



Alpha Controls & Services, L.L.C.  
 411 Devonshire Dr  
 Champaign, Illinois 61820  
 Point of Contact: Jason Vogelbaugh

Date: 7/17/14  
 Proposal #: 14JV025

**Subject: Champaign County – Brookens Admin Center**

**Get \$104,753 in DCEO grants & save \$40,757 in annual utility bills to be green & comfortable.**

**Target:** Address excessive energy costs and reduce temperature and humidity variations to boost the Energy Star score utilizing public sector incentives to fund the project

- As compared to current usage this proposal will *save 29% on electricity and 27% on natural gas costs* annually
- Utilize public sector incentives to become a **green** facility
- Environmental conditions will stabilize; temps will be within 2 degrees of set point. All graphics to be browser based, with alarm generation and remote accessibility.

The Illinois Energy Conversation Code became law in Illinois on January 1<sup>st</sup>, 2013 adopting the American Society of Heating Refrigeration and Air Conditioning Engineers (ASHRAE) Energy Standard for Buildings 90.1 as the new standard for commercial buildings in Illinois. Given this standard and lack of application of current ASHRAE Standard 90.1 this facility is inefficient and is out of date in regards to energy performance. Updating the facility to these standards will improve energy efficiency and environmental comfort.

Over the past 12 months energy costs have been higher than the Energy Star average for office buildings in the region by 165%. Similar projects have resulted in energy savings of 42% electrical and of 36% in natural gas costs in a 62,000 square foot building in Effingham, IL. In addition the Owner report a high degree of satisfaction in environmental conditions and is available as a reference.

**Financial:** Project first cost is estimated at \$139,670. An analysis of the 10 year life cycle cost indicates the cost of doing nothing is \$272,803.

Simple payback	0.9 years	Net Present Value	\$272,803
Return On Investment	116.7%	Savings to Investment Ratio	8.8
Internal Rate of Return	119.7%	Modified Internal Rate of Return	35.5%

**Status:** We have prepared a detailed specification for the project to implement ventilation improvements, DDC controls upgrades for the multi zone units and fan coil units. We propose to provide equipment operation that will reduce energy savings while making the facility more comfortable. We have completed an energy model and analysis and have a turnkey solution ready for installation in 6 weeks from date of authorization to proceed.

**Proposed by:** Jason Vogelbaugh  
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 Director of Energy Solutions  
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 Date: July 22, 2014  
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**Accepted by:** Alan Kurtz  
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**Signature:**   
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**Date:** 8/22/2014  
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**Title:** County Board Chair  
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NOTWITHSTANDING ANY INCONSISTENT OR ADDITIONAL TERMS THAT MAY BE EMBODIED IN YOUR PURCHASE ORDER, SELLER WILL ACCEPT YOUR ORDER SUBJECT ONLY TO THE TERMS OF THE WRITTEN CONTRACT BETWEEN US UNDER WHICH YOUR ORDER IS PLACED. IF NO SUCH CONTRACT EXISTS SELLER WILL ACCEPT YOUR ORDER ONLY ON THE EXPRESS CONDITION THAT YOU ASSENT TO THE TERMS AND CONDITIONS CONTAINED ABOVE AND ON THE REVERS SIDE HEREOF; AND YOUR ACCEPTANCE AND RECEIPT OF THE GOODS SHIPPED HEREUNDER SHALL CONSTITUTE ASSENT TO SUCH TERMS AND CONDITIONS



## Financial Analysis of Efficiency Improvements

Simulating Streams of Cash Inflows and Outflows

Discount Rate:	8%
Finance Rate:	10%
Reinvestment Rate:	10%
Inflation Rate:	3%

	<b>Today</b>	<b>End of</b>	<b>End of</b>	<b>End of</b>	<b>End of</b>	<b>End of</b>	<b>End of</b>	<b>End of</b>	<b>End of</b>	<b>End of</b>	<b>End of</b>
	<b>0</b>	<b>YR 1</b>	<b>YR 2</b>	<b>YR 3</b>	<b>YR 4</b>	<b>YR 5</b>	<b>YR 6</b>	<b>YR 7</b>	<b>YR 8</b>	<b>YR 9</b>	<b>YR 10</b>
<b>Date:</b>	<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>

