

ANNUAL REPORT



# Performance Services

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## ARKANSAS TECH UNIVERSITY

Year 1

January – December 2020



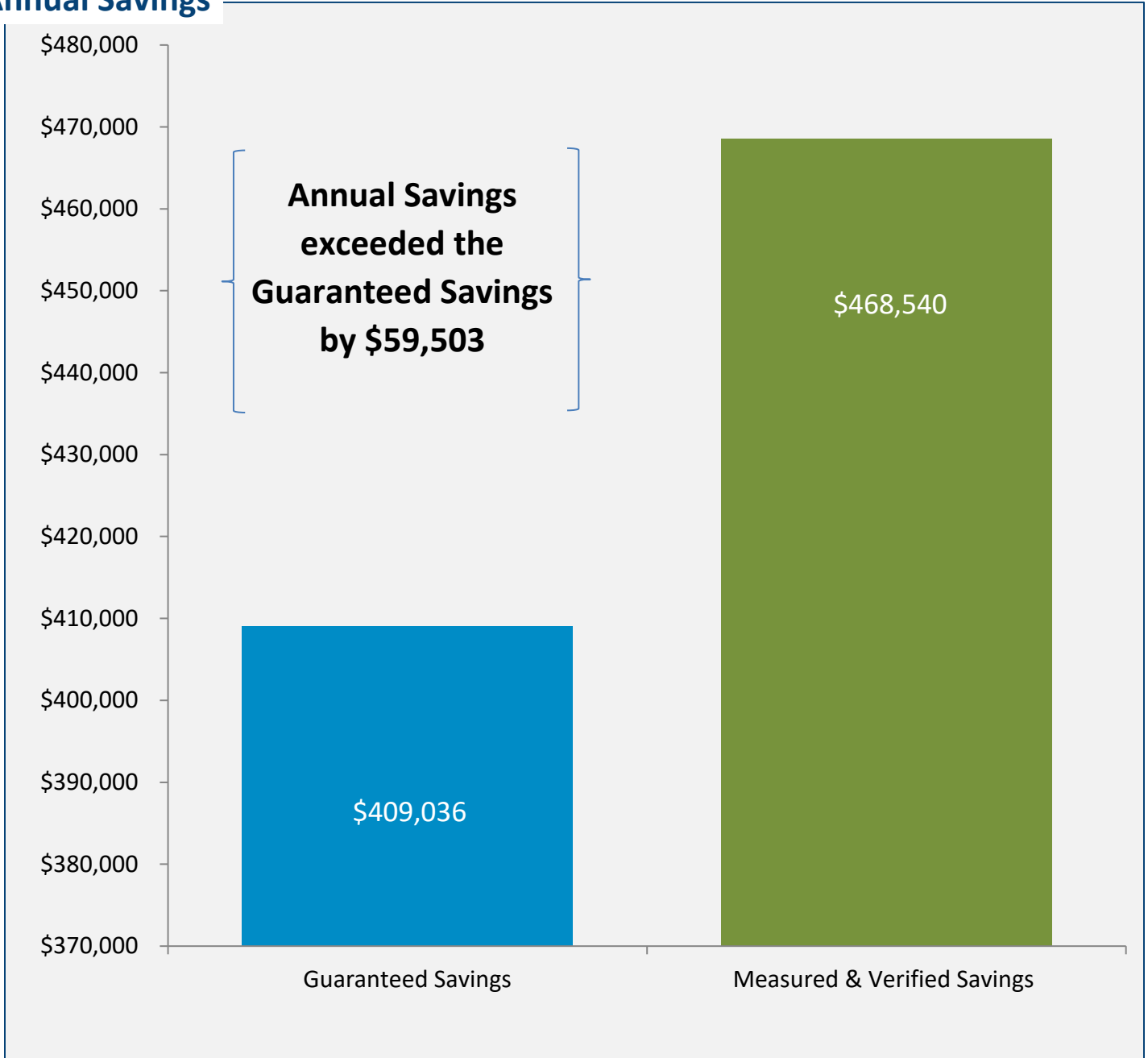
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## Executive Summary

This Year 1 Annual Report provides an overview of energy performance resulting from the efficiency project completed by Performance Services (PSI) in 2019. Our Performance Assurance team is committed to measuring and monitoring project performance, recognizing customer successes, and identifying opportunities for increased efficiency. The following Annual Savings table shows guaranteed energy savings compared to actual savings measured for the period of January 1 – December 31, 2020. Measured savings surpassed guaranteed savings by **\$59,503**, or **14.5%**.

### Annual Savings



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## Project Description

Arkansas Tech University selected Performance Services to implement a campus-wide energy savings program utilizing the Arkansas Energy Performance Contracting (AEPC) Program. Essential improvements include LED lighting retrofits and building automation systems upgrades across the campus. In addition to these energy improvements, Energy Leadership program was implemented across the campus. An energy manager leads the behavioral-based student and staff energy awareness and cost reduction program.



## Project Highlights

- Energy Leadership program
- LED lighting campus-wide upgrade (exterior and interior lighting)
- Building automation controls upgrade
- Fume hood retrofit and controls upgrades
- Cafeteria exhaust hood conversion to VAV



*“I attribute ATU’s project success to clear and open communication from the start of the project. This was a large-scale endeavor including mechanical and lighting upgrades, fume hood conversions and HVAC control improvements. Regular coordination meetings with the ATU team allowed us to identify and resolve any logistical challenges and execute these upgrades with little disruption to university programs, ATU educators, staff and students. It was a pleasure working with Brian Lasey, Marcus (Drew) Dickey, David Condley, Jonathan Collins and the rest of the ATU team. I sincerely appreciate their commitment to providing students with a healthy and productive learning environment while building a more energy efficient campus.”*

