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Canadians for Sensible Climate Policy

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Canadiens pour une politique climatique raisonnable

Fighting Climate Change: Can We Humans Regulate Earth's Climate? A Summary of the Current Situation



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Report Summary

Economic and Social Factors

Will the Paris Climate Accord Work?

The world's largest greenhouse gas (GHG) emitters are now the developing nations, and they are far more interested in making reliable and affordable energy available to their citizens than in "saving the world from climate change." It is only the OECD countries (Canada, the US, the UK, Australia, New Zealand, and the European Union) who seem intent on committing economic suicide.

Is Net Zero Possible?

The goal of achieving "net zero" is not achievable in Canada with any current or on-the-horizon technology unless Canadians sacrifice their social and economic well-being.

Can Electricity Replace Fossil Fuels?

The technologies to replace fossil fuels with reliable and affordable electricity do not yet exist. The conversion of heating, cooking, transportation, and industrial systems from fossil fuels to electricity would require truly enormous investments by homeowners, businesses, and taxpayers. Hydrogen can play a role in niche applications, but its physical characteristics make it wholly unsuitable as a replacement for natural gas or petroleum products.

Can We Succeed In Fighting Climate Change?

Climate change is affected by powerful, unpredictable natural factors; though human emissions and activity contribute to climate change, we are a small part of a complex climate picture. Earth's climate has been changing for many millions of years and it will continue to change even if we stop burning fossil fuels. What we can do is adapt to extreme weather as we have successfully done to date (central heating, grid-scale electricity, insulated homes, dams etc.).

Should We Let Climate Activists Hijack Capitalism?

There is no reason whatsoever to suppose that governments and unelected bureaucrats can design, build, and operate Canada's existing and future energy systems (through tax-subsidized schemes, incentives, bureaucratic agencies or Crown Corporations) more economically or more reliably than the private sector can.

Conclusions about Economic and Social Factors

We show that the aspirational slogans, like Net Zero 2050, advocated by the Environmental Interventionists are unachievable in the demanded timeframe. The proponents claim their policies mitigate against extreme climate/weather but have not demonstrated that such action is necessary or effective. On behalf of their citizens, political leaders in the OECD countries have a duty to re-examine the climate science in open debate.

The Climate Science

Can Carbon Taxes Control Weather and Climate?

Fuel use is essential for modern society and therefore 'inelastic' – a carbon-tax driven price increase does not reduce consumption. Carbon dioxide (CO₂) is only one small element in the extremely complex climate system and is not the singular 'control knob' on climate.

Is Climate Science Settled and No Further Debate is Necessary?

Climate scientists with dissenting views have been shut out of the media. Recent research reveals that most alarmist peer-reviewed climate studies rely on an implausible emissions scenario and outdated science. The most advanced climate models (simulations) run far 'too hot', that is, they exaggerate the effect of carbon dioxide on temperature. Something is wrong with the models. Likewise, research into the Sun's role in climate has progressed, showing it to be a more influential factor than carbon dioxide.

Can we live without CO₂?

If the level of atmospheric CO₂ were to fall below 150 ppm (~38% of present day), all terrestrial plants would die. All terrestrial life would follow soon thereafter.

Is CO₂ Causing Extreme Weather Events or Rising Sea Levels?

While there are credible theoretical and observational studies showing that human CO₂ emissions have contributed to a slight warming of the planet since the mid-1800s, there is no credible link between those emissions and extreme weather or rising sea levels.

Introduction

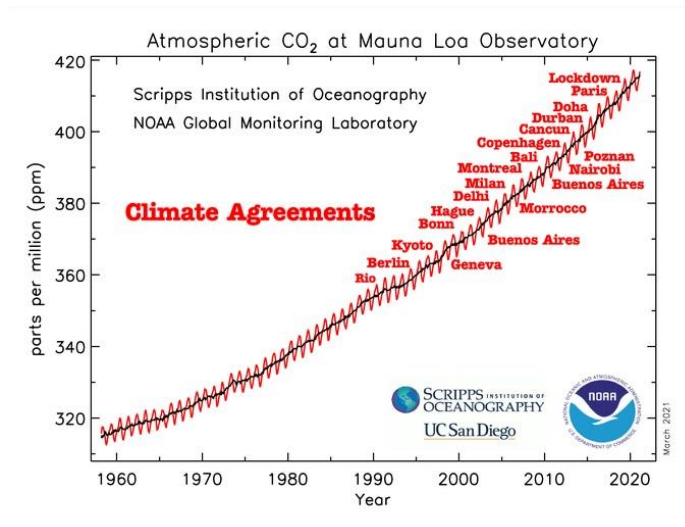
Politicians are supposed to represent the interests of the taxpaying and voting public and to carefully consider the implications of proposed policy.

On the topic of climate change, fulsome debate and cost-benefit analysis are lacking.

From October 31 to November 12, 2021, nations of the world will meet in Glasgow for the 26th “Conference of the Parties” (COP26) – nations signatory to the United Nations Framework Convention on Climate Change (UNFCCC) which was established in 1992.

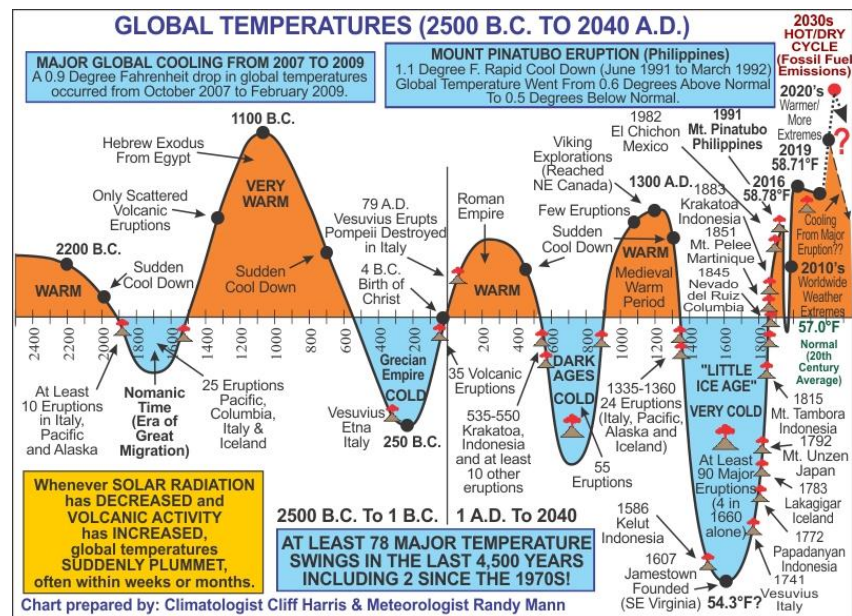
Almost 30 years ago when the UNFCCC was established, the rate of temperature rise and the rate of carbon dioxide emissions from human industrial activity appeared to have been moving in lockstep rise since the 1970s. This led to the UNFCCC which was formed to have unified global action to enact national policies to create a “*stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.*” That was the assumption at the time. The main greenhouse gas seen as the problem was carbon dioxide (CO₂ – referred to as ‘carbon’ today). The main source was seen as industrial activity and the burning of fossil fuels.

Thirty years later we can see that repeat sessions of the Conference of the Parties, all promising to reduce emissions, has not resulted in any change. It should be noted that human emissions are large and significant, but CO₂ concentration in the air is largely made up of natural emissions like ocean degassing or release from the soil; it should also be noted that not all of the warming of the past 150 years is attributed to human industry or CO₂ emissions. And it should be noted that all signatories to the UNFCCC are not equal participants. Many of the ‘developing nations’ (Annex II) are there because they have been promised access to a \$100 billion/year Green Climate Fund (with no accountability), not because they have any concern about climate change per se. In 1992, China was a developing nation. Today it is about to overtake the US as the world’s leading industrial power. The US has reduced its emissions significantly. China has increased its emissions exponentially.



All parties to this thirty year conundrum are well aware that fossil fuel dependent energy demand from OECD countries has not grown, but together India and China now account for 36% of [world CO₂ emissions](#), and almost all the projected growth over the coming thirty years. The reality is that more than half of the 7.9 billion inhabitants of Earth manage on less electricity than the average family in the USA uses to refrigerate its food. China and India are ancient civilizations whose archeological and cultural records demonstrate that both civilizations have an extra thousand years on most countries in the OECD, illustrating that their nations thrived during warm climate cycles and languished when cold periods brought famine.

The following chart shows 4540 years of global temperature cycles and how they affected civilizations. As well, the authors indicate that there is uncertainty whether the 2020s and 2030s will bring us warming or cooling.



If there is to be an effective global response to climate change and environmental issues, then China and India must play an active role, but currently they have made it abundantly clear ([India's no-show at London climate meet isn't good news for UN's COP26](#) [China, India miss UN deadline to update emissions targets](#)) they have no intention to transition away from fossil fuels. Most recently, many signatory nations have committed to “NetZero2050” in an effort to drastically reduce carbon dioxide emissions. But things have changed since the 1992 UNFCCC agreement, including our understanding of many complexities about climate change and the effectiveness (or lack of it) of climate policies like carbon taxes.

The COP conferences are mired in understandings that rely on [outdated science](#) as recently discovered by Roger Pielke, Jr. and Justin Ritchie. This is why open, civil debate on these matters is crucial, yet it is not happening. Climate laws and policies are being made based on outdated science and global demographics and geopolitics.

In Canada, the Liberal government introduced the [Greenhouse Gas Pollution Pricing Act of Canada \(2018-06-21\)](#) (“GHG Act”). As the GHG Act was part 5 of the [Budget Implementation ACT, 2018 No.1](#) the economic and scientific justification was not fully debated in the House of Commons.

Furthermore, during the Constitutional Appeals against the GHG Act by Provincial Governments the economic and scientific justification for the Act remained unchallenged. Subsequently, the Federal Liberal government adopted the [Canadian Net-Zero Emissions Accountability Act \(Bill C-12\)](#) on November 19, 2020, which defined what previously had become law by default.

The Federal Liberal government knew in 2018 that the target reductions in CO₂ of 45% below 2010 levels and Net Zero at 2050, contained in IPCC Special Report SR1.5, were not adopted at the UNFCCC COP24 in Katowice, Poland. Like many other signatories to the 2015 Paris Climate Agreement China and India, the world's largest emitters, have never agreed to the Net Zero targets. Indeed readers may recall that the only international agreement which purports to be legally binding is the 2015 Paris Climate Agreement. Also, that all the target reductions in CO₂ are voluntary and non-binding.

