Retrofits, Cash Flow & Decisions

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Cost of delay – case study

Cash Flow Calculator

INPUTS & OUTPUTS

Pre-Retrofit Annual Energy Expenditure	$460,000	Cost for Improvements	$ 563,000	Loan Term (yrs.)	6
Post-Retrofit Annual Energy Expenditure	$317,000	Design/Engineering	$ 84,450	Interest Rate	2.500%
Post Retrofit Annual Energy Cost Savings	$143,000	Project Management	$ 16,890	Number of Payments per year	12
Post Retrofit Annual Energy Savings %	31%	Contingency	$ 56,300	Down Payment	$ -
Energy Cost Annual Escalation Rate	2.0%	Project Costs - Down Payment	$ 720,640	Discount Rate	8.0%
Assumed Project Life	15				

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INVESTMENT ANALYSIS		
Project Cost	$ 720,640	*Includes applicable incentives or down payment of $0*
Internal Rate of Return (IRR)	21%	*Assumes 2.0% annual utility cost increase*
Simple Payback	5.04	*Only applicable if using internal funds*
Cost of Delay (6 Months)	$ 84,081	*Lost incremental cash flow from waiting to implement project*
Life Cycle Savings	$ 1,739,051	*Assumes loan and immediate action, with 15 year equipment life*
Annual Savings		
With loan payment	$ 22,789	*Represents average energy cost savings - loan payments*
No loan payment	$ 168,161	*Represents increased cash flow from energy cost savings, in scenarios where no loan is taken, or where loan is paid off*

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CASH FLOW COMPARISON, COST OF DELAY

	Cumulative Cash Flow End of year 15	Difference, compared with Appropriation Awarded yr 5	Difference, compared with Loan, Immediate Action	Difference, compared with Loan, 5 yr Delay	Difference, Compared with No Action
Appropriation Awarded Year 5	$ (6,853,215)	$ -	$ (18,195)	$ 740,866	$ 1,720,856
Loan, Immediate Action	$ (6,835,020)	$ 18,195	$ -	$ 759,061	$ 1,739,051
Loan, 5 Year Delay	$ (7,594,081)	$ (740,866)	$ (759,061)	$ -	$ 979,990
No Action	$ (8,574,071)	$ (1,720,856)	$ (1,739,051)	$ (979,990)	$ -

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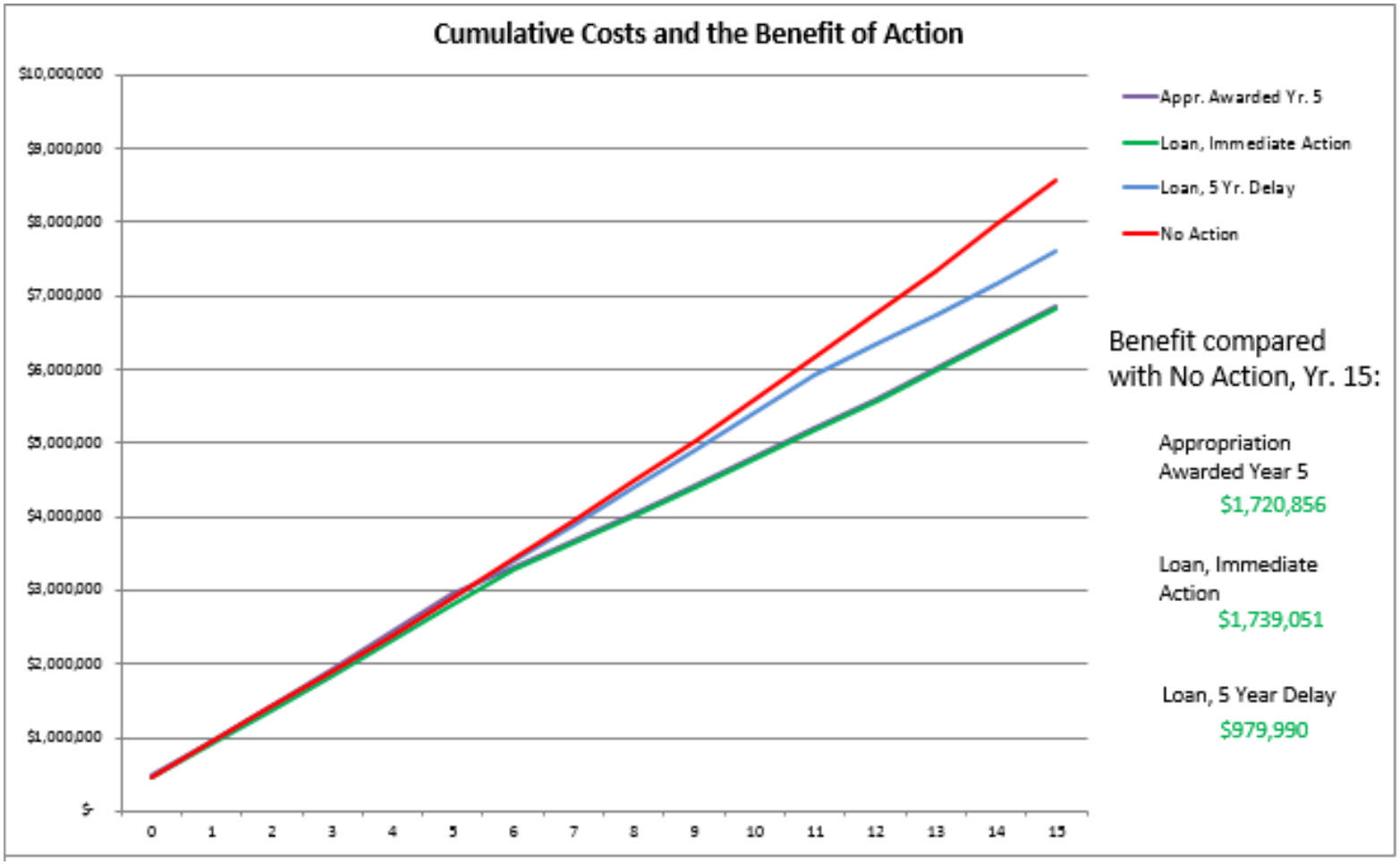

Thank You

For more information visit:
https://www.ahfc.us/efficiency/non-residential-buildings/cash-flow-calculator/

Or Contact:

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ECONOMIC SUMMARY (Assuming Loan)

Cumulative Project Savings

$1,739,051

Assumed Project Life: 15 years

Gross Project Cost	Avg. Ann. Savings	Simple Payback	Savings to Inv. Ratio
$ 720,640	$ 168,161	5.04	1.94

Avg. Ann. Cashflow	IRR	Adj. Rate of Return*	NPV
$ 115,937	21%	13%	$678,954

Discount Rate: 8.0%	Term: 6 years	Utility Esc. Rate: 2.0%	Annual Payment: $130,561

* *Where AIRR = [[1+Discount Rate]^[(SIR)^(1/Life)]]- 1*
AIRR assumes interim proceeds can be invested at the discount rate.