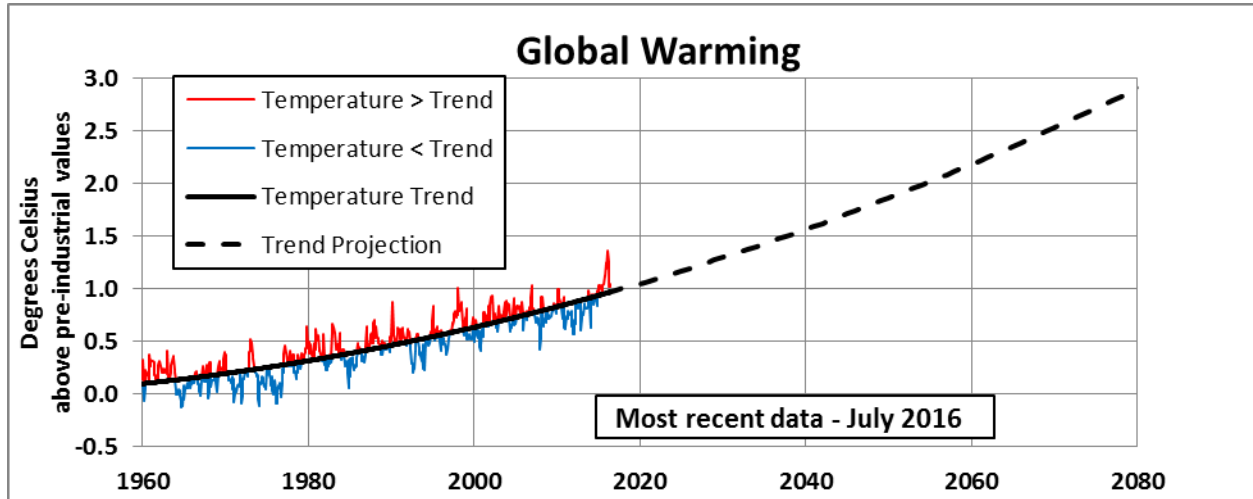


Global Warming Data, Trend and Projection
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Update Note – Another monthly temperature record. A new monthly record has been established in each of the preceding 15 months! Moreover, July, 2016, was the warmest month **ever** in the era of modern global temperature records. According to NOAA data released August 17, July 2016 was the warmest July on record with an average global temperature of **1.02 °C above pre-industrial values** (see data note below.) This year's value was 0.06 °C (0.09 °F) higher than July 2015, previously the warmest July. It should be noted that recent temperatures are more than half the 2.0 °C target limit established by the recent Paris agreement. July 2016 temperatures were likely no longer influenced by El Niño since surface temperatures in the Eastern Equatorial Pacific Ocean have returned to normal.

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 **0.15 °C** has been added to the NOAA values to account for the difference between the 20th 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. Based on this projection, the +2.0 °C target limit will be surpassed in 2054.