To date, Canada's emissions have flatlined since 1990, despite a 37% rise in population. Our rising population is in part why Canada has not met any previous climate targets. On balance, unlike many UNFCCC signatories, Canada has a long and excellent track record of good stewardship of air, water, and natural resources. Air quality has improved and noxious air pollutants in Canada have dramatically declined since the 1970s due to the establishment of the [National Air Pollution Surveillance Program](#). For [example](#), Canada's SO_x emission intensity declined by 52% from 2007 to 2016 levels. Exposure to suspended matter 2.5 micrometers or less in diameter (PM2.5) is an important health and pollution

indicator. Canada ranks 4th among the 33 high-income OECD countries for low PM2.5 levels with an average exposure of only 6.5 $\mu\text{g}/\text{m}^3$.

Reducing small particulates pollutants is ‘easy’ compared to trying to regulate global climate by reducing greenhouse gas emissions (GHGs). Environmental Interventionists, the United Nations Convention on Climate Change (UNFCCC), Intergovernmental Panel on Climate Change (IPCC), The World Economic Forum (WEF), Institutional Investor Groups (IIG) and certain financial services organizations deem that GHGs from human industry and activity drive human-caused global warming, though the scientific community has been questioning the warming effect of carbon dioxide since the late 1990s. For activists and politicians and some scientists, it is only the CO₂ component from human GHG emissions that is claimed to be responsible for all the global warming while water, the most abundant and effective Greenhouse Gas at 75% is ignored! The media regularly link extreme weather events to “human-caused climate change”, though the IPCC itself issued the SREX report in 2012 which showed no such correlations. Many scientists say that attempting to regulate the climate is a daunting, complicated, likely impossible task. Indeed, the IPCC itself says so “In climate research and modelling, we should recognize that we are dealing with a coupled non-linear chaotic system, and therefore that long-term prediction of future climate states is not possible.” (IPCC Third Assessment Report (2001) Section 14.2.2.2, page 774)

In many OECD countries the financial services sector, including pension funds, insurance companies and their advisors (“Interventionists”), have embraced the Net Zero targets, and are financing the promotion of solutions, such as wind turbines, solar panels, battery storage and electric vehicles, where they appear to have vested interests in these sectors or in related carbon markets, suggesting a conflict of interest or possible greenwashing. The Interventionists have invested heavily in awareness campaigns to inform the public of the potential threat from increased surface temperatures. They imply that such measures will result in less extreme weather and a benign climate.

Readers may wish to consider that as the main justification for their alarm these “Environmental” Interventionists rely on the presumed correlation during the last 150 years between Carbon Dioxide emissions and global average surface temperatures. This period is one 30 millionth of the Earth’s existence. Carbon Dioxide is a naturally occurring trace gas in the Earth’s atmosphere (4 molecules in ten thousand), and which is essential for all life on Earth. Moreover, the UNIPCC’s mandate is to focus on the human causation of climate change, and only does a cursory review of the impact of natural cycles of the Earth, the influence of the Sun and intergalactic particles on cloud formation. The Sun has a mass that is 1.3 million times that of Earth and exerts a myriad of forces on our planet; likewise, internal variability like geothermal activity, changing oceans currents and atmospheric oscillations (to name a few) profoundly affect earth’s climate, typically on very long-time scales. The real question is not whether the globe has warmed recently, but rather to what extent this warming is being caused by humans.

The politicians who are supposed to represent and safeguard the Canadians public have not fulfilled their duty in debating the situation. This Report will analyse the implications of the policies they support.

Economic and Social Factors

1. Will the Paris Climate Accord Work?

No! The world's largest greenhouse gas (GHG) emitters are now the developing nations, and they are far more interested in making reliable and affordable energy available to their citizens than in "saving the world from climate change." It is only the OECD countries (Canada, the US, the UK, Australia, New Zealand, and the European Union) who seem intent on committing economic suicide.

Much of the public impetus for climate change policies relies on a sense that Canada has a *moral* obligation to 'do its fair share'. Few people understand the global energy context. Canada contributes 1.6% of total global emissions.

It is [futile folly](#) to think that crippling the Canadian economy to meet Net Zero 2050 targets will have any impact on global emissions or climate change, when "*China emits in one month (819 Mt/month – Mt is one million tonnes) about what Canada emits in one and a half years*".

Canadians are generally well-intentioned people but many are naïve and uninformed about the global geopolitics of energy. It is a [tragic delusion](#) to believe that doing our fair share will set a precedent for other nations. "*Nine of the ten largest country emitters are not on track to meet even the relatively modest emission reduction commitments they made at the United Nations COP21 conference in 2015. China and India alone are on a track to increase their emissions to perhaps 20 billion tonnes per year in 2030.*" Thus, we cannot be certain that other countries will follow our lead and there is no mechanism for enforcement of these global goals. Canada, the US and Australia are the only democracies in the world with vast supplies of hydrocarbons. All of Canada's other oil/gas/coal competitor nations are dictatorships or theocracies that could use climate policies against us, exploiting our democratic norms. Indeed, the establishment of a 'global carbon tax' law of US\$400/t and rising – as desired by climate activist scientists like [Johan Rockstrom](#) of Sweden – could result in [Canada ceding its energy policy](#) to environmental activists. The "Paris rulebook" to be negotiated at COP26 in Glasgow (November 2021) has such a global carbon tax law or global carbon emissions trade as its goal. Appendix 1 presents further details of the global carbon trading network and the financial impacts on average consumers by all these carbon trading schemes.

Climate policy analyst [Bjorn Lomborg](#) used the computer simulation program "MAGICC" to evaluate the reduction in warming if all Paris signatories met their 2030 goals. He found that the outcome would be a miniscule 0.05 °Celsius of warming reduction by 2100 – a far cry from the promise that Net Zero-style policies would result in keeping global temperatures below the 1.5 °C target.

Like Canada, the European Union and UK also have exceptionally demanding Net Zero 2050 reduction plans. The UK has reduced emissions a great deal by driving industry and jobs offshore but at the cost of jobs and the economy. In addition, UK electricity costs rose dramatically, 2020 prices were about [40% more](#) than 2010, due to a combination of exceptionally high subsidies to wind and solar developers and the burdensome costs of integrating unreliable, intermittent wind farms to the existing reliable, affordable fossil fueled and nuclear based power grid. Both the wind farms and their owners are parasitic on the grid and taxpayers. The UK government is in a dilemma about the magnitude of their Net Zero policy. The EU is struggling to maintain a good life for its citizens, especially in Germany, as power prices have made [electricity a luxury good for ordinary people and both household and non-household electricity prices are the highest in Europe](#). But Germany continues to import coal for power generation while saying only that they have shut down their own coal mines, because they know they are in trouble with costs. The real cost of solar, wind and biomass energy is a hard and expensive lesson we are learning. Most of these countries are densely populated, unlike Canada, and enjoy a far more temperate winter climate than Canada. They also have extensive existing high voltage infrastructure (i.e., Germany's light rail systems) which can be

readily tapped into for electric vehicle charging points. Consequently, though climate activists and politicians like to compare Canadian policies with European policies, the parameters are not the same.

2. Is Net Zero Possible?

No! The goal of achieving “net zero” is not achievable in Canada with any current or on-the-horizon technology unless Canadians sacrifice their social and economic well-being.

“Net Zero” is based on the concept that the carbon dioxide (CO₂) component of GHGs released from fossil fuel use, farmed livestock, and human industry/land use, need to be removed to stop global warming and to prevent extreme weather. Proponents expect that countries will remove greenhouse gases from the atmosphere to offset their CO₂ emissions.

Carbon taxes and carbon trading markets are presented as a means to offset the continued use of fossil fuels, while applying emissions limits (caps) on certain industries. Industries that emit below their cap or services that provide a carbon “sink” (e.g. newly “protected” old growth forest) can then sell their “excess” to capped industries until that industry has time to implement its own net zero technology. To make this viable, a price on carbon must be established, otherwise there is no penalty to the large emitter to force them into carbon trading, and no benefit to a low emitter to capitalize on being a lower emitter.

There are questionable aspects to carbon markets which are unlike any other commodity, described by Mark Schapiro in [Conning the Climate](#) as “the lack of delivery of an invisible substance to no one.” [Interpol](#) has noted that carbon markets are [fraught with fraud](#).

Based on these *theoretical* constructs, Net Zero appears to be possible; in reality Net Zero is impossible.

To reach Net Zero by 2050, [Prime Minister Trudeau has pledged](#) that Canada will reduce emissions by 40-45% of emissions below 2005 levels by 2030. This will require the use of all hydrocarbons to be reduced by at least 40-45% and replaced with low-carbon alternatives like biofuels, or hydrogen. Proponents of Net Zero 2050 believe that conventional electrical power generation can be replaced by intermittent wind and solar, which are presently a miniscule 3.5% of Canada’s power generation. Appendix 2 presents the magnitude of the challenge to convert Canada’s total energy supply, government mandated carbon/sin taxes, dealing with population growth and conflicting immigration policies. A ballpark estimate of capital costs to get to net zero assuming CO₂ emissions are reduced by 50% and the remainder is sequestered by carbon capture and storage is C\$12 trillion, not including stranded assets. C\$12 trillion is equivalent to C\$325,000 per Canadian, or \$1.3 million per family of four. This is simply not affordable no matter how you try to finance, subsidize, or tax people and companies to pay it off.

Ultimately, Net Zero plans would require Canada to abandon its wealth of oil and gas reserves, stranding these assets and eliminating their undiscounted proven [reserves valuation](#) of C\$4.8 trillion, equivalent to \$0.5 million per family of four (or \$125k/individual). Including probable and potential reserves could double this value. These assets must then be replaced by an even larger investment for green energy generation, significant modifications to the power grid and huge subsidies to help industry and individuals cope with overall energy costs that could be five times higher than they have been with fossil fuels. It is unlikely that oil/gas competitor nations like Russia, Iran, Saudi Arabia, etc. would follow suit no matter what they promise in the upcoming COP meeting in Glasgow.

3. Can Electricity Replace Fossil Fuels?

No! The technologies to replace fossil fuels with reliable and affordable electricity do not yet exist. The conversion of heating, cooking, transportation, and industrial systems from fossil fuels to electricity would require truly enormous investments by homeowners, businesses, and taxpayers. Hydrogen can play a role in niche applications, but its physical characteristics make it wholly unsuitable as a replacement for natural gas or petroleum products.

