Greenhouse Gas Theory is False

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I wish to provide you with sound scientific and chemical engineering analysis of the faults with the Greenhouse Gas Theory, GHGT, proposed to drive Anthropogenic Global Warming and Climate Change, AGW & CC, especially as it pertains to CO_2. I want to arm you for this huge, ongoing debate. I seek and receive no financial support from any government, business or organization; I finance my own work in retirement.

For the life of me I cannot get a solid, consistent grip on the underlying physics supporting the notion first proclaimed by James Hansen, *Science*, 1981, atmospheric CO_2 has any quantitatively verified effect on Earth's temperature. It is the duty of AGW & CC promoters to provide it, not skeptics like me. So I claim Barak Obama, Harry Reed, Nancy Pelosi and Al Gore have not explained the physics and quantified the effect to my satisfaction. Like most politicians with only one wing, on the left, not right side, they make claims and charges with little or no relevant evidence to back it up. In American law courts these are called frivolous claims and dismissed (thrown out). When Progressives' expensive schemes collapse due to foreseeable engineering consequences, their claim they are unintended consequences rings hollow. After repeating it for 50 years.

While it is not my job as skeptic, I will offer eight objections to their GHG Theory, each of which falsify it. It is their job to prove me wrong. I will present my assertions in simple terms with justifications; I have detailed chemical engineering mathematical analysis verified by experiment to support them.

1. GHGT science is settled, consensus is established, skeptics and deniers are crackpots. Wrong.
2. GHGT effect 15C – (-18C) = 33C is wrong.
3. GHGT says atmosphere acts like a blanket. False.
4. CO2 is green plant food.
5. GHGT neglects the effect of absorbing CO2 on incoming solar irradiance.
6. Kiehl-Trenberth Energy Budget back radiation is false.
7. Thermostat adjusting fossil fuel combustion will never work.
8. Modeling temperature data is worthless.

GHGT science is settled, consensus is established, skeptics and deniers are crackpots. Wrong.
Claim is irrelevant to truthfulness of GHGT. Consensus for GHGT is very small, limited to UN IPCC and a few governments. Consensus it is false is stronger. There is nothing wrong with being skeptical or a denier, taught in universities since Athens, 420BC. Appeal to authority was overturned when Francis Bacon inaugurated the Age of Reason in 1600. Just because UN IPCC report editors say so does not make is so, in spite of EPA. They both have a conflict of financial interest. I get to think and speak for myself.

GHGT effect 15C – (-18C) = 33C is wrong. Correct value is 15.0C – 15.0C = 0C. Nothing to it. Hansen, *Science,* 28Aug1981, incorrectly assumed Earth radiates as a black body with emissivity = 1.0, took satellite readings of its average intensity, 239 w/m^2 of surface, and deduced from Boltzmann equation, K = 100(P/5.67e)$^{0.25}$, it radiates at -18C. K = 100(239/5.67(1.0))$^{0.25}$ = 254.8K – 273.1 = -18.3C.

While measuring average annual thermal temperature day-night, pole-to-pole is difficult, there is consensus it is about 15C. So Hanson declared the difference, his now famous GHGT effect, GHGTE = 33C, a discrepancy due to his so called greenhouse gases H_2O and CO_2. While calculating or measuring Earth's emissivity is difficult, it is certainly < 1, so radiating T > -18C and GHGTE < 33C.

Global Climate Model says emissivity of Earth surface - atmosphere system is about 0.612. If so, corresponding global T for 239 w/m^2 average emitted to space would be
K = 100(239/5.67*0.612)$^{0.25}$ = 288.1 – 273.1 = 15.0C. GHGT = 0C. QED.