**Jerry Philmon**  
PROJECT MANAGER

## Project Benefits

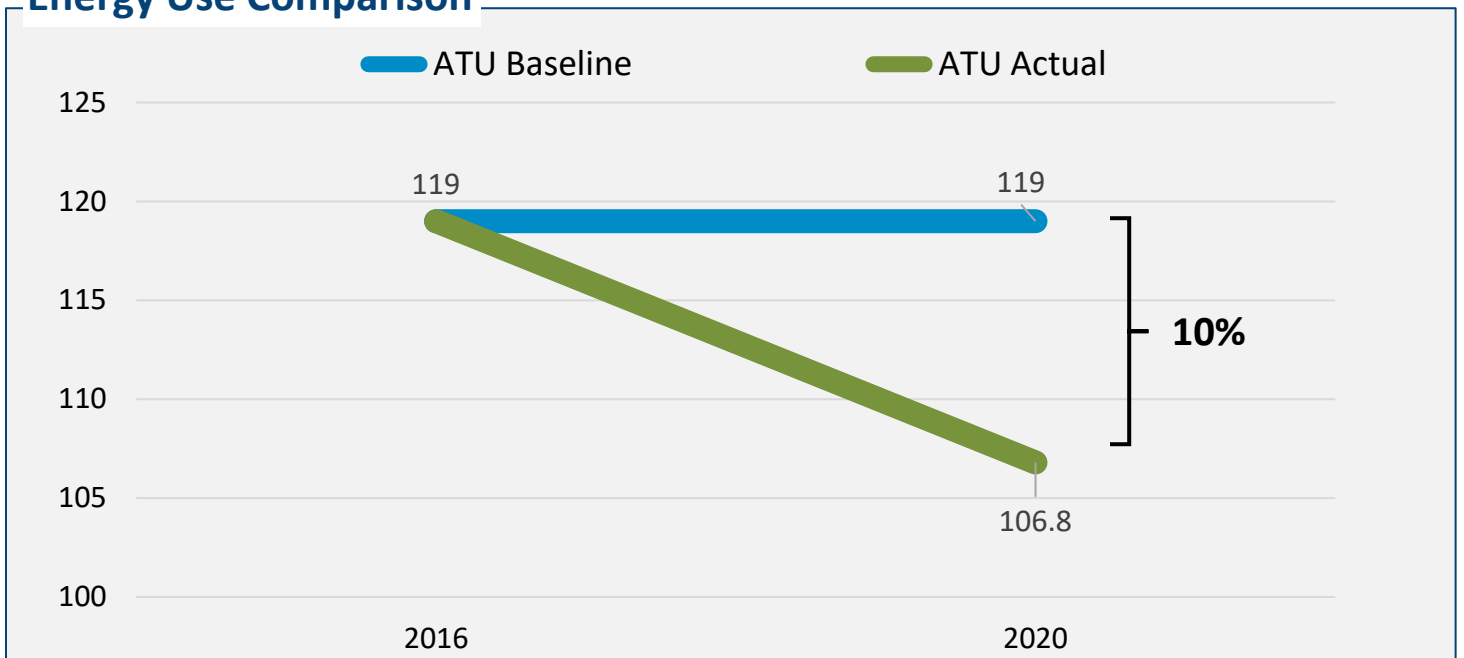
Performance Services provides systems and solutions with the goal of providing high-performing learning and working environments for our customers. Our Four-Season Optimization process ensures that your building systems are energy-efficient while also providing an optimal learning environment. We also design reliable and resilient systems in order to minimize operational costs.



## Energy Usage

The Energy Use Index (EUI), referred to generally as “energy intensity,” demonstrates the volume of energy consumed per square foot at a set of facilities over the course of a year. Prior to 2020, ATU facilities included in this project scored a combined EUI of 119. After adoption of the Energy Leadership program, equipment upgrades, and Four-Season Optimization, the EUI of these facilities is now 106.8, which is a 10% reduction in energy intensity.

### Energy Use Comparison





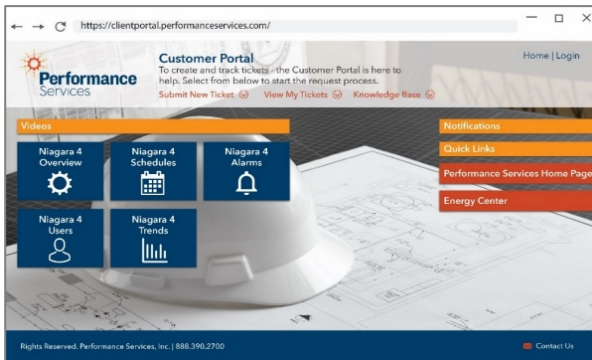
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## Customer Portal

Performance Services provides a **Customer Portal** to our customers with access to training videos, an in-depth searchable knowledge base, and a ticketing system to create and track work requests. This portal allows for ease of communication and ensures a convenient way to request assistance, and document system performance.

### Customer Portal Data

- 25 total tickets
- 100% have been resolved



### McEver Hall Fume Hood

Reported Issue: McEver fume hood reporting a sash-related error  
2/5/2020 10:25am – Per Steven Stilts

We met the TEL electrician in McEver Room 102 yesterday to investigate the fume hood issue. It was discovered that the bottom of the sash was making contact with the fume hood base instead of stopping short, and the close sensor required recalibration. Paul Zasada worked with the electrician to recalibrate. They ran through several steps and positions. Once complete, the equipment was tested at least five times. It now stops about two fingers from the bottom. The alarm is resolved.



*Lighting efficiency upgrades at McEver Hall*

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## Who We Are

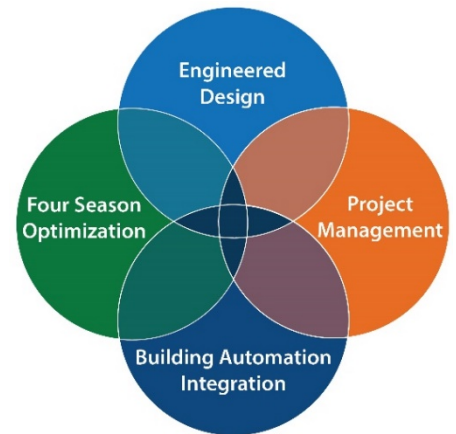
Performance Services is a high-performance specialist, creating and delivering facility and environmental solutions using integrated design and delivery with sole accountability. We do this by utilizing either design-build or guaranteed energy savings contracts. Our focus since the company's founding in 1998 is serving education and local governments to provide sustainable solutions and 100% customer satisfaction on every project.

## What We Do



## How We Do It

Performance Services provides **integrated design and delivery** that is enabled and focused on quality results for our customers. We prefer not to relinquish our design, project management, optimization, or performance assurance work to subcontractors and perform these essential functions in-house. Our team utilizes a cohesive and collaborative team approach throughout project development and implementation to maximize quality results and customer satisfaction.



## How We're Different

Performance Services conducts master planning and completes both new construction and major renovation projects using a design-to-budget and collaborative process to save our customers time and money.

- **A multidisciplinary approach**
- **Unparalleled performance guarantees**
- **No change orders guarantee**
- **Transparent, open-book pricing**
- **Vendor independence**
- **Sole accountability for results**



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## Contact for Assistance



**Sterling Miller**

BUSINESS DEVELOPMENT MANAGER

317-854-9103 | [smiller@performanceservices.com](mailto:smiller@performanceservices.com)