A fundamental fallacy in attempting to replace fossil fuels with electricity is a misunderstanding of the two forms of energy. Fossil fuels are primary forms of energy and are ‘energy dense’. When combusted they release heat energy which can be transformed into a secondary type of energy such as electricity. Electricity must be made by some process – whether in a conventional power plant where fossil fuels are combusted, via nuclear facilities or by hydro dams. Wind and solar are diffuse forms of energy and are at the whim of Mother Nature

Many people make a further error in thinking that wind and solar provide ‘free’ energy because there is no input fuel cost. Wind turbines and solar panels simply capture kinetic energy of wind and the radiant energy of the Sun in an unreliable manner. Wind and solar power require reliable fossil fueled generators (or hydro generators) to backstop the extremely variable and unreliable wind and solar energy to provide steady power for consumers, as described by the late Dutch engineer [JA Halkema](#). Unfortunately, when used at grid scale, ‘free wind and solar’ are unaffordable and unreliable. With wind and solar, one essentially installs a redundant parallel, parasitic system causing [electricity costs to soar from 3 to 9 times the cost of conventional power](#) (this range depends on the mix of power generation sources on the grid). Furthermore, experience has shown that the environmental degradation from the blades killing birds and bats, plus lack of safe recycling of the blades has not been addressed by proponents.

As detailed by FOSS in “[The True Costs of Wind and Solar for Alberta](#)”, these forms of energy only exist on the grid by piggy-backing on the reliability of the conventional power system, and they burden the grid (and consumers/industry) with the need for advanced forecasting and integration technologies and additional expensive high voltage power lines; on top of that, the wind and solar farms themselves are highly subsidized by consumers to begin with and they are given numerous preferential treatments not afforded to conventional power providers. Canada’s Robert Lyman details these in “[Broken Promises](#)”, “[Empty Wallets](#)” and “[Empty Pockets](#)”.

Climate activists and renewable advocates and politicians often blithely talk of ‘battery storage’ as if this is the solution for wind and solar. As explained in “[The True Cost of Wind and Solar for Alberta](#)”, “*while batteries can reasonably manage the intermittency and non-dispatchability of wind and solar generation over periods lasting up to a few hours, they cannot economically manage the months-long seasonal variations in wind, sun, and cloud. At today’s prices, the batteries needed to ensure a reliable supply of electricity from wind and solar generators in Alberta would cost almost two trillion dollars.*”

Activists also claim that ‘clean-tech’ will create millions of new jobs and earn Canada trillions of dollars if we just force ourselves to become an industry leader. In fact, clean-tech was deemed to be an ‘L-for-lose’ investment in 2013 by Joseph Dear, then CIO of CalPERS. Clean tech is not a multi-trillion-dollar global market. There is no clean-tech goose laying golden eggs. Oil, natural gas and coal and their product streams are required for all clean tech to exist as outlined in “[Grounded in Reality](#)”, a rebuttal to Smart Prosperity’s 2017 “Accelerating Clean Innovations in Canada”.

Hydrogen is touted almost universally in Net Zero 2050 plans as the replacement for natural gas, gasoline, and even jet fuel. Hydrogen can be produced through electrolysis processes which many believe can be powered by wind and solar, and through the production of hydrogen, it thus becomes ‘the battery’. This is unproven at any great scale and the processes involve 30-70% [repetitive energy losses](#).

Though the most common element on earth, hydrogen (H₂) is the smallest molecule, it readily leaks from containment vessels, is highly explosive and easily ignited by static electricity alone. To produce

hydrogen, large amounts of energy must be used to convert/capture and compress it, leading to some 30-70% energy losses. This is not sustainable for a modern industrialized society.

4. Can We Succeed In Fighting Climate Change?

No! Climate change is affected by powerful, unpredictable natural factors; though human emissions and activity contribute to climate change, we are a small part of a complex climate picture. Earth's climate has been changing for many millions of years and it will continue to change even if we stop burning fossil fuels. What we can do is adapt to extreme weather as we have successfully done to date (central heating, grid-scale electricity, insulated homes, dams etc.).

Canada's debt increased to \$1.2 B in 2021 as a result of the government's management of the pandemic. Thanks to climate policies, over \$100 billion in investment departed Canada in the space of two years, according to Robert Lyman's "[Prosperity Foregone](#)".

Canada would be economically stable if not for *The Tar Sands Campaign* detailed in Dr. T.L. Nemeth's 2020 report, [A New Global Paradigm: Understanding the Transnational Progressive Movement, the Energy Transition and the Great Transformation Strangling Alberta's Petroleum Industry](#), for the Alberta government. In 2009, the [oil sands developers projected](#) the following:

- A growth of employment across Canada from 75,000 jobs in 2010 to 905,000 in 2035.
- The generation of \$2.1 trillion in economic stimulus over the next 25 years (2010 to 2035)
- Development contributing \$105 billion to provincial taxes and over \$311 billion in federal taxes
- The collection of over \$350 billion in royalties from 2010 to 2035 (Oil Sands Developers Group 2009a)

In 2019, Robert Lyman wrote [an article](#) about the costs of climate policy to Canadians, stating: "*Whether we consider financial costs or economic costs, no one knows the total costs of current and future climate policies. These costs are pervasive, immense, and growing. One can cite individual anecdotes concerning very large figures, such as the fact that carbon dioxide taxes will impose on consumers an additional cost of at least \$24 billion per year by 2020. This number may grow to \$80 billion per year by 2030. However, any attempt to condense all costs of current and future climate policies into a single value is fraught with uncertainty and error. Any number that one might produce would lack an authoritative foundation and could be easily challenged, and thus lack credibility.*"

He noted that due to the many layers of climate policies at all levels of government, the various incentives or restrictions, it is impossible to know what climate policies really cost us.

"In a May, 2018 collaborative report by the federal and provincial governments' Auditor Generals (AGs), the AGs observed that no one has a complete record of all the programs in place, that the number of programs at the municipal level appear to be growing quickly, and that there is very poor coordination among governments in administering these programs. The AGs also observed that there is no way to measure these programs' total cost and cost-effectiveness, nor their extent of overlap and duplication. See the report [here](#)".

In addition to the national losses, pension funds are being forced to divest of fossil fuel investments by climate activists and the UNPRI/Task Force on Climate Related Disclosures. They will be hard pressed to generate the traditional target return of 8% per year required to pay out to pensioners especially if federal subsidies for projects claimed to Fight Climate Change are removed. This is a bizarre irony as [The Myth of Stranded Assets](#) points out.

The IPCC's [SR1.5 report](#) estimates that the cost of CO₂ mitigation to limit warming to 1.5 °C is around US\$880/tCO₂ by 2030. Economic models used by the IPCC in their report estimate the social damages (benefit of fighting climate change) at US\$15/tCO₂. The models fail to include enough benefits of CO₂

fertilization, exaggerate the climate's sensitivity to CO₂ increases, and overstate costs by ignoring adaptation benefits and other issues. We [estimate](#) that the “social cost of carbon” (SCC) in 2020 is about -US\$6/tCO₂. The negative sign shows that CO₂ emissions are net beneficial.

Climate activists talk about new jobs created by “green” projects with great fanfare. However the difference between the cost of a project and the benefit of a project has to be paid for by someone. Almost all of the cost of jobs created by fighting climate change are simply social welfare.

5. Should We Let Climate Activists Hijack Capitalism?

No! There is no reason whatsoever to suppose that governments and unelected bureaucrats can design, build, and operate Canada's existing and future energy systems (through tax-subsidized schemes, incentives, bureaucratic agencies or Crown Corporations) more economically or more reliably than the private sector can.

Thinking that catastrophes like major hurricane landfalls, massive forest fires etc. will be 'cured by eliminating fossil fuel emissions is laughable. Well it's not really funny. Thinking that eliminating fossil fuel emissions will 'solve' the problem of extreme weather events is very sad, sort of on the level of doing rain dances. Everything that goes wrong, they blame on fossil fuel driven climate change.

Imagine how surprised they would be if we were ever to be successful at eliminating fossil fuel emissions, and then we still had bad weather!

Dr. Judith Curry, Atmospheric Scientist

Nations committed to Net Zero 2050 targets seem oblivious to the financial burdens they are imposing upon consumers and citizens for the dubious claim of keeping the world's global average temperature rise since pre-industrial times below a target of 1.5 °C. Trillions of dollars of money borrowed and committed to fighting climate change does not carry any guarantees that these efforts will yield the claimed reduction in temperature or extreme weather. In fact, the IPCC issued the Special Report on Extreme Weather in 2012 and found little evidence that human caused climate change had any effect on extreme weather events or trends.

The most recent (2021) IPCC report claims to find human influence on extreme weather, but it had 54 peer-reviewed studies on that supposed connection, 53 of which found no link. The IPCC chose the only one that made such a claim, as climate policy analyst [Dr. Roger Pielke Jr. has pointed out](#).

The World Economic Forum claims that abandoning shareholder capitalist system will improve climate outcomes in its planned “Great Reset”. In effect this is a statement of intent that, by investing in the technologies the World Economic Forum and Institutional Investor Groups judge to be desirable, the outcome will be profitable financially and yield benign climate on Earth.

In fact, this plan will simply further embed the massive green subsidy system that is feeding the market value of the alleged ‘clean tech’ companies.

“Stakeholder capitalism”, as opposed to shareholder capitalism, relies on taxpayer “subsidy-ism” and is unsustainable for this reason. However, if material possessions and freedoms are taken away from the mass population, then they will not be aware of the level of subsidy, nor will they be able to protest. Though it sounds astonishing, [Deutsche Bank of Germany has proposed an ‘eco-dictatorship’](#) as a ‘build back better’ strategy. *“If we really want to achieve climate neutrality, we need to change our behaviour in all these areas of life. This is simply because there are no adequate cost-effective technologies yet to allow us to maintain our living standards in a carbon-neutral way. That means that carbon prices will have to rise considerably in order to nudge people to change their behaviour. Another (or perhaps supplementary) option is to tighten regulatory law considerably. I know that “ecodictatorship” is a nasty word. But we*

may have to ask ourselves the question whether and to what extent we may be willing to accept some kind of eco-dictatorship (in the form of regulatory law) in order to move towards climate neutrality. Here is an example: What should we do if property owners do not want to turn their houses into zero-emission buildings; if they do not have the financial means to do so; if doing so is not possible for technical reasons or if the related investments do not pay off?”

Likewise, financial markets, not the scientists, are now driving the climate narrative. This is likely due to the influential “Risky Business” report [backed by green billionaires Tom Steyer and Michael Bloomberg](#).

Mark Carney is promoting climate risk as the means test for investors in any company and he has publicly promised that any company not addressing climate change reporting will go bankrupt. Canada should not support these negative movements in a global world instigated by the WEF.

Conclusions about Economic and Social Factors

We have shown that the aspirational slogans, like Net Zero 2050, advocated by the Environmental Interventionists are unachievable in the demanded timeframe. The proponents claim their policies mitigate against extreme climate/weather but have not demonstrated that such action is necessary or effective. On behalf of their citizens, political leaders in the OECD countries have a duty to re-examine the climate science in open debate.

