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A Cruel and Unusual Punishment

Responding to the report:

A Healthy Environment and A Healthy Economy

12.16.2020

FRIENDS OF SCIENCE
Providing Insight into Climate Science

We have been told that climate change is an 'existential crisis.' However, ***based upon our current assessment of the science, the climate threat is not an existential one, even in its most alarming hypothetical incarnations.*** *However, the perception of manmade climate change as a near-term apocalypse and has narrowed the policy options that we're willing to consider. The perceived 'urgency' of drastically reducing fossil fuel emissions is forcing us to make near term decisions that may be suboptimal for the longer term. Further, the monomaniacal focus on elimination of fossil fuel emissions distracts our attention from the primary causes of many of our problems that we might have more success in addressing in the near term.*

- *Dr. Judith Curry, "The Toxic Rhetoric of Climate Change"*

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Canadian Charter of Rights and Freedoms

Provision

12. Everyone has the right not to be subjected to any cruel and unusual treatment or punishment.

Similar provisions

Section 2(b) of the Canadian Bill of Rights is a similar provision. Section 7 of the Charter includes a related principle, prohibiting grossly disproportionate limitations of the right to life, liberty and security of the person (Canada (Attorney General) v. Bedford, 2013 SCC 72 at paragraphs 120-122).

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"...thus superstition and witchcraft bred a precautionary response. Eradicate those responsible for the storm and this period of new storminess. Now it was well-known that people could cook weather with the help of Satan. So, thus did extreme conditions of the severest part of the Little Ice Age contribute to Europe's most horrific period of mass executions and witch trials. This was completely legal and it was undertaken by highly educated, upper social strata....now there were skeptics who stood up, but they were often accused of sorcery to squash any debate..."

- *Dr. Sallie Baliunas, Astrophysicist "Weather Cooking"*

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Overview

In celebration of the fifth anniversary of the COP21 Paris Agreement, the Canadian federal government issued a new report entitled "A Healthy Environment and A Healthy Economy" detailing several new climate policies and an astounding leap in the price of the Canadian carbon tax. The proponents of the report, Prime Minister Justin Trudeau; Minister of Environment and Climate Change - Jonathan Wilkinson; Minister of Infrastructure - Catherine McKenna; Minister of Heritage - Steven Guilbeault, claim that the plan will provide Canadians with good jobs, a leading edge in the global clean tech economy, which they claim will be worth trillions of dollars, and that most Canadians will receive more money in carbon tax rebates/dividends, than it will cost them in carbon taxes. All this on the road to the ultimate goal of NetZero2050 and the interim Paris emissions reductions target.

This report "**A Cruel and Unusual Punishment**" will show how Canadians are being misled by the magical Medieval thinking on climate change and the effective witch hunt against those who hold rational dissenting views.

This report will show that the Canadian government and state actor-Ministers are imposing unnecessary regulations without due diligence or transparent reporting, that threaten the life, liberty and security of Canadians through incalculable debt, untenable carbon tax rates, misleading bribes of carbon dividends/rebates, and the end result of heat-or-eat poverty, job loss, and regional strife. We believe this contravenes Section 12 of the Charter of Rights and Freedoms. We will demonstrate the disproportionality of the imposed climate and energy policy measures against ordinary Canadians vis a vis the actual climate change activities (or lack of them) and emissions in the global context.

This report will provide Canadians with the fundamental due diligence of the impacts of these policies, which the government has not done, to provide clarity to its citizens and sufficient cost-benefit analysis as a basis for rational debate about these proposals.

In the absence of such information and in the face of overwhelming promises that cannot be kept, the federal government is treating its citizens as no more than serfs in Medieval times; in fact the carbon tax 'fee-and-dividend' is much like feudal serfdom where the peasant works, but is beholding to the Lord of the Manor to return a portion of the peasant's corp or earnings for his/her or their families sustenance.

Indeed, the claim that "most Canadians will get back more in carbon rebates than they pay" seems a cruel and unusual joke, when the ballparked cost to Canadians of the ultimate NetZero2050 electrification plan will be in the order of: "*Using Tanton's figures, that would place the costs of electrification at somewhere between U.S. $2.7 trillion (Cdn $3.6 trillion) and*

*U.S. $4.35 trillion (Cdn $5.9 trillion). This does not include the stranded assets costs or the deadweight losses which, based on the value of the proven reserves alone, would appear to be about $9.4 trillion....**A cost of Cdn $3.6 trillion is equal to $95,000 for every person in Canada. A foregone income of Cdn $9.4 trillion is equal to almost Cdn $250,000 per person, or one million dollars for a family of four.**"* [1]

The state broadcaster, CBC posted an article on Dec. 12, 2020, by Aaron Wherry entitled "***Canada finally has a plan to meet its climate target — and maybe now there can be a real debate***". This document will give the Canadian peasant population, on the verge of a neo feudalist society, some facts and tools to engage in a vigorous debate to prevent this cruel and unusual punishment of a carbon tax regime and carbon serfdom being imposed upon us.[2]

This report will compile relevant information from many of our existing science and policy reports and articles, many of which were written by Robert Lyman, former Canadian public servant and diplomat. Other contributions will be from the Friends of Science team or from our network of >900 international scientists, Professional Engineers and scholars who are signatory to the CLINTEL World Climate Declaration.

ROBERT LYMAN is an economist with 27 years' experience as an analyst, policy advisor and manager in the Canadian federal government, primarily in the areas of energy, transportation, and environmental policy. He was also a diplomat for 10 years. Subsequently he has worked as a private consultant conducting policy research and analysis on energy and transportation issues as a principal for Entrans Policy Research Group. He is a frequent contributor of articles and reports for Friends of Science, a Calgary-based independent organization concerned about climate change-related issues. He resides in Ottawa, Canada. Full bio.

How Did We Get Here?

In 2015, the newly elected, neophyte Liberal government representatives went to the Paris COP-21 conference and signed on to the purely voluntary agreement to reduce emissions. The objective was to ensure that human-caused global warming (deemed to be caused by carbon dioxide (CO2) emissions from human industry) would remain below a 2℃ temperature as outlined by the Intergovernmental Panel on Climate Change (IPCC) science reports. Canada opted for a more ambitious target of reductions to meet a 1.5℃ target, because, according to Minister McKenna, the Marshall Islands faced the threat of sea level rise. Catherine McKenna told the Calgary Chamber on March 9, 2017,[3] that she didn't even

[1] https://blog.friendsofscience.org/2020/11/29/ballparking-the-cost-of-electrification/
[2] https://www.cbc.ca/news/politics/net-zero-carbon-climate-trudeau-1.5838736
[3] https://blog.friendsofscience.org/2017/03/26/chamber-of-horrors-minister-mckenna-comes-to-calgary/

know what a 'COP' (Conference of the Parties) was before she got there - yet she signed an agreement, with no due diligence, that is economically destructive to Canada.

> She said: *"So when I took this job I immediately went to the climate negotiations. I actually didn't know about the climate file. I had to figure out what a COP* was. What is this COP? Many people had been to more than one COP, 13, 14 COPs. I got there, dug in and we were able to get the very ambitious climate agreement but then the rubber had to hit the road here...."*
> *(*COP- Conference of the Parties – int'l meeting on climate policy...going on for 22 years now.)*

In an [almost tearful interview]with Rosie Barton upon her return, Catherine McKenna invoked empathy for the Marshall Islanders' plight, dangling a palm frond they had given her, as the rationale for pursuing the more stringent emissions reduction target. In fact, the Marshall Islands are not at threat of sea level rise due to global warming, [as explained by Dr. John Harper], FGSA,FGAC, PGeol., former director of the Geological Survey of Canada, in this April 2016 interview.

This is what Catherine McKenna committed to for Canada. The Paris targets are voluntary and not binding. Please watch "[The Last Time I Saw Paris]" to appreciate the geopolitical context of Canada and the destructive nature of the Paris commitments.

What is the Paris Agreement?

On June 9, 2017, Robert Lyman wrote a succinct overview of what the COP-21 Paris Agreement is all about and some of the history entitled "COP-21 - Just the Facts, Please!" "Conference of the Parties"[4] have been meeting for over two decades, promising to reduce emissions and emissions have steadily risen. The non-OECD developed nations were effectively bribed into the Paris agreement with the promise of a $100 billion/yr 'Green Climate Fund" which would be paid by Western industrialized nations and doled out to them without any accountability whatsoever, ostensibly to help developing nations meet the adaptive challenges of climate change (which it is theorized is being caused by the prior long-term use of fossil fuels and the emissions of the OECD countries). Robert Lyman's 2015 report "Who Cuts? Who Pays? Show me the Money!" provides background on this fund.

Paris Agreement - Where are we Five Years Later?

In Robert Lyman's report of Aug. 12, 2019, he discusses "Promises vs Performance: The World's largest emitters since COP-21". The country that has been most successful at reducing emissions, despite having pulled out of the Paris Agreement, is the United States. The EU has also had success, but with devastating impacts to their economies - what Antonio Tanjani called an 'industrial massacre' as power prices skyrocketed due to carbon taxes and the addition of expensive, unreliable renewable energy like wind and solar.

As you can see in the following table from "Promises vs Performance", Canada has done well with only incremental growth of 1% in emissions. Canada had a population growth of 37% since 1990 but GHG emissions remained fairly flat.

[4] "Parties" are countries signatory to the United Nations Framework Convention on Climate Change (UNFCCC) which entered into force on March 21, 1994 https://unfccc.int/process-and-meetings/the-convention/what-is-the-united-nations-framework-convention-on-climate-change

The Top 10 plus EU

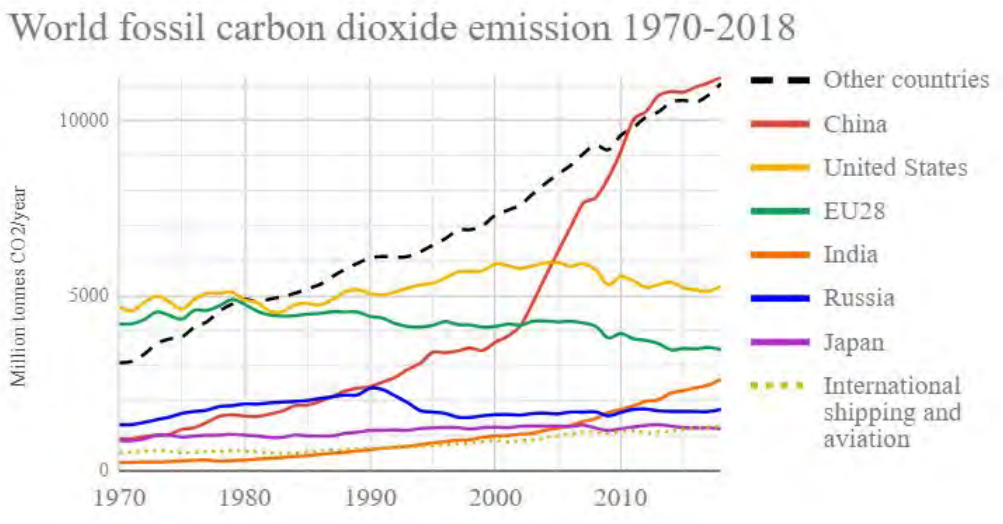
Table 1 lists the countries that are the ten largest carbon dioxide emitters in the world, as well the European Union, whose members tend to set joint policy on emissions reduction, along with data showing trends over the past decade. The emissions are listed in terms of megatonnes (Mt):

Table 1
Carbon Dioxide Emissions Trends

Country/Group	2008(Mt)	2018(Mt)	Change (Mt)	Change (%)
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**

