Thank You So Much!

On May 26, I sent out an appeal for donations titled: *Should Anyone Have the Right to Strangle Freedom of Speech?* where I stated that our operational funds would run out at the end of September. Once again, our friends have been very generous. I am thrilled to inform you that we have presently received a total of $54,000. These funds do help refuel our tank and we now will be able to operate to the end of January 2022. I and the entire FoSS board are extremely grateful for the continued financial and moral backing from all of our supporters. The fundraising committee section below has more details on our financial status and our future fundraising goals. Also just above that section, you will find our latest networking statistics which demonstrate how much we do with the funds we receive from you.

2020/21 Virtual Speakers Event

Our two talks from December 2020 and January 2021 are now free to view and share on YouTube:

- **Donna Laframboise**: Climate Activism: Undermining Free Speech, Free Thought & Free Choice
- **Dr. Roy W. Spencer**: The Most Important Reasons Why There is No Climate Emergency

SAVE the DATE for our 2021 Virtual Speakers Event

On October 2nd at 10:00 am Mountain Daylight Time (18:00 Central European Summer Time) we will be hosting Dr. Guus Berkhout, co-founder of the Climate Intelligence Foundation (CLINTEL). Then, on October 6th at 7:00 pm Mountain Daylight Time (9:00 pm eastern Daylight Time) we will be hosting Mr. Marc Morano, founder of the website ClimateDepot.com. More details to follow.

How to Forward Our Newsletters

We encourage everyone to share our newsletters and press releases. When you do forward any of our emails, please delete the "Manage Your Subscription" link at the bottom of the email. This will prevent a recipient from unsubscribing you. Alternatively, you can forward the pdf link at the top of the email.

Heat Wave!

This June has been exceptionally warm throughout much of the US and Canada. Here in Calgary, we have broken or tied several records. Interestingly, we are not beating temperatures from recent years as alarmists would like you to believe. Many of the hottest Junes in the past were way back in 1918, 1919 and 1936. So you’ve heard it here first, this heat wave is just really Hot Weather and not Global Warming.

Net Zero by 2050 and Carbon Taxes - Follow Up

In our March newsletter I opined that many industries are capitulating to the “Net Zero by 2050” fraud. Our petroleum industry is falling over each other to show how they are *flexing their muscles* to use technology and innovation to win the “The Race to Net-Zero”. This positioning is just virtue signalling. The reality is that the federal government’s definition: Net-zero emissions - where there are no carbon emissions, or where emissions are completely offset by other actions that remove carbon from the atmosphere, such as planting trees is fairly weak. Basically, you won’t have to reduce anything, just buy offsets or plant trees. We will not ever get to “no carbon emissions”, unless we decide to freeze to death and walk everywhere.

Sadly, I too have fallen into the logic trap of arguing if Net Zero makes sense. Those of us that see the lunacy of this mandate, immediately go to discussions of the repercussions on our way of life or calling for
cost benefit analyses. By doing so we indirectly support the premise that CO₂ is bad. This craziness would immediately go away if we recognized that CO₂ is not pollution. We as logical people must demand that our elected officials stop this war on CO₂.

Beware that we are told we need this as it’s essential to keeping the world our children and grandchildren grow up in safe and liveable. They are setting us up for failure so they can impose climate lockdowns.

The WEF has been driving the dismantling of business all in the name of climate change. The WEF means what they say. They want to do away with our normal way of life and Build It Back Better. History has many examples of leaders that people underestimated. Several hundreds of millions paid with their lives for misjudging them.

Glasgow COP26

The 26th UN Climate Change Conference of the Parties (COP) will be held in Glasgow UK from October 31 to November 12. You may recall that COP25 failed to implement the Paris Rulebook which consists of the detailed rules that make the Paris Agreement operational. They are trying once again. Specifically they need countries to agree to ambitious 2030 emissions reductions targets that align with reaching net zero by the middle of the century (2050). Countries will need to accelerate the phase-out of coal, curtail deforestation, speed up the switch to electric vehicles, encourage investment in renewables. Most importantly, developed countries must make good on their promise to mobilise at least $100bn in climate finance per year by 2020 and unleash the trillions in private and public sector finance required to secure global net zero. Those dollars will flow to “developing” nations like China. More in Political Developments.

