

A New Global Paradigm:
Understanding the Transnational Progressive Movement,
the Energy Transition and the Great Transformation
Strangling Alberta's Petroleum Industry

A Report for Commissioner Steve Allan

Anti-Alberta Energy Public Inquiry

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April 2020

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This is the first time in the history of mankind that we are setting ourselves the task of intentionally, within a defined period of time, to change the economic development model that has been reigning for at least 150 years, since the Industrial Revolution.

– Christiana Figueres, 2015

I mean, it's the Great Transformation, it's started, that's what I would say. It's begun. Not the way we expected, but it's begun.

– Paul Dickinson, 27 March 2020¹

I. Introduction

There is a transnational global movement to facilitate a fundamental paradigm shift, a *Great Transformation*, to a new energy economy that will halt fossil fuel use and development, initially in the western world, in order to create a new global low-carbon, net-zero civilization. The first major petroleum industry target being used to accelerate this global transition is the Alberta oil sands. The anti-oil sands campaign has so far been successful in land-locking production, preventing new pipelines for Canadian consumption or export markets, intimidating investors, and influencing the Canadian government to support these policies. However, the current evolved strategy is not confined to Alberta; it is not about making Alberta or Canada suffer per se; it is about transforming the world and creating a new civilization that is not based on fossil fuels, which means *all* western economies will be impacted at some point. The global movement is a psychological, political, and group process, rooted in progressivism, in order to get a critical mass of public support to fundamentally transform western industrial economies and societies. There are various ideas circulating for what will replace the current system, and although there are differences amongst the various interested groups, they agree on the ultimate goal of ending capitalism and our modern way of life. This has been called “The Great Transition”, “Paradigm Shift”, “Great Transformation”, “Global Phase Shift”, and many other labels. For the purposes of this report and consistency, Great Transformation will be the preferred description. Although this inquiry has been overtaken by recent events caused by the coronavirus pandemic, this report provides timely insight into the nature, motivations, objectives, and strategies of the Transnational Progressive Movement to force or manufacture an energy

¹ Christiana Figueres, Tom Rivett-Carnac, Paul Dickinson, Outrage and Optimism Podcast, Season 2 #10 (45), 27 March 2020, “Corona and Climate (1): Coming Back Stronger,” 10:07. <https://tunein.com/podcasts/News-Politics-Podcasts/Outrage-and-Optimism-p1217603/?topicId=140572973> .

transition using the rationale of climate change, cultivating a cultural shift through media and the youth, and implementing various Green New Deals around the world to fundamentally transform the western industrial capitalist economic system. This report also sheds light on the trajectory of changes proposed for the post-pandemic economic restructuring recovery, and how that will potentially impact Alberta's energy industry and the viability of the province itself. Indeed, the very future of Alberta is at stake.

In order to effectively address this comprehensive international assault on Alberta's and Canada's energy industry, it is important to understand the motivations, structure, and strategies that are being pursued in manufacturing a new global energy transition. This is a long-term international movement to facilitate a fundamental global paradigm shift. To contest it or resist it, one must understand it. To that end, drawing upon over a thousand website articles, newspaper articles, reports, speeches, video conference proceedings, academic journal articles, and books, this report is divided into six sections: the first establishes the background of the attack on Alberta's oil sands within the context of the transnational movement to force an energy transition and a Great Transformation of the global economic system. The second examines the nature or motivation of the transnational progressive movement behind the Great Transformation, the climate rationale behind it, and the energy transition at its core. Next to be considered are the groups involved – how they work and communicate, the role of media organizations in shaping the narrative and promoting panic and a sense of emergency, the goals and processes for a cultural shift and the youth movement. The fourth section analyses the various Green New Deals and their common elements, the plans for implementation, and the conceivable impact on modern lifestyles afterwards. The fifth section will first briefly examine the timeframe of the movement's goals and objectives, and then explore the effect of the coronavirus on the goals and timing of the Great Transformation; and finally, the last section will offer conclusions and recommendations for an Alberta and industry response to these developments in light of a hostile federal government firmly committed to the progressive agenda.²

² Justin Trudeau, "The Promise of Progress," in *Global Progress: New Ideas for the Future of the Progressive Movement*, (43-47), <https://cdn.americanprogress.org/wp-content/uploads/2016/03/03095509/021716-GLOBALPROGRESS-web.pdf>. Trudeau writes, "In Canada, the defense of liberty has a unique expression . . . it's about a deliberate and enduring commitment to build a progressive society. . . Canada is – and I hope will forever be – a shining example of the progressive spirit." (43-44)

II. Background/Context

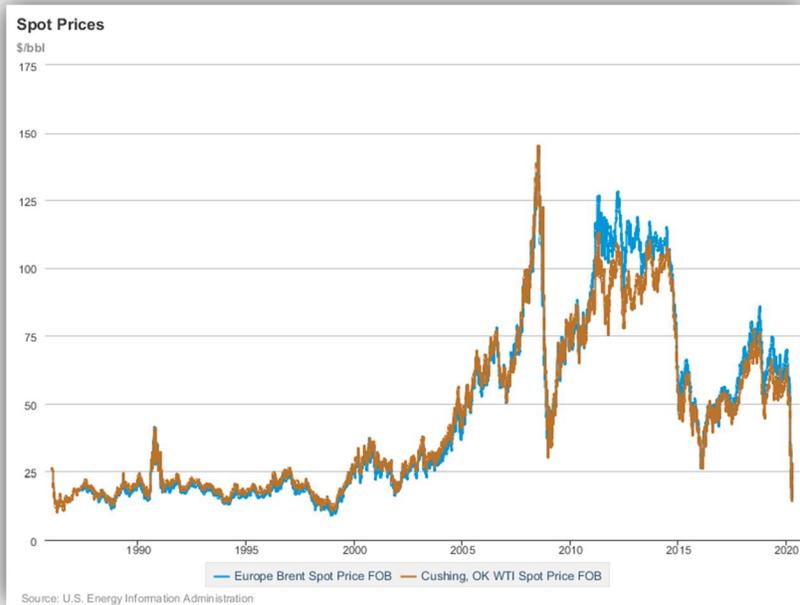


Figure 1 Crude Oil Spot Prices (Source: US Energy Information Administration)

Since 2004, when Canada’s proven oil reserve estimates increased from 5 billion to 180 billion barrels³, there has been a loosely coordinated sustained international attack to shut down the oil production from the Canadian Oil Sands, located primarily in Alberta. In the early 2000s, when President George W.

Bush led the United States (US), there was great angst that American oil and natural gas supplies were in terminal decline. The issue of “peak oil” came to dominate news stories, industry, and scholarly literature. Liquid Natural Gas (LNG) terminals were being built in the US to import or receive LNG from abroad.⁴ There were some musings in the academic literature about the potential for resource competition, and potential conflict, between the US and China, due to China’s increased oil demand and involvement in oil and gas production in developing countries. As shown in Figure 1 above, oil prices began to increase significantly in 2004, peaking just before the 2008/09 financial crisis, and oil producing countries like Russia, Venezuela, Saudi Arabia and other OPEC members were feeling very confident in asserting their power and influence in relation to the US. At the same time, oil sands production in Alberta increased and naturally looked to the American market as the main customer and investor in further development. The US also identified the oil sands as a “linchpin” of long-term US energy security — a future reserve. While it may seem obvious, it is important to note that the oil sands

³ Daniel Yergin, *The Quest: Energy, Security and the Remaking of the Modern World* (New York: Penguin, 2011), 254.

⁴ For a good overview of the evolution of the issue see Michael Lynch, “What Ever Happened To Peak Oil?” *Forbes*, 29 June 2018, <https://www.forbes.com/sites/michaellynch/2018/06/29/what-ever-happened-to-peak-oil/#19376869731a>. For LNG see also, Yergin, *The Quest*, 329.

are not like conventional oil fields. There is a great deal of lead time, even without onerous regulatory procedures, and long-term investment required to extract and process the bitumen whether it is through mining or in-situ Steam-assisted Gravity Drainage (SAGD). Therefore, to be a functional part of an energy security strategy that can withstand disruptions and shocks, the infrastructure and production capability *must already be in place*. Transnational organizations, identified in this report as the Transnational Progressive Movement, working through and with Environmental Non-Governmental Organizations (ENGOS) sought, and continue to seek, to prevent this oil from being developed and exported, particularly to the US, with the long-term aim of depriving the industry of investors and forcing an energy transition that would lead to a Global Green New Deal.

When the 2008/09 financial crisis hit, and the Democratic Party won the U.S. presidential election, the Transnational Progressive Movement saw an opportunity to bring about a Global Green New Deal.⁵ In April 2009, the United Nations Environment Programme (UNEP) released a report by Edward Barbier titled, “Rethinking the Economic Recovery: A Global Green New Deal.”⁶ In June 2009, a conference was held in Essen, Germany, “The Great Transformation: Climate Change as Cultural Change,”⁷ which included participants such as advisor to president Obama John Podesta from the Center for American Progress, German Environment Minister, Sigmar Gabriel, director of the Potsdam Institute for Climate Impact Research and member of the Club of Rome Hans Joachim Schellnhuber, and Canadian cultural scientist Thomas Homer-Dixon. The participants agreed that it was time “to lay the foundations for a societal and economic transformation process. . . . In order to implement new market organizations, new forms of global governance and new technologies, we firstly need to see a profound shift in attitudes and a new culture of participation.”⁸ A month later, the Worldwatch Institute, on behalf of the Heinrich Böll Stiftung and the Transatlantic Climate Policy Group produced the document, “Toward a Transatlantic Green New Deal: Tackling the Climate and Economic Crises,” which warned that “[t]here is therefore a danger that some governments may

⁵ The International Progressive Movement will be defined and explained in more detail in the next section.

⁶ Edward B Barbier, “A Global Green New Deal Executive Summary,” 2009.

<https://www.cbd.int/development/doc/UNEP-global-green-new-deal.pdf>

⁷ Climate Change Means Cultural Change Conference, Essen, Germany, 8-10 June 2009. <https://www.pik-potsdam.de/news/press-releases/archive/2009/201climate-change-means-cultural-change201d>.

⁸ “Climate Change means Cultural Change,” Potsdam Institute for Climate Impact Research, 9 June 2009, <https://www.pik-potsdam.de/news/press-releases/archive/2009/201climate-change-means-cultural-change201d>.

decide to postpone serious action on climate until the economic crisis is resolved,” and advocated a green stimulus to “accelerate structural change toward sustainable development.”⁹ A few months later, in October 2009, the Global Progress Initiative was launched as a collaborative effort of the Center for American Progress, the Heinrich Böll Stiftung (German) and Fundacion IDEAS (Spanish) in order to create a “network of like-minded think tanks across the globe . . . to advance progressive policy ideas.”¹⁰ At the invitation only launch in Madrid, Spain, with eery foreshadowing to the 2020 coronavirus pandemic that will be discussed later, the 2008/2009 financial crisis was identified as presenting “progressives with a unique and unprecedented opportunity to shape the international agenda.”¹¹ In May 2010, the Center for American Progress and the Heinrich Böll Stiftung released their “The Great Transformation” mission statement, where it was defined as a “wholesale transformation of global capitalism [to a] low carbon, resource-efficient, and equitable global society.”¹² An accompanying transatlantic conference on a Green New Deal was held to discuss how to facilitate a comprehensive transformation for the “ecological remodeling of industrial society.”¹³ At another conference in Heidelberg, Germany in 2011, which this author attended, a representative from the Center for American Progress suggested academics and ENGOs needed to find a way to make the market (and the public) *want* clean energy, to make it a *moral* issue, in order to shift investment because financing was the

⁹ Hilary French, Michael Renner and Gary Gardner (edited by Katy Nicholson), “Toward a Transatlantic Green New Deal: Tackling the Climate and Economic Crises,” *Heinrich-Böll-Stiftung Publication Series on Ecology, Vol. 3* (Brussels: Heinrich-Böll-Stiftung, 2009), 7.

¹⁰ Neera Tanden and Matt Browne, “Global Progress: New Ideas for the Future of the Global Progressive Movement,” Center for American Progress, 11 March 2016, <https://www.americanprogress.org/issues/democracy/reports/2016/03/11/132468/global-progress-new-ideas-for-the-future-of-the-global-progressive-movement/>. In 2016, the annual Global Progress meeting was hosted by Canada and a slick booklet with brief articles by leaders of the global progressive movement, including Prime Minister Justin Trudeau, was produced to accompany the conference.

¹¹ Toward a Global New Deal, 1 & 2 October, 2009, <https://us.boell.org/en/2010/10/26/global-progress-initiative>.

¹² Center for American Progress and Heinrich Böll Stiftung, Mission Statement: “The Great Transformation,” Green New Deal, Heinrich Böll Stiftung, May 2010, <https://greennewdeal.boellblog.org/files/2010/05/GreatTransformationMissionStatement.pdf>.

¹³ Conference Summary, 7 July 2010, Heinrich Böll Stiftung, <https://greennewdeal.boellblog.org/2010/conference-summary/>. An interesting panel discussion was on the need to fund more research into progressing societal changes and promote research cooperation between universities and companies. Consequently, in 2015, Heinrich Böll Stiftung offered a number of PhD scholarships to research *for* and on the “Great Transformation,” https://www.boell.de/sites/default/files/uploads/2015/04/transformation_research_juli2015.pdf. The conference programme can be found here, https://www.boell.de/sites/default/files/assets/boell.de/images/download_de/ecology/agenda_GT_long.pdf.

most important obstacle to progress.¹⁴ Numerous other conferences were held over the next few years advocating different changes, but one common element was the recognition that the energy transition requires an enormous amount of financing that governments alone cannot provide; it needs the support of businesses, banks, and investors to buy into renewable and alternative energy developments.¹⁵ The problem was that unconventional oil and gas projects, including the oil sands, were diverting too much international investment away from renewable ventures.

The big shock, however, to the Transnational Progressive Movement and the supporting myriad of ENGOs, think-tanks, foundations, and academics was the fracking revolution. It was unexpected; and significant American investment money went to new fracking exploration and development. Many wondered aloud, how could investment be diverted away from the unconventional petroleum industries and into alternatives, when the fossil fuel economy was so embedded in investment funds, pension funds, and bank holdings? What strategies could be used to make fossil fuel investment unpalatable?¹⁶ How could the rules be changed to deter investment in hydrocarbons? What should be the first target to test these new strategies and tactics?

The Canadian oil sands, for various reasons that will not be explored here, had already been chosen as the test case for the development and implementation of tactics that could then be refined and applied to the fracking revolution and the “fossil fuel” industry as a whole (this includes oil, natural gas, and coal). Around the same time that planning was being undertaken towards a Global Green New Deal as outlined above, in July 2008, hosted by the Rockefeller Brothers fund, a group of ENGOs developed a plan to target the oil sands with a coordinated campaign structure. The ENGOs included nine from Canada and ten from the US, with the key organizations being the Pembina Institute, World Wildlife Federation (WWF), Natural Resources Defense Council (NRDC), Greenpeace, Forest Ethics, Environmental Defence, Ecojustice, and the Sierra Club. Corporate Ethics International was engaged as the centralized strategic adviser

¹⁴ Author’s notes on Jake Caldwell’s presentation, Center for American Progress, at the Heidelberg Center for American Studies ERP Workshop, Energy Policy and Energy Security – Transatlantic Perspectives, 27 May 2011.

¹⁵ While it would be very interesting and possibly revealing to compare the responses of the Transnational Progressive Movement to the 2008 financial crisis with the 2020 intentional economic shutdown due to the coronavirus pandemic, it is outside the scope of this study.

¹⁶ Some of these issues were discussed at the Heidelberg conference in 2011.

that would serve as the financial and coordinating hub for the campaign¹⁷, and “also advised foundations in Europe and the U.S. that were already dedicated to slowing the production of oil worldwide on how best to address this emerging new threat to climate.”¹⁸ The *North American Tar Sands Coalition Strategy* document by Michael J. Marx of Corporate Ethics provides more specific detail about their strategy and their ultimate long-term goals.¹⁹ A few excerpts from this document can help understand the global vision:

our long-term goal is to stop the production of this fuel...It is also an excellent vehicle for realizing the ultimate goal of a **new energy paradigm...**this campaign has much **larger strategic implications for the entire global warming effort...**We are **forcing** investors and oil companies to embrace **a new energy paradigm.**²⁰ [emphasis added]

This strategy, to force an energy transition and create a new global energy paradigm, can be summarized as follows:

1. Isolate the industry and supporters (make a pariah like apartheid in South Africa).
2. Control the narrative (delegitimize ideologically; public denunciation).
3. Boycott (institutional disruption; blockades; protests).
4. Divest (create stranded assets).
5. Litigate (especially native groups, landowners, favourable jurisdictions).
6. Alienate (sever support system; provoke elite defections; impose burdens on allies).

Although the original coalition was American and Canadian, the progressive network extended the action to groups in the UK, Germany, France and other European countries, and to a lesser extent globally.²¹ The oil sands target was used to demonstrate to people – activists,

¹⁷ Detailed aspects of the funding of this campaign in Canada are presented in a different aspect of this inquiry, and are not explored in this study.

¹⁸ Corporate Ethics International, “The Tar Sands Campaign,” <https://corpethics.org/the-tar-sands-campaign/>. The website touts its success with the campaign emphasizing that it, “helped recruit U.S. and European groups that were already fighting domestic oil battles to join with their Canadian allies. CEI also helped generate support for all the groups in the Tar Sands Campaign. The campaign successfully blocked all major proposed pipelines, most notably when President Obama rejected the proposed Keystone XL pipeline across the U.S. . . . In 2015, CorpEthics moved on from the Tar Sands Campaign to spawn and manage the funding for the U.S. [Beyond Oil Campaign](#). Its goal was to block all new proposed oil infrastructure in the U.S. and to protect all federal public lands and waters from oil and gas drilling. That campaign was successful until the election of Donald Trump. So in 2017 the Moving Beyond Oil Campaign shifted its strategic focus from limiting supply to limiting demand for oil.”

¹⁹ Michael J. Marx, “Tar Sands Coalition Strategy Paper 2.1, 2008,” Corporate Ethics International, October 2008. www.offsettingresistance.ca/TarSandsCoalition-StrategyPaper2008.pdf. See also, Michael Northrop’s powerpoint presentation to the Rockefeller Brothers Fund, “The Tar Sands Campaign,” July 2008.

²⁰ Marx, “Tar Sands Coalition Strategy,” 6.

²¹ Matthias Dietz and Heiko Garrelts, *The Routledge Handbook of the Climate Change Movement* (Abingdon: Routledge, 2014), 348. See also Part II, chapters 7 through 14 for examination of specific nations from Great Britain and Germany to China and Africa.

policymakers, businesses, financial institutions and the greater public – that they can *win* against the oil industry. This emboldens supporters, increases funding to ENGOS, think-tanks, and foundations, and creates the perception that the public supports these efforts. Furthermore, it provides fuel for the Transnational Progressive Movement and its efforts towards forcing an energy transition and Great Transformation through a global climate change agreement that is implemented by national Green New Deals.

The apparent success of the ENGOS in compelling sympathetic US President Barack Obama, who counted John Podesta and the Center for American Progress as significant advisors, to reject the Keystone XL pipeline in November 2015 gave momentum to the international UN climate negotiations that took place in December 2015. The Paris Agreement, and the acceptance of the UN's Sustainable Development Goals (SDGs), both of which all participating countries signed and ratified, created the framework for all signatories to pursue a net-zero carbon by 2050 strategy.

UN climate negotiator Christiana Figueres and her political strategist Tom Rivett-Carnac boasted at a discussion in London on 2 March 2020 how they went beyond traditional diplomacy in the two years leading up to the 2015 Paris negotiations to create a surreptitious extensive network of “stakeholders” – companies, religious leaders, investors, NGOs – to “help the diplomatic process be more effective.” Figueres explained, “I couldn't tell them [the national governments] we were working behind their back and using the fees they were paying to the UN convention to organize people and put together a team doing something they didn't really know. It was an odd situation. We put Tom and his team in a different building; we fund raised different monies for this and we said right, go at it, but in secret.” Rivett-Carnac clarified how the system worked during the 2015 negotiations,

We would get to the point where we could use this in real time, that was the endpoint; so I would sit in the negotiation hall, and one country would say something that would throw a spanner in the works; I would get a nod from Christiana and I'd put my system into work, and I'd call somebody who would call somebody, who would call the minister, and then we'd watch the position change in real time as we were sitting in the negotiation hall.

Figueres chuckled, “And no one knew.” The breakthrough mechanism that was secured through this system was the requirement that each country must produce a nationally determined plan

every five years, of increasing ambition, to demonstrate how they will reach net-zero by 2050.²² Although most countries have provided rather vague national plans, the European Union (EU) is the first entity to provide a proposal for a complete overhaul of its economy in the quest to achieve net-zero by 2050. The comprehensive plan, announced in December 2019, is called the “European Green Deal” and will be discussed in some detail later in section V.

It is clear that the ENGOs and the Transnational Progressive Movement believe they have won, or are close to winning internationally and in Canada; it is just a matter of tidying up the loose ends and continuing to apply public pressure on regulatory and policy frameworks that frustrate hydrocarbon development. Considerable funding has been directed to continued protests and ongoing litigation²³ concerning the Trans-Mountain pipeline²⁴, Keystone XL pipeline²⁵, and any pipelines that will cross the American border carrying oil sands oil, and now natural gas.²⁶

²² Christiana Figueres and Tom Rivett-Carnac, Discussion of *The Future We Choose*, RSA London, 2 March 2020; video on YouTube. <https://www.thersa.org/events/2020/03/the-future-we-choose>; Moderator, Sue Pritchard (Director, Food, Farming, and Countryside Commission) (The Future We Choose | Christiana Figueres | RSA Replay), <https://www.youtube.com/watch?v=4YQe0OdAVC0>. Transcript by author.

²³ It should be noted that there is considerable litigation in the United States against the fracking industry and pipeline infrastructure that might carry oil and gas from the Bakken fields, or any fields that employ fracking technology, to refineries or export markets. The most high-profile case is the Dakota Access Pipeline protests, but there are many others that are too numerous to mention and are outside the scope of this study. See for example, Devin Henry, “Judge: Dakota Access Pipeline Needs Further Environmental Review,” *The Hill* [online], 14 June 2017, <https://thehill.com/policy/energy-environment/337863-court-dakota-access-pipeline-needs-further-environmental-review>. See also, Patrick O’Connell, “Activists rail about need for Dakota Access pipeline expansion as coronavirus threatens oil markets and federal ruling raises more questions,” *Chicago Tribune*, 30 March 2020, <https://www.msn.com/en-us/news/us/activists-rail-about-need-for-dakota-access-pipeline-expansion-as-coronavirus-threatens-oil-markets-and-federal-ruling-raises-more-questions/ar-BB11U0la>. For an outline of other litigation cases in the US intended to cripple the petroleum industry see for example, Christopher Horner, “Climate Litigation: A Government Grab for Cash,” *The Pipeline*, 19 March 2020, <https://the-pipeline.org/climate-litigation-a-government-grab-for-cash/>. Horner reveals a Rockefeller funded event, “Accelerating State Action on Climate Change,” that outlined the status, tactics, and strategies to bypass the legislative process. Tom Steyer was in attendance, as were representatives from the Energy Foundation and the Rocky Mountain Institute.

²⁴ Canadian Press, “Group of First Nations Want Supreme Court to hear Appeal on Trans Mountain Pipeline,” *National Post* [online], 7 April 2020. <https://nationalpost.com/pmn/news-pmn/canada-news-pmn/group-of-first-nations-want-to-launch-fight-of-trans-mountain-pipeline-approval>.

²⁵ Emma Graney, “Alberta stands by Keystone XL pipeline investment despite setback from U.S. court ruling,” *Globe and Mail* [online], 16 April 2020. <https://www.theglobeandmail.com/business/article-alberta-stands-by-keystone-xl-pipeline-investment-despite-setback-from/>. See also, Rod Nickel, “U.S. court rules against permit in new setback for Keystone XL oil pipeline,” *Reuters* [online], 16 April 2020, <https://www.reuters.com/article/us-global-oil-tc-energy-idUSKCN21Y013>.

²⁶ Numerous stories were written between January and March 2020 documenting the Wet’suwet’en group of hereditary chiefs and sympathetic protests against the Coastal Gas Link project. See for example, Brent Jang, “Wet’suwet’en Nation Hereditary Chiefs Launch Climate Lawsuit Against Ottawa,” *The Globe and Mail* [online], 12 February 2020, <https://www.theglobeandmail.com/canada/british-columbia/article-wetsuweten-nation-hereditary-chiefs-launch-climate-lawsuit-against/>; Gabriel Friedman and Geoffrey Morgan, “Choke point: How the blockade movement has sent tremors across Canada’s economy and beyond,” *Financial Post* [online], 21 February 2020, <https://business.financialpost.com/news/economy/choke-point-how-the-blockade-movement-has-sent-tremors->

The recent protests concerning the Coastal Gas Link are an example, and their collateral damage – the cancellation of the Teck Frontier oil sands project. The protests and the regulatory uncertainty concerning climate policy and energy sector development in Canada was the main reason given by Teck for withdrawing its application for the project.²⁷ The success of essentially locking in the oil sands, “keeping it in the ground”, by preventing the construction of additional pipeline capacity such as Energy East, Northern Gateway, Keystone XL, and the troubled Trans-Mountain pipeline, has energized and inspired the Transnational Progressive Movement to push for changes such as divestment and financial industry climate risk assessments that will have detrimental effects for the global petroleum and coal industries and their producing states.

III. Transnational Progressive Movement

A. Definitions

What exactly is the Transnational Progressive Movement? What is its nature and motivation? These are somewhat difficult questions to answer not only because the meaning of progressivism continues to change and evolve over time, but also because the very essence of a movement is to be ever mutable. Due to the Cold War terms like “socialism” and “communism” came to be discredited by association with the Soviet Union and its myriad abuses, therefore socialists first adopted the term “liberal”, then when that came to be a term of ill repute, gradually shifted to the term progressive, to the point that this is now the accepted term in contemporary discourse for those who embrace the Green New Deal and its fundamental restructuring of modern industrial

[across-canadas-economy-and-beyond](#); Lawrence Solomon, “The Divine Right of Hereditary Chiefs to Override the Desires and Needs of Their People,” *Financial Post* [online], 6 March 2020, <https://business.financialpost.com/opinion/lawrence-solomon-the-divine-right-of-hereditary-chiefs-to-override-the-desires-and-needs-of-their-people>; Ryan Tumilty, “Pipeline project was 'hijacked' by 'group of five guys,' former Wet’suwet’en hereditary chief tells MPs,” *National Post* [online], 10 March 2020, <https://nationalpost.com/news/politics/pipeline-project-was-hijacked-by-group-of-five-guys-former-wetsuweten-hereditary-chief-tells-mps>. At around the same time as these protests were ongoing, Berkshire Hathaway pulled out of an LNG project in Quebec, see, John Robson, “Canada’s Stark New Reality Barges in after Warren Buffett Pulls Out,” *National Post* [online], 6 March 2020, <https://nationalpost.com/opinion/john-robson-canadas-stark-new-reality-barges-in-after-warren-buffett-pulls-out>. In addition to efforts to stymie the project, the US Federal Regulatory Commission ruled in late February 2020 against the Jordan Cove project -- a Canadian gas export facility on the Oregon Coast. See for example, Geoffrey Morgan, “Another Canadian LNG project blocked as hits keep coming for natural gas producers,” *National Post* [online], 27 February 2020, <https://business.financialpost.com/commodities/energy/another-canadian-lng-project-blocked-as-hits-keep-coming-for-natural-gas-producers>.

²⁷ Jesse Snyder, “The \$20B Frontier mine shelved amid escalating rail blockades, CEO says Canada must reconcile climate and oil,” *National Post* [online], 23 February 2020, <https://nationalpost.com/news/politics/teck-frontier-mine-alberta-oilsands>.

capitalist society.²⁸ As some scholars have pointed out, “[a]mong postmodernists, getting one’s terms publicly adopted is not merely an aspect of ideology, but the very essence of ideological warfare.”²⁹ It is even better when multiple terms are circulating with varying degrees of adoption and understanding in public discourse. Therefore, there is resistance within the movement to a *concrete* public definition or understanding of its ideological underpinnings, preferring instead the ever-shifting meanings, which allows more freedom of organizational and ideological movement.³⁰ This is most evident, since the end of the Cold War, in the softening of the memory and meaning of “socialism” and “communism.” The result has been that Bernie Sanders, self-proclaimed democratic socialist reinvented as a progressive who helped establish the Progressive International in late 2018, can be a viable presidential candidate in 2016 and 2020 for the American Democratic Party.³¹ Some would call progressivism a form of socialism that intends to progress towards a communist type societal organization. Others would argue that progressivism cannot be reconciled with socialism because the former advocates progressive changes to the economic and social system in order for all to equally have “enough”, however that may be defined, whilst the latter requires a *violent* revolution to replace the whole system.³² But what if

²⁸ Jason Bugajski, “Socialism is not Progressivism,” *The Hill* [online], 6 March 2020, <https://thehill.com/opinion/international/486150-socialism-is-not-progressive>. Bugajski provides a good brief description of how the terminology has been twisted over time, arguing that “‘progressivism’ is a broad conviction about social development that can be linked with almost any political ideology, ‘socialism’ has very specific precepts and goals. . . . The word was also hijacked by the Bolsheviks and other communists to claim that Marxist prophecies and Leninist practice would inevitably deliver progress for humanity. It has also been used loosely in American politics, often by liberals seeking to avoid the negative connotations of ‘liberal’ propounded by conservatives.”

²⁹ Robert L. Bradley Jr. and Roger Donway, “Capitalism, Socialism, and ‘the Middle Way’: A Taxonomy,” *The Independent Review*, Vol. 15, No. 1 (Summer 2010), 83. Bradley and Donway provide an excellent discussion of the evolution of the various terminology used to define and describe American political ideology.

³⁰ A good overview of liberalism and its variants internationally can be found in G. John Ikenberry, “The End of Liberal International Order?” *International Affairs* 94:1 (2018), 7-23. For a Chinese interpretation of liberalism and the evolution of Chinese Marxism as potential international hegemony see, Yan Xuetong, “Chinese Values vs. Liberalism: What Ideology Will Shape the International Normative Order?” *The Chinese Journal of International Politics*, 2018, 1-22.

³¹ Sammy Kayes, “Principles of a Modern Progressive Movement,” *Medium: The Progressive Times* [online], 23 January 2017, <https://medium.com/tptimes/principles-of-a-modern-progressive-movement-a2c3f9e5d25a>. See also, Jason Lemon, “Bernie Sanders is a Democratic Socialist not a Communist, Here’s the Difference,” *Newsweek* [online], 3 February 2020, <https://www.newsweek.com/bernie-sanders-democratic-socialist-not-communist-heres-difference-1485478>; Jordan Weissmann, “Calling Himself a Socialist Was One of Bernie Sanders’ Smartest Moves,” *Slate* [online.], 19 November 2015, <https://slate.com/business/2015/11/bernie-sanders-defines-democratic-socialism.html>.

³² For an interesting discussion on the evolution of the terminology see Annika Neklason, “A Linguist’s Case Against Socialism: History has made the term vague and unproductive. Should it be retired?” *The Atlantic* [online], 2 July 2019, <https://www.theatlantic.com/politics/archive/2019/07/a-linguists-case-for-progressive/593095/>. One commentator makes a provocative observation, “Socialists believe that by providing for

both streams converged and the revolution could take place *without* violence because people were convinced to *voluntarily overthrow* the system in order to save the world? This is what the Transnational Progressive Movement is working towards in 2020.

Although the international or Transnational Progressive Movement is an umbrella term for various social movements that encapsulate many different “justice” elements, for the purposes of this study, it can be more narrowly defined as a loose coalition or action system of self-defined “progressive” groups active in countries around the world, working towards a Great Transformation to voluntarily end capitalism, and the fossil fuel industry at its the heart. It is diverse in “membership” but unified in the ultimate goal – to overthrow and replace the capitalist modern industrial democratic system everywhere.³³ This was articulated quite clearly by George Monbiot, a well-known progressive, in a recent Munk Debate in Toronto, Ontario, where he argued for the proposition that “ending climate change requires the end of capitalism as we know it.”³⁴ His main point was that the very idea and system of capitalism is the problem, no variant of it will make things better. David Korten, former professor at the Harvard Business School and Club of Rome Member agreed, writing in February 2020, that Western capitalist industrial civilization was the world’s biggest problem.³⁵

their basic human needs, Progressives prevent the revolution from happening. The more people are satisfied, the less likely they are to rise up. A true Socialist prefers the Free-Market Capitalist economic system to the Progressive economic system because of the inequality it provides. The Socialist can readily achieve his goals in this system because there are more unhappy workers to draw to his cause.” Die Schweizer, “Socialism, Communism, Progressivism, and Beck,” The Nolan Chart Political Commentary for Every Viewpoint, 18 February 2011, <https://www.nolanchart.com/article83364-socialism-communism-progressivism-and-beck-html>.

³³ There are other social movement elements that comprise “progressivism” such as preference of the group over the individual, the hierarchy of group identity, prominence of multiculturalism, proportionality as fairness, the redefinition of democracy, deconstruction of national symbols, and transnationalism as a framework for global rather than national citizenship, to name a few. However, for the purposes of this study the discussion will be limited to the elements that pertain to decarbonization, energy transition, and the Great Transformation. For more information on social movements and progressivism see for example, John Fonte, “Liberal Democracy vs. Transnational Progressivism: The Future of the Ideological War Within the West,” *Orbis*, Summer 2002, https://www.ngo-monitor.org/data/images/File/transnational_progressivism_08312002.pdf; G. John Ikenberry, “The End of Liberal International Order?” *International Affairs* 94:1 (2018), 7-23; Robin Cohen, “Transnational Social Movements: An Assessment,” *WPTC-98-10*, 19 June 1998; Jose Castillo, “Internationalists United! PD and the Transnational Progressive Movement,” *USC Center on Public Diplomacy*, 10 January 2019, <https://www.uscpublicdiplomacy.org>; Donatella Della Porta and Mario Diani, *Social Movements: An Introduction* 2nd Edition (Oxford: Blackwell, 2006).

³⁴ George Monbiot, “Munk Debates: Ending climate change requires the end of capitalism as we know it,” *National Post* [online], 11 April 2020, <https://nationalpost.com/opinion/munk-debates-ending-climate-change-requires-the-end-of-capitalism-as-we-know-it>.

