

STRATEGIC PERSPECTIVES: PART 5

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY

PERSONAL FINANCIAL STABILITY

2. INTRODUCTION	1 TO 5
3. THE CURRENT CANADIAN ECONOMY	6 TO 13
4. INVESTMENT PROSPECTS	14 TO 15
5. FURTHER OBSERVATIONS	16 TO 17
6. PROSPECTIVE GOVERNMENT BEHAVIOUR	18 TO 22
7. INDIVIDUAL BEHAVIOUR	23 TO 30
8. DISCUSSIONS	31 TO 34
10.CONCLUSIONS	35 TO 46

EXECUTIVE SUMMARY

- i. This paper is the final segment of a series of discussions on the Canadian economy, the environment, and climate change.**
- ii. The introduction reviews the content of the earlier material.**
- iii. Then, the future financial personal stability of the population, with special focus on the aged, is explored. Suggestions on how the working population might approach provision for retirement is discussed.**
- iv. Next the individual issues are examined within the framework of a set of inter-related subsystems (proposed by Smith: The World in 2050). This systems approach changes our perspective on the individual issues previously discussed.**
- v. Finally a specific set of conclusions and proposed actions are presented.**
- vi. The reader may want to first read the sections labelled DISCUSSIONS (paras 31 to 34) and CONCLUSIONS (para 35 to**

46) , and especially the final paragraph (46) to obtain the essence of the paper. The other material provides background for the final arguments.

PERSONAL FINANCIAL STABILITY

INTRODUCTION

1. This is part 5 of a paper on the economy, the environment, and climate change. Part 1 focused on the question of the level of immigration for Canada. It concluded that Canada has a deficit in capital investment, and we need to get this level of capital investment higher before we start adding extra labour to the production functions. Part 2 elaborates on this theme of more capital investment.
- 2.** Part 3 indicates big changes for the Canadian economy, including the financial security of its citizens. The aged population is going to double. Old age security and government pension plan expenditure increases will have to be financed out of the federal government budgets. But we have already seen, when looked at in terms of energy use, the government budgets cannot be increased beyond 30% of GDP, in total, without going into debt (assuming people support takes 70% of GDP).
3. The only alternative is to expect, and require, the private sector to finance such retirement funding out of their own budgets. But most people do not have “defined benefit” plans, and the stock markets have changed substantially, making it extremely difficult for individuals to successfully invest enough, with appropriate financial returns, to finance their retirements.
4. Most people have not noticed that our modern economies have bifurcated, separating into a “real” economy, and a “casino-like financial “ sector. The “real” growth in the economy (measured by real GDP)

yields “positive returns in our financial portfolios” for companies invested in the real economy. The casino sector is managed by Wall Street, who take a “cut” off the top, on all transactions. Investors, who are trading in financial markets, are mostly participating in a “zero-sum” casino, where there are no “real returns” (what one investor gains, another loses). (Buffett recognizes this situation, and uses the metric “stock market capitalization/GDP” as a measure of the “value separation” between “the real sector growth” (GDP) and the “stock market financial value” of our economies (measured by the capitalization of the stock market). This gap is financed by debt, deriving from the expansion of Federal Reserve assets. This gap can be expanded further by “stock trading” which in effect adds “velocity” to the excess money (over real economy needs, adding further increases to the stock market)”. These excesses are temporary, and will result in the markets, eventually, falling back to a more reasonable market value relative to the real economy valuation. While individuals can profit from these dynamics, the aggregate of investors (society) cannot capitalize on this market activity (because what one gains, another loses). Society’s investment returns will continue to mirror the real growth of the economy). With expected slower growth in our economies, it will be extremely difficult to provide for “adequate retirement income” for the population, through a reliance on stock market investing.

5. Governments will have to supply a substantive portion of retirement income to the populace. The demands on governments will make it extremely difficult to “square the circle”. The remainder of this paper elaborates on these themes, starting with the economic position of the current economy.

THE CURRENT CANADIAN ECONOMY

6. Current GDP in Canada is \$1.7 trillion. The average income per capita is \$45k. The labour force, without immigration, is projected to be as shown below (in millions).

