

Annual Savings Report

State of Ohio Standard Forms and Documents

Project Name Tolles Career & Technical Center Date 8/25/17
 Project Number 1373

| Project Summary | |
|------------------------------------|----------------------------------------------------|
| School District Name | Tolles Career & Technical Center |
| State Project Number (SN) | 1218 |
| School Building Name(s) | Career Building |
| Total Project Cost (\$) | 214,821 |
| Length of Contract Term (years) | 14.9 |
| Projected Avg. Annual Savings (\$) | 18,842 |
| Construction Started/Completed | Start Date: 7/23/15 Completion Date: 12/11/15 |
| Reporting Year (1, 2 or 3) | 1 |
| ESCO Name | H.E.A.T. Total Facility Solutions |
| ESCO Address | 5064 Red Bank Rd. Galena, OH 43021 |
| ESCO Phone Number | 740-965-3005 |
| ESCO Contact Person | Ron Thomas, President |
| ESCO E-mail Address | rthomas@heattfs.com |

At a minimum, the following items must be included in the annual report in order to support the summary table above. Additional information may be included and the items below are in no particular order within your report. Please check that the following are included in the report:

- Baseline utility tables (gas, electric, water/sewage, etc.) including rates
- Actual monthly utility data for the current year
- List of adjustments from baseline to current year and the supporting documentation
- Adjusted utility tables for the current reporting year
- Conclusion as to whether the project has met its savings projection
- Conclusion as to whether the project has met its guarantee (for projects approved after September 2013)
- In case of shortfall, what measures are proposed to remedy the shortfall (if applicable)

Prepared by:

Certified by:

