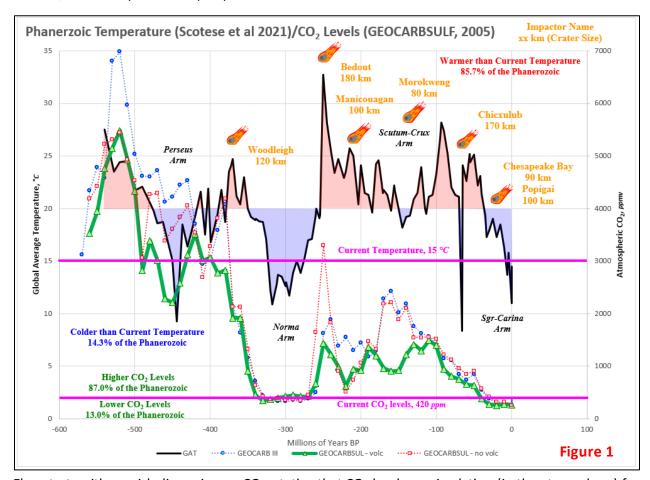
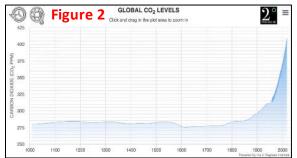
Elon Musk has done a lot of good things for society, especially recently, but his position on "climate change" is still stuck in the mainstream political/media (alarmist) narrative. This recent video (<u>What is needed to address the climate crisis</u>) is full of propaganda and alarmist talking points that are designed to keep the green gravy train flowing well into the future. This discussion looks at Elon's points from a broader, more comprehensive perspective.

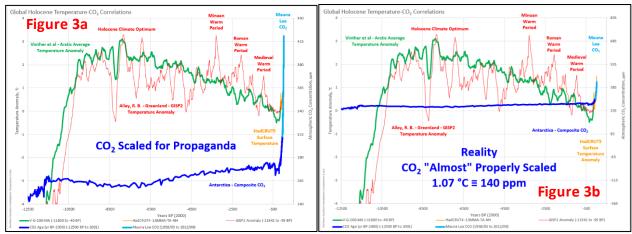


Elon starts with a quick discussion on CO_2 , stating that CO_2 has been circulating (in the atmosphere) for millions, hundreds of millions of years and then immediately focuses on the very recent CO_2 historical rise. That ignores the bigger historical picture. We have reasonable estimates for CO_2 concentration back to the Cambrian-Devonian periods (Figure 1) when levels were in the 4,000 ppm range (compared to the 300 ppm recent historical range cited in the video and the 420 ppm current level). Through various biological

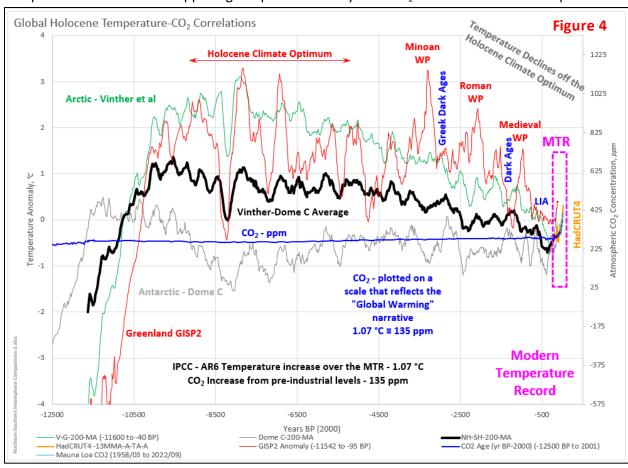


and geological processes those higher CO_2 levels have declined over time as they were sequestered in our planet's sedimentary rock strata. Fossil fuels (a disingenuous term) are completely natural whether they were formed through organic (biotic) decomposition, or they have an abiotic origin. What you do not see in the long-term data (the last 550 million years) is a CO_2 /Temperature relationship.

Elon does try to bring in a historical context by including the plot shown above (Figure 2).