2016	2021	2026	2031	2036	2041	2046	2051
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35.5 36.7 38 39 39.6 39.8 39.36 38.6
 7. The potential labour force is expected to decline as shown by the age cohort 15 to 64(the middle row):

2016	2021	2026	2031	2036	2041	2046	2051
17	16	15	14	13	12	12	12
67	63	59	55	53	52	51	50
17	22	26	31	34	36	37	38

The actual labour force is expected to be as shown below”(potential labour force x population):

Labour force

23.785 23.121 22.42 21.45 20.988 20.696 20.0736 19.3

This projection indicates a “-.6% per annum” decline in the labour force over the period shown.

- The labour force is one indicator of economic potential. It suggests that Canadian GDP is going to be weak going forward. GDP is the product of the labour force multiplied by productivity. To achieve a higher GDP we are going to need a significant increase in productivity, since we are not going to get it through an increased labour force.

9. “Energy Use” can be a good “PROXY” for productivity. Let’s examine our prospects for this variable.
10. The use of energy in the Canadian economy is shown below.

Table I. Electricity Generation in Canada

PROVINCES & TERRITORIES	POPULATION Million	HYDROELECTRIC MW	FOSSIL FUEL MW	NUCLEAR MW	WIND MW	SOLAR MW	BIOFUEL MW	TOTAL MW
Ontario	14.411	8,130.81	13,933.30	12,900.00	5,076.00	2,980.00*	360.50	43,380.61
Quebec	8.421	72,597.60	541.70		3,882.00		201.95	77,223.25
British Columbia	5.016	15,926.70	572.10		698.00		837.50	18,055.35
Alberta	4.330	907.80	10,815.30		1,483.00		450.70	13,656.80
Manitoba	1.356	5,249.00	462.00		258.00			5,969.00
Saskatchewan	1.165	852.80	3,321.00		221.00			4,394.80
Nova Scotia	0.964	388.00	1,869.00		616.00		63.10	2,936.10
Newfoundland & Labrador	0.825	1,929.24	590.00		55.00		15.00	2,589.24
New Brunswick	0.772	950.00	2,342.00	660.00	314.00		38.00	4,304.00
Prince Edward Island	0.154		179.00		204.00			383.00
Northwest Territories	0.044	54.95	72.71		9.20			136.86
Yukon	0.040	76.30	38.89		0.80			115.99
Nunavut	0.036		52.25					-52.25
CANADA TOTAL	37.498	107,063.20	34,789.24	13,560.00	12,817.00	3,040.00*	1,966.75	173,172.25
In %		61.82	20.09	7.83	7.40	1.76	1.14	

*Canada Energy Regulator (CER) (formerly Canada Energy Board – CEB) noted that in 2018 the total solar energy capacity in Canada was 3040 MW, in which Around 98% are in Ontario. All solar power installations with capacity of more than 10 MW are in Ontario. The remaining, with a total capacity of 60 MW, are small installations located in some of the other Provinces.

Table II. Energy Consumption in Ontario

Based on daily 1075 observations from 25 August 2018 to 30 September 2019

	Nuclear		Hydro		Gas		Wind		Solar		Biofuel		Total MW
	MW	%	MW	%	MW	%	MW	%	MW	%	MW	%	
Average	10,266	60.5	4,216	24.7	1,246	6.9	1,251	7.2	181	0.7	63	0.4	17,073
Minimum	7,894	42.4	2,227	14.8	98	0.6	25	0.2	0	0.0	0	0.0	13,176
Maximum	12,151	80.2	6,186	37.0	5,486	27.9	4,087	24.6	423	2.8	248	1.4	23,075

The total use, in the lower right hand corner, shows 173,000 KW. If Fossil fuels were sequestered, this amount would shrink by 20%. Dividing the energy use (173,000) into GDP (1.7trillion) indicates that the economy is using about 10KW per dollar of GDP. If we tried to phase out the “fossil fuels over some 30 years, instead of sequestering immediately, the energy productivity in the economy would have regained its contribution level to GDP over this time (if we sequester this fossil fuel, our GDP would drop about 20% immediately). I would think it would take at least 15 years to bring the energy contribution to a level we have today, if we could increase energy productivity by 1.5%

per year. (Gordon estimates that the US productivity will probably increase by 1.6% per year going forward. Given the current government policies in Canada, it will be surprising if we can attain that level of improvement over that period of time.)

11. If the GDP grows at approximately 1.7% per annum (expected) , the productivity improvements would have to be in the order of 3.5% per annum. Robert Gordon has done an in depth study of the US productivity, with the following results.

