

Common Inputs:	Value	Units	Comments
Project Capital Cost	(245,000)	\$	Negative
Amount Financed	0.0%	%	Applicable for the analysis, even if not borrowed.
Finance Life	10	Years	Term of Loan
Cost of Money	5%	%	Finance Rate. Currently assume 5%.
Project Life	10	Years	Useful life of Project
NCPA Discount Rate	5%	%	Investment Rate. Currently assume 5%.
O&M	0	\$/Year	Negative
O&M Increase Rate in %	3.0%	% per Year	Currently Assume 3%
Revenue stream	41,250	\$/Year	Positive Benefit
Benefits escalation in %	2.0%	% per Year	Currently Assume 2%

Annualized Payment Output: 0 \$ Annualized payment used in the following cash flow "P&I Repayment" Row. Based on Financial Life, Capital Cost, Amount Financed

	Summary of Cash Flows (PV @ Discount Rate)	Cash Flow										
		Beginning Year 1	Ending Year 1	Ending Year 2	Ending Year 3	Ending Year 4	Ending Year 5	Ending Year 6	Ending Year 7	Ending Year 8	Ending Year 9	Ending Year 10
Capital Cost												
Capital Cost	(245,000)	(245,000)	0	0	0	0	0	0	0	0	0	0
P&I Repayment	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0
Total Cost	(245,000)	(245,000)	0	0	0	0	0	0	0	0	0	0
Expenses												
Operation And Maintenance	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0
Total Expenses	0		0	0	0	0	0	0	0	0	0	0
Benefits												
Reduction in cost	346,009		41,250	42,075	42,917	43,775	44,650	45,543	46,454	47,383	48,331	49,298
Other	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0
Total Benefits	346,009		41,250	42,075	42,917	43,775	44,650	45,543	46,454	47,383	48,331	49,298
Net Cash Flow	101,009	(245,000)	41,250	42,075	42,917	43,775	44,650	45,543	46,454	47,383	48,331	49,298
Cumulative Cash Flow	-		(203,750)	(161,675)	(118,759)	(74,984)	(30,333)	15,210	61,664	109,047	157,378	206,676

The following table summarizes the financial measurements required in the AFE. These values are automatically copied to the AFE.

AFE Financial Measurements	Value	Units	Comments
NPV @ Discount Rate	101,009	\$	Total PV Cost + Total PV Expense + PV Total Benefits. =C25+C30+C35
IRR	12.5%	%	Discount rate that results in a net present value of zero of a series of cash flows =IRR(E37:A137)
Average Annual Benefits	34,601	\$	Average Yearly Benefits. = C42/C11
Payback	5.0	Years	Number of Years of Negative Accumulative Cash Flow. =COUNTIF(F39:A139,"<0")
Useful Life	10.0	Years	Useful Life of Project =C10
B/C Ratio	1.41	B/C Ratio	Benefit to Cost Ratio =C38/(C26+C32)

Risk of the Following Occurrence if the U-Bushings are not Replaced

Risk per Year 5.00% 30000

1. Bushing Failure causing GSUT replacement.

New/Used Transformer Turn-Key	\$450,000
Risk Value per Year per Transformer	\$22,500
Number of Transformers	1
Total Value for Replacement Risk Per Year	\$22,500

2. Missed RA Opportunity

RA Value \$ per kw-year	\$30
kW per Unit	\$25,000
RA Value per Year per Unit	\$750,000
Number of Units	1
Total RA Value Per Year	\$750,000
Total down time (days)	182.5
Total RA Downtime Value	\$375,000
Risk Value for RA per Year	\$18,750

Bushing Parts (3x\$10k)	\$	30,000
Drain/Install/Fill/Test (3x\$65k)	\$	195,000
Crane (2x\$10k)	\$	20,000
Total	\$	(245,000)

Common Inputs:	Value	Units	Comments
Project Capital Cost	(600,000)	\$	Negative
Amount Financed	0.0%	%	Applicable for the analysis, even if not borrowed.
Finance Life	30	Years	Term of Loan
Cost of Money	5%	%	Finance Rate. Currently assume 5%.
Project Life	30	Years	Useful life of Project
NCPA Discount Rate	5%	%	Investment Rate. Currently assume 5%.
O&M	0	\$/Year	Negative. Increase O&M
O&M Increase Rate in %	3.0%	% per Year	Currently Assume 3%
Revenue stream	2,083,567	\$/Year	Positive Benefit
Benefits escalation in %	2.0%	% per Year	Currently Assume 2%
Annualized Payment Output:	0	\$	Annualized payment used in the following cash flow "P&I Repayment" Row. Based on Financial Life, Capital Cost, Amount Financed

	Summary of Cash Flows (PV @ Discount Rate)	Cash Flow										
		Beginning Year 1	Ending Year 1	Ending Year 2	Ending Year 3	Ending Year 4	Ending Year 5	Ending Year 6	Ending Year 7	Ending Year 8	Ending Year 9	Ending Year 10
Capital Cost												
Capital Cost	(600,000)	(600,000)	0	0	0	0	0	0	0	0	0	0
P&I Repayment	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0
Total Cost	(600,000)	(600,000)	0	0	0	0	0	0	0	0	0	0
Expenses												
Operation And Maintenance	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0
Total Expenses	0	0	0	0	0	0	0	0	0	0	0	0
Benefits												
Reduction in cost	40,344,231		2,083,567	2,125,238	2,167,743	2,211,098	2,255,320	2,300,426	2,346,435	2,393,364	2,441,231	2,490,055
Bleach Savings	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0
Total Benefits	40,344,231		2,083,567	2,125,238	2,167,743	2,211,098	2,255,320	2,300,426	2,346,435	2,393,364	2,441,231	2,490,055
Net Cash Flow	39,744,231	(600,000)	2,083,567	2,125,238	2,167,743	2,211,098	2,255,320	2,300,426	2,346,435	2,393,364	2,441,231	2,490,055
Cumulative Cash Flow	-		1,483,567	3,608,805	5,776,548	7,987,646	10,242,966	12,543,393	14,889,828	17,283,191	19,724,422	22,214,477

The following table summarizes the financial measurements required in the AFE. These values are automatically copied to the AFE.

AFE Financial Measurements	Value	Units	Comments
NPV @ Discount Rate	39,744,231	\$	Total PV Cost + Total PV Expense + PV Total Benefits. =C25+C30+C35
IRR	349.3%	%	Discount rate that results in a net present value of zero of a series of cash flows =IRR(E37:A137)
Average Annual Benefits	1,344,808	\$	Average Yearly Benefits. = C42/C11
Payback	0.0	Years	Number of Years of Negative Accumulative Cash Flow. =COUNTIF(F39:A139,"<0")
Useful Life	30.0	Years	Useful Life of Project =C10
B/C Ratio	67.24	B/C Ratio	Benefit to Cost Ratio =C38/(C26+C32)

Reduce Following Chemical Expenses
 Ch2mHill Security Assessment \$ 2,083,567 per year

Assumptions: