Open Letter to Mayor Gondek and Calgary's City Council

I live in Ward 13. Dan McLean is my current representative on Council. I applaud Dan's actions in speaking out against the recent proposal to spend 87 billion dollars (of hard-earned taxpayer money) to mitigate damages that will allegedly be brought on by "Climate Change". I would hazard a guess that despite your General Manager of Planning and Development Stuart Daigleish's statement "We know what the impact of climate change will be for Calgary, and we know what we have to do to protect Calgarians from the risks of a changing climate," he does not actually know what the impact of climate change will be for Calgary. Why do I say that? For a couple of very basic reasons.

- 1. There is no evidence in the historical temperature data that Maximum Temperatures in Calgary have warmed measurably since 1884 and daily average temperatures were much warmer in the early 20th century (Dirty 30s). Measured temperatures have increased at an overall rate of 0.86 °C/century but have been declining at a 1.76 °C/century rate since 1973. Even at 0.86 °C/century, that is not a dangerous rise and does not factor in future climate influences. The cool temperatures we are currently experiencing are not surprising since we are just entering a Grand Solar Minimum (GSM). Those temperatures will continue to drop as we move further into the GSM). All the available relevant temperature data is laid out in this document.
- 2. The computer models that forecast these doomsday scenarios (according to the IPCC and the computer modellers themselves) are self admittedly running too hot and have been using an emissions scenario (RCP8.5) that is highly implausible.

The back-up (quotes, links, etc.) to Point 2 can be found in my OPS-55 - The State of Climate Science post along with some key technical papers that shine some light on the full spectrum of Climate Science rather than the simple, unscientific focus on one trace level gas (CO₂) that is absolutely essential to life on this planet.

What have Calgary's temperature been doing over the last century and a half? Calgary's official weather station is located at the International Airport. There are two sets of data (pulled from NASA's website, (GISS Surface Temperature Analysis (GISTEMP v4), shown on the following page). The original data (International Airport – A) covers the 1881 to 2012 period. In 1973 a new set of equipment (International Airport – C) was added. The two data acquisition options overlapped from 1973 until 2012 when the original equipment was decommissioned. The original measured temperature data increased at a rate of 0.86 °C/century. Through the homogenization process (i.e.: data manipulation) that rate was increased to 1.22 °C/century. Homogenization is a process that is supposed to account for differences in data acquisition techniques (different equipment, time of day acquisition, station relocation, etc.). That 0.36 °C cadjustment does not appear to be unusual. Where the data manipulation becomes "suspect" is in the later data. The measured temperatures (International Airport – C) have been declining at a rate of 1.76 °C/century. Through the magic of "homogenization", our official temperature (according to NASA/GISS) is now increasing at a rate of 1.35 °C/century. That is a 3.11 °C/century adjustment. In the real world, we experience measured temperatures not the artificially adjusted "homogenized" temperatures laid out by NASA/GISS.

I looked at the Calgary temperatures in much more detail than what I will lay out here. That analysis can be found in my CSS-19-Calgary-Homogenization post. Homogenization is not limited to Calgary. I looked at homogenization on a broader basis in my CSS-13 - A Look at Homogenization post. The practice is



widespread and is anything but transparent. Realistically, you as Mayor and City Council should be doing

the research to justify your policies. I am providing some basic information that shows

Calgary (and in fact the entire world) is not facing a Climate Emergency (at least not from "warming"). Ultimately, you need to provide the cost benefit analysis to justify these (in my opinion, based on the empirical data) unnecessary, uneconomic, and ultimately devastating "green" initiatives.