 Name, Title
 ESCO Name

 Name, Treasurer
 School District

 Date

 Date

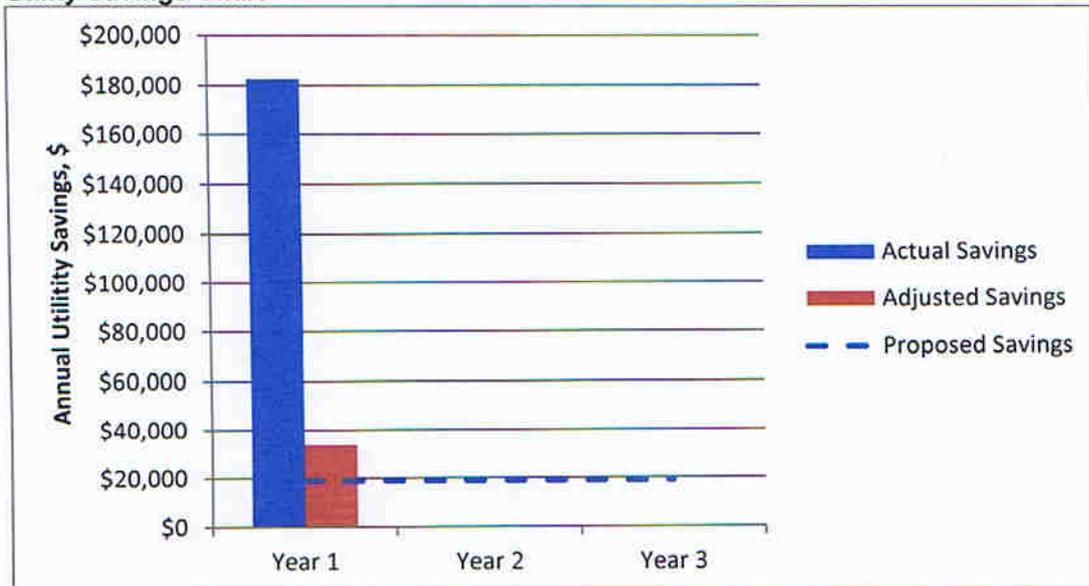
Annual Savings Report

Utility Table

| Electricity | Baseline | Proposed | Actual | Adjusted Baseline year | Adjusted Current year |
|--------------------------------------|---------------------|---------------------|---------------------|------------------------|-----------------------|
| Annual Usage, kWh | 4,621,200 | 4,411,621 | 1,784,500 | 4,621,200 | 2,428,488 |
| Annual Cost, \$ | \$415,458 | \$396,616 | \$194,684 | \$415,458 | \$339,326 |
| CDD | 535 | | 934 | 535 | 934 |
| Fuel (if applicable) | Baseline | Proposed | Actual | Adjusted Baseline year | Adjusted Current year |
| Annual Usage, ____ Units | | | 42815 | | 47400 |
| Annual Cost, \$ | \$ | \$ | \$38205 | \$ | \$42296 |
| HDD | 5756 | | 4971 | 5756 | 4971 |
| Water/Sewage (if applicable) | | | | | |
| Annual Usage ____ Units | | | | | |
| Annual Cost, \$ | \$ | \$ | \$ | \$ | \$ |
| Total Annual Utility Cost, \$ | \$415,458(A) | \$396,616(B) | \$232,889(C) | \$415,458(D) | \$381,786(E) |

Note: Adjustments can be to baseline year or current (measured) year, or both if baselines are adjusted to a historical average. Adjustments include weather, occupancy, utility rate, over-rides, additions, etc. Please justify these adjustments in the body of the report.

Utility Savings Chart



Notes

Proposed Savings = A-B
 Actual Savings = A-C
 Adjusted Savings = A-E, or D-C, or D-E

Natural Gas Savings

| | MCF CONSUMPTION | | | NATURAL GAS COSTS | | | COST SAVINGS | | |
|---------------------------|------------------|---------------|-------------------------------------|---------------------------|---------------|--------------------------------------------|------------------|--------------------------------------------|----------------|
| | Prior to Project | After Project | Actual | Prior to Project | After Project | Actual | Prior to Project | After Project | Actual |
| Building | Baseline | Simple | w/ Weather Normalization Adjustment | Baseline | Simple | w/ Weather Normalization & Rate Adjustment | Simple | w/ Weather Normalization & Rate Adjustment | OSFC Submittal |
| | 0 | 42,815 | 47,400 | \$0 | \$38,205 | \$42,296 | -\$38,205 | -\$42,296 | \$0 |
| Tolles Career & Technical | 0 | 0 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| | | | | Total Natural Gas Savings | | | -\$38,205 | -\$42,296 | \$0 |

Electricity Savings

| | KWH CONSUMPTION | | | ELECTRICITY COSTS | | | COST SAVINGS | | |
|----------------------------------|------------------|---------------|-------------------------------------|---------------------------|---------------|--------------------------------------------|------------------|--------------------------------------------|----------------|
| | Prior to Project | After Project | Actual | Prior to Project | After Project | Actual | Prior to Project | After Project | Estimated |
| Building | Baseline | Simple | w/ Weather Normalization Adjustment | Baseline | Simple | w/ Weather Normalization & Rate Adjustment | Simple | w/ Weather Normalization & Rate Adjustment | OSFC Submittal |
| | 4,621,200 | 1,784,500 | 2,428,488 | \$415,458 | \$194,684 | \$339,326 | \$220,774 | \$76,133 | \$18,842 |
| Tolles Career & Technical School | | | | | | | | -\$164 | |
| Tolles HVAC Electric | | | | | | | | | |
| | | | | TOTAL ELECTRICITY SAVINGS | | | \$220,774 | \$75,968 | \$18,842 |
| | | | | TOTAL ENERGY SAVINGS | | | \$182,569 | \$33,672 | \$18,842 |