**Abby Vaal**

PERFORMANCE ASSURANCE ADMINISTRATOR

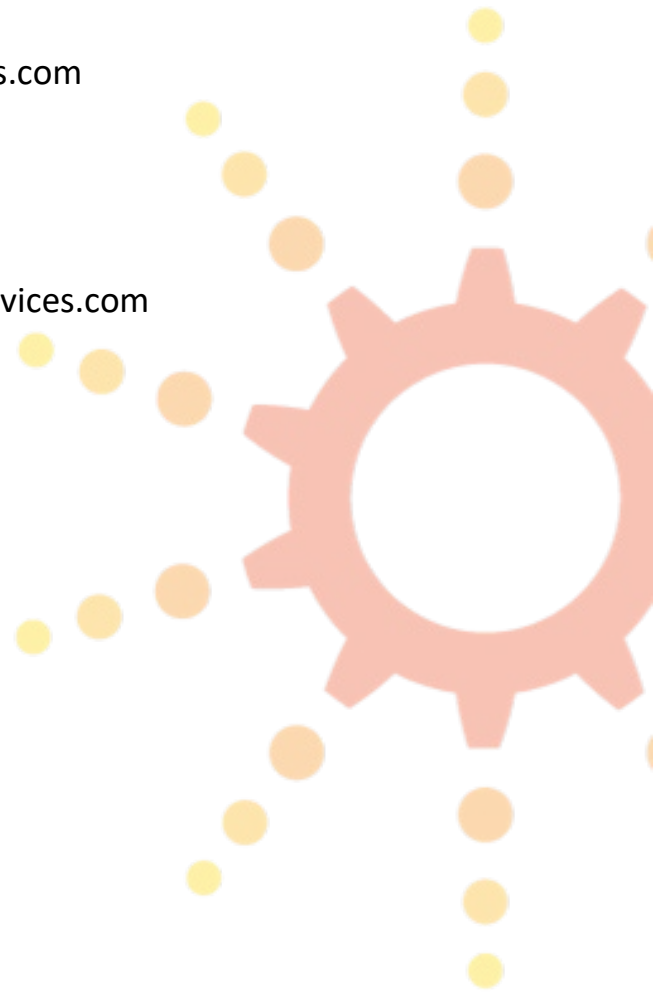
317-713-1750 | [avaal@performanceservices.com](mailto:avaal@performanceservices.com)



**Jeff Peterson**

PERFORMANCE ASSURANCE SPECIALIST

317-450-8481 | [jpeterson@performanceservices.com](mailto:jpeterson@performanceservices.com)



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### OUR WORD IS OUR BOND

When we commit to implementing a project at a set price, we implement that project for that price without asking customers for change orders to cover design or construction errors.

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### RELATIONSHIPS MATTER

We work with customers that believe in a collaborative and partnership approach. We value long-term relationships.

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### WE FULFILL PROMISES

Promises and commitments to customers always take priority over profits. Our employees are empowered and expected to make this happen.

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### CUSTOMER IS IN CONTROL

Quality performance and value is defined by our customers. Customer feedback is always taken into consideration.



Performance  
Services

# Performance Services

## Appendix

PROPRIETARY



## APPENDIX- TABLE OF CONTENTS

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<b>Annual Guaranteed Savings Report Summary</b>			
<i>Year 1 (January 1, 2020 - December 31, 2020)</i>			
Description	Guaranteed Savings	Calculated Savings	Net Difference
<b>ENERGY SAVINGS</b>			
<b>NUTT RESIDENCE HALL</b>			
* Electric	\$ 3,529	\$ 3,715	\$ 186
* Gas			\$ -
<i>Sub-Total</i>	<b>\$ 3,529</b>	<b>\$ 3,715</b>	<b>\$ 186</b>
<b>DEAN HALL</b>			
* Electric	\$ 5,610	\$ 5,906	\$ 295
* Gas			\$ -
<i>Sub-Total</i>	<b>\$ 5,610</b>	<b>\$ 5,906</b>	<b>\$ 295</b>
<b>TURNER HALL</b>			
* Electric	\$ 359	\$ 378	\$ 19
* Gas			\$ -
<i>Sub-Total</i>	<b>\$ 359</b>	<b>\$ 378</b>	<b>\$ 19</b>
<b>PAINE RESIDENCE HALL</b>			
* Electric	\$ 1,894	\$ 1,993	\$ 100
* Gas			\$ -
<i>Sub-Total</i>	<b>\$ 1,894</b>	<b>\$ 1,993</b>	<b>\$ 100</b>
<b>WITHERSPOON HALL</b>			
* Electric	\$ 10,930	\$ 11,506	\$ 575
* Gas			\$ -
<i>Sub-Total</i>	<b>\$ 10,930</b>	<b>\$ 11,506</b>	<b>\$ 575</b>
<b>ROSS PENDEGRAFT LIBRARY AND TECHNOLOGY CENTER</b>			
* Electric	\$ 8,921	\$ 9,391	\$ 470
* Gas			\$ -
<i>Sub-Total</i>	<b>\$ 8,921</b>	<b>\$ 9,391</b>	<b>\$ 470</b>
<b>MCEVER HALL, ANNEX &amp; ADDITION 2</b>			
* Electric	\$ 23,484	\$ 30,649	\$ 7,165
* Gas	\$ 10,167	\$ 50,837	\$ 40,670
<i>Sub-Total</i>	<b>\$ 33,651</b>	<b>\$ 81,486</b>	<b>\$ 47,835</b>
<b>CORLEY HALL</b>			
* Electric	\$ 6,662	\$ 7,012	\$ 351
* Gas			\$ -
<i>Sub-Total</i>	<b>\$ 6,662</b>	<b>\$ 7,012</b>	<b>\$ 351</b>
<b>ENERGY CENTER</b>			
* Electric	\$ 1,131	\$ 1,191	\$ 60
* Gas			\$ -
<i>Sub-Total</i>	<b>\$ 1,131</b>	<b>\$ 1,191</b>	<b>\$ 60</b>
<b>DOC BRYAN STUDENT SERVICES BUILDING</b>			
* Electric	\$ 5,992	\$ 6,307	\$ 315
* Gas			\$ -
<i>Sub-Total</i>	<b>\$ 5,992</b>	<b>\$ 6,307</b>	<b>\$ 315</b>
<b>TUCKER COLISEUM</b>			
* Electric	\$ 8,926	\$ 9,396	\$ 470
* Gas			\$ -
<i>Sub-Total</i>	<b>\$ 8,926</b>	<b>\$ 9,396</b>	<b>\$ 470</b>