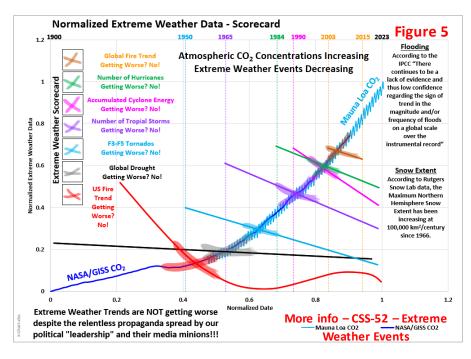


The CO_2 scale is intentionally scaled to exaggerate the recent rise in CO_2 . When taken in an historical context (Figure 1), the rise is negligible. But to be fair we can look at that rise on time scales that reflect humanity's time on the planet. Elon's CO_2 plot goes back to the year 1,000. That flat CO_2 profile extends much further into the past as shown in Figures 3a and 3b. Temperatures have been added (with a couple more in Figure 4) to again show that there is no correlation to CO_2 over the Holocene Interglacial Warm Period. Figure 3a's CO_2 scale is designed for propaganda (in line with Elon's chart). Figure 3b's CO_2 vertical scale reflects the alarmist narrative that the 140 ppm CO_2 rise since the pre-industrial period has led to the 1.07 °C temperature rise laid out in the IPCC's August 2021 AR6 Report. There are a whole lot of temperature fluctuations happening despite a virtually flat CO_2 concentration. Those pre-Modem



Temperature Record (MTR, 1850 to the present) temperature fluctuations are driven by natural forces (primarily solar (directly and indirectly)), not CO₂. Those natural forcings were still active during the MTR and will be active in the future (just not in the computer models, those models that the modelers themselves self admit run way too hot and use emission scenarios that are implausible, effectively impossible).

Elon then goes on to say that the CO_2 rise was accompanied by a temperature increase. That statement is correct but lacks perspective. Most of the temperature rise out of the Little Ice Age (LIA) has been natural, whether CO_2 is playing a significant role or not. Over 86% of humanity's CO_2 emissions occurred post-1950 (i.e.: we are not responsible for much of the planet's warming). For one thing, that rise began back in the 1600s (the depths of the LIA) after the decades of severe cold associated with the Maunder Solar Minimum. As shown in Figure 4 (on the previous page), the Little Ice Age (although experienced differently in the different hemispheres) was visible in both the Northern and Southern Hemispheres. Temperatures were obviously significantly higher than today through much of the early Holocene and several (the Medieval, Roman, and Minoan) Warm Periods through the later Holocene. As an aside, the LIA corresponded to the lowest Total Solar Irradiance (TSI) of the last 7,000+ years and the Modern Warm Period (the Hottest EVER) corresponds to the highest TSI of the last 7,000+ years. Just a coincidence, I am sure.

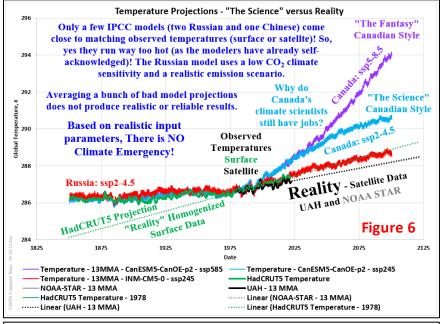


Elon then mentions that the temperature rise has been in the 2 to 3 °C range. This could be a simple imperial, metric mistake but the chart uses °C and discussion should the follow suit. The IPCC has targeted an aggressive 1.5 °C with the hope of a 2 °C fallback position. Many do not realize that the 1.5 or 2 °C targets include the IPCC's 1.07 °C we have already experienced. another 0.5 or 1.0 °C warming really going to lead to disastrous results.

Especially given that $\underline{\text{extreme weather events (CSS-52)}}$ are generally declining or are statistically flat as CO₂ is rising. Despite the continual mis/disinformation in the media, the only place extreme weather is getting worse is in the computer model projections (those models that run way too hot), as shown in Figure 5.

Elon then characterizes the Climate Sensitivity as extremely high. On what basis and for what reason? The CO_2 climate sensitivity is a complex issue and definitely NOT "settled science". The <u>IPCC models</u> use a range of values for the Equilibrium Climate Sensitivity of 1.8 to 5.7 °C (ECS, the temperature change associated with a doubling of the CO_2 concentration). A 1.8 °C sensitivity is significantly different than 5.7 °C. And to

get back to the models that run way too hot, the Russian and a couple Chinese models (using the low end 1.8 °C sensitivity) are the only ones that come close to matching the observed temperatures.