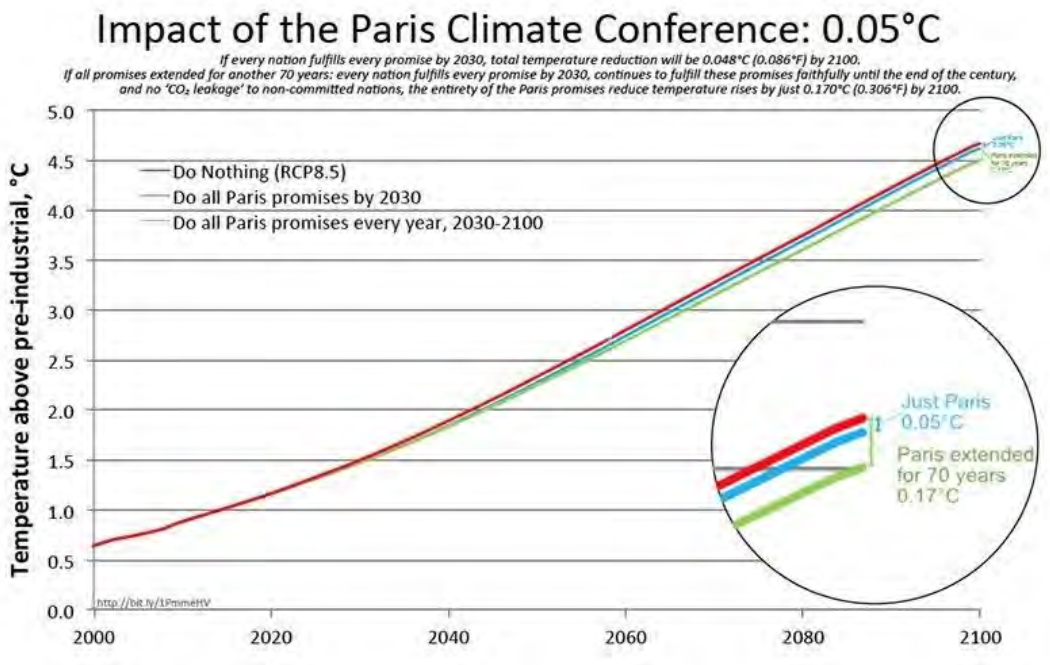
Source: BP Statistical Review of World Energy 2019

Another graph that illustrates who the world's largest emitters are is this one below.



World fossil carbon dioxide emissions 1970 until 2018 with the six top emitting countries and confederations By Tomastvivlaren - Own work, CC BY-SA 4.0, https://commons.wikimedia.org/w/index.php?curid=80085343

Will the Paris Agreement accomplish the goal of reducing emissions? No.



As shown above, Danish economist Bjorn Lomborg, known as "The Skeptical Environmentalist", used the same "MAGICC" computer model used by IPCC contributors and found that e**ven if all signatories to the Paris Agreement met their GHG emissions reductions targets, there would be no measurable decline in warming, but trillions of dollars of public funds would be wasted making 'green crony capitalists' rich.** In Lomborg's recent book "False Alarm:How Climate Change Panic Costs Us Trillions, Hurts the Poor, and Fails to Fix the Planet", he shows that there is no climate emergency (though he agrees the planet will continue to warm), and that such money could be much better spent improving the lives of people worldwide, and adapting to climate change in general.

Is Canada a Large Emitter? Would NetZero2050 in Canada change Global Emissions?

Canadian GHG emissions constitute a tiny part of global GHG emissions

In 2019, Canada carbon dioxide (CO2) emissions were 556 megatonnes (Mt) which is equal to 1.6 per cent of global emissions.

China's CO2 emissions in 2019 were 9,826 Mt (according to British Petroleum data). In other words, China emits in one month (819 Mt/month) about what Canada emits in one and a half years. The average growth in emissions in China over the past decade is 212 Mt per year. Thus, Canada's annual CO2 emissions represent only 2.6 times China's emissions *growth*. **If someone could instantaneously wipe Canada off the map, so that it produced zero emissions forever after, this would have a modest-to-negligible effect on global carbon dioxide concentrations in the atmosphere in 2100, and it would make no difference whatsoever as to whether the IPCC emissions reduction targets (i.e. 1.5 degrees or 2 degrees C.) were met.**

Let that sink in.

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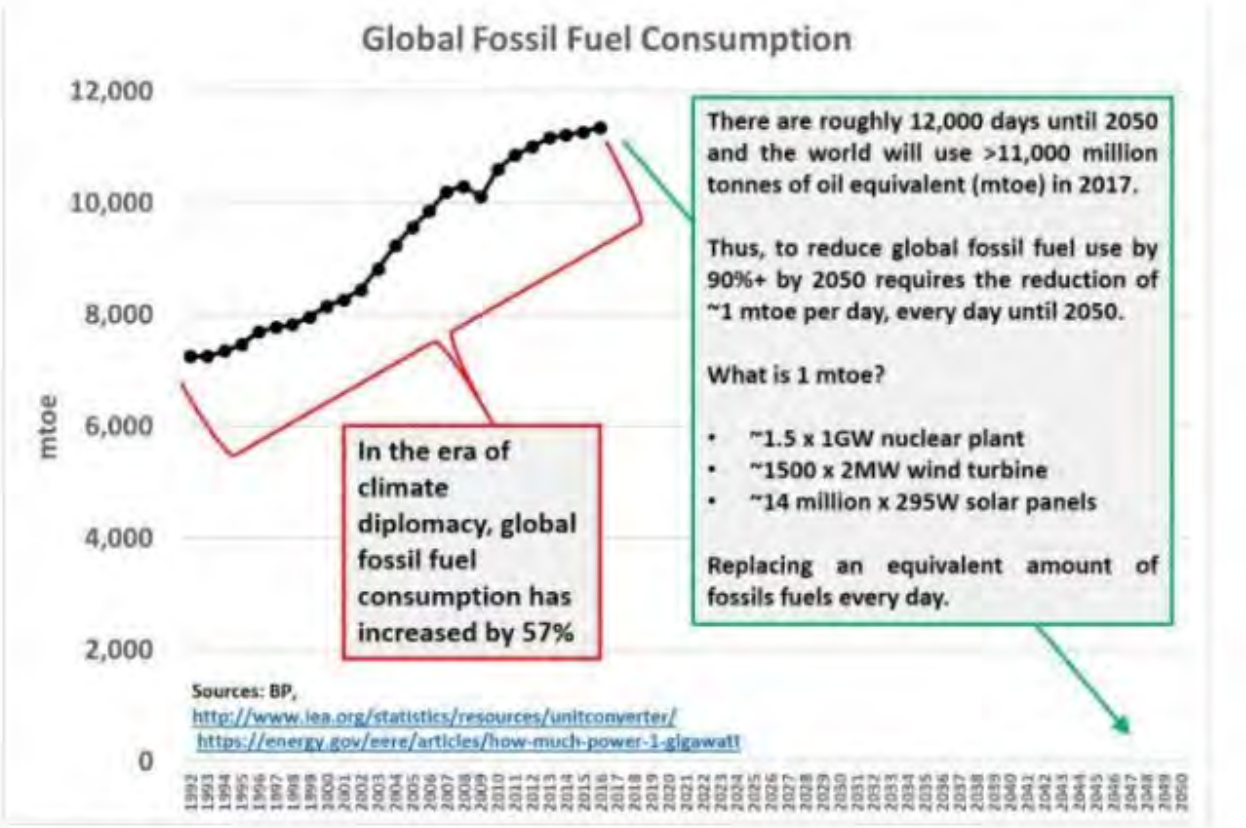
In Robert Lyman's "Futile Folly: Canada's Climate Policy Goals in the Global Context" he points out that: "*China emits in one month (819 Mt/month) about what Canada emits in one and a half years*". Consequently, even if all Canadian emissions stopped tomorrow, it would make no difference to global climate change. In his 2019 report "The Tragic Delusion of Doing Our Share", Robert Lyman shows that Canadians' good-nature is being taken advantage of by the climate movement.

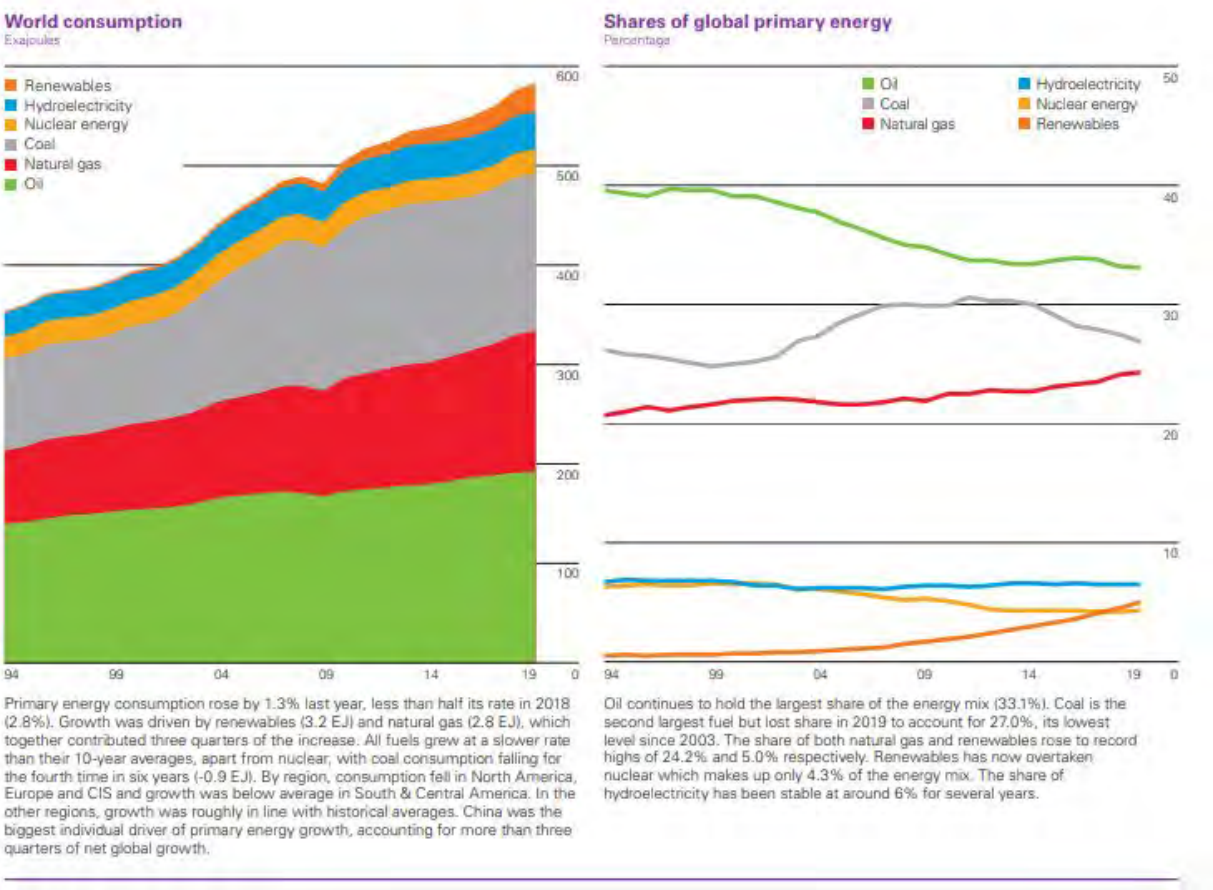
Is NetZero2050 Possible? No.