Annual Guaranteed Savings Report Summary Year 1 (January 1, 2020 - December 31, 2020)			
Description	Guaranteed Savings	Calculated Savings	Net Difference
<b>HUGHES RESIDENCE HALL</b>			
* Electric	\$ 612	\$ 644	\$ 32
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 612</b>	<b>\$ 644</b>	<b>\$ 32</b>
<b>CHAMBERS CAFETERIA</b>			
* Electric	\$ 6,369	\$ 6,838	\$ 470
* Gas	\$ 4,612	\$ 5,765	\$ 1,153
<b>Sub-Total</b>	<b>\$ 10,981</b>	<b>\$ 12,603</b>	<b>\$ 1,623</b>
<b>TECHIONERY</b>			
* Electric	\$ 2,711	\$ 2,854	\$ 143
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 2,711</b>	<b>\$ 2,854</b>	<b>\$ 143</b>
<b>M STREET RESIDENCE HALL</b>			
* Electric	\$ 1,015	\$ 1,068	\$ 53
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 1,015</b>	<b>\$ 1,068</b>	<b>\$ 53</b>
<b>TOMILINSON HALL</b>			
* Electric	\$ 3,466	\$ 3,649	\$ 182
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 3,466</b>	<b>\$ 3,649</b>	<b>\$ 182</b>
<b>ADMINISTRATION BUILDING</b>			
* Electric	\$ 1,910	\$ 2,547	\$ 637
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 1,910</b>	<b>\$ 2,547</b>	<b>\$ 637</b>
<b>CRABAUGH HALL</b>			
* Electric	\$ 4,402	\$ 4,633	\$ 232
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 4,402</b>	<b>\$ 4,633</b>	<b>\$ 232</b>
<b>HULL PHYSICAL EDUCATION BUILDING</b>			
* Electric	\$ 16,370	\$ 17,231	\$ 862
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 16,370</b>	<b>\$ 17,231</b>	<b>\$ 862</b>
<b>BROWNING HALL (OLD ART BUILDING)</b>			
* Electric	\$ 797	\$ 839	\$ 42
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 797</b>	<b>\$ 839</b>	<b>\$ 42</b>
<b>CARAWAY RESIDENCE HALL</b>			
* Electric	\$ 1,035	\$ 1,089	\$ 54
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 1,035</b>	<b>\$ 1,089</b>	<b>\$ 54</b>
<b>NORMAN HALL</b>			
* Electric	\$ 3,324	\$ 3,499	\$ 175
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 3,324</b>	<b>\$ 3,499</b>	<b>\$ 175</b>
<b>BASWELL RESIDENCE HALL</b>			
* Electric	\$ 2,477	\$ 2,608	\$ 130
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 2,477</b>	<b>\$ 2,608</b>	<b>\$ 130</b>
<b>PHYSICAL PLANT SHOP / FACILITIES MANAGEMENT</b>			
* Electric	\$ 4,125	\$ 4,343	\$ 217
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 4,125</b>	<b>\$ 4,343</b>	<b>\$ 217</b>



Annual Guaranteed Savings Report Summary			
Year 1 (January 1, 2020 - December 31, 2020)			
Description	Guaranteed Savings	Calculated Savings	Net Difference
<b>ROTHWELL HALL</b>			
* Electric	\$ 5,162	\$ 5,434	\$ 272
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 5,162</b>	<b>\$ 5,434</b>	<b>\$ 272</b>
<b>BASWELL TECHIONERY</b>			
* Electric	\$ 2,773	\$ 3,209	\$ 436
* Gas	\$ 2,675	\$ 3,344	\$ 669
<b>Sub-Total</b>	<b>\$ 5,448</b>	<b>\$ 6,553</b>	<b>\$ 1,104</b>
<b>BROWN HALL</b>			
* Electric	\$ 2,170	\$ 2,285	\$ 114
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 2,170</b>	<b>\$ 2,285</b>	<b>\$ 114</b>
<b>MORTON HALL</b>			
* Electric	\$ 1,049	\$ 1,104	\$ 55
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 1,049</b>	<b>\$ 1,104</b>	<b>\$ 55</b>
<b>TECH BASEBALL FIELD</b>			
* Electric	\$ 347	\$ 365	\$ 18
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 347</b>	<b>\$ 365</b>	<b>\$ 18</b>
<b>PUBLIC SAFETY</b>			
* Electric	\$ 98	\$ 104	\$ 5
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 98</b>	<b>\$ 104</b>	<b>\$ 5</b>
<b>ALUMNI HOUSE</b>			
* Electric	\$ 440	\$ 463	\$ 23
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 440</b>	<b>\$ 463</b>	<b>\$ 23</b>
<b>THRONE STADIUM</b>			
* Electric	\$ 847	\$ 1,881	\$ 1,035
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 847</b>	<b>\$ 1,881</b>	<b>\$ 1,035</b>
<b>STADIUM SUITES STUDENT HOUSING</b>			
* Electric	\$ 2,245	\$ 2,363	\$ 118
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 2,245</b>	<b>\$ 2,363</b>	<b>\$ 118</b>
<b>CHARTWELLS ATHLETIC COMPLEX</b>			
* Electric	\$ 3,246	\$ 5,901	\$ 2,655
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 3,246</b>	<b>\$ 5,901</b>	<b>\$ 2,655</b>
<b>FISHERIES, WILDLIFE AND ENGINEERING LAB</b>			
* Electric	\$ 1,048	\$ 1,103	\$ 55
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 1,048</b>	<b>\$ 1,103</b>	<b>\$ 55</b>
<b>COLLEGIATE CENTER</b>			
* Electric	\$ 3,778	\$ 3,976	\$ 199
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 3,778</b>	<b>\$ 3,976</b>	<b>\$ 199</b>
<b>WEST ANNEX</b>			
* Electric	\$ 1,454	\$ 1,531	\$ 77
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 1,454</b>	<b>\$ 1,531</b>	<b>\$ 77</b>

Annual Guaranteed Savings Report Summary Year 1 (January 1, 2020 - December 31, 2020)			
Description	Guaranteed Savings	Calculated Savings	Net Difference
<b>OZARK - CAMPUS BUILDINGS</b>			
* Electric	\$ 13,393	\$ 14,098	\$ 705
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 13,393</b>	<b>\$ 14,098</b>	<b>\$ 705</b>
<b>LAKE POINT - ALL CAMPUS BUILDINGS</b>			
* Electric	\$ 13,176	\$ 13,870	\$ 693
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 13,176</b>	<b>\$ 13,870</b>	<b>\$ 693</b>
<b>OTHER MISCELLANEOUS</b>			
* Electric	\$ 14,453	\$ 15,213	\$ 761
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 14,453</b>	<b>\$ 15,213</b>	<b>\$ 761</b>
<b>PUBLIC WORKS BUILDING</b>			
* Electric	\$ 2,675	\$ 2,815	\$ 141
* Gas			\$ -
<b>Sub-Total</b>	<b>\$ 2,675</b>	<b>\$ 2,815</b>	<b>\$ 141</b>
<b>ENERGY LEADERSHIP</b>			
* Energy	\$ 185,592	\$ 182,008	\$ (3,584)
* Water	\$ 11,584	\$ 11,584	\$ -
<b>Sub-Total</b>	<b>\$ 197,176</b>	<b>\$ 193,592</b>	<b>\$ (3,584)</b>
<b>Total</b>	<b>\$ 409,036</b>	<b>\$ 468,540</b>	<b>\$ 59,503</b>
<b>OPERATIONAL SAVINGS</b>			
* Lighting and fume hood upgrades	\$ 101,775	\$ 101,775	\$ -
<b>SAVINGS</b>	<b>\$ 510,811</b>	<b>\$ 570,315</b>	<b>\$ 59,503</b>

*The operational savings are expenditures that the customer would have incurred had they not addressed their repair and replacement needs under this contract. Operational savings are impossible to accurately track after the equipment is replaced because it is impossible to know when the equipment would have failed or required repairs. Therefore, the operational savings were agreed to as a part of the contract and have been averaged over the ten year term.*