	1770-187	1870- 1970	1970 on
Education	.35	.35	.22
Capital deepening	.65	.7	.8
TFP	.5	1.75	.6
Total	1.5	2.8	1.62

(Source: Robert Gordon; The Rise And Fall of America)

12. Gordon feels that the US can only achieve a productivity increase per annum of 1.62 per year, going forward in the future. There is no chance that Canada can achieve 3.5% per annum under these circumstances.
13. It should be abundantly clear that economic growth in Canada, under the best of circumstances (combining the labour market changes and hoped for productivity increases), may reach 1% to 2% per annum, in real terms, but certainly no higher.

INVESTMENT PROSPECTS

14. Now we have concluded , earlier, that the non-inflationary growth of the financial markets can be no higher than the increase in the rate of real GDP. Thus the rate of “real financial returns” (non-inflationary increase) will be no higher than 2% per annum.
15. Individual investors may do better than this 1% to 2%, but the sum of all investors has to average out to these returns.

FURTHER OBSERVATIONS

16. Earlier, we saw that the “potential workforce” is expected to be about 50% by 2051. With perhaps 70% of these people actually working (a fairly high estimate) we will only have about 35% of our population working, earning money, and having the potential financial resources to invest in the financial markets.
17. The retiree population will represent 38% of the total population. Most of these people will not have earned enough in their lifetimes to have adequate pensions in their retirement. Governments will have to provide retirement funds for these people. (this group, today, represents 17% of today’s population.

PROSPECTIVE GOVERNMENT BEHAVIOUR

18. Government is going to have to finance the health care bill, and the retirement requirements of an aging population, in addition to the normal costs of government. All of these additional expenditures are going to have to be financed from the growth of taxation arising from the growth of real GDP. Our growth of GDP is the growth of real GDP, or, by adding in inflation, nominal GDP. But when focusing on investment returns, it is real GDP that will be responsible for the returns necessary to finance these increased expenditures. Inflation gets represented in the “casino”, where it is a zero sum game, where individuals can gain or lose, but the average of the gains and losses will be zero.
19. It is apparent that the growth in real GDP will not be sufficient to finance the health and retirement bills that are looming. We have two choices: more taxes; more inflation.
20. We have indicated, even with such low real GDP growth, this growth will only be possible by restructuring the economy. We need more capital investment. We have already indicated that all economies are going to radically change with the introduction of “block chain” and “5G” technologies. These two types of changes are going to be driven by “investment by tech firms”. The income arising from these changes is going to be concentrated in technical firms, and will not be evenly distributed across the economy. All of this change will lead to more inequality of income. It will be a tricky business to garner enough tax

out of this technical sector to meet the revenue needs we indicate here. We will be able to get some additional revenue but not enough to meet our full needs. Taxing wealth will be part of the solution that government will be tempted to implement.

21. This situation leaves the rest of the financing to inflation. These inflationary actions will be represented by an increasing “debt to GDP” ratio. We will be able to get away with this increasing “debt/GDP’ ratio until we hit a limit that other countries find themselves in today.
22. Previously I cited the monetary changes that will need to be taken once we reach this “debt/GDP” ratio limit. Until then, this combination of taxes and inflation will undoubtedly be the game plan.

INDIVIDUAL BEHAVIOUR

23. For those able to continue investing on their own, what should their investment approach be during this period . Below, we lay out a strategy.
24. First, we want to be invested in real economy companies, in spite of slow real GDP growth. Our economies are going to be changing substantially in terms of industry weightings. Ten years ago we had financialization; Canadian banks increased their capitalization on the TSX from 11% to around 30%; the US finance sector expanded from 8% to 22 %. We are going to see further major sector changes in the future. 5G technology will obsolete 4G phones. Block chain will start to dismantle “data silos” ,which are major targets for hacking. Retail, banking , and the auto sector, will be dramatically altered by block chain and AI (artificial intelligence). We need to focus on those companies that will continue to have growing earnings. For those less confident in plotting these changes, sector ETFs (exchange traded funds) may be a good alternative.
25. Stock trading, being a zero sum game, will not be a good strategy, except for a lucky few.
26. Even with a well chosen strategy, however, our expected outcomes will only reflect the growth of real GDP.

