

The Montana Board of Oil and Gas Conservation

Montana Petroleum Association

Essay Contest

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## I.

Carbon dioxide, more commonly known as CO<sub>2</sub>, has been labeled as one of the major factors in causing global warming. Over the past century, the Earth has been warming, and human-produced Carbon dioxide is believed to directly contribute to these continual rises in temperature. The levels of Carbon dioxide have been rising in the Earth's atmosphere since the early 1800s. Because the electric power and transportation of many countries is based on the use of hydro-carbons, Carbon dioxide gas has been released during the burning of extraordinary amounts of these hydro-carbons. Currently, the United States exceeds the amounts of global CO<sub>2</sub> emissions by nearly five times that of other countries. The release of Carbon dioxide causes the Earth's natural warming, called the Greenhouse Effect, to speed up and cause atmospheric temperatures to rise. Rising temperatures in the atmosphere from excess Carbon dioxide cause water vapor to evaporate more rapidly and contribute to the speed of atmospheric warming. Carbon dioxide levels have risen to levels nearly one third times greater than that of the atmospheric levels in the late 1950s. This rise can be attributed to the great increase in usage of fossil fuels and other hydrocarbons throughout the world. <sup>1</sup>

"There is no compelling evidence that the observed overall warming in the 20<sup>th</sup> Century is anything but man-made,"<sup>2</sup> suggests that the warming seen most recently has no explainable natural cause. Although the continual global warming experienced may have progressed without human assistance, the levels of recorded change point directly to human involvement. The Earth has already had a temperature rise of nearly one degree

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<sup>1</sup> "The Great Experiment on Planet Earth." *Earthguide: Educational Resources in Earth, Marine, Environmental and Planetary Sciences.*

<sup>2</sup> Ibid.

Celsius in the last 150 to 200 years.<sup>3</sup> Rising temperatures as well as increased CO<sub>2</sub> pollutant production are cause for great concern. Because CO<sub>2</sub> has geologically been found to regulate the temperature of the atmosphere, common sense would tell that the changes in CO<sub>2</sub> levels in the past 200 years are either causing a climatic change, or have assisted the Greenhouse Effect after a climatic change.

## II.

Recent studies have shown that the levels of Methane in the Earth's atmosphere have a much greater effect on the global warming process than those of Carbon dioxide. While Carbon dioxide has been shown to regulate the average temperature on Earth, Methane has an effect estimated at twenty five times that of Carbon dioxide. During these studies conducted in 2007, levels of Methane were shown to increase consistently around the entire world, in both the northern and southern hemispheres. This equal rise in any atmospheric compound is relatively unheard of because most compounds are produced in the more industrialized northern hemisphere. When noticeable amounts of atmospheric compounds are recorded in the northern hemisphere, it takes almost one entire year for those same compounds to reach the southern hemisphere. These equal amounts of Methane show that the great increase was truly a natural occurrence because man-made levels would not be able to increase in such exponential numbers in both hemispheres.<sup>4</sup>

With the great technological advances of the past centuries, satellites have been able to measure levels of Earthly contaminants from the vantage point of space. One such contaminant seen to cause a rise Earthly temperatures is radiation expelled from the

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<sup>3</sup> Ibid.

<sup>4</sup> "Is Global Warming Part of Earth's Natural Cycle: MIT Team Says "Yes" -A Galaxy Insight."

Sun. Levels of radiation have noticeably fluctuated over the past thirty years. These changes in radiation levels can be caused by sun spots, solar flares, and other natural solar occurrences.<sup>5</sup>

The current knowledge of climate also contradicts what global warming activists have argued about climate change. The Earth's climate is solely based upon the fact that the planet's orbit around the Sun positions it precisely in the region of space that allows for habitable temperatures.

In addition to changes in energy from the sun itself, the Earth's position and orientation relative to the sun (our orbit) also varies slightly, thereby bringing us closer and further away from the sun in predictable cycles (called Milankovitch cycles). Variations in these cycles are believed to be the cause of Earth's ice-ages (glacials).<sup>6</sup>

If the Earth were to stray farther away from the Sun, then the temperatures on the planet would plummet, and the opposite effects if Earth were to somehow gravitate closer toward the Sun. The Sun can also be immersed in periods of inactivity or periods of greater solar anomalies. These cyclic rituals of the Sun will also cause the Earth to warm or cool. Cycles such as these should possibly be researched further instead of using time and money to simply jump to conclusions about the levels of CO<sub>2</sub> in the atmosphere.

### III.

I am greatly interested with the research being done in this field. Through the process of exploring the data presented, I have come to find that I agree more with the

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<sup>5</sup> "Global Warming Frequently Asked Questions." *NCDC*

<sup>6</sup> Ibid.

second statement. I feel that based upon geological records and scientific findings, the climatic changes on Earth do progress in cycles. Simply because the ambient temperature of the Earth's surface and atmosphere is rising, the cause is not directly related to human-produced Carbon dioxide. Also, with the recent release of emails stating that some information and data may have been doctored to positively affect the outcome for certain scientists shows that a greater uncertainty about climate change is present. Data can be collected and stored, but not necessarily understood by the researchers or public masses. This means that at the current level of technological comprehension, humans simply cannot know what effect we are having on our planet. Currently, I believe that the true cause of human involvement or intervention in the Earth's climate will remain unknown until a greater knowledge of the historical patterns can be properly presented.

## Works Cited

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