<b>Detailed Energy Savings Summary</b>									
<b>Year 1 (January 1, 2020 - December 31, 2020)</b>									
Improvements	Electric Savings			Gas Savings			Total Savings		
	Guaranteed YTD	Calculated YTD	Difference YTD	Guaranteed YTD	Calculated YTD	Difference YTD	Guaranteed YTD	Calculated YTD	Difference YTD
<b>NUTT RESIDENCE HALL</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 3,529	\$ 3,715	\$ 186			\$ -	\$ 3,529	\$ 3,715	\$ 186
Sub-total:	\$ 3,529	\$ 3,715	\$ 186	\$ -	\$ -	\$ -	\$ 3,529	\$ 3,715	\$ 186
<b>DEAN HALL</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 5,610	\$ 5,906	\$ 295			\$ -	\$ 5,610	\$ 5,906	\$ 295
Sub-total:	\$ 5,610	\$ 5,906	\$ 295	\$ -	\$ -	\$ -	\$ 5,610	\$ 5,906	\$ 295
<b>TURNER HALL</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 359	\$ 378	\$ 19			\$ -	\$ 359	\$ 378	\$ 19
Sub-total:	\$ 359	\$ 378	\$ 19	\$ -	\$ -	\$ -	\$ 359	\$ 378	\$ 19
<b>PAINE RESIDENCE HALL</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 1,894	\$ 1,993	\$ 100			\$ -	\$ 1,894	\$ 1,993	\$ 100
Sub-total:	\$ 1,894	\$ 1,993	\$ 100	\$ -	\$ -	\$ -	\$ 1,894	\$ 1,993	\$ 100
<b>WITHERSPOON HALL</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 10,930	\$ 11,506	\$ 575			\$ -	\$ 10,930	\$ 11,506	\$ 575
Sub-total:	\$ 10,930	\$ 11,506	\$ 575	\$ -	\$ -	\$ -	\$ 10,930	\$ 11,506	\$ 575
<b>ROSS PENDEGRAFT LIBRARY AND TECHNOLOGY CENTER</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 8,921	\$ 9,391	\$ 470			\$ -	\$ 8,921	\$ 9,391	\$ 470
Sub-total:	\$ 8,921	\$ 9,391	\$ 470	\$ -	\$ -	\$ -	\$ 8,921	\$ 9,391	\$ 470
<b>MCEVER HALL, ANNEX &amp; ADDITION 2</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 7,714	\$ 8,120	\$ 406			\$ -	\$ 7,714	\$ 8,120	\$ 406
* Savings due to lab fume hood and kitchen hood retrofit	\$ 15,770	\$ 22,529	\$ 6,759	\$ 10,167	\$ 50,837	\$ 40,670	\$ 25,938	\$ 73,366	\$ 47,429
Sub-total:	\$ 23,484	\$ 30,649	\$ 7,165	\$ 10,167	\$ 50,837	\$ 40,670	\$ 33,651	\$ 81,486	\$ 47,835
<b>CORLEY HALL</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 6,662	\$ 7,012	\$ 351			\$ -	\$ 6,662	\$ 7,012	\$ 351
Sub-total:	\$ 6,662	\$ 7,012	\$ 351	\$ -	\$ -	\$ -	\$ 6,662	\$ 7,012	\$ 351
<b>ENERGY CENTER</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 1,131	\$ 1,191	\$ 60			\$ -	\$ 1,131	\$ 1,191	\$ 60
Sub-total:	\$ 1,131	\$ 1,191	\$ 60	\$ -	\$ -	\$ -	\$ 1,131	\$ 1,191	\$ 60
<b>DOC BRYAN STUDENT SERVICES BUILDING</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 5,992	\$ 6,307	\$ 315			\$ -	\$ 5,992	\$ 6,307	\$ 315
Sub-total:	\$ 5,992	\$ 6,307	\$ 315	\$ -	\$ -	\$ -	\$ 5,992	\$ 6,307	\$ 315
<b>TUCKER COLISEUM</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 8,926	\$ 9,396	\$ 470			\$ -	\$ 8,926	\$ 9,396	\$ 470
Sub-total:	\$ 8,926	\$ 9,396	\$ 470	\$ -	\$ -	\$ -	\$ 8,926	\$ 9,396	\$ 470
<b>HUGHES RESIDENCE HALL</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 612	\$ 644	\$ 32			\$ -	\$ 612	\$ 644	\$ 32
Sub-total:	\$ 612	\$ 644	\$ 32	\$ -	\$ -	\$ -	\$ 612	\$ 644	\$ 32
<b>CHAMBERS CAFETERIA</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 4,072	\$ 4,286	\$ 214			\$ -	\$ 4,072	\$ 4,286	\$ 214
* Savings due to lab fume hood and kitchen hood retrofit	\$ 2,297	\$ 2,552	\$ 255	\$ 4,612	\$ 5,765	\$ 1,153	\$ 6,909	\$ 8,317	\$ 1,408
Sub-total:	\$ 6,369	\$ 6,838	\$ 470	\$ 4,612	\$ 5,765	\$ 1,153	\$ 10,981	\$ 12,603	\$ 1,623
<b>TECHIONERY</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 2,711	\$ 2,854	\$ 143			\$ -	\$ 2,711	\$ 2,854	\$ 143
Sub-total:	\$ 2,711	\$ 2,854	\$ 143	\$ -	\$ -	\$ -	\$ 2,711	\$ 2,854	\$ 143
<b>M STREET RESIDENCE HALL</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 1,015	\$ 1,068	\$ 53			\$ -	\$ 1,015	\$ 1,068	\$ 53
Sub-total:	\$ 1,015	\$ 1,068	\$ 53	\$ -	\$ -	\$ -	\$ 1,015	\$ 1,068	\$ 53



