	7,611,351.30	2,986,270.84	-30,366,239.87
4	3,034,829.70	5,462,693.46	8,989,785.00	3,527,091.54	0.8548	4,669,510.37	7,684,468.22	3,014,957.85	-27,351,282.02
5	3,186,571.19	5,735,828.13	9,439,274.25	3,703,446.12	0.8219	4,714,277.14	7,758,139.51	3,043,862.36	-24,307,419.66
6	3,345,899.74	6,022,619.54	9,911,237.96	3,888,618.42	0.7903	4,759,676.22	7,832,851.36	3,073,175.14	-21,234,244.52
7	3,513,194.73	6,323,750.52	10,406,799.86	4,083,049.34	0.7599	4,805,418.02	7,908,127.21	3,102,709.20	-18,131,535.32
8	3,688,854.47	6,639,938.04	10,927,139.85	4,287,201.81	0.7307	4,851,802.73	7,984,461.09	3,132,658.36	-14,998,876.96
9	3,873,297.19	6,971,934.94	11,473,496.85	4,501,561.90	0.7026	4,898,481.49	8,061,278.88	3,162,797.39	-11,836,079.56
10	22,229,197.05	40,012,554.69	12,047,171.69	-27,965,383.00	0.6756	27,032,481.95	8,139,069.19	-18,893,412.76	-30,729,492.32
11	4,270,310.15	7,686,558.28	12,649,530.27	4,962,972.00	0.6496	4,993,188.26	8,217,134.87	3,223,946.61	-27,505,545.71
12	4,483,825.66	8,070,886.19	13,282,006.79	5,211,120.60	0.6246	5,041,075.51	8,295,941.44	3,254,865.92	-24,250,679.79
13	4,708,016.94	8,474,430.50	13,946,107.13	5,471,676.63	0.6006	5,089,742.96	8,376,031.94	3,286,288.98	-20,964,390.81
14	4,943,417.79	8,898,152.02	14,643,412.48	5,745,260.46	0.5775	5,138,682.79	8,456,570.71	3,317,887.91	-17,646,502.89
15	5,190,588.68	9,343,059.63	15,375,583.11	6,032,523.48	0.5553	5,188,201.01	8,538,061.30	3,349,860.29	-14,296,642.60
16	5,450,118.12	9,810,212.61	16,144,362.26	6,334,149.65	0.5339	5,237,672.51	8,619,475.01	3,381,802.50	-10,914,840.10
17	5,722,624.02	10,300,723.24	16,951,580.37	6,650,857.14	0.5134	5,288,391.31	8,702,941.36	3,414,550.05	-7,500,290.05
18	6,008,755.22	10,815,759.40	17,799,159.39	6,983,399.99	0.4936	5,338,658.84	8,785,665.08	3,447,006.24	-4,053,283.81
19	6,309,192.98	11,356,547.37	18,689,117.36	7,332,569.99	0.4746	5,389,817.38	8,869,855.10	3,480,037.72	-573,246.09
20	6,624,652.63	11,924,374.74	20,390,239.90	8,465,865.16	0.4564	5,442,284.63	9,306,105.49	3,863,820.86	3,290,574.77
รวม	126,647,940.28	227,966,292.50	257,547,418.81	29,581,126.32		160,862,876.98	164,153,451.75	NPV	3,290,574.77
								B/C	1.02
								IRR	4.75%

ตารางที่ 11 แสดงค่า NPV IRR และ B/C Ratio กรณีที่ต้นทุนของโครงการเพิ่มขึ้น 83.68% โดยสมมติให้ผลตอบแทนของโครงการคงที่ ณ อัตราคิดลด 4%

