

Case Study number: Tipton HVAC 001-2011

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It has been almost a year since the Carrier Comfort Series unit was installed here and I thought you may be interested in this years findings.

From 2008 through 2011 all control conditions have been kept the same at 68F for heat and 78F for cooling with no other changes except for these items noted.

In late 2008, the attic insulation was increased from R19 to R30 and in late 2010 the heat pump was changed to the new Carrier unit.

The KWH usage on a monthly basis versus the heating/cooling degree days reported for that month and the slope line, calculated by the computer, represents the energy used solely during that time for heating and cooling. The intercept at about 700 KWH represents the energy used for all other uses like cooking/lighting/TV etc.

- 1.) For the year 2008, and years before that the energy usage was 3.380 kwh per degree day
- 2.) For the years 2009 and 2010, when only the increased insulation change was made, the energy usage dropped to 2.491 and 2.624 KWH/DD respectively. an average reduction of approximately 26%.
- 3.) For the year 2011 so far, since the new heat pump was installed a year ago, the energy usage has dropped again to 1.886 KWH/DD, a further reduction of approximately 24%.

Although these figures are not as high as are sometimes claimed, it must be noted that I was already meeting quite a few of the recommendations that are included in the "official" savings package i.e. temperature settings double glazing etc.

I feel very satisfied that both of the changes made will pay for themselves within 5 - 7 years.