Tolles Career Technical Energy Savings - Electric

Tolles Career & Technical School

| Electricity Consumption Prior to HB 264 Project | | | | Electricity Consumption After the HB 264 Project | | | | | |
|-------------------------------------------------|---------------------------|------------------|----------------------|--------------------------------------------------|---------------------------|------------------|----------------------------------|----------------------------|----------------------|
| 2014-2015 | Cooling Degree Days (CDD) | KWH | Cost | 2016-2017 | Cooling Degree Days (CDD) | KWH | Weather Normalization Adjustment | Weather Adjusted KWH Usage | Cost |
| Mar | 0 | 467,700 | \$ 42,418.92 | Mar | 0 | 154,600 | 0 | 154,600 | \$ 18,267.35 |
| Apr | 2 | 291,900 | \$ 29,893.59 | Apr | 0 | 147,000 | 0 | 147,000 | \$ 17,833.79 |
| May | 62 | 244,500 | \$ 23,647.36 | May | 52 | 138,300 | (19,265) | 119,035 | \$ 16,674.13 |
| June | 168 | 168,900 | \$ 14,909.02 | June | 191 | 141,600 | (70,761) | 70,839 | \$ 9,262.87 |
| July | 98 | 169,500 | \$ 14,415.83 | 17-Jul | 270 | 106,800 | (100,029) | 6,771 | \$ 4,758.22 |
| Aug | 159 | 203,100 | \$ 19,760.73 | 16-Aug | 287 | 130,500 | (106,327) | 24,173 | \$ 15,611.96 |
| Sept | 44 | 256,800 | \$ 24,538.79 | Sept | 115 | 162,600 | (42,605) | 119,995 | \$ 18,225.99 |
| Oct | 2 | 272,100 | \$ 28,900.67 | Oct | 18 | 181,800 | (6,669) | 175,131 | \$ 16,868.91 |
| Nov | 0 | 537,000 | \$ 47,858.93 | Nov | 1 | 130,800 | (370) | 130,430 | \$ 15,243.88 |
| Dec | 0 | 562,500 | \$ 48,481.51 | Dec | 0 | 151,800 | 0 | 151,800 | \$ 24,018.88 |
| 15-Jan | 0 | 702,300 | \$ 58,738.57 | 17-Jan | 0 | 179,100 | 0 | 179,100 | \$ 21,641.35 |
| Feb | 0 | 744,900 | \$ 61,894.24 | Feb | 0 | 159,600 | 0 | 159,600 | \$ 16,276.97 |
| TOTALS | 535 | 4,621,200 | \$ 415,458.16 | TOTALS | 934 | 1,784,500 | (346,026) | 1,438,474 | \$ 194,684.30 |

cost per KWH: 0.09

cost per KWH: 0.14

Gas Adjustment

| |
|-------------------------|
| \$ 210,003.04 |
| \$339,325.66 |
| Weather & Rate Adjusted |

| | Simple Reduction | Weather/Rate Adjusted |
|--------------------------|------------------|-----------------------|
| KWH Reduction | 2,836,700 | \$3,182,726 |
| KWH Reduction Percentage | 61.4% | 31.1% |

The historical CDD data was collected from the closest reporting weather station in Plain City, Ohio

**Tolles Career Technical
Energy Savings - Electric**

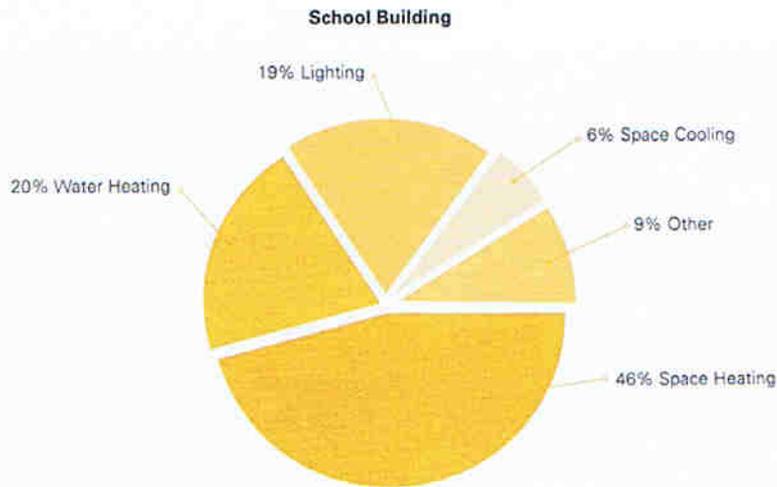
| oct-apr | current | baseline | cost |
|---------|---------|------------|-----------|
| | 130,151 | 318,186.43 | |
| | | 318,186.43 | |
| | | 66.00% | heating % |
| | | 210,003.04 | |

How much do you spend on energy?

U.S. school districts spend \$6 billion each year on energy — second only to salaries. On a more local basis, kindergarten through high school buildings in the U.S. spend an average of 67 cents per square foot (ft²) on electricity and 19 cents/ft² on natural gas annually. In a typical school building, lighting, space heating, and water heating represent the bulk of total use, making those systems the best targets for energy savings.

Top energy-performing schools use three times less energy than the least efficient schools

Energy accounts for about 2.2 percent of a school's expenditures. Although this represents only a small percentage of total costs, it is one of the few expenses that can be decreased without affecting classroom instruction.