³⁵ David Korten, “My Priority for the Defining Year of Humanity’s Defining Decade,” 11 February 2020, <https://davidkorten.org/my-priority-for-the-defining-year-of-humanitys-defining-decade/>, 6.

Transnational Progressivism may also be understood within the context of the standard definition of social movements as “an action system, formed for a certain period of time and based on collective identity, of mobilized networks of groups and organizations which aim to bring about, prevent, or reverse social change by means of protest – if necessary, violent protest.”³⁶ Globally, but in America in particular, there are various factions competing for influence and power, just as in the early days of the Russian Revolution in 1917 there was a struggle between factions for dominance. For example, even though he has some prominent supporters, Bernie Sanders occupies the more radical wing of the American progressive movement, and is outside the progressive establishment circle represented by the Center for American Progress.³⁷ This does not prevent him from working towards a strengthening of the overall movement. To that end, 250 high profile supporters and other American union and city representatives, academics and journalists participated at the 2018 “The Gathering” organized by his Sanders Institute in order to discuss and develop an action plan to further progressive policies in the US and internationally. One outcome of “The Gathering” was the creation, with DiEM25, of the Progressive International “to create a global network of individuals and organizations that will fight together for dignity, peace, prosperity, and the future of our planet.”³⁸ The ultimate goal is to create a post-capitalist society along progressive values with a Global Green New Deal at its heart.³⁹

The most prominent and influential of the American progressive movement is the Center for American Progress, and its founder, John Podesta, occupied a key role in advising the Obama administration. Podesta has been a key figure in American politics, first as the chief of staff for President Bill Clinton, then as the co-chair of Obama’s transition team, and as a counselor to Obama on climate and energy issues. Preparing for the possibility of forming the next

³⁶ Dietz and Garrelts, *Routledge Handbook of the Climate Change Movement*, 6.

³⁷ Some high-profile supporters include Bill McKibben, Bill de Blasio, Naomi Klein, Jeffrey Sachs, Cornel West, former Greek Finance Minister Yanis Varoufakis, as well as other less prominent supporters like Tulsi Gabbard, NDP MP Niki Ashton, actors Danny Glover, Susan Sarandon, and John Cusack.

³⁸ Progressive International, “Open Call to All Progressive Forces,” <https://www.progressive-international.org/open-call>. DiEM25 (Democracy in Europe 2025) is a new but important European mobilized group pushing for a more “democratic” EU that will be more sustainable and leave fossil fuels in the ground. The movement seeks to secure more progressive representatives in the European parliament through its Progressive Agenda for Europe to “imagine a post-capitalist economic and social model.” It was founded by former Greek Finance Minister Yanis Varoufakis. <https://diem25.org/progressive-agenda-for-europe/>.

³⁹ Jayati Ghosh, “How to Build the Global Green New Deal,” Progressive International, <https://progressive-international/blueprint/80b03a68-68ca-4322-a3ad-c91775f167b9-jayati-ghosh-how-to-build-the-global-green-new-deal/en>.

administration, in October 2008, the Center of American Progress assisted in identifying “diverse ‘green’ candidates” for administration positions. Some people on the list who came to hold positions include John Holdren (science advisor), Dr. Stephen Chu (Secretary of Energy), and Van Jones (special advisor for green jobs).⁴⁰ When President Obama needed results, or to signal administration commitment on an issue, he would assign John Podesta a leadership role. For example, after Cap and Trade failed and Obama was re-elected in 2012, Podesta was given the task of framing and winning support for Obama’s second term climate action plan. As he explained to an environmental group, “The president asked me to return to the White House...to ensure implementation of the climate action plan that you heard about and to push forward with great vigor to transform our economy.”⁴¹ Although its influence at the center of the American government suffered a setback after the defeat of Hilary Clinton in 2016, it continues to exert its influence within the American and international progressive movement.⁴² It does so by being a center for organizing and coordinating politicians, activists, and researchers, such as hosting events and bringing key people of the movement together, like the discussion of former California government Jerry Brown and German Green Party co-chair Robert Habeck in January 2020 on climate change and the agenda for global action in 2020.⁴³ Given these developments and discussion what does progressive mean today? Progressive today means using democracy and capitalism to progressively, gradually, move people and society towards a type of socialism and a global collective that will replace the modern industrial capitalist society with a managed human society and interaction through technology under the auspices of saving the Earth from alleged human caused climate change.

⁴⁰ Email from Carol Browner to John Podesta and M. Froman, Subject: “Diverse ‘green’ candidates”, 24 October 2008, <https://wikileaks.org/podesta-emails/emailid/58298>. Interestingly, one candidate, physicist Dr. Dan Kammen, did not serve in the White House but instead filled a newly created World Bank position in 2010, Chief Technical Specialist for Renewable Energy and Energy Efficiency. <http://kammen.berkeley.edu/>.

⁴¹ Edward-Isaac Dovere and Carrie Budoff Brown, “How John Podesta is Changing the W.H.,” *Politico*, 6 February 2014, <https://www.politico.com/story/2014/02/john-podesta-white-house-barack-obama-administration-103191>. In addition, according to Podesta’s biography at CAP he also served as “a member of the U.N. Secretary General’s High-Level Panel of Eminent Persons on the Post-2015 Development Agenda.” <https://www.americanprogress.org/about/staff/podesta-john/bio/>.

⁴² I have focused here on two significant American wings of the movement as there are many and these are the most influential at the moment. Canada’s progressives play a role in the overall Transnational Progressive Movement, but due to time constraints and to keep the discussion focused on the international movement they are not discussed in detail. This could be an area for further research.

⁴³ Tackling the Climate Crisis and Greening our Economies: A Trans-Atlantic Conversation, <https://www.americanprogress.org/events/2020/01/15/479461/tackling-climate-crisis-greeing-economies>.

B. Climate Change Rationale for Revolution

Climate change, the successor to global warming and global cooling before that, is a useful vehicle, pretext, or as Terrence Corcoran describes it “a marketing tool”, to pursue and achieve a *voluntary* relatively non-violent overthrow of capitalism and our current modern industrial society.⁴⁴ It is argued that our very planet is at risk, not only from industrial human activity, but also from economic growth and individual wealth.⁴⁵ Since the proposed cause of climate change by human activity is the emission of greenhouse gases (GHGs)—most notably carbon dioxide (CO₂) but also methane and nitrous oxide and a few others that are created and emitted through modern industrial production, transportation, heating, and agriculture—and gases rise and circulate in the atmosphere, it provides an issue that transcends borders and requires an international response.⁴⁶ For the past 50 years, since the first Earth Day in 1970, there have been various environmental catastrophes lurking just around the corner: resource depletion (Club of Rome, *The Limits to Growth*), over population (John Ehrlich, *The Population Bomb*), biosphere degradation (Barbara Ward, *Only One Earth*).⁴⁷ None of which proved accurate, yet the credibility of the doom and gloom only diminished temporarily to resurface and become entrenched in the global agenda through the United Nations – the United Nations Environment Programme, the United Nations Framework Convention on Climate Change, and its information gathering and assessment body the Intergovernmental Panel on Climate Change (IPCC). There have been several excellent books and articles written about the evolution of the environmental movement and the climate change debate, but it is beyond the scope of this study to explore this

⁴⁴ Terrence Corcoran, “The blockades are a clash over socialism, not Indigenous rights and climate change,” *Financial Post* [online], 25 February 2020, <https://business.financialpost.com/opinion/terrence-corcoran-the-blockades-are-a-clash-over-socialism-not-indigenous-rights-and-climate-change>.

⁴⁵ Hans Joachim Schellnhuber, “Expanding the Democracy Universe,” 20 February 2013, Center for Humans & Nature, <https://www.humansandnature.org/democracy-hans-joachim-schellnhuber>. See also, Monbiot, “Ending climate change requires the end of capitalism as we know it.”

⁴⁶ Countries agreed through The United Nations Framework Convention on Climate Change (UNFCCC) on a collection of seven GHGs that were proposed as affecting Earth’s climate: CO₂, methane, nitrous oxide, sulphur hexafluoride, nitrogen trifluoride, perfluorocarbons, and hydrofluorocarbons. Each signatory must compile and report on its GHG emissions inventory. See for example, <https://www.canada.ca/en/environment-climate-change/services/climate-change/greenhouse-gas-emissions/inventory/emissions.html>.

⁴⁷ Although the environmental movement can be traced back to earlier concerns about conservation and then to Rachel Carson’s seminal work *Silent Spring*, all of which established the groundwork for subsequent political activities, it was not until 1970 that it captured more international attention. For an excellent discussion of the details behind the evolution of the environmental movement see Rupert Darwall. *The Age of Global Warming: A History*. (London: Quartet Books, 2013), and the sequel, *Green Tyranny: Exposing the Totalitarian Roots of the Climate Industrial Complex*. (London: Encounter Book, 2017).

at length. What is important is to recognize that the message of environmental catastrophe due to human activity has been around for a while, seeping into our collective consciousness, and it is being used as a vehicle to further an agenda that has at its core the replacement of the post-enlightenment western industrial capitalist way of life.⁴⁸ Nevertheless, without going into too much detail about the climate change debate, it is necessary to review a few essential points.

The IPCC was created in 1988 in order to study the hypothesis that the human production of GHGs is causing global warming – also referred to as anthropogenic global warming (AGW). It was established as an ongoing intergovernmental bureaucratic structure to maintain academic networks and keep governments engaged in the issue rather than seeing momentum lost after grand summits, while also serving to gradually embed sustainability within participating organizations and states.⁴⁹ The goal was to provide the evidence and policy options for action by governments through its three working groups (WG): WGI - assess available evidence, WGII - assess environmental and socio-economic impacts, and WGIII - provide mitigation options. With perceived advancements in technology and research methods, such as satellite temperature and monitoring data, ice core samples, and tree ring proxy samples, approximations of past and future climate can be attempted utilizing computer analysis and modelling, which comprise many of the scientific studies in the reports.

One of the important aspects of the present climate change discussion is the lack of historical context for the claims being made. Are the temperature fluctuations within a normal cyclical pattern? Does the Earth have different climate cycles? Has the Earth been warmer or cooler before humanity began producing greenhouse gases because of industrialization? These are crucial questions that tend to get ignored, dismissed, or as was shown in the Climategate emails – manipulated, in the IPCC reports for policymakers. There is some very good data to indicate these natural cycles exist, and the Earth has been warmer with more CO₂ in the atmosphere in the past.⁵⁰ Represented in Figure 2 on the following page, an analysis of Antarctic ice core samples by paleo-climatologists, indicate that over the past 400,000 years Earth has had

⁴⁸ See for example this op-ed by Melanie Phillips who discusses other commentators who have come to realize that net-zero and carbon neutrality will generate a civilizational collapse of modern life, “The Real Western Civilisation Emergency,” 22 February 2020, <https://www.melaniephillips.com/real-western-civilisation-emergency/>.

⁴⁹ Darwall, *Age of Global Warming*, 88-94; Ball, *Human Caused Global Warming: The Biggest Deception in History* (Tellwell, 2016), 2-4.

⁵⁰ The Climate Discussion Nexus provides an excellent overview, explanation, and discussion of these questions. <https://climatediscussionnexus.com>.

more cooling than warming, and that in between these long periods of cooling, there are shorter periods of warming. We are currently in an inter-glacial warming period, so it is no surprise that temperatures are naturally increasing. There is a clear large fluctuation between cold and warm periods, indicating that natural cyclical phenomena drive global temperature. Furthermore, the data seems to show that previous inter-glacial periods have been *warmer* than today. Even if human activities are contributing to changes in global temperature, the temperature increase is still less than previous eras, and are easily overwhelmed by natural occurring cycles.

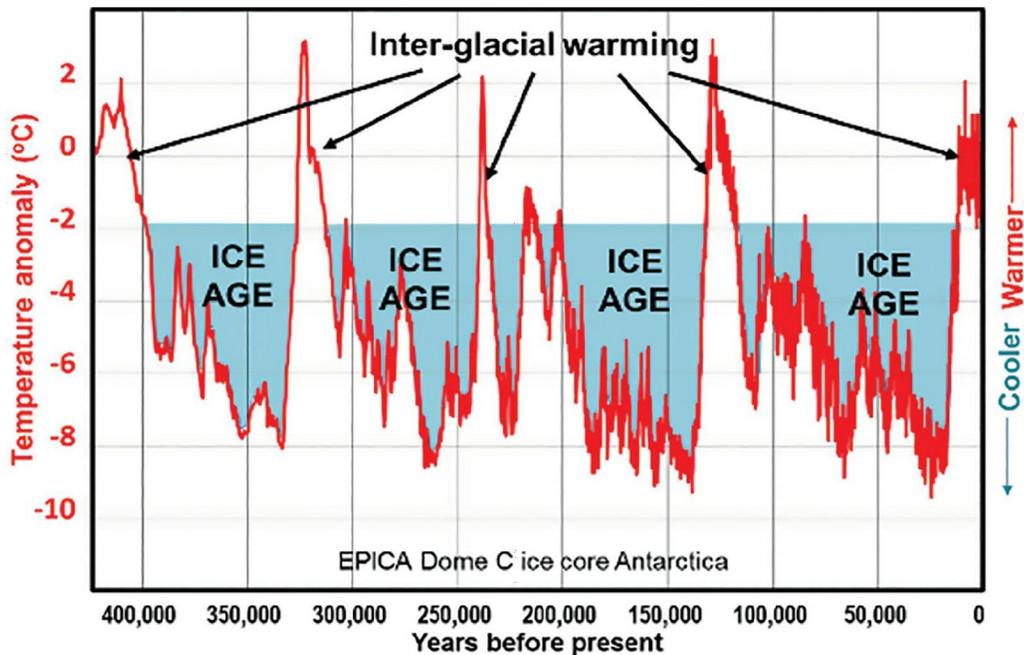


Figure 2 Evidence of Natural Warming and Cooling Cycles from Antarctic Ice Cores, 400,000 BC to present. Source: Jouzel J, et al. EPICA Dome C Ice Core 800K Yr Deuterium Data and Temperature Estimates. IGBP PAGES/World Data Center for Paleoclimatology Data Contribution Series # 2007-091. NOAA/NCDC Paleoclimatology Pro-gram, Boulder CO, USA.

One might argue that ice core samples from Antarctica do not give an accurate representation as it is only one region, in addition, it is such a large time scale that it does not shed light on more recent activities. Another study utilizing an assortment of non-tree ring data such as borehole data, lake pollen, diatoms, cave layer thicknesses and so on, taken from a number of locations around the world, created a 2,000 year global temperature profile. The results shown in Figure 3 on the following page clearly show that the Medieval Warm Period not only existed *before* there was industrial activity with large amounts of CO₂, it was *warmer* than

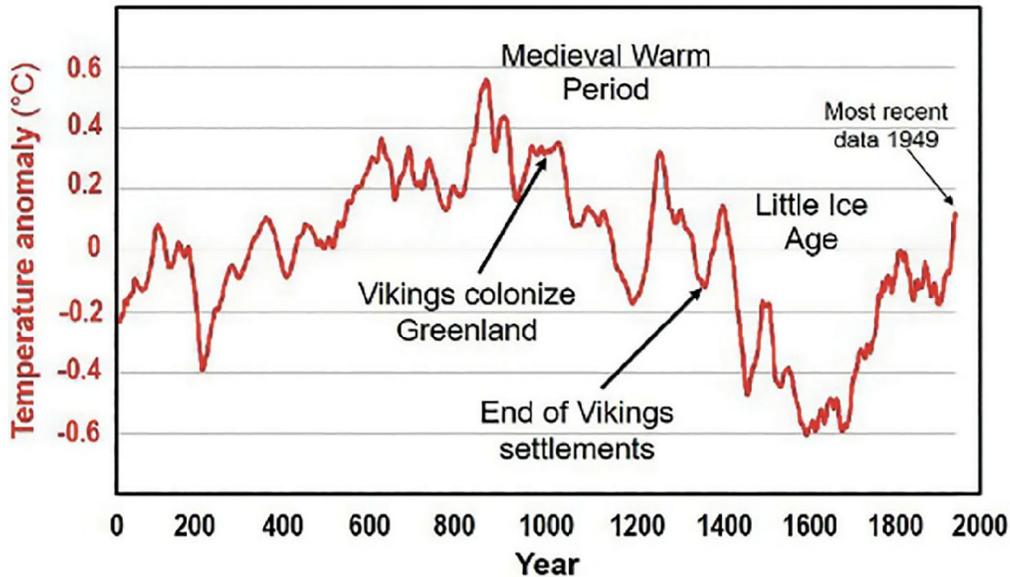


Figure 3 Non-Tree Ring Data for 2,000 years Temperature Data. Source: Loehle C, McCulloch JH (2008a) A 2000-Year Global Temperature Reconstruction Based On Non-Tree Ring Proxies. Energy & Environment, Vol 18, No 7&8; and Loehle C, McCulloch JH (2008b) Correction to: A 2000-Year Global Temperature Reconstruction Based On Non-Tree Ring Proxies. Energy & Environment, Vol 19, No 1.

today. It also clearly illustrates that the Little Ice Age existed and was significantly cooler than today, and that the Earth’s temperature has been on a steady increase coming out of the cooling period indicating that modern temperature increases are part of a normal cycle. None of this should be controversial. Yet, the entire idea of a Medieval Warm Period and a Little Ice Age has been challenged and dismissed by some vocal researchers.⁵¹ The most famous climate researcher who sought to diminish both the Medieval Warm Period and Little Ice Age in a way that would indicate the past 1,000 years has been quite stable, is Dr. Michael Mann. Figure 4 on the following page displays a comparison of two climatologists’ temperature reconstructions: Dr. Mann’s and Dr. Tim Ball’s. When those advocating a Green New Deal talk about “pre-industrial” temperatures and emissions, it is Mann’s version that is in the back of their minds; a distorted idea of past stability that has been upset by modern human activity. Those who question the global warming or climate change narrative have Ball’s version in mind.

⁵¹ An entire website is dedicated to “debunking” climate change critics, see <https://skepticalscience.com/argument.php>.

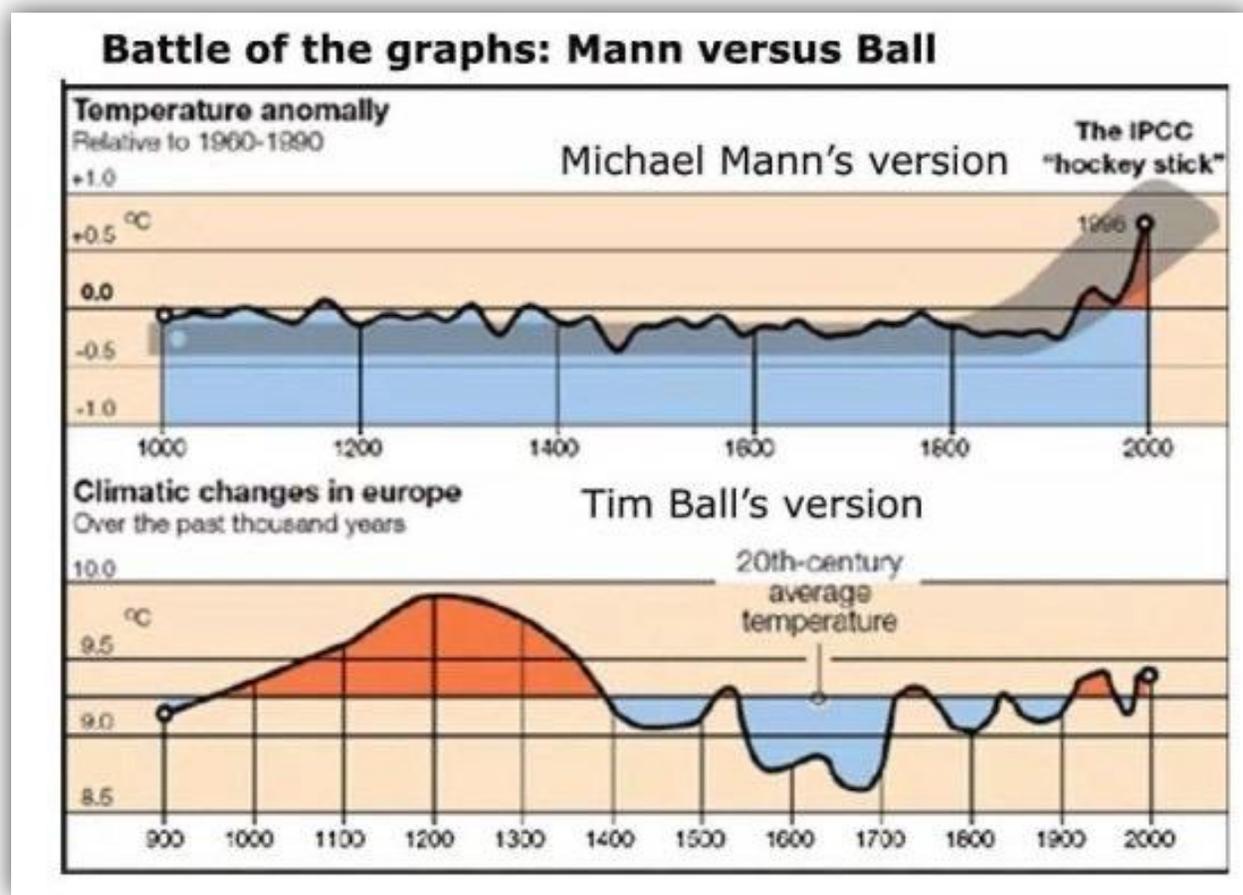


Figure 4 Battle of the Graphs: Mann versus Ball (Source: <https://www.climatedepot.com/2019/08/24/climatologist-dr-tim-ball-defeats-michael-manns-climate-lawsuit/>)

The graphs and information presented briefly above are a tiny fraction of what is presented, debated, and published within the field of climate science, paleo-climatology, meteorology, and other climate related fields. There is a great deal of select specialist information that is compiled in the IPCC scientific reports, and it was recognized at the beginning that these would be too technical and detailed for policymakers. Therefore, a *Summary for Policymakers* accompanies each report, which does not always accurately reflect the nuances and limitations within the scientific papers and dampens disagreements and dissent amongst scientists. As Michael Hart points out in *Hubris*,

The panel was sold to the world as an independent, objective source of advice to governments, and for the next 25 years the media faithfully echoed that myth as the panel poured out one 'authoritative' report after another. In reality, the panel's leadership was chosen from the activist scientists who had from the beginning been closely involved in developing the catastrophic climate change story. Many of the scientists who contributed to the reports formed part of a closely knit group of researchers who shared the alarmist

perspective. A few scientists who were not part of the ‘in’ group participated in the early days but soon wore out their welcome and concentrated on their own work or became much-aligned critics.⁵²

Gradually, the scientists whose data and conclusions did not conform with the overall message of AGW, or who criticized the inclusion of activist reports as unbiased scientific data,⁵³ or who expressed doubts about the process and the quality of the research submitted, were diluted, sidelined, or excluded from the process.⁵⁴ It began with denial of funding, then exclusion from publication, and removal from academic journal editorial boards. This deliberate exclusion was dismissed by the IPCC scientists and their activist supporters as conspiracy theories, suggesting that their critics’ work was just not good enough to be published in peer reviewed journals. However, the Climategate scandal of 2009, that almost no one remembers now, would prove the critics right.

A series of emails were leaked in November 2009 from one of the world’s main climate research institutes, the University of East Anglia’s Climatic Research Unit (CRU). The emails called into question the data sets used by IPCC researchers, revealed how key scientists cooperated to prevent the release of their computer models and data, exposed how the scientists manipulated or “adjusted” the data to ensure it always displayed global temperatures steadily trending upward, and showed how these scientists worked to silence critics by “discrediting or freezing out any scientific journal which dares to publish their critics’ work.”⁵⁵ A parliamentary

⁵² Michael Hart, *Hubris: The Troubling Science, Economics, and Politics of Climate Change* (Ottawa: Compleat Desktop Publishing, 2015), 165. The IPCC process is further dissected by Donna Laframboise in *The Delinquent Teenager Who was mistaken for the World’s Top Climate Expert* (Toronto: Ivy Press, 2011). One might notice that most books written that criticize the international climate change regime are published either independently or with a small publisher; larger presses will not publish them, nor will university presses, as Michael Hart discusses in the preface to his book *Hubris*.

⁵³ Laframboise, *Delinquent Teenager*, 254.

⁵⁴ In a normal “peer review” process, the reviewers do not know who wrote the paper in question, nor does the author know who the reviewers are. However, in the IPCC review process *anyone* can sign up to be a reviewer, including the authors themselves, and thousands of comments are generated. The reviewers know who the authors are, and the authors know who the reviewers are. This can lead to some comments and criticisms being dismissed simply because of from whom they originate. It also allows authors and those leading the working groups to see who is disagreeing and treat them accordingly.

⁵⁵ Christopher Booker, “Climate Gate: this is the worst scientific scandal of our generation,” *The Telegraph* [UK] [online], 28 November 2009, <https://www.telegraph.co.uk/comment/columnists/christopherbooker/6679082/Climate-change-this-is-the-worst-scientific-scandal-of-our-generation.html>. See also, Steven Mosher and Thomas W. Fuller, *Climategate: The Crutape Letters* (Nquire Publishers, 2010).

“inquiry” was undertaken in the UK regarding the leak and downplayed the significance of the exchanges between the scientists. The outcome was neither a vindication nor an exoneration.⁵⁶

Although Climategate was probably the biggest reason for the failure of the 2009 Copenhagen climate negotiations, and a contributing factor in the failure of President Obama to pass his Cap and Trade legislation, it was only a temporary setback for the Transnational Progressive Movement. Efforts were doubled to produce more studies and more media coverage about human caused climate change. It was also absolutely necessary for the success of the Great Transformation that a more pronounced effort was made to remove skeptical viewpoints from the public sphere after Climategate. Journalists, commentators, conservative magazines, newspapers, and think tanks were sued for reporting on the scandal or mentioning the names of the scientists involved, leading to a chilling effect in the media.⁵⁷ By 2018, “impartial” BBC officially employed a policy of no longer including skeptical representatives for “debates” or stories on climate change.⁵⁸ Smear campaigns were undertaken against outspoken and well-respected questioning climate scientists like Tim Ball, Roger Pielke Jr., and Judith Curry.⁵⁹ For all intents and purposes in the public sphere, “the science is settled”, a chilling situation for a discipline that needs disagreement.⁶⁰

⁵⁶ S. Fred Singer, “ClimateGate Whitewash,” Watts Up With That, 3 April 2010, <https://wattsupwiththat.com/2010/04/03/singer-on-climategate-parliamentary-inquiry/>; Judith Curry, “Legacy of Climategate – 10 years later,” Climate Etc., 12 November 2019, <https://judithcurry.com/2019/11/12/legacy-of-climategate-10-years-later/>.

⁵⁷ Michael Bastasch, “Supreme Court Asked to Hear Case Involving Leaked ‘Climategate’ Emails,” *The Daily Caller* [online], 24 May 2019, <https://dailycaller.com/2019/05/24/supreme-court-climategate-emails/>. See also, Steve Goreham, “A Rare Debate on the ‘Settled Science’ of Climate Change,” Watts Up With That, 2 October 2014, <https://wattsupwiththat.com/2014/10/02/a-rare-debate-on-the-settled-science-of-climate-change/>.

⁵⁸ Ben Webster, “BBC Freezes Out Climate Sceptics,” *The Times* [UK], 8 September 2018, <https://www.thetimes.co.uk/edition/news/bbc-freezes-out-climate-sceptics-fqhqmrf6>. It should be noted that every time a climate skeptic was interviewed on a BBC programme, activist complaints would be made in order to create the perception that “the public” was offended by the inclusion of a dissenting opinion.

⁵⁹ Tim Ball, *The Deliberate Corruption of Climate Science* (Seattle: Stairway Press, 2014); Rupert Darwall, *Green Tyranny: Exposing the Totalitarian Roots of the Climate Industrial Complex* (London: Encounter Books, 2017); Roger Pielke Jr., *The Rightful Place of Science: Disasters and Climate Change* (Charleston: Consortium for Science, Policy & Outcomes, 2018); Roger Pielke Jr., “How Academic ‘Blacklists’ Impede Serious Work on Climate Science,” *Forbes*, 9 February 2020, <https://www.forbes.com/sites/rogerpielke/2020/02/09/a-climate-blacklist-that-works-it-should-make-her-unhirable-in-academia/#318b1f326368>. Wiki-leaks exposed the involvement of the Center for American Progress in coordinating attacks on Pielke, see, J. Legum to T. White and Tom Steyer, “Climate Progress in Action,” 28 July 2014, <https://wikileaks.org/podesta-emails/emailid/19569>.

⁶⁰ As Albert Einstein said, “Genius abhors consensus because when consensus is reached, thinking stops. Stop nodding your head.” <https://www.azquotes.com/quote/824260>.

Since the creation of the IPCC, and its ranks being filled with climate alarmists, there has been a constant drum beat of crisis and catastrophe, reaching a crescendo with the repeated declarations of a “climate emergency”. Reinforcing this is the ongoing global propaganda campaign to demonize carbon dioxide; the Canadian government, and the US Environmental Protection Agency (EPA) went so far as to publicize CO₂ as “pollution” when it is a gas *essential* to all life on Earth. To enhance the idea of a “climate emergency” in the public perception, every weather and even geologic event (including tsunamis, earthquakes, and volcanoes) is put at the feet of the ubiquitous “climate change,” even when the facts and data prove otherwise. For example, with respect to so-called “extreme” weather events there are many media accounts of either more storms or fewer but more severe weather “events”, but the data, even that from the questionable IPCC, does not indicate that is happening.⁶¹ Context is lacking; undoubtedly, insurance companies have been paying out more damages because there are more people; more people are buying insurance; people have more possessions that are more expensive and insured. Another factor is that people are living in more risky areas such as flood plains and hurricane or tornado zones. It is not that there are necessarily more or more severe storms, but that there are more people living, reporting, and being insured in areas where storms happen.⁶²

Saving the Earth from the “climate emergency” is given as the reason for dismantling and replacing the most successful form of economy and society in the history of all mankind that has lifted more people out of poverty and illness and increased life expectancy than ever before, as shown in Figure 5 below.⁶³ Extreme poverty has fallen below 10 percent of the world’s population; child mortality rates have fallen to record levels; famines are rare; many terrible

⁶¹ Michael Bastasch, “UN IPCC Report Admits Extreme Weather Events Have Not Increased,” *Daily Caller* [online], 8 October 2018, <https://www.climatedepot.com/2018/10/08/un-ipcc-report-admits-extreme-weather-events-have-not-increased/>.

⁶² See Pielke Jr., *Rightful Place of Science: Disasters and Climate Change*, for a detailed discussion of the data related to natural disasters and the lack of evidence for an increase in “extreme” weather events. Included, is a discussion on the evolving definition of “extreme” and lack of contextualization.

⁶³ A compelling case is made by Stephen Moore and Kathleen White in *Fueling Freedom: Exposing the Mad War on Energy* (Regnery Publishing, 2016), Alex Epstein, *The Moral Case for Fossil Fuels* (Portfolio, 2014), and Peter J. Ferrara, “Fossil Fuels, Not the Green New Deal, Improve Human Welfare, *Issues & Insights* [online], 26 March 2020, <https://issuesinsights.com/2020/03/26/fossil-fuels-not-the-green-new-deal-improve-human-welfare/>, and Marian L. Tupy, “Celebrate the Industrial Revolution and What Fueled it,” *Human Progress* [website], 28 October 2016, <https://www.humanprogress.org/article.php?p=446>. See also, Hart, *Hubris*, 287, Figure 8-1 “Fossil Fuels and Human Progress.”

diseases like polio and malaria are in decline; weather related deaths have decreased by 95 percent since the 1960s; global life expectancy has increased; humanity is becoming more

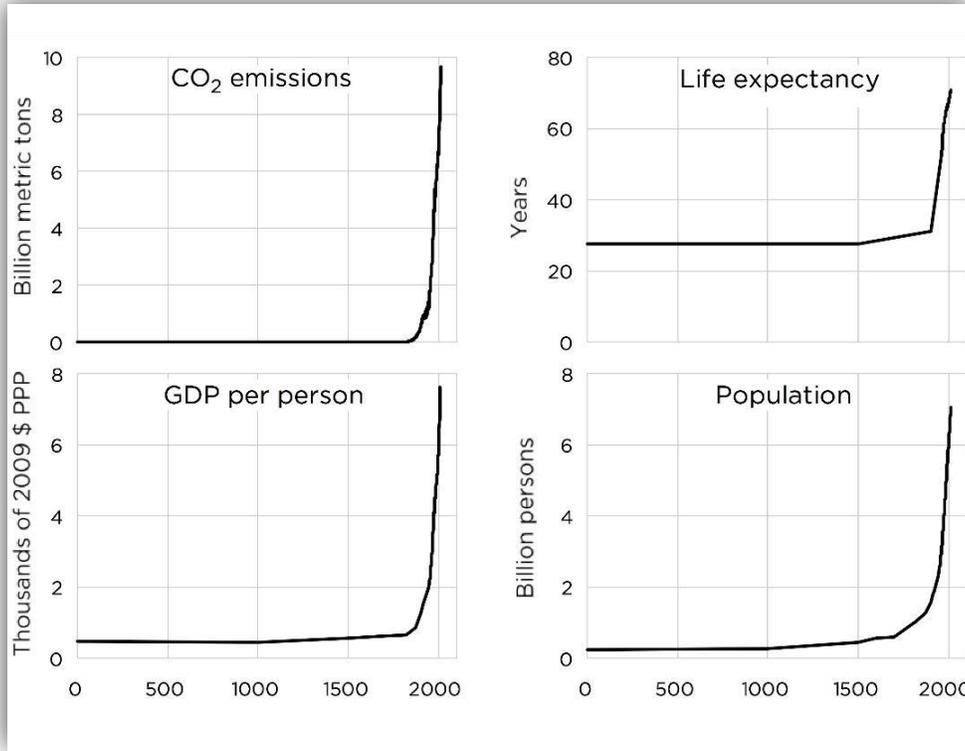


Figure 5 Fossil Fuel Use and Human Progress (Source: figure 3.1 from *Moral Case for Fossil Fuels*, <https://www.moralcaseforfossilfuels.com/data/>)

efficient at using its land and resources; food production has increased using less land; and the number of forests worldwide have increased.⁶⁴ All of this good news is drowned out by the rhetoric of the “climate emergency” and the proposed need to fundamentally transform modern western industrial capitalist societies to save the planet from warming by reducing GHG emissions to net-zero. What evidence is being used to convince countries to embark upon this path?