Source: Roger A. Pielke, Jr.

The chart above by climate policy analyst Roger Pielke, Jr. shows that it is very unlikely the world could meet any NetZero2050 target without the development of some astounding new technology. Even so, as Vaclav Smil, energy expert and author of some 40 books on energy points out, energy transitions typically take 70-100 years. Robert Lyman's "Energy Policy needs to Transition to Reality" summarizes the challenges of decarbonization.

Is the World Moving to a Clean Economy and Phasing Out Fossil Fuels? No.



Robert Lyman's recent report "Renewable Energy Outlook to 2025 - the Inconvenient Facts" explains that the world is not moving off fossil fuels any time soon. The Executive Summary reads:

The International Energy Agency (IEA) recently published its Renewable 2020 Report, an analysis of current trends in global renewable energy markets and a projection of the supply and demand for renewable energy (defined as hydro, wind, solar and biofuels) to 2025.

The report began by noting that, in contrast to other fuels, renewables used for generating electricity are projected to grow by 7% in 2020, even as global energy demand declines by 5%.

Net installed renewable energy generation capacity will grow by nearly 4% in 2020, reaching almost 200 gigawatts (GW). These additions will account for almost 90% of the

increase in total power capacity worldwide. The report stated that solar photovoltaic (PV) and onshore wind are already the cheapest way of adding new electricity generating plants in most countries. It projected that renewables will account for 95% of the net increase in power capacity through 2025. The few media reports on this subject characterized it as showing that renewables are "growing from strength to strength", and likely to "power past coal and gas".

The IEA's enthusiasm for renewable energy, and especially, wind and solar energy, should be viewed in the context of several important facts relating to historical global energy trends, the relative importance of electricity in the fuel mix, the real cost of renewables (i.e. taking subsidies and intermittency into account), and important policy and market uncertainties.

Inconvenient Facts

Since 1994, global energy demand has been dominated by coal, oil, and natural gas. As of 2019, **these three energy sources continued to provide 84% of global energy needs.**

In 2019, wind and solar energy used for power generation constitutes only 2% of global primary energy consumption.

Non-hydro renewables, including biomass, supply 5% of primary energy demand.

In other words, even if renewables continue to grow in usage at a fast pace, it will be many years before they come to be as important to the world economy as the other energy sources.

In most countries, the utilities that produce, transmit and distribute electricity are government owned, operated, controlled, and regulated. This goes a long way to explaining why renewable energy investments are increasing.

The cost of overcoming the variability, intermittency and unreliability of solar and wind electrical power is so high that it raises the costs to electricity customers to unacceptably high levels and will continue to do so even if the capital costs of building renewable energy plants continue to decline.

The most often published costs of wind and solar energy plants ignore the role of taxpayer subsidies. In fact, there are about 20 generic types of subsidies provided to the manufacturers and builders of these plants.

The IEA report assumes that Asian countries, and mainly China and India, will all adhere to their commitments under the 2015 Paris Agreement. Most are failing to do so.

Supply, demand, and competitive markets have in the past largely determined the role that different energy sources play in the world economy and, climate policy or not, it is difficult to believe that this will not be the case in future.

Can Renewables Replace Conventional Fuels? No.

Watch now – VOD https://www.globalwarningdocumentary.com/en/?utm_source=friendsofscience

Sponsored Content. Friends of Science Society receives a share of the VOD fee.

In Calgary filmmaker Mathew Embry's film "Global Warning" he explores diverse perspectives on climate and energy issues. Perhaps most informative on the issue of renewables is his interview with Dr. Fritz Vahrenholt, environmentalist, former German minister of environment in two states, author of books on environmental protection and climate change as driven by the sun, past IPCC expert commentator, professor of chemistry, and former CEO of a renewable energy company. He explains that wind and

solar have a place as **complementary forms of energy, but they cannot replace conventional power**, and that the costs of making such an attempt are catastrophic for society and ordinary citizens.

Likewise, award-winning Dutch filmmaker Marijn Poels has explored the destructive impact of 'farming energy' such as biofuels, wind and solar, instead of farming food, on the EU farming community - and the extreme risks to society of food insecurity, in the event of disruption of global food supply chains. Poels also interviews climate scientists like Dr. Hans von Storch who notes that climate is only one of many issues that society must address and it should not take precedence over common, present-time needs. Poels' trilogy of climate and free speech films can be viewed here for free.

Additional resources on the issue of renewables:

Broken Promises: Why Renewables Offer No Resilient Recovery - Part 1

Empty Wallets: Why Renewables Offer No Resilient Recovery - Part 2

Empty Pockets: Why Renewables Offer No Resilient Recovery - Part 3

In the Dark on Renewables: Rebutting Deloitte Insights and Climate Reality

Why Renewable Energy Cannot Replace Fossil Fuels by 2050

Is Clean-tech a Multi-trillion Global Opportunity for Canada? No.

From Robert Lyman's report "Empty Wallets":

"CLEAN TECHNOLOGY" IS NOT A GROWTH INDUSTRY IN CANADA

Statistics Canada refers to a group of economic activities as "clean technology", and groups them in two categories: "clean energy and environmental goods and services" and "the environmental and clean technology products account".

The Clean Technology Goods and Services category is very diverse. Of the total income to this category in 2017, $32 billion, most of it is in industries not related to climate policies (e.g. equipment and services relating to waste management, site remediation, water management, municipal sewage treatment and spill response, and others). In fact, arguably, only about $5.5 billion of the total is unquestionably driven by climate policies.

The Environmental and Clean Technology Products Account, usually referred to by the government as the "Clean Technology Sector", had a total income in 2018 of $66.3 billion. This account's share of Canadian GDP has been about 3% since 2007, despite the fact that Statistics Canada constantly adds more industries to the category. For over a decade, the

Environmental and Clean Technology Products Account has held a shrinking share of Canada's economy.

THE CLAIMS ABOUT "GREEN JOBS" ARE EXAGGERATED

According to Statistics Canada, an estimated 317,000 jobs were attributable to the Clean Technology sector (as previously described) in 2018, comprising 1.7% of all jobs in Canada.

The goal of Canada's energy sector is not to create as many jobs as possible, especially in politically-favoured and heavily subsidized renewable energy industries. Rather, the economic goal is to produce as much energy as possible at the lowest possible cost, and that means doing so with the fewest energy workers. It is a common mistake of politicians and the media to treat jobs as an economic benefit, when in fact jobs are an economic cost, or price of production. The appropriate economic objective is to have the fewest number of workers producing the highest amount of output. The higher productivity, other things equal, justifies higher wages per worker.

Advocates of renewable energy subsidies and mandates do not consider the direct and indirect adverse effects (including job destruction) on a wide array of energy-intensive industries, and the effects of increased prices for consumers. Experience in other countries provides ample evidence of this. Studies in Spain, Italy, Germany, Denmark and the United Kingdom all found that for every job created in the renewable energy sector, two to three jobs were lost in energy consuming sectors of the economy.

Government intrusion into energy markets amounts to little more than attempting to prematurely force businesses to abandon current generally well-known and proven production technologies for new and more expensive ones.

CONCLUSION

Experience in other countries and in Canada shows that the economic spinoff effects of policies that divert money from the general economy to subsidize renewable energy result in lower value employment in the "Clean Tech" industries, disproportionate loss of employment and income in the broader economy, higher costs for consumers and loss of competitiveness. Despite immense subsidies and a long list of government-conferred advantages, the "Clean Tech" industries hold a smaller and smaller share of Canada's economy. This is not the way to a post-coronavirus resilient economy.

Additional Resources:

Grounded in Reality - Challenging Smart Prosperity on Clean Tech

The Clean Growth Hallucination

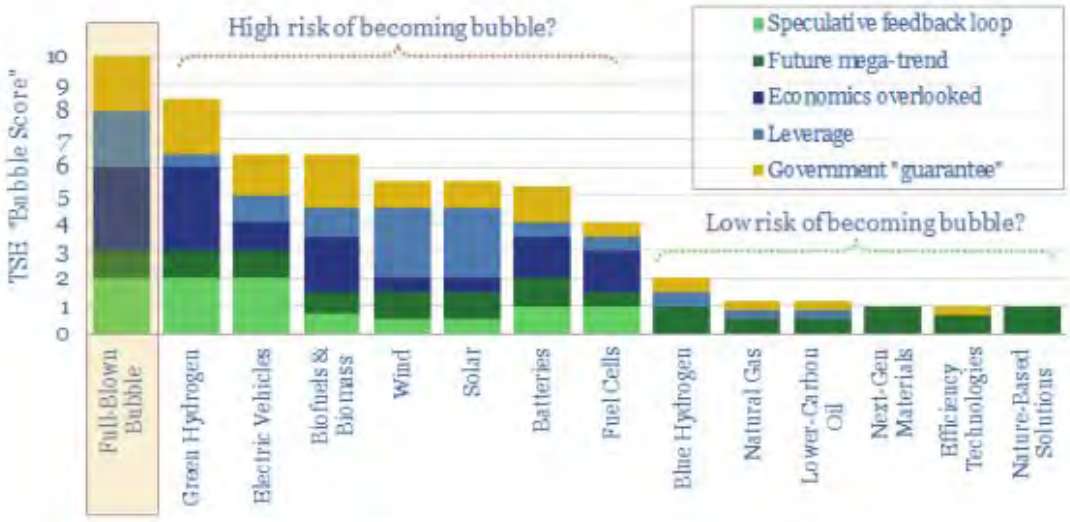
To Get Wind You Need Oil

Inconvenient Facts - Summarizing Natural Resources Canada Energy Fact Book

Are Canadians being Asked to Prop up Looming Clean-tech Investment Bubbles?

Energy transition may be becoming a 'bubble'. Hence our research in November-2020 focused on non-obvious renewable opportunities, and new upside in conventional energy...

Investment bubbles in history take 4-years to build and 2-years to burst, as asset prices rise c815% then collapse by c75%. In the aftermath, finances and reputations are both destroyed. Worryingly, we find a resemblance is now appearing with some themes in the energy transition (chart below), outlined in our 18-page report. Specific historical bubbles are also explored here.



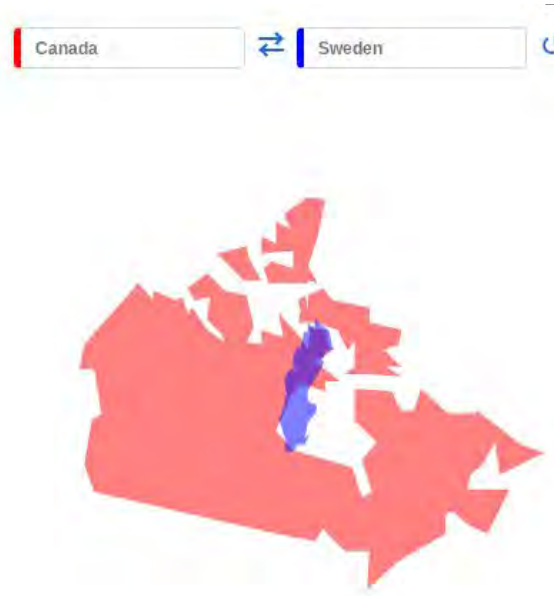
Economic get overlooked during bubbles. This may be occurring today. Continued deflation is expected for transition technologies. But ever-lower prices seem to conflict with ever achieving profitability (e.g., for solar, batteries, hydrogen electrolysers (chart below)). Hence our website now contains models to verify economics, costs and IRRs for 80 transition technologies.