Our ongoing appeal…

As we are starting to be allowed back to “normal” life, we see governments creating laws that remove our civil liberties and impede our ability to speak freely. Climate alarmists are emboldened from how effective the lockdowns where that they are pushing for climate lockdowns. We at FoSS diligently report on the science, policy and economics of climate change to chip away at the volumes of misinformation we are continually bombarded with. We are in this together and we continue to need your financial help. At the very least, we hope you will repeat our messaging whenever and wherever you can.

Andrew Bonvicini, P. Geoph.  
President, Friends of Science

POLITICAL DEVELOPMENTS

Edmonton’s New “Blue” Hydrogen Project

Friends of Science’s December 2020 Newsletter reported on Hydrogen: Fuel for a Fantasy Future, that described the growing enthusiasm for a hydrogen economy, both internationally and in Canada, as well as hydrogen production and properties. We revealed that a Hydrogen Task Force was set up to develop hydrogen production in Alberta’s Industrial Heartland near Edmonton.

On June 9, Air Products Canada Ltd. announced a $1.3 billion (CAD) project to build a “net-zero hydrogen production and liquefaction facility” that will make Edmonton the centre of Western Canada’s hydrogen economy. This project would produce “blue” hydrogen from natural gas, while capturing the resulting CO₂ emissions. As shown in Figure 1, natural gas and oxygen are fed into an auto-thermal reformer (a variation of the common steam-methane reformer that uses pure oxygen, rather than air) to produce CO₂ and hydrogen, with 95% of the CO₂ captured for sequestration (~3 million tonnes/year).
The design incorporates a hydrogen-fueled power plant that "reduces the CO2 intensity to a level that is close to zero" and exports electricity to the grid, which qualifies the project as net-zero. Of the 1500 tonnes/day of hydrogen produced, 30 t/d will be liquefied for the merchant market and "hydrogen for mobility" in heavy-duty vehicles such as buses, trucks, and rail. The rest of the hydrogen will flow into an existing 55-km pipeline supplying plants in the Alberta Industrial Heartland.

It is obvious that the project is uneconomic for the following reasons:

- Natural gas can be burned directly to produce electricity more efficiently rather than first transforming it into hydrogen to fuel a power plant.
- Natural gas can be liquefied more easily than hydrogen (~1/3 of energy required).
- Capturing and sequestering CO₂ increases the cost of the hydrogen by 30-50% (from 0.91-1.42 $/kg to 1.34-1.85 $/kg).

Therefore, the project will need support from the federal and Alberta governments, which have signed memorandums of understanding. The federal minister of innovation, science and industry said: "Once you have an MOU, then you need to move to the next phase to come to a final agreement and define the level of contribution and the commitments that would be made by the federal government and the company." According to Alberta Premier Jason Kenny: "We will be working out details of potential support and incentives for this project," adding that Air Products has already received $15 million from the province's carbon levy through Emissions Reduction Alberta.

While the Pembina Institute, a clean energy think tank, called the project “a major improvement relative to existing hydrogen production using natural gas”, Environmental Defence called the proposed plant greenwashing, saying “public funding is being put towards finding new revenue streams for oil and gas companies.” On the same day as the announcement of the Air Products project, a group of five oilsands producers revealed a new alliance to achieve net-zero emissions from their operations by linking their operations to a carbon sequestration hub, use carbon capture and storage technology, as well as clean hydrogen, fuel switching and other methods to reduce emissions.

If the Air Products project comes to fruition the hydrogen produced can be used only for industrial and heavy transportation purposes. Any attempt to promote it for mass consumer use (vehicles or domestic) would be doomed, as hydrogen is one of the most difficult and dangerous substances to handle.