ปีที่	ต้นทุน(C)	ต้นทุนเพิ่มขึ้น 83.68%	รายรับ(B)	กำไร(B-C)	4%	PVของC	PVของB	PVของ(B-C)	กำไร/ขาดทุน สะสม
0	21,800,000.00	40,042,684.60	0.00	-40,042,684.60	1	40,042,684.60	0.00	-40,042,684.60	-40,042,684.60
1	2,621,600.00	4,815,408.35	7,765,714.29	2,950,305.94	0.9615	4,630,015.12	7,466,734.29	2,836,719.16	-37,205,965.44
2	2,752,680.00	5,056,178.76	8,154,000.00	3,097,821.24	0.9246	4,674,942.88	7,539,188.40	2,864,245.52	-34,341,719.92
3	2,890,314.00	5,308,987.70	8,561,700.00	3,252,712.30	0.8890	4,719,690.07	7,611,351.30	2,891,661.23	-31,450,058.69
4	3,034,829.70	5,574,437.09	8,989,785.00	3,415,347.91	0.8548	4,765,028.82	7,684,468.22	2,919,439.40	-28,530,619.29
5	3,186,571.19	5,853,158.94	9,439,274.25	3,586,115.31	0.8219	4,810,711.33	7,758,139.51	2,947,428.17	-25,583,191.12
6	3,345,899.74	6,145,816.89	9,911,237.96	3,765,421.07	0.7903	4,857,039.09	7,832,851.36	2,975,812.28	-22,607,378.85
7	3,513,194.73	6,453,107.73	10,406,799.86	3,953,692.13	0.7599	4,903,716.57	7,908,127.21	3,004,410.65	-19,602,968.20
8	3,688,854.47	6,775,763.12	10,927,139.85	4,151,376.73	0.7307	4,951,050.11	7,984,461.09	3,033,410.98	-16,569,557.22
9	3,873,297.19	7,114,551.27	11,473,496.85	4,358,945.57	0.7026	4,998,683.73	8,061,278.88	3,062,595.16	-13,506,962.06
10	22,229,197.05	40,831,042.50	12,047,171.69	-28,783,870.81	0.6756	27,585,452.31	8,139,069.19	-19,446,383.12	-32,953,345.18
11	4,270,310.15	7,843,792.78	12,649,530.27	4,805,737.49	0.6496	5,095,327.79	8,217,134.87	3,121,807.08	-29,831,538.10
12	4,483,825.66	8,235,982.42	13,282,006.79	5,046,024.37	0.6246	5,144,194.62	8,295,941.44	3,151,746.82	-26,679,791.28
13	4,708,016.94	8,647,781.54	13,946,107.13	5,298,325.59	0.6006	5,193,857.59	8,376,031.94	3,182,174.35	-23,497,616.93
14	4,943,417.79	9,080,170.62	14,643,412.48	5,563,241.86	0.5775	5,243,798.53	8,456,570.71	3,212,772.18	-20,284,844.76
15	5,190,588.68	9,534,179.15	15,375,583.11	5,841,403.96	0.5553	5,294,329.68	8,538,061.30	3,243,731.62	-17,041,113.14
16	5,450,118.12	10,010,888.11	16,144,362.26	6,133,474.16	0.5339	5,344,813.16	8,619,475.01	3,274,661.85	-13,766,451.29
17	5,722,624.02	10,511,432.51	16,951,580.37	6,440,147.86	0.5134	5,396,569.45	8,702,941.36	3,306,371.91	-10,460,079.37
18	6,008,755.22	11,037,004.14	17,799,159.39	6,762,155.26	0.4936	5,447,865.24	8,785,665.08	3,337,799.83	-7,122,279.54
19	6,309,192.98	11,588,854.34	18,689,117.36	7,100,263.02	0.4746	5,500,070.27	8,869,855.10	3,369,784.83	-3,752,494.71
20	6,624,652.63	12,168,297.06	20,390,239.90	8,221,942.84	0.4564	5,553,610.78	9,306,105.49	3,752,494.71	0.00
รวม	126,647,940.28	232,629,519.61	257,547,418.81	24,917,899.20		164,153,451.75	164,153,451.75	NPV	0.00
								B/C	1.00
								IRR	4.00%

ตารางที่ 12 แสดงค่า NPV IRR และ B/C Ratio กรณีที่ผลตอบแทนของโครงการลดลง 10% โดยสมมติให้ต้นทุนของโครงการคงที่ ณ อัตราคิดลด 4%

ปีที่	ต้นทุน(C)	ผลตอบแทน(B)	ผลตอบแทน ลดลง 10%	กำไร(B-C)	4%	PVของC	PVของB	PVของ(B-C)	กำไร/ขาดทุน สะสม
0	21,800,000.00	0.00	0.00	-21,800,000.00	1	21,800,000.00	0.00	-21,800,000.00	-21,800,000.00
1	2,621,600.00	7,765,714.29	6,989,142.86	4,367,542.86	0.9615	2,520,668.40	6,720,060.86	4,199,392.46	-17,600,607.54
2	2,752,680.00	8,154,000.00	7,338,600.00	4,585,920.00	0.9246	2,545,127.93	6,785,269.56	4,240,141.63	-13,360,465.91
3	2,890,314.00	8,561,700.00	7,705,530.00	4,815,216.00	0.8890	2,569,489.15	6,850,216.17	4,280,727.02	-9,079,738.89
4	3,034,829.70	8,989,785.00	8,090,806.50	5,055,976.80	0.8548	2,594,172.43	6,916,021.40	4,321,848.97	-4,757,889.92
5	3,186,571.19	9,439,274.25	8,495,346.83	5,308,775.64	0.8219	2,619,042.86	6,982,325.56	4,363,282.70	-394,607.22
6	3,345,899.74	9,911,237.96	8,920,114.17	5,574,214.42	0.7903	2,644,264.57	7,049,566.23	4,405,301.66	4,010,694.44
7	3,513,194.73	10,406,799.86	9,366,119.87	5,852,925.14	0.7599	2,669,676.68	7,117,314.49	4,447,637.82	8,458,332.25
8	3,688,854.47	10,927,139.85	9,834,425.87	6,145,571.40	0.7307	2,695,445.96	7,186,014.98	4,490,569.02	12,948,901.28
9	3,873,297.19	11,473,496.85	10,326,147.16	6,452,849.97	0.7026	2,721,378.61	7,255,151.00	4,533,772.39	17,482,673.67
10	22,229,197.05	12,047,171.69	10,842,454.52	-11,386,742.53	0.6756	15,018,045.53	7,325,162.27	-7,692,883.25	9,789,790.41
11	4,270,310.15	12,649,530.27	11,384,577.25	7,114,267.09	0.6496	2,773,993.48	7,395,421.38	4,621,427.90	14,411,218.31
12	4,483,825.66	13,282,006.79	11,953,806.11	7,469,980.45	0.6246	2,800,597.51	7,466,347.30	4,665,749.79	19,076,968.10
13	4,708,016.94	13,946,107.13	12,551,496.41	7,843,479.47	0.6006	2,827,634.98	7,538,428.75	4,710,793.77	23,787,761.87
14	4,943,417.79	14,643,412.48	13,179,071.23	8,235,653.44	0.5775	2,854,823.77	7,610,913.64	4,756,089.86	28,543,851.73
15	5,190,588.68	15,375,583.11	13,838,024.80	8,647,436.11	0.5553	2,882,333.89	7,684,255.17	4,801,921.27	33,345,773.01
16	5,450,118.12	16,144,362.26	14,529,926.04	9,079,807.92	0.5339	2,909,818.06	7,757,527.51	4,847,709.45	38,193,482.46
17	5,722,624.02	16,951,580.37	15,256,422.34	9,533,798.32	0.5134	2,937,995.17	7,832,647.23	4,894,652.06	43,088,134.51
18	6,008,755.22	17,799,159.39	16,019,243.45	10,010,488.23	0.4936	2,965,921.58	7,907,098.57	4,941,176.99	48,029,311.50
19	6,309,192.98	18,689,117.36	16,820,205.63	10,511,012.64	0.4746	2,994,342.99	7,982,869.59	4,988,526.60	53,017,838.11
20	6,624,652.63	20,390,239.90	18,351,215.91	11,726,563.28	0.4564	3,023,491.46	8,375,494.94	5,352,003.48	58,369,841.58
รวม	126,647,940.28	257,547,418.81	231,792,676.93	105,144,736.66		89,368,264.99	147,738,106.57	NPV	58,369,841.58
								B/C	1.65
								IRR	22.14%