The Western countries (and the world) are being convinced to scrap their economies and way of life based on computer *models* that are trying to predict Earth’s climate 30 years from now. How reliable and potentially accurate are these models? We have 30 years of model predictions already, how accurate have they been? One graph, shown in Figure 6 below, and

⁶⁴ Matt Ridley, “We’ve just had the best decade in human history. Seriously,” *The Spectator* [UK] [online], 29 December 2019, <https://www.spectator.co.uk/article/we-ve-just-had-the-best-decade-in-human-history-seriously-29-december-2019>.

presented to the US Congress, demonstrates clearly that—all—of the models have been wrong with the average running too hot.⁶⁵ The point is that these are *models* – they are only as good as the data, variables, and parameters programmers put into them.

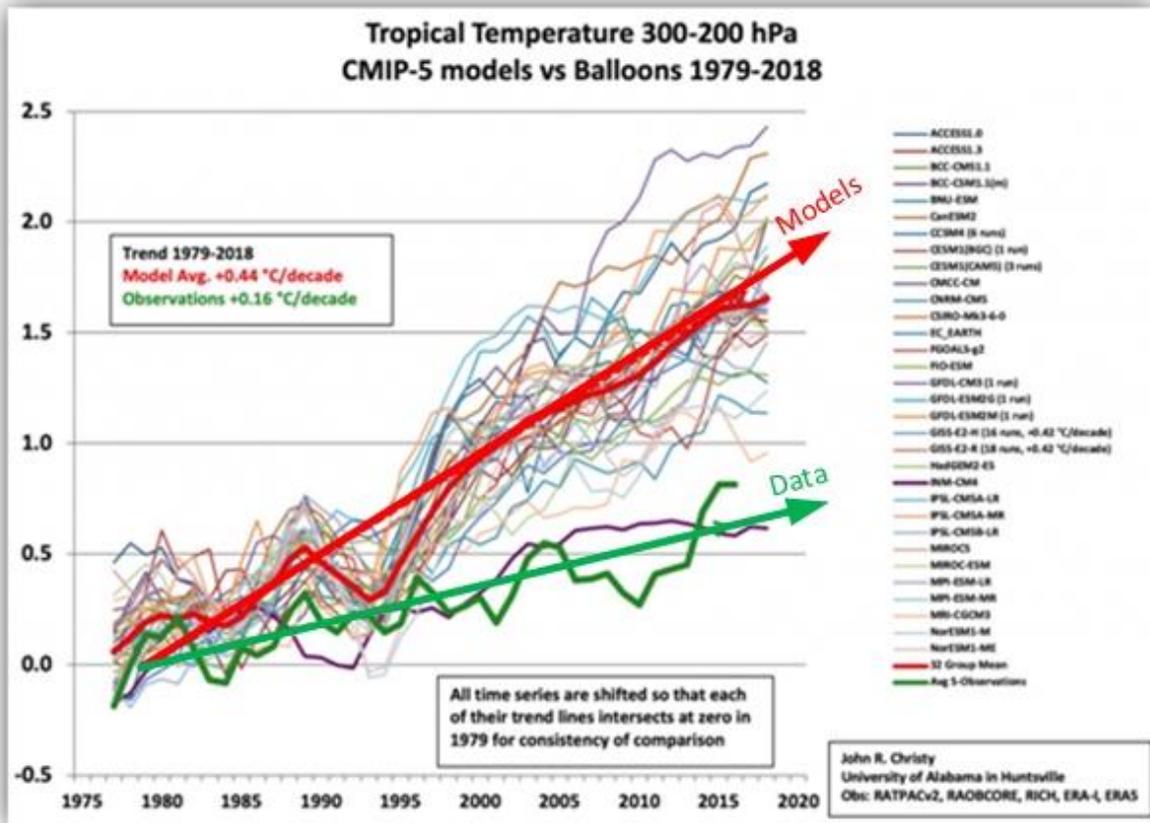


Figure 6 Climate Models vs Balloon Temps, 1979-2018 (Source: https://www.eike-klima-energie.eu/wp-content/uploads/2020/02/rahm_1-1024x731.png)

Most models do not, cannot, include all the variables that affect Earth’s climate, and they represent temperatures that are very recent, leaving out important long-term trends.⁶⁶ It seems rather foolhardy to commit to completely dismantling the global economy based on model

⁶⁵ Many have commented on this inconsistency between models and real-world data including, most recently, Joe Oliver, “Teck Resources decision proves Canada is inhospitable to energy development,” *Financial Post*, 24 February 2020,

⁶⁶ Even a Nobel winning economist admits the short-comings of models. In a recent *Foreign Affairs* article, William Nordhaus advocates caution in using economic models to accurately predict the future, “Such detailed modeling results should not be taken literally. Modeling offers insights rather than single-digit accuracy.” The same should apply to climate models. William Nordhaus, “The Climate Club: How to Fix a Failing Global Effort,” *Foreign Affairs* [online], 10 April 2020, <https://www.foreignaffairs.com/print/1125787>.

predictions that have not been accurate in the past yet are supposed to be accurate for the future. The evidence in Figure 6 should be enough to motivate governments that have signed the Paris Agreement to withdraw and abandon the harmful climate policies, including an energy transition, that will lead to a catastrophic decrease in their citizens' quality of life. Instead, let us adapt to whatever natural ongoing climate changes are taking place and forego a harmful and unnecessary energy transition.

C. Global Energy Transition

The global energy transition to “net-zero” is at the core of the “paradigm shift” or Great Transformation of modern western democratic capitalist industrial society. What is it? Who wants it and why? This is a complicated question. Essentially, the energy transition means reducing *global* anthropogenic carbon emissions to zero. Some have categorized it as “net-zero”, which means allowing only the amount of emissions that are cancelled out by carbon sinks, carbon capture, or extracting the carbon dioxide from the atmosphere. Others suggest it ought to be a true zero emissions from human activity.⁶⁷ There are two competing pathways to zero emissions: a gradual phasing out of hydrocarbons and replacement with renewables that will permit energy consumption at similar or slightly reduced levels; or significant degrowth that shrinks both production and consumption through a “radical change of lifestyle, attitudes, social norms, institutions and value systems distinct from a growth [capitalist] society.”⁶⁸ The former has been marketed to developed countries, financial institutions, corporations, businesses, and the general public for some time.⁶⁹ However, what has actually been agreed upon in the Paris Agreement is the latter. For example, an analysis of the G20 on the Nationally Determined

⁶⁷ See for example this collaborative report with scholars from Cambridge, Oxford, and other British universities, J.M. Allwood, C.F. Dunant, et al, “Absolute Zero,” UK FIRES, November 2019, <https://www.repository.cam.ac.uk/bitstream/handle/1810/299414/Absolute-Zero-digital-280120-v2.pdf?sequence=6&isAllowed=y>.

⁶⁸ Jin Xue et al., “Two Contrasting Scenarios for a Zero-Emission Future in a High-Consumption Society,” *Sustainability (Switzerland)* 9, no. 1 (2017), <https://doi.org/10.3390/su9010020>.

⁶⁹ Germany has been working on an energy transition or *Energiewende* nationally for some time, but after spending several hundred billions of Euros building close to 30,000 wind turbines and 1.6 million Photovoltaic systems, in 2018 wind, solar, and water accounted for 27% of its energy production and only 3.1% of its consumption. Part of the reason is that Germany rashly agreed to decommission its nuclear power plants after the Japanese Fukushima disaster in 2011, and even though it still operates coal power plants, which it is also phasing out, it must import electricity from other EU countries to smooth out the intermittency of its energy grid. See, Michael Shellenberger, “Renewables Threaten German Economy & Energy Supply, McKinsey Warns In New Report,” *Forbes* [online], 5 September 2019. <https://www.forbes.com/sites/michaelshellenberger/2019/09/05/renewables-threaten-german-economy-energy-supply-mckinsey-warns-in-new-report/#e94a4c8e482a>.

Contributions (NDCs) by the group Climate Transparency, points out that total *global* fossil fuel primary energy needs must fall from the current 80% to 33%, with the bulk of reductions coming from the advanced OECD countries by 2050. Of some importance is the fact that the same numbers and proposals were put forward in 2009 by the UN and the Heinrich Böll Stiftung foundation as the Global or Transatlantic Green New Deal.⁷⁰

Those who desire a new energy paradigm are diverse – while they are mostly from the left, there are some on the “conservative” side who support an energy transition – perhaps out of expediency, or even rent-seeking, rather than a firm belief in its necessity. Some see it as a way to become more self-sufficient and ostensibly less vulnerable to external supply and price interruptions and shocks. This reflects more of a national security and diversity of energy sources argument, particularly with the echoes of the energy crises of the 1970s and 1980s. Some on the left see it as a means to improve the environment, like the Audubon Society or Ducks Unlimited; others as a way to upend and replace capitalism. Others on the left, such as Communist China, might have alternative reasons. One could make an argument that China is encouraging an energy transition within the Transnational Progressive Movement as an opportunity to weaken the west (especially the US if possible) and assert the dominance of “socialism with Chinese Characteristics” as a global alternative.⁷¹

An interesting development with respect to the energy transition that requires more research is the Chinese global plan, endorsed by the UNFCCC, called the Global Energy

⁷⁰ Climate Transparency, *Brown to Green Report: The G20 Transition Towards a Net-Zero Emissions Economy 2019* (Berlin: Climate Transparency, 2019), 25. <https://www.climate-transparency.org>. (Lead authors: Lena Donat (Germanwatch), Hannah Schindler (Humboldt-Viadrina Governance Platform), and Jan Burck (Germanwatch). Although the authors state the global fossil fuel consumption is 67%, that number is incorrect. The World Bank, IEA, and BP Statistical Review concur that the number is closer to 80% -- this includes coal, oil, and natural gas. Therefore, I have used the 80% number rather than the 67% included in the report. World Bank, Fossil Fuel Energy Consumption % of total, <https://data.worldbank.org/indicator/EG.USE.COMM.FO.ZS>; International Energy Agency, Data and Statistics, Total Final Consumption, World, 1990-2017, <https://www.iea.org/datat-and-statistics>; BP Statistical Review of World Energy 2019, <https://bp.com/energyoutlook>, 10. For the earlier Green New Deals see, Barbier, “A Global Green New Deal Executive Summary,” and French, et al, “Toward a Transatlantic Green New Deal.”

⁷¹ Todd Royal, “China and India Will Watch The West Destroy Itself,” *Eurasia Review* [online], 5 June 2019, <https://www.eurasiareview.com/05062019-china-and-india-will-watch-the-west-destroy-itself-oped/>. For an assessment of this strategy within the context of Covid-19 see, Emily de La Bruyere and Nathan Picarsic, “Competition Meets Crisis: China’s Perverse Opportunity and a Strategic Response,” *National Interest* [online] 23 March 2020, <https://nationalinterest.org/feature/competition-meets-crisis-china%E2%80%99s-perverse-opportunity-and-strategic-response-136227>.

Interconnection.⁷² The purpose of the plan is to create a global electricity grid using Ultra High Voltage (UHV) transmission lines that would link renewable energy globally utilizing a smart grid powered by machine learning and AI to ensure efficient allocation of resources. This proposal seems to be an expansion and modification of the now defunct Desertec project, a German initiative that proposed to link solar power from North Africa and the Middle East to the European market with a plan to extend it globally.⁷³ A conference of the Global Grid Forum was held in Vancouver in September 2019 to explain how this would work globally and elicit support from skeptical western nations; major Canadian utilities attended such as SaskPower, BC Hydro, and Hydro Quebec. The Chinese plan would see the countryside of Alberta and Saskatchewan covered in windmills and solar panels with UHV transmission lines delivering power to more populated areas in the east, and south to the US.⁷⁴ A similar idea about turning Alberta and Saskatchewan into large solar and wind producers by filling all that space now occupied by oil wells and farms was presented by Chris Bataille, a researcher in the Deep Decarbonization Project and a lead author for the IPCC WG III chapter on Industry, at the 2018 International Conference on Fossil Fuel Supply and Climate Policy in Oxford, and echoed by Avi Lewis in a recent op-ed in *The Globe and Mail*.⁷⁵ China's initiative is praised heavily by Jeffrey Sachs, a founder of the Deep Decarbonization Project, advisor to the UN Secretary General on Sustainable Development and important knowledge purveyor in the Transnational Progressive Movement, who calls it "the boldest and most inspiring initiative by any government to achieve the goals of the Paris climate agreement."⁷⁶ Despite the praise, it is unclear how serious

⁷² UNFCCC, "Global Energy Interconnection Is Crucial for Paris Goals," *UN Climate Change News*, 28 November 2018, <https://unfccc.int/news/global-energy-interconnection-is-crucial-for-paris-goals>.

⁷³ Corrado Clini and Arvea Marieni, "China Plans UHV Transmission Lines that Span Countries," *Energy Post*, [online] 22 March 2019, <https://energypost.eu/china-plans-uhv-transmission-lines-that-span-continents>. For details on the Desertec programme see, <https://www.desertec.org>.

⁷⁴ For the agenda of the conference including attendees see, <https://www.theglobalgridforum.com/>. See also the powerpoint presentation, Global Energy Interconnection Development and Cooperation Organization, "Research on North American Energy Interconnection," September 2019, <https://img1.nengapp.com/geidco/20190910/en.html>. For more information on the state company established to pursue this initiative see China's Global Energy Interconnection Development and Cooperation Organization website, <https://en.geidco.org/>. Former US Secretary of Energy, Steven Chu, is a vice chairman of the organization.

⁷⁵ His presentation in Session 1 "Putting Supply-Side Climate Policy in Practice: Opportunities and Challenges," can be viewed at: https://www.youtube.com/watch?list=PLoJ3pxCzMP1tN3P_daxqrRm7_ftOzAqe8&time_continue=15&v=8rXWLjCicAo&feature=emb_logo; or at <http://fossilfuelsandclimate.org/2018/archive>.

⁷⁶ Jeffrey D. Sachs, "China's Bold Energy Vision," *Project Syndicate* [online], 2 April 2018, <https://www.project-syndicate.org/commentary/china-global-renewable-energy-grid-by-jeffrey-d-sachs-2018-04>. Sachs is part of George Soros' network of scholars.

Communist China is about the project; there could be ulterior motives—it could be a way to get more information about the strengths and weaknesses of the North American grid for other purposes. In any event, it does deserve more investigation as a potentially ideologically motivated project.

For some people in politics ideology is important, but care is taken not to state that explicitly because of likely criticism and potential rejection of the movement by the general public if people realized how that ideology would transform the modern capitalist way of life. Establishment Democrats in the United States, and establishment Liberals in Canada are in this category. But this is changing with the inclusion and rise of more radical Democratic party members, like Bernie Sanders, Alexandria Ocasio-Cortez, and other social democrats/progressives in the US. The Liberal Party in Canada has also become more progressive over time, invading territory usually occupied by the NDP and the Green Party. The recent election of Steven Guilbeault, a former campaign manager for Greenpeace and one of the founders of radical environmental group *Équiterre*, and his appointment to a cabinet position, as well as the appointment of Jonathan Wilkinson, the former head of the NDP Youth in Saskatchewan, as Environment Minister, reinforces the progressive credentials and direction of the federal Liberals led by Justin Trudeau in facilitating Canadian participation in the Great Transformation.⁷⁷

At the 2009 “Great Transformation” conference in Essen, Germany, Thomas Homer-Dixon made the argument that change will not happen or be accepted by the public until there are some “major shocks or instabilities that mobilize broad populations. Much will depend ultimately on whether we’re prepared to seize the opportunities these shocks create – opportunities that arise at what I call ‘moments of contingency’ *when people are scared, angry, and prepared to consider alternatives to the status quo.*”⁷⁸ [emphasis added] There was a sense at the time that the 2008/2009 financial crisis was such a moment, but the various stimulus packages did not pursue the type of structural changes towards a Green New Deal or make

⁷⁷ Trudeau, “The Promise of Progress,” in *Global Progress: New Ideas for the Future of the Progressive Movement*, (43-47), <https://cdn.americanprogress.org/wp-content/uploads/2016/03/03095509/021716-GLOBALPROGRESS-web.pdf>.

⁷⁸ Thomas Homer-Dixon, “The Great Transformation – Climate Change as Cultural Change,” Conference Presentation at Essen, Germany, 8-10 June 2009, <https://www.homerdixon.com/the-great-transformation-climate-change-as-cultural-change>.

significant progress towards an energy transition advocated by the Transnational Progressive Movement. In subsequent research on why the Great Transformation did not happen in the wake of the financial crisis, Homer-Dixon observed that at the center of our modern industrial society is cheap or affordable, reliable, energy:

Only enormous inputs of inexpensive high-quality energy can create and sustain the unprecedented connectivity and complexity of human civilization, including the connectivity described here among this civilization's diverse component systems. As a provisional hypothesis, therefore, it seems reasonable to propose that the global energy system helps to synchronize these systems' behavior and to stimulate simultaneous crises within and across them. Other factors such as global trade and transport systems, the Internet, and simultaneous scarcity of multiple resources may also play synchronizing roles, but these factors themselves depend on, and are therefore significantly derivative of, massive flows of energy.⁷⁹

Therefore, his implication is that in order to collapse the current civilization, to create that synchronous failure, the energy system at its beating heart— based on hydrocarbons— must be stopped. The most effective way to destroy the petroleum industry in North America and Europe, outside of a global crisis, is to deprive it of funding.

i. Divestment/Transforming Financial Industry

Not surprisingly, the Transnational Progressive Movement recognizes that the fossil fuel or hydrocarbon economy is the most successful in history, and hydrocarbon industries are well-embedded in the global financial structure like pension funds and asset management. In order to facilitate an energy transition away from hydrocarbons, financing of hydrocarbon activity has to be significantly curtailed. What was learned from the 2008/2009 financial crisis is that, even in the midst of a global financial meltdown, there was still considerable available private financing for the development of the fracking industry and for oil and gas companies in general. The biggest lament in academic and activist circles was that the energy transition could not move forward without private investment – public monies were not enough – the obstacle was the prosperous oil and gas industry. To change this perceived shortcoming, global solidarity within the financial system is required to help it move to the right place, and people inside to disrupt the system. However, some groundwork needed to be prepared to convince central bankers and

⁷⁹ Thomas Homer-Dixon, Brian Walker, Reinetta Biggs, Anne-Sophie Crepin, Carl Folke, Eric F. Lambin, Garry D. Peterson, Johan Rockstrom, Marten Scheffer, Will Steffen, and Max Troell, "Synchronous Failure: The Emerging Causal Architecture of Global Crisis," *Ecology and Society* 20(3):6, 10. <http://dx.doi.org/10.5751/ES-07681-200306>.

financial institutions to make the necessary changes. Activist pressure is one facet or stage of the strategy, to raise the negative profile of the petroleum industry and create a sense of public desire for change.

Since 2012, the activist ENGO wing of the Transnational Progressive Movement has had an ongoing divestment campaign to divert investment and financing of the petroleum and coal industries to renewable and post-carbon projects. Inspired by the South African apartheid boycotts and divestment, activist groups – the boots on the ground enforcers – utilizing public embarrassment and high-profile media campaigns, have pressured banks, pension funds, and university endowments to divest from heavy emitting projects and governments. A second stage of the strategy is to have sympathetic key people within the financial system, such as Mark Carney and Mike Bloomberg, to disrupt it.⁸⁰

For the past five years, a great deal of work has been done to move the financial industry to support and promote this forced energy transition. Mark Carney, former Governor of the Bank of England and Chairman of the Financial Stability Board stated in September 2015, “More [needs] to be done to develop consistent, comparable, reliable and clear disclosure around the carbon intensity of different assets...Companies would disclose not only what they are emitting today, but how they plan their transition to the net-zero world of the future.”⁸¹ Since ending his term as Governor of the Bank of England, Carney has been appointed the UN Special Envoy on Climate Action and Finance. Mike Bloomberg held a similar position of UN Special Envoy for Climate Action and Cities until he resigned to run for the Democratic Presidential primary. When that campaign failed, Bloomberg was re-appointed the chair of the Task Force on Climate Related Disclosures (TCFD). While it may seem that Bloomberg is an unlikely progressive, given his business empire, he has been working towards a corporate-progressive coalition since at least his 2010 Risky Business initiative.⁸² It is all falling into place as Carney told a Summit in

⁸⁰ For an excellent discussion of this strategy see, Peter Foster, “Mark Carney and Michael Bloomberg’s ‘sustainable’ scheme to dismantle Canada’s economy,” *Financial Post* [online], 16 April 2019, <https://business.financialpost.com/opinion/peter-foster-mark-carney-and-michael-bloombergs-sustainable-scheme-to-dismantle-canadas-economy>.

⁸¹ Larry Elliott, “Carney warns of risks from climate change 'tragedy of the horizon',” *The Guardian* [UK] [online], 29 September 2015, <https://www.theguardian.com/environment/2015/sep/29/carney-warns-of-risks-from-climate-change-tragedy-of-the-horizon>.

⁸² Burt Helm, “Climate Change’s Bottom Line,” *New York Times* [online], 31 January 2015, <https://www.nytimes.com/2015/02/01/business/energy-environment/climate-changes-bottom-line.html>. See also, <https://riskybusiness.org/>. Risky business was founded in 2013 by Bloomberg, Hank Paulson, and Tom Steyer. The

Tokyo in October 2019, “Firms that align their business models to the transition to a net-zero world will be rewarded handsomely. Those that fail to adapt will cease to exist.”⁸³

Yet, this was all voluntary and subject to changes in public opinion. Therefore, under the direction of Mark Carney and Mike Bloomberg, the global rules for financial institutions and the financial industry as a whole are in the process of being changed to take into account climate risks and carbon exposure. Through the Financial Stability Board’s Network for Greening the Financial System (NGFS), and the Task Force for Climate Related Financial Disclosures (TCFD) a set of mandatory requirements and a “green” taxonomy are being created for banks, pension funds and investment portfolios to create an environmental disclosure framework that will be internationally consistent: to disclose what they are doing to identify, assess, and manage climate risks; to provide metrics on the emissions or carbon footprint between different types of assets such as loans and investments; and mobilise capital for low-carbon and green investments through such mechanisms as certified green bonds.

The TCFD was established in December 2015 with the purpose of establishing voluntary financial climate-risk disclosures. These include “physical, liability and transition risks to measure and respond to climate change risks, and encourage firms to align their disclosures with investors’ needs.”⁸⁴ It released a set of recommendations for companies to follow in assessing climate risks in 2017, with subsequent evolving refinements in 2018 and 2019. Under four core elements, an organization would need to disclose: governance around climate-related opportunities and risks; strategy and financial planning of actual and potential impacts of climate-related risks and opportunities; “how the organization identifies, assesses, and manages

membership was diverse and included Gregory Page (Cargill), James Owens (Caterpillar), Rob Walton (Walmart), Robert Rubin (CFR & Former Treasury Sec.), Donna Shalala (Clinton Foundation), Anne Mulcahy (Xerox), Henry Cisneros (US Sec. of Housing), George Shultz (Sec. of State), Olympia Snowe (US Senator), Al Sommer (School of Public Health, Johns Hopkins). It ceased operation in 2017, and some of the key members went on to found the Climate Leadership Council – a broad climate coalition of corporations (Ford, GM, Unilever, P&G, Microsoft, and more), including energy companies (Shell, Total, BP, Vistra, and more), NGOs (WWF, WRI, Conservation International), and policy influencers. Some of the members include Christiana Figueres, Klaus Schwab, Steven Chu, Ben Bernacke, Ratan Tata, Janet Yellen to name a few. The CLC put forward in February 2020 a “Bipartisan Climate Roadmap” that proposed a carbon tax with proceeds going to fund renewable infrastructure and energy efficiency upgrading.

⁸³ Mark Carney, “TCFD: Strengthening the Foundations of Sustainable Finance,” Speech Given by Mark Carney, Governor Bank of England, Tokyo, TCFD Summit, 8 October 2019, 3. <https://www.bankofengland.co.uk/-/media/boe/files/speech/2019/tcfd-strengthening-the-foundations-of-sustainable-finance-speech-by-mark-carney.pdf?la=en&hash=D28F6D67BC4B97DDCCDE91AF8111283A39950563>.

⁸⁴ <https://www.fsb-tcfd.org/about/#>.

climate-related risks;” and “the metrics and targets used to assess and manage relevant climate-related risks.”⁸⁵ Within these four categories are requirements for more detail, and a recommendation to include scenario analysis to determine the resilience of strategies. It is unclear what provisions are being made to protect the considerable amount of data generated on companies and institutions utilizing these metrics. One of the weaknesses pointed out in the updates was the lack of standardization in the metrics and taxonomy across different jurisdictions. While the TCFD recommendations applied to organizations, several central banks decided it was necessary that they too must assess climate-related risks into their operations and formed the NGFS.

The NGFS was established by eight central banks in 2017 to incorporate climate change risks into their regulatory and supervisory processes. It has expanded to 48 as of 2020, but the US Federal Reserve and other American federal financial regulators did not join. In April 2019, the NGFS released its Call For Action Report with six recommendations “for central banks, supervisors, policymakers and financial institutions to enhance their role in the greening of the financial system and the managing of environment and climate-related risks.”

1. *Integrating climate-related risks into financial stability monitoring and micro-supervision.*
2. *Integrating sustainability factors into own-portfolio management.* This was an appeal to lead by example: central banks ought to integrate sustainability in their own pension funds and reserves, perhaps even going so far as divesting from hydrocarbon companies.
3. *Bridging the data gaps.* Public authorities are encouraged to share relevant data and create a publicly available data repository.
4. *Building awareness and intellectual capacity and encouraging technical assistance and knowledge sharing.* This appeal was to create in-house expertise and collaboration with “stakeholders” to “improve their understanding of how climate-related factors translate into financial risks and opportunities.” Stakeholders tend to be environmental organizations such as the WWF and foundation bundlers like ClimateWorks.
5. *Achieving robust and internationally consistent climate and environment-related disclosure.*

⁸⁵ TCFD, *Task Force on Climate-related Disclosures: Overview*, March 2020, https://www.fsb-tcfid.org/wp-content/uploads/2020/03/TCFD_Booklet_FNL_Digital_March-2020.pdf, 20.

6. *Supporting the development of a taxonomy of economic activities.*⁸⁶

During the associated conference, the WWF representative Thomas Vellacott declared he was “weak with joy” when reading the recommendations and the plan to restructure finance in a way that hydrocarbon production and development would be starved of private funds. In a demonstration of the power ENGO shock troops have on businesses and the financial industry, he was asked what bankers need to do “to keep the protestors from chaining themselves to the Central Banks.” After some nervous tittering from the crowd of bankers, Vellacott replied that it was important that they show action; young people worry about a lack of action. The banks need to show the problem is being taken seriously and acted upon.⁸⁷ There was a hint of a threat in the answer: if these policies are not accepted globally by the banks, there will be a PR price to pay.

At one of the other plenary sessions “What can central banks do to mitigate climate related risks and scale up green finance,” several members agreed that they needed to prioritize speaking repeatedly in public about potential risks, engage with boards and financial institutions, and continue dialogue with stakeholders like ClimateWorks and “NGOs like the WWF; we have to be in touch with real life.”⁸⁸ It is disconcerting to think that central bankers believe climate foundation money bundlers and NGOs represent real life. Guy Debell from the Bank of Australia described the effectiveness of talking about climate risk publicly because it led to a legal opinion in Australia that company directors might be personally liable to investors if they do not take climate as a serious risk in their company operations and future planning. Talking to boards personally was also emphasized as a way to create personal connections to persuade and change minds and fight against the inherent conservatism in the system. It was agreed at the conference that one way to address the conservatism was to work with stakeholders to put pressure on consumers and asset managers. But the most important way to scale up green finance, once a

⁸⁶ NGFS, *A Call for Action: Climate Change as a Source of Financial Risk*, April 2019. (Paris, 2019), https://www.banque-france.fr/sites/default/files/media/2019/04/17/ngfs_first_comprehensive_report_-_17042019_0.pdf.

⁸⁷ NGFS Conference Plenary, “What Should be the Next Steps and Follow Up of the NGFS Comprehensive Report,” NGFS 17 April 2019, at 37:50-39:00, <https://www.ngfs.net/en/page-videos-et-jeux/video-gallery>.

⁸⁸ NGFS Conference Plenary, “What can central banks do to mitigate climate related risks and scale up green finance,” NGFS 17 April 2019, at 22:55-24:38, <https://www.ngfs.net/en/page-videos-et-jeux/video-gallery>.

standardized taxonomy was created, was to make disclosure of climate risks compulsory. At the present, it is a coalition of the willing, but not everyone is willing.

There was some discussion about what to do about countries or banks that did not wish to join the “coalition of the willing”. One suggested the need for a PR campaign to bypass unsupportive nations like the US under President Donald Trump, and Australia. Those who expressed doubt about the lack of US involvement in the initiative were reassured that it was possible to bypass recalcitrant leaders by working through and supporting willing cities, counties, and states/provinces. Mike Bloomberg has been instrumental in establishing coalitions of cities, like the C40, We’re Still In, Beyond Carbon, and American Cities Climate Challenge, to introduce into significant American jurisdictions climate change initiatives aligned with the NGFS, TCFD and Paris Agreement.⁸⁹ The Center for American Progress has also been a key organization in promoting climate action at the state level to circumvent the Trump administration.⁹⁰ A similar reassurance, that recalcitrant national leadership could be sidestepped, was made at the IMF/World Bank annual meetings in October 2019. At the IMF/World Bank annual meetings a plenary discussion “Can Central Banks Fight Climate Change,” Kristalina Georgieva, from the former Soviet Union and Chair of the IMF, affirmed to the crowd that everywhere, including in the US, “there is an upswing in engagement and attention to this issue. Look at what US cities are doing, what many individuals are doing, what people are doing...I don’t think the US is behind the curve.”⁹¹ A central bank can mandate something that all institutions must do, and the effect is comprehensive and immediate. However, if subnational jurisdictions require mandatory disclosure, assessment, and reporting of climate risks by financial institutions operating within their bailiwicks, they can have the same effect as if the requirement was coming from the central bank albeit on a more gradual trajectory as more jurisdictions join the effort.

⁸⁹ Bloomberg has funded and continues to fund a number of environmental initiatives and has donated \$10 million to the UNFCCC. <https://www.mikebloomberg.com/global-impact/environment/>.

⁹⁰ See for example the event, “States Lead on Climate Change,” April 2020, Center for American Progress, <https://www.americanprogress.org/events/2020/04/22/483811/states-lead-climate/?evlc=rsvp>. See also, “State Fact Sheet: 100 Percent Clean Future,” https://cdn.americanprogress.org/content/uploads/2019/10/15120800/Clean-Future-State_FS3.pdf.

⁹¹ World Bank/IMF Annual Meeting session, “Can Central Banks Fight Climate Change?”, 16 October 2019, at 17:51-18:14; <https://www.youtube.com/watch?v=LRGCxgKjir8>.

A concern, however, is that the creation of all this data from the mandatory disclosures will not just be used by investors. Ostensibly, the data is to help “investors” know and understand not only what assessments organizations have done to address climate-related risks, but also what the carbon footprint is of the potential investment vehicle. Yet, with that information, banks can institute preferential rates for “green” over “brown” portfolios, and governments can give preference to “green” companies over “brown” ones for government contracts. Georgieva went on to speculate on potential options, “How much can central banks proactively use their tools to push down brown investment, and push up green investments? Could interest rates be differentiated? Could there be a discount if you invest green, and a premium if you invest brown?” Philip Lane of the European Central Bank (ECB) added that it was a global problem and global solutions were needed, “We need the world to take this seriously and the world to conclude that a certain activity or a certain sector should be downgraded. . . .Let’s say we conclude that certain activities are very Brown. The ideal is that *everyone* gets out of these sectors. It’s about ensuring *everyone* correctly incorporates climate risk into their assessment.”⁹² He then mentioned the work the EU was doing to create a taxonomy for sustainable activities.

In March 2020, the EU Technical Expert Group on Sustainable Finance issued its technical report on implementing an EU taxonomy for sustainable finance. Not only will companies have to disclose climate-related risks to banks and investors using TCFD metrics, if they wish to do business in or be financed by a European entity they will also have to utilize the EU taxonomy on sustainability to determine just how green or brown their activities are within the new EU climate benchmarks or performance thresholds.⁹³ They will have to disclose what they are doing towards climate change mitigation, climate change adaptation, sustainable use and protection of water and marine resources, transition to a circular economy, pollution prevention and control, and protection and restoration of biodiversity and ecosystems. Club of Rome co-president Sandrine Dixson-Declève was heavily involved with the Technical Expert Group that drafted the proposals drawing upon the knowledge and expertise of her involvement in other

⁹² Ibid., 22:04-23:42.

⁹³ EU Technical Expert Group on Sustainable Finance, *Technical Report: Taxonomy: Final Report of the Technical Expert Group on Sustainable Finance*, March 2020, (Brussels: EU, 2020). https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/200309-sustainable-finance-teg-final-report-taxonomy_en.pdf.

Club of Rome activities. For example, at the Club of Rome summit conference in Cape Town on 6 November 2019, the presenters agreed that incremental change was no longer feasible and rethinking finance was the key for accelerating the transition. The transformation of the economic system was best done through finance and to work from inside to disrupt the system. However, Peter Blom, chairman of Triodos Bank, cautioned that one “can’t push bankers too hard or fast; one must test the pain they will bear...[it is] a psychological and group process.” Yet, he was successful in convincing the European Investment Bank to stop hydrocarbon investments from 2021.⁹⁴ Other Club of Rome members praised the work being done by civil society to pressure banks and investors to withdraw from fossil fuels – they were transforming the world.⁹⁵

This transformation of the international financial system, to find a way to shift investment away from companies in the hydrocarbon industry to renewables using disclosure of climate-related risks, began in 2015 but has accelerated significantly since early 2019. Individual countries have jumped on the bandwagon: Canada convened an expert panel, chaired by the new governor of the Bank of Canada Tiff Macklem, to explore how finance can support the transition. Their report, *Mobilizing Finance for Sustainable Growth*, recommended that climate risk management, based on TCFD recommendations, ought to be embedded in everyday products, services, and decisions so that Canadians can make “climate smart investments.” Presumably, this would preclude investment in Canadian hydrocarbon companies, infrastructure, and products. In November 2019, the Center for American Progress released an issue brief, funded by ClimateWorks, recommending American financial regulators act quickly to “integrate climate risk into their regulatory and supervisory frameworks.”⁹⁶ In February 2020, UK Prime Minister Johnson signalled that he wanted the UK to lead on reporting climate risks, intending to make reporting guidelines of all listed companies and large asset owners mandatory by 2022

⁹⁴ Jillian Ambrose and Jon Henley, “European Investment Bank to phase out fossil fuel financing,” *The Guardian* [UK] [online], 15 November 2019, <https://www.theguardian.com/environment/2019/nov/15/european-investment-bank-to-phase-out-fossil-fuels-financing>. Blom and Dixson-Declève also established the Finance Impact Hub in Brussels in order to help change the financial system.