**International Energy Agency Report: Net Zero by 2050**

The International Energy Agency is a Paris-based intergovernmental organization formed in 1974 in the wake of the 1973 oil crisis. It initially dedicated itself to responding to oil supply disruptions, as well as providing statistics on the international oil market and other energy sectors. Under its current director, Fatih Birol, the IEA has become a cheerleader for “clean” energy and net-zero. In May, the agency issued a special report: *Net Zero by 2050: A Roadmap for the Global Energy Sector*.

The report takes a world view without national or regional breakdowns, though in some places it differentiates between advanced economies and developing/emerging ones.

The Introduction (p.30) lays out three reasons why the report came to be:

- COP26 in November will be the most important COP since signing of the Paris Agreement in 2015.
- COVID-19 caused a 5.8% decline in global CO₂ emissions in 2020, but they rebounded last December, and the IEA estimates that those for 2021 will be only 1.2% below the 2019 level.
- COP26’s UK president asked the IEA “to create a comprehensive and detailed pathway, or roadmap, to achieve net-zero energy-related and industrial process CO₂ emissions globally by 2050.”

The report consists of an IPCC-style Summary for Policymakers and four chapters:

1. Announced net-zero pledges and the energy sector;
2. A global pathway to net-zero CO₂ emissions in 2050;
3. Sectoral pathways to net-zero emissions by 2050;

Figure 2, below, shows the global pathway determined by the IEA. It consists of key milestones and the resulting CO₂ emissions, according to the agency’s modelling. By 2050, capture of 7.6 Gt/year of CO₂ would offset any remaining emissions.
Some of the fanciful assumptions that went into making this road map:

- Solar PV and wind become the leading sources of electricity globally before 2030 and together would provide nearly 70% of global generation in 2050 (p.47). However, even the IEA acknowledges that there is a looming mismatch between supplies of critical minerals such as copper, lithium, nickel, cobalt and rare earth elements and the amounts needed to reach net zero. For example, a typical electric car requires six times the mineral inputs of a conventional one, and an onshore wind plant uses nine times the minerals of a natural gas power plant. Nowhere does the report mention how all the minerals needed will be mined, processed, and turned into finished products without CO₂ emissions. Nor is there any discussion of the problem of dealing with waste when disposing of old wind turbines and solar panels.

- Coal demand declines by 90% in 2050, oil declines by 75%, and natural gas declines by 55%. Remaining fossil fuels are used in products like plastics or in plants with carbon capture, use and storage, or applications where alternatives are scarce, such as aviation fuel (p.47).

- By 2050 the world’s population expands from its 2020 level of 7.8 billion in 2020 to 9.7 billion, while the global economy becomes more than twice as large (p.50).

- Crude oil prices decline from $37/barrel in 2020 to $24/barrel in 2050 (p.51).

- CO₂ prices in advanced economies reach $250/t in 2050 (p.53).

- By 2050, nearly 90% of all electricity generation is from renewables, as is around 25% of non-electric energy use in industry and buildings (p.55).

- Energy intensity (energy per unit of GDP) falls by 4% on average each year between 2020 and 2030, or more than twice the rate achieved in 2010-2020 (p.56).

- By 2050, two-thirds of residential buildings in advanced economies and around 40% of residential buildings in emerging market and developing economies are fitted with a heat pump (p.61).
From 2035 there are no new passenger vehicles running on internal combustion engines sold (p.66). Nearly 20 battery giga-factories open every year to 2030, to satisfy battery demand and higher-density batteries are needed to electrify long-haul trucks (p.72).

Global hydrogen use expands from 90 Mt in 2020 to 530 Mt in 2050, with electrolysers (“green” hydrogen) accounting for 60% of total production in 2050 (pp.75-76).

To pay for all this, annual investment in energy expands from the current $2 trillion/year to $5 trillion/year in 2030, declining to $4.5 trillion/year in 2050. Most of the expenditure occurs for electricity generation, networks, and electric end-user equipment (p.81).

Finally, achieving net-zero would require “an unwavering focus from all governments, working together with industries and citizens, to ensure that the transition to global net-zero emissions proceeds in a coordinated way without delay” (p.152).