Rob West, CFA, has published his concerns that significant parts of the 'energy transition' (key areas promoted by the Trudeau government plan) are at risk of becoming 'investment bubbles'. *"A bubble is an economic cycle that is characterized by the rapid escalation of market value, particularly in the price of assets. This fast inflation is followed by a quick decrease in value, or a contraction, that is sometimes referred to as a "crash" or a "bubble burst."* In 2018, the CEO of the Spanish Iberdrola energy company *"warned of the prospect of financial disaster for the global renewable energy sector, reminiscent of the collapse of Enron"*.

Enron was the originator of the concept of carbon pricing, cap and trade, and a global 'green' fund - all associated with the Kyoto Accord of the late 1990's. Friends of Science Society began operations in 2002 to challenge the questionable science and economics of Kyoto. The Paris Agreement is simply an updated version of Kyoto.

In January of 2017, The Guardian reported that renewables investment in Europe would drop 95% from 2017 to 2020 due to subsidy cuts.

Did a Carbon Tax reduce Emissions in Sweden and Norway? No.



Canada (9,984,670 km²) is **23** times as big as Sweden (441,370 km²). Population of Sweden: 10,099,265 Population of Canada: 37,742,154	Canada (9,984,670 km²) is **31** times as big as Norway (323,802 km²). Population of Norway: 5,421,241 Population of Canada: 37,742,154

In the federal government report "A Healthy Environment and A Healthy Economy" the claim is made that Sweden's carbon tax reduced emissions by 23% between 1990 and 2018. In fact, during that time, it is far more likely that Sweden's nuclear power generation reduced emissions significantly, not the carbon tax. The World Nuclear Association says: "*Six (nuclear) reactors entered commercial service in the 1970s and six in the 1980s.*"

Sweden's population is small compared to Canada, their distances for travel are short and they have many active ports, providing incoming/outgoing freight by sea, the cheapest

form of transportation - whereas Canada has thousands of kilometers of roads, rail, and air routes by which goods must be delivered. Likewise, temperatures in the most populated areas of Sweden and Norway are mild in winter (compared to Canada) due to the moderating effects of the Gulf Stream.

In the early as the 1990's, Norway instituted a stiff carbon tax, but it was found that "*the carbon taxes contributed to only 2 percent reduction*". (Bruvoll & Larsen 2002)

A higher carbon tax will destroy Canada, not improve its economy.

Additional Resources:

Let Them Eat Carbon - Rebutting Ecofiscal

Robert Lyman: The Alarming Scope of Future of Carbon Taxes in Canada

CHECKSTOP: Challenging the Canadian Federal Government's Carbon Pollution Pricing System Results Report

Carbon Kleptomania - Rebutting the Carbon Dividend Proposal

Carbon Kleptomania - short video rebutting carbon dividend

Carbon Tax Information for Canadians - A Compendium

Robert Lyman's "Carbon Taxation: The Canadian Experience"

Do Economists Agree that Carbon Tax is the Best Means to Reduce Emissions? No.

Emiel Van Broekhoven, D. Phil.(Econ) Oxford, emeritus Universiteit Antwerpen sees the EU NetZero2050 policy - which is similar to that of the recent Canadian Bill C-12 and "A Healthy Environment and Healthy Economy" plan as "Zero carbon policy: fooling 97% of the people?"

Ross McKitrick, Professor of Economics, Guelph University, and long-time climate science commentator notes that 'If you can't explain the pause, you can't explain the cause' - the pause being the 15 year hiatus in warming reported by the IPCC in 2013 (despite a rise in carbon dioxide) as per his 2014 presentation to Friends of Science Society. He explains in a series of interviews for the lay person that climate 'damages' are assessed through economic models (IAMs) which are calibrated to climate models. However, since climate models are running too hot, projecting temperatures far above those observed, then carbon prices are also several times too high.

Robert Lyman's "85 Million Tonne Obsession" shows that after five years of governments steadily increasing fuel taxes (which are a form of carbon tax) to the level of $192/t carbon tax equivalent as of April 1, 2020, Canadians have not abandoned their private vehicles.

Economist **Robert P. Murphy** assessed William Nordhaus' models and finds: *"Although Nordhaus favors a carbon tax to slow climate change, **his own model shows that the UN's target would make humanity poorer than doing nothing at all about climate change.***

*Indeed, we can use Nordhaus's and other standard models to show that t**he now-championed 1.5°C target is ludicrously expensive, far more costly than the public has been led to believe.** This is presumably why the new IPCC special report does not even attempt to justify its policy goals in a cost/benefit framework. Rather, it takes the 1.5°C target as a politically "given" constraint and then discusses the pros and cons of various mechanisms to achieve it.*

It is ironic that in the context of accusations that opponents of government intervention are "science deniers," the latest UN report largely ignores the peer-reviewed publications in climate-change economics, including those of the man who just won the Nobel Prize in the field.[5]

Is Hydrogen - Green or Blue[6] - the Clean Energy Magic Bullet? No.

"Burning hydrogen to generate energy when hydrogen has been produced by energy is like keeping oneself warm burning Louis Vuitton handbags. Inevitably, any hydrogen produced will end up in chemistry and not in a motor vehicle."

- Prof. Samuele Furfari, Hydrogen Strategy to Nowhere

Doctor of applied sciences and engineer, Samuele Furfari has been teaching energy geopolitics at the Free University of Brussels since 2003. He was a European civil servant for 36 years at the Directorate General for Energy of the European Commission. He is president of the European Society of Engineers and Industrialists. He has recently published a book in French and English "The Hydrogen Illusion" - based on his years of research during which he also 'believed' in hydrogen as a solution. But experience and research shows this to be an illusion. Furfari writes:

[5] In this article, I focus on the published model results of Nobel laureate William Nordhaus, which are consistent with other models of the global economy and climate. However, the reader should be aware that climate change economists such as Martin Weitzman have developed frameworks that place greater weight on unlikely but catastrophic outcomes. In these approaches, it is efficient to engage in more aggressive government action against climate change than in the more conventional cost/benefit framework used by Nordhaus and others. See for example Martin Weitzman, "Fat-Tailed Uncertainty in the Economics of Catastrophic Climate Change,".

[6] Hydrogen must be produced through an industrial process. 'Green' hydrogen is proposed to be produced by wind and solar as a means of energy storage; 'blue' hydrogen is produced using energy from natural gas.

"The central part (of "The Hydrogen Illusion") explains precisely why all the dreams about hydrogen and other policies, such as biofuels, decided upon by policy-makers who deliberately choose to ignore science, are doomed to failure. And yet some of the high-ranking politicians have been scientists … one can only conclude that the power of politics prevails over science.We will show that the use of hydrogen to store and then produce electricity, but also as a fuel, will not happen for so obvious economic and safety reasons that it is astounding to see European government leaders being dragged into such a bizarre 'strategy'. But why on earth don't administrations warn their decision makers or why aren't they listened to? We will see that this illusion is, above all, a mistake used to cover up a previous mistake on intermittent renewable energies.Throughout this book, the failures of experiences will illustrate in a concrete and referenced way the points discussed.The conclusion is obvious to me: this costly political mistake, which is all the easier to make as those responsible will no longer be in charge when time comes, is certain to fail."

While Furfari acknowledges the importance of hydrogen, particularly for agriculture and the production of fertilizer, his books and articles make it clear that this is another investment and subsidy fad driven by climate-addled institutional investors and savvy green crony capitalists.

Like economist Emiel Van Broekhoven, Furfari is extremely critical of the EU climate policy asking: "Climate and the European Parliament: lack of calculation or demagoguery?"

Canadian citizens and taxpayers are right to question -***Where is the due diligence by the Trudeau government?***

Can we Just Decarbonize by Installing EV Chargers, EV Public Transit or Mass Transit? No.

"Using Tanton's figures, that would place the costs of electrification at somewhere between U.S. $2.7 trillion (Cdn $3.6 trillion) and U.S. $4.35 trillion (Cdn $5.9 trillion). This does not include the stranded assets costs or the deadweight losses which, based on the value of the proven reserves alone, would appear to be about $9.4 trillion….A cost of Cdn $3.6 trillion is equal to $95,000 for every person in Canada. A foregone income of Cdn $9.4 trillion is equal to almost Cdn $250,000 per person, or one million dollars for a family of four." [7]

"A Healthy Environment and A Healthy Economy" blithely talks of installing a network of EV chargers and mandating zero emissions or electric vehicles such as buses or cars for all government procurement. There is no discussion of the broader technical demands of

[7] https://blog.friendsofscience.org/2020/11/29/ballparking-the-cost-of-electrification/

trying to switch an entire transportation system from Internal Combustion Engines (ICE) cars, buses, and trucks to electric, hydrogen or hybrid electric versions.

An analysis by Kent Zehr, P. Eng. shows that Canada would need to build an additional 10,000 MW of power generation to meet the existing EV policy.

Such projects (i.e. Site C dam or Muskrat Falls - both of which are now over budget and mired in technical and political issues) require a 20-30 year horizon for planning, development, land acquisition, environmental clearance, and construction/commissioning. Not one such project is on the table at present. The requirement to build 10,000 MW of new power generation would cost billions of dollars - in addition, a network for high voltage transmission lines would have to be built to energy hubs, and additional power lines to communities to support EV charging (once past a limited number of vehicles). In most places, neighbourhood distribution lines would also have to be upgraded to handle additional charging outlets in homes. These costs will spiral into the hundreds of billions.

There is also talk of building an east-west power grid. Power generation experts see this as technically infeasible, a poor application of electrical power (as there are significant line losses of energy), and potentially putting Canada at risk of national blackout.

Electrification is also a national security risk in the event of natural Coronal Mass Ejection (CME) such as that of the Carrington Event or the CME of 1989 that blacked out Quebec, or in the event of an Electromagnetic Pulse (EMP) attack by any hostile power.

In the case of mass transit, as Robert Lyman notes in "Squandered Money:Funding Mass Transit to Reduce Emissions", this is an extremely expensive way to attempt to reduce greenhouse gas emissions; the embedded emissions are probably far greater than any GHG reductions anticipated by climate ideologues.

Additional Resources:

"Ballparking" the Cost of Electrification

Shocking Reality: Electrification and Decarbonization

Look Before You Leap Into Climate Emergency Mode

False Assumptions: A Critique of Keller et al (2019) on BC Vehicle Electrification

Design Considerations of a Real-World Interprovincial Energy Corridor Transmission Line

Will Climate Change Policies and Carbon Taxes Stop Extreme Weather Events? No.

"A Healthy Environment and A Healthy Economy" invokes extreme weather events in a number of places, as if this is evidence or the threat of climate change. In fact, as Dr. Madhav Khandekar, former Environment Canada researcher of 40 years, past IPCC expert reviewer and WMO regional expert explains, extreme weather is simply an integral part of climate.

This kind of thinking, wide-spread in the media and in the communications of ENGO 'charities' and climate activists, is a repeat of historical superstition of the Little Ice Age, where today carbon dioxide is framed as a 'Satanic Gas'. Just as the cover of this report shows a witch being taken away for the crime of 'weather cooking with the help of Satan', so Dr Sallie Baliunas, Friends of Science Society's first scientific advisor, discusses how superstition ruled in the Little Ice Age, when people tried to make sense of the erratic and terrifying extreme weather events - blaming 'deniers' and anticipating an apocalyptic end of the world.

People are highly suggestible and green crony capitalists like Al Gore have capitalized on that by claiming that 'every night is a nature hike through the Book of Revelations' when it comes to extreme weather.