⁹⁵ Club of Rome Summit, South Africa, 6 November 2019, <https://clubofrome.org/impact-hubs/climate-emergency/club-of-rome-summit-2019/>. The video is also available on YouTube with each panel and its participants listed, <https://www.youtube.com/watch?v=T-jgGa31Ye0>.

⁹⁶ Greg Gelzinis and Graham Steele, “Climate Change Threatens the Stability of the Financial System,” Center for American Progress, 21 November 2019.

using TCFD guidelines.⁹⁷ The EU, as discussed above, put forward its own taxonomy for deciding what counts as a green investment. With all of these recommendations and announcements that send signals to large investors, what has been the effect on Alberta and the Canadian petroleum industry?

A number of banks, pension and investment funds have divested or are phasing out their investment in oil sands projects, pipeline infrastructure, and even sub-sovereign bonds. For example:

- HSBC announced it will no longer fund Arctic petroleum development or new greenfield oil sands projects (April 2018), this was clarified in July 2018 to include no new financing for new pipelines that will carry oil sands oil.
- The European Investment Bank (EIB) announced it will no longer finance new fossil fuel projects from the end of 2021 (November 2019).
- Norway’s pension fund divested from Canadian oil sands companies (October 2019).
- The Climate Action 100+ group encourages investors to push companies to decarbonize and meet Paris Agreement goals. The Alberta Investment Management Corp, and other Canadian pension investment funds, have pledged to Climate Action 100+. This could mean penalties for investing in any fossil fuel businesses upstream or downstream, or a commitment to divest. This campaign has also convinced over 1000 banks and insurance companies to support divestment of investment in fossil fuel companies and jurisdictions with high emitters. Blackrock joined in January 2020.
- French insurer AXA eliminated coal and oil sands assets from its portfolio in 2019.
- Blackrock (a member of Bloomberg’s Risky Business coalition) announced in January 2020 that it would rethink its hydrocarbon investments, and compel its clients to disclose climate-related risks in line with TCFD recommendations, including plans to operate under Paris Agreement goals. Perhaps this is related to its recent appointment to advise the EU on environmental rules for banks.
- The Swedish Central Bank – Riksbank sold its sub-sovereign debt of Alberta bonds (November 2019).

⁹⁷ Gavin Hinks, “UK Government Set to Implement Mandatory TCFD reporting,” *Board Agenda* [online], 13 February 2020, <https://boardagenda.com/2020/02/13/uk-government-set-to-implement-mandatory-tcfd-reporting/>. The *Financial Times* [UK] followed up with a small blurb, “Pension Plans Under Pressure Over Climate,” (FT Money, 2) in the same weekend newspaper the *FT Weekend Magazine* focus was, “Can the World Kick Its Oil Habit?”, 15/16 February 2020. The lead story outlined ways to facilitate a deep structural change through efficiency improvements, significant curbing of demand, and changes to financing.

By changing the regulations and the “rules of the game” the NGFS, the TCFD, and some governments like the EU are creating an investment environment hostile to any organization or fund that cannot tick the virtue signaling boxes of sustainability. This will have dire consequences for hydrocarbon industries in Alberta and Canada.

ii. The Future of Hydrocarbons

Since the Great Transformation and Canada’s commitment to the Paris Agreement requires an energy transition from hydrocarbons to net-zero energy by 2050, what will fuel the new civilization? The most extreme proposal is 100% renewables – wind, solar, hydro, geothermal – augmented by battery storage; a compromise proposal, which is more feasible but equally unattainable if we wish to preserve our present modern lifestyle, is mostly renewables – wind, solar, geothermal, existing hydro, with existing nuclear, and some natural gas that employs carbon capture technology, augmented by battery storage. But there are significant shortcomings with these proposals. If divestment proceeds as planned, and private capital is withdrawn from financing hydrocarbon companies and projects, it is likely the industry will collapse fairly quickly as investors try to avoid having stranded assets and dump their shares. If the industry collapses quickly, consumers will suffer as prices will sky-rocket and North American supply will contract.

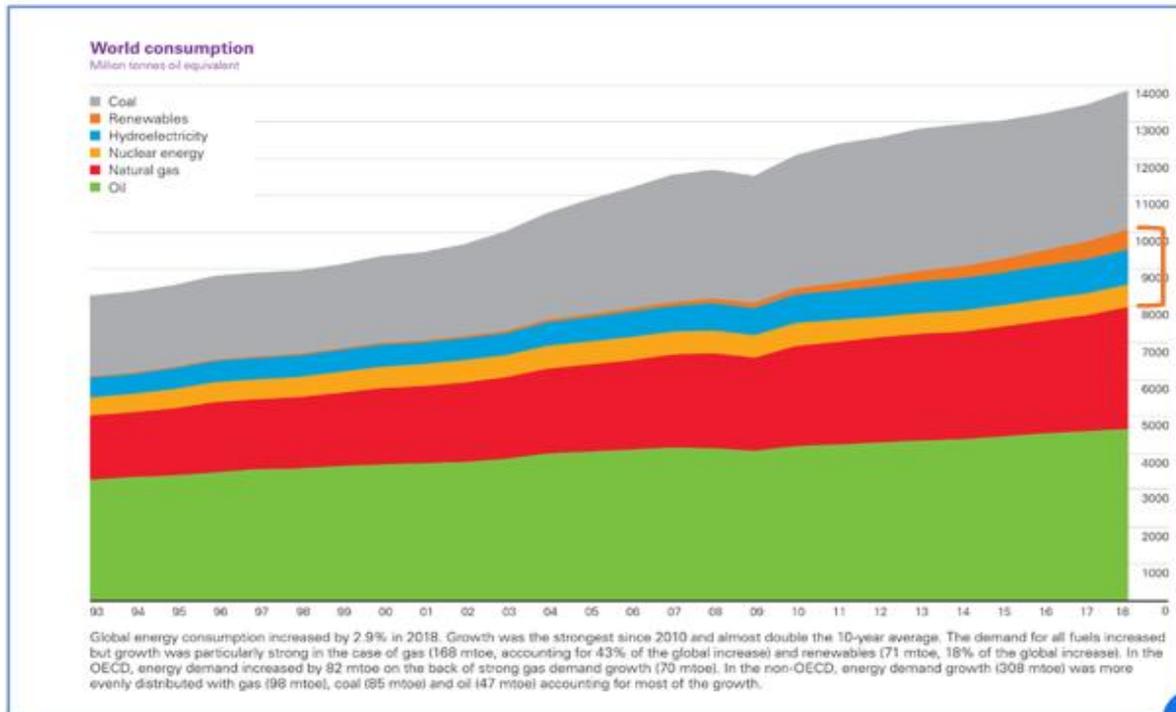


Table 1 Global Energy Consumption. Source: BP World Energy Review 2019.

Second, the numbers for replacing oil, gas, and coal from the modern industrial energy mix seem to embody a contradiction when it comes to what is proposed and maintaining our present modern industrial society.⁹⁸ Two charts from the BP World Energy Review illustrate the current energy consumption mix. In Table 1 above, globally, about 14% of energy consumption is comprised of renewables, including hydroelectricity and biomass, and nuclear energy, as indicated by the orange brackets on the graphs. How will the remaining 86% be replaced at all, let alone rapidly? Given that *all* forms of fossil fuels are to be “phased-out”, except for essential uses, what will replace them? A recent Harvard study calculated that to generate current *electricity* demand, not all energy, 1/3 of the continental US would need to be filled with windmills.⁹⁹ Some have calculated that to triple current electrical production to meet the net-

⁹⁸ But, as Douglas Murray points out in his new book *The Madness of Crowds*, “One of the traits of the Marxist thinkers has always been that they do not stumble or self-question in the face of contradiction, as anybody aiming at the truth might. Marxists have always rushed to contradiction. ... People looking for this movement to wind down because of its inherent contradictions will be waiting a long time.” The same can be said of Progressives who embody a redefined global Marxism. As quoted in, Paul Rossiter, “Understanding the climate movement: the impotence of science,” Watts Up With That [website], 26 November 2019, <https://wattsupwiththat.com/2019/09/26/understanding-the-climate-movement-the-impotence-of-science/>.

⁹⁹ Leah Burrows, “The Downside of Wind Power,” *The Harvard Gazette*, 4 October 2018, <https://news.harvard.edu/gazette/story/2018/10/large-scale-wind-power-has-its-down-side/>. The authors also

zero commitments of replacing all hydrocarbon forms of energy would require thousands of 12MW offshore wind turbines, thousands of 2MW onshore wind turbines, tens of *millions* of solar panels, millions of 85kWh Tesla battery packs, and thousands of kilometres of ultra-high-voltage (UHV) power transmission lines.¹⁰⁰ Where would all these go? Would they not occupy

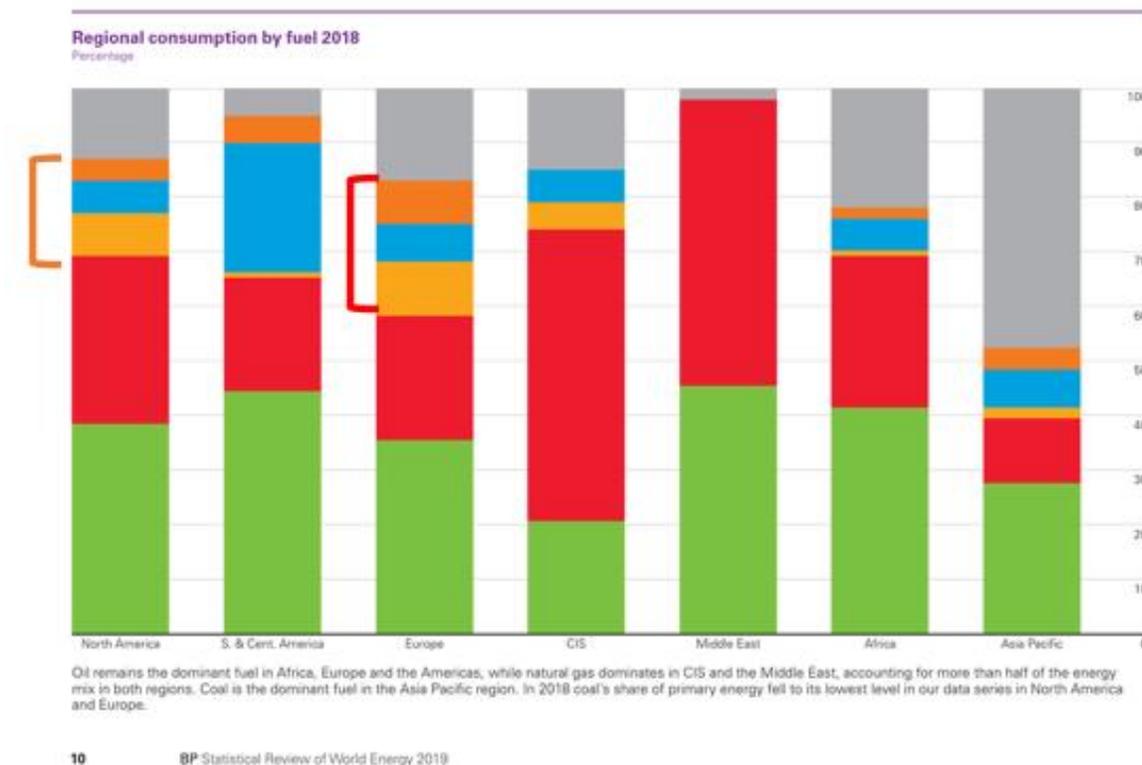


Table 2 Global Regional Energy Consumption. Source: BP World Energy Review 2019

space reserved for tree planting and farming? Would they not have a deleterious effect on wildlife, particularly birds and bats? What about the tremendous amount of materials it would take to make all these windmills and solar panels, and the energy security implications? A Dutch government study concluded that a major share of global minerals would be consumed just to

discussed how the change in wind patterns, atmospheric mixing, and other factors would likely *increase* surface temperatures by 0.24C.

¹⁰⁰ Paul Driessen, “How Exactly Do They Plan to Ban Fossil Fuels?” Townhall [online], 15 March 2020, <https://townhall.com/columnists/pauldriessen/2020/03/15/how-exactly-do-they-plan-to-ban-fossil-fuels-n2564950>; see also Lester R. Brown, Janet Larsen, J. Matthew Roney, and Emily E. Adams, “The Accelerating Transition,” in *The Great Transition: Shifting from Fossil Fuels to Solar and Wind Energy* (Earth Policy Institute, 2015), 150. The authors agree there will be millions of solar panels, but they see them on everyone’s house or apartment building, “tied into a smart and flexible grid getting power from wind turbines as well as from geothermal and hydroelectric projects.”

meet the green ambitions of the Netherlands.¹⁰¹ All of these “renewable” technologies require a great deal of resources that are mined in less than environmentally friendly ways and places. They require several different rare earth metals that are, for the most part, controlled by China – either through production or refining, which means western countries would not have energy security since they would be dependent on China for key resources. Renewable technologies also take a great deal of energy to process and turn into energy generators; and there is no way, as of yet, to recycle all of these materials when they have reached end-of-life, which tends to be far shorter than conventional power plants.¹⁰² As one researcher points out, “Renewables, therefore, require more land, and their construction is energy-intensive and necessitates many rare earth materials. So although renewables create fewer carbon emissions [once operating] than fossil fuels, their ecological impact shifts into other forms.”¹⁰³ The implications of this physical reality are staggering. As Douglas Murray points out about the social justice movement and its Marxist underpinnings, which is quite applicable here, “the inherent willingness to rush towards contradiction rather than notice all these nightmarish crashes suggests that it is really not interested in solving any of the problems that it claims to be interested in. It is expressed not in the manner of a critic hoping to improve, but as an enemy eager to destroy.”¹⁰⁴ The conclusion one must draw is that it will be impossible under a net-zero policy to maintain the current standard of living in modern western society, without some new miracle technology, and therefore, the intent is to pursue the destructive policy of “degrowth”.¹⁰⁵ What is degrowth? It is as it sounds: restructuring the global economy to flatten the wealth curve and move beyond GDP:

¹⁰¹ Peter van Exter, Sybren Bosch, Branco Schiper, Benjamin Sprecher and Rene Kleijn, *Metal Demand for Renewable Electricity Generation in the Netherlands: Navigating a Complex Supply Chain* (Amsterdam: Ministry of Infrastructure and Water Management, 2018). <https://www.copper8.com/wp-content/uploads/2018/12/Metal-Demand-for-renewable-electricity-generation-in-the-netherlands.pdf>.

¹⁰² Michael Kelly, “Energy Utopias and Engineering Reality,” The Global Warming Policy Foundation 2019 Annual Lecture, 11 November 2019, <https://thegwpcf.org/content/uploads/2019/11/Kelly-1.pdf>.

¹⁰³ Joe Herbert, “Degrowth: the transformation needed to combat climate breakdown,” Degrowth [online], 15 December 2019, <https://www.degrowth.info/en/2019/12/degrowth-the-transformation-needed-to-combat-climate-breakdown/>.

¹⁰⁴ As quoted in, Paul Rossiter, “Understanding the climate movement: the impotence of science,” Watts Up With That [website], 26 November 2019, <https://wattsupwiththat.com/2019/09/26/understanding-the-climate-movement-the-impotence-of-science/>.

¹⁰⁵ Rex Murphy, “A COVID-19 wake-up call: Canada must stop this self-destruction,” *National Post*, 3 April 2020, <https://nationalpost.com/opinion/rex-murphy-a-covid-19-wake-up-call-canada-must-stop-this-self-destruction>.

Degrowth argues for a managed equitable downscaling of the material size of the global economy before reaching a ‘steady-state’ at safe ecological levels. Degrowth does not represent the opposite of growth, recession, but a complete restructuring of society around values of conviviality, solidarity, and sufficiency. . . . To achieve this aim, degrowth argues for establishing more localized economies, which reduce the reliance on high-emission international trade flows. . . . [it] also offers the prospect of simpler, more fulfilling ways of living, where more time can be dedicated to community, relationships and creative pursuits.¹⁰⁶

The description of degrowth sounds very similar to many of the Green New Deal platforms, and the EU Green Deal proposals for a circular economy in particular. As one scholar points out, “Any scenario that gets us to net-zero by 2050 requires that we stop doing things that are economically productive.”¹⁰⁷ Even with a degrowth scenario, there will still be a need for a limited amount of hydrocarbons for certain key industries that are necessary to produce essential products.¹⁰⁸

Premier Kenney suggested that he would prefer it if Alberta’s petroleum industry would be among those remaining producers allowed to produce those last permissible supplies in the new civilization to emerge from the Great Transformation. However, with the changes to the financial industry, the commitment of the federal Liberal government to the progressive agenda, and the absolute abhorrence of Alberta’s industry by the ENGOS, that is highly unlikely.¹⁰⁹ One only has to consider how any time an oil sands project is ready for a federal approval decision, after running the gauntlet of regulatory and environmental reviews and relentless ENGO scrutiny and abuse, some type of high profile protest intended to bully and embarrass the government materializes, like an international open letter campaign from progressive luminaries, and is gleefully—dutifully—published in major newspapers around the world and plastered all over the

¹⁰⁶ Herbert, “Degrowth.” The Degrowth organization is partnered with the Heinrich Boll Foundation, among other foundations.

¹⁰⁷ Nikos Tsafos, “Why Europe’s Green Deal Still Matters,” Center for Strategic and International Studies analysis, 24 March 2020, <https://csis.org/analysis/why-europes-green-deal-still-matters>.

¹⁰⁸ This energy reality and the need for degrowth has been long articulated by Vaclav Smil. See for example a recent discussion, Dale Eisler and Vaclav Smil, “Is Vaclav Smil the Voice of Reason We All Need to Hear?” *Public Policy Forum*, Publicly Speaking Blog, 6 April 2020, <https://ppforum.ca/policy-speaking/is-vaclav-smil-the-voice-of-reason-we-all-need-to-hear/>.

¹⁰⁹ Jason Kenney and Scott Moe, “The Premiers’ Perspective: A Canada-U.S. Relations Outlook for the New Decade,” Video conversation event at Woodrow Wilson Center, Washington, D.C., 7 February 2020, <https://www.wilsoncenter.org/event/premiers-perspective-canada-us-relations-outlook-new-decade>.

internet and television news, to see the grim reality for Alberta's industry in Canada today.¹¹⁰ Under Canada's net-zero policy and international climate commitments, it is likely that whatever oil and gas production will be permitted will largely come from the Atlantic offshore and existing production in Western Canada, preferably from declining wells in the Western Sedimentary Basin. There will likely be no phasing out of the Atlantic production, the phase-out will only apply to Western Canada, particularly in the oil sands, hence the approval in December 2019, after only three years of government review (compared to the 10 year process for the Teck Frontier project), of the exploration and development project in the Flemish Pass by the China National Offshore Oil Corporation (CNOOC).¹¹¹ This decision did not receive *any* negative attention; not a comment from the ENGOs, while at the same time protests were ongoing regarding the Teck Frontier project and the Coastal Gas Link project. In fact, CBC news praised it as a positive development for Newfoundland; no such coverage was forthcoming for the Teck Frontier project.

Which companies will be left to produce the "last drops" of oil and gas if private funding will be choked off? It is logical and reasonable to assume that National or State Oil Companies (NOCs) will be the last ones standing with their questionable environmental practices.¹¹² The Chinese and Russian NOCs will be well positioned for global dominance, whilst Middle Eastern states will continue their production. For example, with the unprecedented drop in global oil prices due to the pandemic global lockdown, the government of Saudi Arabia is purchasing large chunks of private petroleum companies.¹¹³ This trend can be expected to continue as the forced energy transition is accelerated through financial industry changes and the divestment initiatives.

¹¹⁰ See for example, Muhammad Yunnas et al, "As Nobel prize winners, we demand Justin Trudeau stop the Teck Frontier mine," *The Guardian* [UK], 21 February 2020, <https://www.theguardian.com/commentisfree/2020/feb/21/nobel-prize-winners-justin-trudeau-teck-frontier-mine>.

¹¹¹ CBC News service, "Chinese oil company gets go-ahead for exploration drilling in Flemish Pass Basin," CBC news, 18 December 2019, <https://www.cbc.ca/news/canada/newfoundland-labrador/cnooc-exploration-drilling-flemish-pass-1.5401425>. Although CNOOC received approval in December 2019, it announced in March 2020 that the project will be delayed because of the pandemic. Terry Roberts, "Chinese oil company announces delay of Flemish Pass drilling campaign," CBC News, 31 March 2020, <https://www.cbc.ca/news/canada/newfoundland-labrador/flemish-pass-delay-1.5515849>.

¹¹² Stefan Andreasson, "Fossil fuel divestment will increase carbon emissions, not lower them – here's why," *The Conversation* [online], 25 November 2019, <https://theconversation.com/fossil-fuel-divestment-will-increase-carbon-emissions-not-lower-them-heres-why-126392>.

¹¹³ Andrew England and Simeon Kerr, "After wrecking the oil market, rich OPEC states are picking up Big Oil stocks and other assets," *Financial Post* [online], 16 April 2020, <https://business.financialpost.com/commodities/energy/after-wrecking-the-oil-market-rich-OPEC-states-are-picking-up-Big-Oil-stocks-and-other-assets>.

On the surface, the global energy transition may seem to parallel the Green New Deal movement, but it is actually at the heart of it. Although the many different groups, foundations, think tanks, ENGOs and governments advocating an energy transition have varying reasons for wanting or supporting a transition, they are united in the simple desire – at this point – to facilitate the energy transition – not just at a local, regional, or national scale, but *globally* and predominantly in the western countries. Why the western countries? Western countries are at the pinnacle in terms of standard of living; they are also the most prosperous and have used the most energy to date to lift their citizenry to an enviable standard of living through freedom and capitalism. Western industrial capitalism is the target to be replaced through a process of voluntary destruction that will level standards of living across the globe, by *lowering* the Western quality of life.¹¹⁴ Western countries, however, are wealthy and innovative, thus, if one major western country does *not* voluntarily transform and destroy its economy like the rest, then investment and people will shift to that country. This helps to explain the Transnational Progressive Movement’s contempt and visceral loathing for America under President Trump since he is withdrawing the US from the Paris Agreement. If America does not take the leap, the Great Transformation will probably fail, or at least take longer to fulfill. One might think of it as a global suicide pact or as Rex Murphy puts it a “doomsday cult.”¹¹⁵ To comprehend it in this way is not to dismiss it; the intention is not to diminish the very real possibility of success in bringing about this Great Transformation. To fully understand that this is about the destruction of the modern western way of life, the next section will examine the groups involved, their mode of operation and communication, and the cultural shift being attempted using youth and the media.

IV. Groups Involved

A. Mode of Operation and Communication

The Transnational Progressive Movement is a complex social and ideological movement. It draws in, mobilizes, and utilizes whatever “vehicle”, front, institution, organization, or individual at a given time that may aid the movement in achieving its outcome: the overthrow of modern western industrial capitalist society. Since it is a movement and not an organization, it is

¹¹⁴ Terence Corcoran, “The blockades are a clash over socialism, not Indigenous rights and climate change.”

¹¹⁵ Rex Murphy, “Climate Zealots have taken Canada hostage, and our PM is missing in action,” *National Post*, 14 February 2020, <https://nationalpost.com/opinion/rex-murphy-climate-zealots-have-taken-canada-hostage-and-our-pm-is-missing-in-action>.

decentralized: there does not appear to be any one guiding group or individual. Members of the various decentralized networks “act in solidarity with each other, have very strong convictions, and . . . are normatively or ideologically motivated in their struggle for shared aims.”¹¹⁶ As sociologist Donatella della Porta points out, “social movements create and recreate ties: they build upon existing networks but also, in action, they connect and multiply them.”¹¹⁷ What is at hand can be operationalized, transformed or influenced to support the motivating agenda; in this case it is *climate change*. One can visualize the network as illustrated in Figure 2 below.

Members or individuals in the *coordinating movement* at the top of the *climate change* house occupy positions of influence in a given organization and inspire and recruit people who are sympathetic to the cause who then fill the ranks with other like-minded people.¹¹⁸ In this way

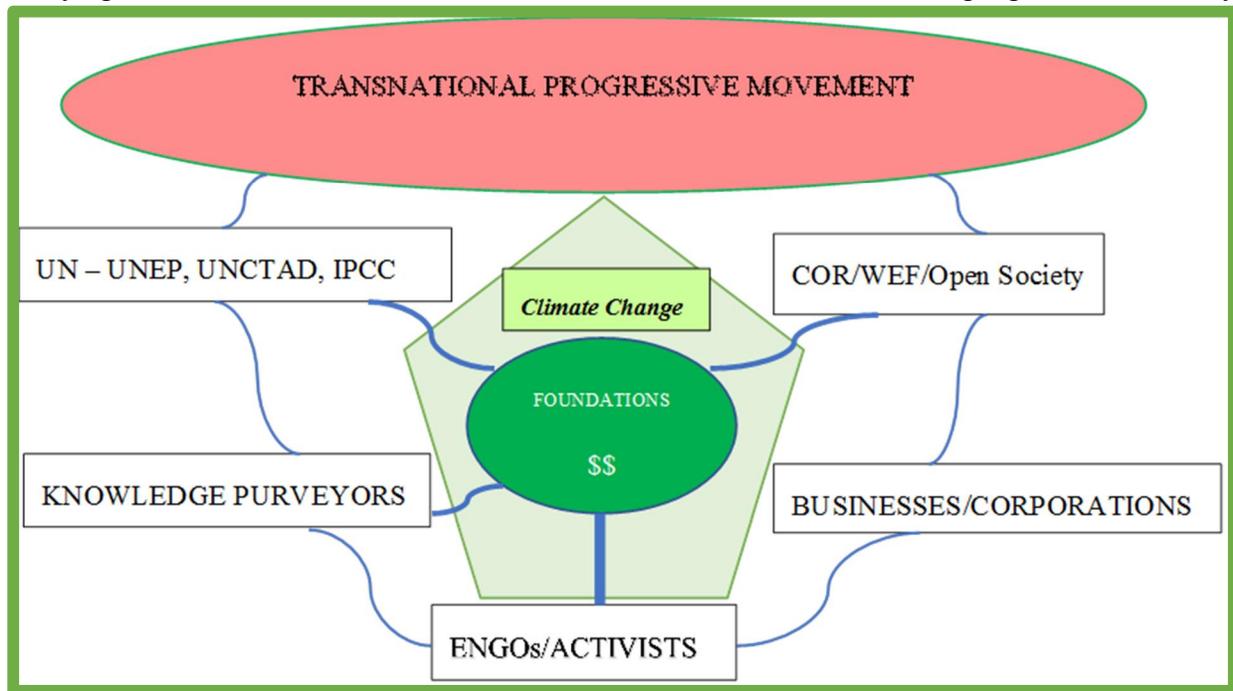


Figure 7 Conceptual Framework of Transnational Progressive Movement Network

it has captured *international or transnational institutions* like the United Nations (UN), the World Bank, the International Monetary Fund (IMF), the European Union (EU), and the

¹¹⁶ Dietz and Garrelts, *Routledge Handbook of the Climate Change Movement*, 4.

¹¹⁷ Donatella della Porta, “Social Movements in Times of Pandemic: Another World Is Needed,” *Common Dreams* [website], 23 March 2020. <https://www.commondreams.org/views/2020/03/23/social-movements-times-pandemic-another-world-needed>.

¹¹⁸ For an analysis of key individuals in the UN see Tim Ball, *Human Caused Global Warming: The Biggest Deception in History* (Tellwell, 2016), 81-93; Michael Hart, *Hubris*, Chapter 10, “Baptists, Bootleggers, and Opportunists,” 380-430; Rupert Darwall, *Age of Global Warming*.

Financial Services Board (FSB), numerous university departments, corporations and businesses.¹¹⁹ The Transnational Progressive Movement also advances networks with international multidisciplinary *clubs, fora, or organizations* like the Club of Rome, World Economic Forum (WEF), and the Open Society. It connects with and uses *business groups and corporations*. It cultivates *knowledge purveyors*, like institutes and think tanks, universities and researchers, in the same way it does for international institutions, in order to provide the intellectual framework and legitimization of the movement. The foot soldiers, *the shock troops*, of the larger movement is the environmental movement – the ENGOs (or watermelons, as James Delingpole has coined – green on the outside, red (socialist) on the inside).¹²⁰ The pervasiveness of the movement would not be possible without the *Foundations*, appropriately situated at the centre, established by wealthy donors to fund the various elements and networks of the Transnational Progressive Movement. Taken in conjunction, there is an appearance that *many* separate entities within western society desire and support changing the system, not just one group.

i. International Institutions

To expand upon the outline provided above, the Transnational Progressive Movement is extensive. It pervades the highest levels of national governments in Europe, North America, Latin America, Asia, and Africa. It extends to numerous *international institutions* such as the EU, the UN, the IMF, the World Bank, the G7/8, the G20, the IEA, the Organization for Economic Cooperation and Development (OECD), the Financial Stability Board, the Group of 30 and so on – all of which have significant commitments to achieve sustainability with the Sustainable Development Goals (SDGs), and are actively guiding their member countries towards a low carbon economy. A fundamental aspect and strategy of this is to encourage through its cooperating states to institutionalize sustainability in as many areas as possible within a nation’s socio-economic framework such that sustainability is included in job descriptions,

¹¹⁹ Given that this is a report and not a comprehensive study, it was decided to limit the analytical variables for manageability. Thus, a discussion of religious institutions as part of the movement is not included here, although it is interesting to note that Dr. Hans Joachim Schellnhuber of the Potsdam Institute and Member of the Club of Rome was the climate advisor behind Pope Francis’s *Laudato Si*, encyclical letter on climate change.

¹²⁰ James Delingpole, *Watermelons: How Environmentalists are Killing the Planet, Destroying the Economy and Stealing Your Children’s Future* (London: Biteback Publishing, 2012). In describing the “watermelons” he explains, after the fall of the Berlin Wall Greenpeace and the environmental movement went through a process of “supplanting of ageing hippies with a new breed of zealots less interested in saving Planet Earth than in destroying the capitalist system.” [loc 1289 – Kindle edition].

performance evaluations, codes of practice, professional status, educational requirements and operation, and so on, to the point where sustainability permeates every level of society from nation to small village community.

ii. World Economic Forum

At this point in time, the World Economic Forum, the Club of Rome, and the Open Society have risen in influence and serve as points of convergence for the various streams to assemble and cooperate. The World Economic Forum (formerly the European Management Forum) was established by Klaus Schwab in 1971 as an international organization for public-private cooperation. Its goal is to guide and shape society's transition to the "fourth industrial revolution" (4IR); the transformation of global society through interconnected technology, such as Artificial Intelligence (AI), machine learning, virtual reality, social media, data, and other digital systems, into a technocracy governed by experts through technological means and stakeholder assemblies that would replace traditional democratic structures.¹²¹ These changes would necessarily replace the current western economic and political system, which is why the WEF supports the Beyond GDP movement. Schwab has articulated his vision in several books and articles. Two articles in 2019 and his most recent book laid out his vision of replacing the post WWII international institutional structures as follows:

- "Most agree that this framework—comprising the United Nations, the International Monetary Fund, the World Bank, and other multilateral institutions—needs to be updated to address the challenges of climate change, widening inequality and slowing economic growth."¹²²
- "I have been clear: tinkering with our existing processes and institutions simply will not do. Instead, we need to redesign them so that we can capitalize on the abundance of new opportunities that await us, while avoiding the kind of disruptions that we are witnessing today...the 4IR requires that national policies be integrated into a global system."¹²³

¹²¹ On Schwab's support for stakeholder or citizen assemblies, see Klaus Schwab, "A Better World Starts At Home," Project Syndicate, 9 December 2019, <https://www.project-syndicate.org/onpoint/citizen-assemblies-to-end-polarization-by-klaus-schwab-2019-12?barrier=accesspaylog>.

¹²² Schwab, "A Better World Starts at Home."

¹²³ Klaus Schwab, "The Great Reconstruction," Live Mint, 1 January 2019, <https://www.livemint.com/Industry/fkmks71XSK5z1rmCXSPBhN/The-great-reconstruction-by-Klaus-Schwab.html>.

- “A shift in mindsets, is not enough. ...Action and leadership are required from all organizations, sectors and individuals in the form of ‘systems leadership,’ involving new approaches to technology, governance, and values.”¹²⁴

In order to bring about this Great Transformation, the WEF has created a wide range of “Shaping the Future” platforms for research and cooperation between corporations, governments, researchers, and activists. Some of these include advanced manufacturing, consumption, cybersecurity, urban infrastructure, the digital economy, energy and materials, mobility, AI and machine learning, the new economy, and a current one on Covid-19. Each platform brings together relevant and interested partners to facilitate research and action on particular issues.¹²⁵

In a coincidentally prescient move, in October 2019, the WEF partnered with the Bill and Melinda Gates Foundation, and the Johns Hopkins Bloomberg School of Public Health, Center for Health Security, for Event 201, which simulated a coronavirus pandemic in order to anticipate responses and gaps in preparedness.¹²⁶ Consequently, the WEF established in January 2020 the Pandemic Supply Chain Network. Partners in this network are Henry Schein, Johnson & Johnson, United Nations Children's Fund (UNICEF), UPS, World Bank Group, World Economic Forum, and the World Health Organization (WHO). It is unclear how effective this group has been in assisting the response to the pandemic in 2020.