The Climate Science

*“What if climate change appears to be just mainly a multidecadal natural fluctuation?
They’ll kill us probably...”*

Tommy Wils, Climategate emails (28 Mar 2007 16:37:09 +0100)

All of the climate initiatives are premised on two things:

1. That human use of fossil fuels is causing dangerous change to the atmospheric gas concentrations resulting in dangerous or catastrophic global warming/climate change; and
2. That not using fossil fuels will prevent climate change and extreme weather events.

The science to back up these premises has never been proven. On the contrary, in the last decade independent scientists have done much research that has uncovered more and more scientific evidence that these premises are false. A significant example is the five “Climate Change Reconsidered II” volumes of [Nongovernmental International Panel on Climate Change \(NIPCC\)](#). Unfortunately, the record shows that climate interventionists have deplatformed the extensive science pertaining to natural factors that impact Earth’s climate.

1. Can Carbon Taxes Control Weather and Climate?

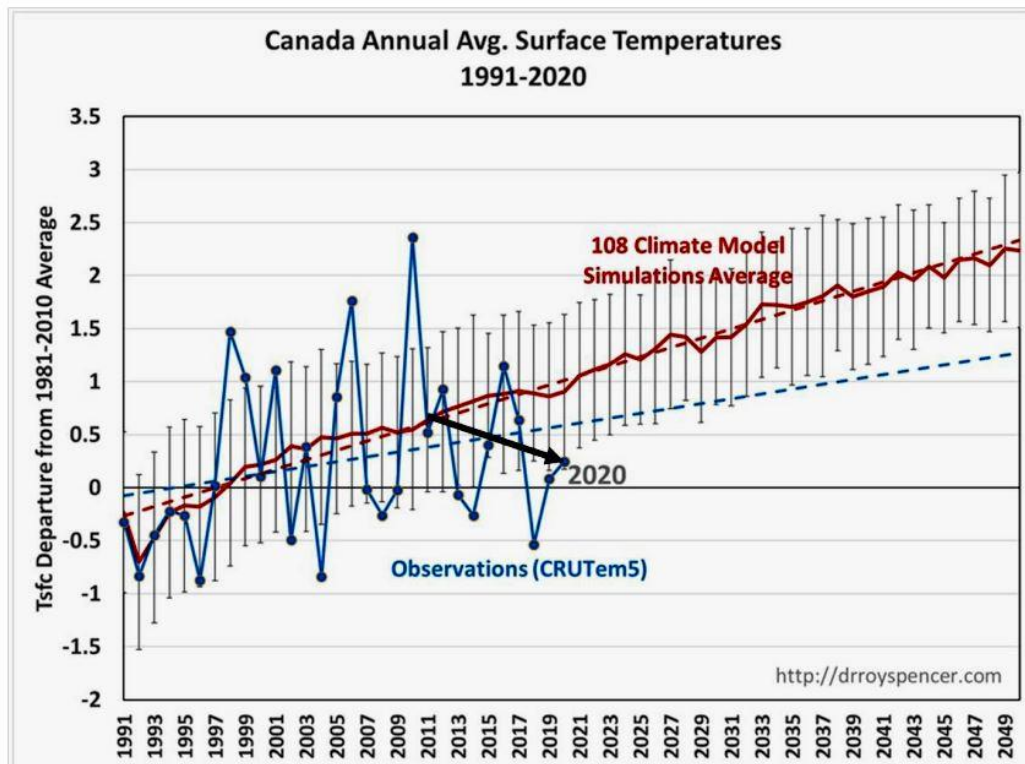
No! Fuel use is essential for modern society and therefore ‘inelastic’ – a carbon-tax driven price increase does not reduce consumption. Carbon dioxide is only one small element in the extremely complex climate system and is not the singular ‘control knob’ on climate.

The carbon tax is seen, by many economists, as a Pigouvian form of ‘sin tax’ whose burden will slowly nudge a person or industry into using less fossil fuel intensive options. As discussed in Appendix 2, essentials like home heating and gasoline for driving to work are ‘inelastic’. Meaning that even when the price goes up, consumer demand and use remain about the same.

Consequently, a carbon tax simply burdens all of society with incremental but cumulative costs without attaining the alleged objective of reducing emissions through personal choice of lower emitting options. In Canada, with Quebec having the lowest cost of bulk electricity in North America carbon taxes have an egregious impact on national unity.

In 2013, the IPCC issued its AR5 report with the bombshell that there had been no statistically significant warming for the past 15 years. The lack of warming continued for about another five years, and the slight warming that ensued appeared to be more associated with an El Niño year than with the CO₂ concentration. [Research presented](#) by renowned Canadian paleoclimatologist Tom Gallagher showed that El Niño effects can last for seven years. Also, his very detailed analysis of ancient climate variations presented that CO₂ and temperatures are not connected and that water is the main driver of climate changes and CO₂ is only a “passenger”. The bombshell revelation should once and for all debunk the entire IPCC “GHG theory” that has never been proven in the 100 years that it has existed!

At the same time, work by the team of John Christy and Roy Spencer of the University of Alabama Huntsville, using the satellite remote sensing temperature record and weather balloon data showed there was no warming to speak of, and no Equatorial ‘hot spot’ in the tropopause as predicted by climate modellers. Earlier this year in 2021, Dr. Spencer detected the start of the next natural cooling cycle in west Arctic temperatures. Following is Dr. Spencer’s latest graph that shows the decline in average surface temperatures in Canada since 2011.



This evidence led Dr. Judith Curry to testify to the US Senate in January of 2014 that ‘[carbon dioxide is not the control knob that can fine tune climate](#)’ backing up the statement by Tom Gallagher that: “CO₂ is not a driver in climate change, it is a passenger”.

As discussed in [The Unstoppable Momentum of Outdated Science](#), Roger Pielke Jr. and colleague Justin Ritchie have analyzed thousands of peer-reviewed papers in climate science that are based on an outdated emissions scenario known as RCP8.5. The [original authors of the RCP studies](#) explicitly stated in their paper that these pathways were not to be used as policymaking instruments – they had designed these scenarios strictly for research purposes and none of them represented reality.

However, numerous organizations ranging from Environment Canada to think tanks like “[Canadian Institute for Climate Choices](#)”, to individual climate scientists like [Dr. Katharine Hayhoe](#), freely compare these implausible scenarios as if these are the pathways and choices we must make.

This is deeply concerning in terms of social policy as three of the four RCP scenarios are based on a world with 3 billion fewer people. It would be very unfortunate if certain policymakers decided that “climate action” should be taken to depopulate the world to “save the planet” based on this misinformation.

While most people in the climate science community do see human emissions of carbon dioxide as having some effect on climate, especially over the long-term, few see it as an imminent emergency and [many point out there are benefits to slightly warmer weather and CO₂ fertilization \(which causes more bountiful crops\)](#). This modelling of the social cost of the concentration of CO₂ proves that the “cost” as a worst case scenario is zero and more often than not is negative which implies a Social Benefit to humanity.

The work of Pielke Jr. and Ritchie in “[Distorting the view of our climate future: The misuse and abuse of climate pathways and scenarios](#)” shows that the climate science community has been focussed on outdated science and an implausible scenario. As he writes in “[The Unstoppable Momentum of Outdated Science](#)”, “it is difficult to turn the big ship “Climate Catastrophe” around, but the evidence does not support a climate emergency anymore.”

2. Is Climate Science Settled and No Further Debate is Necessary?

No! Climate scientists with dissenting views have been shut out of the media. Recent research reveals that most alarmist peer-reviewed climate studies rely on an implausible emissions scenario and outdated science. The most advanced climate models (simulations) run far ‘too hot’, that is, they exaggerate the effect of carbon dioxide on temperature. Something is wrong with the models. Likewise, research into the Sun’s role in climate has progressed, showing it to be a more influential factor than carbon dioxide.

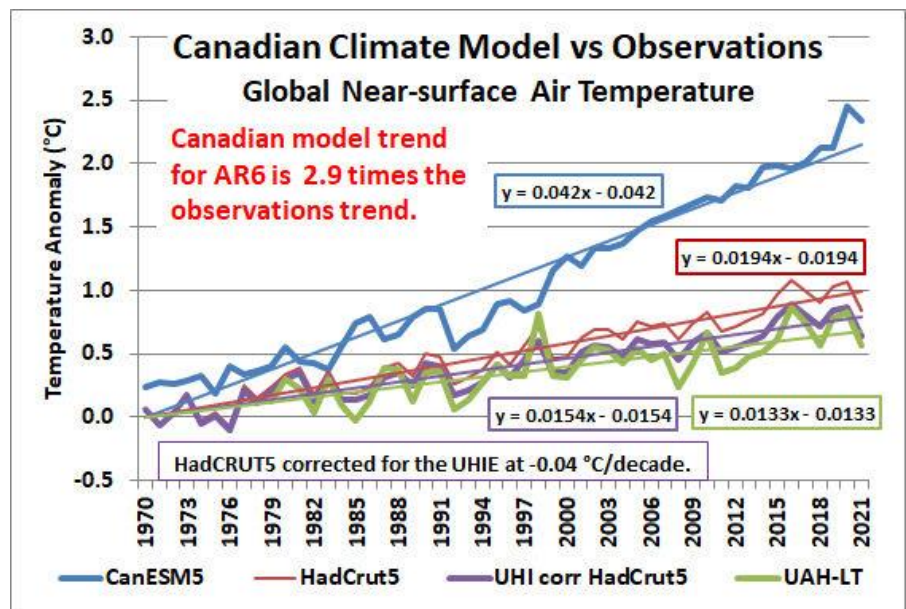
“The climate model is a very good tool for understanding climate, but a very bad tool for predicting climate.”

[Freeman Dyson, Physicist](#)

For governments to set climate policies, they need to look for robust scientific estimates of what will happen to temperatures or weather patterns in the future. Climate scientists use ‘models’ to understand what factors (forcings) affect climate in what way. ‘Models’ are sophisticated computer simulations run on supercomputers that can compute thousands of parameters, but as Dyson says “... *the world is much more complicated than the computer models.*” Computer models cannot yet correctly incorporate the impact of cloud cover. Efforts to improve the models have made them run hotter and diverge even more so from reality. All climate models (there are about 100 of them) are designed with the assumption that carbon dioxide is the driver of climate change.