The temperatures shown previously, are average temperatures. Another way to look at "Global Warming" is to focus on the Maximum Recorded Temperature. These temperatures are not homogenized and will reflect the obviously of "Global dangers Warming", right? Here are Maximum the daily recorded temperatures for for both the Calgary International Airport A and C weather stations. These plots were pulled from Tony Heller's Real Climate Tools website. The data shown is pulled from NOAA's temperature datasets. The earlier data clearly shows the generally higher temperatures that were present in the late 1800s and early 1900s. A time of much lower CO₂ concentrations. The plot on the following page, shows

just the highest recorded temperature for each year since 1884. That would be the uppermost points in the two plots above. The yearly cycles are more visible in the International Airport - C data, but the yearly cycles in the International Airport - A data can easily be seen by zooming in on the website.

So, what are the Maximum Temperature trends showing in Calgary? What they are not showing is "Global Warming". The current trend is a measly 0.02 °C/century. If the anomalous temperature spikes in 2018 and 2021 (the Pacific Northwest Heat Dome) are put aside for the moment, the maximum temperatures have been declining at a rate of 0.2 °C/century. There is no Climate Emergency in Calgary. Calgary maximum temperatures pre-1950 were noticeably warmer than those post-1950. CO₂ is obviously not warming Calgary. The 2018 and 2021 data points do not represent climate trends. They are weather events. The climate trend in Calgary is very clear. We are not getting hotter. Maximum temperatures are



flat and average measured temperatures have been declining since at least 1973. Spending billions of dollars to mitigate climate change is pointless when the climate is not changing. Hardening your infrastructure to deal with floods, droughts, etc. (which are not new or even unusual events) can make sense and probably should have been dealt with already.



Just a quick note on the Pacific NorthWest Heat Dome (PNWHD) (highlighted to the left). As I said this was a weather event, but the event was very localized from a global perspective. The average global temperature anomaly was only 0.2 °C above the 1979 - 2000 That would average. be significantly less than the HOTTEST YEARS EVER we have supposedly been living through over the last ten or so years (courtesy "homogenization").

You can argue that "Climate Change" is a global issue, and we

should be doing our part. But the global empirical data also does not support a "Climate Emergency". The University of Alabama, Huntsville (UAH) Lower Troposphere satellite data (shown on the following page) shows that the temperatures have declined significantly since the strong El Niño of 2016. The satellite data is much more accurate than the "homogenized" surface temperature datasets. The satellite data is also closely correlated to radiosonde (i.e.: weather balloon) measurements. The Lower Troposphere temperature is very important to the "Climate Change" discussion. According to the computer models (those self-admittedly running too hot models), the Lower Troposphere should be where the "Global



Warming" impact is the visible. most But, not surprisingly, the models do not accurately represent the observed temperatures (maybe because they run too hot). The models have recently transitioned from the CMIP5 protocol to the CMIP6 protocol. CMIP6 has more solar forcings (Cosmic Ray Flux and High Energy built into the Particles) Sadly, the options. ideological biases built into science" the "climate community are still strong and have chosen to continue ignoring the more dominant and dangerous solar forcings. CMIP6 Beta testing had shown that the Modern Temperature Record (MTR, 1850 to the Present) could be modelled with no CO₂ influence. I showed the same thing in my OPS-8 -Basic Climate Model post Open Letter (and my Addendum). In fact, the CMIP6 models are more erratic and less accurate than the CMIP5 models. At least the Russian model

(INM-CM4) came close using the CMIP5 protocol, but they were just as out to lunch with the CMIP6 protocol. What was the Russians secret to closely modelling the observed temperatures? A low CO_2



climate sensitivity and a negative cloud albedo (which reflects the solar forcings the other models are ignoring).



The UAH satellite data is shown above. Overall, the global temperature has been rising at a rate of 1.34 °C/century. These are not dangerous temperature rises. And more importantly, they are not reflecting the natural (solar) forcings that will become much more dominant over the next couple of decades. Obviously, there is a lot more going on than just CO₂.

The first plot on the next page expands the look at temperature to include the full MTR. The

HadCRUT5 data goes back to 1850 and is consistent with but slightly less homogenized than other data sets like NASA/GISS and Berkeley Earth. The UAH Data begins in December 1978. Both HadCRUT5 (0.76



°C/century) and UAH (0.54 °C/century) data have been declining since 2015 (seven years and counting). The plot (on the previous page) zooms in on the last eight years and layers in CO₂ concentrations.