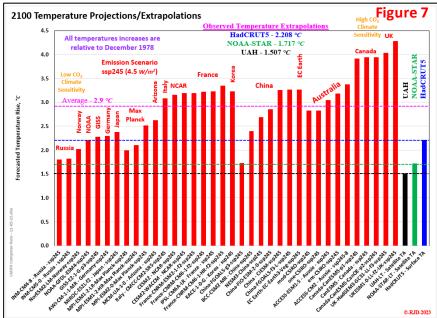
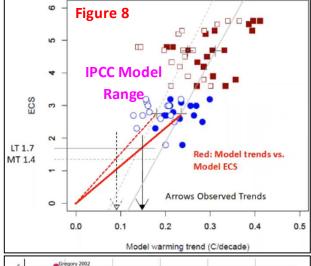
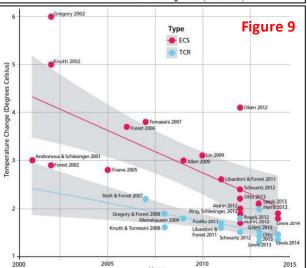


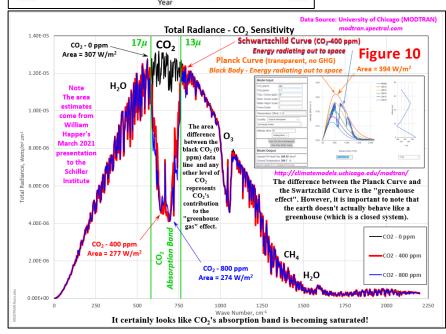
Figure 6 to the left shows the best fit (the Russian Model (using the ssp2-4.5 emission scenario), plotted against the estimated global HadCRUT5 surface temperature data and the UAH and NOAA STAR satellite temperature data). The Canadian models (close to the worst fit) are also shown (both the more realistic ssp2-4.5 and the unrealistic ssp5-8.5 emission scenarios). Sadly, these are the scientists that produce "the science" that Justin Trudeau follows.

Figure 7 shows the extrapolated temperatures that can be expected in 2100 three the temperature datasets (UAH, NOAA STAR and HadCRUT5) and the 36 IPCC computer models (listed on the X-axis). Out of 36 only 3 models (2 Russian and 1 Chinese) come close to matching observed satellite data sets. Another 8 are close to matching up with the over "homogenized" HadCRUT5 surface data set.

The IPCC's current analysis takes all these incorrect runs and averages them to come up with their official "best projection". Bear in mind that these runs use the more realistic ssp2-4.5 emission scenario. Not an unreasonable estimate given that current emissions are running below ssp2-4.5. At ssp2-4.5 emission levels, There is NO Climate Emergency, Crisis, Apocalypse, Global Boiling, etc.







So, what is CO2's ECS? As mentioned earlier (and shown in Figure 8), the IPCC uses a 1.8 to 5.7 °C range. If you look at the historical data (Figure 9), the ECS (and Transient Climate Response, TCR) estimates have both been trending down towards that 2.0 and 1.0 °C range, respectively as more data has come available and evaluation techniques are improved. There is not much wonder why the models "run way too hot". There is one further point to consider when reviewing the estimated ECS/TCR. These estimates assume that all the warming from pre-industrial to the present is due to CO₂ (primarily anthropogenic) emissions. A rather ridiculous assumption given over 86% of humanity's emissions were post-1950 and temperatures began rising centuries before the industrial age began.

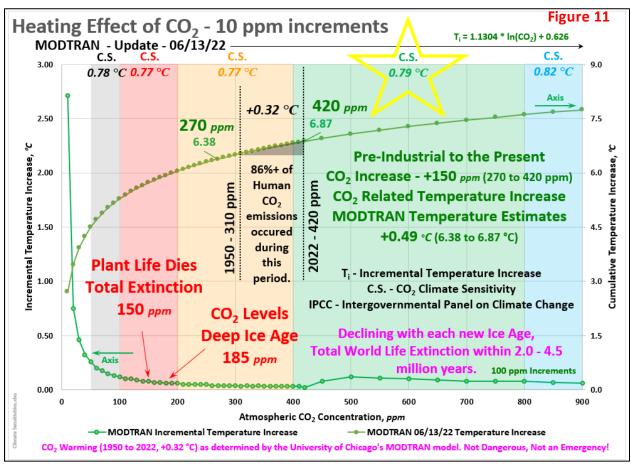
Without going into all the detail, there are plenty of papers and studies that show that the ECS is very likely less than 1.0 °C once Urban Heat Island Effects (UHIE) and natural forcings are properly considered. CO_2 's role in atmospheric temperature levels is tied closely to the rate radiation is lost to space. CO_2 absorbs and re-emits Long Wave Radiation (LWR), which delays the LWR's return to space and warms the planet to some degree. How

much is the question.

The Schwarzschild curves (shown in Figure 10) show the effect CO₂ has on radiation back to space. CO2's Absorption band is relatively small and becoming saturated in the 13 to 17 μ range. A recent 2021 van Wijngaarden and "Relative Happer paper. Potency of Greenhouse Molecules", discusses the concept in much detail. These curves are generated using the University of Chicago's **MODTRAN**

<u>computer model</u> that is calibrated very closely to satellite measurements of energy radiating to space. MODTRAN uses a CO_2 ECS of roughly 0.8 °C (based on their directions for calculating the temperature response to a doubling of CO_2 concentration).

