

## Financial Analysis of Efficiency Improvements Simulating Streams of Cash Inflows and Outflows

### SAMPLE ANALYSIS

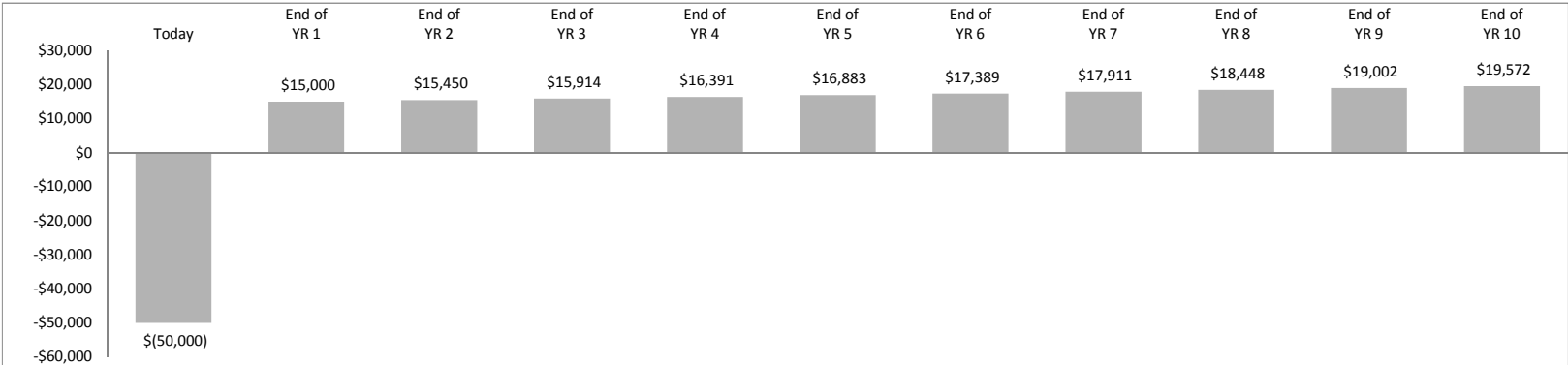
Discount Rate:	10%
Finance Rate:	10%
Reinvestment Rate:	10%
Inflation Rate:	3%

	Today	End of YR 1	End of YR 2	End of YR 3	End of YR 4	End of YR 5	End of YR 6	End of YR 7	End of YR 8	End of YR 9	End of YR 10
Date:	0	1	2	3	4	5	6	7	8	9	10
<b>CASH OUTFLOWS</b> (after Date 0 rebates)											
Single investment	\$ (65,400)										
Phased investment											
Financed investment											
<b>Subtotal</b>	\$ (65,400)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rebate/incentive rec'd at Date 0 <sup>1</sup>	\$ 15,400										
<b>SUBTOTAL OUTFLOWS</b>	\$ (50,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>CASH INFLOWS</b>											
Energy savings	\$ 10,000	\$ 10,300	\$ 10,609	\$ 10,927	\$ 11,255	\$ 11,593	\$ 11,941	\$ 12,299	\$ 12,668	\$ 13,048	
Maintenance savings	\$ 5,000	\$ 5,150	\$ 5,305	\$ 5,464	\$ 5,628	\$ 5,796	\$ 5,970	\$ 6,149	\$ 6,334	\$ 6,524	
Rebates/incentives considered "cash inflow" <sup>1</sup>											
<b>SUBTOTAL INFLOWS</b>	\$ -	\$ 15,000	\$ 15,450	\$ 15,914	\$ 16,391	\$ 16,883	\$ 17,389	\$ 17,911	\$ 18,448	\$ 19,002	\$ 19,572
<b>Annual Cash Flow</b>	\$ (50,000)	\$ 15,000	\$ 15,450	\$ 15,914	\$ 16,391	\$ 16,883	\$ 17,389	\$ 17,911	\$ 18,448	\$ 19,002	\$ 19,572
<i>PV of Outflows (for SIR calculation)</i>	\$ (50,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<i>PV of Inflows (for SIR calculation)</i>	\$ -	\$ 13,636	\$ 12,769	\$ 11,956	\$ 11,195	\$ 10,483	\$ 9,816	\$ 9,191	\$ 8,606	\$ 8,059	\$ 7,546
<b>Annual Present Value</b>	<b>(\$50,000.00)</b>	\$ 13,636	\$ 12,769	\$ 11,956	\$ 11,195	\$ 10,483	\$ 9,816	\$ 9,191	\$ 8,606	\$ 8,059	\$ 7,546