Detailed Energy Savings Summary									
Year 1 (January 1, 2020 - December 31, 2020)									
Improvements	Electric Savings			Gas Savings			Total Savings		
	Guaranteed YTD	Calculated YTD	Difference YTD	Guaranteed YTD	Calculated YTD	Difference YTD	Guaranteed YTD	Calculated YTD	Difference YTD
<b>TOMILINSON HALL</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 3,466	\$ 3,649	\$ 182			\$ -	\$ 3,466	\$ 3,649	\$ 182
Sub-total:	\$ 3,466	\$ 3,649	\$ 182	\$ -	\$ -	\$ -	\$ 3,466	\$ 3,649	\$ 182
<b>ADMINISTRATION BUILDING</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 1,910	\$ 2,547	\$ 637			\$ -	\$ 1,910	\$ 2,547	\$ 637
Sub-total:	\$ 1,910	\$ 2,547	\$ 637	\$ -	\$ -	\$ -	\$ 1,910	\$ 2,547	\$ 637
<b>CRABAUGH HALL</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 4,402	\$ 4,633	\$ 232			\$ -	\$ 4,402	\$ 4,633	\$ 232
Sub-total:	\$ 4,402	\$ 4,633	\$ 232	\$ -	\$ -	\$ -	\$ 4,402	\$ 4,633	\$ 232
<b>HULL PHYSICAL EDUCATION BUILDING</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 16,370	\$ 17,231	\$ 862			\$ -	\$ 16,370	\$ 17,231	\$ 862
Sub-total:	\$ 16,370	\$ 17,231	\$ 862	\$ -	\$ -	\$ -	\$ 16,370	\$ 17,231	\$ 862
<b>BROWNING HALL (OLD ART BUILDING)</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 797	\$ 839	\$ 42			\$ -	\$ 797	\$ 839	\$ 42
Sub-total:	\$ 797	\$ 839	\$ 42	\$ -	\$ -	\$ -	\$ 797	\$ 839	\$ 42
<b>CARAWAY RESIDENCE HALL</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 1,035	\$ 1,089	\$ 54			\$ -	\$ 1,035	\$ 1,089	\$ 54
Sub-total:	\$ 1,035	\$ 1,089	\$ 54	\$ -	\$ -	\$ -	\$ 1,035	\$ 1,089	\$ 54
<b>NORMAN HALL</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 3,324	\$ 3,499	\$ 175			\$ -	\$ 3,324	\$ 3,499	\$ 175
Sub-total:	\$ 3,324	\$ 3,499	\$ 175	\$ -	\$ -	\$ -	\$ 3,324	\$ 3,499	\$ 175
<b>BASWELL RESIDENCE HALL</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 2,477	\$ 2,608	\$ 130			\$ -	\$ 2,477	\$ 2,608	\$ 130
Sub-total:	\$ 2,477	\$ 2,608	\$ 130	\$ -	\$ -	\$ -	\$ 2,477	\$ 2,608	\$ 130
<b>PHYSICAL PLANT SHOP / FACILITIES MANAGEMENT</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 4,125	\$ 4,343	\$ 217			\$ -	\$ 4,125	\$ 4,343	\$ 217
Sub-total:	\$ 4,125	\$ 4,343	\$ 217	\$ -	\$ -	\$ -	\$ 4,125	\$ 4,343	\$ 217
<b>ROTHWELL HALL</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 5,162	\$ 5,434	\$ 272			\$ -	\$ 5,162	\$ 5,434	\$ 272
Sub-total:	\$ 5,162	\$ 5,434	\$ 272	\$ -	\$ -	\$ -	\$ 5,162	\$ 5,434	\$ 272
<b>BASWELL TECHIONERY</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 1,305	\$ 1,374	\$ 69			\$ -	\$ 1,305	\$ 1,374	\$ 69
* Savings due to lab fume hood and kitchen hood retrofit	\$ 1,468	\$ 1,835	\$ 367	\$ 2,675	\$ 3,344	\$ 669	\$ 4,143	\$ 5,179	\$ 1,036
Sub-total:	\$ 2,773	\$ 3,209	\$ 436	\$ 2,675	\$ 3,344	\$ 669	\$ 5,448	\$ 6,553	\$ 1,104
<b>BROWN HALL</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 2,170	\$ 2,285	\$ 114			\$ -	\$ 2,170	\$ 2,285	\$ 114
Sub-total:	\$ 2,170	\$ 2,285	\$ 114	\$ -	\$ -	\$ -	\$ 2,170	\$ 2,285	\$ 114
<b>MORTON HALL</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 1,049	\$ 1,104	\$ 55			\$ -	\$ 1,049	\$ 1,104	\$ 55
Sub-total:	\$ 1,049	\$ 1,104	\$ 55	\$ -	\$ -	\$ -	\$ 1,049	\$ 1,104	\$ 55
<b>TECH BASEBALL FIELD</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 347	\$ 365	\$ 18			\$ -	\$ 347	\$ 365	\$ 18
Sub-total:	\$ 347	\$ 365	\$ 18	\$ -	\$ -	\$ -	\$ 347	\$ 365	\$ 18
<b>PUBLIC SAFETY</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 98	\$ 104	\$ 5			\$ -	\$ 98	\$ 104	\$ 5
Sub-total:	\$ 98	\$ 104	\$ 5	\$ -	\$ -	\$ -	\$ 98	\$ 104	\$ 5
<b>ALUMNI HOUSE</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 440	\$ 463	\$ 23			\$ -	\$ 440	\$ 463	\$ 23
Sub-total:	\$ 440	\$ 463	\$ 23	\$ -	\$ -	\$ -	\$ 440	\$ 463	\$ 23

<b>Detailed Energy Savings Summary</b>									
<b>Year 1 (January 1, 2020 - December 31, 2020)</b>									
Improvements	Electric Savings			Gas Savings			Total Savings		
	Guaranteed YTD	Calculated YTD	Difference YTD	Guaranteed YTD	Calculated YTD	Difference YTD	Guaranteed YTD	Calculated YTD	Difference YTD
<b>THRONE STADIUM</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 847	\$ 1,881	\$ 1,035			\$ -	\$ 847	\$ 1,881	\$ 1,035
Sub-total:	\$ 847	\$ 1,881	\$ 1,035	\$ -	\$ -	\$ -	\$ 847	\$ 1,881	\$ 1,035
<b>STADIUM SUITES STUDENT HOUSING</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 2,245	\$ 2,363	\$ 118			\$ -	\$ 2,245	\$ 2,363	\$ 118
Sub-total:	\$ 2,245	\$ 2,363	\$ 118	\$ -	\$ -	\$ -	\$ 2,245	\$ 2,363	\$ 118
<b>CHARTWELLS ATHLETIC COMPLEX</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 3,246	\$ 5,901	\$ 2,655			\$ -	\$ 3,246	\$ 5,901	\$ 2,655
Sub-total:	\$ 3,246	\$ 5,901	\$ 2,655	\$ -	\$ -	\$ -	\$ 3,246	\$ 5,901	\$ 2,655
<b>FISHERIES, WILDLIFE AND ENGINEERING LAB</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 1,048	\$ 1,103	\$ 55			\$ -	\$ 1,048	\$ 1,103	\$ 55
Sub-total:	\$ 1,048	\$ 1,103	\$ 55	\$ -	\$ -	\$ -	\$ 1,048	\$ 1,103	\$ 55
<b>COLLEGIATE CENTER</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 3,778	\$ 3,976	\$ 199			\$ -	\$ 3,778	\$ 3,976	\$ 199
Sub-total:	\$ 3,778	\$ 3,976	\$ 199	\$ -	\$ -	\$ -	\$ 3,778	\$ 3,976	\$ 199
<b>WEST ANNEX</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 1,454	\$ 1,531	\$ 77			\$ -	\$ 1,454	\$ 1,531	\$ 77
			\$ -			\$ -	\$ -	\$ -	\$ -
Sub-total:	\$ 1,454	\$ 1,531	\$ 77	\$ -	\$ -	\$ -	\$ 1,454	\$ 1,531	\$ 77
<b>OZARK - CAMPUS BUILDINGS</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 13,393	\$ 14,098	\$ 705			\$ -	\$ 13,393	\$ 14,098	\$ 705
Sub-total:	\$ 13,393	\$ 14,098	\$ 705	\$ -	\$ -	\$ -	\$ 13,393	\$ 14,098	\$ 705
<b>LAKE POINT - ALL CAMPUS BUILDINGS</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 13,176	\$ 13,870	\$ 693			\$ -	\$ 13,176	\$ 13,870	\$ 693
Sub-total:	\$ 13,176	\$ 13,870	\$ 693	\$ -	\$ -	\$ -	\$ 13,176	\$ 13,870	\$ 693
<b>OTHER MISCELLANEOUS</b>									
Savings									
* Savings due to exterior lighting retrofit at all (3) campuses and interior lighting at the Lake Point Conference Center	\$ 14,453	\$ 15,213	\$ 761			\$ -	\$ 14,453	\$ 15,213	\$ 761
Sub-total:	\$ 14,453	\$ 15,213	\$ 761	\$ -	\$ -	\$ -	\$ 14,453	\$ 15,213	\$ 761
<b>PUBLIC WORKS BUILDING</b>									
Savings									
* Savings due to interior and exterior lighting retrofit	\$ 2,675	\$ 2,815	\$ 141			\$ -	\$ 2,675	\$ 2,815	\$ 141
Sub-total:	\$ 2,675	\$ 2,815	\$ 141	\$ -	\$ -	\$ -	\$ 2,675	\$ 2,815	\$ 141
<b>ENERGY LEADERSHIP</b>									
Savings									
* Savings due to alteration of energy culture and behaviors of staff and students - Energy	\$ 185,592	\$ 182,008	\$ (3,584)	\$ -	\$ -	\$ -	\$ 185,592	\$ 182,008	\$ (3,584)
* Savings due to alteration of energy culture and behaviors of staff and students - Water							\$ 11,584	\$ 11,584	\$ -
Sub-total:	\$ 185,592	\$ 182,008	\$ (3,584)	\$ -	\$ -	\$ -	\$ 197,176	\$ 193,592	\$ (3,584)
<b>TOTAL</b>	\$ 379,998	\$ 397,010	\$ 17,012	\$ 17,455	\$ 59,946	\$ 42,492	\$ 409,036	\$ 468,540	\$ 59,503

