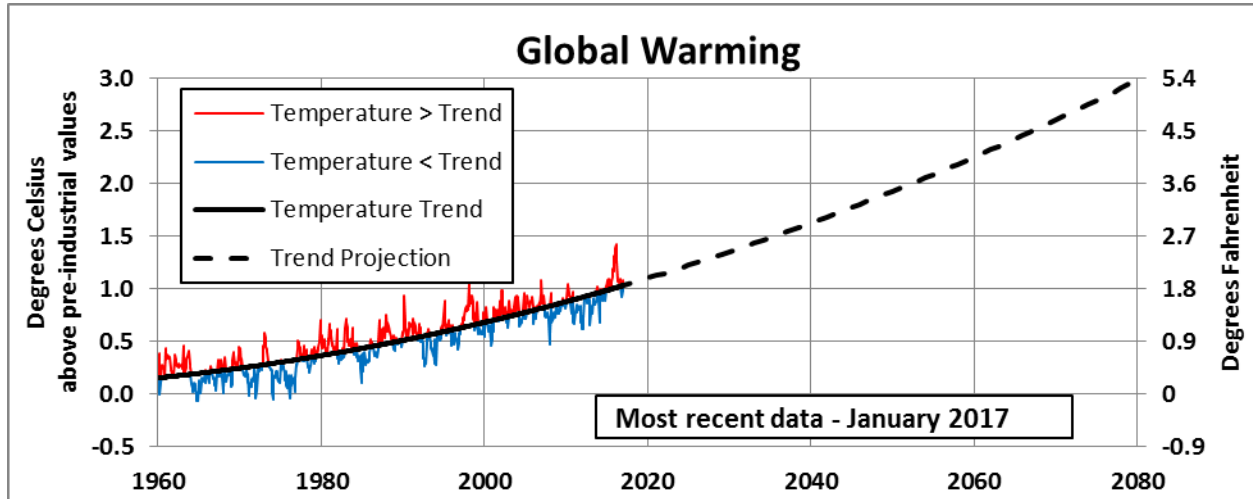


**Global Warming Data, Trend and Projection**  
**Dr. Rich Ferguson, CEERT**  
**Updated February, 2017**



**Update Note** –Global temperatures in January 2017 were slightly warmer than the trend, making the month the 3<sup>rd</sup> warmest January on record. 2016 global annual average temperatures set a new record for the 3<sup>rd</sup> consecutive year.

**Data** – Monthly global surface temperature anomaly data (red and blue lines) are monthly differences from the average temperature *for that month* during the years 1901-2000 and are available from [NOAA](http://www.noaa.gov). The red (blue) lines represent monthly temperatures warmer (cooler) than the trend. Note that **0.2 °C** has been added to the NOAA values to account for the difference between the 20<sup>th</sup> century average and pre-industrial values.

**Trend and Projection** — The trend shown in the chart is a quadratic fit to the recorded monthly global temperatures since 1960 relative to pre-industrial values. The projection is the continuation of this curve into future times. Note that the projection will change as the historical trend changes in response to new data. Recent temperatures are about half the 2.0 °C target limit established by the recent Paris agreement. Based on this projection, the +2.0 °C target limit would be surpassed in 2052.