Although there is continuous interaction between members of the various networks of the Transnational Progressive Movement and the numerous WEF agenda and platform areas, producing reports and white papers and editorial content, the annual meeting in Davos affords the opportunity for many to gather in person and renew or make new contacts amongst the diverse interested parties. At the 2020 meeting for example, it boasted over 3,000 participants, and climate change was among the seven main themes – “How to Save the Planet” – with

¹²⁴ Klaus Schwab, *Shaping the Future of the Fourth Industrial Revolution* (New York: Currency, 2018), 220. Systems leadership (technology, governance, and values) is defined as cultivating and acting on a shared vision of change among all people to change how and to whom the system delivers its benefits. (221)

¹²⁵ For example, in its Network for Global Technology Governance, partners include Motsepe Foundation, Reliance Industries, Salesforce, Accenture, AIFC, Deloitte, Hitachi, Huawei, Kaiser Permanente, Koç Holding, Latham & Watkins, McKinsey, Microsoft, Mitsubishi Chemical, Mori Building, NEC, Palantir, PwC, Saudi Aramco, Sampo Holdings, Splunk, Suntory, Takeda, Visa, American Heart Association, Bahrain Economic Development Board, Baker McKenzie, Cyberdyne, DJI, Gavi, the Vaccine Alliance, HORIBA, IBM, IDEO, Inter-American Development Bank, Netflix, NTT Corporation, Sberbank.

¹²⁶ About the Event 201 Exercise, Center for Health Security, <https://www.centerforhealthsecurity.org/event201/about>. Videos of the simulation can be found at <https://www.youtube.com/playlist?list=PL9-oVXQX88esnrdhaiuRdXGG7XOVYB9Xm>.

speakers ranging from Al Gore and Prince Charles to Greta Thunberg. Other attendees included several bankers, like RBC president David McKay and J.P. Morgan CEO Jamie Dimon, central bankers like Mark Carney, government representatives like EU President Ursula von der Leyen and EU Green Deal leader Frans Timmermans, the heads of various international organizations like Kristalina Georgieva (IMF), foundation creators like Bill Gates, ENGOs like the WWF, various industry and corporate representatives like CEO of Chevron Michael Wirth, Ren Zhengfei of Huawei, Marc Benioff of Salesforce and Larry Fink of Blackrock, as well as several members of the Club of Rome including its co-president Sandrine Dixson-Declève.¹²⁷ George Soros, the man who created and funds the Open Society Foundation, was also one of the key speakers. The meeting helps to create momentum, visibility and attention, facilitates networking, and enhances the interconnectedness of the movement. Many of the attendees support the idea of a Great Transformation, while others, particularly among the businesses, investors, and bankers, are perhaps more opportunistic than ideological.

iii. Club of Rome

The WEF and the Club of Rome, whose membership is by invitation only, complement each other within the Transnational Progressive Movement. The first organizational meeting for the Club of Rome was held in 1968, but the core group did not come together until 1970. The purpose of the Club of Rome, which has not changed today, is to recognize “the interconnectedness of global challenges, with a distinct perspective that is holistic, systemic and long-term. Our goal is to actively advocate for paradigm and systems shifts which will enable society to emerge from our current crises, by promoting a new way of being human, within a more resilient biosphere.”¹²⁸ In 1972, it released *The Limits to Growth*, a discussion of the limits of global resources, based on computer models, that predicted industrial consumer lifestyles would exceed those limits to devastating global catastrophe within 100 years. The report has been credited with assisting the rise of the global sustainability movement. None of the shorter-term predictions in the book came to fruition, and from the middle of the 1980s, when there was a growing global neo-liberal paradigm shift, Club of Rome publications were disregarded or

¹²⁷ World Economic Forum Annual Meeting 2020, <https://www.weforum.org/events/world-economic-forum-annual-meeting-2020#speakers>.

¹²⁸ “About the Club of Rome,” Club of Rome, <https://clubofrome.org/about-us/>.

even discredited except in certain progressive circles.¹²⁹ The organization as a whole diminished in influence, but gradually re-built its network after the 1998 Kyoto Accord. In an effort to broaden its reach, it selected co-presidents – one from Europe and one from Africa. The two co-presidents, Sandrine Dixson-Declève and Dr. Mamphela Ramphela, move fluidly between various aspects of the network. For example, Sandrine Dixson-Declève has held several different roles in different areas of the network. She was Chief Partnership Officer for the UN Agency Sustainable Energy for All, Executive Director of the EU Green Growth Platform, Director of the Prince of Wales’s Corporate Leaders Group, and personal advisor to the Prince of Wales. She is a senior associate at environmental thinktank E3G, a special advisor to the EU Energy Transition Commission, a member of Climate KiC, a member of *The Guardian’s* Sustainable Business Advisory Board, Board member of business group We Mean Business, and a Senior Associate at the Cambridge Institute for Sustainability Leadership. Perhaps most importantly, currently as co-president for the Club of Rome, she is simultaneously serving as an expert advisor on three different technical committees tasked with developing the details of the European Green Deal.¹³⁰ Other Club of Rome members hold advisory positions on several of these committees as well. Dr. Mamphela Ramphela is a highly regarded South African anti-apartheid activist, politician, and medical doctor. She is currently one of the co-presidents of the Club of Rome, and has served as one of four co-directors of the World Bank, was on the Board of Trustees for the Rockefeller foundation, a founder of the Open Society for South Africa, and the Alliance for a Green Revolution in Africa.¹³¹ The Club of Rome, with its extensive interconnections between mostly European and North American governments, international institutions, and think tanks, complements the business and corporate connections and global reach of the WEF, and the broad scope of the Open Society Foundation.¹³²

¹²⁹ For an excellent discussion of the rise of the Club of Rome and its influence in Canada during the years of Pierre Trudeau, see Jason Churchill, “The Limits to Influence: The Club of Rome and Canada, 1968 to 1988,” (University of Waterloo: PhD Dissertation, 2006).

¹³⁰ Sandrine Dixson-Declève, “Biography,” Cambridge Institute for Sustainability Leadership, <https://www.cisl.cam.ac.uk/directory/sandrine-dixson-decleve>.

¹³¹ Farai Gundan, “One of South Africa’s Richest Women, Dr. Mamphela Ramphela Announce Run for President,” *Forbes* [online], 29 January 2014, <https://www.forbes.com/sites/faraigundan/2014/01/29/one-of-south-africas-richest-women-dr-mamphela-ramphela-announces-run-for-president/>.

¹³² The Club of Rome has a central hub, but also permits national associations. Its membership, by invitation only, does include representation from countries outside of Europe and North America, but it is minimal with one or two people from Japan, China, Africa, and South America. See <https://clubofrome.org/members>.

iv. Open Society Foundation

The Open Society Foundation is unique in this category as it is not only a coordinating network like the WEF and the Club of Rome, but it is also a major source of funding for a number of institutes, knowledge networks, media and universities. It was established by George Soros in 1979 to advance his idea of transforming global society and its economy under the rubric of an “open society” that encapsulates many progressive social justice themes and ideas. Over the past 40 years Open Society Foundations have spread across the world, operating in over 120 countries to advance progressive causes. Some organizations in the US that are funded are commentary generator Project Syndicate, Media Matters, Alliance for Citizenship, Tides Foundation, Tides Center, Center for American Progress, Earth Day programs, Center for Responsible Lending, Economic Policy Institute, and many others in America and around the world. Soros also founded the Central European University in 1991. At the WEF meeting in 2020, Soros stated his belief in the need for quality education as a long-term strategy to advance his concept of an open society. To that end he is creating a global educational network called the Open Society University Network (OSUN) that “will offer an international platform for teaching and research.”¹³³

v. Knowledge Purveyors

Within the *Knowledge Purveyors* category institutes, think-tanks, and academics have continued to work towards the New Energy Paradigm or Great Transformation, establishing an intellectual and economic framework for the energy transition in numerous scholarly articles and recent conference events.¹³⁴ There are too many groups to list, but some representative groups include: The Center for American Progress, the Open Society Institute, 350.org, Progressive Policy Institute, Canada 2020, The Council of Canadians, the Pembina Institute, World Resources Institute, The Potsdam Institute, Broadbent Institute, Parkland Institute, Earth Justice,

¹³³ George Soros, “Remarks delivered at the World Economic Forum,” 23 January 2020, <https://www.georgesoros.com/2020/01/23/remarks-delivered-at-the-world-economic-forum-3/>.

¹³⁴ A few of the recent conferences include the annual World Economic Forum meeting in Davos, Switzerland (January 2020), the Club of Rome “Climate Emergency and New Civilizations” summit in Cape Town (November 2019), Project Drawdown Research to Action: The Science of Drawdown conference (September 2019), the Oxford Energy Seminar (September 2019), and the Aspen Ideas Festival “Climate Breaking Points,” (June 2019). This is just a small handful of conferences that are held annually to improve or thicken networks, share research, and increase publications in the relevant fields that in turn secure tenure, increase funding, and influence policy-makers.

Media Matters, Union of Concerned Scientists, Code Pink, International Initiative for Promoting Political Economy, Policy Network (UK), Volta Italia, Sanders Institute, the Rocky Mountain Institute, Heinrich Böll Stiftung, Wuppertal Institute, Institute for New Economic Thinking, World Future Council, Momentum (UK), Climate KiC, E3G, and many, many more. This also does not include the various institutes housed at universities such as sustainability institutes (these are at almost every university in Canada), the SIPA center (Columbia), ETH Zurich, Grantham Institute (Imperial College London), Cambridge Centre for Climate Science (UK), Cambridge Institute for Sustainability Leadership (UK), Environmental Change Institute (Oxford, UK), Oxford School of Climate Change (UK), Oxford Climate Research Network (UK), Centre for International Governance Innovation (Canada), Project Drawdown (U Penn), Deep Decarbonization Pathways Project, and many more. The research output from this section is remarkable and provides the intellectual support or framework for the Transnational Progressive Movement. The importance and contributions of the knowledge purveyors cannot be overstated; they provide the scaffolding and ammunition not only for the rationale and theoretical underpinnings for the transformation, but also for the necessary cultural shift. Individual knowledge purveyors move fluidly between think tanks, the UN and other international institutions, the WEF, the Club of Rome, the various organizations, institutes, and institutions of the Open Society, the ENGOS, and business groups providing intellectual capital and credibility to forward the energy transition, the Green New Deal, and the Great Transformation.

vi. Business groups and Corporations

Business groups and Corporations helping to advance the energy transition and replacement of the capitalist system include the Prince of Wales Corporate Leaders Group, We Mean Business, the Risky Business group (now the Climate Leadership Council), Coalition for Environmentally Responsible Economies (CERES), We Are Still In, Price Waterhouse Cooper (PwC), McKinsey, Deloitte, Microsoft, Unilever, Climate Action 100+, and other coalitions of businesses. One key businessman advancing the Great Transformation is Mike Bloomberg. After establishing a media empire, he became the Mayor of New York City for three terms. During that time, he established his philanthropy foundation. He used these connections and networks to recruit and fill his philanthropic endeavours, particularly in the field of environmental advocacy. He also utilized (and still utilizes) the networking connections with other cities and states he

made as mayor, and his activities with various political organizations, to form the C40 Cities Climate Leadership Group, which he merged with the Clinton Climate Initiative. He formed Risky Business with Tom Steyer and Hank Paulson to persuade businesses to pursue more sustainable business practices, which became the Climate Leadership Council. He continues to fund Sierra Club's Beyond Coal campaign and the Environmental Defense Fund's campaign against fracking. In 2015, Bloomberg was tasked by Mark Carney (chair of the Financial Services Board (FSB)), to head the Task Force on Climate-related Financial Disclosures to develop guidance and metrics for corporate disclosures of climate risk. In 2018, he was appointed UN envoy for climate action and cities. In 2019 he founded the Climate Finance Leadership Initiative to accelerate investments in clean energy.¹³⁵ When he resigned to run as a candidate in the Democratic presidential primaries, Mark Carney took over as UN envoy for climate action and finance. While Bloomberg encourages these various corporate coalitions, his media company promotes the Davos meetings of the WEF. One has to wonder why such a successful businessman, or other successful businessmen and corporations, would want to destroy the system that enabled their prosperity.

Businesses and corporations form coalitions and participate in the WEF and help finance projects and institutes for a few possible reasons: perhaps they really believe in the cause even if it might hurt their businesses; perhaps they wish to deflect criticism of their practices through “greenwashing”; perhaps they do not want to be left out of the group (like with Climate Action 100+); perhaps they are playing along with the agenda in order to shape or influence policies to the benefit of the company. Regardless of why, by participating in the sustainability and climate change agenda they lend the agenda credibility, legitimacy, and power.

vii. ENGOs

For over thirty years, many large American philanthropic organizations have committed their significant resources to funding climate change action through various *ENGOs*. Although there are too many *ENGOs* to name them all, some include the Sierra Club, Environmental Defence, the Indigenous Environmental Network, Natural Resources Defence Fund, Dogwood Initiative, Earth Day Network, National Wildlife Federation, Friends of the Earth, 350.org,

¹³⁵ “Bloomberg Announces Founding Members of New Climate Finance Leadership Initiative,” Bloomberg [online], <https://www.bloomberg.com/company/press/bloomberg-announces-founding-members-new-climate-finance-leadership-initiative/>.

Conservation International, the Pembina Institute, Rainforest Action Network, Équiterre, and Indigenous Climate Action. The relatively new organizations like the Sunrise Movement and Extinction Rebellion and its affiliated groups have benefited from Climate Action Network assistance and Tides Foundation funding, and are spreading across the globe. However, the most significant period for Canada and Alberta has been the period since 2007. Continuing through the present, an extraordinary amount of money has been, and continues to be, distributed to a number of different ENGOs whose unifying cause is shutting down the oil sands and keeping it in the ground. The ENGO networks that grew and expanded from their “Tar Sands Campaign” experience, are also very extensive with many connected by the Climate Action Network, a personal data pooling site that trains activists and assists new progressive groups in identifying supporters and securing funding from various foundations.

The most influential ENGOs internationally are the WWF and Greenpeace, both are often included as stakeholders in EU policy consultations, and the WWF was a stakeholder in the Network for Greening the Financial System (NGFS) review of greening financial investments. In Canada, activists from the WWF and the Pembina Institute are not only hired to conduct research and create reports for policymakers, thereby steering the direction of government policy, they have also permeated top positions in the federal government.¹³⁶ Gerald Butts, the former president and CEO of WWF Canada, served as Prime Minister Justin Trudeau’s chief of staff, and used his position to bring in other campaigners: “Marlo Reynolds, [was] chief of staff to Environment Minister Catherine McKenna, is past executive director of the Tides-backed Pembina Institute. Zoë Caron, chief of staff to Natural Resource Minister Amarjeet Sohi, is also a former WWF Canada official. Sarah Goodman, on the prime minister’s staff, is a former vice-president of Tides Canada.”¹³⁷ The list goes on: Steven Guilbeault (Greenpeace, founder Équiterre, Co-Chair advisory committee 2018/19, Minister of Heritage 2019 onward), Erin Flanagan (former program director Pembina Institute, now Director of Climate, Energy and Regulatory Affairs at Environment and Climate Change Canada), and Clare Demerse (Clean

¹³⁶ Sun Media, “Liberals apologize after hiding \$183K in contracts awarded to environmental group,” *Toronto Sun*, 25 February 2020, <https://torontosun.com/news/national/liberals-apologize-after-hiding-183k-in-contracts-awarded-to-environmental-group>.

¹³⁷ Gwyn Morgan, “Killing the ‘Tar Sands’ with American Money and Canadian Saboteurs,” *Financial Post*, March 23, 2019, <https://c2cjournal.ca/2019/03/killing-the-tar-sands-with-american-money-and-canadian-saboteurs/>.

Energy Canada, Broadbent Institute, Pembina Institute, Senior Policy Advisor ECCC). The ENGOs have infiltrated and captured key positions where policy may be influenced from the inside.

Given these circumstances, it will be difficult for Alberta's hydrocarbon industry to expand or even survive, as was seen with the deliberate inaction by the federal government towards the Coastal Gas Link protestors and the feet dragging on the Teck Frontier project. The coronavirus pandemic reinforces this interpretation. The federal government mandated an economic lockdown; the government compelled people to stay home and not go to work; it forced companies to stop operating. But when it came time to offer assistance to the people and companies it forced to stop working, assistance was not given equally to all of those affected. Instead, the federal government politicians and their officials are deciding who receives assistance and how much they receive – essentially the government is deciding which businesses will stay alive and which will fail. Is it any wonder then that the assistance to the Alberta hydrocarbon industry that was to come “within hours or days,” took several weeks, and in the end it was only intended to clean up orphan wells,¹³⁸ something that was being negotiated anyway. It would be unsurprising if it turns out those former ENGO people within the government worked assiduously to persuade any dissenters that this was the opportunity to strike a death blow to Alberta's hydrocarbon industry. Undoubtedly, they were aided by the various open letters and reports in the media by their former colleagues at various ENGOs to

¹³⁸ Rod Nickel and Steve Scherer, “Canadian energy firms fret as Ottawa labours over promised aid package,” *Calgary Herald* [online], 1 April 2020, <https://calgaryherald.com/business/canadian-energy-firms-fret-as-ottawa-labours-over-promised-aid-package/>; Jesse Snyder, “‘Not going to do anything.’ Oil executives say federal abandoned well program comes too late,” *National Post* [online], 17 April 2020, <https://nationalpost.com/news/not-going-to-do-anything-oil-executives-say-federal-abandoned-well-program-comes-too-late>.

help workers and not the companies, as if the two were somehow separate.¹³⁹ The ENGOs would not be able to further their goal of shutting down the Albertan hydrocarbon industry and accelerating the energy transition without substantial foundation funding.

viii. Foundations

While some of the elements described in the preceding analysis have been fermenting for some time, over the past twelve years pieces have been moved into place to facilitate a convergence of critical elements to expedite the paradigm shift or Great Transformation through the vehicle of an energy transition. This has been accomplished through the proliferation of

Mega Multiple	Funding Foundations
Bloomberg Philanthropies	ClimateWorks
Rockefeller Brothers Fund (RBF)	Grantham Foundation
Sea Change Foundation	William and Flora Hewlett Foundation
Bill & Melinda Gates Foundation	IKEA Foundation
Yellow Chair Foundation	Tides Foundation
Turner Foundation	Tides Center
Energy Foundation	Tides Canada
Pew Charitable Trusts	Walter and Duncan Gordon Foundation
Open Society Foundation	Ford Foundation
Omidyar Network	Gordon and Betty Moore Foundation
Mercator Foundation	Schmidt Family Foundation
European Climate Foundation	Skoll Global Threats
Bullitt Foundation	Kresge Foundation
Oak Foundation	John D. and Catherine T. MacArthur Foundation
William and Flora Hewlett Foundation	Barr Foundation

Table 3 Mega Multiple Funding Foundations

Foundations that provide the large sums of money for the almost exponential growth of think tanks, institutes, and university centres to provide the intellectual capital and legitimacy for the

¹³⁹ Bob Weber, “Environment Groups, Churches, unions ask oil bailout for families, not companies,” *National Post* [online], 24 March 2020, <https://nationalpost.com/pmnn/news-pmnn/canada-news-pmnn/environment-groups-churches-unions-ask-oil-bailout-for-families-not-companies>.

transition (a new treason of the intellectuals). Table 3 of foundations on the previous page is by no means exhaustive; rather, it is the main “mega” funders that direct the most money to climate change and social justice activities that support the Great Transformation. As mentioned above, the foundation money also goes towards the proliferation of ENGOs to provide the foot soldiers and manpower support for protests, volunteers, and action.¹⁴⁰ Most of the money that has been spent over the past thirty years by various foundations, has been done so quietly, and for the most part, with little fanfare. However, perhaps in preparation for the big push for the Great Transformation in 2020, not to mention it is an election year and everything must be utilized to have a president from the Democratic party, an open, well publicized, coordinated effort was launched in September 2018. A group of philanthropists gathered in San Francisco at the Global Climate Action Summit and pledged \$4 billion over 5 years to combat climate change and

Global Climate Action	Summit Foundations
Barr Foundation	Joyce Foundation
Bloomberg Philanthropies	The JPB Foundation
Bullitt Foundation	KR Foundation
Sir Christopher Hohn and The Children’s Investment Fund Foundation (CIFF)	Kresge Foundation
The Educational Foundation of America	Dee & Richard Lawrence and OIF
Pirojsha Godrej Foundation	John D. and Catherine T. MacArthur Foundation
Grantham Foundation	McKinney Family Foundation
The Grove Foundation	McKnight Foundation
Growald Family Fund	Oak Foundation
The George Gund Foundation	The David and Lucile Packard Foundation
Heising-Simons Foundation	Pisces Foundation
William and Flora Hewlett Foundation	Rockefeller Brothers Fund (RBF)
IKEA Foundation	Sea Change Foundation
Ivey Foundation	Turner Foundation

Table 4 Global Climate Action Summit Foundations

explore mitigation measures.¹⁴¹ See table 4 above for the list of donors who pledged funding

¹⁴⁰ For an insight into how this funding enters Canada see for example, Robert Lyman, “Dark Green Money A Glimpse Inside the Big Green Funding Machine,” Friends of Science Society, 1 October 2019. <https://blog.friendsofscience.org/wp-content/uploads/2019/05/Dark-Green-Money-Foundation-Funding-Jan-11-2019-1.pdf>.

¹⁴¹ Courtney Lindwall, “Climate Leaders Made History Last Week”, Natural Resources Defense Council, 17 September 2018, <https://www.nrdc.org/stories/climate-leaders-made-history-last-week>.

towards the \$4 billion commitment. The amount of money that has been directed towards this end is staggering. Yet, if a non-violent revolution is to succeed the money needs to be channelled in the right direction, and after the failure to achieve the Great Transformation after the 2008/09 financial crisis, it was recognized that a cultural shift was needed.

B. Cultural Shift

i. Youth Movement

Many of the ENGOs and those operating within these sustainability and transformational circles thought that the 2008/09 financial crisis would be the catalyst for this transformation, particularly with a sympathetic American President advised by the Center for American Progress led by John Podesta.¹⁴² But the transition did not happen as quickly as was hoped. It came to be realized that the transition required more groundwork to be laid, such as a cultural shift as identified at a conference in 2009 by Canadian scholar Thomas Homer-Dixon from CIGI.¹⁴³ As the future generation having to live with the consequences of the Great Transformation, and the requisite lower standard of living, the support and mobilization of the youth is central to the success of overthrowing or transforming the system.

The youth movement is crucial to facilitating the energy transition and Great Transformation; they not only provide an energetic and sympathetic “army”, they must be convinced of the righteousness of their cause so that they voluntarily agree to the sacrifice of a less prosperous lifestyle in the future. The youth movement is seductive and pernicious, appealing to youthful emotion and desire to “take action” and make a difference about something, while simultaneously causing much stress and angst at the prospect that there will be an ecological and societal collapse by 2050 if people do not act on climate change *now*. By involving the youth, not just in the action part of the movement, but also in the development of

¹⁴² John Podesta and the Center for American Progress had considerable influence in the Obama administration, recommending key officials who were either champions of or sympathetic to pursuing climate change initiatives. Officials recommended included John Holdren (White House Scientific Advisor), Van Jones (White House Advisor), Stephen Chu (Secretary Department of Energy), and the EPA administrator Lisa Jackson.

¹⁴³ Thomas Homer-Dixon, “The Great Transformation – Climate Change as Cultural Change,” Conference Presentation at Essen, Germany, 8-10 June 2009, <https://www.homerdixon.com/the-great-transformation-climate-change-as-cultural-change>. Homer-Dixon argues that all people, regardless of where they live in the world or their cultural background, care about their children and want a safe and secure world for them. This can be a point of global unity, for “Without the involvement of large democratic communities in their development, any proposed solutions, *especially those that require significant sacrifice*, will not be legitimate enough to be widely accepted.” (10) [emphasis added]

proposed solutions, such as the youth involvement in the Sunrise Movement in crafting the US Green New Deal, it increases the likelihood of a broad acceptance of the drastic changes to everyday life that will result from the transformation. The idea of a “climate emergency” caused by the exploitation and usage of “dirty” hydrocarbons is used to manipulate young people into believing the world is being destroyed catastrophically, and if our system does not change immediately, the world will be uninhabitable. Therefore, a cultural shift and embracing of degrowth is required. There are too many youth activist groups to name, and some are subsets of larger ENGOs, but here are some of the more active: Sunrise Movement, Fridays for Future, Extinction Rebellion, Divest Ed, WWF, Nat Geo Kids, Alliance for Youth Action, IfNotNow, Justice Democrats, March for Our Lives, NextGen America, Student Action, United We Dream, Alliance for Climate Education, Climate Generation, Climate Advocacy Lab, Defend Our Future, Earth Guardians, Sierra Student Coalition, Power Shift Network, Resilience, IRENA Youth Network, WEF Youth Leaders, Club of Rome Youth Generation Progress, Zero Hour. The youth movement is delineated, in some respects, by those organizations appealing to school children, those that seek to organize university students, and those for identified “youth” leaders in academics, government, and business under the age of 40.

1. *School Children*

Since the 2008/09 financial crisis there has been an increased effort of indoctrination of the youth towards the idea of a climate crisis that has culminated in the “Friday Strikes for the Future” and various “Climate Now” actions from groups like the Sunrise Movement and the youth wing of 350.org and other organizations. The indoctrination is not just through interest groups or activist organizations, the groundwork is laid in the schools; the youth are meant to feel knowledgeable about climate change issues, and that those making decisions should heed this knowledge.

Environmental management, and environmental studies proliferate through the high schools, and just about every subject incorporates climate change messaging. How many schools have a recycling program that began in kindergarten? How many schools promote the idea of meatless Mondays? In Germany, at the *Grundschule* (elementary school), the children are taught in science class about recycling, the benefits of windmills and the need to walk more, drive less; and an external group Klasse 2000 *Klaro* is invited into the classroom to teach the kids about

healthy eating and lifestyles, which of course promotes plant-based diets and the need to eat less dairy and meat and more fruit and vegetables. In one northern German rural community, with a number of dairy farms, there was a school milk programme. During the morning snack break the children had a choice of milk or yoghurt from a local dairy, which was widely popular with the children. When a new principal came to the school in 2013, despite protests from the parents, she immediately cancelled the milk programme and replaced it with a fruit and vegetable programme instead.¹⁴⁴

There are other more fun ways to push the climate change message to children. The EU government funded a game app called Penjii Protects the Planet, to be used in the classroom along side climate action education.¹⁴⁵ In the game, the player must help the penguin navigate through pollution, avoiding obstacles and cleaning up pollutants. If Penjii dies, then the player must watch 3 or 4 climate facts and correctly answer a follow-up question before reviving and trying again. It is extremely difficult to succeed in the game so that the player must constantly view the “facts” and answer the questions to continue. One question in the game is, “Why does eating too much meat lead to climate change?” Answer, “More animals means more emissions and more water use.” It offers in-class teaching resources to accompany the game, and information on how to “get involved in sustainability initiatives to make a genuine impact!”

The WWF is also very active in promoting the climate change message in a fun and pervasive way for children. In Germany, for example, the WWF partners with Edeka, one of the major supermarket chains, to enhance sustainability practices, and their “approval” logo and sticker can be found on countless products.¹⁴⁶ The WWF also engages in various publicity campaigns in the supermarket that includes an annual book and sticker campaign. Customers earn packages of stickers and trading cards of animals, that can then be organized in a special WWF book (purchased at additional cost).¹⁴⁷ During the coronavirus lockdown of spring 2020,

¹⁴⁴ This was between 2011 and 2015 and are based on the personal encounters of the author.

¹⁴⁵ <http://penjiithegame.com/>.

¹⁴⁶ Starke Partnerschaft – Edeka und der WWF, <https://verbund.edeka/verantwortung/projekte-partnerschaften/okologisches-engagement/partnerschaft-mit-dem-wwf/>.

¹⁴⁷ This was very popular in our local school, with the children trading the cards during the breaks and bringing their sticker books to show off their collection.

WWF offered a number of free educational activities and resources for children to do and learn at home.¹⁴⁸

In the UK, climate change permeates almost every subject in the school curriculum. Geography is about one quarter climate change related issues. The general science modules fit a mention of climate change into almost every chapter. However, the most blatant example is the General Certificate of Secondary Education (GCSE) exam taken by 15 or 16 year olds for German, (learning German as a second language). An entire module of the exam is about explaining in essay form what the student does to avert catastrophic climate change, what they do to convince their families to change their lifestyle, how they consider the environmental impact of different forms of transport, and so on.¹⁴⁹ This indoctrination primes the children to take action and demonstrate their desire to help the environment by participating in climate action events, particularly the Fridays for Future protests that encourage school children worldwide to skip school and protest for action on the “climate emergency”.

This youth action, or civil disobedience, is crucial to the cause of forcing an energy transition and accelerating the Great Transformation. As Christiana Figueres stated in a March 2020 interview promoting her new book *The Future We Choose*,

civil disobedience has a wonderful role to play it [can] put a lot of pressure, and a lot of public attention and awareness raising, on what needs to be done. We say in the book that history shows, that once you get civil disobedience, especially of those who are the most vulnerable and the most affected, **which in this case is the kids, young people on the streets are fantastic**. And once you get to 3.5% of the entire population out on the streets in civil disobedience, history shows that is when you have a tipping point. So we are not very far from that. Civil disobedience can really help to focus the mind.¹⁵⁰ [emphasis added]

Figueres and other leading members of the climate change movement, like Club of Rome co-president Sandrine Dixson-Declève, bestow a great deal of admiration on the Fridays for Future protests and the children who accompany the Extinction Rebellion shock events to paralyze

¹⁴⁸ See for example the Learn to Love Nature campaign that included downloadable resources, videos, and live webinars with “WWF experts”, <https://www.wwf.org.uk/updates/learn-love-nature>. The international site also offered various home activities for children and youth, <https://explore.panda.org/youth-at-home>.

¹⁴⁹ Harriette Lanzer and Michael Wardle, *Edexcel GCSE German Higher Student Book* (London: Edexcel, 2017), Chapter 8, 146-163.

¹⁵⁰ Christiana Figueres & Tom Rivett-Carnac – Discussing new book at RSA London, 2 March 2020; video on YouTube. <https://www.thersa.org/events/2020/03/the-future-we-choose>. Moderator, Sue Pritchard (Director, Food, Farming, and Countryside Commission), (The Future We Choose | Christiana Figueres | RSA Replay) <https://www.youtube.com/watch?v=4YQe0OdAVC0>

modern life. They are essential in creating the 3.5% tipping point to shift public support for the energy transition and Great Transformation, and while creating the appropriate mindset and hysteria in children is necessary, it needs to be continually reinforced and cultivated as they grow up and channeled into appropriate political activity.

2. High School and University

Many of the activist organizations have educational materials for educators to use in the classroom. For example, Project Drawdown, at their conference in September 2019, had a workshop titled, “From Despair to Hope: Empowering Educators and Students through Drawdown Solutions.” The workshop provided ways to engage students from K-12 and at university level by providing ways to make climate change materials more accessible and engaging within the context of “drawdown”: the point when atmospheric GHGs start to decline steadily by bringing emissions to zero through broad societal changes and increasing natural carbon sinks.¹⁵¹ One suggestion for university lecturers was to incorporate just one mention of the climate emergency in every lecture regardless of whether the lecture was about climate change or not. Naomi Klein’s “This Changes Everything” movement provides a high school and university classroom guide to use in conjunction with the book of the same title to analyse the concepts and ideas of each chapter. There is also a link to the companion film.¹⁵² Resilience, the youth program of the Post Carbon Institute, offers an online *Think Resilience* course (free during the coronavirus shutdown), complete with a certificate at the end, that provides “comprehensive understanding of systems thinking and resilience science, and gives you concrete ideas and strategies for how to engage in building the resilience of your own community.”¹⁵³ The International Renewable Energy Agency (IRENA) organized a Youth Forum in January 2020 to enhance “the vital role that young people play in achieving climate stability and advancing the sustainable development agenda and energy transformation at large.”¹⁵⁴ IRENA also offers a Student Trainee Programme to support Governing Body Meetings for high school students and a Youth Circle at the World Future Energy Summit so that “students engage in dialogue with representatives and experts in the renewable energy sector.” Action and activity are a constant element in the quest to engage young people in the movement and politically.

¹⁵¹ Drawdown Framework, <https://www.drawdown.org/drawdown-framework>.

¹⁵² <https://thischangeseverything.org/book/guide>.

¹⁵³ Think Resilience, What you’ll learn, <https://education.resilience.org/course-options>.

¹⁵⁴ <https://www.irena.org/events/2020/Jan/IRENA-Youth-Event>.

The most politically influential of the American youth movements is the Sunrise Movement, launched in 2017 to build momentum towards the 2020 election. They do not hide their objective: “We’re building an army of young people to make climate change an urgent priority across America. . . . Public opinion is already with us – if we unite by the millions we can turn this into political power and reclaim our democracy.” Regardless of who wins the election, Stage 5 of their strategy is “to engage in mass noncooperation to interrupt business as usual to win a Green New Deal.”¹⁵⁵ In February 2020, they organized a protest “teach in” on the Green New Deal at the Capitol building in Washington, D.C. Twenty teenagers were arrested.¹⁵⁶ It also offers a Sunrise School during the coronavirus lockdown that educates students on the Green New Deal, “how it fits into the coronavirus crisis, and how we can work together to win it.”¹⁵⁷ They offer a number of other workshops, but some are limited to those who “are members of a hub, strike circle, or national support team, or who’ve attended an in-person Sunrise training or *Movement Building 101*.” The youth are also being prepped to be voters for progressive ideas and candidates.

Another organization, Generation Progress, provided an assessment for Democratic candidates on how to capitalize on the youth vote. It warned, “neglecting to prioritize listening to, appealing to, and inspiring this group would be a major miscalculation. . . . campaigns should be connecting with young voters on a personal level, asking about their concerns, and creating policy proposals that will resonate with young people specifically.”¹⁵⁸ On their Climate Change issue section, they have quick links to “take action” campaigns, where a person only needs to fill in their name, address, and email and a letter is sent to Congress on that issue. An appeal is then made for the person to tell three friends to do the same thing.

The American group Divest Ed, “a national training and strategy hub for student fossil fuel divestment campaigns,” has been the most successful in organizing across American university campuses to encourage endowment funds to divest from fossil fuel investments. In Canada,

¹⁵⁵ <https://www.sunrisemovement.org/about>.

¹⁵⁶ “20 Teens Arrested as Youth Climate Activists Take Over Capitol Building for Green New Deal Teach-In,” Democracy Now! [website], https://www.democracynow.org/2020/2/18/headlines/twenty_teens_arrested_as_youth_climate_activists_take_over_capitol_building_for_green_new_deal_teach_in.