## Utility Bill Savings

### Arkansas Tech University

Timeframe			ELECTRIC								
Base Year	Current Year	Month	Current Year			Base Year			Savings		
			Usage (kWh)	Rate (\$ / kWh)	Raw Costs (\$)	Usage (kWh)	Rate (\$ / kWh)	Costs (\$)	Usage (kWh)	Rate (\$ / kWh)	Savings (\$)
2016	2020	Jan	1,765,948	\$ 0.0677	\$ 107,401	2,004,357	\$ 0.0611	\$ 123,258	238,409	\$ 0.0677	\$ 16,139
2016	2020	Feb	1,763,164	\$ 0.0677	\$ 119,149	1,979,388	\$ 0.0611	\$ 120,983	216,224	\$ 0.0677	\$ 14,637
2016	2020	Mar	1,822,208	\$ 0.0677	\$ 121,614	2,144,172	\$ 0.0611	\$ 131,779	321,964	\$ 0.0677	\$ 21,795
2016	2020	Apr	1,687,421	\$ 0.0677	\$ 108,895	2,284,456	\$ 0.0611	\$ 132,535	597,035	\$ 0.0677	\$ 40,416
2016	2020	May	1,883,105	\$ 0.0677	\$ 134,146	2,402,086	\$ 0.0611	\$ 149,386	518,980	\$ 0.0677	\$ 35,132
2016	2020	June	2,015,557	\$ 0.0677	\$ 149,349	2,604,241	\$ 0.0611	\$ 167,779	588,685	\$ 0.0677	\$ 39,851
2016	2020	July	2,266,431	\$ 0.0677	\$ 158,008	2,996,457	\$ 0.0611	\$ 192,179	730,025	\$ 0.0677	\$ 49,419
2016	2020	Aug	2,503,380	\$ 0.0677	\$ 180,280	3,112,942	\$ 0.0611	\$ 204,634	609,562	\$ 0.0677	\$ 41,264
2016	2020	Sept	2,300,958	\$ 0.0677	\$ 157,734	2,949,302	\$ 0.0611	\$ 182,133	648,344	\$ 0.0677	\$ 43,889
2016	2020	Oct	2,095,097	\$ 0.0677	\$ 136,847	2,823,129	\$ 0.0611	\$ 161,145	728,032	\$ 0.0677	\$ 49,284
2016	2020	Nov	1,761,842	\$ 0.0677	\$ 115,386	2,258,555	\$ 0.0611	\$ 128,025	496,713	\$ 0.0677	\$ 33,625
2016	2020	Dec	1,587,891	\$ 0.0677	\$ 98,835	1,870,407	\$ 0.0611	\$ 105,716	282,516	\$ 0.0677	\$ 19,125
<b>Total</b>			<b>23,453,003</b>	<b>\$ 0.0677</b>	<b>\$ 1,587,644</b>	<b>29,429,494</b>	<b>\$ 0.0611</b>	<b>\$ 1,799,552</b>	<b>5,976,491</b>	<b>\$ 0.0677</b>	<b>\$ 404,577</b>

Energy Leadership Performance Summary		
Actual Energy Savings	\$	456,956
Measured & Verified Savings from Improvements	\$	(274,947)
<b>Energy Leadership Savings</b>	<b>\$</b>	<b>182,008</b>