Figure 11 lays out the temperature increments/change expected for a MODTRAN CO_2 ECS of roughly 0.8 °C. Each shaded area represents a doubling of CO_2 , with the associated MODTRAN ECS estimate shown at the top of the graph's shaded area. A CO_2 ECS of 0.8 °C means that only 0.49 °C of the IPCC's 1.07 °C temperature rise since the pre-industrial period is due to CO_2 concentration increases. We are likely to end the century at roughly 600 ppm, which would add another 0.41 °C. So, the total CO_2 temperature rise we can expect from the pre-industrial era to 2100 is roughly 0.9 °C (well below the IPCC's arbitrarily chosen 1.5 °C target). These numbers exclude the natural forcings which will drive temperatures lower over the next few decades. There is no science based need to spend taxpayer money on emission reduction. Yet we still will until a majority of the voter base wakes up.



Elon is correct when he says, "we are going to exit the fossil fuels era". The questions are when and at what cost and is that even necessary this century? Our society and standard of living are built on high density, low cost, reliable energy. Current renewable technology cannot provide any of those three energy basics.

His next statement is pure propagandist alarmism. "We want to use energy sources that will be good for a billion years". That would certainly not include solar and wind installations which if they are lucky will only last 20 years. Unfortunately, we do not have enough raw materials to produce the proposed installations

let alone the future replacements. There are also some environmental issues associated with the raw material procurement, manufacturing, installation, and disposal of said facilities. Some important general negative issues not even alluded to by Elon.

Elon then makes the following statement, "The worst case, however, is more displacement and destruction than all the wars in history combined." Again, pure alarmism, that is not backed up by the data. We are still going to experience hurricanes, fires, drought, floods, etc., but (as shown earlier) extreme weather events are not rising with CO₂ concentrations. A fact that is reflected in the 2021 IPCC AR6 Report on many occasions (an example of which is shown below).

"There continues to be a lack of evidence and thus low confidence regarding the sign of trend in the magnitude and/or frequency of floods on a global scale over the instrumental record".

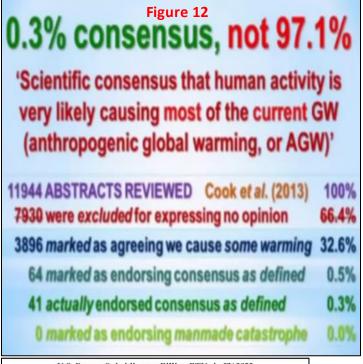
Elon could be referring to the rising economically destructive value of extreme weather (which has accelerated and will continue accelerating as our unnecessary green induced inflation keeps rising). That has nothing to do with "climate change". That is simply inflation combined with humanity's propensity to build in areas that put them in the path of extreme weather. For example, a hurricane hitting the Florida coast today can cause massive damage in areas that were unpopulated a century ago that would have experienced no economic damage. The average hurricane strength has not changed much (slightly lower), Florida has changed.

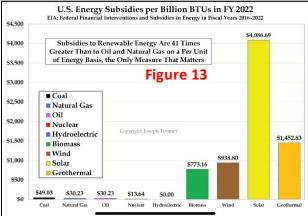
A quick look at GDP growth shows that our economies will not suffer significantly if we choose to stop spending on "climate change" mitigation. This discussion will give a brief summary of Canada's Parliamentary Budget Officer's November, 8th, 2022 Report (Global Greenhouse Gas Emissions and Canadian GDP). More detail, links, discussion can be found in my OPPS-22 – Parliamentary Budget Office post. The PBO looked at three cases. Canada's GDP with no "climate change" impacts, "climate change" assuming that no action was taken on "climate change" and the case where there was full global compliance with the 2015 Paris Accord. economic damage. So, assuming Canada had climate restrictions on growth, GDP in 2100 (assuming a 2%/year GDP growth rate) would be 378% higher than our current GDP. According to the PBO, "climate change" would drop our GDP growth by just 6.6% to 371.4%. In dollar terms, our GDP in 2100 would be 9.76 trillion dollars instead of 9.9 trillion dollars (a difference of 140 billion dollars). To put that in perspective, Calgary alone wants to spend \$87 billion dollars to fight "climate change".