Roger Pielke, Jr.'s more reasoned analysis of climate and insurance damages in his book "The Rightful Place of Science: Disasters & Climate Change" shows that there is **no increase in extreme weather events and when properly calculated, no increase in losses.** The difference is that today we build multi-million dollar edifices on flood plains or beach fronts, when 40 years ago we might have only built small wooden houses.

Canadians have been Paying for Pollution for the Past 50 Years.

Frequently in press conferences and public appearances, Prime Minister Trudeau has made disparaging remarks about provinces or politicians who he claims 'want pollution to be free'. This is false. Canadians have been paying to reduce noxious pollutants since before the Prime Minister and his eco-ministers were born.

In Canada, polluters have paid to implement emissions reduction technology, they have paid to install monitoring systems, they continue to pay various levels of taxes and penalties related to the types of noxious emissions, they have paid to create layers of legal, regulatory staff and compliance reporting systems – and if these measures fail, they pay very stiff penalties for

polluting. The company operations can be shut down – which costs them thousands, if not hundreds of thousands of dollars a day. In addition, many corporate employees live or work in the region and care about their environment and communities – they want clean air for themselves and their children.

You taxpayers have paid to pollute as well. There are fuel taxes on gas and diesel. Car manufacturers have paid to upgrade vehicle engine and exhaust design to reduce emissions – and that is passed on to you in vehicle price, but you benefit – with cleaner air. The greatest "Ground level contaminants" (at the level of human breathing) come from vehicle exhaust. As the late Jim Prentice pointed out during his public debate for the 2015 Alberta election, he was the Environment Minister who introduced the more stringent fuel efficiency standards in Canada, cleaning up the air you breathe.

Noxious air pollutants have been significantly reduced. Carbon dioxide is not a noxious air pollutant - you breathe it out at 40,000 parts per million with every breath - that is 100 times the concentration of carbon dioxide in the atmosphere.

Alberta was the First Province with a Climate and Environment Plan.

Despite many disparaging veiled or direct comments about Alberta and the oilsands, oil and gas industry emissions, the Prime Minister and his eco-ministers do not seem to know that **Alberta was the first province to have an Environment Ministry,** and the first Minister of Environment was Ralph Klein. The **province of Alberta had the first wind farm** in Canada, established in 1993. By 2005, the Alberta Electric System Operator (AESO) was warning the province that to add more wind, more conventional power generation would have to be built. Indeed, shortly thereafter the $1.4 billion dollar Shepard Energy Centre was built, a combined cycle natural gas plant, ideal for ramping up and down to meet the ever changing demands of wind. Along with it, the province had to build a $2.2 billion 500 kiloVolt transmission line to the southern wind farms - all this for just 4% (at that time) of the province's power from 'free' wind.

In 2000, the Alberta government commissioned Dr. Madhav Khandekar to write a report on the greenhouse gas theory of manmade climate change. In 2018, Dr. Khandekar noted that there had been many uncertainties in the theory, and today, "there are many more".

The Alberta government developed comprehensive climate and environment legislation in 2002, and brought it into law in 2003. Alberta was the first jurisdiction in Canada to put a 'price on carbon' and to legislate mandatory greenhouse gas reductions. The carbon tax was paid by large emitters into a research and development fund. Consumers were not taxed.

Despite the federal government's ambitious plan promoted in "A Healthy Environment and A Healthy Economy" to plant 2 billion trees over 10 years, the Alberta oil sands companies have already planted 5 million trees over the past 10 years - a testament to their dedication to land restoration and a reality check for the government on how difficult it is to properly plant large numbers of trees.

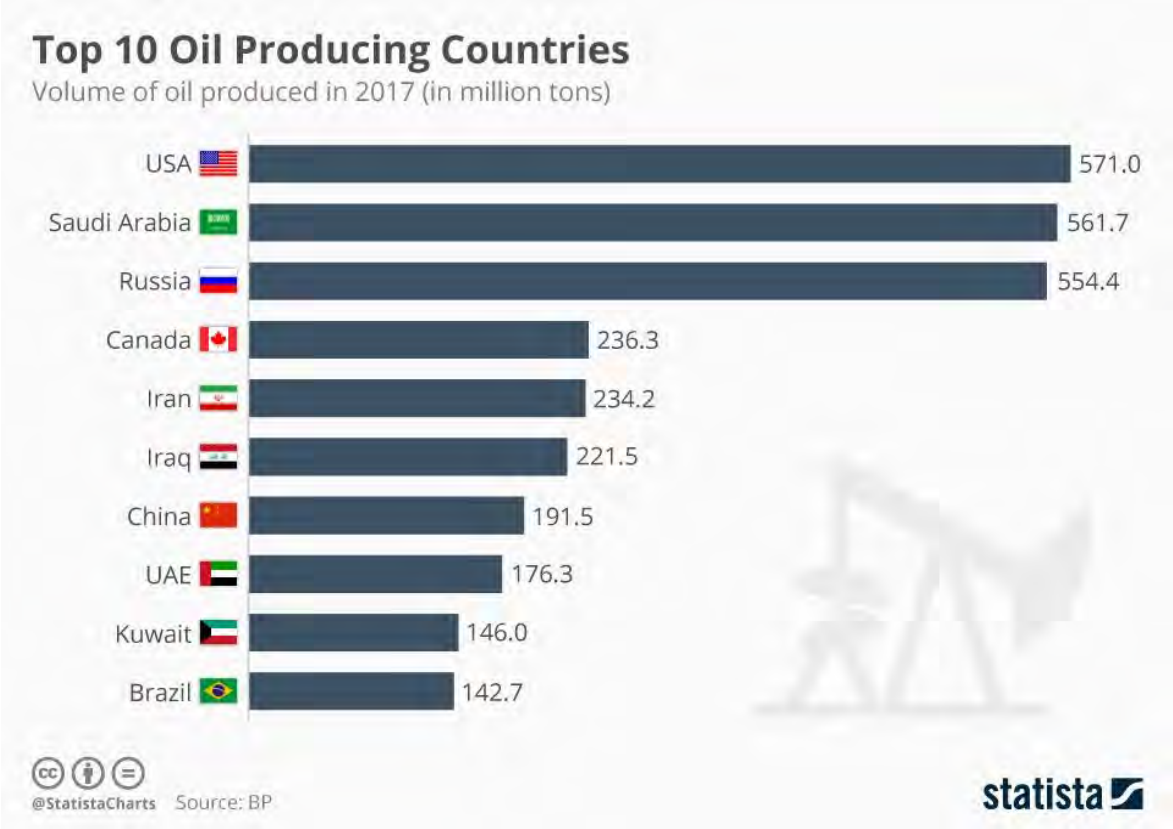
From 2008 "Moving Forward" report

To put Minister O'Regan's comments in context, this excerpt from "Futile Folly: Canada's Climate Policy Goals in the Global Context":

In 2019, Canada carbon dioxide (CO2) emissions were 556 megatonnes (Mt) which is equal to 1.6 percent of global emissions.

China's CO2 emissions in 2019 were 9,826 Mt (according to British Petroleum data). **In other words, China emits in one month (819 Mt/month) about what Canada emits in one and a half years.** The average growth in emissions in China over the past decade is 212 Mt per year. **Thus, Canada's annual CO2 emissions represent only 2.6 times China's emissions growth**. If someone could instantaneously wipe Canada off the map, so that it produced zero emissions forever after, this would have a modest-to-negligible effect on global carbon dioxide concentrations in the atmosphere in 2100, and it would make no difference whatsoever as to whether the IPCC emissions reduction targets (i.e. 1.5 degrees or 2 degrees C.) were met.

Canada and Alberta are in the "OILympics" - This is our Resilient Recovery



Canada is one of the top ten oil producing nations. None of our competitor nations are imposing climate or energy policies that will restrict the production or sale of this valuable commodity on world markets. Clearly, the foreign and domestic funded Tar Sands Campaign may be a green trade war against Canada and Alberta, enacted under the umbrella of climate change.

Canada fared well during the 2008 recession, largely because the Alberta oil sands was churning $30 billion through our economy and driving ~500,000 jobs.

Additional Resources:

Fear and Loathing - The Alberta Oil Sands: From National Pride to International Pariah

Protest vs Green Trade War - Rebutting Environmental Defence

Manufacturing a Climate Crisis

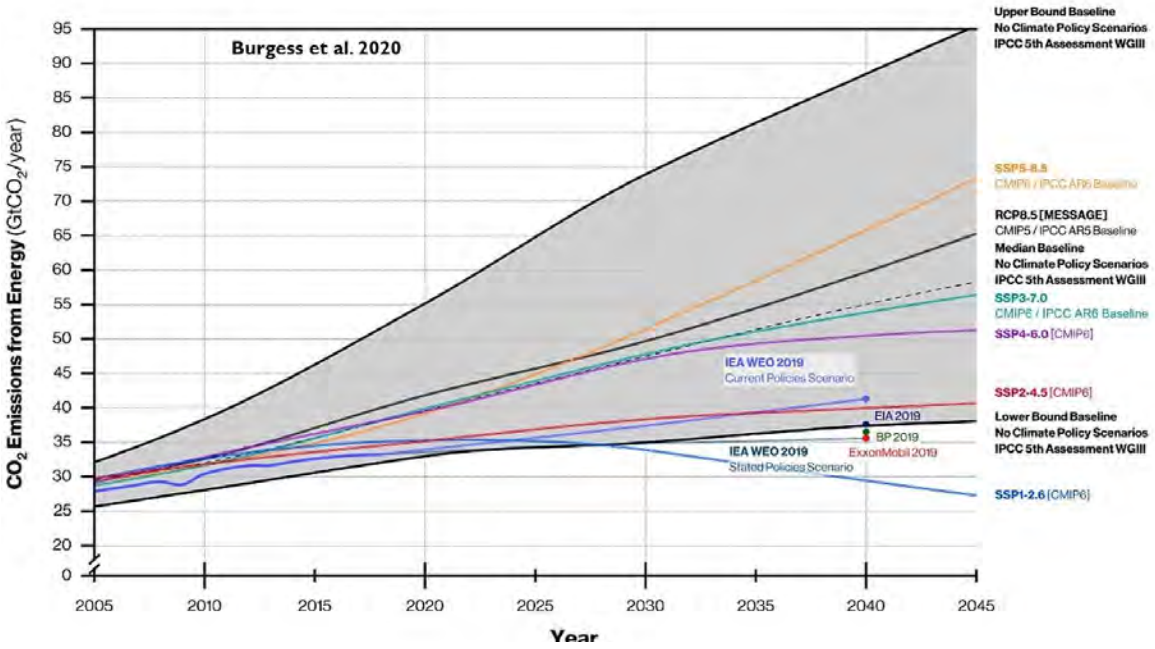
Money Matters: The ENGO Political Advantage

Dark Green Money: A Glimpse Inside the Big Green Funding Machine

Big Green Money vs Conventional Energy Advocates

Green Titantic: How Big Green Money's Political Power was Unleashed

Can We Trust the 'Consensus' Science on Climate? No.



As many climate 'skeptics' have claimed for years, climate models have projected a 'worst case scenario' that is not reflective of reality. However media outlets love terrifying headlines and scientists often accept previous findings or premises uncritically, building faulty work.

That is exactly what Roger Pielke, Jr., climate policy analyst has found.

Writing of the above graph he says:

Our paper goes into the technical details, but in short, an important reason for the lower-than-projected carbon dioxide emissions is that economic growth has been slower than expected across the scenarios, and rather than seeing coal use expand dramatically around the world, it has actually declined in many regions. ***It is even conceivable, if not likely, that in 2019 the world has passed "peak carbon dioxide emissions."*** *Crucially, the projections in the*

figure above are pre-Covid19, which means that actual emissions 2020 to 2045 will be even less than was projected in 2019.