¹⁵⁷ “Crash Course: Green New Deal & Coronavirus,” <https://www.sunrisemovement.org/sunrise-school>.

¹⁵⁸ Emily Leach and Brent J. Cohen, “Report: Young People are the Pathway to Victory in 2020,” 10 March 2020, <https://genprogress.org/content/uploads/youthvote.html>.

350.org has been instrumental in the university divestment campaign. Its branch at the University of British Columbia (UBC) was successful in December 2019, in having UBC commit to divest from fossil fuel industries represented in its endowment fund.¹⁵⁹ Once degrees are completed, and the young people move into the workforce, the connection to climate change issues must be maintained, sometimes that is through employment at ENGOs, or for the academically inclined, at one of the myriad institutes and think tanks. Some, however, enter business in sustainability departments, or enter government, and rise through the ranks to positions of leadership.

3. *Youth Leaders Under 40*

Although less youthful than the other organizations, the WEF also has a “youth” component, The Forum of Young Global Leaders. Established in 2004, it recruits 115 leaders under the age of 40 in a five year programme to “create a proactive multistakeholder community of the world’s next-generation leaders to inform and influence decision-making and mobilize transformation.”¹⁶⁰ This year’s cohort includes the chief investment officer of Blackrock, the sustainability officer of Google, executive editor of NBC news, party co-leader of The Greens (Germany), a partner at KPMG (Netherlands), the PM of Finland, a member of the Blockchain policy centre OECD, the founder of Patreon, the mayor of Phoenix, Arizona, as well as Canadian cabinet minister Maryam Monsef, Minister for Women and Gender Equality.

In 2019, the Club of Rome established a Youth and Young Leadership impact hub to generate “young leadership and intergenerational dialogue,” and in March 2019, it issued a statement of support and solidarity with the Global Student Climate Protests led by Greta Thunberg, and held its first Youth Summit concurrent with the COR AGM in Cape Town in November 2019.¹⁶¹ The inclusion of youth is a new area for the Club of Rome, therefore it is unclear how much influence it offers in the overall youth movement, but it reinforces the idea that the movement identifies the need to keep the youth engaged for the cultural shift.

¹⁵⁹ “Divestment Win!”, UBCC350, <https://ubcc350.org>. The commitment to divest was made by the UBC board of governors soon after it declared a “climate emergency” on 5 December 2019. <https://president.ubc.ca/letter-to-the-community/2019/12/05/climate-emergency-declaration/>.

¹⁶⁰ Forum of Young Global Leaders, About, <https://www.younggloballeaders.org/vision-and-mission>.

¹⁶¹ Young Leadership & Intergenerational Dialogue, Club of Rome, <https://clubofrome.org/impact-hubs/youth-young-leadership/>.

ii. Media

The media has come to be a significant driver of public opinion on climate change and is therefore a key driver in the cultural shift necessary for the Great Transformation. As a recent study points out, coverage of particular issues raises their profile and makes them salient to the public and policymakers. If issues are covered frequently and widely, they are assumed to be of importance to policymakers, advocacy coalitions, and the general public. How the media frames an issue or narrative can lead to “mobilization of different constituencies. Media narratives that identify the cause of policy problems and outline potential solutions narrow the way issues are interpreted, and groups can use this framing to advance their own interests.”¹⁶² The media is key to shaping public opinion about the petroleum industry, hydrocarbons, and climate change. It was very successful in amplifying the ENGO pejorative message of “dirty oil” and “tar sands” and helping the labels to stick in the public perception of the Canadian industry. Without the constant repetitive stories about the benevolence of “green” philanthropy, protests, PR stunts, ENGO “studies” being released and reported on uncritically, emphasizing normal weather events as extraordinary, the public perception would be very different. Yet, what is perhaps most troubling are the increase in, and open advocacy of, collective groups of journalists to coordinate and effectively distribute propagandized climate change issues in their reporting, such as the Society for Environmental Journalists, Climate Matters/Climate Central, Covering Climate Now, Climate Home News and Climate News Network.

The Society for Environmental Journalists (SEJ), as described in their mission statement, was established in 1990 to assist journalists to responsibly cover complex environmental issues for the advancement of public knowledge. They help develop networks between scientists and journalists, offer support for professional journalists, and provide a “Reporter’s Toolbox” to help improve climate coverage, offering various tips to journalists on terminology (do not be too technical, avoid using certain words, emphasize other words), how to more effectively frame a story (do not provide a platform for skeptics), and how to work climate change into other

¹⁶² Jason Thistlethwaite and Daniel Henstra, “Leveraging Media Coverage of Disasters to Support Disaster Risk Reduction,” Centre for International Governance and Policy, Policy Brief No. 157, November 2019, 3. <https://www.cigionline.org/publications/leveraging-media-coverage-disasters-support-disaster-risk-reduction>.

stories.¹⁶³ Their website offers a comprehensive number of resources such as “tip sheets”, links to other coverage on an issue, funding opportunities, webinar events, and a host of other resources. There is also an SEJ Canada page, but it is not as extensive. During the coronavirus pandemic, the SEJ offered a webinar about climate and coronavirus, and how to work climate into stories when newsrooms did not want to focus on anything except the pandemic.¹⁶⁴ There is also a dedicated coronavirus page with links to articles, online events, funding, and other resources, including a link to a website that is “keeping an eye on climate change-related rollbacks by the Trump administration and state governments amid the coronavirus crisis, along with favors to oil and gas, and other energy and climate-related industries.”¹⁶⁵ The SEJ is funded by the usual progressive foundations such as the Bullitt Foundation, FJC: A Foundation of Philanthropic Funds, William and Flora Hewlett Foundation, The Pew Charitable Trusts, Scripps Howard Foundation, and The Wilderness Society. Having one collective organization of journalists to spread the climate change message throughout the media is insufficient for the Transnational Progressive Movement; more organizations not only allow the message to be spread more broadly, it also helps to protect and insulate journalists if criticism arises, especially as the critical moment arrives for the Great Transformation.

Around the time of the 2008 financial crisis, and the first calls for a Global Green New Deal, Climate Central was founded. It describes its purpose as “a central authoritative source for climate change information. Climate Central surveys and conducts scientific research on climate change and informs the public of key findings.”¹⁶⁶ In 2010, Climate Matters was created within the Climate Central organization, it expanded to Climate Matters in the Newsroom in 2017. Climate Central informs the public through Climate Matters and Climate Matters in the Newsroom, which then distributes the stories through a network of journalists, “Climate Central’s journalists collaborate with news organizations nationwide, contributing science reporting and data to TV, radio, print and digital coverage of local climate change impacts and

¹⁶³ Hassol, Susan Joy. ‘Reporter’s Toolbox: New Resources Help Improve Climate Coverage,’ Society of Environmentalist Journalists, 22 January 2020. <https://www.sej.org/publications/reporters-toolbox/new-resources-help-improve-climate-coverage>.

¹⁶⁴ SEJ Webinar: Covering a Crisis: Climate, Coronavirus, and Global (In)Action, 2 April 2020, <https://www.sej.org/calendar/sej-webinar-covering-crisis-climate-coronavirus-and-global-inaction>.

¹⁶⁵ <https://www.sej.org/covid-19-resources-journalists>.

¹⁶⁶ Climate Central, About Us, <https://www.climatecentral.org/what-we-do/history>.

solutions.”¹⁶⁷ Similar to the SEJ, it not only helps to provide material and stories for journalists, it also offers training programs through the Climate Communication organization to help “journalists on every beat to tell timely, science-based, local climate change stories.”¹⁶⁸ Climate Communication was established to “help journalists gather reliable scientific information and identify experts. We help make climate change science available and comprehensible to the media and to the public.”¹⁶⁹ The point is to tie climate change to local events; making it immediate, local, and personal, not an issue that is distant. Climate Communication is funded by the Rockefeller Brothers Fund and the Hartfield Foundation; Climate Central and its affiliates are funded by 49 different progressive foundations that include ClimateWorks, The David & Lucile Packard Foundation, Energy Foundation, Leonardo DiCaprio Foundation, Prince Albert II of Monaco Foundation, Rockefeller Philanthropic Advisors, and The Eric and Wendy Schmidt Fund for Strategic Innovation. Building on the sustained linking of climate change to local events, helped prepare and prime the broader public for receiving coverage of larger events, like Greta Thunberg and the UN “Climate Action Summit” in September 2019.

An unprecedented collusion of media organizations launched a “coordinated effort to change the media conversation,” about climate change in 2019. The effort was coordinated in part by the Columbia Review of Journalism (CRJ).¹⁷⁰ Climate Central was also involved in organizing the media blitz, therefore it is unsurprising that it employed a similar strategy to work climate change issues into various stories while connecting scientists, advocates, and other supporters of climate action with newsrooms around the US. The CRJ and the Covering Climate Now project stated that they would “work to organize as much of the news media as possible—large and small, national and local—to commit to one week of focused coverage of climate change this September [2019].”¹⁷¹ Many of the news stories on Greta and the UN meetings originated from news organizations participating in the coordinated initiative, but did not disclose that they were part of the movement. There was some mild criticism of the endeavour,

¹⁶⁷ Climate Central, Partnerships Journalism, <https://www.climatecentral.org/partnerships-journalism>.

¹⁶⁸ Climate Communication, Climate Matters in the Newsroom Trainings, <https://www.climatecommunication.org/news/climate-matters-in-the-newsroom-2019-trainings/>.

¹⁶⁹ Climate Communication, Assist Journalists, <https://www.climatecommunication.org/what-we-do/assist/>.

¹⁷⁰ Chris White, “Exclusive: Inside The Media Conspiracy To Hype Greta Thunberg,” *Daily Caller* [online], 18 November 2019, <https://dailycaller.com/2019/11/18/greta-thunberg-climate-change-media/>.

¹⁷¹ <https://www.cjr.org/watchdog/climate-crisis-media.php>.

but unsurprisingly, it did not receive much coverage outside of certain conservative oriented news organizations.

Emboldened by the weak criticism that emerged after the revelations of the collusion, and distressed at the lack of attention to climate change during the coronavirus pandemic, the CRJ and Covering Climate Now project have again organized a weeklong media blitz. As Chris White at the *Daily Caller* reports, “The founders behind Covering Climate Now are asking their network of more than 400 media outlets to blanket the airwaves with stories about climate change during the week of Earth Day [19-26 April 2020].”¹⁷² There are a number of participating Canadian news outlets, some are university newspapers and niche publications, but there are a few more prominent publications like the *Toronto Star*, *Maclean’s*, *The Tyee*, *Rabble*, and *TVO*. While individual news organizations and publications fill out the numbers for this initiative, the disturbing aspect is that some well-known wire services have pledged their reputations to the cause: Reuters, Bloomberg, Agence-France-Presse, and Getty Images. Many stories published in mainstream Canadian newspapers and news organizations like *The Globe and Mail*, *The National Post*, the postmedia news service, the CBC or any of the television news programs, are reprinted or based on stories from these wire services. The implications of this are staggering and help to explain the sudden surge in “silver lining” stories and “open letters” from activists about using the recovery packages to pursue net-zero climate policies. These climate media collectives are not confined to North America.

In Europe, there is a media organization called Climate Home News dedicated to “bringing important climate stories to as large an audience as possible. Our London-based editorial team coordinates deep reporting from around the world on the political, economic, social and natural impacts of climate change.”¹⁷³ Their stories and commentaries are picked up and spread on the internet by a variety of news, activist, and social media sites. They have large corporate sponsors such as Unilever, Signify (LED lighting), Climate Investment Funds, We Mean Business, and Nordea (Nordic bank/financial services), as well as NGO sponsors like Responding to Climate Change (RTCC) an organization sponsored in part by the Canadian

¹⁷² Chris White, “More Than 400 News Outlets Partner With A Project Seeking Media To Beef Up Climate Coverage Amid Pandemic,” *Daily Caller* [online], 16 April 2020, <https://dailycaller.com/2020/04/16/coronavirus-climate-news-coverage-columbia-journalism-review/>.

¹⁷³ <https://climatechangenews.com/about-us/>.

government. Climate Home News is assisted by the European Climate Foundation, an organization “dedicated to responding to the global climate crisis by creating a net-zero greenhouse gas emissions society. We harness the power of effective philanthropy to support the climate community in shaping public debate and forging bold solutions.” They are supported by the Energy Foundation, ClimateWorks Foundation and others, providing indirect funding to Climate Home News. The Energy Foundation and ClimateWorks are bundlers for other large donors like the Hewlett Foundation, Heinz Foundation, High Tide Foundation, MacArthur Foundation, Sea Change Foundation, and so on. Climate Home News also partners with Climate News Network (UK), an organization somewhat similar to the SEJ. Climate News Network offers news articles free of charge written by volunteer journalists, and free training materials to help journalists communicate the complexity of the environment and climate change effectively. It also participated in the Covering Climate Now media blitz for April 2020 and produced stories for the project designed to persuade the public that immediate action was not only necessary, but possible. While there were no stories about any Green New Deal, global or otherwise, there were stories featuring individual policies out of the Green New Deal package and how each would contribute to a net-zero transformed society.¹⁷⁴ There are voices out there that question this climate change narrative and the necessity or efficacy of an energy transition, but their voices are rarely heard – not because they do not exist, but rather, as this has shown, because they are being deliberately overwhelmed by environmental messaging and excluded from the areas of public discourse.

The mode of operation and communication or interactions between the various elements described in this section are fluid, dynamic, and to some extent personal, although there are some general patterns discernible over the past thirty years. There is the organizing idea, in this case it is that the current western industrial capitalist system must be replaced because human activity within that system is leading to catastrophic global warming and climate change, therefore there must be an energy transition away from hydrocarbon use and a new economic system put in

¹⁷⁴ See for example, Paul Brown, “UK gas plans a carbon-free future with hydrogen,” Climate News Network, 20 April 2020, <https://climatenewsnetwork.net/uk-gas-plans-a-carbon-free-future-with-hydrogen/>; the article concludes with the observation: “a number of competing technologies now exist to decarbonise heating, cooking and transport entirely. All that is still lacking is the political will to press ahead.” See also, Tim Radford, “Halve the farmland, save nature, feed the world,” Climate News Network, 21 April 2020, <https://climatenewsnetwork.net/halve-the-farmland-save-nature-feed-the-world/>.

place. The idea takes hold in some international institutions like the UN and a permanent body is created to study the issue and develop mitigation pathways (IPCC). Core organizations like the WEF, Club of Rome, and the Open Society Foundation help to create a framework to build networks and coalitions between academics, businesses, governments, and activists. Foundations provide a significant amount of money to proliferate think tanks, institutes, university institutes, and ENGOS. The idea is cultivated over time in the universities and becomes a way to earn grant funding, publications, and promotion. The idea grows as an area of research as more careers are built around the idea. The proliferation of think tanks, centers, and institutes help to thicken and create tighter networks of researchers, politicians, and government officials through conferences, international summits, and gatherings. Personal networks grow and are developed, and these are used to fill positions at new institutes, corporations, media outlets, and international organizations. Therefore, gradually, other international institutions like the International Energy Agency, the OECD, the IMF, and the World Bank become filled with individuals from the progressive academic institutes and think tanks. Corporations and businesses also begin to be filled with progressive minded personnel, particularly in the sustainability offices, and some corporations form coalitions to demonstrate their commitment at helping fight climate change: as much for the potential of deflecting criticism, increasing market share, and rent-seeking, as for a genuine concern for the environment. As more people become part of the network, the ENGOS also grow and the increase in people move fluidly between one part of the network to another. In some cases, members of the ENGOS become stakeholders in policy deliberations, or even part of government where they can have a direct influence on policy direction and decisions. The ENGOS as “shock troops” play a special role in providing bad publicity to targeted companies, and creating emotional responses within the public to the idea and the proposed solutions presented by the Transnational Progressive Movement of an energy transition and Great Transformation of society. They are on the front lines and serve to divert public and critical attention away from the proliferation of progressivism in the other areas. Through this interaction, a cultural shift is cultivated as the youth are indoctrinated in the core beliefs of the movement, and the media propagates and amplifies the messaging from the other parts of the movement to a wider audience.

How does this apply to Canada? Canada plays a role in the larger movement as both a player and a target. International foundations like ClimateWorks, the Tides Foundation, and the

Open Society Foundation funnel money or establish links through various Canadian entities in order to fund ENGOs, think tanks, and institutes like the Pembina Institute that target the oil sands as a symbol of all that is wrong with hydrocarbon use. The Centre for International Governance Innovation (CIGI) or the Public Policy Forum or any of the other think tanks, often offer analyses questioning the oil sands industry and supporting alternatives to capitalism. Academics grow their careers at the various sustainability institutes that exist at almost every university in Canada, sometimes work with ENGOs, think tanks, and institutes, and are invited to influence Canadian policies as participants on expert panels, or as consultants to government departments. They share their ideas and network nationally and internationally through the Sustainable Canada Dialogues (SCD) (a network of over 80 researchers), the Sustainable Transitions Network (STRN) (a network of over 2,000 international scholars), among other organizations, and target oil companies through the Corporate Mapping Project.¹⁷⁵ Some scholars like Chris Bataille, a lead author for an IPCC working group, are involved in STRN, and work towards creating support for various ideas to restructure the economies of Alberta and Saskatchewan in the wake of closing down the petroleum industry. Others, like George Hoberg, who assisted in the campaign to secure UBC's divestment of fossil fuels from its endowment, are in the SCD and also in 350.org using their academic credentials to lend legitimacy to the idea of fundamentally restructuring Canada's economy and society.¹⁷⁶ The advocacy of sustainability and the Sustainable Development Goals is encouraged in cities and local governments to ensure implementation at all levels of the nation. Businesses and large corporations, including many in the petroleum industry, have been seduced into accepting the need for sustainability officers to demonstrate their commitment to the environment largely in the hope of preventing ENGO negative publicity, and to show the public that the environment matters in their operations. Clearly, this strategy has been unsuccessful for petroleum companies. The youth are mobilized to protest through the Fridays for Future movement and the growing Extinction Rebellion movement. The increasing constriction of media variability in Canada, coupled with the influx of

¹⁷⁵ <http://www.sustainablecanadialogues.ca/en/research-team-and-institutional-partners;> <https://www.corporatemapping.ca/>, partners include Parkland Institute, Canadian Centre for Policy Alternatives, Lil' Sis, Unifor, and six Canadian universities, including the University of Lethbridge.

¹⁷⁶ GreenPolicyProf, <https://greenpolicyprof.org/wordpress/>. See also, a media release outlining the UBC Faculty vote to divest, https://d3n8a8pro7vhmx.cloudfront.net/ubcc350/pages/42/attachments/original/1423610867/Media_release_-_February_10_-_UBC_faculty_vote_on_fossil_fuel_divestment.pdf?1423610867.

reporters trained in progressive journalism schools, and dependence on federal government funding for survival, means that there are few news outlets, national or otherwise, that provide anything other than stories that support the narrative of the energy transition, the “climate emergency” and the policy proposals to bring about the Great Transformation being advocated internationally and by the Liberal government. There are exceptions like the *National Post* and *Sun News Network*, but even with editorial and commentator content that is generally critical of the energy transition, those voices are overwhelmed by support that is still given to the climate change narrative, and by space that is still given whenever an ENGO produces a study or writes an open letter protesting Canada’s petroleum industry.

While the description presented here is linear, the reality is more fluid and dynamic. It is difficult to convey just how interconnected these processes of the movement are when they operate like a multidimensional feedback loop. Taken all together, these different components interact, some by design, others inadvertently, in order to achieve the destruction of Alberta’s petroleum industry through an energy transition designed to facilitate the Great Transformation through some variation of a Green New Deal.

V. Facilitating the Great Transformation

A. Green New Deals

Since 2009, there have been a variety of Green New Deals proposed by different groups, with a growth and acceleration of proposals since the 2015 Paris Agreement. Although the Green New Deals appear to originate from the individual countries, almost all of the general policy proposals and principles are the same. Each time a Green New Deal was put forward by activists in one country, the media would quickly circulate and publicize the story across many platforms. The internet and social media allow for the proliferation and rapid dissemination of ideas, and the various networks of environmental journalists, particularly in the US, accelerates the transmission. This seems to be a case of repeating a policy around the world with the strategy of convincing people that such a concept must be popular and desired by a large part of the citizenry. This section will briefly review the origins of the Global Green New Deal, and the various national Green New Deal proposals of the UK, Canada, the US, and the EU, with a more detailed appraisal of the policy proposals put forward by the EU since it is the first western country to embark upon a complete economic and societal overhaul based upon the principles of

a net-zero transition, and is likely to be the model for Canada’s forthcoming policies.¹⁷⁷ The section will then conclude with a chart highlighting the main policy areas that are common across all of the “deals”.

i. Global Green New Deal

In 2009, during the financial crisis there was much hope that the global financial meltdown would facilitate the Great Transformation away from a global economic system dominated by variations of capitalism, democracy, and centred around hydrocarbons, to one of technocratically guided corporatism, “citizen assemblies”, and centred around rationed renewable energy. Although the ultimate outcome is some sort of Global Green New Deal in principle, each individual country needs to have some sort of national Green New Deal unique to their own circumstances to aid implementation and to avoid the political difficulties of selling a global authority over a nation’s economic development and direction.

Some at the UN prefer the idea of a true Global Green New Deal that would see cooperation and coordination on policy initiatives because addressing the climate emergency requires collective action. An embodiment of this idea, put forward in April 2019, was the “Geneva Principles for a Global Green New Deal.” Some highlights of the proposal include transforming food production, a green industrial policy, and regulating private financial flows. But it went further by suggesting that the post-war trade and financial multilateral institutions, the IMF, the World Bank, the WTO, needed to be reformed or replaced.¹⁷⁸

Some like former UN IPCC negotiator Christiana Figueres see the 2015 Paris Agreement as the international binding framework for a Global Green New Deal, the details of which will be developed and implemented by the signatory states. In promoting her new book, written with colleague Tom Rivett-Carnac about the choices we can make for the future, she emphasized to a gathering of the RSA in London on 2 March 2020, that 2020 is the fulcrum for the future. Her comments are worth quoting at length because it illustrates the motivating mindset:

before 2020 we actually didn’t have the technologies that are the solution. . . . we didn’t have the capital accumulation that we have had since 2008; we have a capital accumulation in the market that can be shifted quickly if we decide to do so. Thirdly, we

¹⁷⁷ Terence Corcoran, “The big zero in Ottawa’s net-zero carbon plan,” *Financial Post* [online], 27 February 2020, <https://business.financialpost.com/opinion/terence-corcoran-the-big-zero-in-ottawas-net-zero-carbon-plan>.

¹⁷⁸ Richard Kozul-Wright and Kevin Gallagher, “A New Multilateralism for Shared Prosperity,” 12 April 2019, (UNCTAD), 25-29. http://www.bu.edu/gdp/files/2019/04/A-New-Multilateralism-GDPC_UNCTAD.pdf.

were only experimenting with the policies. Today, for the first time in history, we have the tech, the finance, and the policy all together, and if we align them all together, we can get to 50% by 2030. So, here is the summary of that: Before 2020, we could not have done it; after 2030 it's going to be too late. Our children can do nothing about that. It is these 10 years where we are actually determining the future of humanity and the planet. So, no pressure. Just let's get it done.¹⁷⁹

By appealing to national signatories to the Paris Agreement to fulfill their obligations with nationally determined plans, Figueres reflects the trend that the proposals for a Global Green New Deal were more pronounced in 2009, whereas by 2020 there are more individual national proposals for Green New Deals even though they all contain similar core policies that were part of the Global Green New Deal. One could argue that these are national programmes in name only.

ii. **Green New Deal Group (UK)**

One of the first national groups to work on developing and selling a Green New Deal was formed in the UK in 2007. Green Party MEPs, Green MPs, and the business editor of *The Guardian* newspaper in the UK formed the Green New Deal Group to develop the policies.¹⁸⁰ Before the Labour government was defeated in 2010, it passed the Climate Change Act (2008) and then a Conservative/Liberal Democrat coalition committed the UK to net-zero by 2050 as part of the Paris Agreement. The UK Climate Change Committee (CCC) was also established in 2008 to advise the UK on carbon emissions and monitor progress on their reductions. In May 2019, the CCC published a report outlining recommendations to accelerate progress on emission reductions. A supplementary report was published in January 2020 outlining net-zero land use policies.¹⁸¹ During the UK election in 2019, the Green Party introduced a Green New Deal Bill. The other parties also issued policy platforms in many ways similar to the Green New Deal. However, despite a well-publicized advisory group report released in May of 2019, the ongoing Climate Assembly exercise, and many proposals, a comprehensive binding policy plan has yet to be adopted.

¹⁷⁹ Christiana Figueres & Tom Rivett-Carnac – Discussing new book at RSA London, 2 March 2020; video on YouTube. <https://www.thersa.org/events/2020/03/the-future-we-choose>; Moderator, Sue Pritchard (Director, Food, Farming, and Countryside Commission), (The Future We Choose | Christiana Figueres | RSA Replay), <https://www.youtube.com/watch?v=4YQe0OdAVC0>.

¹⁸⁰ <https://greennewdealgroup.org/>.

¹⁸¹ The Climate Change Committee, “Land Use Policies for a Net-Zero UK,” January 2020, <https://www.theccc.org.uk/publication/land-use-policies-for-a-net-zero-uk/>.

iii. Green New Deal (Canada)

In 2016, Naomi Klein and her husband Avi Lewis developed the “Leap Manifesto”. This now forms the basis of the Canadian Green New Deal that Green Party Leader Elizabeth May and some members of the NDP keep trying to introduce into parliament. They are working on creating a base of support to pressure the Liberals to adopt this policy as part of their net-zero 2050 implementation plan. Like with the oil sands protests, a network is being built, with particular attention being paid to the youth, to push acceptance of the radical policies.¹⁸² During the Canadian Federal election campaign in 2019, a “Green New Deal for All” tour travelled the country, promoted by “a wide range of progressive groups”, to spread the word about the plan to save the environment by rapidly replacing the old capitalist economy with a new “progressive” one. Avi Lewis attended one of the town halls and fired up the crowd with his declaration that, “The Green New Deal is the left’s progressive antidote to this stale debate... The Green New Deal restores a sense of collective purpose.”¹⁸³ Although Canada has the Pan Canadian Framework on Clean Growth and Climate Change, many elements have yet to be translated into specific binding policies and stakeholder consultations are forthcoming.¹⁸⁴ Attempting to influence the policy choices, on 9 March 2020 Climate Action Network Canada held a Green New Deal reception at Parliament Hill trying to persuade parliamentarians to support the plan for Canada.¹⁸⁵ The recent pandemic has led to calls for incorporating all or most of the elements of a Green New Deal into any government recovery package. Perhaps the apparent procrastination in developing a concrete plan is due to the necessity of waiting for the outcome of the US presidential election in November 2020. If President Trump is re-elected, Canada will be unable to implement as radical a plan as it would like. On the other hand, if a Democratic candidate is elected, then there will be policy convergence between Canada and the US and it will be like a North American Green New Deal.

iv. Green New Deal (US)

¹⁸² <https://greennewdealcanada.ca/>.

¹⁸³ Molly McCracken, “Election 2019: A Green New Deal for Canada?”, Policy Alternatives [website], 3 September 2019, <https://www.policyalternatives.ca/publications/monitor/election-2019-green-new-deal-canada>.

¹⁸⁴ Terence Corcoran, “The big zero in Ottawa’s net-zero carbon plan,” *Financial Post* [online], 27 February 2020, <https://business.financialpost.com/opinion/terence-corcoran-the-big-zero-in-ottawas-net-zero-carbon-plan>.

¹⁸⁵ <https://climateactionnetwork.ca/2020/03/20/green-new-deal-for-canada-reception-on-the-hill/>.

The Center for American Progress (CAP) co-hosted an international conference in 2009/10 to work out a plan for a Green New Deal. At the time, the president of CAP, John Podesta, was working with President Obama to nudge the United States onto the climate change bandwagon. The big push was for the Cap and Trade legislation, but that failed to pass Congress. The idea for a comprehensive Green New Deal was set aside and the strategy was reconsidered. Instead, other avenues were pursued at the state and city levels, and work was done federally within the EPA to try and work around the failure of federal action.

The idea for a Green New Deal was revived in early 2019 by a new cohort of socialist “progressive” congressional members, most notably Alexandria Ocasio-Cortez and her advisors, some from the Sunrise Movement, who worked with the UK Green New Deal group to draft the American Green New Deal. Naomi Klein and Avi Lewis worked with Ocasio-Cortez to produce a short accompanying video imagining how much better America will be in 2050 if it embraces the Great Transformation.¹⁸⁶ The Green New Deal was taken up by senators Elizabeth Warren, Edward Markey, and Bernie Sanders.¹⁸⁷ A more savvy internet and youth campaign and orchestrated broad media coverage, as discussed in the previous section, led to great publicity for the plan, in order to build momentum toward the UN climate sessions in the fall of 2019, and eventually for the 2020 presidential election. The recent pandemic has revitalized discussions about incorporating all or most of it into any government recovery package.

v. **European Green Deal**

In December 2019, the new president of the EU Ursula von der Leyen announced her commitment to introduce a new European Green Deal plan to fundamentally transform the European economy and social structure by 2050 based on the principles of a “circular economy”. Notably, the principles of the EU Green Deal in that announcement were based in large part on the Club of Rome’s Planetary Emergency Plan launched in Brussels in the fall of 2019.¹⁸⁸ Von der Leyen then appointed Frans Timmermans as Executive Vice-President of the European Green Deal, who is charged with overseeing all aspects of the development, negotiation, and

¹⁸⁶ “A Message from the Future with Alexandria Ocasio-Cortez,” <https://www.youtube.com/watch?v=d9uTH0iprVQ>.

¹⁸⁷ Senate Resolution 59, February 2019, <https://www.congress.gov/116/crec/2019/02/07/CREC-2019-02-07.pdf>.

¹⁸⁸ Sandrine Dixon-Declève, Ian Dunlop, and Anders Wijkman, “THE CLUB OF ROME CLIMATE EMERGENCY PLAN A Collaborative Call for Climate Action By Members of the Club of Rome,” September 2019. <https://clubofrome.org/2019/09/23/planetary-emergency-plan/>.

implementation of the EU Green Deal. The process includes convening a number of different expert panels that include not only experts but also specially chosen stakeholders to develop policy recommendations for each component of the plan. An examination of some of these expert panels reveals that the Transnational Progressive Movement is well represented, from the participation of the WWF to the Club of Rome. For example, Jochen Krimphoff, WWF France, is a member of the Technical Expert Group on Sustainable Finance, as is the Club of Rome's co-president Sandrine Dixon-Declève.¹⁸⁹ Dixon-Declève also serves as an expert advisor on two other committees tasked with developing and implementing the Green Deal, including Horizon 2020 (ESIR) and economic and societal impact of research and innovation (ESIR2) expert groups. Other Club of Rome members hold advisory positions on several of these committees as well, but do so as representatives of other organizations.¹⁹⁰ In addition, the concept of a circular economy, which is at the center of the EU Green Deal, is the motivating force of Club of Rome member Ellen MacArthur and her foundation, representatives of which serve on various EU advisory groups.¹⁹¹ A number of MacArthur foundation studies have informed and inspired the EU circular economy plan.

On 4 March 2020 with much fanfare, EU President von der Leyen released the proposed legal framework for the EU Green Deal. The EU Green Deal is the most ambitious plan being attempted in the western world to decarbonize and completely redesign an industrial capitalist society. As Nikos Tsafos of the Center for Strategic and International Studies points out,

The European Green Deal is revolutionary...it is an effort to fully reconceptualize what a modern economy looks like, not just find patches that reduce the carbon footprint of any

¹⁸⁹ *Final Reports of the technical Expert Group on Sustainable Finance, Stakeholder on Sustainable Finance*, 12 March 2020, https://ec.europa.eu/info/sites/info/files/business_economy_euro/events/documents/finance-events-200312-programme_en.pdf.

¹⁹⁰ Hans Schellnhuber and the Potsdam Institute is a good example, as is Enrico Giovanni. The EU has a register of commission expert groups that is searchable online, <https://ec.europa.eu/transparency/regexpert/index.cfm>. A note on the process: under the guise of transparency and participation, the EU invites "stakeholders" to participate in the policy-making process. However, the stakeholders are almost solely left of center progressive groups that support strong interventionist policies. It is possible for concerned individuals to comment on the policies as part of an open process, but their viewpoints are diluted and do not carry the same weight as invited stakeholders.

¹⁹¹ See, <https://ellenmacarthurfoundation.org>; Ellen MacArthur Foundation, *Completing the Picture: How the Circular Economy Tackles Climate Change*, v.3-26 September 2019. For details of the foundations activities in advising the EU, including a list of reports it contributed to the EU policymaking process see, <https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=206816021848-17&locale=en&indexation=true>.

one source or product...and [this is] why the success or failure of the European Green Deal will affect everyone.¹⁹²

Some salient policy proposals include the following: rapid development of renewable energy, a commitment to renovation, infrastructure upgrading, a sustainable agriculture Farm 2 Fork strategy, a carbon border tax, reform of the EU emissions trading system, an increase in carbon pricing, and replacing the current economic structure with a “circular economy.” The proposal is for the plan to be financed out of the EU budget with 1 trillion Euros over ten years with a 100 billion Euros Just Transition Mechanism, the creation of “green bonds” to help encourage private financing of the transition, and the EIB operating as a “climate bank”, offering EU backed loans for projects that further the green agenda.¹⁹³

Not only does the EU Green Deal envision controls on GHG emissions, but government control, manipulation, and eventual monitoring of every citizen’s daily life through the policy of a “circular economy” and data acquisition and utilization.¹⁹⁴ How do these general proposals translate into specific policies? With respect to transportation and the EU Green Deal, diesel and petrol vehicles will be banned by 2030. Only Electrical Vehicles (EV) will be permitted, with the aim for an acceleration in the number of autonomous vehicles. It is likely that who can own one will be severely limited due to supply constraints, and leasing will be encouraged. Ride-sharing (Uber or car pooling), public transit, walking and cycling will also be encouraged and promoted. A mandatory retrofitting of homes and businesses will be required to be undertaken at the cost of the owner with some partial subsidy from the government. For households, it would mean a switch of heating since natural gas and home heating oil will be banned and all heat would have to be electric. Heat exchangers are touted as the ideal replacement, but do not work well when it

¹⁹² Nikos Tsafos, “Why Europe’s Green Deal Still Matters.”