Critics of climate models have said for years that the models run ‘too hot’; indeed, the most recent edition of climate models have been shown to run implausibly hot – and are just [‘wrong’ according to for the world’s leading climate modeller, Gavin Schmidt of NASA GISS](#). Recently, [two peer-reviewed papers](#) assess the new climate models, known as the “Coupled Model Intercomparison Project version 6” (CMIP6) and find that they run exceptionally hot. [Mitchell et al \(2020\)](#) write “*We draw attention to the CanESM5 model: it simulates the greatest warming in the troposphere, roughly 7 times larger than the observed trends.*”

The Canadian government [relies on](#) the [CanESM2 model](#) “*to provide science-based quantitative information to inform climate change adaptation and mitigation in Canada and internationally.*” [McKittrick and Christy \(2020\)](#) find a strong warming bias in the tropical atmosphere in all the new models and the bias of the new CMIP6 models is worse than the previous CMIP5 models. The 1979-2014 model average mid-troposphere tropical warming trend is an astounding 3.3 times the average measured warming trend!



It should be noted that the time interval used for deriving the assumption of human-caused global warming includes the end of the Little Ice Age, a period of extreme cold and much volcanic activity that ran from about 1300-1860 and when human fossil fuel emissions were absent.

Earth scientists and many astrophysicists see global climate patterns as being driven by a complex interplay of extraterrestrial solar, orbital and celestial influences like cosmic rays, which affect internal forcings like

ocean currents, tides, atmospheric concentration of gases, magnetic fields, etc. The latest were [three podcasts](#) presented by Canadian paleoclimatologist Tom Gallagher on his findings, from last November at the University of Victoria, regarding the driving variables of past climates based on ‘cause and effects’ evidence. These driving variables are not properly captured by climate models. This is another example where the non-technical policy makers of the IPCC ignore the detailed work of the participating scientists.

[A recent study](#) shows that the IPCC did not properly account for the Total Solar Irradiance (TSI) effect on northern hemisphere temperatures. In general, the IPCC mandate is to assess human-caused climate change so natural factors like solar influence are given short shrift in their reports. Neither do they account for the effect of clouds correctly. Trying to model a cloud is about as easy as trying to hold one in your hands. Getting models to incorporate clouds properly is very important as clouds and water vapour together contribute about 75% of the total greenhouse effect in the atmosphere. The amount of clouds in the atmosphere is affected by changes in solar activity and other natural causes of climate change. It is unknown if warming causes the amount of clouds to increase or decrease. As clouds are the Earth's sunshade, they have a huge effect on climate.

Dr. Richard Lindzen, one of the world's most foremost climatologists, points out that assigning CO₂ the lead role in climate change creates an [oversimplified picture](#) of a complex system. [Highlights include:](#)

1. Doubling the atmospheric CO₂ concentration from 280 parts per million (ppm) to 560 ppm results in just a 1-2% perturbation to the Earth's 240 W/m² energy budget. This doubled-CO₂ effect has less than 1/5th of the impact that the net cloud effect has. And yet we are asked to accept the “implausible” claim that change in one variable, CO₂, is predominantly responsible for altering global temperatures.
2. A causal role for CO₂ “cannot be claimed” for the glacial-to-interglacial warming events because CO₂ variations follow rather than lead the temperature changes in paleoclimate records and the 100 ppm total increase over thousands of years produce “about 1 W/m²” of total radiative impact.
3. Climate science didn't used to be alarmist prior to the late 1980s. Scientists were instead sufficiently skeptical about claims of climatically-induced planetary doom. That changed during the years 1988-1994, when climate research centered on CO₂ and global warming received a 15-fold increase in funding in the US alone. Suddenly there was a great financial incentive to propel alarming global warming scenarios.

1988 to 1994 was when the newly formed IPCC began under the leadership and influence of Maurice Strong (a Canadian entrepreneur with less than a high school education and a controversial history in his international dealings and influence on UN leaders and other elite globalists). Thus, it appears that at very least, human-caused global warming/climate change has been wildly over-estimated, as has the effect of carbon dioxide on warming, and it may be that natural factors are simply much greater than human influence. Dr. Lindzen calls it the “[Imaginary Climate Crisis](#)”. Lindzen and Christy are [very critical](#) of the use of the Global Mean Temperature Anomaly Record, calling it misleading.

Therefore, there is no valid case that humans can regulate climate - it is not within our means and the scientific premise for “climate action” is faulty. Instead, the emphasis should be on using limited public funds to adapt and prepare for naturally occurring cyclical weather patterns and weather extremes.

3. Can we live without CO₂?

No! If the level of atmospheric CO₂ were to fall below 150 ppm (~38% of present day), all terrestrial plants would die. All terrestrial life would follow soon thereafter.

It is ironic that most of the public has become convinced—that carbon dioxide is ‘pollution’ and must be removed to save the planet. Nothing could be further from the truth! The Carbon Cycle is taught in high school, showing that carbon dioxide is essential and life-giving. However, science classes are short, while persistent media fearmongering about the climate emergency are 24/7.

The sensible environmentalist, [Patrick Moore](#), co-founder of Greenpeace and now outspoken advocate for common sense on climate and energy policies, says that the biggest danger is running out of CO₂. At levels below 150 ppm, almost reached near the end of the last ice age, plants would die and humankind would follow soon after. Consequently, the claim that there is a limited ‘carbon budget’ that we must not exceed is a fallacy, likely based on the erroneous RCP 8.5 scenario discussed above.

[CO₂ is not a pollutant](#) and should not be treated as such. The vilification of CO₂ has been the foundation of all the poor climate policies that are syphoning trillions away from valid social needs, into the pockets of green crony stakeholder corporatists.

4. Is CO₂ Causing Extreme Weather Events or Rising Sea Levels?

No! While there are credible theoretical and observational studies showing that human CO₂ emissions have contributed to a slight warming of the planet since the mid-1800s, there is no credible link between those emissions and extreme weather or rising sea levels.

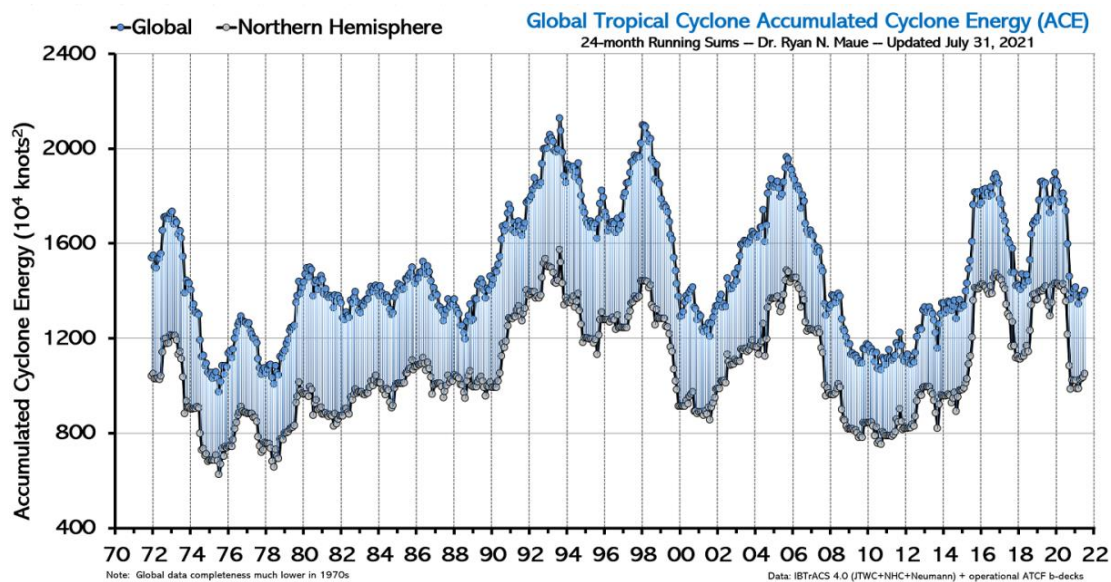
According to Dr. Madhav Khandekar, [extreme weather events are integral to climate](#). Both Khandekar and Pielke Jr. see [no trend in extreme weather events](#).

There is no trend to more extremes according to the most recent IPCC report (AR6) either, though the Summary for Policymakers misleadingly makes this appear so. Dr. Roger Pielke Jr. has [deconstructed the report](#). The heat dome that settled over the Pacific Northwest in early July is a known meteorological phenomenon and not a sign of global warming, as explained by [Prof. Cliff Mass](#), an expert in Pacific Northwest weather patterns. Dr. Khandekar recently (July 7, 2021) expanded on the topic in an Epoch Times news article [BC Heat Wave Caused by Natural Climate Variability, Not Global Warming: Extreme Weather Expert](#).

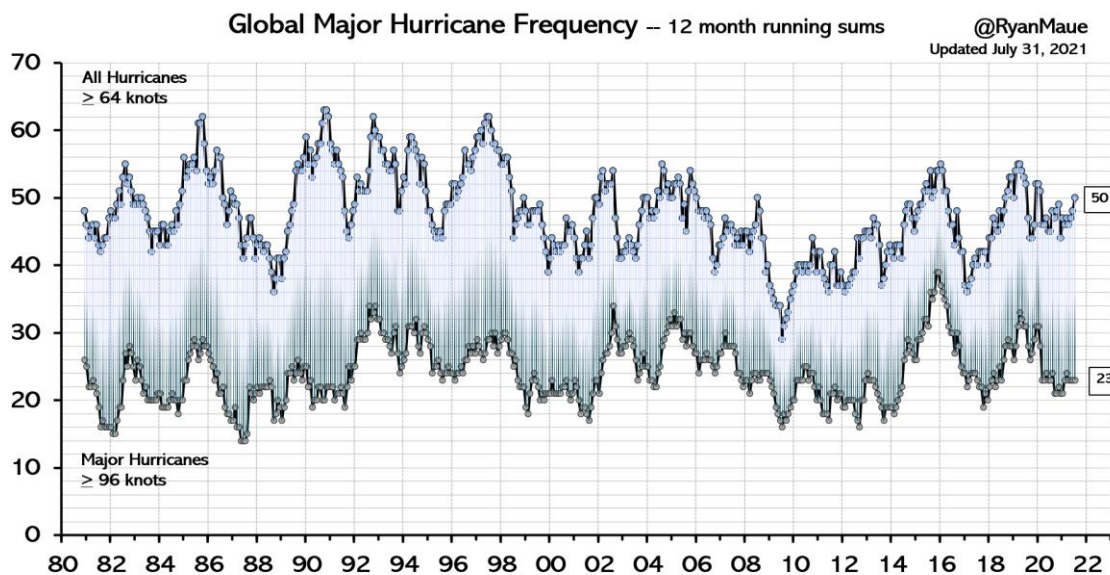
Much of the hype about extreme weather comes from climate research centers that are funded by insurance companies. CBC and the Insurance Bureau of Canada were forced to retract claims about flooding when professional engineer Robert Muir [exposed their hyped up fallacies](#).