ตารางที่ 13 แสดงค่า NPV IRR และ B/C Ratio กรณีที่ผลตอบแทนของโครงการลดลง 20% โดยสมมติให้ต้นทุนของโครงการคงที่ ณ อัตราคิดลด 4%

ปีที่	ต้นทุน(C)	ผลตอบแทน(B)	ผลตอบแทน ลดลง 20%	กำไร(B-C)	4%	PVของC	PVของB	PVของ(B-C)	กำไร/ขาดทุน สะสม
0	21,800,000.00	0.00	0.00	-21,800,000.00	1	21,800,000.00	0.00	-21,800,000.00	-21,800,000.00
1	2,621,600.00	7,765,714.29	6,212,571.43	3,590,971.43	0.9615	2,520,668.40	5,973,387.43	3,452,719.03	-18,347,280.97
2	2,752,680.00	8,154,000.00	6,523,200.00	3,770,520.00	0.9246	2,545,127.93	6,031,350.72	3,486,222.79	-14,861,058.18
3	2,890,314.00	8,561,700.00	6,849,360.00	3,959,046.00	0.8890	2,569,489.15	6,089,081.04	3,519,591.89	-11,341,466.29
4	3,034,829.70	8,989,785.00	7,191,828.00	4,156,998.30	0.8548	2,594,172.43	6,147,574.57	3,553,402.15	-7,788,064.14
5	3,186,571.19	9,439,274.25	7,551,419.40	4,364,848.22	0.8219	2,619,042.86	6,206,511.60	3,587,468.75	-4,200,595.39
6	3,345,899.74	9,911,237.96	7,928,990.37	4,583,090.63	0.7903	2,644,264.57	6,266,281.09	3,622,016.52	-578,578.87
7	3,513,194.73	10,406,799.86	8,325,439.89	4,812,245.16	0.7599	2,669,676.68	6,326,501.77	3,656,825.09	3,078,246.23
8	3,688,854.47	10,927,139.85	8,741,711.88	5,052,857.41	0.7307	2,695,445.96	6,387,568.87	3,692,122.91	6,770,369.14
9	3,873,297.19	11,473,496.85	9,178,797.48	5,305,500.29	0.7026	2,721,378.61	6,449,023.11	3,727,644.50	10,498,013.64
10	22,229,197.05	12,047,171.69	9,637,737.35	-12,591,459.70	0.6756	15,018,045.53	6,511,255.35	-8,506,790.17	1,991,223.47
11	4,270,310.15	12,649,530.27	10,119,624.22	5,849,314.06	0.6496	2,773,993.48	6,573,707.89	3,799,714.42	5,790,937.88
12	4,483,825.66	13,282,006.79	10,625,605.43	6,141,779.77	0.6246	2,800,597.51	6,636,753.15	3,836,155.64	9,627,093.53
13	4,708,016.94	13,946,107.13	11,156,885.70	6,448,868.76	0.6006	2,827,634.98	6,700,825.55	3,873,190.58	13,500,284.10
14	4,943,417.79	14,643,412.48	11,714,729.99	6,771,312.19	0.5775	2,854,823.77	6,765,256.57	3,910,432.79	17,410,716.89
15	5,190,588.68	15,375,583.11	12,300,466.49	7,109,877.80	0.5553	2,882,333.89	6,830,449.04	3,948,115.14	21,358,832.04
16	5,450,118.12	16,144,362.26	12,915,489.81	7,465,371.69	0.5339	2,909,818.06	6,895,580.01	3,985,761.95	25,344,593.99
17	5,722,624.02	16,951,580.37	13,561,264.30	7,838,640.28	0.5134	2,937,995.17	6,962,353.09	4,024,357.92	29,368,951.90
18	6,008,755.22	17,799,159.39	14,239,327.51	8,230,572.29	0.4936	2,965,921.58	7,028,532.06	4,062,610.48	33,431,562.39
19	6,309,192.98	18,689,117.36	14,951,293.89	8,642,100.91	0.4746	2,994,342.99	7,095,884.08	4,101,541.09	37,533,103.48
20	6,624,652.63	20,390,239.90	16,312,191.92	9,687,539.29	0.4564	3,023,491.46	7,444,884.39	4,421,392.93	41,954,496.41
รวม	126,647,940.28	257,547,418.81	206,037,935.05	79,389,994.78		89,368,264.99	131,322,761.40	NPV	41,954,496.41
								B/C	1.47
								IRR	17.75%

ตารางที่ 14 แสดงค่า NPV IRR และ B/C Ratio กรณีที่ผลตอบแทนของโครงการลดลง 30% โดยสมมติให้ต้นทุนของโครงการคงที่ ณ อัตราคิดลด 4%