Reaction to the report from mainstream publications like the Washington Post was mildly positive, noting that the IEA offers a “narrow pathway” to net zero and predicting that few governments are “likely to follow the script as closely as necessary.” OPEC leaders mocked the IEA’s “la-la land” scenario, with the energy ministers of Saudi Arabia and Qatar promising to keep expanding their oil and gas facilities and warning of the consequences of starving the industry of cash. Officials in Southeast Asia rejected the IEA’s call to stop new fossil fuel investments. Even the UK refused to commit halting new oil exploration in the North Sea, saying that licencing rounds for exploration will resume.

China, the world’s biggest miner, importer and consumer of coal, shows no signs of weaning itself of this fuel, and India’s minister of energy explained why net zero is not realistic for his country: “You have 800 million people who do not have access to electricity. You can't say that they have to go to net zero. They have to develop. They want a higher standard of living for their people, and you can't stop it.”

Ian Cameron
Director, Friends of Science

SCIENCE NEWS

Preindustrial Biomass Burning Reduces Aerosol Climate Forcing

An important paper, published in Science Advances, presents evidence from records of fourteen Antarctic ice cores and one central Andean ice core, suggesting that historical fire activity in the Southern Hemisphere (SH) exceeded present-day levels. Fire activity results in soot aerosols that affect clouds, albedo (reflection of solar energy) and climate. The paper finds that the decreasing trend of SH fire emissions over the past century largely compensates for the cooling effect of increasing aerosols from fossil fuel and biofuel sources. The total black carbon deposition rates in the ice cores were roughly constant from 1750 to now. The fire activity over human-managed land is lower than that under natural conditions. The blue curve is the climate modeler’s view of increasing aerosols that have a cooling effect. The black curve is from the new ice core data that shows no significant aerosol change since 1750. The orange line is from a new model that attempts to fit the ice core data.

Climate modelers assume that preindustrial fire activity was much less than in recent times.

Climate modelers assume that preindustrial fire activity was much less than in recent times.

Dr. John Robson of Climate-Discussion-Nexus reviewed the paper and wrote “So when you look at the mild 20th century warming record, it could be the result of high sensitivity to CO2 offset by a lot of cooling from aerosols, or low sensitivity to CO2 and not much cooling from aerosols.” As both scenarios roughly match 20th century warming, the evidence of not much cooling from aerosols implies low climate sensitivity to CO2.
The paper says “An overly large aerosol cooling implies that models might overestimate TCR and ECS to reproduce historical temperature response. … reducing both the magnitudes of negative aerosol radiative forcing and climate sensitivity yields a better agreement with the observed historical record of the surface temperature.”

Submission: Social Cost (Benefit) of Carbon Dioxide from FUND

I submitted a comment and a document to the US Office of Management and Budget (OMB) which requested comments concerning the social cost (benefit) of carbon dioxide (SCC). The values were calculated by a modified FUND model that includes corrections of energy use, CO₂ fertilization and the climate component. The FUND model forecasts too much temperature rise for a given equilibrium climate sensitivity (ECS), as reported in the March 2021 Science News. The ECS was determined by applying corrections for the urban heat island effect and the millennium cycle warming between the base and final periods used in the Lewis and Curry 2018 estimate of ECS with the infilled temperature data. The resulting median (best estimate) ECS was estimated at 1.19 °C with a likely range (17%-83%) of 0.90 - 1.57 °C. This is much less that the likely range estimated by the IPCC in the 5th assessment report of 1.5 - 4.5 °C. The resulting SCC for emissions in 2020 is -11.3 2020 US$/tCO₂ at 3% discount rate and -6.0 2020 US$/tCO₂ at 5% discount rate. The negative sign indicates that CO₂ emissions are net beneficial, so policies to tax or restrict fossil fuel use are misguided.