Timeframe			GAS												
Base Year	Current Year	Month	Current Year				Base Year					Savings			
			Weather (HDD)	Usage (Therms)	Rate (\$ / Therm)	Raw Costs (\$)	Weather (HDD)	Usage (Therms)	Rate (\$ / Therm)	Costs (\$)	Weather Adjustment	Adj. Usage (therms)	Usage (Therms)	Rate (\$ / Therm)	Savings (\$)
2016	2020	Jan	641	128,493	\$ 0.3350	\$40,608	755	146,096	\$ 0.4377	\$ 54,905	0.85	124,037	(4,456)	\$ 0.4377	\$ (1,950)
2016	2020	Feb	574	97,747	\$ 0.3350	\$30,499	480	118,593	\$ 0.4377	\$ 48,864	1.20	141,817	44,071	\$ 0.4377	\$ 19,290
2016	2020	Mar	233	88,349	\$ 0.3350	\$33,595	268	89,910	\$ 0.4377	\$ 34,561	0.87	78,168	(10,182)	\$ 0.4377	\$ (4,457)
2016	2020	Apr	184	72,714	\$ 0.3350	\$24,024	71	70,046	\$ 0.4377	\$ 27,143	2.59	181,527	108,813	\$ 0.4377	\$ 47,629
2016	2020	May	43	53,139	\$ 0.3350	\$17,654	28	53,401	\$ 0.4377	\$ 22,293	1.00	53,401	263	\$ 0.4377	\$ 115
2016	2020	June	-	45,017	\$ 0.3350	\$14,537	-	37,822	\$ 0.4377	\$ 17,802	1.00	37,822	(7,195)	\$ 0.4377	\$ (3,149)
2016	2020	July	-	44,568	\$ 0.3350	\$12,324	-	35,766	\$ 0.4377	\$ 20,807	1.00	35,766	(8,802)	\$ 0.4377	\$ (3,853)
2016	2020	Aug	-	45,275	\$ 0.3350	\$14,292	-	43,067	\$ 0.4377	\$ 22,630	1.00	43,067	(2,207)	\$ 0.4377	\$ (966)
2016	2020	Sept	6	46,479	\$ 0.3350	\$17,099	-	44,852	\$ 0.4377	\$ 23,683	1.00	44,852	(1,627)	\$ 0.4377	\$ (712)
2016	2020	Oct	172	79,030	\$ 0.3350	\$20,584	24	53,392	\$ 0.4377	\$ 27,189	1.00	53,392	(25,638)	\$ 0.4377	\$ (11,222)
2016	2020	Nov	294	78,553	\$ 0.3350	\$31,415	262	83,758	\$ 0.4377	\$ 35,723	1.12	93,988	15,435	\$ 0.4377	\$ 6,756
2016	2020	Dec	673	117,481	\$ 0.3350	\$43,781	693	132,496	\$ 0.4377	\$ 62,367	0.97	128,672	11,192	\$ 0.4377	\$ 4,899
<b>Total</b>			<b>2,820</b>	<b>896,843</b>	<b>\$ 0.3350</b>	<b>\$ 300,413</b>	<b>2,581</b>	<b>909,198</b>	<b>\$ 0.4377</b>	<b>\$ 397,966</b>	<b>1.09</b>	<b>1,016,509</b>	<b>119,665</b>	<b>\$ 0.4377</b>	<b>\$ 52,379</b>

**Total Utility Savings: \$ 456,956**



## Lighting Savings

Facility Name	kW	kWh	kW \$	kWh \$	Total (\$)
Nutt Residence Hall	25	96,150	\$ 572	\$ 3,143	\$ 3,715
Dean Hall (DN)	37	155,134	\$ 834	\$ 5,071	\$ 5,906
Turner Residence Hall	2	9,962	\$ 52	\$ 326	\$ 378
Paine Residence Hall	14	51,204	\$ 319	\$ 1,674	\$ 1,993
Witherspoon Hall (WPN)	75	299,794	\$ 1,706	\$ 9,800	\$ 11,506
Ross Pendergraft Library and Technology Center (RPL)	61	244,910	\$ 1,385	\$ 8,006	\$ 9,391
McEver Hall, Annex, & Addition 2	51	213,155	\$ 1,152	\$ 6,968	\$ 8,120
Corley Hall (COR)	47	181,628	\$ 1,075	\$ 5,937	\$ 7,012
Energy Center (CES)	8	31,170	\$ 172	\$ 1,019	\$ 1,191
Doc Bryan Student Services Center (SSC)	38	166,794	\$ 854	\$ 5,452	\$ 6,307
Tucker Coliseum	65	242,258	\$ 1,477	\$ 7,919	\$ 9,396
Hughes Residence Hall	5	16,504	\$ 104	\$ 540	\$ 644
Chambers Cafeteria	29	110,941	\$ 660	\$ 3,627	\$ 4,286
Techionery (TEC)	20	73,259	\$ 459	\$ 2,395	\$ 2,854
M Street Residence Hall	7	27,685	\$ 163	\$ 905	\$ 1,068
Tomlinson Hall (TOM)	25	94,362	\$ 564	\$ 3,085	\$ 3,649
Administration Building	22	62,974	\$ 489	\$ 2,059	\$ 2,547
Crabaugh Hall (CRA)	32	119,769	\$ 718	\$ 3,915	\$ 4,633
Hull Physical Education Building (HULL)	116	446,378	\$ 2,639	\$ 14,592	\$ 17,231
Browning Hall	7	20,892	\$ 156	\$ 683	\$ 839
Caraway Residence Hall	7	28,453	\$ 159	\$ 930	\$ 1,089
Norman Hall (NOR)	24	90,161	\$ 552	\$ 2,947	\$ 3,499
Baswell Residence Hall	17	68,208	\$ 378	\$ 2,230	\$ 2,608
Facilities Management	16	70,757	\$ 81	\$ 4,261	\$ 4,343
Rothwell Hall (RTH)	41	137,686	\$ 933	\$ 4,501	\$ 5,434
Baswell Techionery	7	37,137	\$ 160	\$ 1,214	\$ 1,374
Brown Hall (RCB)	22	54,838	\$ 492	\$ 1,793	\$ 2,285
Morton Hall	4	18,001	\$ 20	\$ 1,084	\$ 1,104
Baseball Field	3	9,287	\$ 62	\$ 304	\$ 365
Public Safety	1	2,676	\$ 16	\$ 87	\$ 104
Alumni House	3	11,955	\$ 72	\$ 391	\$ 463
Thone Stadium	11	50,159	\$ 242	\$ 1,640	\$ 1,881
Stadium Suites Student Housing	8	28,773	\$ -	\$ 2,363	\$ 2,363
Chartwells Women's Sports Complex	25	95,898	\$ 126	\$ 5,775	\$ 5,901
Fisheries and Wildlife Engineering Lab	3	18,105	\$ 13	\$ 1,090	\$ 1,103
Ozark Campus- Collegiate Center	15	64,786	\$ 75	\$ 3,901	\$ 3,976
Ozark Campus- Adult Education	6	24,890	\$ 32	\$ 1,499	\$ 1,531
Ozark - Campus Buildings	58	229,226	\$ 294	\$ 13,804	\$ 14,098
Lake Point - All Campus Buildings	62	225,072	\$ 316	\$ 13,554	\$ 13,870
Other Misc.	0	390,588	\$ 1	\$ 15,213	\$ 15,213
Public Works Building	13	45,660	\$ 66	\$ 2,750	\$ 2,815
<b>Total:</b>	<b>1,031</b>	<b>4,367,242</b>	<b>\$ 19,638</b>	<b>\$ 168,447</b>	<b>\$ 188,085</b>

Fume Hood Savings					
Facility Name	Project	kWh Savings	Electric Savings (\$)	Therm Savings	Gas Savings (\$)
Chambers Cafeteria	VAV Retrofit	78,066	\$ 2,552	\$14,170	\$ 5,765
Baswell Techionery	VAV Retrofit	56,132	\$ 1,835	\$ 4,352	\$ 3,344
McEver Hall	Fume Hood VAV Retrofit	689,176	\$ 22,529	\$72,481	\$ 50,837
		823,374	\$ 26,916	91,003	\$ 59,946
			Grand Total Savings		\$ 86,862