ปีที่	ต้นทุน(C)	ผลตอบแทน(B)	ผลตอบแทน ลดลง 30%	กำไร(B-C)	4%	PVของC	PVของB	PVของ(B-C)	กำไร/ขาดทุน สะสม
0	21,800,000.00	0.00	0.00	-21,800,000.00	1	21,800,000.00	0.00	-21,800,000.00	-21,800,000.00
1	2,621,600.00	7,765,714.29	5,436,000.00	2,814,400.00	0.9615	2,520,668.40	5,226,714.00	2,706,045.60	-19,093,954.40
2	2,752,680.00	8,154,000.00	5,707,800.00	2,955,120.00	0.9246	2,545,127.93	5,277,431.88	2,732,303.95	-16,361,650.45
3	2,890,314.00	8,561,700.00	5,993,190.00	3,102,876.00	0.8890	2,569,489.15	5,327,945.91	2,758,456.76	-13,603,193.68
4	3,034,829.70	8,989,785.00	6,292,849.50	3,258,019.80	0.8548	2,594,172.43	5,379,127.75	2,784,955.33	-10,818,238.36
5	3,186,571.19	9,439,274.25	6,607,491.98	3,420,920.79	0.8219	2,619,042.86	5,430,697.65	2,811,654.80	-8,006,583.56
6	3,345,899.74	9,911,237.96	6,937,866.57	3,591,966.83	0.7903	2,644,264.57	5,482,995.95	2,838,731.39	-5,167,852.18
7	3,513,194.73	10,406,799.86	7,284,759.90	3,771,565.17	0.7599	2,669,676.68	5,535,689.05	2,866,012.37	-2,301,839.80
8	3,688,854.47	10,927,139.85	7,648,997.90	3,960,143.43	0.7307	2,695,445.96	5,589,122.76	2,893,676.80	591,837.00
9	3,873,297.19	11,473,496.85	8,031,447.79	4,158,150.60	0.7026	2,721,378.61	5,642,895.22	2,921,516.61	3,513,353.61
10	22,229,197.05	12,047,171.69	8,433,020.18	-13,796,176.87	0.6756	15,018,045.53	5,697,348.43	-9,320,697.09	-5,807,343.48
11	4,270,310.15	12,649,530.27	8,854,671.19	4,584,361.04	0.6496	2,773,993.48	5,751,994.41	2,978,000.93	-2,829,342.55
12	4,483,825.66	13,282,006.79	9,297,404.75	4,813,579.09	0.6246	2,800,597.51	5,807,159.01	3,006,561.50	177,218.95
13	4,708,016.94	13,946,107.13	9,762,274.99	5,054,258.04	0.6006	2,827,634.98	5,863,222.36	3,035,587.38	3,212,806.33
14	4,943,417.79	14,643,412.48	10,250,388.74	5,306,970.95	0.5775	2,854,823.77	5,919,599.50	3,064,775.72	6,277,582.05
15	5,190,588.68	15,375,583.11	10,762,908.17	5,572,319.49	0.5553	2,882,333.89	5,976,642.91	3,094,309.01	9,371,891.07
16	5,450,118.12	16,144,362.26	11,301,053.58	5,850,935.47	0.5339	2,909,818.06	6,033,632.51	3,123,814.45	12,495,705.51
17	5,722,624.02	16,951,580.37	11,866,106.26	6,143,482.24	0.5134	2,937,995.17	6,092,058.96	3,154,063.78	15,649,769.30
18	6,008,755.22	17,799,159.39	12,459,411.58	6,450,656.35	0.4936	2,965,921.58	6,149,965.55	3,184,043.98	18,833,813.27
19	6,309,192.98	18,689,117.36	13,082,382.15	6,773,189.17	0.4746	2,994,342.99	6,208,898.57	3,214,555.58	22,048,368.85
20	6,624,652.63	20,390,239.90	14,273,167.93	7,648,515.30	0.4564	3,023,491.46	6,514,273.84	3,490,782.38	25,539,151.23
รวม	126,647,940.28	257,547,418.81	180,283,193.17	53,635,252.89		89,368,264.99	114,907,416.22	NPV	25,539,151.23
								B/C	1.29
								IRR	12.98%

ตารางที่ 15 แสดงค่า NPV IRR และ B/C Ratio กรณีที่ผลตอบแทนของโครงการลดลง 40% โดยสมมติให้ต้นทุนของโครงการคงที่ ณ อัตราคิดลด 4%