Reducing CO₂ Emissions to 1997 Level

There is no reason to implement policies for net zero CO₂ emissions. Let’s assume that CO₂ emissions growth from fossil fuels is reduced so that it peaks in 2025 and falls to that in 1997 by 2038, then emissions are held constant at 23 GtCO₂/year. Using the FUND model, this would cause CO₂ concentrations to increase from the current value of 417 ppm to 450 ppm in 2040. CO₂ concentrations would continue to increase to 519 ppm by 2100. The growth rate of CO₂ in the atmosphere would be reduced by 60% from the current CO₂ growth rate. Using the ECS of 1.2 °C as determined in the previous article, the global average surface temperature increase from 2021 to 2100 would be only 0.29 °C, which is only 1.1 °C above 1900 temperatures. This small temperature increase would not cause a net harm to people. According to the modified FUND model, the temperature increase would cause an increase in the wealth of people, including social impacts, of 1.0% relative to 2000. Positive wealth impacts would continue to increase until about 2140. The global average wealth per person in 2100 would be 319% of that in 2020. Reducing emissions harms the current generation and transfers wealth to the extremely wealthy of the future.

Ken Gregory, P. Eng.
Director, Friends of Science

LATEST NETWORKING / OUTREACH STATISTICS

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FRIENDS OF SCIENCE SOCIETY

FUNDRAISING COMMITTEE: DONATIONS

We are truly thankful for all of our faithful and generous members and financial supporters. Without your consistent support of our organization, we would have failed in communicating with the public a long time ago. After 18 years of providing insights on climate and related energy policies, we find that more and more people finally understand and appreciate our efforts. These efforts will be even more needed following the recent ruling by the Supreme Court in favour of the Federal Government’s ability to force a carbon tax.

We thank all of you who generously responded to our latest request for support and donations. We clearly can’t continue to do this without your help. Your contributions will allow us to continue our ongoing passion to communicate the truth. COVID-19 resulted in 2020 being a year of lockdowns worldwide and made our job for communicating our message even more difficult. 2021 is unfolding as an equally challenging year with unprecedented political, social and financial turmoil. Now with an unexpected Federal Election looming at our doors we could find ourselves with a result that could present an even stronger challenge to our message.

It appears that after almost one and half years of obedience to COVID lockdowns an increasing number of people worldwide are saying “we won’t take it anymore”. Authorities are realizing that they are losing their authority to maintain the lockdowns. In response they are forcing people to take vaccines which are only approved under an Experimental Use Authorization (“EUA”). Furthermore, they are contemplating Vaccine Passports which will curtail the personal liberties of people unwilling or unable to take the experimental vaccine.

WHAT DOES THE FOREGOING HAVE TO DO WITH CLIMATE CHANGE?

Phrases like; “Climate Lockdown”, “Climate Passport”, “Build Back Better”, “Climate Justice” are being promoted by people and organizations with a well-known authoritarian pedigree. Friends of Science will fight for every citizen’s personal liberty and stand against totalitarian implementation of ill-founded and anti-science measures.

If our $150,000 per year budget was doubled to $300,000 per year we could quadruple our impact. We are dependent upon our members and donors to make this happen. If you believe that we speak with honesty and integrity it is essential that you vote with an increase to our financial support.

The world which you leave to your children and grandchildren is in your hands. Be generous to them and the truth.

We continue to lose more freedom each day for getting our message out while the green crony capitalists and the media have ramped up their mistruths with the support of various Governments from the local level up. Regardless, Friends of Science vows to stay focused on our mandate by publicly communicating the science and the empirical evidence regarding climate change.

We assure you that we do our best to utilize your generous donations in the most effective way we can to gain as much exposure as we can for minimal cost. In 2020, we limited expenditures to one billboard, a number of low-cost videos and two live streaming presentations. For the first 6-months of 2021 we have endeavoured to keep our costs limited but our messaging effective.

This year with your generous donations we are hopeful to be able to continue to produce our popular videos, our many press releases and other communication opportunities including guest speaking at events or attending community gatherings to make our voices heard. We will continue our valuable social media outreach, our informational website by relying on many volunteer hours. However, we continue to need more paid support to assist with time consuming proactive research to facilitate participating in more community debates in the face of an ever growing and strong opposition. The proposed Bills C-36, along with C-10, pose the risk of successful attempts to silence us even more. In addition to presenting our facts to the public we need to individually push back in any way we can on the possibility of either or both Bills ‘having legs’ going forward.

