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**Michael E Ramsey\*** (mer19@geneseo.edu) and **Jacob A Goldberg**. *Typical Meteorological Year versus Actual Meteorological Year Weather Data: How modern data collection improves previous methods.*

Typical Meteorological Year (TMY) data files are intended to be representative of actual weather by carefully piecing together historical weather data to create a “typical” year. These TMY files are employed by those working in the field of building technology and clean energy to gauge how much energy a building will use. This process is currently the standard for industry; however the use of actual weather data might produce more accurate predictions. Actual weather data is increasingly easy to come by, with many stations offering an abundance of data for free or for little cost.

We utilize TMY and Actual Meteorological Year (AMY) data along with the Department of Energy’s EnergyPlus Model to estimate heating and cooling loads of a residential home in Rochester, NY. We perform statistical analysis to demonstrate that there are striking differences in the predicted energy consumption. In response to a request from our industry partner, Resource Refocus, LLC, we also give ideas for how a more detailed portfolio of energy use might look now that computational power is much larger than it was at the inception of energy modeling. (Received September 22, 2015)