We can add to the homogenization discussion here again. HadCRUT5 data was only recently adopted. The standard had been HadCRUT4. As shown in the second plot (previous page), these curves have been adjusted up in recent years and adjusted down in previous years. You could easily argue that "Global Warming" is manmade (based on this type of data manipulation). Every year, the measured data is adjusted. HadCRUT4 HadCRUT5 is a to relativelv minor adjustment compared to the yearly adjustments. The US data has been reviewed extensively by Tony Heller. The plot to the left shows how much homogenization NASA/GISS employs (OPS-58 – US Temperatures – Tony



<u>Heller</u>). A total of 2.5+ °F (1.4+ °C) has been added to the US temperature rise. The HadCRUT yearly adjustments would look very similar.

The Atlantic Multidecadal Oscillation (AMO) played a significant role in the global temperature rise from around 1975 – 2005 and is entering its 30-year cooling phase. The El Niño Southern Oscillation (ENSO) is very visible (although somewhat more erratic). ENSO is capable (on its own) of moving temperatures up and down on the same scale as the IPCC's supposedly dangerous 1.07 °C increase from pre-industrial levels. The temperature "PAUSE" from the late 1990s to 2014 is very visible and has since been transitioned to a new "PAUSE" (that will soon become a steady and deep decline). I do provide more detail in my OPS-56 – The PAUSE post. What causes these pauses? Something is overpowering the alleged CO_2 warming. There are a lot of factors. The AMO easily overpowered CO₂ from 1945 to 1975 culminating in the Ice Age is Coming Scare (and was likely helped by the lower solar activity of Sunspot Cycle 20). But the AMO peaked early this century and is no longer a warming influence. The ENSO has a shorter cycle that causes fluctuations during the PAUSE but not necessarily the PAUSE itself. That leaves the shallow decline in solar activity as a likely candidate for the PAUSE. The Total Solar Irradiance Momentum (TSI_M) peaked in 1950 (previous page), remained relatively flat, then began declining slowly around 2005. The small drop in TSI_M appears to be enough to stop CO₂ warming. When the TSI_M begins dropping more dramatically as we move further into the GSM (forecasted by both NASA and NOAA (among others)), the temperatures will also drop dramatically. My CSS-16 – Central England Temperature – Model post has a more detailed look at the solar, ocean, CO₂ and temperature relationships. There is more to climate than CO₂ (which is a minor player at best).



The last plots I will show you will put the "Global Warming" narrative in perspective. These plots adhere to the concept that all the warming over the last century and a half can be attributed to human activity (primarily CO₂ emissions). This premise obviously ignores the well documented fact that the temperature began rising out of the Little Ice Age (LIA) centuries before CO₂ could be considered a significant factor. Remember, 86%+ of human emissions occurred after 1950. That premise also assumes that the natural forcings (active throughout the Holocene Interglacial Warm Period) suddenly became inactive over the last century and a half. Nature does not work that way. The programmers may have turned the natural forcings down and/or off in their models (those models that run too hot), but the natural forcings have been, are and will continue to be active in the future. A plot of various Holocene temperature datasets and historical CO₂ estimates is included on the previous page. You will notice that the CO₂ concentration curve does not look all that intimidating when the vertical scales are adjusted to reflect the "Global Warming" premise mentioned earlier.

Quite simply, the premise states that the 135 ppm CO_2 concentration rise since the pre-industrial age (285 ppm to 420 ppm) is responsible for the 1.07 °C temperature rise (as reported by the IPCC in their recent 2021 AR6 Report). An example of the misleading CO_2 /temperature plots used by those pushing the Catastrophic Anthropogenic Global Warming (CAGW) alarmist narrative is included below. These plots were used in the RBC sponsored <u>Goodside Climate Change Reports</u>. A very <u>detailed review</u> of the very weak science laid out in that report can be found on my website (<u>climatechangeandmusic.com</u>).