Source <http://www.eere.energy.gov/buildings/info/schools/index.html>

Tolles Career & Technical Center - HVAC Electric Heating

| Consumption Prior to HB 264 Project | | | | | Consumption After the HB 264 Project | | | | | | |
|-------------------------------------|---------------------------|----------------|-------------------|----------|--------------------------------------|---------------------------|--------------------|-----------------|----------------------------------|------------------------------------|--|
| 2014-2015 | Heating Degree Days (HDD) | KWh | Cost | | 2016-2017 | Heating Degree Days (HDD) | Cost | KWh | Weather Normalization Adjustment | Weather Adjusted MCF Usage | |
| 15-Mar | 679 | 10,802 | \$ 972.18 | | Mar | 529 | \$ 422.94 | 3,021 | 296 | 3,316.76 | |
| Apr | 243 | 5,856 | \$ 527.04 | | Apr | 102 | \$ 187.04 | 1,336 | 57 | 1,393.03 | |
| May | 287 | 4,499 | \$ 404.91 | | May | 70 | \$ 168.00 | 1,200 | 39 | 1,239.14 | |
| June | 358 | 5,174 | \$ 465.66 | | June | 0 | \$ 299.18 | 2,137 | 0 | 2,137.00 | |
| July | 415 | 6,228 | \$ 560.52 | | 17-Jul | 0 | \$ 409.92 | 2,928 | 0 | 2,928.00 | |
| 14-Aug | 0 | 5,462 | \$ 491.58 | | 16-Aug | 0 | \$ 319.20 | 2,280 | 0 | 2,280.00 | |
| Sept | 5 | 4,415 | \$ 397.35 | | Sept | 2 | \$ 190.68 | 1,362 | 1 | 1,363.12 | |
| Oct | 192 | 7,339 | \$ 660.51 | | Oct | 113 | \$ 258.44 | 1,846 | 63 | 1,909.18 | |
| Nov | 659 | 8,492 | \$ 764.28 | | Nov | 394 | \$ 307.30 | 2,195 | 220 | 2,415.28 | |
| Dec | 738 | 14,438 | \$ 1,299.42 | | Dec | 847 | \$ 628.18 | 4,487 | 474 | 4,960.55 | |
| 15-Jan | 1044 | 17,077 | \$ 1,536.93 | | 17-Jan | 712 | \$ 808.36 | 5,774 | 398 | 6,172.07 | |
| Feb | 1136 | 16,640 | \$ 1,497.60 | | Feb | 502 | \$ 814.38 | 5,817 | 281 | 6,097.66 | |
| TOTALS | 5,756 | 106,422 | \$9,577.98 | - | TOTALS | 3,271 | \$ 4,813.62 | 34,383.0 | 1,829 | 36,212 | |
| COST/CCF | | | | | COST: | | | | | \$164.41 | |
| #DIV/0! | | | | | 0.09 | | | | | Weather & Rate Adjusted | |

| | Simple Reduction | Weather/Rate Adjusted |
|----------------------------|------------------|-----------------------|
| Cost Savings | \$0 | \$0 |
| Cost Reduction Percentage | 0.0% | 0.0% |
| MMBtu Reduction Percentage | 0.0% | 0.0% |

The historical CDD data was collected from the closest reporting weather station in Salineville, Ohio

USAGE AFTER ECM 2

VRF Usage Report

DISCLAIMER: This tool is intended to be an estimate of approximate operating cost difference between commercial VRF systems and the baseline system indicated. This is NOT a guarantee of actual operating cost or guaranteed actual dollar savings. Any information provided in this tool for equipment capacity or performance is ONLY intended for use in this comparison and NOT for final design purposes. Energy usage and cost in this report is ONLY for building HVAC components, NOT whole building energy consumption from plug, lighting, process, or domestic hot water loads. Your actual costs and energy savings will vary according to such individual factors as local utility rates, equipment selections, climate, building envelope, building usage and internal loadings, etc....