Many wildfires can be attributed to lack of attention to forest management, as [outlined in this article](#). [Unfortunately, serious fires have also been set by arsonists. Moreover, data from the Canadian Wildland Fire Information System shows a downward trend in the number of fires and no meaningful trend in hectares burned in Canada since 1980.](#)

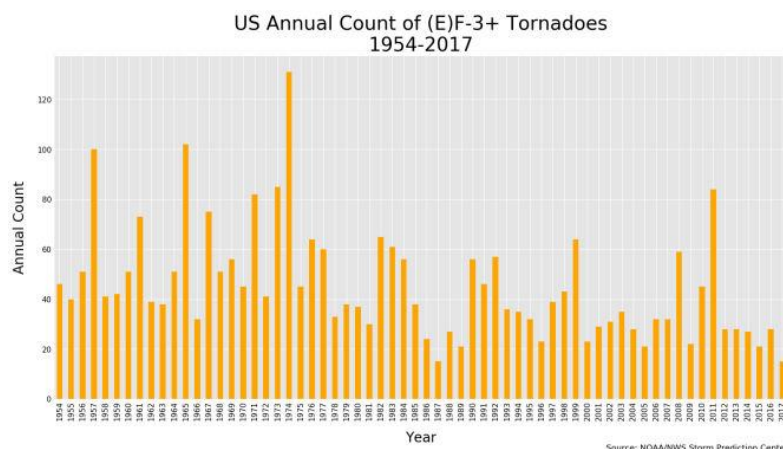
Warming trends in the northern polar region are greater than in the tropics which reduce the temperature gradient that powers storms. A warmer world should have fewer, not more, severe storms.



The above graph presents global and Northern hemisphere hurricane activity from 1972 to 2021 as measured by the Accumulated Cyclone Energy (ACE) which is the combination of hurricane intensity and longevity. The graph clearly demonstrates the expected decadal variability of hurricane energy and that there is no trend of increasing severity in hurricanes since 1972. In fact, current global ACE values are significantly less than in 1972 and the northern hemisphere ACE is currently very similar to that same year.



The Global Major hurricane frequency graph above also shows no increase in the number of hurricanes since 1981.



The United States' annual count of strong tornadoes for 1954 to 2017, presented in the graph above, indicates a significant declining trend in number of tornadoes annually. A recent [paper](#) reported that a survey of official weather sites and the scientific literature provides strong evidence that the first half of the 20th century had more extreme weather than the second half. The paper states, "The lack of public, political and policymaker appreciation of the disconnect between empirical data and theoretical constructs is profoundly worrying, especially in terms of policy advice being given."

The Global Integrated Drought Monitoring and Prediction System (GIDMaPS) provides drought information based on multiple drought indicators. There is a slight [declining trend](#) of total droughts throughout the period 1982 to 2012.

Dr. Indur M. Goklany prepared a [study](#) that examines global deaths and death rates due to extreme weather events. Deaths in the 1920s were 242 million and they declined 99% to 3 million in the 2000s. Our increasing wealth and technology, powered by fossil fuels, has resulted in making a dangerous world a much safer world.

The UN's IPCC (Intergovernmental Panel on Climate Change) 2021 AR6 [Summary for Policymakers](#) report states that the average global rate of sea level rise 1.3 mm/yr between 1901 and 1971, increasing to 1.9 mm/yr between 1971 and 2006, and further increasing to 3.7 mm/yr between 2006 and 2018. The jumps in rate of rise, 1.3 to 1.9 to 3.7, may seem alarming and an indication of acceleration. However, the fact is that the globally averaged sea level fluctuates considerably over time. More often than not, predictions of sea level and coast line changes ignore local geological and other conditions that cause changes in the ocean basin volumes. Coast lines sink or rise due to the movement of tectonic plates and rising continents. Calculated sea level increases are mostly theoretical, not actual measurements as they are difficult to do properly if at all. For example the western part of the Canadian Arctic mainland is rising about 3 ft/century and Tuvalu is an atoll in the Pacific that is sinking partly due to a growing population resulting in the depletion of aquifers, and saltwater intrusion which can give the false impression of sea level rise (SLR). As well this [apparent acceleration](#) can be attributed to a change in measurement systems, tide gauges were used prior to 1971 and satellite data after 1971. Further complicating the comparison of SLR rates is how well the satellite data has been calibrated. For example, the Topex satellite SLR from January 2002 to September 2005 was 1.58 mm/yr, but the Jason-1 satellite SLR over the same period was 3.06 mm/yr. The difference would be interpreted as SLR acceleration but is actually due to failing to calibrate the satellite data trends so they match in the overlapping time period.

[This study](#) of 709 tropical islands found that 88.6% of the islands were either stable or increased in area, while only 11.4% contracted. [This paper](#) examined the historical shoreline change trends and reports that on a global scale, the world's beaches have increased on average 0.33 m/yr over the past three decades, giving a total gain of 3,663 km² despite SLR. This [new study](#) (2021) reports "Since 2000, land area on 221 atolls examined had increased by 61.74 km² (6.1 %)".

Experts have raised the alarm for years that [there is no alarming sea level rise](#), but it seems to fall on deaf ears.

Conclusion: A Made in Canada Proposal for a Prudent Way Forward:

Net Zero 2050 is a global plan, but it does not reflect the unique nature and challenges of Canada, which is the coldest country in the world.

As shown, no reasonable cost-benefit analysis, actuarial loss assessment, or probability analysis has been done on the Net Zero 2050 plans – though the various numbers shared in this report make it clear that Net Zero 2050 will be devastating to the Canadian economy and other OECD countries. These plans will turn citizens' lives upside down – for no benefit to the climate, the environment or any economy.

As Canadians have done for decades, adaptation to climate and weather events will be the key to addressing either global warming or global cooling. [S.M.A.R.T. – Specific, Measurable, Achievable, Realistic and Timely plans](#) can be made on this basis with measurable results and tangible outcomes, rather than NetZero ideologies that are unrealistic and cannot be achieved, certainly not by 2050.

It is clear that reducing carbon dioxide (CO₂) will not 'stop climate change' and may harm life itself.

Professor Ross McKittrick has outlined an interesting means of assessing climate mitigation measures that would be triggered by temperature change. Please see the summary in Appendix 3.

Canada is a nation rich in resources and potential. Net Zero 2050 climate policies will destroy us.

APPENDICES

Appendix 1: Global Carbon Trading Network

Ordinary citizens are far removed from transnational global financial matters. Some people in elite circles see a global carbon trading network as the ultimate way to make money. In fact, a number of large philanthropies have been funding environmental groups worldwide to agitate for apparent ‘grassroots’ climate policy changes that will ultimately lead to success for these large ‘green’ billionaire funds and philanthropists who hope to cause a ‘sea change in the global economy’ through two global cap and trade systems. This is [well-documented by Matthew Nisbet](#). For some of these parties, they see Canada’s vast natural wilderness as the ideal ‘carbon sink’ for trading carbon credits. Indeed, this type of activity has been going on in Canada for some time, under the guise of nature conservation. The [Great Bear Rainforest](#), largely paid for by taxpayers to allegedly protect the rare Kermode bear, has ended up as a carbon trading sink, as has the Nature Conservancy’s “[Darkwoods](#)” project, which is now a commercial partner with [Shell and its ‘driving carbon neutral’](#) program. Unfortunately, the significant sums of money being funneled around in these trades of Canada’s natural beauty are not returned to citizens in anyway. Indeed, as with the Shell project, citizens who are already taxed to the hilt with fuel and carbon taxes, are invited to further enrich one of the richest companies in the world by paying a 2¢ per litre ‘sin tax’ to assuage those who feel guilty about driving and emitting carbon dioxide. Shell then looks ‘greener’ to investors and we’re not sure where those 2 cents go, but someone is getting rich. It is not the Canadian middle class.

As [Robert Lyman writes](#): “Two cents sounds like so little, right? How can consumers complain? Well, in 2019 Canadians consumed 43.3 billion litres of gasoline. Two cents per litre, if added to all gasoline sales, would total \$866 million.”... “Gasoline is already by far the most heavily taxed energy source. The average tax on gasoline in Canada in 2020 is 42 cents per litre, according to the Canadian Taxpayers’ Federation.”

Indeed, carbon offset programs are seen as the key to reaching a **virtual Net Zero** by many people in the financial world. Their benefits could be significant – in the hundreds of billions. As an example, this power point from a 2007 power point of Baker McKenzie indicates that the World Bank and an unnamed private fund made US\$1.2 billion in 23 minutes, trading Certified Emissions Reduction credits through the UN’s Clean Development Mechanism program.



These funds will never reach ordinary consumers and effectively are paid by ordinary people through the various carbon tax regimes and schemes. There are concerns that carbon trading is a type of Ponzi scheme that will lead to an [Enron-style collapse](#); Joanne Nova has termed it ‘[sub-prime carbon](#)’.

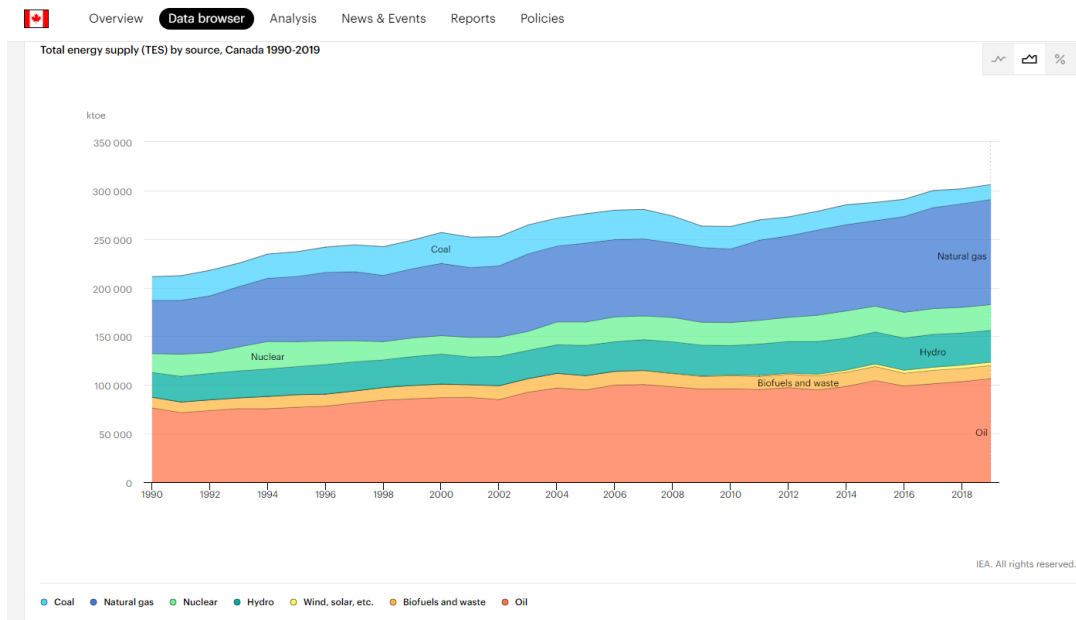
This addresses a virtual reduction in carbon dioxide emissions, as promoted by the [commercial backers of Greta Thunberg](#), but what of the real goals of reducing CO₂ emissions?