On the RBC/Goodside scales (above), the CO_2 increase looks very dramatic. However, when the CO_2 /temperature data are plotted together and the vertical scales are adjusted to reflect the CAGW premise, the CO_2 rise does not look so menacing (as shown on the following page). The plot I am including has added the Vostok ice core temperatures to the ice core CO_2 data shown in the RBC/Goodside plot on the right (above). I have also shortened the timeline to just over 400,000 years. Has the atmospheric CO_2 concentration increased significantly over the last 150 years? Yes, but that increase needs to be taken in context. The context is provided in the second plot where the scales have been adjusted to reflect the CAGW alarmist truth that 135 ppm is responsible for the 1.07 °C temperature increase modern society has experienced. Our impact is lost in the noise of natural variation. As shown in the Holocene plot previously, the temperature fluctuates routinely (often by more than 1.07 °C) while CO_2 concentrations remain virtually flat. More evidence that the IPCC and the rest of the CAGW alarmist community continue to ignore the natural forcings to push their ideology and put our futures at extreme risk. Climate Change is an existential threat, but that threat will come from cold not heat.



The lower plot is reality. The upper plot (like the RBC/Goodside plots on the previous page) are propaganda. As mentioned earlier, the influence of CO₂ is lost in and cannot be differentiated from the natural temperature variations. There is more detail provided on my website. A quick look should include my OPS-51 - Late Holocene - CAGW CO₂ and Temperature and OPS-54 - CO_2 and **Temperature** Properly Scaled posts.

The concept can be expanded out and made more all encompassing by bringing the CO₂ Climate Sensitivity into the discussion. The CO₂ Climate Sensitivity reflects the temperature change that can be expected when the atmospheric CO₂ levels are doubled. A recent post, CSS-21 - CO₂ - Visualized Temperature Influence applied a range of CO_2 Climate Sensitivities to the Holocene temperature fluctuations. One of the

examples is shown on the following page. Three sensitivity scenarios are shown. The lowest scenario is based on the University of Chicago's MODTRAN model, which was designed to estimate the amount of energy that escapes to space under a variety of conditions. The model has been calibrated to satellite measurements of that energy transfer. The second curve, is the IPCC's estimate of Transient Climate Response (TCR, the temperature increase that can be expected over our lifetime from a CO_2 doubling). The IPCC uses a TCR of 1.2 °C. A more realistic estimate of TCR is 1.0 °C, with a trend even lower when Urban Heat Island Effects (UHIE) are properly accounted for. The upper curve is the Equilibrium Climate Sensitivity (ECS, the expected temperature rise that CO_2 doubling would produce if the system was given time to reach equilibrium). The curve uses an ECS of 1.8 °C (consistent with the Russian Model (mentioned

earlier) that reproduced observed temperatures). The IPCC arbitrarily uses ECS values that are higher than 1.8 °C (their range is a very unsettled 1.8 °C to 5.6 °C), but let us not forget that their models (on their own



admission) run too hot. Regardless of which sensitivity you choose, CO_2 is not making a dangerous contribution to warming. Recent work done by W.A. van Wijngaarden and W. Happer in 2021 (<u>Relative</u> <u>Potency of Greenhouse Molecules</u>) has shown that the CO_2 adsorption band is becoming saturated and the ECS is likely in the 0.8 °C range. Which would be located between the black and red curves shown above. The trends of both ECS and TCR estimates are shown in the inset above. They have been steadily declining and will continue to decline.

The two additional plots (on the following page) just add more context to the planet's historical temperature and CO_2 levels. Life easily survived and thrived at the much higher temperatures and CO_2 levels of the Eocene Climate Optimum. The first curve shows the Cenozoic data with an estimate of CO_2 influence. A detailed discussion of the Cenozoic (covering the point in time the dinosaurs were wiped out to the present) has been included in my <u>CSS-10 – A Ride Through the Cenozoic</u> post.