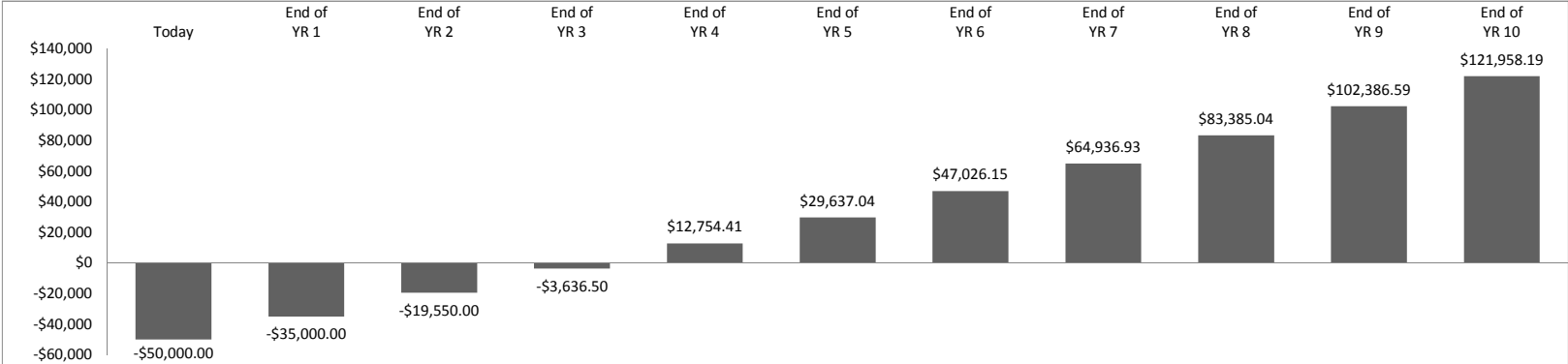
NOTE THAT CERTAIN RETURNS VARY DEPENDING ON THE LENGTH OF THE ANALYSIS TERM											
	10-YEAR	1-YEAR	2-YEAR	3-YEAR	4-YEAR	5-YEAR	6-YEAR	7-YEAR	8-YEAR	9-YEAR	10-YEAR
NPV	\$ 53,256	(\$36,363.64)	(\$23,595.04)	(\$11,638.99)	(\$443.78)	\$10,039.00	\$19,854.70	\$29,045.77	\$37,651.94	\$45,710.46	\$53,256.16
SPP	3.3										
ROI	30.0%										
IRR	30.1%	-70.0%	-27.4%	-3.6%	9.6%	17.4%	22.3%	25.5%	27.6%	29.1%	30.1%
MIRR	18.3%	-70.0%	-20.1%	0.7%	9.8%	14.1%	16.3%	17.4%	18.0%	18.2%	18.3%
SIR	2.1	0.3	0.5	0.8	1.0	1.2	1.4	1.6	1.8	1.9	2.1

NOTE 1: SIR calc removes any rebate/incentive received at Date 0 from first cost prior to calculating SIR.