¹⁹³ For a critical assessment of the feasibility and likelihood of success of the EU proposed transformation, see Servaas Storm, “The EU’s Green Deal: Bismarck’s ‘What Is Possible’ versus Thunberg’s ‘What Is Imperative’,” *Institute for New Economic Thinking Working Paper Series*, March 30, 2020, 1–31. <https://doi.org/10.36687/inetwp117>. However, the coronavirus pandemic lockdown has put the funding for the EU Green Deal in question.

¹⁹⁴ Interestingly, the concept of a circular economy is remarkably similar to Buddhist economics as articulated by Fritz Schumacher in his book *Small is Beautiful – “Economic ‘progress’ is good only to the point of sufficiency, beyond that, it is evil, destructive, uneconomic. . . . Non-renewable goods must be used only if they are indispensable.”* Darwall, *Age of Global Warming*, 49-50. Coincidentally, Paris Agreement negotiators Christiana Figueres and Tom Rivett-Carnac are students of Buddhism, and have close ties with the European Buddhist colony Plum Village (<https://plumvillage.org>).

is below 5°C.¹⁹⁵ A “carbon border adjustment mechanism” is being developed to prohibit external goods from entering the common market if they have a large carbon footprint unless an appropriate carbon offset charge is paid. Heavy industry such as cement and steel manufacturing will need to develop low carbon means of production. Even though this will likely make the materials significantly more expensive, lower priced but more heavily carbon intensive alternatives will not be able to enter the European Union without paying a carbon border tax. New buildings must use less concrete and more natural materials. Manufacturers will be encouraged to make products of more natural materials and more plastics will be banned, in particular single-use plastics.¹⁹⁶ Materials and products will have to be made better to last longer and be re-used before they are recycled as a last resort. For example, at a recent meeting with industrial business leaders, President von der Leyen gave an example of how the circular economy would work. She proposed that companies make appliances and products last longer; the incentive for product longevity would be that people would no longer buy and own their washing machine or stove or fridge, rather the items would be leased directly from the manufacturer who would be responsible for the upkeep, maintenance, and eventual disposal of the items.¹⁹⁷

The circular economy is not just about removing ownership of products from people, it also intends to change behaviour – encourage less consumption of everything and increase the rate of use of a product: for textiles that means reducing the use of cotton or synthetic materials in clothing, and people should buy less clothing and recycle through second-hand clothes shops (there are few second hand shops like the Salvation Army or Value Village in continental Europe, while the UK has a robust second-hand charity shop culture).¹⁹⁸ Christiana Figueres

¹⁹⁵ We had a heat pump or heat exchanger when we lived in the south of France and once it got below +5°C it did not work. We had to purchase portable electric heaters and keep the fireplace going to keep warm. Electricity prices in France were the most reasonable of the European countries because of the large amount of nuclear power in their energy mix. The most expensive prices are in Germany, the country with the largest renewable mix in Europe, where our natural gas and electricity utilities cost more per month than our mortgage!

¹⁹⁶ See for example, the subject being discussed at a G7 workshop. A representative from the MacArthur Foundation led one of the panel discussions.

https://ec.europa.eu/environment/international_issues/pdf/g7_plastics_workshop_final_programme.pdf.

¹⁹⁷ Ursula von der Leyen, “Keynote speech by President von der Leyen at the Business Europe Day 2020,” Brussel, 5 March 2020, https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_20_397.

¹⁹⁸ The WEF has been a coordinating organization to assist in developing a business-government partnership to accelerate the circular economy. In 2018 it established PACE – Platform for Accelerating the Circular Economy, creating a coalition of 75 public, private, and civic executive leaders. It is hosted by the World Resources Institute in The Hague, and partners with the Ellen MacArthur Foundation. <https://pacecircular.org/projects>.

reflects clearly the attitude and mentalité behind the circular economy, as she declared in a recent interview,

Oh my goodness. Do we really need everything that we buy? When is enough, enough? Do we really need the fourth or fifth or sixth pair of shoes? Or the fourth or fifth or sixth sweater? We are already getting out of single-use plastics in many countries. That's a really good start. But we should move away from single-use anything: single-use fashion, single-use appliances, single-use furniture. We should get out of that single-use mentality and understand that a sharing economy, a circular economy, is the only way to go. And we reach that conclusion as soon as we are much more mindful about our carbon footprint and how we walk upon this earth.¹⁹⁹

How this applies to food is that people should eat less of everything, particularly meat, and it should be more local, meaning people will have to get used to not having “exotic” fruits and vegetables from outside the local region; and agriculture in general will be “regenerative.” Currently, the Farm 2 Fork strategy is being negotiated and the proposals so far indicate that industrial farming will be penalized, fertilizers and pesticides phased out; small organic farms will be encouraged and subsidized; meat and dairy production will be significantly reduced; communal vegetable plots and allotments will be encouraged.²⁰⁰ The complementary fisheries and aquaculture plan has not yet been released, so it is unclear how this policy will apply to the fishing industry.

The EU Green Deal, however, proposes not only a green revolution but also a digital revolution in order to facilitate and accelerate the Great Transformation. President von der Leyen explained the EU thinking on technology and data to a group of businesses in March 2020:

We have to define a new industrial way for Europe [using] technology: It is about big data, it is about Artificial Intelligence. . . We want digital leadership. You have a data space where you do not only store your own data but that enable you to get access to other researchers' data at the same time. And the same has to go for the business sector, the same actually has to go for governments. They have an enormous amount of data that are being never used [sic] – 85% of all our data we collect are never used or underused. So we should share them because there is a huge amount of innovation in it, of entrepreneurship, missed opportunities.²⁰¹

¹⁹⁹ Laura Paddison, “We Have 10 Years Left To Save The World, Says Climate Expert,” *Huffington Post [UK]*, 21 February 2020, <https://www.huffingtonpost.co.uk/entry/climate-change-christiana-figueres-paris-agreement>.

²⁰⁰ “Leak—Farm2Fork Draft Action Plan,” 13 January 2020, <https://arc2020.eu/leak-farm2fork-draft-action-plan/>.

²⁰¹ Ursula von der Leyen, “Keynote speech by President von der Leyen at the Business Europe Day 2020,” Brussels, 5 March 2020, https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_20_397, 1, 3.

It is argued that a digital transformation is required in order to make energy systems and everyday life more efficient and productive by utilizing commercial and utilities data like anonymized mobility data (vehicle GPS data), and energy consumption data.²⁰² Within the legal framework document digital transformation is highlighted as a way to spur innovation in ways to reach climate neutrality by being able to monitor energy transmission and usage more effectively.²⁰³ In February 2020, the EU released its *Shaping Europe's Digital Future* plan that included initiatives such as bringing superfast broadband and 5G to every household, 5G corridors for automated mobility, development of an AI and blockchain strategy, training small businesses to incorporate digital upgrades into their operations, bringing the circular economy to electronic devices (must be able to repair), and securing access and exchange of electronic health records across the EU.²⁰⁴ It is true that many different countries, not just the EU, are exploring the integration of technology and society, nevertheless, this national government directed and mandated adoption of intense technological and digital penetration of daily life is a fundamental societal transformation of the present western democratic capitalist system into something else.²⁰⁵

Despite originating in different western countries, the Green New Deals from the US to the EU all share similar elements, and they are worth reviewing as listed below.

²⁰² Ursula von der Leyen, "Shaping Europe's Digital Future," *Competition Policy International*, 19 February 2020, <https://www.competitionpolicyinternational.com/shaping-europes-digital-future-op-ed-by-ursula-von-der-leyen-president-of-the-european-commission/>.

²⁰³ European Commission, Regulation of the European Parliament and of the council Establishing the framework for achieving climate neutrality and amending Regulation (EU) 2018/1999 (European Climate Law), 4 March 2020. Brussels: 2020.

²⁰⁴ European Commission, *Shaping Europe's Digital Future*, February 2020; https://ec.europa.eu/info/sites/info/files/communication-shaping-europes-digital-future-feb2020_en_3.pdf.

²⁰⁵ On security and privacy concerns see, Ricardo Vinuesa, Hossein Azizpour, et al, "The role of artificial intelligence in achieving the Sustainable Development Goals," *Nature Communications*, 2020 11:233. <https://doi.org/10.1038/s41467-019-14108-y>. Some scholars from CIGI argue that all of this data will need a global governance framework, see, Robert Fay, "Digital Platforms Require a Global Governance Framework," CIGI online, 28 October 2019, <https://www.cigionline.org/articles/digital-platforms-require-global-governance-framework>.

i. Common Elements of Green New Deals

- Most or all power consumption from renewable or carbon neutral sources within 10 years.
- Halt all fossil fuel expansion, investment and subsidies; shift investment to low carbon sources.
- Building energy-efficient, distributive and smart energy grids.
- Promote “clean” low carbon manufacturing.
- Promote low carbon cement, aluminum and other heavy industries.
- Upgrade all buildings and residences for energy efficiency.
- Upgrade or replace all infrastructure.
- Massive reform of transportation – banning non-electric vehicles.
- Discourage flying except if it is essential.
- Increase rail and public transportation, promote cycling, ride sharing, and walking.
- Invest in renewable and alternative technologies.
- Agricultural reform to reduce the use of pesticides, herbicides, and fertilizers.
- Encourage more local food production.
- Initiate changes to land use for reforestation to sequester more carbon.
- Agree to a global carbon price and trading mechanism.
- Consider consumption taxes to alter behaviours.
- Provisions for a “Just Transition” for displaced workers.

Figure 8 Common Elements of Green New Deal Plans

B. Implementing Green New Deals

How will nations go about implementing and enforcing these disruptive deep decarbonization changes? It is an important question; one that is rarely asked by pundits or analysts in the media. Since the EU is the first western society attempting to pursue a Green New Deal, it is useful to examine what that means for implementation. If the EU is serious about being a net-zero carbon society by 2050, there is no way that renewable energy will be able to supply the amount of electricity required to fulfill all of contemporary society’s energy needs. This absolutely means reducing the amount of energy every household—every person—uses.²⁰⁶

²⁰⁶ Heleen de Coninck, an IPCC lead author, made clear at the International Sustainability Transitions Conference in Ottawa in 2019 that “it’s very hard to realize all this if we don’t change, or continue with the lifestyles we are currently leading, especially in the North [west].” Her presentation can be viewed here,

To that end, the EU has been financing research into ways to make people *want* to reduce their personal emissions through Personal Carbon Tracking or Trading (PCT). Initial projects used a credit-card type tracking of credits but were not well received.²⁰⁷ However, with the advancement of smart phones and their apps, a new way has emerged. One transportation pilot project in the city of Lahti, Finland, uses an app that tracks how one is traveling and gives credits and rewards if one is cycling or walking.²⁰⁸

Various research papers have explored different possibilities, but the most common suggestion is that each person ought to be given a monthly or annual Personal Carbon Budget that one must live within.²⁰⁹ If a person exceeds the allotted budget or carbon quota, then credits must be purchased, ideally from another person who has banked more credits because they are more environmentally-friendly and -conscious. Dr. Tina Fawcett from Oxford University was involved in the original UK study in 2007 for a PCT scheme.²¹⁰ Although at that time the idea was met with much scorn and fear at the level of Orwellian monitoring, it has regained traction.

<https://carleton.ca/istconference/conference-updates/>, or on YouTube, <https://www.youtube.com/watch?v=qL4aWimADfE>. See also, Ghislain Dubois, Benjamin Sovacool, et al, “It starts at home? Climate policies targeting household consumption and behavioral decisions are key to low-carbon futures,” *Energy Research and Social Science* 52 (2019): 144-158.

²⁰⁷ Simon Roberts and Joshua Thumim. “A Rough Guide to Individual Carbon Trading: The Ideas, the Issues and the next Steps Report to Defra,” 2006. For an overview of trials in the EU, Australia, and UK see, Frank Swain, “Can rationing carbon help fight climate change?”, BBC Future Planet, 18 February 2020, <https://www.bbc.com/future/article/20200217-can-rationing-carbon-help-fight-climate-change>.

²⁰⁸ Anna Kuokkanen et al., “A Proposal for a Novel Urban Mobility Policy: Personal Carbon Trade Experiment in Lahti City,” *Utilities Policy* 62 (February 1, 2020), <https://doi.org/10.1016/j.jup.2019.100997>. See also, <https://www.smartlahti.fi/>.

²⁰⁹ See for example, Matthew Lockwood, “The Economics of Personal Carbon Trading,” *Climate Policy* 10, no. 4 (2010): 447–61. <https://doi.org/10.3763/cpol.2009.0041>; Daoyan Guo, Chen Hong and Ruyin Long, “How to Involve Individuals in Personal Carbon Trading? A Game Model Taking into Account the Heterogeneous Emotions of Government and Individuals,” *Natural Hazards* 95, no. 1–2 (January 15, 2019): 419–35. <https://doi.org/10.1007/s11069-018-3496-4>; Wenbo Li, Ruyin Long, Hong Chen, Tong Yang, Jichao Geng, and Muye Yang, “Effects of Personal Carbon Trading on the Decision to Adopt Battery Electric Vehicles: Analysis Based on a Choice Experiment in Jiangsu, China,” *Applied Energy* 209 (January 1, 2018): 478–88. <https://doi.org/10.1016/j.apenergy.2017.10.119>; Stuart Capstick, Irene Lorenzoni, Adam Corner, and Lorraine Whitmarsh, “Prospects for Radical Emissions Reduction through Behavior and Lifestyle Change,” *Carbon Management*. Taylor and Francis Ltd., 2014, <https://doi.org/10.1080/17583004.2015.1020011>; Yael Parag, and Deborah Strickland, “Personal Carbon Budgeting: What People Need to Know, Learn and Have in Order to Manage and Live within a Carbon Budget, and the Policies That Could Support Them?,” 2009; Zia Wadud, and Phani Kumar Chintakayala, “Personal Carbon Trading: Trade-off and Complementarity Between In-Home and Transport Related Emissions Reduction,” *Ecological Economics* 156 (February 1, 2019): 397–408. <https://doi.org/10.1016/j.ecolecon.2018.10.016>.

²¹⁰ Tina Fawcett, Catherine Bottrill, Brenda Boardman, Geoff Lye, *Trialling Personal Carbon Allowances* (UKERC, December 2007). See also, Tina Fawcett, “Personal carbon trading: A policy ahead of its time?” *Energy Policy* Volume 38, Issue 11, November 2010, Pages 6868-6876. <https://www.sciencedirect.com/science/article/abs/pii/S0301421510005239>.

She and another colleague produced a YouTube video in 2019 demonstrating how easy and cool it would be to have a PCT, “How Would Personal Carbon Trading Work?”²¹¹ Notably in the animated video there is an implied criticism of certain lifestyles like living in a big single family house, driving a car, playing video games, and having the lights on. A few proposals are circulating for how best to monitor and reward or punish behaviour. The concern, of course, is who will be making the decision about what an individual can and cannot have or can or cannot do. To address this issue, the suggestion is that a form of Artificial Intelligence, or an algorithm, will determine in a “neutral” way each person’s limits and budgets.

In Canada, two scholars in B.C. have proposed that the best way to shift the public towards meaningful action on deep decarbonization would be for individuals to realize how much “carbon” they are emitting in their everyday life. They make the argument that in the initial stages positive reinforcement is necessary, and it must be voluntary. Making the endeavour into something like a game that also keeps track of what others are doing as a means of comparison and social pressure is also important. They are in the development phase of “Carbon Kit”, a carbon tracker smartphone app that will also be linked with health and fitness monitoring, representing “a combination of computing applications, information sources, and incentives that would enable individuals to track and reduce their personal carbon emissions.”²¹² It would be marketed as a platform with a full bundle of linked apps that track your healthy lifestyle in a way similar to Fitbit; a person would have their utilities profile uploaded to monitor household energy usage; transportation choices would be assessed through monitoring where you go and how you get there—similar to what is being used to track people with the coronavirus—and so on. Game-style rewards would be provided for reaching performance targets. The developers explain that “The Carbon Kit is envisioned as a ubiquitous platform that integrates web-based and smartphone supporting applications, including carbon footprint monitoring, budgeting, and reduction, as well as health improvement and money-saving.”²¹³ Not only that, it is linked to your social media profiles so that you can compare your performance with others. Initially, the performance targets will be set by the user, but the point is to get people

²¹¹ “How Would Personal Carbon Trading Work?” <https://www.youtube.com/watch?v=5kOBvrpKHVc>.

²¹² Laura Guzman, Stephen Makonin, and Alex Clapp, “CarbonKit: Designing A Personal Carbon Tracking Platform,” *Social Sense* ’19: Fourth International Workshop on Social Sensing, April 15, 2019, Montreal, QC, Canada. ACM, New York, NY, USA, 6 pages. <https://doi.org/10.1145/3313294.3313385>.

²¹³ Guzman, Makonin, and Clapp, “CarbonKit: Designing A Personal Carbon Tracking Platform.”

used to it before personal carbon budgets become mandatory. Being tracked through “location services” on one’s device, and what is being done with that information, is perhaps receiving more attention now that people are being tracked during the pandemic, a strategy first pursued by China utilizing its massive surveillance infrastructure spawned by its Social Credit System (not to be confused with the form of Social Credit espoused in Alberta during the 20th century).

Other research being considered by the EU explores how China’s Social Credit system, Big Data, blockchain, and Artificial Intelligence might be utilized, alone or in combination, in order to facilitate the deep decarbonization necessary for the Great Transformation. Both the Club of Rome and the WEF have research clusters in this area as well. In order to understand what type of society is being considered it is useful to take a brief look at China because it has been at the forefront of these developments.

In a massive unprecedented social experiment, China has been trialling a “Social Credit” scheme since 2014 in some provinces, with a comprehensive rollout due some time in 2020. Citizens are monitored through a 5G network of surveillance cameras and drones employing facial recognition technology and AI to monitor and assess personal behaviour and interactions. An individual also has a social credit identity or number that other people with whom one interacts can rate, which then affects a person’s social credit score. A person’s score determines whether or not they are permitted to be entered into the automobile license lottery, which school their children may attend, if they will qualify for loans, where they may live, if they will be promoted, and so on. There is a limit to how many vehicles are permitted in a given area, and even if one can buy a car, as there are only a certain number of license plates issued each month. Some cities have a lottery or an auction for the license plates, and in a big city like Beijing a particular license plate may only allow entrance to the city on certain days of the week. Consequently, one of the big movements is ride sharing and e-bikes. The social credit system accumulates a tremendous amount of data on each individual, gathered and used by companies like Alibaba but ultimately controlled by the state.²¹⁴ If you disagree with your score there is no

²¹⁴ Information for this section on social credit has been synthesized from the following studies and articles: Karen Wong, Li Xan and Amy Shields Dobson, “We’re Just Data: Exploring China’s Social Credit System in Relation to Digital Platform Ratings Cultures in Westernised Democracies.” *Global Media and China* 4, no. 2 (June 2019): 220–32. <https://doi.org/10.1177/2059436419856090>; Rogier Creemers, “China’s Social Credit System: An Evolving Practice of Control”; Daithí Mac Sithigh and Mathias Siems. “The Chinese Social Credit System: A Model for Other Countries?”; Ramon Salim Diab, “Becoming-Infrastructure: Datafication, Deactivation and the Social Credit System,” *Journal of Critical Library and Information Studies* 1, no. 1 (January 31, 2017),

one to appeal to. The Chinese government justifies it as a way to ensure trust, honesty, and integrity in society, however that is defined. The implications of such minute control over every aspect of a person's daily life, and the potential for abuse is staggering. This is particularly obvious during the pandemic, as one observer noticed in China:

The government has also integrated the social credit system in its strategy of quarantining and managing the spread of the virus. Individuals who hide their travel or medical history – and thus their potential exposure to the coronavirus – can have their personal social credit scores deducted or be put on a blacklist. Some cities have also included behaviors such as the spreading of rumors and hoarding products as social credit infringements.²¹⁵

The Social Credit system may seem incompatible with western values of freedom and privacy, but its lure can be seductive for those who profess concern about safety and efficiency. Could China's social-technological experiment move beyond national borders and become global?

The World Economic Forum foresees a time when such social-environmental-technology integration goes global. A November 2017 WEF study in collaboration with PwC praised China's car-pooling company Didi that operates like Uber and moves 2 million people a day. The study went on to suggest that blockchain, satellites, drones, AI could all be used for global environmental commons management "there could be a worldwide blockchain for mobile carbon trading... algorithms [could be] used to assign every person on the planet a science-based carbon budget, which people could then trade. Such a system could potentially spur the next generation of a global climate framework, removing the political and institutional challenges that governments and international regimes, frameworks and systems currently face."²¹⁶ The

<https://doi.org/10.24242/jclis.v1i1.19>; Martin Chorzempa, Paul Triolo, and Samm Sacks. "POLICY BRIEF 18-14 China's Social Credit System: A Mark of Progress or a Threat to Privacy?," Peterson Institute for International Economics, June 2018, <https://www.piie.com/system/files/documents/pb18-14.pdf>; Shazeda Ahmed, Natasha Bajema, et al, "AI, China, Russia, and the Global Order: Technological, Political, Global, and Creative Perspectives A Strategic Multilayer Assessment (SMA) Periodic Publication," NSI Team, December 2018, https://nsiteam.com/social/wp-content/uploads/2018/12/AI-China-Russia-Global-WP_FINAL.pdf; Stefan Brehm and Nicolas Loubere, "China's Dystopian social credit system is a harbinger of the global age of the algorithm," *The Conversation* [online], 15 January 2018, <https://theconversation.com/chinas-dystopian-social-credit-system-is-a-harbinger-of-the-global-age-of-the-algorithm-88348>; Liav Orgad and Wessel Reijers (eds), "A Dystopian Future? The Rise of Social Credit Systems," EUI Working Paper RSCAS 2019/94; Nicole Kobie, "The complicated truth about China's social credit system," *Wired* [UK] [online], 7 June 2019, <https://www.wired.co.uk/article/china-social-credit-system-explained>.

²¹⁵ China's Social Credit System: COVID-19 Triggers Some Exemptions, Obligations for Businesses, <https://www.china-briefing.com/news/chinas-social-credit-system-covid-19-triggers-some-exemptions-obligations-businesses/>.

²¹⁶ Dominic Waughray, Celine Herweijer, and Jim Leape, *Harnessing the Fourth Industrial Revolution for the Earth* (Geneva: World Economic Forum, 2017), 11.

surveillance and monitoring of GHG emissions could be displayed in real-time so anyone around the world would be able to track the sources and flow of GHGs. The report goes on to express concern about data privacy with the suggestion that a new international environmental organization might be needed to “become curators of global environmental information.”²¹⁷

The people in the Transnational Progressive Movement believe we are at an important crossroads with the technology available to make the transition happen. In an interview in March 2020, UN climate negotiator Christiana Figueres expressed her view that information technology – our personal data – information about *everything* we do along with the ability to measure the changes in the climate is “absolutely vital to the transformative economy. [It] is advancing our ability to measure the changes climate change is causing, which helps us predict resource needs and shortages, to provide for human needs before they reach crisis proportions.”²¹⁸ A position reinforced by EU president Ursula von der Leyden in March 2020 as well, as mentioned earlier.

C. Life After the Great Transformation

Some representations of life in a Green New Deal, or net-zero world, have been made that reflect a very utopian future.²¹⁹ If the EU and the other countries who have agreed to net-zero by 2050 are serious about banning almost all hydrocarbons in the energy mix, and wish to use big data, machine learning, AI, surveillance, and tracking apps, all of this takes an enormous amount of electricity. If one adds that into the amount of electricity that will be required to run and heat one’s home, as discussed earlier, there is no way that renewable energy alone can meet this demand. As several of the more honest activists have quietly admitted, it will require a fundamental lifestyle change for people in North America and Europe – “The West” – and citizens do not realize exactly what this means. Since the main objective is to lower GHG emissions across all sectors of the economy, particularly in transportation, industry, and agriculture,²²⁰ it will, in some important respects, resemble the current covid-19 lockdown.

²¹⁷ Waughray, et al, “Harnessing the Fourth Industrial Revolution,” 12.

²¹⁸ <https://www.greenbiz.com/article/christiana-figueres-and-tom-rivett-carnac-every-day-chance-will-not-come-again>.

²¹⁹ See Alexandria Ocasio-Cortez’ video, “A Message from the Future,” 17 April 2019, <https://www.youtube.com/watch?v=d9uTH0iprVQ>; and the BBC video by Christiana Figueres, “Imagining a World Without Fossil Fuels,” 5 April 2018, <https://www.bbc.co.uk/ideas/videos/imagining-a-world-without-fossil-fuels/p0639hks?playlist=newtopias>.

²²⁰ The Canadian agriculture industry is not immune to this movement. A niche coalition of Canadian organic farmers called “Farmers for Climate Solutions” is hoping to be a stakeholder in the next five-year plan of the Canadian Agricultural Partnership to push for the deindustrialization of Canadian farming. See, Alastair Sharp,

What exactly would life be like under a Global Green New Deal, or some national variant, once a full energy transition, paradigm shift, or Great Transformation has taken place? Based on an analysis of the proposals discussed so far, it seems, as Joe Oliver has opined, it will be a dystopia²²¹ rather than the utopia or, as Terence Corcoran describes it, a “neo-communist future”²²² ‘newtopia’, some make it out to be.

1. Everything will be electric – heating, transportation, everything.
2. Electricity *must* be renewable or “net-zero” – but not nuclear; windmills and solar are best, existing hydro acceptable; natural gas only with carbon capture.
 - a. Neighbourhood power generation will be encouraged through small scale solar and wind – but there are not enough materials mined and processed to make all of the new windmills, solar panels, UHV transmission lines, or electrical vehicles (EVs) required to maintain the current standard of living.
 - b. Most of the rare earth elements required for the construction of the solar panels, key components in windmills, and for the batteries in EVs and backup storage are controlled by China. This raises national security and geopolitical concerns.
3. The current western civilized industrial lifestyle *cannot* be maintained solely by renewables.
 - a. People will need to use less electricity in the house – this means rationing to some extent and choices concerning the usage of appliances;
 - b. The internal combustion engine will be banned – EVs only; there are not enough materials to make the batteries required to switch over everyone’s car to electric;
 - c. Not everyone will be allowed a car²²³ – walking, biking, ride sharing and public transport will be encouraged and preferred by the state; non-essential travel will be discouraged, just as with the coronavirus social distancing rules;

“Canadian Farmers have a plan for tackling climate change,” The Grist [online], 17 February 2020. <https://grist.org/climate/canadian-farmers-have-a-plan-for-tackling-climate-change/>. The article was dutifully circulated across the progressive media network.

²²¹ Joe Oliver, “A primal policy battle is Coming and Canada’s future is at stake,” *Financial Post*, 21 April 2020, <https://www.msn.com/en-ca/money/topstories/joe-oliver-a-primal-policy-battle-is-coming-and-canadas-future-is-at-stake/ar-BB12Y6oE>.

²²² Terence Corcoran, “Good News, say climate activists: We have a pandemic!” *Financial Post*, 13 March 2020, <https://business.financialpost.com/opinion/terence-corcoran-good-news-say-climate-activists-we-have-a-pandemic>.

²²³ Elizabeth Traut, “Working Session: Transportation—Mobility in a Drawdown World (Option 4 of 4),” Research to Action: The Science of Drawdown Conference, 16-17 September 2019. Traut made the case that a paradigm shift was necessary to convince people that not everyone needs to have a car. (at 54:30). Lewis Fulton, Jacob Mason, Dominique Meroux, “Three Revolutions in Urban Transportation: How to achieve the full potential of vehicle electrification, automation and shared mobility in urban transportation systems around the world by 2050,” UC Davis, Sustainability Transportation Energy Pathways, May 2017. (https://steps.ucdavis.edu/wp-content/uploads/2017/05/STEPS_ITDP-3R-Report-5-10-2017-2.pdf) The study, funded by ClimateWorks, William and Flora Hewlett Foundation and the Barr Foundation, ran different scenarios estimating that business as usual would see 2.1 billion vehicles in the world by 2050, but under the 3R scenario that number is down to 500 million *worldwide* – just over **10%** -- a **90% reduction in automobiles** (3, 24). The 3R scenario discourages car ownership, promotes ride-sharing, no single occupant vehicles, public transit, cycling and walking. (35)

- d. Large single-family dwellings will be discouraged; all houses will need retrofitting and renovation to meet new stringent environmental energy efficiency standards;
 - e. Air travel for holidays will be minimized, if allowed at all, since non-essential travel will be discouraged.
4. Modern agriculture must be replaced to preserve biodiversity and soil health; farming emissions must be reduced especially the use of fertilizers, herbicides, and pesticides and animal husbandry.
- a. A vegan diet is preferred, but vegetarian is good with very little fish in the diet;
 - b. Meat and dairy production must be reduced significantly;
 - c. “Industrial farms” must be converted to smaller organic plots;
 - d. People must be encouraged to grow their own food on common allotments;
 - e. People need to eat less in order to solve the “obesity” epidemic.
5. Land use patterns must change to accommodate more forests.
- a. Land previously occupied by cows, pigs, and sheep will be converted to forest and natural preserves;
 - b. With organic food production and land use changes there will be less food than with industrial farming and food will need to be rationed.
6. Textiles and products must be more natural and improved to extend longevity and promote a circular economy.
- a. Most plastics will be banned, especially single-use plastics;
 - b. Only have what you “need” – do you need so many clothes or shoes? Do you need all those gadgets?
 - c. Major appliances will not be yours or owned, they will be leased to you from the manufacturers who will maintain them so there is supposedly a vested interest in building things to last;
 - d. Repairability of tech goods will be mandated like in the EU green deal.
7. Governance
- a. Citizen Assemblies will be introduced, at first to augment the present system, but with the view to replace the current form of democracy. Ireland was the first country to utilize a citizen assembly to make recommendations on controversial issues like abortion, which was then put to a referendum. The UK initiated a Citizen Assembly to discuss and make recommendations regarding what changes need to be made for the UK to meet its Paris Agreement commitments. France recently held a Citizen’s Assembly that made quite radical recommendations on how France can cut its carbon emissions by 40% by 2030.²²⁴
 - b. Another alternative for governance proposed by the World Economic Forum is “stakeholder capitalism” that will move beyond GDP to embrace the “4th industrial revolution – this is the transformation of society into a technocracy, governed by experts through technological means, perhaps similar to China’s social credit system.

²²⁴ The Citizen Assembly is a very dangerous experiment, as it seems to operate in direct contradiction to a free and democratic society. To see how this operates in the context of climate change policy developments see, <https://www.climateassembly.uk/>.

Life after the Great Transformation will be constantly monitored, short, cold, and miserable, just like pre-industrial times. This might seem like an extreme assessment, but it is rooted in a realistic appraisal of the policy initiatives proposed so far, and the physical limitations of present resources and technology. How close are we to this outcome? UN climate negotiator Christiana Figueres explained in a recent interview about her new book, that the Great Transformation is within reach,

...starting in 2020, everything matters. We are at a critical decision-making moment that will determine the entire future of humanity, and there is a tiny sliver of time we can use to make it a positive future. We have never had the solutions and technologies so easily at hand and the financing as available as now. We could not have done this before, and by 2030 it will be too late....What makes us hopeful is seeing the enormous shifts investors are making, more than 200 city leaders shifting the energy and building sectors in their local environments, greater awareness of plant-based diets and availability of more sustainable food. These are all taking us in the right direction, but we need to move much more and faster.²²⁵

Why does the movement need to move fast in 2020, one might ask? One reason may be because it is an election year in the US and if President Trump is re-elected the energy transition and Green New Deals will likely fall apart. However, if a Democratic candidate is elected, the US will likely commit to some form of a Green New Deal. Another reason may be that if it goes too slow people will realize what it means and reject it. That may be the case if people begin to understand that life in lockdown for the coronavirus, with social distancing, restrictions on mobility, loss of employment, disruptions in the supply chains, potential shortages of food, shortages of medical supplies, monitoring quarantines, and tracking the infected with apps, drones, and other technology, is not far off from what is proposed in the various Green New Deals and the Great Transformation.

VI. The “Silver Lining” of the Coronavirus Pandemic

Several different people and organizations within the Transnational Progressive Movement, from Club of Rome co-president Sandrine Dixson-Declève to former UN climate negotiator Christiana Figueres, and many in between, have touted 2020 as a super-year, or tipping point, to avert the

²²⁵ Deonna Anderson, “Christiana Figueres and Tom Rivett-Carnac: ‘Every day is a chance that will not come again’,” Green Biz [online], 7 March 2020, <https://www.greenbiz.com/article/christiana-figueres-and-tom-rivett-carnac-every-day-chance-will-not-come-again>.

disaster arising from the so-called “climate emergency.” Symbolically, it is the 75th anniversary of the end of WWII and the establishment of the Bretton Woods global economic system that has oil and hydrocarbon energy at its centre; some would like to see that system replaced—climate change is the rationale, and the coronavirus might be the catalyst. With all of the talk about 2020 being crucial, knowing that it is imperative that President Trump is defeated in November 2020 so that a Green New Deal may be introduced in the US, and understanding that many within the movement believe a war time mentality is needed for governments to direct the entire economy to achieve rapid outcomes,²²⁶ a trigger was expected—some type of big global event like a market crash along the lines of the 2008/09 financial crisis. A global pandemic, however, was not anticipated, though it might prove to be just as effective. Paul Dickinson, speaking with Figueres during a podcast in March 2020, and quoted at the beginning of this report, summed up the situation when he said, “I mean, it’s the Great Transformation, it’s started, that’s what I would say. It’s begun. Not the way we expected, but it’s begun.”²²⁷ The question will be whether the Transnational Progressive Movement can capitalize on the pandemic crisis and not let it go to waste as some believe happened after the 2008/09 financial crisis.