In addition to our regular community outreach, we are planning to develop potentially marketable communication packages to fund more billboards and/or media Op-eds. We are hopeful to be able to acquire sponsors for each package. You will of course be kept informed of what these packages will include and ask for any assistance you can provide for directing us towards potential sponsors. You as well, may along with a group of other members, be interested in participating as a sponsor or a shared sponsor of a
package you feel will have noticeable influence in our quest to communicate the truth. It is our intent to solicit sponsors from within the various industries and from interested parties we feel can directly benefit from our outreach or who support what we do.

We continue to believe we need to push back and provide the information the main-stream media chooses to not report. We must not stop communicating empirical evidence and scientific truth. Stopping would diminish our commitment to the freedom and future welfare of our children, grandchildren and those less fortunate than ourselves.

Please share our content (listed at the end of this newsletter) with friends and family and assist us to grow our audience through this sharing and along with your financial support to maintain our two websites (friendsofscience.org climatechange101.ca).

Needless to say the months ahead will be some of our greatest challenges with many unknowns as we watch countries across the globe move towards greater totalitarianism.

Please join the battle in any way you can.

As you can see our fuel gauge shows operational budget funding that will now take us through January 2022.

We need you to help us find more members and donors!

We recognize these are tough times, however, with restrictions lifting July 1 we will now be able to enjoy more exposure to the community as COVID is hopefully past us. We ask that you reach out to your friends, tell them the value you receive from our messaging and encourage them to join. On a last note, have you personally considered making monthly contributions to Friends of Science?

Setting up your recurring donation only takes a few minutes. Please call us at 1 888 789 9597 Ext 2 to join a growing group of monthly donors.

Contributions can be made at friendsofscience.org by clicking on “Become a Member/DONATE” in the upper right of the home page. The PayPal donation link will allow you to pay with your credit card even if you do not have a PayPal account. Should you experience technical difficulties with online processing, please try turning off any ad blocker as this sometimes interferes with the program and we do not have ads on our site. Otherwise, if you prefer, you may phone us at 1-888-789-9597 Ext 2 to pay by credit card. Alternately, you can mail donations to Friends of Science at the following address:

Friends of Science Society  
P.O. Box 23167 Mission P.O.  
Calgary AB Canada T2S 3B1  
Toll-Free Telephone: 1-888-789-9597 Ext 2  
E-mail: contact@friendsofscience.org

MEMBERSHIPS

Thank you to our members for your support and helping your society spread the truth about climate change. All of our funding comes from our membership; comprised of donations and the modest membership fee.

Without your support, our outreach through our many social media platforms would not be continuing to grow and potentially reach millions of people. Since you are a member and you are reading this, we make the leap that you believe in what we do and like how we do it. Our call to action for you is to please pledge an amount then circulate this newsletter to twenty or even one of your friends requesting they match your donation or sign up for a membership.

It is critical that we grow FoSS’s ability to get our message out. Times are hard everywhere. We need your help to keep going. Please, help us solve our ongoing funding challenge. If you have constructive comments or ideas which would improve the ability of your society to advance its mandate, we would truly love to hear from you.
VOLUNTEERING

Do you want to make a difference? For our voice to continue being heard, we need much more support. We need you! Please email us at volunteering@friendsofscience.org, put Volunteer in the subject and tell us what you would like to help with.

This debate matters, you are making a difference.

MICHELLE’S BREAKING NEWS!