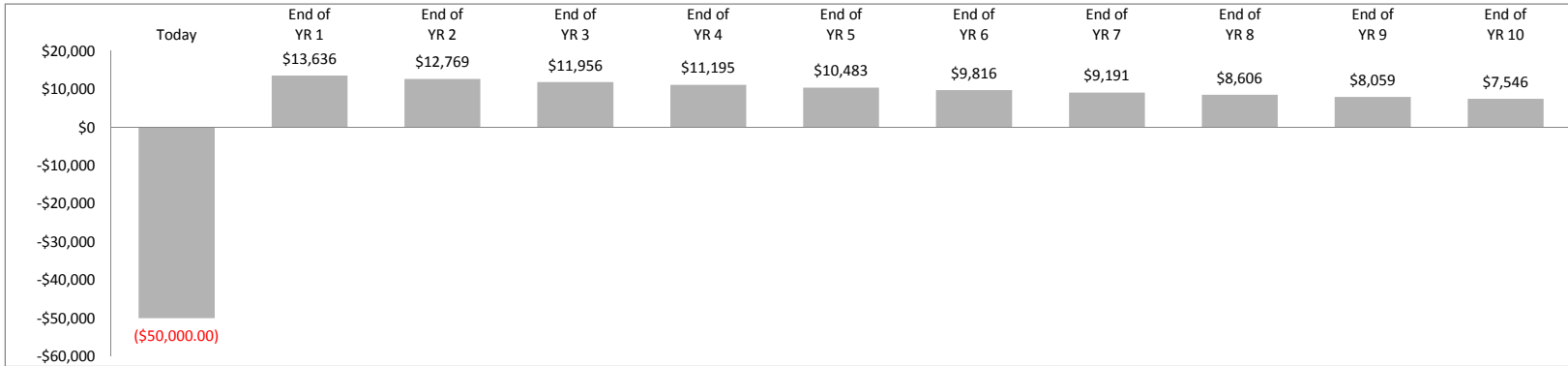
**10-year Cash Flow**



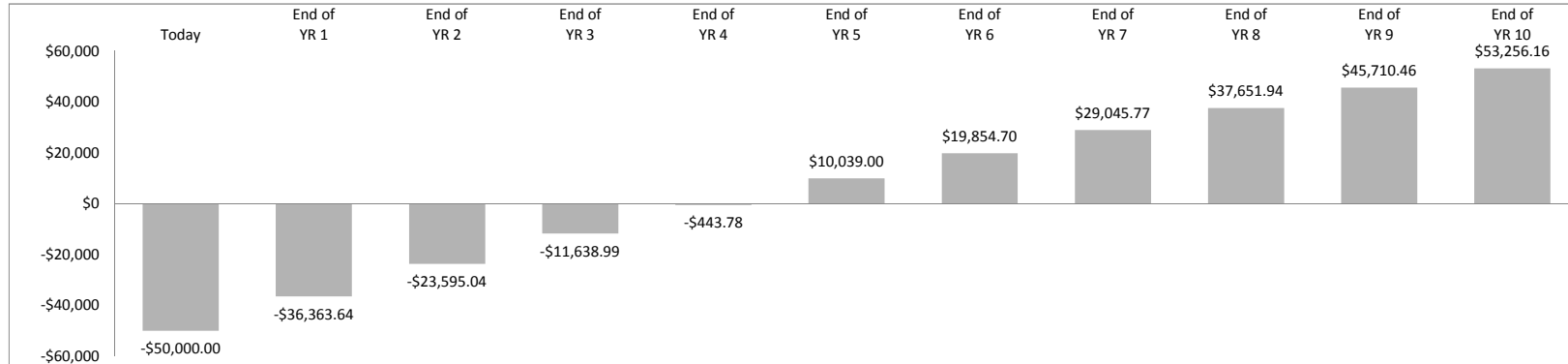
**Cumulative 10-year Cash Flow**



### 10-year Present Value



### Cumulative 10-year Present Value



## Financial Analysis of Efficiency Improvements

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### COMPARING 2 STREAMS OF CASH INFLOWS AND OUTFLOWS OVER TIME

#### CASH FLOW SCENARIO A

<b>Discount Rate:</b>	10%										
<b>Finance Rate:</b>	10%										
<b>Reinvestment Rate:</b>	10%										
	<b>Today</b>	<b>End of Year 1</b>	<b>End of Year 2</b>	<b>End of Year 3</b>	<b>End of Year 4</b>	<b>End of Year 5</b>	<b>End of Year 6</b>	<b>End of Year 7</b>	<b>End of Year 8</b>	<b>End of Year 9</b>	<b>End of Year 10</b>
"Date ____"	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<b>Cash outflows</b>	\$ (300.00)										
<b>Cash inflows</b>		\$ 150.00	\$ 150.00	\$ 150.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Subtotals</b>	\$ (300.00)	\$ 150.00	\$ 150.00	\$ 150.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>PV</b>	\$ (300.00)	\$ 136.36	\$ 123.97	\$ 112.70	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>NPV</b>	\$ 73.03	NOTE: THESE ARE 10-YEAR RETURNS (adjust range of inputs if fewer years are desired)									
<b>SPP</b>	2.0										
<b>ROI</b>	50.00%										
<b>IRR</b>	23.38%	NOTE: THESE ARE 10-YEAR RETURNS (adjust range of inputs if fewer years are desired)									
<b>MIRR</b>	12.42%	NOTE: THESE ARE 10-YEAR RETURNS (adjust range of inputs if fewer years are desired)									
<b>SIR</b>	1.24										

#### CASH FLOW SCENARIO B

<b>Discount Rate:</b>	10% <<<uses same discount rate as listed above in yellow shaded box										
<b>Finance Rate:</b>	10% <<<uses same discount rate as listed above in yellow shaded box										
<b>Reinvestment Rate:</b>	10% <<<uses same discount rate as listed above in yellow shaded box										
	<b>Today</b>	<b>End of Year 1</b>	<b>End of Year 2</b>	<b>End of Year 3</b>	<b>End of Year 4</b>	<b>End of Year 5</b>	<b>End of Year 6</b>	<b>End of Year 7</b>	<b>End of Year 8</b>	<b>End of Year 9</b>	<b>End of Year 10</b>
"Date ____"	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<b>Cash outflows</b>	\$ (300.00)										
<b>Cash inflows</b>		\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00
<b>Subtotals</b>	\$ (300.00)	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00
<b>PV</b>	\$ (300.00)	\$ 68.182	\$ 61.98	\$ 56.35	\$ 51.23	\$ 46.57	\$ 42.336	\$ 38.49	\$ 34.99	\$ 31.81	\$ 28.92
<b>NPV</b>	\$ 160.84	NOTE: THESE ARE 10-YEAR RETURNS (adjust range of inputs if fewer years are desired)									
<b>SPP</b>	4.0										
<b>ROI</b>	25.00%										
<b>IRR</b>	21.41%	NOTE: THESE ARE 10-YEAR RETURNS (adjust range of inputs if fewer years are desired)									
<b>MIRR</b>	14.82%	NOTE: THESE ARE 10-YEAR RETURNS (adjust range of inputs if fewer years are desired)									
<b>SIR</b>	1.54										