**CASH OUTFLOWS**

Single investment	\$	(139,670)																		
Phased investment																				
Financed investment																				
<b>SUBTOTAL OUTFLOWS</b>	<b>\$</b>	<b>(139,670)</b>	<b>\$</b>	<b>-</b>	<b>\$</b>	<b>-</b>	<b>\$</b>	<b>-</b>	<b>\$</b>	<b>-</b>	<b>\$</b>	<b>-</b>	<b>\$</b>	<b>-</b>	<b>\$</b>	<b>-</b>	<b>\$</b>	<b>-</b>	<b>\$</b>	<b>-</b>

**CASH INFLOWS**

Rebate/incentive rec'd	\$	104,753																				
Energy savings			\$	40,757	\$	41,980	\$	43,239	\$	44,536	\$	45,872	\$	47,249	\$	48,666	\$	50,126	\$	51,630	\$	53,179
Maintenance savings			\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
<b>SUBTOTAL INFLOWS</b>	<b>\$</b>	<b>104,753</b>	<b>\$</b>	<b>40,757</b>	<b>\$</b>	<b>41,980</b>	<b>\$</b>	<b>43,239</b>	<b>\$</b>	<b>44,536</b>	<b>\$</b>	<b>45,872</b>	<b>\$</b>	<b>47,249</b>	<b>\$</b>	<b>48,666</b>	<b>\$</b>	<b>50,126</b>	<b>\$</b>	<b>51,630</b>	<b>\$</b>	<b>53,179</b>

<b>Annual Cash Flow</b>	<b>(\$34,917.50)</b>	<b>\$40,757.00</b>	<b>\$41,979.71</b>	<b>\$43,239.10</b>	<b>\$44,536.27</b>	<b>\$45,872.36</b>	<b>\$47,248.53</b>	<b>\$48,665.99</b>	<b>\$50,125.97</b>	<b>\$51,629.75</b>	<b>\$53,178.64</b>
<b>Annual Present Value</b>	<b>(\$34,917.50)</b>	<b>\$37,737.96</b>	<b>\$35,990.84</b>	<b>\$34,324.59</b>	<b>\$32,735.49</b>	<b>\$31,219.96</b>	<b>\$29,774.59</b>	<b>\$28,396.14</b>	<b>\$27,081.50</b>	<b>\$25,827.73</b>	<b>\$24,632.00</b>

**NOTE THAT CERTAIN RETURNS VARY DEPENDING ON THE LENGTH OF THE ANALYSIS TERM**

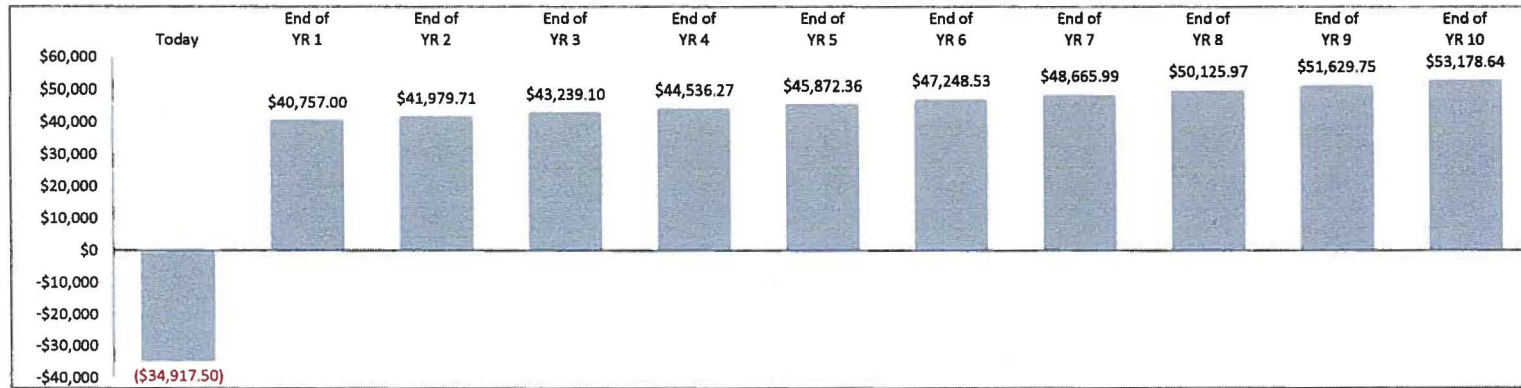
	10-YEAR	1-YEAR	2-YEAR	3-YEAR	4-YEAR	5-YEAR	6-YEAR	7-YEAR	8-YEAR	9-YEAR	10-YEAR
NPV	\$ 272,803	\$2,820.46	\$38,811.30	\$73,135.89	\$105,871.38	\$137,091.34	\$166,865.93	\$195,262.07	\$222,343.57	\$248,171.30	\$272,803.30
SPP	0.9										
ROI	116.7%										
IRR	119.7%	16.7%	82.6%	104.9%	113.4%	116.9%	118.4%	119.1%	119.4%	119.6%	119.7%
MIRR	35.5%	16.7%	57.7%	58.4%	54.1%	49.7%	45.9%	42.6%	39.8%	37.5%	35.5%
SIR	8.8	1.1	2.1	3.1	4.0	4.9	5.8	6.6	7.4	8.1	8.8