ปีที่	ต้นทุน(C)	ผลตอบแทน(B)	ผลตอบแทน ลดลง 40%	กำไร(B-C)	4%	PVของC	PVของB	PVของ(B-C)	กำไร/ขาดทุน สะสม
0	21,800,000.00	0.00	0.00	-21,800,000.00	1	21,800,000.00	0.00	-21,800,000.00	-21,800,000.00
1	2,621,600.00	7,765,714.29	4,659,428.57	2,037,828.57	0.9615	2,520,668.40	4,480,040.57	1,959,372.17	-19,840,627.83
2	2,752,680.00	8,154,000.00	4,892,400.00	2,139,720.00	0.9246	2,545,127.93	4,523,513.04	1,978,385.11	-17,862,242.72
3	2,890,314.00	8,561,700.00	5,137,020.00	2,246,706.00	0.8890	2,569,489.15	4,566,810.78	1,997,321.63	-15,864,921.08
4	3,034,829.70	8,989,785.00	5,393,871.00	2,359,041.30	0.8548	2,594,172.43	4,610,680.93	2,016,508.50	-13,848,412.58
5	3,186,571.19	9,439,274.25	5,663,564.55	2,476,993.37	0.8219	2,619,042.86	4,654,883.70	2,035,840.85	-11,812,571.73
6	3,345,899.74	9,911,237.96	5,946,742.78	2,600,843.03	0.7903	2,644,264.57	4,699,710.82	2,055,446.25	-9,757,125.48
7	3,513,194.73	10,406,799.86	6,244,079.92	2,730,885.18	0.7599	2,669,676.68	4,744,876.33	2,075,199.65	-7,681,925.83
8	3,688,854.47	10,927,139.85	6,556,283.91	2,867,429.44	0.7307	2,695,445.96	4,790,676.65	2,095,230.69	-5,586,695.14
9	3,873,297.19	11,473,496.85	6,884,098.11	3,010,800.92	0.7026	2,721,378.61	4,836,767.33	2,115,388.72	-3,471,306.41
10	22,229,197.05	12,047,171.69	7,228,303.01	-15,000,894.04	0.6756	15,018,045.53	4,883,441.52	-10,134,604.01	-13,605,910.42
11	4,270,310.15	12,649,530.27	7,589,718.16	3,319,408.01	0.6496	2,773,993.48	4,930,280.92	2,156,287.44	-11,449,622.98
12	4,483,825.66	13,282,006.79	7,969,204.07	3,485,378.41	0.6246	2,800,597.51	4,977,564.86	2,176,967.36	-9,272,655.63
13	4,708,016.94	13,946,107.13	8,367,664.28	3,659,647.33	0.6006	2,827,634.98	5,025,619.16	2,197,984.19	-7,074,671.44
14	4,943,417.79	14,643,412.48	8,786,047.49	3,842,629.70	0.5775	2,854,823.77	5,073,942.43	2,219,118.65	-4,855,552.79
15	5,190,588.68	15,375,583.11	9,225,349.86	4,034,761.18	0.5553	2,882,333.89	5,122,836.78	2,240,502.88	-2,615,049.90
16	5,450,118.12	16,144,362.26	9,686,617.36	4,236,499.24	0.5339	2,909,818.06	5,171,685.01	2,261,866.95	-353,182.96
17	5,722,624.02	16,951,580.37	10,170,948.22	4,448,324.20	0.5134	2,937,995.17	5,221,764.82	2,283,769.65	1,930,586.69
18	6,008,755.22	17,799,159.39	10,679,495.64	4,670,740.41	0.4936	2,965,921.58	5,271,399.05	2,305,477.47	4,236,064.16
19	6,309,192.98	18,689,117.36	11,213,470.42	4,904,277.43	0.4746	2,994,342.99	5,321,913.06	2,327,570.07	6,563,634.23
20	6,624,652.63	20,390,239.90	12,234,143.94	5,609,491.31	0.4564	3,023,491.46	5,583,663.29	2,560,171.83	9,123,806.06
รวม	126,647,940.28	257,547,418.81	154,528,451.29	27,880,511.01		89,368,264.99	98,492,071.05	NPV	9,123,806.06
								B/C	1.10
								IRR	7.55%

ตารางที่ 16 แสดงค่า NPV IRR และ B/C Ratio กรณีที่ผลตอบแทนของโครงการลดลง 45.56% โดยสมมติให้ต้นทุนของโครงการคงที่ ณ อัตราคิดลด 4%

ปีที่	ต้นทุน(C)	รายรับ(B)	รายรับลดลง 45.56%	กำไร(B-C)	4%	PVของC	PVของB	PVของ(B-C)	กำไร/ขาดทุน สะสม
0	21,800,000.00	0.00	0.00	-21,800,000.00	1	21,800,000.00	0.00	-21,800,000.00	-21,800,000.00
1	2,621,600.00	7,765,714.29	4,227,802.73	1,606,202.73	0.9615	2,520,668.40	4,065,032.33	1,544,363.93	-20,255,636.07
2	2,752,680.00	8,154,000.00	4,439,192.87	1,686,512.87	0.9246	2,545,127.93	4,104,477.73	1,559,349.80	-18,696,286.27
3	2,890,314.00	8,561,700.00	4,661,152.51	1,770,838.51	0.8890	2,569,489.15	4,143,764.59	1,574,275.44	-17,122,010.83
4	3,034,829.70	8,989,785.00	4,894,210.14	1,859,380.44	0.8548	2,594,172.43	4,183,570.83	1,589,398.40	-15,532,612.43
5	3,186,571.19	9,439,274.25	5,138,920.65	1,952,349.46	0.8219	2,619,042.86	4,223,678.88	1,604,636.02	-13,927,976.41
6	3,345,899.74	9,911,237.96	5,395,866.68	2,049,966.94	0.7903	2,644,264.57	4,264,353.44	1,620,088.87	-12,307,887.54
7	3,513,194.73	10,406,799.86	5,665,660.01	2,152,465.28	0.7599	2,669,676.68	4,305,335.04	1,635,658.37	-10,672,229.17
8	3,688,854.47	10,927,139.85	5,948,943.01	2,260,088.55	0.7307	2,695,445.96	4,346,892.66	1,651,446.70	-9,020,782.47
9	3,873,297.19	11,473,496.85	6,246,390.16	2,373,092.97	0.7026	2,721,378.61	4,388,713.73	1,667,335.12	-7,353,447.35
10	22,229,197.05	12,047,171.69	6,558,709.67	-15,670,487.38	0.6756	15,018,045.53	4,431,064.26	-10,586,981.27	-17,940,428.62
11	4,270,310.15	12,649,530.27	6,886,645.16	2,616,335.00	0.6496	2,773,993.48	4,473,564.69	1,699,571.22	-16,240,857.40
12	4,483,825.66	13,282,006.79	7,230,977.41	2,747,151.75	0.6246	2,800,597.51	4,516,468.49	1,715,870.99	-14,524,986.42
13	4,708,016.94	13,946,107.13	7,592,526.29	2,884,509.34	0.6006	2,827,634.98	4,560,071.29	1,732,436.31	-12,792,550.11
14	4,943,417.79	14,643,412.48	7,972,152.60	3,028,734.81	0.5775	2,854,823.77	4,603,918.13	1,749,094.35	-11,043,455.76
15	5,190,588.68	15,375,583.11	8,370,760.23	3,180,171.55	0.5553	2,882,333.89	4,648,283.16	1,765,949.26	-9,277,506.49
16	5,450,118.12	16,144,362.26	8,789,298.24	3,339,180.13	0.5339	2,909,818.06	4,692,606.33	1,782,788.27	-7,494,718.23
17	5,722,624.02	16,951,580.37	9,228,763.15	3,506,139.13	0.5134	2,937,995.17	4,738,047.00	1,800,051.83	-5,694,666.40
18	6,008,755.22	17,799,159.39	9,690,201.31	3,681,446.09	0.4936	2,965,921.58	4,783,083.37	1,817,161.79	-3,877,504.61
19	6,309,192.98	18,689,117.36	10,174,711.38	3,865,518.39	0.4746	2,994,342.99	4,828,918.02	1,834,575.03	-2,042,929.58
20	6,624,652.63	20,390,239.90	11,100,834.88	4,476,182.25	0.4564	3,023,491.46	5,066,421.04	2,042,929.58	0.00
รวม	126,647,940.28	257,547,418.81	140,213,719.10	13,565,778.82		89,368,264.99	89,368,264.99	NPV	0.00
								B/C	1.00
								IRR	4.00%