Enter Back-Up Heat Type:
Gas Source Back-Up Eff:

Electric Strip Select Electric If No Backup Heat is Desired
92% Thermal Efficiency

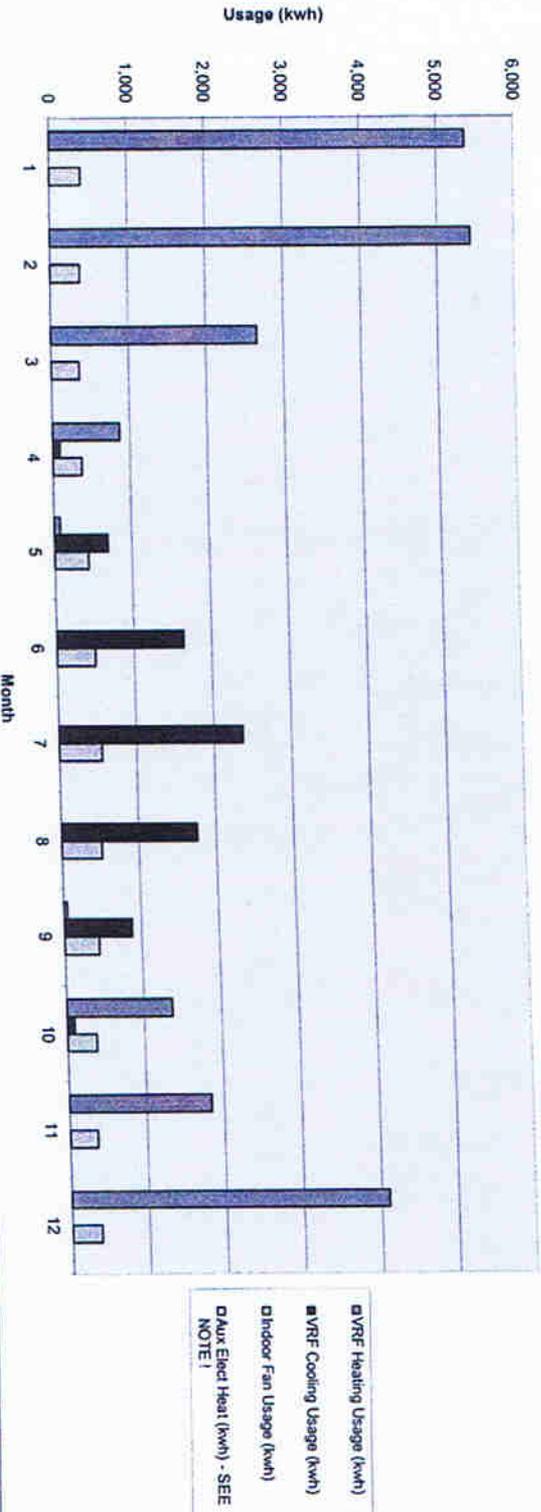
Resulting Energy Usage:

| Month | Jan | Feb | Mar | April | May | June | July | Aug | Sep | Oct | Nov | Dec | Totals |
|-----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| VRF Heating Usage (kwh) | 5,370 | 5,433 | 2,661 | 869 | 76 | 0 | 0 | 0 | 42 | 1,387 | 1,839 | 4,105 | 21,762 |
| VRF Cooling Usage (kwh) | 0 | 0 | 0 | 93 | 690 | 1,641 | 2,377 | 1,760 | 877 | 100 | 0 | 0 | 7,538 |
| Indoor Fan Usage (kwh) | 404 | 383 | 360 | 374 | 433 | 466 | 551 | 520 | 442 | 378 | 356 | 382 | 5,081 |
| Aux Elect Heat (kwh) - SEE NOTE 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Elec. Cons. (kwh) | 5,774 | 5,817 | 3,021 | 1,336 | 1,200 | 2,137 | 2,928 | 2,280 | 1,362 | 1,846 | 2,195 | 4,487 | 34,380 |
| Aux Gas Heat (therms) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Aux Heat (\$/hour) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Cost | \$519 | \$523 | \$272 | \$120 | \$108 | \$192 | \$263 | \$205 | \$122 | \$166 | \$197 | \$403 | \$3,091 |

Total Yearly Operating Cost: \$3,091 (HVAC only operating cost - NOT Whole Building)

Auxiliary Heat Note: Auxiliary heat usage shown is based on average hourly weather data as part of the energy analysis performed, NOT the actual requirement for auxiliary heat during design peak or extreme climate conditions. Always consult "Diamond Builder" outputs based on design peak conditions to accurately determine what capacity auxiliary heat is required.