Climate Cancel Culture Hits from Unexpected Angle in Second Quarter: In April 2021, I was slated to be a poster presenter at the Canadian Mental Health Association (Alberta) Virtual Conference March 9 & 10, 2021 for Working Stronger - Building Resilient Workplaces in the Face of Challenges. My theme and poster, in which I represented Friends of Science Society, had been accepted, was “Indoctrination and Demoralization: Climate Change Fears and Alberta’s Work Force”. My poster overview read:

“Since clinical psychologist Margaret Klein Salamon developed the theme “Our House is On Fire” to emotionally drive the public into fear and force political action on climate change, people around the world have been spiraling into depression and existential angst. In Alberta, this has been exacerbated by a visit from Greta Thunberg, who frequently parrots Salamon’s phrases, and by the Alberta Narratives project, led by “Climate George” Marshall and Dr. Katharine Hayhoe. This presentation deconstructs the Alberta Narratives Project and the global Tar Sands Campaign that has demoralized Albertans in all walks of life, destroyed our economy, and led to a serious rise in mental health issues, family violence, divorce, job loss and sadly, suicide.”

The night before the conference, my poster and overview were listed with four others on the virtual conference site. By the morning, my poster and description were gone. Some sponsors objected to my content. CMHA is significantly funded by the government, despite being a ‘charity’ - in Alberta only $52,000 in donations were received from the public, vs $3,379,102.00 (82.21%) from governments (Source: CRA).

“Ostracism…the social kiss of death” Williams (2007)

Very disappointing to me that the professional ‘healing’ community of mental health caregivers are entrenched in climate dogma and fail to recognize the demoralizing effects of the Tar Sands Campaign on Alberta professional scientists and engineers, skilled trades, right down to the hard-working labourers in the energy sector through the supplier and retail support chain. These workers are literally providing the life-giving energy needed to drive our economy, to power our hospitals and all aspects of modern medicine, and yet are treated like dirt. Watch for my poster video explainer - coming up on our YouTube channel!

Live Streams!

Friends of Science Society has joined the world of live stream webinars, with three live stream events. Video, report, and power point are all included in these links:

“Speed Bumps on the Road to Decarbonization”
“What You Really Need to Know About Renewable Energy (That The Pembina Institute Won’t Tell You)”

Special Projects

“The World According to Ben Stein” Thanks to the outreach by Mike Visser of our video production studio “The Director’s Chair”, Ben Stein invited Michelle to join his panel to talk about climate change and the creepy depopulation/eugenics themes underlying it - and how science is being used to push North American society into poverty and powerlessness on the world stage.

A fellow researcher in Europe sent Michelle the link to University of Calgary professor Jessalynn Keller’s paper entitled “This is oil country: mediated transnational girlhood, Greta Thunberg, and patriarchal petrocultures” Keller is an associate professor at the University of Calgary who says “I am currently completing a SSHRC-funded project (2018 - 2021) that explores the politics of anti-Trump resistances across feminized media cultures.” Michelle’s rebuttal: “Ecofeminist Energy Illiteracy: Greta in Alberta Oil Country”

“Bigfoot - Lessons in Misinformed Eco-Martyrdom for Kids” - The Canadian Energy Centre (aka Alberta war room) took on Netflix for their misinformed movie, and Michelle provided her take on how the flick is a primer for kids on eco-martyrdom.
How Trudeau’s Bill C-10 will change what you say about climate change

Michelle Stirling talked with Sheila Gunn Reid on "The Gunn Show" on June 30, 2021 about Bill C-10 and the creepy depopulation undertones of the dystopian climate change movement.

New Science contributions to the blog:

- **The Imaginary Climate Crisis - A talk by Richard Lindzen** Special thanks to the Climate Realists of Five Dock, Sydney Australia. A Zoom presentation arranged by the ICSF and Clintel held on 31 March 2021

- **A response to the report of the Harvard University 'Dim the Sun' project** Contributed by Ray Garnett & Madhav Khandekar © 2021

- In reading the recent press release on Harvard University's proposal to combat human induced global warming by dimming the sun we are taken aback. Such a project would likely have harmful effects on world grain production.

- **Volcanic and Geothermal Influences on Climate** Prof. Wyss Yim sheds some light on the effect of undersea geothermal activity on ocean heating and climate.