ตารางที่ 17 แสดงค่า NPV IRR และ B/C Ratio กรณีที่ต้นทุนของโครงการเพิ่มขึ้น 10% และผลตอบแทนของโครงการลดลง 10% พร้อมกัน ณ อัตราคิดลด 4%

ปีที่	ต้นทุน(C)	ต้นทุนเพิ่มขึ้น 10%	ผลตอบแทน(B)	ผลตอบแทนลดลง 10%	กำไร(B-C)	4%	PVของC	PVของB	PVของ(B-C)	กำไร/ขาดทุน สะสม
0	21,800,000.00	23,980,000.00	0.00	0.00	-23,980,000.00	1	23,980,000.00	0.00	-23,980,000.00	-23,980,000.00
1	2,621,600.00	2,883,760.00	7,765,714.29	6,989,142.86	4,105,382.86	0.9615	2,772,735.24	6,720,060.86	3,947,325.62	-20,032,674.38
2	2,752,680.00	3,027,948.00	8,154,000.00	7,338,600.00	4,310,652.00	0.9246	2,799,640.72	6,785,269.56	3,985,628.84	-16,047,045.54
3	2,890,314.00	3,179,345.40	8,561,700.00	7,705,530.00	4,526,184.60	0.8890	2,826,438.06	6,850,216.17	4,023,778.11	-12,023,267.43
4	3,034,829.70	3,338,312.67	8,989,785.00	8,090,806.50	4,752,493.83	0.8548	2,853,589.67	6,916,021.40	4,062,431.73	-7,960,835.71
5	3,186,571.19	3,505,228.30	9,439,274.25	8,495,346.83	4,990,118.52	0.8219	2,880,947.14	6,982,325.56	4,101,378.41	-3,859,457.30
6	3,345,899.74	3,680,489.72	9,911,237.96	8,920,114.17	5,239,624.45	0.7903	2,908,691.02	7,049,566.23	4,140,875.20	281,417.91
7	3,513,194.73	3,864,514.20	10,406,799.86	9,366,119.87	5,501,605.67	0.7599	2,936,644.34	7,117,314.49	4,180,670.15	4,462,088.05
8	3,688,854.47	4,057,739.91	10,927,139.85	9,834,425.87	5,776,685.95	0.7307	2,964,990.56	7,186,014.98	4,221,024.43	8,683,112.48
9	3,873,297.19	4,260,626.91	11,473,496.85	10,326,147.16	6,065,520.25	0.7026	2,993,516.47	7,255,151.00	4,261,634.53	12,944,747.01
10	22,229,197.05	24,452,116.76	12,047,171.69	10,842,454.52	-13,609,662.24	0.6756	16,519,850.08	7,325,162.27	-9,194,687.81	3,750,059.20
11	4,270,310.15	4,697,341.17	12,649,530.27	11,384,577.25	6,687,236.08	0.6496	3,051,392.82	7,395,421.38	4,344,028.56	8,094,087.76
12	4,483,825.66	4,932,208.23	13,282,006.79	11,953,806.11	7,021,597.88	0.6246	3,080,657.26	7,466,347.30	4,385,690.04	12,479,777.79
13	4,708,016.94	5,178,818.64	13,946,107.13	12,551,496.41	7,372,677.77	0.6006	3,110,398.47	7,538,428.75	4,428,030.27	16,907,808.07
14	4,943,417.79	5,437,759.57	14,643,412.48	13,179,071.23	7,741,311.66	0.5775	3,140,306.15	7,610,913.64	4,470,607.49	21,378,415.55
15	5,190,588.68	5,709,647.55	15,375,583.11	13,838,024.80	8,128,377.25	0.5553	3,170,567.28	7,684,255.17	4,513,687.89	25,892,103.44
16	5,450,118.12	5,995,129.93	16,144,362.26	14,529,926.04	8,534,796.11	0.5339	3,200,799.87	7,757,527.51	4,556,727.64	30,448,831.08
17	5,722,624.02	6,294,886.42	16,951,580.37	15,256,422.34	8,961,535.91	0.5134	3,231,794.69	7,832,647.23	4,600,852.54	35,049,683.62
18	6,008,755.22	6,609,630.74	17,799,159.39	16,019,243.45	9,409,612.71	0.4936	3,262,513.74	7,907,098.57	4,644,584.83	39,694,268.45
19	6,309,192.98	6,940,112.28	18,689,117.36	16,820,205.63	9,880,093.35	0.4746	3,293,777.29	7,982,869.59	4,689,092.30	44,383,360.75
20	6,624,652.63	7,287,117.90	20,390,239.90	18,351,215.91	11,064,098.01	0.4564	3,325,840.61	8,375,494.94	5,049,654.33	49,433,015.09
รวม	126,647,940.28	139,312,734.30	257,547,418.81	231,792,676.93	92,479,942.63		98,305,091.49	147,738,106.57	NPV	49,433,015.09
									B/C	1.50
									IRR	18.57%