VRF System Electric Monthly Usage



Electric Boiler Baseline System Usage Report

DISCLAIMER: This tool is intended to be an estimate of approximate operating cost difference between commercial VRF systems and the baseline system indicated. This is NOT a guarantee of actual operating cost or guaranteed actual dollar savings. Any information provided in this tool for equipment capacity or performance is ONLY intended for use in this comparison and NOT for final design purposes. Energy usage and cost in this report is ONLY for building HVAC components, NOT whole building energy consumption from plug, lighting, process, or domestic hot water loads. Your actual costs and energy savings will vary according to such individual factors as local utility rates, equipment selections, climate, building envelope, building usage and internal loadings, etc....

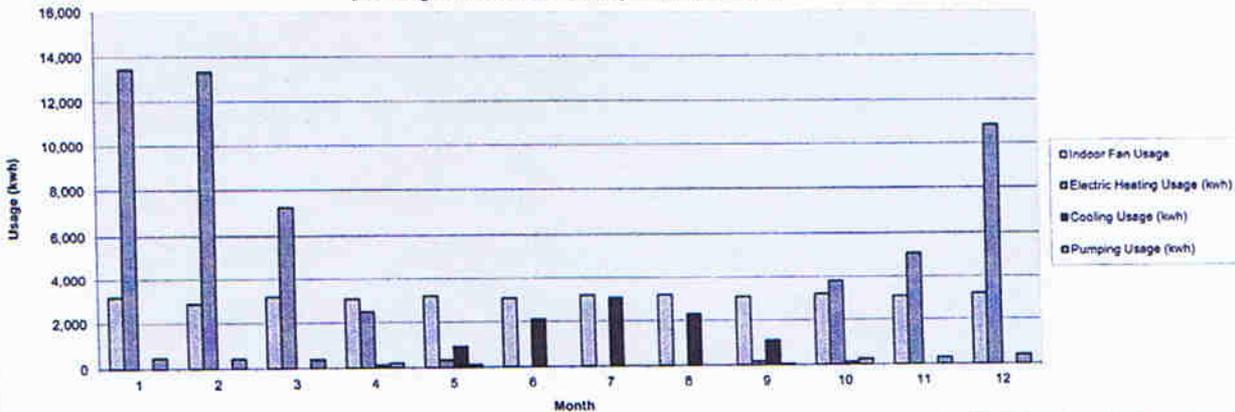
Enter Planned Installed Tonnage: 18 Tons
 Enter Air Cooled Chiller kw/ton: 1.19 Enter kw/ton @ 95 Deg F Ambient
 Air Cooled Chiller EER: 10.1 Calculated EER
 Enter Total Indoor Airflow: 10000 CFM
 Enter Fan Total Static Pressure: 2 inWG (Typical value is 1.25 for ducted FCU's - total static pressure)
 Enter Fan Overall Efficiency: 55% 55% is typical (includes fan, drive, and motor efficiency)
 Calculated Fan Peak Motor HP: 5.72 HP
 Supply Fan Cycle During Unoccupied: No Select Yes/No
 Supply Fan Cycle During Occupied: No Select Yes/No - Select "No" if Indoor Unit Provides Ventilation Air
 Primary Chilled Water Pump Head: 0.00 FT H2O - Typical Value 40-50 FT Assumed As Constant Volume - NO VFD
 Primary Pump Horse Power: 0.00 HP
 Secondary Chilled Water Pump Type: Variable Speed Select Variable (VFD) or Constant Volume
 Secondary Chilled Water Pump Head: 0.00 FT H2O - Typical Value 80-100 FT
 Secondary Pump Horse Power: 0.00 HP
 Hot Water Pump Type: Constant Speed Select Variable (VFD) or Constant Volume
 Hot Water Pump Head: 100.00 FT H2O - Typical Value 80-100 FT
 Hot Water Pump Horse Power: 0.86 HP
 Heating Water Loop Heat Source Type: Electric
 Heat Source Efficiency (Gas): 0% Thermal Efficiency