Our study builds upon a growing literature — notably that led by our co-author Justin Ritchie of the University of British Columbia — indicating that ***commonly used climate scenarios are already well off track and will become increasingly off track****. As Zeke Hausfather and Glen Peters write in Nature, the highest emissions scenario commonly used in research to represent a "business as usual" trajectory into the future "****becomes increasingly implausible with every passing year." [bold added]***

Friends of Science Society has written several reports showing that catastrophic climate claims are not supported by the evidence.

Additional Resources:

Faulty Premises = Poor Public Policy on Climate Responding to the IPCC SR1.5 Report

Video overview

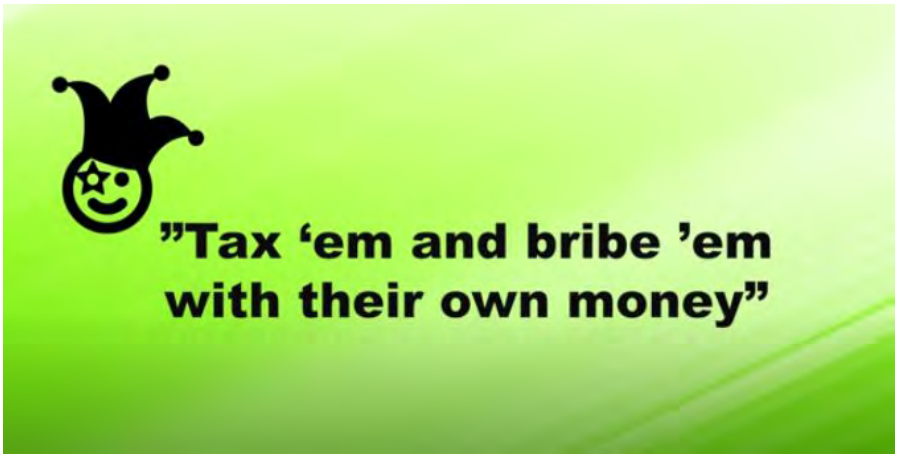
Climate Change Your Mind - Rebutting the Canadian Government's Climate Report

Facts vs Fortune Telling - Rebutting Alberta's Climate Future Report by Katharine Hayhoe and Anne Stoner

Misguided Math: MisInterpreted Science

Will You Get More Money than You Pay with Your Carbon Dividend? No.

As noted throughout this report, the real costs and technical challenges of most of the proposals in "A Healthy Environment and A Healthy Economy" are enormous and fraught with technical and financial complexities. These issues are not being transparently presented to Canadians.



Sadly, the Trudeau government descends into a form of bribery with its published table of carbon tax 'dividends' (rebates) to Canadians. This is commonly known as "tax 'em and bribe 'em with their own money'.

Dark Clouds of Conflict of Interest Drive Climate Accountability Demands

Full Report here.

Recently, five Canadian Environmental Non-governmental Organizations (ENGOs), most of which are federally registered charities, came together to publish a demand for a Climate Accountability Law in Canada which would set legally enforceable targets for Greenhouse Gas (GHG) reductions. The ENGOs are: Ecojustice, CANRAC (an organization of more than 100 ENGOs), West Coast Environmental Law, Equiterre, Environmental Defence, and Pembina Institute. To appreciate the power and influence of such a collaboration, one should read Robert Lyman's series of reports reviewing the financial power and new political freedoms of the top 40 ENGOs in Canada.

Subsequently, the Canadian Institute for Climate Choices, (formerly Ecofiscal Commission/Pan-Canadian Collaboration), issued a report on a similar theme entitled "Marking the Way: How Legislating Climate Milestones Clarifies Pathways to Long-Term Goals."

The objective of these groups' demands for a climate accountability law would be to force Canadian industry (and Canadians) to meet the purely voluntary and aspirational targets that are based on the non-scientific claims of the COP21, 2015 Paris Agreement.

It should be noted that environmental non-governmental organizations and environmental charities are unelected, unaccountable, and some – like WWF and Greenpeace – are transnational bodies that operate for their own objectives, not those of Canadian taxpayers and citizens.

This paper will argue that under existing Competition Bureau and Canada Revenue Agency laws and guidelines, these organizations are greenwashing the public on the obligations of the Paris Agreement, using distorted claims about climate change and the misrepresenting the effectiveness of proposed climate mitigations like renewables. It is our view that these groups are acting against the interests of Canadians.

The Premise – Meeting Paris Targets

Both reports premise their argument for a "Climate Accountability Act" by focusing on an apparent need to meet greenhouse gas reduction targets laid out in the Paris Agreement.

According to Ottawa energy policy consultant, Robert Lyman, former public servant of 27 years and diplomat for 10 years, the Paris Agreement is entirely voluntary, aspirational, and Canada has no formal obligations to meet targets.

As he writes in his report "Litigating Climate in Canada":

Canada ratified the Paris Agreement on October 5, 2016. Canada's treaty obligations under that Agreement do not include any requirement that Canada:

• meet any specific GHG emissions reduction target;

• pay any penalty if it fails to meet its voluntary emissions reductions targets;

• pay any specific amount or share of the collective financing for developing countries;

• use any specific set of policy instruments (e.g. taxes, regulations, subsidies, etc.) in pursuing its voluntary emissions reductions goals.

Consequently, other than creating another burdensome layer of government, populated with more public servants who will be counting carbon dioxide molecules, it is difficult to see why a Climate Accountability Law is required. Canada already has more than 600 different greenhouse gas reduction/'clean' incentive regulations in place today, and Canada's fuel tax is already more than $192/t carbon tax equivalent.

A Questionable Purpose

Canadians should challenge the fundamental rationale for legislating emissions reduction requirements. It is clear that no such obligation arises from Canada's political commitments under the 2015 Paris Agreement. Very few other countries that are signatory to the Paris Agreement have imposed upon their citizens such legal obligations – certainly, none of the countries where the most rapid emissions growth is occurring, such as China and India.

So, what would be the real purpose of the law?

Canada does not need a law to establish a target. We already have done that. We do not need a law to establish a pan-Canadian Policy Framework; we already have that. We do not need a law to establish hundreds of programs; we already have those. We do not need a law to authorize a Canada-wide carbon dioxide pricing regime; we already have that. We do not need another law to imbed climate considerations into the regulatory framework that governs the review of new energy infrastructure projects; we already have that. We do not need a law to allow us to maintain records of the progress being made in reducing emissions; we already do that without a law.

So, what is this really all about? What it means is that the proponents of such a law want to take decisions on climate policy and measures out of the hands of democratically elected governments and place them under the purview of the courts. They want to give environmental lobby groups and their foreign funders an additional weapon to use against energy producers and users – the ability to challenge in court new projects of any kind that increase emissions, and thus to add enormously to the costs and risks of all new resource developments or new emissions-intensive industrial plants in Canada. In other words, inspired by their ideological commitment to place emissions reduction above all other public policy objectives, they want a way to impose a legal strangle-hold on the Canadian economy.

This represents a fundamental attack on Canadians' economic freedoms and Canadians' best economic avenue and hope for recovery from the present economic recession. Canada needs to use our natural resources as powerful levers to grow our income and employment. Canada does not need another weapon that radical environmentalists with deep pockets and crafty lawyers can use against taxpaying workers and the Canadian economy.

As Phillip Cross wrote of economist Robert Schiller, beware of powerful narratives that contradict the facts, noting that "*Climate change is another powerful narrative fused with celebrity to brow-beat the public into accepting poor policies that are harmful to the economy and do little to change the climate.*"

This report will lay out the facts for your consideration.

Dark Clouds of Conflict of Interest

Can Canada Survive Climate Change Policy?

This is the prepared text of a presentation made at the Friends of Science Society's 14th Annual CLIMATE DOGMA EXPOSED event in Calgary, Alberta, Canada, on May 9th, 2017. At the time, the question seemed absurd to many - today, not so much.

Robert Lyman: (Video of remarks here)

Ladies and gentlemen, I truly am pleased to be in Calgary for this event and to be able to speak to you on the question of whether Canada can survive climate change policy.

Hearing the question framed this way must surprise some of you. We hear so often in the media and from environmental groups that Canada and other countries may not survive what many predict to be the catastrophic effects of human-induced global warming. It must indeed seem strange that someone would wonder about the effects of the policies now proposed to reduce greenhouse gas emissions as though the policies themselves are the threat. And yet they are.

Everyone comes to this issue with a certain perspective, so I will declare mine at the outset. I am not a scientist. I am not here to address the issue of how much human-related greenhouse gas emissions are contributing to increased concentrations of carbon dioxide in the atmosphere nor on the sensitivity of global temperatures and climate to the increases in those concentrations over time. There are others here far more qualified than I to discuss that.

Instead, I want to discuss the policy and program measures that the people of Canada and other countries, especially in the industrialized world, are being urged to adopt and what

will be the implications of those policies and programs. I believe in the importance of a sound public policy process when governments decide on issues that have important present and future consequences.

My career has taught me several important lessons about what makes for good public policies. The first is that good policies need to reflect the diversity of Canada and of the public interest. As in most countries, the people here include many different groups differentiated by financial interests, economic and social status, region, viewpoint and political party. Good public policy needs to take into account how each group will be affected and seek the highest benefit for all. Similarly, Canadians expect governments to pursue many different national goals: economic development, social justice, safety and security, public health and environmental quality to name a few. Sometimes these goals are compatible and sometimes they compete with one another. We live in a pluralist, multi-goal society. Further, good public policies in Canada must acknowledge and respect the design of our federal political structure. Policies that severely harm some provinces and regions, allegedly to benefit the whole, may indeed place the federation at risk.

Every now and then, a policy issue comes along whose adherents think it is the most important one of all. Today, the theory that humans are causing cataclysmic global warming has created a claim for ascendancy over all other public policy objectives.

Indeed, many environmental organizations here consider that Canada should, as a point of moral principle and to show leadership, seek to completely eliminate greenhouse gas emissions in the shortest possible timeframe.

To that end, they seek the complete ending of coal use as the first step in the transformation of the electricity sector. They oppose all construction of new oil or natural gas pipeline systems. They use pressure on investors and various shaming tactics to discourage new investment in oil and gas exploration and development. They ask governments to impose absolute ceilings on the level of GHG emissions from certain energy sources as we have seen in the case of the oil sands. They advocate constantly in support of new programs, regulations and subsidies to favour renewable energy sources over traditional ones.

Before discussing the challenges that these demands pose, let me review how we came to this juncture and Canada's place in the world.

In 1988, governments working together at international levels first raised concerns about the possibility that increasing human-related greenhouse gas emissions might be having an adverse impact on global temperatures. Since then, various countries have adopted targets to reduce emissions. In 1992, developed countries agreed on a voluntary target of stabilizing greenhouse gas emissions at 1990 levels by 2000. They did not even come close. Having not met a relatively modest target, countries agreed upon a more stringent one. In 1997, about 150 countries committed under the Kyoto Protocol to reduce GHG emissions by an average of 5% below 1990 levels by the 2008 to 2012 period. They failed miserably.

You might ask why, in Canada, a series of governments made political commitments to emission reduction targets that their officials candidly advised them probably could not be met. Part of it, I suspect, was simple cynicism. There was no political downside to promising to reduce emissions, only to actually doing it. Making large emissions cuts is costly and governments are usually cautious about provoking the public. So, they pretended to embrace the targets, but stopped short of the really disruptive measures. This, however, had a disadvantage. The government's adherence to non-attainable targets gave environmental groups a proverbial two-by-four with which they could beat federal politicians about the head and shoulders every year. And so they did.