ตารางที่ 18 แสดงค่า NPV IRR และ B/C Ratio กรณีที่ต้นทุนของโครงการเพิ่มขึ้น 20% และผลตอบแทนของโครงการลดลง 20% พร้อมกัน ณ อัตราคิดลด 4%

ปีที่	ต้นทุน(C)	ต้นทุนเพิ่มขึ้น 20%	ผลตอบแทน(B)	ผลตอบแทนลดลง 20%	กำไร(B-C)	4%	PVของC	PVของB	PVของ(B-C)	กำไร/ขาดทุนสะสม
0	21,800,000.00	26,160,000.00	0.00	0.00	-26,160,000.00	1	26,160,000.00	0.00	-26,160,000.00	-26,160,000.00
1	2,621,600.00	3,145,920.00	7,765,714.29	6,212,571.43	3,066,651.43	0.9615	3,024,802.08	5,973,387.43	2,948,585.35	-23,211,414.65
2	2,752,680.00	3,303,216.00	8,154,000.00	6,523,200.00	3,219,984.00	0.9246	3,054,153.51	6,031,350.72	2,977,197.21	-20,234,217.45
3	2,890,314.00	3,468,376.80	8,561,700.00	6,849,360.00	3,380,983.20	0.8890	3,083,386.98	6,089,081.04	3,005,694.06	-17,228,523.38
4	3,034,829.70	3,641,795.64	8,989,785.00	7,191,828.00	3,550,032.36	0.8548	3,113,006.91	6,147,574.57	3,034,567.66	-14,193,955.72
5	3,186,571.19	3,823,885.42	9,439,274.25	7,551,419.40	3,727,533.98	0.8219	3,142,851.43	6,206,511.60	3,063,660.18	-11,130,295.54
6	3,345,899.74	4,015,079.69	9,911,237.96	7,928,990.37	3,913,910.68	0.7903	3,173,117.48	6,266,281.09	3,093,163.61	-8,037,131.93
7	3,513,194.73	4,215,833.68	10,406,799.86	8,325,439.89	4,109,606.21	0.7599	3,203,612.01	6,326,501.77	3,122,889.76	-4,914,242.17
8	3,688,854.47	4,426,625.36	10,927,139.85	8,741,711.88	4,315,086.52	0.7307	3,234,535.15	6,387,568.87	3,153,033.72	-1,761,208.45
9	3,873,297.19	4,647,956.63	11,473,496.85	9,178,797.48	4,530,840.85	0.7026	3,265,654.33	6,449,023.11	3,183,368.78	1,422,160.33
10	22,229,197.05	26,675,036.46	12,047,171.69	9,637,737.35	-17,037,299.11	0.6756	18,021,654.63	6,511,255.35	-11,510,399.28	-10,088,238.95
11	4,270,310.15	5,124,372.18	12,649,530.27	10,119,624.22	4,995,252.03	0.6496	3,328,792.17	6,573,707.89	3,244,915.72	-6,843,323.23
12	4,483,825.66	5,380,590.79	13,282,006.79	10,625,605.43	5,245,014.64	0.6246	3,360,717.01	6,636,753.15	3,276,036.14	-3,567,287.09
13	4,708,016.94	5,649,620.33	13,946,107.13	11,156,885.70	5,507,265.37	0.6006	3,393,161.97	6,700,825.55	3,307,663.58	-259,623.51
14	4,943,417.79	5,932,101.35	14,643,412.48	11,714,729.99	5,782,628.64	0.5775	3,425,788.53	6,765,256.57	3,339,468.04	3,079,844.53
15	5,190,588.68	6,228,706.42	15,375,583.11	12,300,466.49	6,071,760.07	0.5553	3,458,800.67	6,830,449.04	3,371,648.37	6,451,492.89
16	5,450,118.12	6,540,141.74	16,144,362.26	12,915,489.81	6,375,348.07	0.5339	3,491,781.67	6,895,580.01	3,403,798.34	9,855,291.23
17	5,722,624.02	6,867,148.83	16,951,580.37	13,561,264.30	6,694,115.47	0.5134	3,525,594.21	6,962,353.09	3,436,758.88	13,292,050.11
18	6,008,755.22	7,210,506.27	17,799,159.39	14,239,327.51	7,028,821.25	0.4936	3,559,105.89	7,028,532.06	3,469,426.17	16,761,476.28
19	6,309,192.98	7,571,031.58	18,689,117.36	14,951,293.89	7,380,262.31	0.4746	3,593,211.59	7,095,884.08	3,502,672.49	20,264,148.77
20	6,624,652.63	7,949,583.16	20,390,239.90	16,312,191.92	8,362,608.76	0.4564	3,628,189.75	7,444,884.39	3,816,694.64	24,080,843.41
รวม	126,647,940.28	151,977,528.33	257,547,418.81	206,037,935.05	54,060,406.72		107,241,917.99	131,322,761.40	NPV	24,080,843.41
									B/C	1.22
									IRR	11.27%