GHGT says atmosphere acts like a blanket. False. Electric blankets do warm you, nonelectric blankets don't. Blankets, jackets and clothing reduce the rate of heat transfer between your body and air by reducing heat transfer coefficient. That may make you feel better or worse, depending. The rate of heat transfer by conduction is q = UA(T_h– T_c). Wool blanket heat transfer coefficient U < silk U. Confusion arises when GHGT defenders assert a blanket analogy that fails to specify whether q is constant or T_h is constant. Human body releases energy of oxidation by IR radiation, thermal conduction/convection and perspiration. Normally T_h = 37.0C, held constant by internal thermostat adjusting oxidation rate q, metabolism. So when you put on a blanket, U decreases and so does q. You may feel better if (T_h– T_c) is large, but not if it is small or < 0. When that happens you take it off to keep q > 0.

For atmosphere to empty space U = 0 so q = 0 for any (T_h– T_c). The blanket analogy is falsified.

CO2 is green plant food. GHGT does not account for plant photosynthesis chemical reaction, a cooling effect. The reaction consumes solar energy, CO_2 and H_2O to make O_2 and sugar, starch, cellulose, carbohydrates and hydrocarbons. The rate of reaction increases with temperature, humidity and CO_2 concentration, published in 1924. Most of it occurs by ocean algae, tropical jungles and Siberian forests. So as CO_2 increases, photosynthesis absorption of solar radiation increases, cooling Earth. Biology counts as much as radiation physics. Most commercial greenhouses, like Walt Disney World, inject CO_2 to promote growth. Denying Earth's living flora their food, CO_2, choking and starving them, is a monstrous crime against them, dependent fauna, humanity, life as we know it and our Mother Earth. It should be prosecuted to the fullest extent of the law in the World Court, The Hague.

GHGT neglects the effect of absorbing CO2 on incoming solar irradiance. I see some overlap between CO_2 absorption spectrum left side and solar incident spectrum right side at 2.0 and 2.8 micrometers with 28% of CO2 absorbing power. So first 100 ppm does absorb some incoming and emit it back to space. That would divert radiant energy to and from surface,

cooling surface a bit. The Earth system emits to space at same rate with slightly higher emissivity due to introduction of CO_2, so it must radiate at a lower T. That's cool. The second 100 ppm would divert less due to Lambert-Beer Law, and cool Earth a lesser amount. The fourth 100 ppm would have a much smaller cooling effect, law of diminishing returns. Determining the effect of CO_2 on average absorptivity / emissivity of 100 km thick atmosphere takes some work to quantify those little bits. I am reconciled with nature for now. I think the whole 400 ppm today causes about $T_4 - T_0 = -0.5C$ or so. The next 100 ppm, 400 to 500 would cause an additional -0.01C. Always < 0C. Not enough to get excited about. No tipping points. All is calm, all is bright.

You want a simple explanation for the GHGT effect? There it is. One short paragraph, fits on a bar napkin.

[Kiehl-Trenberth Energy Budget](#) back radiation is false.

First it says nothing about CO_2.

More importantly, it depicts the basic mechanism of GHGT; back-radiation energy transfer from cold atmospheric CO_2 absorbed by surface, the wide beige down arrow at far right, 333 w/m². Which I proved should be zero, below. Which feeds the wide surface up arrow 396, which should be $396 - 333 = 63$. If you add $17 + 80 = 160$ and assume Earth surface accounting for photosynthesis has emissivity = 0.412, you find $K = 100(160/5.67*0.412)^{0.25} = 287.7 - 273.1 = 14.6C$ in agreement with measurements. Atmosphere alone emissivity is about 0.83 and the surface plus atmosphere combo emissivity is 0.612.

The GHGT does not follow the rate of radiant energy transfer law used commercially by chemical engineers: $\mathbf{Q/\sigma = ET^4 - at^4}$. Heat transfers in only one direction, not simultaneously in two.(John H Perry, Ed, "Chemical Engineer's Handbook", Section 6, Hoyt C Hottel, Radiant-heat Transmission, pg 484, eqn (3), McGraw-Hill, 1950.
E = emissivity of radiating surface. Varies with its temperature, roughness and if a metal, degree of oxidation. Large variations are possible in a single material.
a = absorptivity of atmosphere. Depends on factors affecting emissivity and in addition on the quality of the incident radiation, measured by its distribution in the spectrum. One may assign two subscripts to a, the first to indicate the temperature of the receiver and the second that of the incident radiation.)

