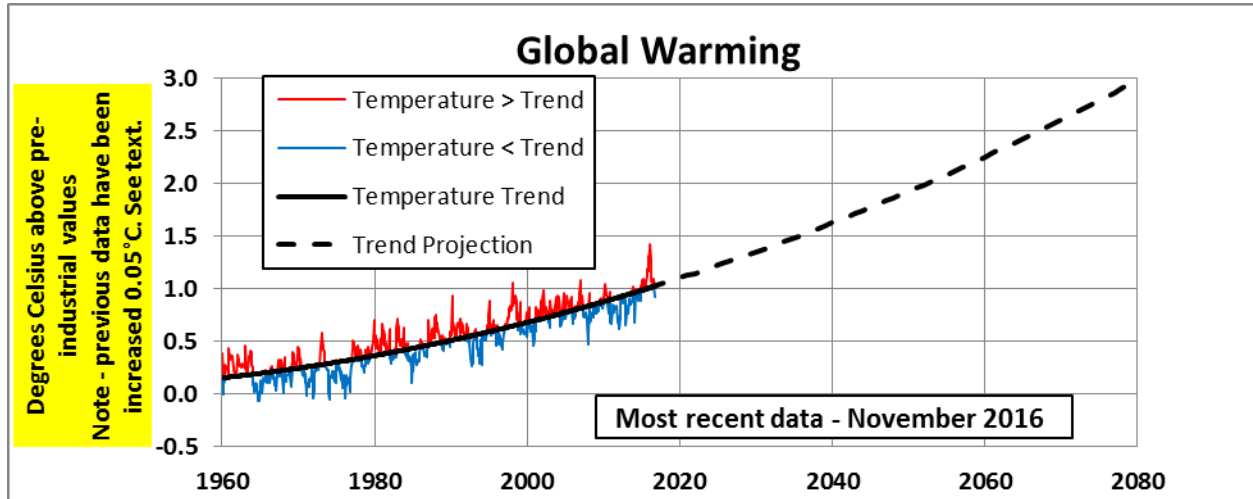


Global Warming Data, Trend and Projection

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Update Note –Global temperatures in November 2016 were cooler than the trend, likely influenced by a continuing weak La Niña condition as surface temperatures in the Eastern Equatorial Pacific Ocean are cooler than normal. The mild La Niña condition is expected to last through the end of the year. Recent temperatures are more than half the 2.0 °C target limit established by the recent Paris agreement.

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://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 20th century average and pre-industrial values. This estimated adjustment is 0.05 °C larger than in earlier charts based on discussion with climate experts.

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 would be surpassed in 2052. Note that the projected dates will change as the trend changes in response to new data.