When the 2008/09 financial crisis buffeted the global economy there were calls to use the various national stimulus packages to foster and promote reducing carbon dependency, increasing energy efficiency, expanding renewable energy infrastructure, and other elements of a Global Green New Deal.²²⁸ Indeed, this was the very reasoning behind the UN sponsored report *A Global Green New Deal: Rethinking the Economic Recovery*.²²⁹ The G20 sent positive signals

²²⁶ James Temple, “At this rate, it’s going to take nearly 400 years to transform the energy system,” *Technology Review* [online], 14 March 2018, <https://www.technologyreview.com/2018/03/14/67154/at-this-rate-its-going-to-take-nearly-400-years-to-transform-the-energy-system/>. Daniel Schrag, a former advisor to President Obama on climate change, was interviewed to discuss what is necessary to make the energy transition happen. He explained that large project analogies miss the mark, “the analogy that really speaks to the dimensions and urgency of the problem is World War II, when the United States nationalized parts of the steel, coal, and railroad industries. The government forced automakers to halt car production in order to churn out airplanes, tanks, and jeeps. The good news is that if you [the government] direct an entire economy at a task, big things can happen fast. *But how do you inspire a war mentality in peacetime, when the enemy is invisible and moving in slow motion?*” [emphasis added]

²²⁷ Christiana Figueres, Tom Rivett-Carnac, Paul Dickinson, Outrage and Optimism Podcast, Season 2 #10 (45), 27 March 2020, “Corona and Climate (1): Coming Back Stronger,” 10:07. <https://tunein.com/podcasts/News--Politics-Podcasts/Outrage-and-Optimism-p1217603/?topicId=140572973>.

²²⁸ Tariq Banuri, David Le Blanc, Fred Soltau, Chantal Line Carpentier and Andy Yager, *UN-DESA Policy Brief No. 12: A Global Green New Deal for Sustainable Development*, March 2009, United Nations Department of Economic and Social Affairs, <https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/policybrief12.pdf>.

²²⁹ Edward B. Barbier, *Rethinking the Economic Recovery: A Global Green New Deal*, UNEP, 2009. <https://www.cbd.int/development/doc/UNEP-global-green-new-deal.pdf>. See also, Edward B. Barbier, “Global

that the various countries would make an effort to increase green investments. The US under President Obama directed some of its stimulus package, \$150 billion over ten years, to clean energy projects.²³⁰ But the only country to make a significant effort in this direction was South Korea, with limited success.²³¹ Most nations funneled the stimulus money back into the existing economic framework and the window or opportunity for the Great Transformation was lost.

The Coronavirus pandemic, however, re-opens the window; it has been a fortuitous development for the Transnational Progressive Movement and affords a better chance for accelerating the Great Transformation than in 2008/09. Lessons were learned from the 2008/09 crisis by the Transnational Progressive Movement, and their *media network*, as described earlier, has been put into action to avoid those mistakes in 2020. One important lesson is to ensure that the public is primed and receptive to transformative ideas, while keeping up the pressure about a climate emergency in the middle of a real emergency. It should come as no surprise, therefore, that during the ongoing coverage and analysis of the coronavirus (Covid-19) pandemic, there has been a coordinated media blitz – a plethora of articles in various online magazines and newspapers and in other media – highlighting the “silver lining” of the pandemic as it pertains to climate change.²³² What began as a trickle at the end of February 2020 with images and stories of how air pollution in China had virtually disappeared and the canals in Venice were suddenly clear because the gondola boats were no longer stirring up the sediment, has grown into a cascading crescendo with almost daily reports and commentaries in Canada, the US, the UK, and Europe from knowledge purveyors, activists, multilateral institutions, and politicians, advising

Governance: The G20 and a Global Green New Deal,” *Economics: The Open-Access, Open Assessment E-Journal*, Kiel Institute for the World Economy, Vol. 4, Iss. 2010-2, 1-35. <http://economics-ejournal.org/economics/journalarticles/2010-2>.

²³⁰ John D. Podesta, “The Great Transformation: Climate Change as Cultural Change,” Keynote Speech, Essen, Germany, 9 June 2009, https://cdn.americanprogress.org/wp-content/uploads/issues/2009/06/pdf/podesta_germany1.pdf. This amount came under the pledged 1% of GDP, and was approximately 1/5th of the stimulus package.

²³¹ Edward G. Barbier, “How is the Global Green New Deal Going?” *Nature*, Vol.464, 8 April 2010, 832-833.

²³² One of the first “silver lining” articles came from the UK. Journalist Ed Conway was one of the few to mention that the coronavirus can help to usher in the 4th industrial revolution of a more digitized economy and way of life – tele-working, digital currency instead of hard cash, less travel, and so on. Ed Conway, “Coronavirus can trigger a new industrial revolution,” *The Times* [UK], 5 March 2020, <https://www.thetimes.co.uk/article/coronavirus-has-a-silver-lining-cz8wpc6xj>.

and demanding that stimulus or recovery money ought to be used to pursue net-zero climate policies and not support the “old carbon” system in a restored economy.²³³

The various articles on the “silver lining” present similar themes or talking points as illustrated in the following box.²³⁴ It is interesting that the last item on the list began as a very strong talking point about “listening to the scientists” and “trusting in the models” but has since faded into the background as significant questions have been raised about the reliability,

- Climate change will lead to more pandemics.
- Less trade, less travel, less commerce is good for the climate.
- If we can accept restraints now, we can accept them for climate change.
- If we can trust and listen to the scientists on the virus, we can listen to and trust the scientists on climate change.
- If we can change our lifestyles for the virus, we can do it for the climate.
- People make personal sacrifices for fighting the virus, why not for the climate.
- If there are food supply shortages because of global networks, it would be better to produce most food locally.
- The world was not prepared for the pandemic with a terrible cost; if we do not prepare for climate change there will be a worse cost.
- The collective problem of the pandemic and the collective action in fighting it shows what we are capable of for fighting climate change.
- If the world is going to spend so much money to keep economies afloat, why not spend it on improving green infrastructure and paying for the “necessary” green transition.
- What is needed is a public investment in a reset of [*insert nation’s name here*] economy and society.
- Listen to the scientists and trust in the models; if medical models can be used to guide a lockdown, climate models can be used to guide the Great Transformation.

Figure 9 Common Silver Lining Coronavirus Media Themes

²³³ A simple Google news search of “coronavirus climate change” brought back results too numerous to count, and those were just from the ranked Google news sources.

²³⁴ These talking points have been collected from a number of news articles between March and April 2020 for example, Julia Jacob, “How Coronavirus impacts climate change with emissions reductions,” *ABC News* [US], 5 March 2020, <https://abcnews.go.com/International/severe-reduction-emissions-coronavirus-mitigate-climate-change-long/story?id=69334246>; Terence Corcoran, “Good News, say climate activists: We have a pandemic!” *Financial Post*, 13 March 2020, <https://business.financialpost.com/opinion/terence-corcoran-good-news-say-climate-activists-we-have-a-pandemic>; Thomas Homer-Dixon, “Coronavirus will change the world. It might also lead to a better world,” *The Globe and Mail*, 8 March 2020, <https://www.theglobeandmail.com/opinion/article-the-coronavirus-is-a-collective-problem-that-requires-global/>; Anna Kusmer, “Coronavirus is changing how people think about fighting climate change,” *Public Radio International* [online], 26 March 2020, <https://www.pri.org/stories/2020-03-26/coronavirus-changing-how-people-think-about-fighting-climate-change>.

shortcomings, and efficacy of the various models being used to justify the extended lockdowns.²³⁵

As governments began to prepare economic aid packages in March 2020, in order to prevent a total economic collapse while the shelter in place, self-isolation, social distancing “guidelines” are being followed, opinion editorials and “open letters” were published in various news media calling for governments to adopt Green New Deal plans in the stimulus. In the US, a group of progressives combined elements of the original Green New Deal introduced by Ocasio-Cortez, and the various proposals contained in the different Democratic primary campaigns and issued it as an open letter to Congress. The open letter was then, of course, endorsed by a long list of members in the Transnational Progressive Movement, and circulated widely on the internet.²³⁶ In Europe, the plea was for the EU not to be distracted or diverted from its commitment to the Great Transformation, but to double-down and stay its course with the EU Green Deal. An open letter, written by Club of Rome co-president Sandrine Dixson-Declève and other Club of Rome members, was distributed in the EU and the US encouraging an acceleration of the implementation of the EU Green Deal and for it not to be delayed.²³⁷ Various multilateral institutions also added their advice for nations to “recover better.” On 12 March 2020, the IEA’s executive director, Fatih Birol, appealed for governments not to compromise the clean energy transition, but use the stimulus to invest in renewable infrastructure and energy efficiency measures. An appeal he repeated on 3 April 2020 in a conversation with Christiana Figueres and Paul Dickinson on their podcast, but he added that any “bail out” *must* align and accelerate the

²³⁵ See for example, Paul Driessen and David Legates, “Fauci-Birx Climate Models?” *Townhall.com*, 11 April 2020, <https://townhall.com/columnists/pauldriessen/2020/04/11/faucibirx-climate-models-n2566726>.

²³⁶ Johana Bozuwa, J. Mijin Cha, Daniel Aldana Cohen, Billy Fleming, Jim Goodman, Ayana Johnson, Daniel Kammen, Julian Brave Noisecat, Mark Paul, Raj Patel, and Thea Riofrancos, “A Green Stimulus to Open Our Economy: An Open Letter and Call to Action for Members of Congress,” Medium, 22 March 2020, https://medium.com/@green_stimulus_now/a-green-stimulus-to-rebuild-our-economy-1e7030a1d9ee.

²³⁷ Sandrine Dixson-Declève and Johan Rockström, “Emergence from emergency: The case for a holistic economic recovery plan,” Euractiv, 24 March 2020, <https://www.euractiv.com/section/energy-environment/opinion/emergence-from-emergency-the-case-for-a-holistic-economic-recovery-plan/>; Sandrine Dixson-Declève, “A Green Reboot After the Pandemic,” Project Syndicate, 24 March 2020, <https://www.project-syndicate.org/commentary/covid19-green-deal-by-sandrine-dixson-decleve-et-al-2020-03>, this article was reprinted on the World Economic Forum website with the added attribution of Kate Raworth and Hans Joachim Schellnhuber, <https://www.weforum.org/agenda/2020/03/a-green-reboot-after-the-pandemic/>; Sandrine Dixson-Declève, Hunter Lovins, Hans Joachim Schellnhuber, Kate Raworth, “Une seule sortie pour la crise du coronavirus: le Pacte vert européen,” *Le Soir* [Belgium], 24 March 2020, <https://plus.lesoir.be/289426/article/2020-03-24/une-seule-sortie-pour-la-crise-du-coronavirus-le-pacte-vert-europeen>.

energy transition and come with criteria to decrease emissions in industry.²³⁸ The UN Secretary General António Guterres chimed in “urging countries to embrace the Paris Agreement and the United Nations sustainability agenda as part of their response to the Covid-19 crisis.”²³⁹ Not to be left out, the World Bank offered a sustainability checklist for policymakers for the next phase of recovery. In the introduction it mentioned the key lessons learned from 2008/09 were that without market reforms or “supportive policies” many green projects are placed at a disadvantage “to incumbent technologies or did not have the momentum to disrupt long-standing development approaches.” The list itself is filled with progressive initiatives such as gender equity, inclusivity, and decarbonization. Specifically, it asks policymakers to consider if the stimulus intervention would “create or amplify a lock-in of carbon- or energy-intensive development patterns, or represent a future stranded asset risk due to decarbonization.”²⁴⁰ It is unclear if the World Bank will link loans and funding to appropriate responses to the checklist.

In Canada, Avi Lewis wrote in *The Globe and Mail* that this is “a once-in-a-lifetime opportunity for the federal government to initiate a reset of our economy and society, putting Canada on a path toward zero emissions.” It is an amazing opportunity “for government to do big things, like actually lead a democratic and inclusive response to the climate emergency at the speed and scale that science and justice require.” The plan he recommended was the American Green New Deal that would initiate “public investment in a justice-based transition...[because] in a crisis (like a pandemic, an economic meltdown, a climate breakdown, or all of the above at once) people across the ideological spectrum want and expect government to ride to the rescue.” Lewis continues with an appeal for the public to imagine a brighter future after the pandemic once “the federal government started *painting Alberta in publicly-owned solar panels*, creating tens of thousands of jobs that paid prevailing energy industry wages, while enforcing the law of

²³⁸ Jillian Ambrose, “Coronavirus poses threat to climate action, says watchdog,” *The Guardian* [UK], 12 March 2020, <https://www.theguardian.com/environment/2020/mar/12/coronavirus-poses-threat-to-climate-action-says-watchdog>; Christiana Figueres, Tom Rivett-Carnac, Paul Dickinson, Outrage and Optimism Podcast, Season 2 #10 (46), “Let’s Get Ethical with Dr. Fatih Birol,” 3 April 2020, <https://tunein.com/radio/Outrage-and-Optimism-p1217603/?topicId=140975767>.

²³⁹ António Guterres, “Secretary General’s opening remarks at virtual press encounter on COVID-19 Crisis,” 19 March 2020, <https://www.un.org/sg/en/content/sg/speeches/2020-03-19/remarks-virtual-press-encounter-covid-19-crisis>.

²⁴⁰ Stephen Hammer and Stephane Hallegatte, “Planning for the economic recovery from COVID-19: A sustainability checklist for policymakers,” World Bank, 14 April 2020, <https://blogs.worldbank.org/climatechange/planning-economic-recovery-covid-19-coronavirus-sustainability-checklist-policymakers>.

polluter pays to spark a reclamation boom cleaning up a century of oil and gas wells and infrastructure.” [emphasis added] Lewis seems to advocate covering Alberta with solar panels and probably windmills as well, because it is in Alberta’s backyard and not Ontario’s. The article concludes, after mentioning the “white elephant” of a pipeline, with the comment that “once we’re all hard at work building the future together – it’ll be a lot less painful to wash our hands of the relics of the past.”²⁴¹ Presumably the relics of the past to which he is referring are the petroleum industry, the oil sands in Alberta, and all of the infrastructure that accompanies the smooth and vibrant functioning of a modern industrial society. This is the predominant viewpoint of the Progressive movement; it abhors Alberta and the hydrocarbon industry that powers the province and country and relishes the idea of their demise. Clearly, the Trudeau government sympathizes and agrees with this perspective since, after weeks of apparent tortuous deliberation within cabinet, the only federal aid to Alberta’s petroleum industry has been for an abandoned well programme. It is unlikely there will be any other aid for the industry, certainly not for companies. The federal government seems to be advancing a new “industrial policy” as it decides which industries or sectors of the economy to favour or destroy in line with its commitment to the Great Transformation.

Just in time to offer intellectual justification and scaffolding for the resurrection of industrial policy within the context of decarbonization, Sean Speer, Royce Mendes, and Robert Asselin, former Policy and Budget Director to Finance Minister Bill Morneau, released a new report outlining how the federal government should embrace a “challenge-driven industrial strategy” to increase Canada’s competitiveness. They wrote in a blog entry at the end of March 2020 for the *Public Policy Forum*, that the federal government’s economic intervention as a response to the coronavirus should be carefully directed and not be temporary,

the idea that Canada can just rely on traditional market forces to remain competitive while everyone else is adopting more active industrial strategies is foolhardy... We call it a challenge-driven growth strategy and propose situating such an industrial policy where Canada’s pre-existing industrial strengths intersect with pressing societal challenges. By aligning policy around challenges such as climate change, smart cities and communities, or aging demographics for example, this type of strategy would serve as a North Star to

²⁴¹ Avi Lewis, “In the midst of converging crises, the Green New Deal is the answer,” *The Globe and Mail* [online], 15 March 2020, <https://www.theglobeandmail.com/opinion/article-in-the-midst-of-converging-crises-the-green-new-deal-is-the-answer/>.

marshal public and private resources to meet these challenges over the medium and long term.²⁴²

What they are advocating is a form of corporatism where the government makes partnerships with companies and gives them directions as to what the government wants researched or produced – business winners, or euphemistically “champions”, and losers will be chosen. By focusing on “pre-existing strengths” the prospect for innovation outside of those areas is likely to be severely diminished. Certainly, this is the path that the EU is taking with its EU Green Deal, and the UK also speaks of having an industrial policy, but that does not mean it is a good policy or that it is appropriate for Canada. Indeed, it is a return to the 1970s, but with better technology. It is the type of federal government technocratic intervention Pierre Trudeau had desired in 1980, fuelled by the revenues generated from the National Energy Program, but failed to achieve. What the father failed to accomplish the son may be able to do with the help of supportive cabinet ministers.

Former Environment minister and current cabinet minister for Infrastructure, Catherine McKenna, is in the position to direct and oversee new infrastructure related industrial projects that would be in line with decarbonization. Indeed, she endorsed on twitter a 27 March 2020 article in the *New York Times* outlining the case for taking this “opportunity” to fundamentally transform the North American economy into a Green New Deal paradise. McKenna tweeted on 30 March 2020, “After we get through #Covid_19, the world will have a choice. Respond with an economic & jobs recovery stimulus that jumps starts the clean economy & creates meaningful jobs . . . or not.” Below her tweet was a link to the *New York Times* op-ed article, “What the

²⁴² Robert Asselin and Sean Speer, “COVID-19 shows us why Canada needs a challenge-driven growth strategy,” *Public Policy Forum* [online] 25 March 2020, https://ppforum.ca/policy-speaking/asselin-speer-covid-challenge-driven-growth-strategy/?sf_data=all&sf_paged=2. This is a short summary of their new report, *New North Star II: A Challenge-Driven Industrial Strategy for the Age of Intangibles*, (Ottawa: Public Policy Forum, 2020). <https://ppforum.ca/wp-content/uploads/2020/04/NewNorthStarII-PPF-APRIL2020-EN.pdf>.

Coronavirus Means for Climate Change.” In her article, Meehan Crist encourages policymakers to choose a different path and take advantage of the situation to “decide to make building a carbon-neutral society a priority. Because while the new reality could easily drain political will and funding from efforts to address the climate crisis, it could also inject a sense of urgency at a time when politicians are suddenly willing to spend vast sums of money.” She concludes by advocating that governments choose not to return to the carbon intense capitalist economy that existed pre-virus.²⁴³ Behind the relentless messaging on the need for green stimulus is the big



fear of those who champion a Green New Deal, or being carbon neutral net-zero by 2050, that once the pandemic is over the public will wish and demand to return to “normal” and western countries, concerned about restive citizens, will revert to the path dependency of the hydrocarbon intensive economic and societal structure.²⁴⁴

Path dependency is understood as being like a rut in the

road – early choices taken narrow the possible choices in the future, and the more layers carved into the path, like infrastructure, accumulated experience, standardization benefits, and positive feedbacks among vested interests, make it extremely difficult to depart from the path. The path dependency associated with hydrocarbons in our society is known as carbon lock-in. The paths, however, can be weakened for hydrocarbons through policies like phasing out the internal combustion engine, divestment, delegitimizing “carbon-intensive business models,” and reducing the networks and representation of hydrocarbon stakeholders on decision-making

²⁴³ Meehan Crist, “What the Coronavirus Means for Climate Change,” 27 March 2020, *The New York Times*, <https://www.nytimes.com/2020/03/27/opinion/sunday/coronavirus-climate-change.html>.

²⁴⁴ Daniel Rosenbloom, “Breaking Carbon Lock-In through Innovation and Decline,” no date, <https://www.wri.org/climate/expert-perspective/breaking-carbon-lock-through-innovation-and-decline>.

bodies.²⁴⁵ At the International Sustainability Transitions 2019 conference at Carleton University, Frank Geels emphasized that weakening the “carbon” system was crucial to delegitimize it in the eyes of the public and policymakers. He suggested this was best achieved through negative discourse about the system, the example given was to repeatedly emphasize economic problems of firms through education, media, and coalition building.²⁴⁶

Even though these paths have been weakened, there is a real concern and uneasiness that in the wake of the crisis trauma, the comfortable and familiar path will be preferred not just by the public, but by the policymakers as well. Christiana Figueres expressed this dismay at the likely possibility that people will go back to ‘normal’ after the pandemic subsides, “What is not helpful . . . [is that after a few months] we jump back to bad traditions [habits]. . . . can this have actually behavioural change impact, maybe, and let us hope.”²⁴⁷ This sentiment was echoed by Club of Rome co-president Sandrine Dixon-Declève who added that the emergency response should not support the ‘old economy,’

Covid-19 shows us that change is possible: a different world, a different economy is suddenly taking shape. The profound changes imposed on our daily lives by the emergency policies of the virus demonstrate that there are alternatives to the wasteful consumerism that has developed and triumphed since the 1960s... Now is not the time to support old neo-liberal regimes and fossil fuels.²⁴⁸

She is right in a manner of speaking: in some ways the pandemic lockdown *is* a glimpse into the future. The difference is that natural gas, nuclear, and coal power plants are what is keeping Netflix on, and access to Zoom and the internet possible. Under a Green New Deal, of any type proposed in the EU, the US, and Canada, that available and reliable electricity would not exist. In

²⁴⁵ Daniel Rosenbloom, “Breaking Carbon Lock-In Through Innovation and Decline,” World Resources Institute Expert Perspective, no date, <https://www.wri.org/climate/expert-perspective/breaking-carbon-lock-through-innovation-and-decline>.

²⁴⁶ Frank Geels, Keynote Presentation, International Sustainability Transitions conference, Carleton University, Ottawa, Ontario, 22 July 2019, <https://carleton.ca/istconference/conference-updates/#geels>; his presentation can be viewed on YouTube, https://www.youtube.com/watch?v=PDdBgBOC_Nc&feature=youtu.be.

²⁴⁷ I&I Editorial, “Global Warming Alarmists: Not Only Wrong But Vicious,” 9 March 2020, <https://issuesinsights.com/2020/03/09/global-warming-alarmists-not-only-wrong-but-vicious/>.

²⁴⁸ Sandrine Dixon-Declève, “une seule sortie pour la crise du coronavirus le pacte vert Européen,” Le Soir [Belgium], 24 March 2020, <https://plus.lesoir.be/289426/article/2020-03-24/une-seule-sortie-pour-la-crise-du-coronavirus-le-pacte-vert-europeen>. Translated from the French. “Le Covid-19 nous montre que le changement est possible : un monde différent, une économie différente se met soudain en place. Les changements profonds imposés à notre vie quotidienne par les politiques d’urgence du virus démontrent qu’il existe des alternatives au consumérisme gaspilleur qui s’est développé et a triomphé depuis les années 1960...Ce n’est pas le moment de soutenir les anciens régimes néolibéraux et les énergies fossils.”

a Green New Deal world just like life under coronavirus lockdown there will be reduced mobility, no driving or flying unless it is necessary; only “essential” consumer purchases; reduced food supply particularly beef, dairy, pork, lamb, and chicken; an increase in local vegetable gardens and allotments if possible because of disruptions in the supply chain; cashless to better track carbon footprints of purchases, and ease carbon credit transfers between individuals; and tracking of movement correlated with data of energy usage, carbon footprint, and health. The increase in technological integration and surveillance is perhaps among the most significant and disturbing aspects of this glimpse into the near future and requires a slight digression into what is currently happening and being proposed during the coronavirus pandemic.

The integration of technology and monitoring has been highlighted during the pandemic as a way to track people who might be infected and with whom they have been in contact. On 24 March 2020, Bill Gates spoke in an online TED Talk interview about the possibility of everyone needing to be vaccinated before being allowed to return to work, and needing to prove they have been vaccinated so there can be constant contact tracing.²⁴⁹ One possibility is to integrate vaccination data with a “digital passport”. This is technology that has been in the pipeline since 2016 when the UN convened a summit to discuss how to track refugees and other people who are living without identification. From this discussion ID2020 was founded by the Bill and Melinda Gates Foundation in conjunction with the Rockefeller Foundation, Accenture and Gavi, with the support of the WEF. Trials have been undertaken in Indonesia to allow people in rural areas to receive government assistance through a digital passport using biometric and facial recognition data to verify the IDs.²⁵⁰ The concept of a digital ID has been around for some time, but it is only now during a pandemic, that the public is taking more notice about its potential ubiquity in society. Medical doctor Nicholas Wright in a recent *Foreign Affairs* article praised China’s social credit system for successfully curbing the spread of coronavirus in China,

²⁴⁹ Chris Anderson interviews Bill Gates, “How we must respond to the coronavirus pandemic,” Ted Talks, 18 March 2020, at 33:33, https://www.ted.com/talks/bill_gates_how_we_must_respond_to_the_coronavirus_pandemic.

²⁵⁰ For more information about ID2020 and its trials in Indonesia, see <https://id2020.org/>. It is unsurprising that the WEF is involved in an endeavour that would be an integral part of the fourth industrial revolution. There are a number of digital passport technologies being developed and marketed as of April 2020, such as large European technology company Thales’ Gemalto Digital ID Wallet that would contain all of a person’s official documents in a digital wallet accessible via smartphone, <https://www.thalesgroup.com/en/taxonomy/term/8878>.

especially with the smartphone app that “tagged people as green (free to travel through city checkpoints) or as orange or red (subject to restrictions on movement),” and declared that “Western liberal democracies must be unafraid in trying to sharpen their powers of surveillance for public health purposes. There is nothing oxymoronic about the idea of ‘democratic surveillance.’”²⁵¹ That is certainly a matter of debate, but such a system originally established for “public health purposes” represents a slippery slope to comprehensive surveillance for other purposes. As discussed in the previous section, there is considerable support in the EU, and other organizations, to utilize this type of technology to aid in the monitoring and implementation of decarbonization and maintaining a net-zero lifestyle; a development that sets 2020 apart from 2008.

It is clear that the Transnational Progressive Movement seeks to use the economic shut-down of the coronavirus pandemic as an opportunity to restructure the global economy, as was attempted in 2008/09. The pandemic, however, is a deeper disaster than the 2008/09 financial crisis because this time nations have *voluntarily* shut down most economic activity. This point cannot be overstated. Unlike 2008/09, the public has been softened, primed, for the message about climate change, the “climate emergency”, and a Green New Deal, and are therefore more receptive to proposals that would see stimulus being directed to renewable energy alternatives and other “green” infrastructure. In addition, it is very difficult to break out of a routine, and convince people to embrace a fundamental shift in society, if the economy is doing well with most people employed, an abundance of food, and a warm and comfortable place to live.

Coincidentally, serendipitously for the Transnational Progressive Movement, the pandemic has interrupted this “life is good” path. The voluntary lockdown has ground the global economy almost to a halt, except for, in many countries, essential businesses and services. With the shuttering of most businesses, millions of people in the western world have found themselves unemployed and needing government assistance just to eat and pay the bills. With the duration of the lockdown unknown, businesses that had reserves are quickly consuming them, and those that did not must rely on government assistance to keep afloat if even that will be enough. The suspension of general economic activity has severely curtailed all forms of industry and travel,

²⁵¹ Nicholas Wright, “Coronavirus and the Future of Surveillance: Democracies Must Offer an Alternative to Authoritarian Solutions,” *Foreign Affairs* May/June 2020 [online], 6 April 2020, <https://www.foreignaffairs.com/articles/2020-04-06/coronavirus-and-future-surveillance>.

causing oil prices to enter into negative territory for the first time ever as oversupply threatens the viability and very existence of North American producers – a boon for those eager for an energy transition, and the National Oil Companies. The food supply chain in North America is in trouble partly because some Canadian federal inspectors refused to conduct inspections during the lockdown,²⁵² then employees within meat packing facilities became infected with the virus and operations of key meat packing plants in Canada and the US have been halted.²⁵³ Cattle ranchers and other livestock producers are unable to sell their animals as there is nowhere for them to be butchered and processed. It is likely there will need to be a culling of livestock and many small producers will be unable to recover leaving a much contracted meat industry with less supply, a convenient outcome for those who support a circular economy and plant based diets. Vegetable producers warn there are not enough employees to seed and harvest crops. Other food producers are also warning of potential shortages later in the year.²⁵⁴ The one area that has yet to be catastrophically affected is housing. Some jurisdictions in the US have passed legislation staying foreclosures and evictions, and part of the stimulus plan was the provision for up to 12 months mortgage payment deferrals. In Canada, a general \$2,000/month stipend has been given to some individuals that could cover housing rent payments, there is some government rent relief for businesses, and some banks are offering mortgage payment relief. However, in the coming months this could all tip disastrously towards a housing market collapse.²⁵⁵ The longer the shelter in place orders stay in effect, the more difficult the recovery will be and the greater the likelihood of a cascading collapse in the employment, food, and

²⁵² Jason Herring, “Packing plant suspends slaughter after federal inspectors refuse to enter over COVID-19 concerns,” *Calgary Herald*, 28 March 2020, <https://calgaryherald.com/news/local-news/packing-plant-suspends-slaughter-after-federal-inspectors-refuse-to-enter-over-covid-19-concerns/>.

²⁵³ Reuters, “Factbox: Spread of coronavirus closes North American meat plants,” 13 April 2020, <https://www.reuters.com/article/us-health-coronavirus-meat-factbox-idUSKCN21V09W>; Kyle Bagenstose, Sky Chadde and Matt Wynn, “Coronavirus at Meat Packing Plants Worse Than First Thought,” *USA Today*, 23 April 2020, <https://www.msn.com/en-us/news/us/coronavirus-at-meat-packing-plants-worse-than-first-thought-usa-today-investigation-finds/ar-BB132K8d>; Kathryn Baum, Susan Robertson, and Carrie Tait, “Cargill to close meat-packing plant at centre of Alberta outbreak,” *The Globe and Mail*, 20 April 2020, <https://www.theglobeandmail.com/canada/alberta/article-cargill-to-temporarily-close-meat-packing-plant-at-centre-of-alberta/>; Kate Gibson, “Food supply chain is breaking,” Tyson Foods chairman warns amid meat plant shutdowns,” 27 April 2020, <https://www.cbsnews.com/news/tyson-foods-chairman-food-supply-chain-breaking-meat-plant-shutdowns-coronavirus-pandemic/>;

²⁵⁴ Perhaps as a precaution, or due to concerns about this year’s potential crop, Russia closed its border to grain exports in April 2020. RFE/RL, “Russia cuts of wheat other grain exports,” VOA News, 26 April 2020 <https://www.voanews.com/covid-19-pandemic/russia-cuts-wheat-other-grain-exports>.

²⁵⁵ Adam Othman, “3 Signs That Covid-19 Will Cause a Housing Market Crash,” *The Motley Fool*, 27 April 2020, <https://www.fool.ca/2020/04/27/3-signs-that-covid-19-will-cause-a-housing-market-crash/>.

housing sectors that have the potential to facilitate a great depression. At that point, people will be more amenable to comprehensive ideas promising to make life and the earth better than it was before—ideas like the Green New Deal. To fulfill the strategy of the Transnational Progressive Movement, the chorus of voices advocating a green stimulus will continue—must continue—so that hydrocarbon path dependency can be stopped, and a new path created on the road to the Great Transformation.

VII. Conclusion

The Great Transformation, and the energy transition at its heart, that has been facilitated by a Transnational Progressive Movement, is on the verge of halting all fossil fuel development and ushering in a new low carbon net-zero emissions civilization. Although it has been nurtured for fifty years, and had a window of opportunity in 2008/09, the petroleum industry was not weak enough and the public not suitably receptive for the necessary paradigm shift – it is different this time in 2020. An unprecedented and ongoing campaign against Alberta and its petroleum industry, particularly the oil sands, was used as a key part of a long-term strategy to weaken the global non-NOC petroleum industry and keep all hydrocarbons in the ground. The Transnational Progressive Movement, with climate change as the rationale, used its dynamic networks – the UN and other international institutions to link governments, used the coordinating skills of the Club of Rome, World Economic Forum, and Open Society Foundation to promote transnational and intersectional networking, used the vast array of academics, think tanks, and institutes to provide intellectual support, used businesses and corporations to infiltrate capitalist organizations and create coalitions, used foundations to provide vast amounts of funding, and used an army of ENGOS – to delegitimize, alienate, and harass oil sands producers, and pursue changes to financial regulations to starve hydrocarbon industries of private funding. A corresponding cultural shift, cultivated by the progressives over the past ten years targeting the youth and utilizing a broad media network for disseminating the message of a climate emergency has softened the public to the idea that the climate emergency can be solved by a Green New Deal, which the public does not realize will create a new global civilization based on degrowth and renewable energy. This transition has been greatly aided by the current economic crisis resulting from the coronavirus pandemic of 2020; it is the spark for the Great Transformation.

It is important to take the Transnational Progressive Movement at its word when it says it wants to fundamentally transform the global economy. They mean what they say, their actions

prove it. When Sandrine Dixson-Declève talks about a Planetary Emergency and the need to replace capitalism with a circular economy, she is serious and is actively working to make this a reality within the EU policymaking apparatus. When Klaus Schwab talks about the advent of a fourth industrial revolution and how this will fundamentally transform the world into a circular economy with integrated technology invading, monitoring, and tracking every part of our lives, and is putting all of his energy, coalition-building, and organizing efforts into making this happen, we should believe him. When John Podesta speaks about the need for a Global Green New Deal to fulfill the Great Transformation away from a modern industrial capitalist economy, and he is in a position of influence and power, then we should take him at his word. When Justin Trudeau warns the mining and other industries that there will be a “‘big adjustment for many industries, including yours.’ It will require a ‘transformation,’” we should believe him.²⁵⁶ Undoubtedly, there are times when academics, ENGOs, bureaucrats, and politicians speak with rhetorical hyperbole, this is not the case with the Green New Deal, energy transition, paradigm shift, and Great Transformation.

The uncomfortable or unspoken truth is that for many at the centre of the Transnational Progressive Movement this global energy transition and Great Transformation is *ideological*. It is the replacement of capitalism and the post World War II framework with a repackaged technocratic socialism, complete with an industrial policy that picks economic winners and losers, not based on economic principles but through arbitrary processes driven by ideology, and agricultural “planning” that promotes small-scale organic farming and subsistence agriculture over industrial agribusiness. It is a centralized planned society that limits consumption through a so-called “circular economy”, and is overseen by a technocracy that creates algorithms to “neutrally” direct our existence augmented by Artificial Intelligence that monitors, evaluates, and judges where we go, how we get there, and what we are doing – just like it does in China.

As the pandemic has demonstrated, lives depend on a vibrant, free, and well-functioning economy with reliable, affordable, and secure energy at its core that enables the possibility of well-being and prosperity for those who choose to work and participate in it. Those who advocate a complete replacement of the current free-market hydrocarbon system with a “beyond GDP” circular or “net-zero” economy with “green” renewable energy at its core know that their

²⁵⁶ Rex Murphy, “Mr. Prime Minister, please make a choice: Paris or Calgary?” *National Post*, 3 March 2020, <https://nationalpost.com/opinion/rex-murphy-mr-prime-minister-please-make-a-choice-paris-or-calgary>.

new system is about degrowth and subsistence rather than prosperity. This new system, with the EU having gone the farthest in attempting to implement it, will re-make modern life in a way that will make it unrecognizable. The public at large do not understand what it represents; what it means for their individual every-day existence. If they did understand, they would reject it.

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