As one of the two coldest countries in the world, (non-climate compliant Russia, a competitor nation, being the other) and one where 14.9% of energy comes already from low-carbon nuclear and hydro it is very unlikely that Canada would be physically able to substantially reduce CO₂ emissions before the alternative novel technologies are commercially viable – most of which are still nascent or in a test pilot stage and with no related infrastructure (i.e., very few charging stations for EVs). The answer is not to force that infrastructure into place through onerous climate policy legislation, but to do a full cost-benefit analysis to see how these novel proposals and technologies will impact Canadians, and then decide on a path of action accordingly.

Appendix 2: Canada's Gargantuan Task To Net Zero.

Magnitude of the Challenge

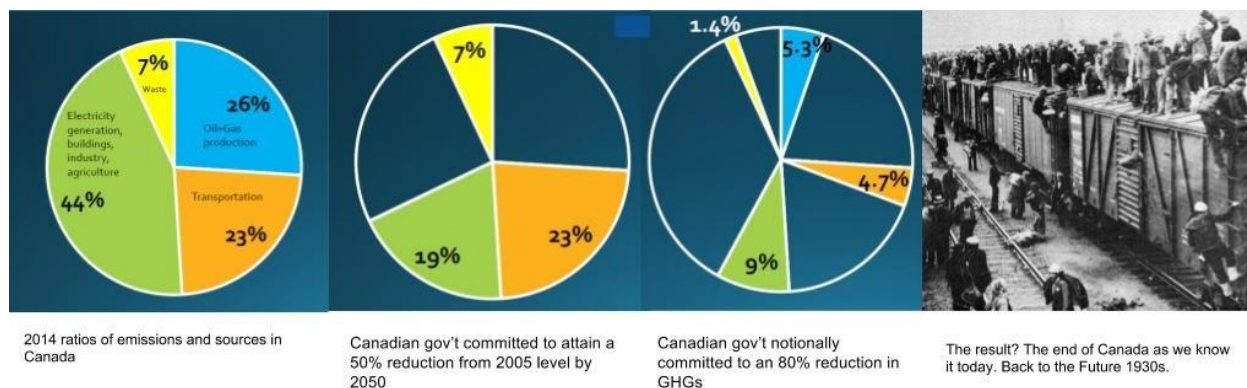
Canada's total energy supply graph gives a sense of the daunting task ahead to go Net Zero by 2050.



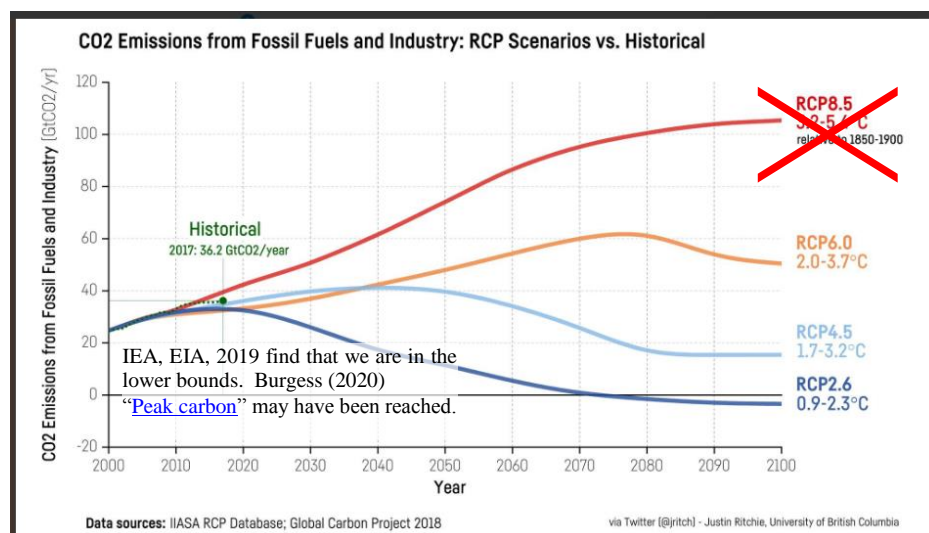
In order to meet the 2030 pledge by the Trudeau government to reduce emissions 40-45% important industries would have to be shut down or severely limited in operations. These are the largest revenue generators for Canada's tax pool and the main creators of good paying jobs.

Fossil fuels represent a significant portion of Canada's economy. Nine percent of our economy's GDP comes from the energy sector alone and since the cost of energy is built into every single thing we buy, fossil fuels are likely closer to 30% of Canada's economy. Attempting to eliminate this industrial sector when oil and gas are in demand world-wide, or attempting to replace them with alternative energy sources that do *not* generate any export revenue is naïve and foolhardy.

[Four of the 10 biggest industries in Canada are petroleum industries](#), and the other six cannot function without the energy, taxes, and export revenues from hydrocarbons. Most of the proposed Net Zero 2050 plans rely on electrification of 'everything'. Wind and solar are intermittent and unreliable, and it would be [impossible to build out sufficient wind/solar devices](#), or provide sufficient battery back-up, by 2050, especially when these require mining intensive operations. Finally, reliance on a singular form of energy puts national security at risk due to potential sabotage, warfare (i.e. EMP), or natural causes like the [Coronal Mass Ejection that hit Quebec in 1989](#) and put millions of people into a long-term blackout.



It should be understood that the push for NetZero originates in the 2018 IPCC SR1.5 report which claimed the climate impacts at 2 °C above pre-industrial temperature (PI) are more severe than at 1.5 °C above PI. Some impacts were estimated using the RCP8.5 model simulation, which is a highly unlikely high emissions scenario. RCP8.5 is the most catastrophic scenario of a set of four scenarios called Representative Concentration Pathways (RCPs) that were never meant as policymaking instruments. The most recent IPCC report, released in mid-August, no longer makes such a claim and RCP 8.5 has been widely dismissed by climate scientists. Nonetheless, the Net Zero movement has not lost any momentum.



Methods to reach Net Zero

The plan to ‘decarbonize’ is to electrify everything with the following proposals:

- Replace existing conventional power generation with ‘low-carbon’ alternatives (wind, solar, geothermal) [Note: nuclear generation is not acceptable to the green movement]
- electric vehicles (EV) for personal cars, delivery fleet, long-haul semi-trailers
- electrify industrial processes, container ships, railways and aircraft
- electrify residential and commercial heating and cooling. Including replacing heat pumps for gas boilers/heaters
- create grid scale electricity storage
- carbon dioxide capture and storage (CCS) or direct air carbon dioxide removal to create CO₂ based products
- farm fuel by creating [cellulosic](#) or corn ethanol for sustainable aviation fuels
- convert methane from waste to gasoline equivalents
- employ Bio-Energy Carbon Capture and Storage (BECCS) to ‘farm’ electricity production
- retrofit commercial and residential buildings to increase insulative qualities and reduce energy/heat waste

It should be noted that none of these plans have appropriate cost-benefit analyses attached to them and few have any kind of major market penetration, yet they are being touted as solutions when they are untested at such scale for the most part. Electrification of all hydrocarbon fuelled aspects of society will require massive expansion of the electricity grid and installation of millions of vehicle charging points. Nations should not be planning their futures based on [magical thinking](#). Robert Lyman wrote: “*Net zero means increasing the uses of renewable energy entirely to replace the 84% of energy supplied by oil, natural gas and coal, and doing this in less than 30 years.*”

In addition to that, there would be an explosion in demand for materials to create the NetZero technologies. In May 2021 the International Energy Agency (IEA) issued a [report](#) on “The Role of Critical Minerals in

Clean Energy Transitions”. The IEA projects the demand for key minerals such as lithium, graphite, nickel and rare-earth minerals would rise by 4,200%, 2,500%, 1,900% and 700% respectively, by 2040. The world does not have the capacity to meet such demand.

We estimate a ballpark capital cost to meet net zero assuming a 50% reduction of CO₂ emission and the remainder sequestered by carbon capture and storage (CCS), of C\$12 trillion. This estimate is based on [the report](#) by Robert Lyman “Ballparking the Cost of Electrification”. These plans would also require Canada to abandon its wealth of oil and gas reserves due to decarbonization, meaning foregone income of our proven petroleum reserves which [we estimate](#) is valued at C\$4.8 trillion. This is equivalent to about \$0.5 million per family of 4 (\$125,000 per individual).

Mitigation and Social Costs (Benefits)

The IPCC's SR1.5 report provides their estimates of mitigation costs as well as the social benefits of reducing CO₂ emissions, both expressed in USD per tonne of CO₂ (tCO₂). The SR1.5 report, shows that the estimated mitigation costs to keep global average temperatures below 1.5 °C above preindustrial temperatures is US\$880/tCO₂ by 2030, increasing to US\$3000/tCO₂ by 2050 as explained [here](#). The [SR1.5 report](#) also says the social cost of CO₂ (SCC) emissions is estimated at US\$15/tCO₂. Therefore, the report shows the mitigation costs at 2030 are around 59 times greater than the benefits. However, their SCC estimate is far too high, partly because the assumed climate sensitivity to greenhouse gases is too high and it doesn't include significant CO₂ fertilization benefits. Mitigation costs are actually 207 times greater than the benefits when calculated correctly.

Accounting for natural warming and the urban heat island effect that contaminates the land surface temperature measurements, a [paper by Gregory](#) shows that the SCC for emissions in 2020 is about negative US\$6/tCO₂. The negative sign shows that CO₂ emissions are net beneficial.

Considering all the best available evidence, attempting to meet the arbitrary 1.5 °C limit will cause both huge mitigation costs and a loss of the net benefits of a slightly warming world and of greater crop yields from the CO₂ fertilization effect. These plans would also require Canada to abandon its wealth of oil and gas reserves, meaning foregone income due to decarbonization in Canada per family of 4 is [estimated at ~\\$1 million \(or \\$250K/individual\)](#).