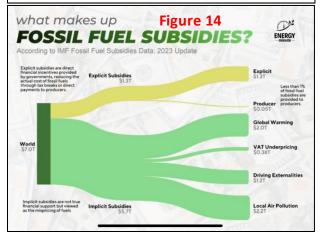
The PBO analysis goes one step further. Assuming the entire planet gets on board with the Paris Accords, the GDP improvement in Canada in 2100 will be just 0.8% (a miniscule \$17 billion dollars). How many hundreds of billions/trillions are we the Canadian taxpayer going to spend to get that \$17 billion dollar improvement?

Elon then shows he is just pandering to the alarmist narrative by bringing up the 97% of scientists agree talking point. Agree with what? I agree that climate change is happening. I agree that atmospheric CO_2 has been rising since the pre-industrial era and that we are likely responsible for much of that rise. I agree that rising CO_2 concentrations will contribute to temperature rise (but the magnitude is in question, even in the alarmist community (as per the sensitivity discussion)). I do not agree that the warming will be catastrophic. There is simply no empirical evidence for that. Those whimsical projections of doom exist only in the computer modelers programming. Computer projections are not considered proof, especially when the projections are self-admittedly running way too hot. Note, there is not even empirical

 CO_2 /Temperature data that shows CO_2 driving the climate on any statistically significant historically time scale (a basic Scientific Method requirement).







So, where did the "97% of scientists agree" narrative originate. There are many "studies" that "support" the narrative. I looked three (Oreskes/Peiser (2004/2005), Doran & Zimmerman (2009) and Cook et al (2013)) in my OPS-14 -Consensus post. Cook et al epitomizes the alarmist's deceptive evaluation techniques. Cook et al (Figure 12) reviewed 11,944 climate change papers (or more specifically, their abstracts) to come up with their 97%. A full review of the papers (not just the abstracts) produced a much different result. Of the 11,994 papers, only 41 (0.3%) explicitly endorsed the question posed by Cook et al ("Human activity is very likely causing most of the current GW (anthropogenic global warming AGW)"). There were 3,896 papers (32.6%)

were "marked as agreeing we cause some warming". But that is a very different viewpoint than the question posed.

Elon then alludes to the subsidies received by the "fossil fuel industry", without even mentioning "green" subsidies. This discussion will be limited, but Figures 13 and 14 lay out the general problems with the subsidy discussion. As shown in Figure 13, US renewable subsidies on a Per Unit basis are considerably higher 41 times) than coal, gas, oil or nuclear. Global scenarios would be similar. Figure 14 puts to rest the myth that the hydrocarbon industry producers are awash in subsidies (just 50 billion of the 7.0 trillion global allocations, represented by the thin yellow line). A small percentage of the huge subsidies received by the renewable energy producers. Those green subsidies will just continue to rise. And the royalties and taxes paid by the "fossil fuel" producers will start to decline if this idiotic emission reduction madness is allowed to continue. That is as far as I will take this discussion point.



Elon's "The Problem, A Hidden Subsidy" discussion is also disingenuous. This calculation (Figure 15), while just representative, is meaningless. The benefit to society (assuming that is renewables, emission reduction, etc.) could be (very likely is) a severe negative to society. Unnecessary, expensive green initiatives have already led to severe inflation and will just inflame that problem in the future. Renewables are incapable of maintaining our current standard of living. A huge negative we have already been told to prepare for. Heat or eat (or die) poverty is already a problem in many Western countries. And

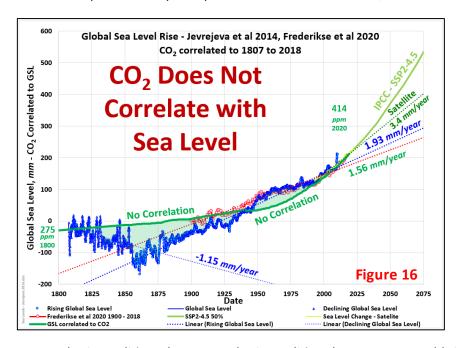
renewables, EVs, batteries, etc. are also a built in negative. The harm (assuming that is 'climate change', (i.e.: CO_2)) to society could just as easily be positive. The net benefits of CO_2 are primarily positive with minor warming, more abundant plant food (CO_2) and increased plant drought resistance. The higher latitudes will warm much more than the equatorial latitudes leading to more arable land (another net positive).

The assertion that extreme weather is getting worse and CO_2 emission reduction will fix that problem, has already been shown to be untrue. The climate model projections are useless given the modelers have acknowledged that they run too hot (even using a reasonable emission scenario, ssp2-4.5) and the higher emission scenarios, like ssp5-8.5 are totally impractical. Until the alarmist community can provide empirical proof that CO_2 drives the climate, no net benefit to society can realistically be assigned to this simplistic calculation. We are much more likely to end up in an economic disaster than the utopia promised by our current ideological "leadership". A more realistic (not necessarily correct) representative calculation has been included in green highlights above (Figure 15).