Resulting Energy Usage:

| Month | Jan | Feb | Mar | April | May | June | July | Aug | Sep | Oct | Nov | Dec | Totals |
|--------------------------------|----------------|----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|----------------|
| Electric Heating Usage (kwh) | 13,438 | 13,340 | 7,248 | 2,484 | 308 | 0 | 0 | 0 | 173 | 3,803 | 6,118 | 10,856 | 56,769 |
| Cooling Usage (kwh) | 0 | 0 | 0 | 97 | 921 | 2,098 | 3,047 | 2,284 | 1,109 | 111 | 0 | 0 | 9,667 |
| Indoor Fan Usage (kwh) | 3,174 | 2,857 | 3,174 | 3,072 | 3,174 | 3,072 | 3,174 | 3,174 | 3,072 | 3,174 | 3,072 | 3,174 | 37,372 |
| Pumping Usage (kwh) | 465 | 432 | 380 | 203 | 97 | 4 | 6 | 4 | 61 | 262 | 302 | 408 | 2,614 |
| Total Elec. Cons. (kwh) | 17,077 | 16,640 | 10,802 | 5,856 | 4,499 | 5,174 | 6,228 | 5,462 | 4,415 | 7,339 | 8,492 | 14,438 | 106,423 |
| Gas Heat (therms) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Cost | \$1,535 | \$1,496 | \$971 | \$526 | \$404 | \$465 | \$560 | \$491 | \$397 | \$660 | \$763 | \$1,298 | \$9,567 |

Total Yearly Operating Cost: \$9,567 VRF Savings 68% (HVAC Only Savings - Not Whole Building Savings)
 (HVAC only operating cost - NOT Whole Building)

Baseline System Monthly Electric Usage
 (Gas Usage Not Shown - See Monthly Data In Table Above)



32 TONS

Tolles Career & Technical Center - Gas

| Heating Oil Consumption Prior to HB 264 Project | | | | Gas Consumption After the HB 264 Project | | | | | | |
|-------------------------------------------------|---------------------------|----------|---------------|------------------------------------------|---------------------------|---------------------|-----------------|----------------------------------|----------------------------|-----------------|
| 2014-2015 | Heating Degree Days (HDD) | CCF | Cost | 2016-2017 | Heating Degree Days (HDD) | Cost | CCF | Weather Normalization Adjustment | Weather Adjusted MCF Usage | Difference Cost |
| 15-Mar | 679 | | | 17-Mar | 580 | \$ 5,120.19 | 7,878.0 | 535 | 8,413 | |
| Apr | 243 | | | Apr | 437 | \$ 2,701.00 | 2,078.8 | 403 | 2,482 | |
| May | 287 | | | May | 243 | \$ 1,119.52 | 1,455.0 | 224 | 1,679 | |
| June | 358 | | | June | 11 | \$ 281.71 | 334.0 | 10 | 344 | |
| July | 415 | | | July | 3 | \$ 87.33 | 80.0 | 3 | 83 | |
| 14-Aug | 0 | | | 16-Aug | 0 | \$ 12.20 | 16.0 | 0 | 16 | |
| Sept | 5 | | | Sept | 42 | \$ 139.99 | 146.0 | 39 | 185 | |
| Oct | 192 | | | Oct | 278 | \$ 626.70 | 770.0 | 256 | 1,026 | |
| Nov | 659 | | | Nov | 599 | \$ 2,611.35 | 3,318.0 | 552 | 3,870 | |
| Dec | 738 | | | Dec | 1115 | \$ 9,813.87 | 8,741.0 | 1,028 | 9,769 | |
| 15-Jan | 1044 | | | 17-Jan | 968 | \$ 9,297.36 | 10,190.0 | 893 | 11,083 | |
| Feb | 1136 | | | Feb | 695 | \$ 6,393.53 | 7,808.0 | 641 | 8,449 | |
| TOTALS | 5,756 | 0 | \$0.00 | TOTALS | 4,971 | \$ 38,204.75 | 42,814.8 | 4,585 | 47,400 | \$0.00 |

TOTAL Cost/CCF #DIV/0! Cost: 0.89

Weather & Rate Adjusted \$42,296.15

| | Simple Reduction | Weather/Rate Adjusted |
|----------------------------|------------------|-----------------------|
| Cost Savings | \$0 | \$0 |
| Cost Reduction Percentage | 0.0% | 0.0% |
| MMBtu Reduction Percentage | 0.0% | 0.0% |

The historical CDD data was collected from the closest reporting weather station in Salineville, Ohio