Markets Fail Under Government Mandate

Most Net Zero 2050 government mandates want to both ‘push’ and ‘pull’ markets in a Green New Deal direction. Heavy carbon taxes are being imposed as ‘sin taxes’ to get industry and consumers to reduce consumption of hydrocarbons. For the past five decades, the Canadian government has [tried to persuade people out of their cars](#) and into public transit, imposing high fuel taxes and ever more onerous conditions related to personal vehicle use *After five decades of governmental efforts to discourage commuting by personal vehicle, the percentage of working Canadians commuting by car has fallen from 80.7 to 79.5 per cent. In other words, regardless of what government planners, transit commissions and environmentalists may prefer, the average citizen is voting for personal vehicles.* Fuel taxes are now more than \$200/t carbon tax equivalent. People are still driving Internal Combustion Engine Vehicles and choosing them by the millions over electric vehicles, even though EVs come with a generous subsidy in several provinces.

Electric Vehicles Will Not Take Over the Market

According to a recent JPMorgan report, [EV penetration in North America is nominal](#) (3% of Canada’s light vehicle sales; 2% of US) and will continue to be so, largely due to vast distances, extreme weather conditions, and North Americans’ “Route 66” mentality. In Canada, other than hybrid vehicles, Battery Electric Vehicles (BEV) face challenges of vast distances, a limited network of chargers, and [temperature extremes](#).

An [energy conversion analysis](#) vis a vis vehicle use to electric power requirements and found that Canada would need to build 10,000 MW of additional power generation to serve the EV policy of 2019. This

would mean building at least 8-10 additional power generation projects like Site C dam or Muskrat Falls, both of which are years behind in completion and billions of dollars over budget. To build just one such project a time horizon of 20-30 years is required. There is not one new major power generation project on the table at present in Canada. In addition to the power plants, related infrastructure like high voltage transmission lines, large custom built sub-station transformers, and related integration technologies would be required. [Land acquisition for rights-of-way](#) for high voltage power lines can take decades. Likewise, in terms of public resistance, the only thing that activists hate more than pipelines is power lines.

Population Growth and Immigration Defeats Climate Policy

Despite claiming that “Canada is Back” (post-Paris Agreement 2015) Canada has not reduced its growth in CO₂ emissions in the 5 years since the Paris Climate Agreement. Canada’s emissions flatlined while the population grew by 37% since 1990.

Climate activists constantly denounce Canada for missing targets while simultaneously calling for ‘climate justice’ for the people of the world, especially immigrants. [Canada’s fertility rate](#) is only 1.4 children per female (this is below replacement level). With all due respect to new Canadians, present Canadian immigration policy defeats Canada’s climate policies. Immigrants from tropical or temperate low per-capita emissions countries like India, China and the Philippines, become high per-capita emissions citizens in Canada.

According to the World Bank, [per capita CO₂ emissions](#) in Canada from 2009 to 2018 have been between 15 and 16 tonnes. Canada has embarked on the “[Century Initiative](#)” to add another 63 million people to our population. Some have estimated this to mean a potential increase in CO₂ emissions of one billion tonnes yearly which does not include the emissions involved in the supply of housing and services for immigrants. It is difficult to make sense of the contradictory Climate Accountability Law and the federal government’s breach of it through its immigration policies.

Other Nations Have Not Met Paris Targets

It is clear that governments cannot attain meaningful reductions in CO₂ emissions.

Furthermore, most countries have [failed to achieve their Nationally Determined Contributions \(NDCs\)](#) as they had agreed to do via the Paris Accord. Most recently, in advance of this fall’s 26th meeting of the Conference of the Parties (to the UNFCCC), known as COP-26, many countries have refused to increase their emissions reduction target to progress towards Net Zero. Ironically, the US under Donald Trump is one of the few countries to have substantially reduced emissions (by large scale conversion to natural gas) without any stringent emissions regulation like carbon taxes or cap and trade policy.

The Top 10 plus EU

Table 1 lists the countries that are the ten largest carbon dioxide emitters in the world, as well the European Union, whose members tend to set joint policy on emissions reduction, along with data showing trends over the past decade. The emissions are listed in terms of megatonnes (Mt):

Table 1
Carbon Dioxide Emissions Trends

<u>Country/Group</u>	<u>2008(Mt)</u>	<u>2018(Mt)</u>	<u>Change (Mt)</u>	<u>Change (%)</u>
China	7379	9429	2050	28
USA	5676	5145	-531	-9
European Union	4149	3479	-670	-16
India	1467	2479	1021	69
Russia	1554	1551	-3	-0.2
Japan	1275	1148	-127	-10
South Korea	558	698	140	25
Iran	504	656	152	30
Saudi Arabia	424	571	147	35
Canada	545	550	5	1
World	30,337	33,891	3554	12

Source: BP Statistical Review of World Energy 2019

Will Competitor Nations Comply with NetZero Targets?

Of significant concern to Canada is the question “Will competing nations adopt identical Net Zero targets?” Canada has set itself up as a climate leader; will there be any followers? In light of the poor performance versus the climate promises over the years, it seems clear that many nations will simply capitalize on conventional fuels. As geopolitical energy expert [Samuel Furfari writes](#): “*The Communist Party of China has announced the creation of 250 GW of new coal-fired power stations (the EU has a total of 150 GW). They will continue their economic growth – and therefore energy – because they do not want to end up like the USSR. That is, they do not care about CO₂ emissions. Their popular diplomacy is there to deceive the naive who still believe that we will reduce global CO₂ emissions.*” Furfari is a chemistry professor, author of numerous books on energy and 36-year veteran advisor to the EU on energy policy.

Global Demographics Preclude Western Nations’ Efforts to “Stop Climate Change”

Global demographics preclude any assurances that the climate policies that Western nations obsess about will be of any interest to emerging nations which are trying to raise the standard of living for their people and develop viable economies. As noted in Robert Lyman’s report “[When Giants Arise](#)”, “Many people, especially in Europe and North America, may not be aware that their combined populations are only 15% of the world total, that the population of Africa exceeds that combined total and that the population of Asia is four times that large.”



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Appendix 3: Proposed Elements of an Alternative Environmental Platform

A. Adapt

1. We start from knowing that Canada stands on the brink of a Debt Crisis. Evidence supports a policy of proper consideration of the unresolved climate science debate. Also, that: “There is time for re-consideration of the role of Carbon Dioxide.” Can governments in Canada please fix what’s wrong with our health system first? Everyone can align with pressing urgency for attention to the deficiencies in ownership and management of our senior’s homes. Do these priorities not rank higher than resolving the disagreement about fighting climate change?
2. The most cost-effective adaptation measures on which Canada can demonstrate a cost/benefit are increased civil engineering works for flood mitigation, better enforcement of forestry management fire prevention practices, and continued enforcement of home construction building standards in tornado prone areas and low lying river basins. Canada has a globally competitive building code that provides for increased structural strength, durability, and for protection against earthquakes and high winds. Also, for water and energy conservation. These have been adopted internationally and continue to offer economic potential for technology transfer as an aid to our lumber producing sector. Can we not expand the use and exportation of this technology by liberating the private sector?
3. Contingency plans for extreme weather events offer a greater return for risk capital than mitigation of future climate. For example, burying electrical distribution cables offer security in wartime not just protection against snow and ice. See para 9 below.

B. Prepare

1. Prudent fiscal management demands that the low-cost options rank higher for consideration and implementation than un-costed options which may increase debt by irresponsible sums. May we ask governments to consider allowing the private sector to participate in an evaluation of current measures? For example, there are [over six hundred measures](#) that are designed to not only stimulate transition to new technologies for energy in all forms but to reduce the production and use of fossil fuels. Canada needs to take steps now to mitigate against the risk of a Debt Crisis.
2. Federal and provincial governments should fundamentally revise the Pan-Canadian Framework on Clean Growth and Climate Change to ensure that the objectives of all emission reduction measures are no longer treated as over-riding policy goals.
3. We recommend that our think tanks be mandated to examine the effectiveness of these measures and propose scrapping those that harm the future productivity and physical security of Canadians. For example, those measures that promote GHG emissions reduction through subsidies, regulation, taxation/price distortion, and social marketing. Any that are retained should be subject to a validation process based on cost-effectiveness and non-duplication with provincial measures.
4. The GHG Pollution Pricing Policy Act, and Bill C12, are major disincentives to capital formation. A moratorium of at least ten years should be placed on further increases in the federal carbon dioxide minimum tax so that it will not rise above the \$30 per tonne rate that took effect in 2020, pending the outcome of a full examination of the underlying Climate Change Science by Canadian Scientists outlined in the last paragraph, a full evaluation of the impact of the tax on the competitive viability of emissions intensive

industries in Canada. Such a moratorium also would allow for a fulsome review of the real effects and consequences of such taxes applied at the federal and provincial levels

5. There should be a rigorous and publicly transparent review of the implicit social cost of eliminating fossil fuels for climate mitigation policies, programs and tax-related measures to ensure that the social cost of carbon is justified by the underlying data that will emerge from the examination outlined in the last paragraph
6. Canada should place a higher priority on measures that enable the economy to adapt to whatever extreme weather events such as floods, temperature extremes, landslides, avalanches, blizzards and forest fires may occur.
7. Implementation of Bill C 12 (Net Zero by 2050) should not proceed. In negotiation at the UNFCCC COP26 Canada's opening position should be that "Net Zero is a nonstarter until all signatories to the Paris Climate Agreement have endorsed the policy."
8. The legislation that substituted partisan political consideration for independent, merit-based review of new energy pipeline projects (Bill C-69) must be repealed.
9. Canada should participate fully in the UNFCCC COP26 meeting in Glasgow, UK currently scheduled for November 2021. Canada's delegation must put forward the proposition of a Temperature Indexed tax for all signatories to the Paris Climate Agreement to sign (per the 2018 Paper by McKittrick, Aliakbari, et al.) One that binds all nations to contribute to A Climate Adaptation Fund for less developed small nations. The Green Climate Fund (GCF) focused on subsidizing investments in electricity generation by wind turbines and solar panels, which have been shown to be intermittent and not cost effective. It should be abandoned. The exception being that nations who do not sign up to implement the Temperature Indexed Tax shall not qualify for receipt of any grants from the GCF.
10. Finally, Canada has a credible moral case to offer a "solution to the impasse." Our forest canopy is a natural CO₂ sequestration sink that the EU has not allowed to be credited against our production of fossil fuels. Indignation at the treatment of Canada (incl. the Rothschild/Hewlett Packard Foundation harassment of the Tar Sands Campaign) can be used as justification for offering a face saving proposal. It may be rejected by the participants at COP26, but Canada will not be seen as a beggar for exceptional concessions because it extracts fossil fuels.

For further details see Dr. McKittrick's [Global Warming: Temperature-Indexed Tax](#)