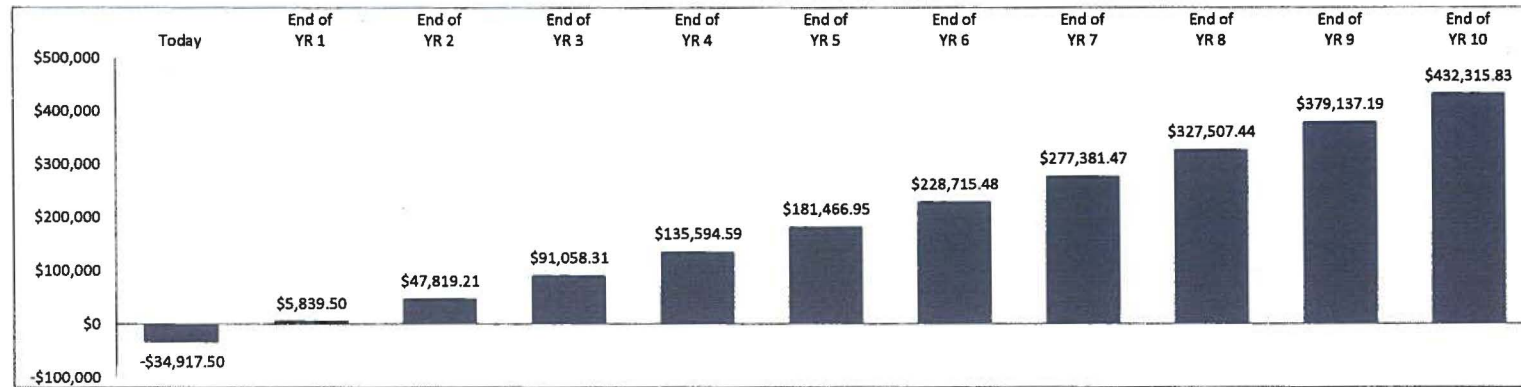
## Financial Analysis of Efficiency Improvements