Elon is correct when he says we "have an unhealthy market". Our focus should be on fixing our current fiscal problems (inflation, debt, etc.). Very soon we will have no financial resources to provide the staples (food, energy, shelter), let alone an unnecessary (impossible with today's technology) energy transition. All these green initiatives are effectively wasting money. The trillions that will be spent over the rest of the century will reduce the temperature rise by something less than 0.2 °C (using the IPCC "science"). Ultimately, the temperatures are still rising in the models, so what will those hundreds of trillions of dollars have really accomplished? In the real world, the natural forcings the alarmist community chooses to ignore will bring the global temperatures down (might have to add a few zeros to that societal benefit calculation).

The Carbon Tax discussion is pointless unless every country on the planet adopts the same punitive CO₂ penalties. In Canada, if we produce/burn a barrel of Western Canadian Oil, we pay an ever-escalating Carbon Tax. A barrel of Saudi oil in Eastern Canada is treated much differently. Why do we have a Carbon Tax and the US does not? The playing field is not level. Moving to a revenue neutral carbon tax (while a nice idea) is a joke with the current leadership and their global leaders in waiting (UN, WEF, etc.) are pushing the narrative. Our carbon taxes were already supposed to be revenue neutral. Unfortunately, that chicken has already flown the coup. His assertion that only those that use high levels of carbon will be taxed is also a fallacy. The green expenditures will continue to add to inflation and debt and unless you can produce your own food, energy and shelter you will pay, or you will become wards of the state.

The tobacco reference is pure talking point. Tobacco while obviously dangerous has no net benefit to society (other than an ever-rising tax source). Fossil Fuels (and CO_2 emissions) do have net benefits, many of which are absolute necessities to maintain our existence on this planet. Take away our oil, gas and coal and our survival are no longer guaranteed. And there is that little problem with the alarmist narrative, they have never provided empirical proof for their CO_2 obsession, let alone their catastrophic viewpoint.



Before closing, I would like to address Elon's reference to displacement back on page 7. I assume he is referring to sea level rise and/or immigration from hot countries to cooler countries. Figure 16 shows Sea Levels from 1807 to 2018 and CO_2 their correlation to concentrations. Spoiler alert, there is no correlation. And some second thought, the idea that our global atmospheric CO₂ concentrations can influence Sea Levels is ludicrous. The oceans influence can

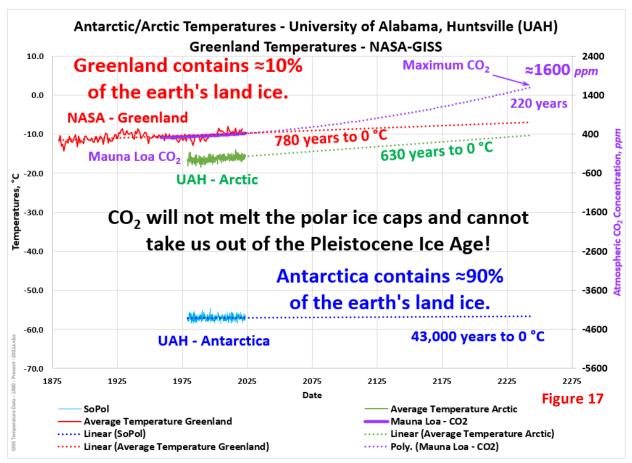
atmospheric conditions, but atmospheric conditions have no measurable impact on the oceans as a whole.

The alarmists like to pretend that CO_2 is influencing sea levels, and we will quickly be flooding every coastline on the planet, drowning hundreds of millions (an obvious exaggeration). The sea level data does not back that assertion up. Nor does the data conform to the alarmist narrative (all CO_2 , all the time). They will and have focused on the post 1960 data which does show a minor acceleration (that they attribute to anthropogenic (CO_2) causes). So, why is the longer-term trend linear (consistent with virtually all the tidal gauges on the planet)? And why does the 1960 to 2018 "acceleration" look just like the 1900 to 1960 "acceleration" and both periods correlate with the Atlantic Multi-decadal Oscillation's (AMO) 60-year cooling and warming cycle? And why are the pre-1856 sea levels declining? CO_2 is not driving Sea Levels, temperature is. But then how can CO_2 be driving temperatures? The alarmists obviously have a conundrum to ponder.

