

Canada's Net Zero - 440 Megatons of CO² by 2030: Is a battle between Human System Dynamics and the Political - Economic systems.

INTRODUCTION

You would not be surprised to know that Climate change has provided the moment of reckoning especially to capitalism; the epitome of natural resource depletion, adversities of biodiversity and our widening inequality of social well being, income and wealth. This results initially from distortion of the multi faceted systems and a flawed measurement of human wellbeing and the quality of living standards of a country's citizens. This culprit measurement is much glorified, yet an increasingly misleading metric known as "Gross Domestic Product (GDP)", Boushey, H. (2019) and the entailing economic growth rate along with a vexing Per capita income used to stratify countries in the entire world.

The Green House Gas (GHG) emissions and the attributed carbon footprint is a detrimental outcome on society who have been made to accept the market's subtle moniker "Consumer" making reference to humans by pushing aside their generic identity as citizens and people or men and women. This is orchestrated mainly by the commercial enterprise through capitalism (open market) and materialism, Wiedenhofer, D., et al. (2018). Its primary function is creating wealth through (1) generating society's economic capacity and a corresponding consumption capacity by providing employment, (2) utilizing natural capital and its material inputs, (3) adding value with human capital for manufacturing process and management for the throughput of products and services to create rampant profit aimed at appeasing shareholders.

They dismiss any adequate concern for limits of the environment and natural ecosystems. Thus, an incompatible business attitude of the commercial enterprises since the industrial revolution have largely been injurious to humans, inter-generationally, along with the use of fossil fuels creating Co2 the largest of emissions that have caused climate change and its crises.

Although NASA has reported that global GHG produced in year 2022 has increased to 37 billion tons, we have not found any viable projects or financing and investments in any productive technology for scalable de-carbonization except carbon mitigation efforts that target industrial process efficiencies. Hence, the need for society's participation is a milestone in the exercise of carbon reduction. It is the most visible pathway to overt acceptance of solutions.

PROBLEM STATEMENT

Green House Gas emissions and Climate change are not limited to any particular country or hemisphere. Citizens in every country are in a dilemma, because a veiled burden of reaching the Net –Zero targets is disproportionately imposed upon them by a levy of Carbon tax and Fuel pollution tax introduced in 2023. These taxes will be long loathed as an additional tax on the middle and lower income people in Canada. However, public corporations in Canada, USA and most developed countries have been granted billions of dollars in the form of subsidies and incentives, because they pretend to omnipotence and goodwill at driving a regenerative economy with renewable energy and unrealistic de-carbonization technologies.

Any type of business tax in Canada, namely the Carbon tax and the Fuel pollution tax paid by corporations to government for the provision of social goods would not justify the natural environmental damage nor social inequities and psychosocial and economic insecurities. These carbon taxes bear defects in its purpose; neither do they act as stimuli to curb carbon emissions at source, because the carbon tax costs are directly passed through to the public at the point of sale causing financial hardship whilst being a regressive tax policy on its citizens, Fremstad, A. et al. (2022)

Hence, the role of government and its policies must be first to recognize the degree of stakeholder relevance of its citizens and their associated significance at implementing the de-carbonization program. A country's citizens are the source and elements of its national economy, but the prospect of their well- being is either wittingly or unwittingly bestowed on industrial, technological and financial enterprises and their vested interests and initiatives. Thus, government policies have the tendency to implicitly and explicitly relegate the role of citizens to mere consumers who must conform and comply with what the market regulates; even if that is a lesser living standard.

Here's my argument: If the Theory of Anthropogenic Climate Change is that humans are causing most of the current changes to climate by burning fossil fuels such as coal, oil, and natural gas, Dubois, G. et al.(2019), how could the policy makers justify the exclusion of “ the core of change makers – households and consumers” and confine the provision of necessary financial investments, its economic returns and solutions largely to business entities. Corporations are mostly seen as elusive by their business attitude, always demanding a business case for sustainability and have Climate denial to Solutions denial pronouncements, especially in the fossil fuel industry; whilst earning all negotiated business profits attributed to Free markets and Capitalism with their political influence and power.

On the other hand, The federal government of Canada in alignment with its carbon mitigation program and “preferred technologies to transition to low-carbon households”, Astudillo, M.F. et al. (2017), has offered instant cash rebates upon the purchase of Battery Electric and Hybrid

versions of passenger vehicles in the hope of accelerating its Net –Zero interim target in 2030 and the 2050 target reducing the annual GHG to 440 Metric tons from 2012 baseline. However, new vehicle Sales data of Battery Electric vehicles (BEV) and Plug in Hybrid electric vehicles (PHEV) for 2023 show truly disappointing results.