The second plot shows Phanerozoic temperature and CO_2 levels. The Phanerozoic covers from 570 million years ago to the present. A more detailed discussion of the Phanerozoic is included in my <u>CSS-12 – Cosmic</u> <u>Ray Discussion</u> post. As with the shorter Cenozoic period, life thrived and survived at higher temperatures and CO_2 levels (which was around 80% of the time). Celestial impacts and deep ice ages have led to mass extinctions, but CO_2 on its own (at levels humanity is capable of generating) is not fatal to life on this



planet. Any CO₂ we generate (without other real pollutants) will just provide minor beneficial warming

and increased plant fertilization.

We are not facing an existential threat if our CO_2 levels reach 800 or even 1600 ppm (a level that would require us to burn all the coal, natural gas, and oil reserves on the planet (according to NASA)). The real threat (over and above the threat posed by cooling temperatures) is the tremendous waste of capital being dedicated to reducing emissions that will not have any measurable effect on the temperature in 2100. Using the IPCC's "science", the temperature reduction in 2100 would be just 0.17 °C (if every country honoured their Paris commitments). The two biggest emitters (India and China) have displayed no intention of honouring their commitments. So, Canada can lead the rally all they want, but our contribution to the temperature reduction will be effectively zero (0.003 °C). Calgary's contribution will be significantly less than 0.003 °C (by orders of magnitude). A quick cost benefit analysis (globally) suggests that every 0.01 °C of temperature reduction will cost us somewhere between 5 and 7 trillion dollars. Again, that assumes the IPCC science is correct. I would not take that bet given they have already acknowledged that the models run too hot, and they continually ignore solar activity (that little energy source that supplies around 99% of the energy reaching our planet). There is more discussion on this topic in my <u>OPS-17 – Paris Accord – 2015</u> and my <u>OPPS-9 – Common Sense</u> posts.

There are so many good things that could be accomplished by directing those trillions of dollars to real problems. The planet has been cooling and will continue to cool over the next couple of decades. Throwing 87 billion dollars of Calgarian taxpayer's money at this perceived problem, will only drive us further into debt and leave a financial crisis that our children and grandchildren will suffer through the rest of their lives. Stop the insanity or at least delay these uneconomic and unscientific green emission initiatives. Calgary has plenty of capital/social/infrastructure projects that need funding and will ultimately benefit our society. Climate Change spending (apart from adaption, flood mitigation, etc.) does not benefit our society. Those costs just add to the debt problems we already face. If we do not fix our fiscal problems, there will be no money to fight the perceived problems of "Global Warming", let alone the real problems associated with real "Climate Change" (the GSM cooling).

I have presented a lot of information in this Open Letter. That just barely touches the surface. However, the data does show that there is no need to declare a Climate Emergency for Calgary nor is their any need to declate another 87 billion dollars of our taxpayer money to fix a problem that does not exist. If you have additional empirical data that shows otherwise, I would be happy to reconsider my position. And I will reiterate, that is empirical data, not computer models. The computer models (which run too hot) only output what they are programmed to output.

I am not alone in my position. I am a vetted signatory to the Climate Intelligence Foundation (CLINTEL) <u>World Climate Declaration: There is no Climate Emergency</u>. I would be more than happy to sit down with you, the members of the city council, or your administrative personnel and discuss the issue further.

My approach to Climate Change is no different than any other subject I analyze. My opinion just reflects what the data is showing. There is no empirical CO_2 /Temperature data showing CO_2 driving the climate on any statistically significant historical time scale. And empirical data has always and will continue to be a basic requirement of the Scientific Method. Making policy decisions on Climate Change without true scientific back-up (empirical data) has and will continue to lead to disastrous physical, environmental, economic and societal consequences. A true leader would recognize that, focus on the real problems and not just follow the political narrative.