More discussions and visuals are available in my $\underline{\text{CSS-46-Sea Level}}$ - Fact Check and $\underline{\text{CSS-47-CO}_2}$ and Sea Levels DO NOT Correlate posts. Many of the points discussed in this document (and more) are touched on in my $\underline{\text{CSS-53-CO}_2}$'s Moneyball Moment post. As in, if $\underline{\text{CO}_2}$ is such a good climate driver, why is it not driving the climate?

Elon finishes with some speculation on whether the ultimate temperature rise will be limited to 2 °C (indicating we will surpass 2 °C). What he has not factored in is the solar influences. Given that most of the natural forcings are transitioning to their cold phases (just not in the models), we are likely not going to see the 2 °C temperature rise from pre-industrial levels. We may reach the 1.5 °C temperature rise since we have already used up over 1 °C of that increase. But before we get into solar influences, we can look at

what CO_2 may due on its own. First you need to establish a climate sensitivity which as mentioned earlier is not yet settled. Once natural forcings and UHIE are factored in, CO_2 's climate sensitivity drops into the 0.8 °C range. For easy math, we can go with 1.0 °C. Now given that if we burned all our total oil, gas, and coal reserves, we only have the capacity to raise atmospheric CO_2 concentrations into the 1600 ppm range. That means that future anthropogenic (human) warming is limited to roughly 2 °C (1 °C for a doubling to 800 ppm and a second 1 °C for a further doubling to 1600 ppm).

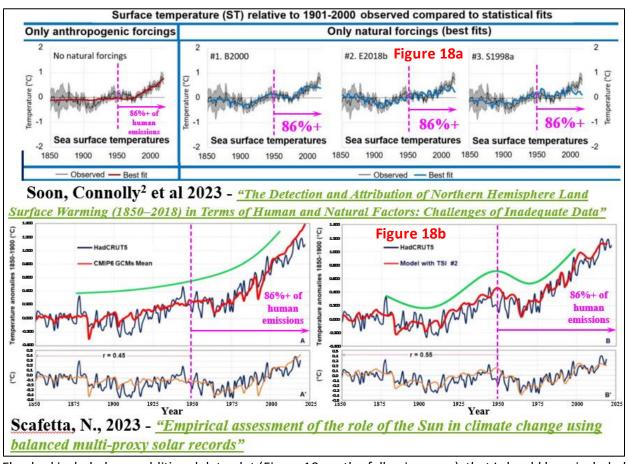


The 1600 ppm also becomes important when considering sea level rise. That 2 °C temperature rise will not melt Greenland and Antarctica. Assuming CO_2 concentrations continued their current trajectory, the 1600 ppm CO_2 levels would be reached centuries before Greenland approaches the melting point and millennia before Antarctica even comes close (millennia after we have entered the next deep ice age). Temperatures will not suddenly accelerate due to continued CO_2 rise, since CO_2 's warming capacity decreases exponentially as CO_2 concentrations rise.

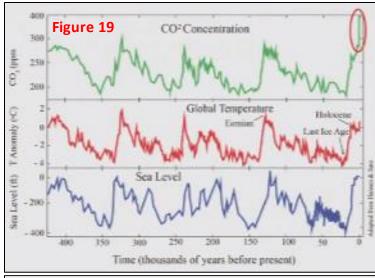
All those temperature extrapolations (Figure 17) assume that solar activity changes will have no impact on temperature. Despite the alarmist's insistence that solar activity is effectively a non-factor, the solar and ocean cycles are moving into their cold phases and will move temperatures colder. I have in the past shown that the Modern Temperature Record (MTR) can be modeled using just the Total Solar Irradiance (TSI, as a proxy) and the Atlantic Multidecadal Oscillation (AMO). Refer to my OPS-8 – Basic Climate Model and Open Letter Addendum posts for details. Does my evaluation carry much capital on its own? No, but I am not alone. Figure 18 (on the following page) shows a comparison between the MTR CO₂ and Natural Forcings (solar) correlations from two recent papers that go into great detail to show solar activity is a

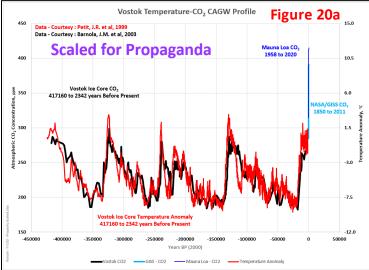
better correlation. These authors have not expanded their evaluation to the pre-MTR Holocene. But I can guarantee that their correlation will be substantially more accurate than any model based almost solely on CO_2 concentrations. Pre-MTR Holocene CO_2 levels are essentially flat and are therefore incapable of modelling the temperature fluctuations present throughout the Holocene (Figure 4) or even the more recent Medieval Warm Period and the cold multiple solar minimums (Wolf, Spörer, Maunder and Dalton) of the Little Ice Age. I put together a "simple" Excel spreadsheet ($\frac{CSS-29-Climate\ Model-TSI-AMO-CO_2$ for some detail) that uses TSI (as a proxy), AMO and CO_2 to model the Central England Temperature (CET, 1659 to the present)). The three-parameter match was not perfect, but the CO_2 alone does not even come close.

