

Return on Investment Analysis

Property: Marriott Full Service Hotel

Project Title: Boiler Plant Replacement

Project Description: Replacement of heating and potable hot water plant. Comparison of Atmospheric boiler plant with Condensing boiler plant.

Cash Flow Summary: Condensing Boiler Plant

5% :NPV Discount Rate

2% :Inflation Rate

Note: Costs are negative numbers, Savings or Revenues are positive numbers.

Item	Description	NPV	Undiscounted Total Cash Flow	Initial Investment	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Aerco boiler equipment	(308,400)	(308,400)	(308,400)															
2	Boiler Installation	(275,600)	(275,600)	(275,600)															
3	Ancillary Equipment	0	0	0															
4	Energy Savings	211,569	311,282		18,000	18,360	18,727	19,102	19,484	19,873	20,271	20,676	21,090	21,512	21,942	22,381	22,828	23,285	
5	Hot Water Storage Tank	0	0																
6		0	0																
7	Temporary Boilers	(153,000)	(153,000)	(153,000)															
8		0	0																
9		0	0																
10		0	0																
Totals:		(525,431)	(425,718)	(737,000)	18,000	18,360	18,727	19,102	19,484	19,873	20,271	20,676	21,090	21,512	21,942	22,381	22,828	23,285	23,751

Cash Flow Summary: Atmospheric Boiler Plant

5% :NPV Discount Rate

2% :Inflation Rate

Note: Costs are negative numbers, Savings or Revenues are positive numbers.

Item	Description	NPV	Undiscounted Total Cash Flow	Initial Investment	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Atmospheric Boilers	(275,000)	(275,000)	(275,000)															
2	Temporary Boilers	(153,000)	(153,000)	(153,000)															
3	Ancillary Equipment	(57,000)	(57,000)	(57,000)															
4	Hot Water Storage Tank	(161,905)	(170,000)			(170,000)													
5	Mixing Valves	(45,000)	(45,000)	(45,000)															
6	Shorter life	(130,952)	(137,500)											(137,500)					
7	Increased maintenance expense	(1,175)	(1,729)		(100)	(102)	(104)	(106)	(108)	(110)	(113)	(115)	(117)	(120)	(122)	(124)	(127)	(129)	
8		0	0																
9		0	0																
10		0	0																
Totals:		(824,033)	(839,229)	(530,000)	(100)	(170,102)	(104)	(106)	(108)	(110)	(113)	(115)	(117)	(137,620)	(122)	(124)	(127)	(129)	(132)

Difference in cash flow:

NPV	Undiscounted	Initial	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
298,601	413,511	(207,000)	18,100	188,462	18,831	19,208	19,592	19,984	20,384	20,791	21,207	159,131	22,064	22,505	22,955	23,414	23,883
Simple Payback:		(207,000)	(188,900)	(438)	18,393	37,601	57,193	77,177	97,561	118,352	139,559	298,690	320,754	343,259	366,214	389,628	413,511