### Simulating Streams of Cash Inflows and Outflows

**10-year Cash Flow**



**Cumulative 10-year Cash Flow**

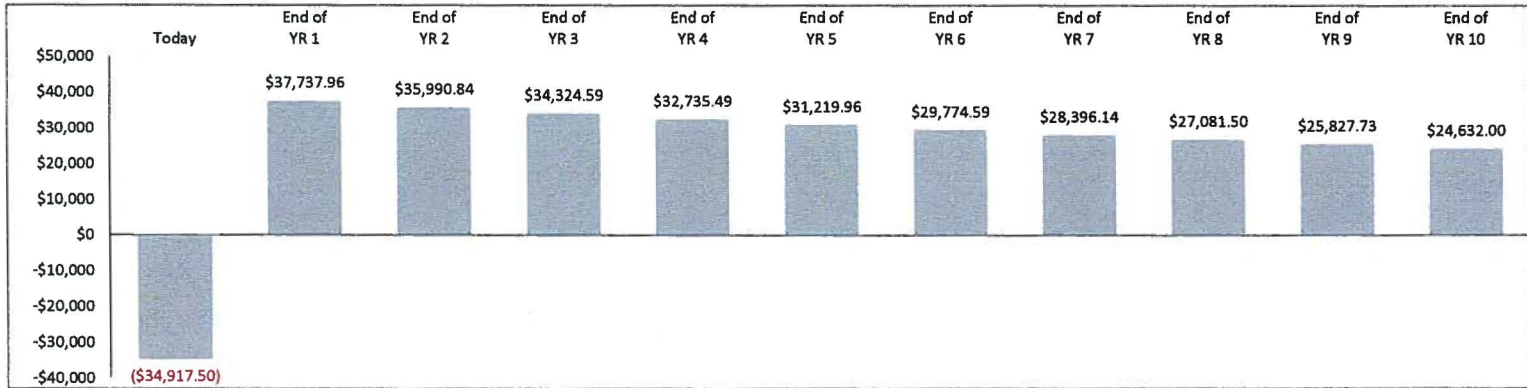




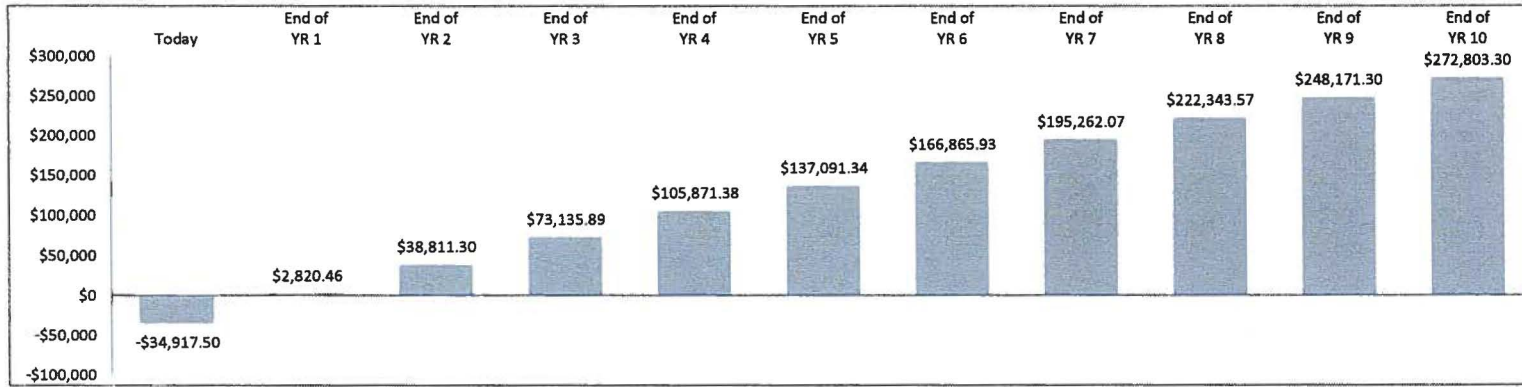
## Financial Analysis of Efficiency Improvements

### Simulating Streams of Cash Inflows and Outflows

**10-year Present Value**



**Cumulative 10-year Present Value**



All goods, services, and Firmware furnished by Alpha Controls & Services ("Supplier") are governed by these standard terms and conditions, and every agreement or other undertaking by Supplier is expressly conditioned on assent hereto by the buyer, and any end user with whom Supplier undertakes to deal, of Supplier's goods, services, and Firmware ("Customer"). These standard terms and conditions supersede all inconsistent printed terms submitted by Customer prior to Supplier's order acknowledgment. They may be varied only by a typed or legibly handwritten notation on the face of Supplier's quotation or order acknowledgment, Customer's purchase order form, or similar documents. Product and sales policy sheets and the like published from time to time by Supplier shall supplement but not supersede these standard terms and conditions. SUPPLIER IS NOT BOUND TO FURNISH ITS GOODS, SERVICES OR FIRMWARE EXCEPT IN ACCORDANCE WITH THE TERMS OF ITS ORDER ACKNOWLEDGMENT, FIRM QUOTATION, OR OTHER SIMILAR DOCUMENT ISSUED OVER THE SIGNATURE OF AN AUTHORIZED EMPLOYEE OF SUPPLIER. SUPPLIER'S REPRESENTATIVES, DISTRIBUTORS, DEALERS AND OTHER NON-EMPLOYEES HAVE NO AUTHORITY TO BIND SUPPLIER.