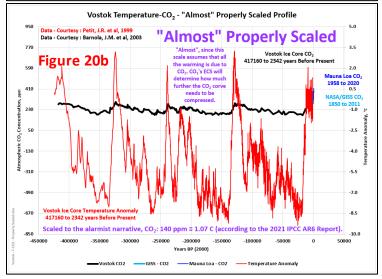
As outlined in the Soon-Connolly et al paper (of which Nicola Scafetta is a co-author), the IPCC has chosen just one of the 27 TSI reconstructions available (which conveniently conforms to the alarmist narrative). The whole alarmist narrative is designed to push the green agenda, empower, and enrich a select few on the backs of the global taxpayer. CO_2 has not been and never will be the primary climate driver. Ignoring the natural forcings is unscientific and dangerous and will lead to unnecessary hardships and ultimately economic suicide. Just my opinion.



Elon had included one additional data plot (Figure 19, on the following page), that I should have included earlier (on Page 1 or 2). His plot adds some longer-term ice core data (400,000+ years) to his discussion with the recent CO_2 rise highlighted. Strange that the correspondingly large associated temperature rise that CO_2 is supposed to produce does not show up in the data. This is one of the classic alarmist propaganda plots. They are attempting to mislead the reader in a couple of ways. As shown earlier, the







takes longer than absorption).

vertical CO2 scale must be adjusted to reflect the alarmist narrative (140 ppm ≡ 1.07 °C). The difference (using the same Vostok data) is shown in Figures 20a and 20b). The 1.07 °C temperature rise out of the Little Ice Age is neither unusual nor unprecedented. Remember, as shown earlier, CO₂ is not responsible for the warming and humanity's contribution is largely post-1950 (where 86%+ of our emissions occurred). But even post-1950, CO2 must share the limelight with several ocean cycles (with the AMO and ENSO influences dominating).

The second ploy used involves plotting the ice core CO2 Concentration and Temperature Anomaly (and in this case, Sea Level) together to show the correlation, but offer no discussion with respect to causation. CO2, while having some minor contribution, is not driving these climate profiles. The main driver here, on the macro scale is the Milankovitch Cycles. The changes in Obliquity, Precession and Eccentricity move the planet's temperature up and down over thousands of years. As temperatures rise, Sea Levels and atmospheric CO₂ concentrations also rise. Sea Levels rise as the ice caps on the planet melt. CO₂ concentrations rise because the ocean waters release CO2 as the ocean temperature rises. The opposite is true for temperature declines. Milankovitch Cycle induced temperature change is driving the climate (on these time scales), not CO₂. Temperature change happens first, followed by CO₂ concentration changes centuries later for warming and millennia later for cooling (reabsorption

Elon's final statement, "Talk to your friends about it and fight the propaganda from the carbon industry. So that is the basic message I have" is as hypocritical as you can get. His entire video was a propagandist's dream coming from one of the, if not 'the' major beneficiaries of the ideological green movement. Given his background in technology, Elon is well aware of the Scientific Method. His total disregard for the Scientific Method, as it applies to "Climate Science", is both disappointing and dangerous. The images in the video are there for their emotional appeal. The few datasets provided are sorely lacking in context and do not begin to tell the whole story. And as with all climate alarmists, he has chosen to ignore the natural forcings (solar, which supplies close to 100% of the energy the planet receives and the ocean cycles (driven by solar) which drive the atmospheric cycles). All Elon must do to prove all the skeptics/realists wrong is provide an empirical CO_2 /Temperature dataset that shows CO_2 driving the climate on any statistically significant historical time scale (a basic Scientific Method requirement). Surely, the richest man in the world has the resources and contacts to make that happen (assuming that the empirical data exists, it does not). Remember Big Green (Pharma, Military, etc.) loves money, power, and control just as much as Big Oil does (maybe more). Elon Musk may be doing some great things for society, but even the richest man in the world can be greedy and self-serving.

Thank you @DavidCarbutt_ and team for producing this video!

Elon, David C.,
this is not CO₂,
it is H₂O



A few images from the video. Surprisingly short on floods, hurricanes, and forest fires. David C.'s team could do better!







The sun, the real climate driver is limited to parched land, desert, and desolation pictures.