Since the 1990's, twenty-two conferences of the parties to the United Nations Framework Convention on Climate Change (UNFCCC) have been held in efforts to broker a deal.

Recently, some countries have made political commitments to more stringent reductions. In the Copenhagen accord of December 2009, Canada and other countries committed politically to reduce GHG emissions to 17% below 2005 levels by 2020. Pursuant to international discussions preceding COP21 in December 2015, the government of Canada made a political commitment to attain a 30% reduction from 2005 levels by 2030. Outside of the COP framework, in 2008 the group of eight leaders, including Prime Minister Harper for Canada, established a long-term objective of reducing global emissions by 50% by 2050. They also announced that they supported a goal for all industrialized countries to reduce their emissions by 80 per cent or more, compared to 1990, by 2050.

At the COP21 conference, the parties finally realized that agreeing on another yet-more-stringent target was not credible, so they adopted a new strategy. They agreed not to set out in the agreement explicit goals to reduce emissions. Consequently, the COP21 agreement can be presented, especially in the United States, as not a treaty. It contains very few binding legal requirements, there is no formula for determining what

each country's obligations are, and there are no legal penalties for non-compliance. Rather, it represents a best-efforts political commitment to keep the level of global GHG emissions below that which, in theory, might produce a two degree celsius increase in average global temperatures. So no one knows for sure how much emissions would have to be reduced, and the countries did not agree on specific targets. One might fairly describe this as a failure. Significantly, though, the agreement included a political commitment to file with the U.N. Secretariat a series of five-year plans to reduce emissions. These five-year plans were to become the bases upon which stringent reductions will occur.

Ladies and gentlemen, these commitments are just the beginning, the mere "foot in the door" for the more radical demands that lie ahead. We are still bound in principle to reduce Canadian GHG emissions by 50% from 2005 levels by 2050. The U.N still wants us to "show leadership" by reducing emissions by 80% from 2010 levels by 2050. A number of environmental groups in Canada and other countries have recently endorsed the Wind, Water and Sunlight, or WWS, vision. This vision seeks completely to eliminate the use of all fossil fuels – coal, oil, and natural gas – in the world by 2050. The New Democratic Party's LEAP Manifesto endorses this vision, as does the Green Party and most of Canada's influential environmental organizations. The government of Ontario also has formally committed the province to this vision. So have a number of large Canadian municipal governments.

How can we even begin to understand the magnitude of the changes being proposed? One way is to look at the sources of energy consumption and related emissions today. In 2005, Canadian emissions were 738 megatonnes of carbon dioxide equivalent. In 2014, after six years of the worst recession since the Great Depression, Canadians emitted less, 722 megatonnes. Twenty-six per cent of those emissions were from oil and gas production, 23 per cent were from transportation, and roughly equal portions of around 10 per cent were from electricity generation, buildings, industry and agriculture, with waste and other sources making up a residual 7 per cent. Assuming that emissions do not grow one bit over the next 32 years as a result of increased economic activity or increased population, achieving a 50 per cent emissions reduction from 2005 levels would mean reducing emissions to 369 megatonnes CO2 equivalent. That is comparable to completely eliminating the current emissions from oil and gas production, electricity generation, and all emissions-intensive industries like mining, petrochemicals, auto and parts manufacturing, iron, steel and cement. Gone. Achieving the aspirational goal of 80 per cent reduction recommended by the IPCC would mean reducing emissions to 147 megatonnes CO2 equivalent. That would be comparable to reducing Canada's per capita emissions and our energy economy to the current levels of Bolivia, Sudan or Iraq.

I think it is fair to say that this would not be wildly popular outside of certain environmentalist and left-wing circles. The effects on regional economies would be devastating. Just eliminating all oil and gas production would deprive Alberta, Saskatchewan, Newfoundland and Labrador and the northern territories of their most promising resource development and income growth opportunities. Eliminating or sharply reducing all consumption of oil would mean electrifying all railways, sharply curtailing ownership and use of personal and commercial road vehicles, and severely limiting use of aviation and marine transportation services. No sector of the economy would be spared. If indeed such measures were actually to be implemented as national policy, really and truly the Canadian federation might not survive as a political entity.

You might say that any government that tried to push the climate change agenda so far would soon run into the limits of technology, economics or politics. That may be true. Unfortunately, even if radical emissions cuts prove to be impossible, governments still may be impelled by international political commitments to take measures with major economic costs. The American Enterprise Institute recently noted that, even though not legally binding, the Paris agreement provides a framework for a global, political pressure machine to exist for decades. The agreement is designed to stimulate political protest any time policy makers fail to keep commitments to de-carbonize the economy, pony up billions of dollars in climate aid for developing countries, and make increasingly ambitious emission reduction promises every five years, in perpetuity. Further, the Paris agreement tacitly affirms the preferred narrative that climate change is humanity's greatest peril and that 'inaction' threatens millions of lives.

Which benefits would be achieved by incurring such costs?

Well, climate change is, above all, a global issue. The emissions occur all over the world and the effects are global.

Despite all the rhetoric about reducing world carbon dioxide emissions from fuel combustion and gas flaring, according to the U.S. Carbon dioxide information analysis center, they rose steadily from 16.6 Gigatonnes carbon dioxide equivalent in 1973 to 34.1 Gigatonnes in 2014. So, they more than doubled over that timeframe. Importantly, though, the origins of the emissions changed significantly. In 1973, the countries of the organization for economic cooperation and development, or OECD, accounted for two-thirds of global CO2 emissions from fuel combustion; by 2014, the OECD share had

declined to just over a third. So all, or almost all, of the emissions growth occurred outside of the OECD.

What does the future hold? No one has an infallible crystal ball, but the united states energy information administration, or EIA, is one of the most authoritative sources of analysis and future projections concerning energy supply, demand and emissions. In May 2016, it issued its most recent international energy outlook, with projections to 2040. Based on the most thorough analysis of the likely trends in economic and population growth and the rate at which new technologies will be applied, the outlook included some striking projections:

First, worldwide energy use will grow continuously over the next three decades, led by strong increases in non-OECD areas and especially in Asia. In the EIA reference case, consumption grows 48 per cent from 2012 to 2040.

- Fossil fuels will still account for almost 80 per cent of energy use in 2040.
- Use of petroleum and other liquid fuels will grow from 90 million barrels per day in 2012 to 121 million barrels per day in 2040, while natural gas use will grow from 129 trillion cubic feet in 2012 to 203 tcf in 2040.
- Energy-related carbon dioxide emissions will grow from 32.3 Gigatonnes in 2012 to 43.2 Gigatonnes in 2040, a 34% increase.
- 91% of the emissions growth will take place outside the OECD.

So, we have two sharply different perspectives of the future, the EIA's projections of what probably will happen and the aspirations of the U.N. And many environmental groups as to what in their view should happen. Reducing emissions by 50% by 2050 to meet the U.N.'s vision would mean a global total of about 16 Gigatonnes, in contrast to the EIA's projection of 43 Gigatonnes (Gt). The OECD countries – the United States, Canada, most of Europe, Japan, Australia and others – could eliminate 100% of their projected emissions of 14 Gt, and the world would still be over its target by 13 Gt.

Let me repeat that in a more striking way. You have probably heard before that, as Canada represents only 1.6% of global emissions, nothing that we do in this country will make any difference to the trends in global emissions or the resulting climate effects, if any. If the current projections of the United States EIA are correct, then not only Canada but also the entire OECD region could cease to emit, and the global emissions total would still be far above the levels the IPCC claims must be achieved.

With this as background, I would like to discuss three problems that now beset Canadians' efforts to deal with climate change mitigation–the difficulty in choosing appropriate policy instruments, the excessive expectations concerning governments' ability to deal with the climate issue, and the weakness of the federal government policy and planning process.

To my knowledge, there has never been a public policy issue as complex as climate change. The calls for massive and rapid emissions reductions would be daunting if they affected only a single commodity in one sector of the economy. Instead, they concern fundamental changes to global and national energy systems and infrastructure that have developed over the past century and longer. Almost every aspect of our current industrial, transportation, settlement, and commercial capital stock and infrastructure has developed based upon the availability of relatively low cost hydrocarbons.

Some advocates of rapid transformation believe that this can best be effected through the price mechanism. Unfortunately, fossil fuels stubbornly continue to be relatively plentiful and cheap. So, to retain the advantages of using market-based measures, the advocates recommend carbon taxes and cap and trade systems to reduce emissions. The federal government's national carbon tax system imposes charges that will rise from $10 to $50 per tonne by 2022, and who knows to what levels after that.

Not surprisingly, the current carbon tax regime has run into political resistance. The opposition in parliament has asked some embarrassing questions. How much revenue will the carbon taxes raise? What will be the cost of living impact on the average family? How will the competitiveness of Canadian firms be affected? The government will not say. Even tougher questions remain. How much does the government think such taxes will actually reduce Canadian emissions? What will be the effect of that reduction on global emissions and on temperatures? How high will carbon taxes and fees have to go to achieve the 2030 and 2050 goals? The former National Roundtable on the Environment and the Economy projected that, to reach the 2050 goal, a carbon tax of at least $300 per tonne would be needed. That, at least, gives us some idea of where the tax level may be headed in future.

Even in the absence of satisfactory answers about future tax levels, the theory that allegedly justifies both carbon taxes and cap and trade systems fails in practice. Professor Ross McKitrick of the University of Guelph has explained why. First, a carbon tax is only desirable in theory if it acts as the replacement for the long list of regulations, programs and subsidies that are now in place; the federal, provincial and municipal governments, however, have no intention of removing those measures. Second, a carbon tax, to avoid

damaging the economy, has to be genuinely revenue neutral, in the sense that the funds must be channeled back into the economy by lowering the rates of other broadly-based taxes, not by being used to fund a host of new programs and subsidies that benefit the "green" lobbyists and industries; while British Columbia claims to have done this, there is zero chance any other government will. Third, the size of the carbon tax has to be set at a rate that properly reflects the alternative cost of reducing emissions and the best estimate of what damage is being avoided by reducing emissions; the current federal tax has no connection to either of these standards. Fourth, there has to be credible evidence that the economic cost incurred will be offset by incremental improvement in the world's environmental condition; Canada is too small an emitter to matter and, as I explained, Asian countries are rapidly increasing their emissions in any case. Finally, we should not set a new carbon tax burden on Canadian companies seeking to compete in international markets; proceeding here when we know the Americans will not impose a carbon tax is simply irresponsible. Many of the same problems apply to cap and trade systems.

I decided to explore further Professor McKitrick's comment about the current list of regulations, programs and subsidies. There is not in Canada a comprehensive list of the measures that have been implemented by all orders of government to reduce greenhouse gas emissions. They have been increasing in number, reach and cost since 1988. I counted 37 different generic types of measures now in use. Large bureaucracies exist to design, implement, and (less frequently) evaluate these measures. They stretch like the tentacles of some vast octopus across every aspect of the Canadian economy and touch everyone's life. As no one has ever established an inventory of the measures now in place or of those under consideration, no one knows how much these measures already cost Canadians. Two things are certain – they cost billions of dollars annually, and they are not going away soon, regardless of the taxes imposed on carbon. I might add a third certainty, which is that the government will continue to develop and implement more and more programs and regulations as time goes on.