- **Social Cost (Benefit) of Carbon Dioxide from FUND with Corrected Temperatures, Energy and CO2 Fertilization** Friends of Science Society’s research director, Ken Gregory, P. Eng., does an analysis using the “FUND” economic model. Climate policies such as carbon taxes are set by governments using social cost of carbon (SCC) values calculated by a set of economic computer programs called integrated assessment models (IAM).

- **“THE GREAT EXTINCTION” - WHY?** Contributed by Michael N. Chernoff, BSc. Geological Engineering. 96 percent of the earth’s species were extinguished at the close of the Permian period (252 million years ago - MYA). The extinction interval is fairly short (thousands of years) and recovery began within a few million years of extinction.

More in the blog:

**First Nation - No Consent to UNDRIP (Bill C-15)** Hard to believe that a law that is supposed to require the prior consultation and consent of First Nations was passed with many First Nations people saying they were not consulted! See our commentary.

**Friends of Science Society's Professional Engineers Challenge Pembina Institute on Renewables**

What You Really Need to Know About Renewable Energy (That The Pembina Institute Won’t Tell You)

The team also challenged Licia Corbella at the Calgary Herald on her claims about solar energy. Electricity From the Sun: Reality Versus Fantasy

What is the “True Cost of Wind and Solar for Alberta?” Click the link and find out.

Latest from Robert Lyman’s Desk:

**The Role of the Green Economy in Pandemic Recovery**: Robert Lyman has provided these links to the briefs he submitted to the House of Commons Committee on Industry, Science and Technology following his appearance before the committee on May 11:

- [English](#)
- [français](#)

**Climate Policy Articles and Reports:**

November’s COP26 approaches. Robert Lyman notes there are [Storm Signals for COP26 in Glasgow](#)

**Speed Bumps on the Road to Net Zero - Part 1**

Lyman summarizes highlights from the recent JP Morgan energy report. EVs unlikely to take the world by storm. CCUS - nope. DACC - very unlikely. Decarbonizing the industrial sector? Good luck. Sustainable aviation fuel? Look at the numbers. Electrifying container ships…well…uh..Then there’s converting methane from waste into gas equivalents. In short - this is a painful but necessary reality check. [Report](#) [Live stream, links, and PowerPoint](#)

**Part 2 of “Speed Bumps on the Road to Net Zero”**

In this report, Robert Lyman examines the technological and cost barriers to the conversion of much of the world’s economy to use electricity as its primary energy source in place of fossil fuels. [Hazards Ahead - Part 2 of “Speed Bumps on the Road to Net Zero”](#)
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Magical Thinking - Why “Net Zero” Is Neither Possible nor Desirable
Several western governments have committed their countries to have “net zero” greenhouse gas emissions in future. In this note, Robert Lyman explains why achieving net zero for an entire economy would face insuperable technical and cost barriers and demand unacceptable political changes for democratic societies. Magical Thinking - Why “Net Zero” Is Neither Possible nor Desirable

SPECIAL FREE FoSS FEATURE - the complete trilogy (June, July, September 2020) on climate change and freedom of speech by award-winning, independent European filmmaker Marijn Poels.

Poels is renowned for producing over 50 films on social justice in conflict and poverty countries, where most people struggled to have enough to eat. He then decided to investigate the paradigms in Climate Change. To view: MARIJN POELS’ DOCUMENTARIES will take you to all three or find them on our YouTube site.

GLOBAL WARNING: Taking the FilmFest World by Storm BUT Ignored by Canadian Media
Mathew Embry’s “Global Warning” has been totally ignored by Canadian media. (Instead, the feds are implementing a LAW about forcing Canadian content online… 😞) In addition to the May news that “Global Warning” is a Silver REMI Winner - 54th Annual WorldFest Houston Int’l Film Festival 2021, the documentary has now been officially selected for the Miami Indie Film Awards.

Watch a series of interviews with award-winning director Mathew Embry, and watch the sponsored content film “Global Warning” at this Video-on-Demand link.

#KidFriendly #ClimateTales for the Whole Family:

Grampy the Garden Gnome Stops Boiling Oceans

The Tiny Rabbit Family “Dad, How Big is the Sky?”

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