GHGT invented the back-radiation mechanism unknown to physics, transferring heat from a cold body to a warmer one, warming it further. In Nov 2011 I proved if it did, it would be a [perpetual motion machine](#); just what promoters need to drive global warming in perpetuity. That violates of the Second Law of Thermodynamics quantified by famous engineer [Sadi Carnot](#) in 1824. I actually proved for a step change in GHGT back radiation, presumably due to increased CO_2, the sequence converges to a new steady-state and a finite amount of energy is created (which is impossible). I actually derived the rate of creation from the physical properties:

$\mathbf{Es = (K*F0 + f0)(1 + K)k/(1 - kK)}$.

K is the fraction of radiation from the first bar absorbed by the second colder bar, $0 < K < 1$.
k is the fraction of re-radiation from the second bar absorbed by the first hotter bar, $0 <= k < 1$.
Starting radiation rates are given: $F0 > 0$ and $f0 => 0$.
Since the denominator is $0 < (1 - kK) < 1$, it follows that for any $K > 0$ and $k > 0$, the numerator term $(1 + K)k > 0$, and $Es > 0$.

Es = 0 if and only if the fraction of back-radiation k = 0.

Therefore GHGT is false because back-radiation = 0. This means you must change the famous GHGT K-T Global Energy Flows diagram right side beige arrow down from 333 to zero and up arrow from 396 to 63 w/m² of Earth surface. Just use correct absorptivity's and emissivity's and it all fits known physics and observations.

This was done to refute a well-known argument by GHGT partial skeptic, partial defender Dr Roy Spencer, "Yes Virginia, Cooler Objects Can Make Warmer Ones Even Warmer Still".

Thermostat adjusting fossil fuel combustion will never work. A thermostat is a temperature controller adjusting energy input to a system, like a house, refrigerator and car. Earth's atmosphere is a chemical process system. Chemical process control systems engineers like me (PhD, PE in Texas & California) design feedback control systems. Our profession has mathematical criteria for modeling and evaluating dynamic, multivariable control systems to insure measurability, observeability, controllability, stability and performance. I proved before Kyoto Protocol was promulgated in 1997 that Earth's thermostat adjusting fossil fuel combustion was not measurable, not observable and not controllable. It will never work. No matter what NAS, EPA, Congress, President, Supreme Court, UN IPCC or majority of humanity believe. No matter how much money is spent on research. Because I know and can prove it. I can prove area of every circle radius R in the universe is Pi*R*R. Easy. BTW no Congressman is licensed to practice control systems engineering, yet they practice controlling American's lives all the time, incompetently.

Modeling temperature data is worthless. Systems engineers proved long ago one cannot prove or disprove cause and effect from correlated measurements alone. All the discussion about CO_2 and T data is utterly irrelevant to the issue does CO_2 affect T and if so why and how much? Only science and systems engineering can answer that. UN IPCC statistical models have no predictive power for this reason. If I said all the data since 1492 says every rooster always crows 3.14159 minutes before sunrise appears, without explaining the underlying physical mechanism, you may accept correlation but must reject the conclusion roosters cause sunrises because you know they are not the cause, for sure.

While this essay may seem long and complicated, it proves beyond any reasonable doubt with eight smoking guns, GHGT is false, AGW and CC fears are unfounded and the whole issue is a monumental fraudulent hoax for power and money. Harvard Law School would call this an indictment, trial and conviction. My brief essay is nothing compared to 2009 Waxman-Markey

CO2 Cap & Trade Bill or Obamacare Law. If you can invest an hour with this essay you can join Sen. James Inhofe (R-OK) running rings around CO_2 deniers. Just ask Rep Shelia Jackson Lee (D-TX), Rep Chris Van Hollan (D-MD), Rep Nancy Pelosi (D-CA), Sen Barbara Boxer (D-CA), Sen John Markey (D-MA) or POTUS to refute it.