1. **Firmware.** The terms "goods" as used herein shall include Firmware which shall mean the set of instructions, consisting of symbolic language, processes, logic, routines, and programmed information in the form of firm or soft media relating to any of the goods and all revisions and modifications thereof.
2. **Price/Delivery Terms.** Unless otherwise provided on Supplier's order acknowledgment, price and delivery terms are FOB Supplier's plant and do not include sales, use, or other taxes. Supplier may, at its option, make partial shipments and invoice for same.
3. **Payment/Credit/Security.** Payment terms for buyers with a credit standing deemed adequate by Supplier are net 30 days from date of invoice. Supplier shall be entitled to charge interest thereafter at a rate permitted by law, but in no event to exceed 1-1/2% per month. Whenever Supplier in good faith deems itself insecure, Supplier may cancel any outstanding contracts with Customer, revoke its extension of credit to Customer, reduce any unpaid debt by enforcing its security interest, created hereby, in all goods (and proceeds therefrom) furnished by Supplier to Customer, and take any other steps necessary or desirable to secure Supplier with respect to Customer's payment for goods and services furnished or to be furnished by Supplier.

In the event Customer for any reason withholds payment of any amount due Supplier, Supplier may declare itself insecure and suspend further shipment to Customer until Customer places the withheld amount in escrow and gives adequate security for further shipment or until Customer satisfies Supplier that Customer is entitled to withhold such amount. Supplier shall be entitled to recover from Customer all costs, including reasonable attorney's fees, incurred by Supplier in connection with the collection of any amount due Supplier.

#### 4. Cancellation by Customer.

(a). Except as provided in sub-paragraph (b) below, Customer's wrongful non-acceptance or repudiation of a contract to purchase Supplier's goods or services shall entitle Supplier to recover the price or, where an action for the price is not permitted by law, damages, as provided by law, including Supplier's lost profits. In this connection all goods purchased and all services furnished by Supplier in complete or partial fulfillment of a special order from Customer shall be deemed identified to the contract between Supplier and Customer.

(b). Customer's wrongful non-acceptance or repudiation of a contract to purchase from Supplier goods which Supplier generally carries in inventory as stock items (or which are otherwise readily resaleable by Supplier at a reasonable price) shall entitle Supplier to recover damages, as provided by law, including Supplier's lost profits.

5. **Warranty.** Supplier warrants that all new and unused goods furnished by Supplier are free from defect in workmanship and material as of the time and place of delivery by Supplier. Except for goods and services furnished by Supplier through its employees arising out of orders solicited by Supplier's Representatives and duly accepted by Supplier, Supplier does not warrant, and shall not be liable for, the quality of any goods or services furnished or to be furnished by representatives, distributors, dealers or other non-employees of Supplier.

As a matter of general warranty policy, Supplier honors an original buyer's warranty claim in the event of failure, within 12 months from the day of delivery by Supplier to the site for Alpha Controls & Services equipment and for Building Management Systems goods, which have been installed and operated under normal conditions and in accordance with generally accepted industry practices. This general warranty policy may be expanded or limited for particular categories of products or customers by information sheets published by Supplier from time to time:

The express warranties provided above are in lieu of all other warranties, express or implied. IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSES ARE EXCLUDED WITH RESPECT TO ANY AND ALL GOODS AND SERVICES FURNISHED BY SUPPLIER.

In case of Supplier's breach of warranty or any other duty with respect to the quality of any goods, the sole and exclusive remedies therefore shall be, at Supplier's option, (1) repair, (2) replacement, or (3) payment of or credit for the purchase price (less reasonable depreciation based upon actual use) upon return of the non-conforming goods or parts.

Return authorization must be obtained from Supplier prior to the return of any defective material. All unauthorized returns will be sent back, freight collect, to the Customer. All returns must be made with transportation prepaid by the Customer. Supplier's examination of the units must disclose to its satisfaction that defects exist and have not been caused by misuse, neglect, improper installation, repair, alteration or accident before replacement is made or credit issued.

6. **Force Majeur.** Supplier and Customer assume the non-occurrence of the following contingencies which, without limitation, might render performance by Supplier impractical: strike, riots, fires, war, late or non-delivery by suppliers to Supplier, and all other contingencies beyond the reasonable control of supplier.
7. **No Consequential Damages.** Under no circumstances shall Supplier be liable to any person (including distributor) for loss of use, income, or profit or for incidental, special or consequential or other similar damages, arising, directly or indirectly out of or occasioned by the sale, operation, use, installation, repair or replacement of the goods or services, whether such damages are based on a claim of breach of express or implied warranties (including merchantability or fitness for a particular purpose), tortious conduct (including negligence and strict liability) or any other cause of action, except only in the case of personal injury where applicable law requires such liability.
8. **Governing Law.** The law of the State of Illinois shall govern all transactions to which these standard terms and conditions apply.
9. **Prices** in this quotation remain in effect for 45 days from date of issue.