ตารางที่ 19 แสดงค่า NPV IRR และ B/C Ratio กรณีที่ต้นทุนของโครงการเพิ่มขึ้น 29.50 % และผลตอบแทนของโครงการลดลง 29.50 % พร้อมกัน ณ อัตราคิด

ลด 4 %

ปีที่	ต้นทุน(C)	ต้นทุนเพิ่มขึ้น 29.50%	รายรับ(B)	รายรับลดลง 29.50%	กำไร(B-C)	4%	PVของC	PVของB	PVของ(B-C)	กำไร/ขาดทุน สะสม
0	21,800,000.00	28,230,680.15	0.00	0.00	-28,230,680.15	1	28,230,680.15	0.00	-28,230,680.15	-28,230,680.15
1	2,621,600.00	3,394,933.54	7,765,714.29	5,474,942.51	2,080,008.97	0.9615	3,264,228.59	5,264,157.22	1,999,928.63	-26,230,751.52
2	2,752,680.00	3,564,680.21	8,154,000.00	5,748,689.64	2,184,009.42	0.9246	3,295,903.32	5,315,238.44	2,019,335.11	-24,211,416.41
3	2,890,314.00	3,742,914.22	8,561,700.00	6,036,124.12	2,293,209.89	0.8890	3,327,450.74	5,366,114.34	2,038,663.60	-22,172,752.81
4	3,034,829.70	3,930,059.93	8,989,785.00	6,337,930.32	2,407,870.39	0.8548	3,359,415.23	5,417,662.84	2,058,247.61	-20,114,505.20
5	3,186,571.19	4,126,562.93	9,439,274.25	6,654,826.84	2,528,263.91	0.8219	3,391,622.07	5,469,602.18	2,077,980.11	-18,036,525.10
6	3,345,899.74	4,332,891.08	9,911,237.96	6,987,568.18	2,654,677.10	0.7903	3,424,283.82	5,522,275.13	2,097,991.32	-15,938,533.78
7	3,513,194.73	4,549,535.63	10,406,799.86	7,336,946.59	2,787,410.96	0.7599	3,457,192.13	5,575,345.71	2,118,153.59	-13,820,380.19
8	3,688,854.47	4,777,012.41	10,927,139.85	7,703,793.92	2,926,781.51	0.7307	3,490,562.97	5,629,162.22	2,138,599.25	-11,681,780.95
9	3,873,297.19	5,015,863.03	11,473,496.85	8,088,983.62	3,073,120.58	0.7026	3,524,145.37	5,683,319.89	2,159,174.52	-9,522,606.43
10	22,229,197.05	28,786,484.03	12,047,171.69	8,493,432.80	-20,293,051.24	0.6756	19,448,148.61	5,738,163.20	-13,709,985.42	-23,232,591.84
11	4,270,310.15	5,529,988.99	12,649,530.27	8,918,104.44	3,388,115.44	0.6496	3,592,280.85	5,793,200.64	2,200,919.79	-21,031,672.05
12	4,483,825.66	5,806,488.44	13,282,006.79	9,364,009.66	3,557,521.21	0.6246	3,626,732.68	5,848,760.43	2,222,027.75	-18,809,644.30
13	4,708,016.94	6,096,812.87	13,946,107.13	9,832,210.14	3,735,397.27	0.6006	3,661,745.81	5,905,225.41	2,243,479.60	-16,566,164.70
14	4,943,417.79	6,401,653.51	14,643,412.48	10,323,820.65	3,922,167.14	0.5775	3,696,954.90	5,962,006.42	2,265,051.52	-14,301,113.17
15	5,190,588.68	6,721,736.19	15,375,583.11	10,840,011.68	4,118,275.50	0.5553	3,732,580.10	6,019,458.49	2,286,878.38	-12,014,234.79
16	5,450,118.12	7,057,822.99	16,144,362.26	11,382,012.27	4,324,189.27	0.5339	3,768,171.70	6,076,856.35	2,308,684.65	-9,705,550.14
17	5,722,624.02	7,410,714.14	16,951,580.37	11,951,112.88	4,540,398.73	0.5134	3,804,660.64	6,135,701.35	2,331,040.71	-7,374,509.43
18	6,008,755.22	7,781,249.85	17,799,159.39	12,548,668.52	4,767,418.67	0.4936	3,840,824.93	6,194,022.78	2,353,197.86	-5,021,311.57
19	6,309,192.98	8,170,312.34	18,689,117.36	13,176,101.95	5,005,789.60	0.4746	3,877,630.24	6,253,377.98	2,375,747.75	-2,645,563.83
20	6,624,652.63	8,578,827.96	20,390,239.90	14,375,418.29	5,796,590.33	0.4564	3,915,377.08	6,560,940.91	2,645,563.83	0.00
รวม	126,647,940.28	164,007,224.48	257,547,418.81	181,574,709.01	17,567,484.53		115,730,591.95	115,730,591.95	NPV	0.00
									B/C	1.00
									IRR	4.00%

ประวัติผู้เขียน

ชื่อ นามสกุล	นายกระพัน เกิดผล
วัน เดือน ปี เกิด	10 กันยายน 2527
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