Governments' persistent reliance on what are generally called "direct action measures", redundant if one believes in the efficacy of prices and taxes, indicates another tenet of the current climate change mitigation advocates. They strongly believe that governments have the institutional and knowledge capacity to manage the economy and to drive the pace of technological change. I referred earlier in my remarks to the wind, water and sun vision of Professors Jacobson and Delucci that has been extremely influential in supporting the 2050 targets. Jacobson and Delucci do not stop at setting out a list of promising technologies and visualizing the amount of renewable energy generation capacity needed to meet future demand. They set out detailed, quantified "roadmaps" of exactly which steps governments should take by which dates and of the resulting generation levels by 2050.

The adherents to the WWS vision express extraordinary optimism, verging on blind faith, in the pace at which scientific discoveries, technology applications, commercialization of new products, and market penetration through mass production will occur. They seem to think that, if something can be done and it has alleged environmental benefits, all that stands in the way of its mass commercialization is for governments to subsidize or regulate so as to achieve their preferred outcome.

In reality, of course, scientific breakthroughs do not come on a fixed schedule, and there is no direct relationship between the amount of money that society spends on research and the likelihood or timing of a discovery. If there were, cancer would have been cured long ago.

Dr. Peter Grossman, one of the foremost experts in the history of U.S. Energy policy, has described how over many years U.S. Policy makers referred to the Apollo program and the Manhattan project as models for the development of alternative energy technologies. The technologies they have promoted at great costs are the same ones being advocated today in the name of addressing alleged global warming – solar energy, wind energy, cellulosic ethanol, electric vehicles, etc. The Apollo Fallacy, as Grossman calls it, conflates an engineering problem with a commercial problem, and it actually deflects efforts (and funds) away from scientific research and advance and focuses them instead on grandiose social schemes. Among other things, programs to accelerate the demonstration and use of specific technologies have amounted to picking winners over losers, and governments have proved again and again and again that they are remarkably bad at that game.

There is an older term to describe what the advocates of rapid transformation want. It is called central planning. In fact, they seek the largest intrusion of state authority and central planning into the economy since the second world war.

For those with some knowledge of history, there is considerable irony here. The climate change issue came to public prominence around 1990. 1990 was also the year when the political systems of the former Soviet Union and its satellite states collapsed as a result of their internal contradictions, and especially the realization that central planning was a fundamentally flawed approach. How ironic it is that, at precisely the moment in history when the failures of central planning were laid bare for all to see, environmentalists should seize upon climate change as evidence that central planning was an idea whose time had come!

That confidence might be warranted if government climate change programs over the past twenty years had been wildly successful. Frankly, that has not been the Canadian experience. Instead, let me remind you of the conclusions reached by the federal government's own monitor of program effectiveness, the Commissioner of the Environment and Sustainable Development.

Starting in 1998, the commissioner began to critique the government's approach to managing emission reduction measures. In the seven reports that followed, there were five consistent themes.

First, the government has not created effective governance structures for managing climate change activities. In fact, there have been weaknesses in horizontal governance across departments, accountability and coordination.

Second, there has been, and remains, no overall implementation plan. The government has produced no estimate of the emission reductions expected from each sector. Without an implementation plan, industry, consumers and other levels of government lack a solid basis for knowing how to apply technology or make investment decisions.

Third, as a result, Canada cannot determine whether the targets for emissions reduction already announced will be met or how much it will cost to do so.

Fourth, there are few mechanisms in place to measure the performance of the emission-reduction measures that have been implemented so far.

Fifth, the federal and provincial governments do poorly in coordinating their approaches to emissions reduction.

In short, while there have been some exceptions, the federal government's management of the climate change file has been a frustrating combination of good intentions, partisan politics and limited capacity to deliver.

Environmentalists often claim that what we need is an honest dialogue about climate change. What they really mean is that the general public should acquiesce with the thesis that human-induced global warming threatens a catastrophe and that reducing emissions should be given priority over all other public interest objectives.

I agree that we need an honest dialogue about climate change mitigation. It should start with the recognition that governments to date have publicly embraced emission reduction targets that are unachievable with present technology and at acceptable economic costs. We should acknowledge that we as a society have multiple goals of which environmental quality, however important one might think it is, represents only one. If we value our prosperity and unity as a federal, geographically diverse country, we must approach the climate change issue with a respect for all our collective goals.

The Canadian federation has resolved difficult controversies in the past, including those concerning the best response to international events. Historically, we have valued moderation and accommodation. This offers hope that we can avoid irreconcilable differences in future.

Much of Canada's current political elite favours the pursuit of international goals over the steadfast promotion of the Canadian interest, whether on issues of trade, security or the environment. Never before, however, have we faced a situation in which commitment to an international objective May impose enormous and divisive costs on Canada for no discernable global environmental benefit. Climate change thus offers a clear dichotomy between the Canadian national interest and the global environmental agenda.

Which should we value higher? I, for one, choose Canada. Thank you.

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Canadians Deserve Better than Cruel and Unusual Punishment

The plan "A Healthy Environment and A Healthy Economy" imposes draconian costs on Canadian citizens and business and is disproportionate to the ratio of emissions in Canada versus those of the world's largest emitters. This is contrary to the Charter of Rights and Freedoms.
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Provision

12. Everyone has the right not to be subjected to any cruel and unusual treatment or punishment.

Similar provisions

Section 2(b) of the *Canadian Bill of Rights* is a similar provision. Section 7 of the Charter includes a related principle, prohibiting grossly disproportionate limitations of the right to life, liberty and security of the person (*Canada (Attorney General) v. Bedford*, 2013 SCC 72 at paragraphs 120-122).

https://www.justice.gc.ca/eng/csj-sjc/rfc-dlc/ccrf-ccdl/check/art12.html

The federal government and its state actors are attempting to bribe Canadians into compliance with the promise of a carbon rebate/dividend, that they claim will be more than what most Canadians pay in carbon taxes. This is a grand deception while advocating for NetZero 2050 emissions goals that will cost Canadians incalculable sums of money - a ballpark estimate being: *"A cost of Cdn $3.6 trillion is equal to $95,000 for every person in Canada. A foregone income of Cdn $9.4 trillion is equal to almost Cdn $250,000 per person, or one million dollars for a family of four."*

There are very serious concerns about the undue influence of environmental groups and various possible real or perceived conflicts of interests related to the historical associations of several of the ministers in association with some of the beneficiary industries of the proposals.[8]

9 10 11 12 13

[8] https://financialpost.com/opinion/terence-corcoran-canada-gets-new-environment-minister

[9] https://www.theglobeandmail.com/report-on-business/careers/careers-leadership/bioteqs-jonathan-wilkinson-a-business-oddity-but-no-fish-out-of-water/article554291/

[10] https://en.wikipedia.org/wiki/Scott_Gilmore Scott Gilmore, husband of Minister McKenna "In 2009 he was awarded the $765,000 dollar Skoll Prize for Social Entrepreneurship by philanthropist Jeff Skoll." (Jeff Skoll is Al Gore's executive producer)

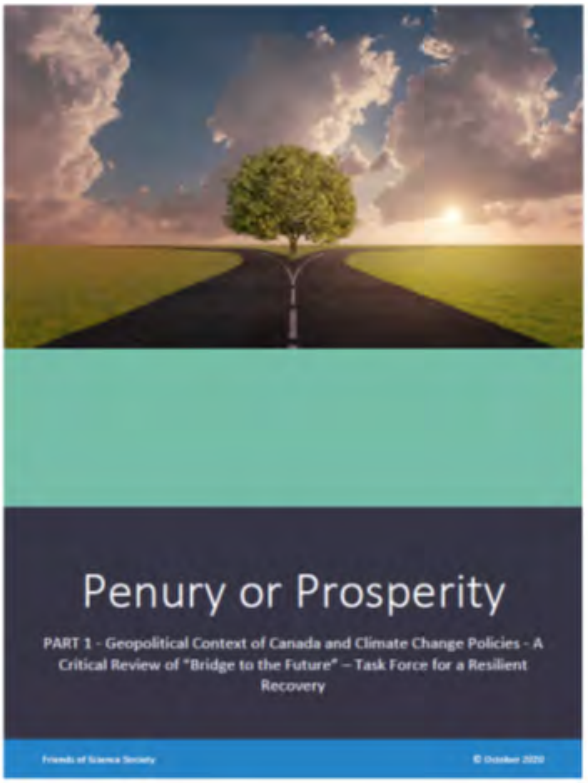
[11] https://www.equiterre.org/en/news/steven-guilbeault-leaving-equiterre

[12] https://thepostmillennial.com/exclusive-trudeau-govt-gave-20-million-to-company-that-paid-liberal-minister

[13] https://blog.friendsofscience.org/wp-content/uploads/2019/02/Manufacturing-A-Climate-Crisis-2A-FINAL.pdf

There are numerous other details in “A Healthy Environment and A Healthy Economy” which are not addressed in this document. Friends of Science Society invites readers to review our two-part report “Penury or Prosperity? A Critical Review of Bridge to the Future” which addresses the geopolitics of climate and energy issues, and which deconstructs the ‘Five Bold Moves” which are the pillars of the government’s green COVID recovery platform.

Canadians must say NO to Paris Agreement climate CO2 Coercion.



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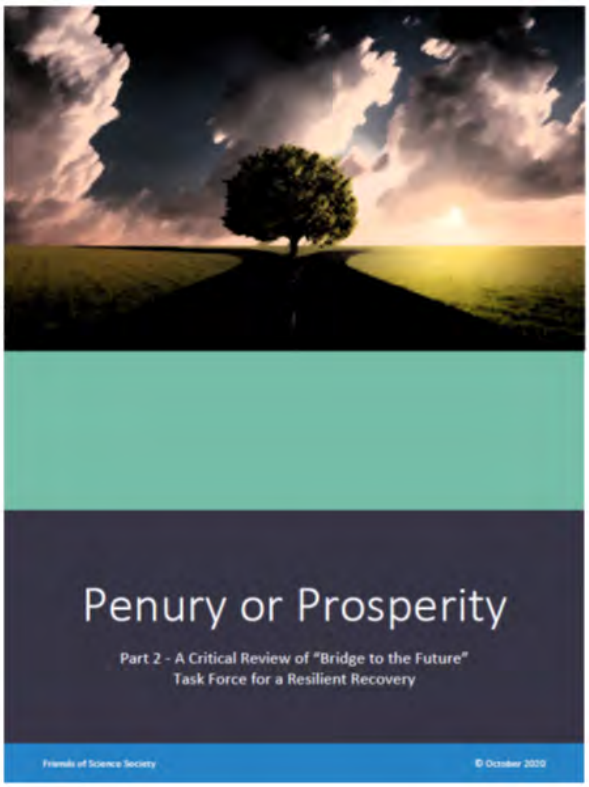

https://blog.friendsofscience.org/wp-content/uploads/2020/10/Penury-or-Prosperity-Part-2-Critical-Review-Bridge-to-the-Future-Oct-11-2020-Final.pdf

FRIENDS OF SCIENCE
Providing Insight into Climate Science

About

Friends of Science Society is an independent group of earth, atmospheric and solar scientists, engineers, and citizens that is celebrating its 18th year of offering climate science insights. After a thorough review of a broad spectrum of literature on climate change, Friends of Science Society has concluded that the sun is the main driver of climate change, not carbon dioxide (CO2).

Friends of Science Society
P.O. Box 23167, Mission P.O.
Calgary, Alberta
Canada T2S 3B1
Toll-free Telephone: 1-888-789-9597
Web: friendsofscience.org
E-mail: contact(at)friendsofscience(dot)org
Web: climatechange101.ca