Regrettably, the common man is a powerless subject when they are confronted with the climate change catastrophes and its consequences on human well being. It must also be noted that “they have already been familiarized and confined to a cost effective, efficient and a reliable source of energy - fossil fuel for their primary needs” for more than 100 years. Changing to a new source of energy at the instruction of government and its policies seem disorientation to their planned lives and aspirations. This abounds despite their natural human agency; power and capacity to make rational choices and decisions in their own self interest, Serrao-Neumann, S., et al.(2023) and hence, a handicap in coping with the emergence of an evolving energy transition for personal transport and an evolving Green economy; ensuing lifestyle, costs, living standards etc., Bandura,A.(2006).

The Green economy is an evolving phenomenon and to date research on this economy and sustainability has been oriented toward annual GDP growth and its’ metrics to assess economic progress of countries. Research articles and literature available are short of encompassing a “systematized economy” that integrates environmental harmony, balancing Personal economy of the public, equal opportunity to wealth building, human well being and social empowerment that can embody human system dynamics.

Academic and Experts have not been able to provide concrete solutions; plagued by a deficiency of consensus from related disciplines, corporate business and government policy makers. Thus, lend a gap in knowledge and action at establishing an equitable system by policy - makers who are the real organizers of markets, not the assertive corporate business organization of “free markets”.

RESEARCH GOAL

Accordingly, the overall research goal is to examine how a “System Thinking” process, if and when adopted, in Government Policy decisions empower citizens’ capacity and agency and enable equitable income and wealth and the overall enrichment of human well – being, in harmony with the natural environment?

RESEARCH QUESTION

What could be the most productive and objective financial incentive program that governments, particularly, in developed countries must implement to avoid policy resistance by “End - user investors” in passenger vehicles (Personal use transportation), which potentially spur equitable and tangible returns to “End user investors” and transformation outcomes for the government

and natural environment; collective contribution to an ambitious Net zero interim CO₂ target by 2030, in Canada.

Objectives:

1. Are the households in Canada inclined to transition by owning and operating an electric vehicle or prioritize on carbon emission reduction in home heating and cooling systems?
2. What do consumers think about the incentive - rebate program offered by the federal government in Canada towards the purchase of Battery Electric Vehicles (BEV).
3. How a “Systems Thinking” process would empower people’s capacity and the overall enrichment of human well – being, in harmony with the natural environment?

RESEARCH METHODOLOGY

I have chosen to use a mixed method of research which makes use of both primary and secondary research methodologies.

The secondary research method for this study is literature review and conceptual financial modeling. This secondary research, in addition will utilize rolling new information, from the media, journals and experts, recognizing the evolution of a nascent Green economy and its new technologies, business practices and government policies treated as primary data relevant to the research on climate change, sustainability technologies, systems and responsible investment. A Qualitative, primary research will be undertaken via a Survey Questionnaire consisting of 15 -20 questions, mailed to the selected sample with a turn - around time of 15 days.

Study the economic independence of business organization, the inter-dependence of human system dynamics with the natural environment, business organization and the national political economy.

This study will first review the theory of anthropogenic climate change and the various types of constraints in carbon emission reduction and their characteristics.

In the second stage of this study, existing financial modeling methods will be identified based on a comprehensive review of current statistics on Personal Tax payer practices and government programs promoting savings and retirement benefits to personal financial freedom. Finally, once a correlation is identified with currently available tax benefits, a conceptual financial model will be formulated and tested with public survey to assess its acceptability. *This entire study and research will be conducted between February 15, 2024 and June 15, 2024.*

The province of Ontario in Canada consist the largest population and highest annual income earners, especially in the Greater Toronto Area (GTA). Therefore a sample of 100 respondents will be randomly selected from 10 postal code areas in the GTA. Statistics Canada publishes household income by postal codes. This would help in selecting households by address only, earning an annual income above \$80,000 per year. The sample selection will be limited to Houses – Single family homes, no Condominiums or Apartments.

A Qualitative research will be undertaken via a Survey Questionnaire consisting 15 -20 questions, mailed to the selected sample with a turn - around time of 15 days. The package mailed out will not be addressed to an identifiable person or name, except the address is randomly selected. It will be addressed AS “Homeowner/Chief Occupant”. Any attempt for personal interviews or any other form of personal contact with a respondent is totally eliminated. Respondent answers received will be tabulated and summarized to arrive at conclusions to assess the probability of acceptance of the proposed Financial - Investment model.

All returns and responses are considered anonymous wherein the survey questionnaire does not retain a place or field for any type of identification of the respondent, i.e. an identifiable name, addresses, postcodes, faxes, emails or telephone numbers of the household. They are considered voluntary respondents to the survey. The initial package mailed to households is enclosed with a self addressed stamped envelope with only the Researcher’s name. A short introductory letter describing the origin and purpose of this research / survey will be included in the package. The cost for this entire research will be borne by the research student.

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