**Southgate School Energy Manager Report**

**September 4, 2012**

**Note: Data is current through August 30th**

**Degree Day Info:**

**Degree Day Background Information**

Degree days are essentially a simplified representation of outside air-temperature data. They are widely used in the energy industry for calculations relating to the effect of outside air temperature on building energy consumption.

"*Heating degree days*", or "*HDD*", are a measure of how much (in degrees), and for how long (in days), outside air temperature was *lower* than a specific "*base temperature*" (or "*balance point*" of 65F). They are used for calculations relating to the energy consumption required to *heat* buildings.

"*Cooling degree days*", or "*CDD*", are a measure of how much (in degrees), and for how long (in days), outside air temperature was *higher* than a specific base temperature. They are used for calculations relating to the energy consumption required to *cool* buildings.

**Fiscal Year 2012:** Fiscal year 2012 was incredibly mild as far as degree days go. This means that energy consumption should be down this year for heating and cooling, and is as you can see from the charts below.

The red values in the change column within the tables below represent energy consumption and cost over the SEMP baseline year of FY2010 or the ENERGY STAR Portfolio Manager Baseline year of FY2009. Since the weather this fiscal year has been so mild, this year should not be used to compare with other years for budgetary purposes.

The district saw a savings of **$5,172.22** when comparing FY2012 utilities to the SEMP baseline year of FY2012 and **$5,031** when comparing FY2012 utilities to the ENERGY STAR Portfolio Manager Baseline year of FY2009. The majority of this savings was seen in natural gas consumption, and can be attributed to the mild winter.

**District Wide:**

|  |  |  |  |
| --- | --- | --- | --- |
| **SEMP Baseline Comparison** | **FY2010** | **FY2012** | **Savings** |
| Electric Use (kWh) | 298,094 | 278,326 | 19,768 |
| Electric Use (kBTU) | 1,017,097 | 949,648 | 67,448 |
| Electric cost | $28,706.08 | $27,525.63 | $1,180.45 |
| Gas Use (ccf) | 18,714 | 18,550 | 164 |
| Gas Use (kBTU) | 1,925,671 | 1,908,795 | 16,876 |
| Gas Cost | $17,440.41 | $13,448.64 | $3,991.77 |
| Total Energy Use (kBTU) | 2,942,767 | 2,858,443 | 84,324 |
| Total Energy Cost | $46,146.49 | $40,974.27 | $5,172.22 |

|  |  |  |  |
| --- | --- | --- | --- |
| **ENERGY STAR Portfolio Manager Baseline Comparison** | **FY2009** | **FY2012** | **Savings** |
| Electric Use (kWh) | 258,200 | 278,326 |  (20,126.00) |
| Electric Use (kBTU) | 880,978 | 949,648 |  (68,669.91) |
| Electric cost |  $ 27,546.65  |  $ 27,525.63  | $21.02 |
| Gas Use (ccf) | 17,984 | 18,550 |  (566.00) |
| Gas Use (kBTU) | 1,850,554 | 1,908,795 |  (58,241.40) |
| Gas Cost |  $ 18,458.62  |  $ 13,448.64  | $5,009.98 |
| Total Energy Use (kBTU) | 2,731,532 | 2,858,443 |  (126,911.31) |
| Total Energy Cost |  $ 46,005.27  |  $ 40,974.27  | $5,031.00 |

**District Wide Total**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Gas Use (ccf)** | **Electric Use (kWh)** | **Gas Cost ($)** | **Electric Cost ($)** | **Gas Use (kBTU)** | **Electric Use (kBTU)** | **Total Energy (kBTU)** | **Total Cost ($)** |
| 2008-2009 | 17,984 | 258,200 | $18,458.62 | $27,546.65 | 1,850,554 | 880,978 | 2,731,532 | $46,005.27 |
| 2009-2010 | 18,714 | 298,094 | $17,440.41 | $28,706.08 | 1,925,671 | 1,017,097 | 2,942,767 | $46,146.49 |
| 2010-2011 | 23,664 | 281,469 | $19,204.28 | $27,423.29 | 2,435,026 | 960,372 | 3,395,398 | $46,627.57 |
| 2011-2012 | 18,550 | 278,326 | $13,448.64 | $27,525.63 | 1,908,795 | 949,648 | 2,858,443 | $40,974.27 |
| 2012-2013 | 21 | 54,321 | $109.86 | $5,064.39 | 2,161 | 185,343 | 187,504 | $5,174.25 |

**Southgate School:**

**Southgate School**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Gas Use (ccf)** | **Electric Use (kWh)** | **Gas Cost ($)** | **Electric Cost ($)** | **Gas Use (kBTU)** | **Electric Use (kBTU)** | **Total Energy (kBTU)** | **Total Cost ($)** | **Energy Intensity (kBTU/ft^2)** | **Total Cost ($/ft^2)** |
| 2008-2009 | 17,984 | 258,200 | $18,458.62 | $27,546.65 | 1,850,554 | 880,978 | 2,731,532 | $46,005.27 | 45.63 | $0.77 |
| 2009-2010 | 18,714 | 283,920 | $17,440.41 | $27,064.44 | 1,925,671 | 968,735 | 2,894,406 | $44,504.85 | 48.35 | $0.74 |
| 2010-2011 | 23,664 | 261,800 | $19,204.28 | $25,421.05 | 2,435,026 | 893,262 | 3,328,287 | $44,625.33 | 55.60 | $0.75 |
| 2011-2012 | 18,550 | 258,440 | $13,448.64 | $25,977.27 | 1,908,795 | 881,797 | 2,790,592 | $39,425.91 | 47 | $0.66 |
| 2012-2013 | 21 | 52,240 | $109.86 | $4,866.99 | 2,161 | 178,243 | 180,404 | $4,976.85 | 3 | $0.08 |

**Southgate Modular:**

**Southgate Modular**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Gas Use (ccf)** | **Electric Use (kWh)** | **Gas Cost ($)** | **Electric Cost ($)** | **Gas Use (kBTU)** | **Electric Use (kBTU)** | **Total Energy (kBTU)** | **Total Cost ($)** |
| 2008-2009 | 0 | 0 | $0.00 | $0.00 | 0 | 0 | 0 | $0.00 |
| 2009-2010\*\* | 0 | 14,174 | $0.00 | $1,641.64 | 0 | 48,362 | 48,362 | $1,641.64 |
| 2010-2011\* | 0 | 19,669 | $0.00 | $2,002.24 | 0 | 67,111 | 67,111 | $2,002.24 |
| 2011-2012 | 0 | 19,886 | $0.00 | $1,548.36 | 0 | 67,851 | 67,851 | $1,548.36 |
| 2012-2013 | 0 | 2,081 | $0.00 | $197.40 | 0 | 7,100 | 7,100 | $197.40 |