27. For many, "HOUSING" has always been an alternative "asset class". Recently it has also become "financialized". Prices have raced ahead of wages, so the gap between the two is not dissimilar from the "stock market capitalization/GDP" ratio. High rise buildings are reported to have some 50% vacancy rates in "owned units". Rents are beyond the means of ordinary working families. These conditions are likely to attract government legislation, including potential "capital taxes" on vacant units.
28. The forgoing summary suggests that working families are likely to have a difficult time earning enough on financial investments to fully provide for their retirements. The fall back position will be to expect government to provide the necessary supplements to cover retirement needs.
29. It is apparent from the contents of this paper that government will need to provide much greater financial support for both health care and retirement funding. With these additional resources having to come from the growth in real GDP. This means that our "debt/GDP" ratio is going to rise, and the government is going to increasingly find itself in more debt. With a debt/GDP ratio of around 30% at present, we will have some time to try to find a solution to this debt problem before we reach the debt levels of many other countries, including the US (which has a debt/GDP ratio of some 105% at present.
30. Astutely managing our "resource wealth" , and the associated environmental degradation, will be critical in determining the level, and growth of GDP; the source of funding and taxation, for the heavy demands on government expenditures. Sequestering fossil fuels , which will immediately reduce our real GDP some 20% does not seem to be a prudent strategy in the face of these circumstances.

DISCUSSIONS

31. To date, we have focused on specific issues. But we are dealing with an amalgam of **complex sub-systems**. Smith, in his book

THE WORLD IN 2050, identified 4 such systems: demographics; resources; globalization; and climate change. A fifth, “Governance”, needs to be added in the Canadian case. We will now integrate some of our previous observations and arguments under the rubric of this wider systems view of our situation.

32. **POPULATION.** We started this series of papers by asking if it was wise for the federal government to import 400,000 immigrants per year. Our conclusion was we should not do this because our real resource issue was a shortage of capital to boost productivity, not more labour. Without such capital, we were increasing GDP with immigration but lowering our standards of living (GDP per capita). Smith observes that energy use is influenced by 3 factors; an increase in population; the population life style; and the amount of capital used in the production process. Modernization, involving urbanization , uses 8 times as much energy as simple rural living. Immigrants, congregating in urban environments, consume much more energy than rural, native Canadians. Randor , in his book **2052**, projects that by 2052, sixty percent of the world’s population will be living in urban environments, with a fertility rate of 1.0, resulting in a world population of about 7 billion, and declining. Smith projects about 9 billion people by 2050. Earlier UN estimates had the world population around 12 billion, but have now seemed inclined to accept a figure closer to 9 billion. Anyone of these estimates still imply a heavy use of natural resources, contingent on the amount of labour used to produce our life styles.
33. In Canada, with immigration, we would be consuming much more of our resources, when we are already concerned about the amount of resource currently being used.
34. **Resources.** The 3 most used energy sources at this time are coal, oil, and natural gas. The amount of resource available is measured by the metric “total reserve/ yearly production (designated R/P)”

	Per person	R/P
Coal	124	133 yrs
Oil	25	40
Natural gas	19	60

It is apparent that the world is going to exhaust its supply of "oil" within the next 40 years, given current production rates.

35. The distribution of these resources in Canada is captured in the table below:

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Maximum	12,151	80.2	6,186	37.0	5,486	27.9	4,087	24.6	423	2.8	248	1.4	23,075

This table illustrates the different use patterns of the different energy sources in Canada. Restrictions on any specific energy usage will impact

different provinces in very different ways; especially Alberta with respect to fossil fuels.

- 36. ECONOMICS:** We have shown, before, that Canada has a shortage of capital. More capital embodies more “energy”. Adding population, with our current production functions, produces more GDP, but our standards of living (GDP/capita) is reduced. We saw earlier that 1 gallon of gasoline is worth “ the work of 1 man, working 10 hours per day, for 2 weeks”. We have a trade off: more labour or more capital. And the more “urban” (modernization) we become, the more energy we use.
- 37.** Those most focused on climate change, and advocating “sequestering oil”, are discounting the effects of such action on the other “sub-systems(population; economics; globalization) “, in our systems view of the issues. While sequestering would impact Alberta the most heavily, it would also impact other provinces as well, to varying degrees (especially in the equalization payments system, but also in general economic activity).
- 38.** Smil (and others) have emphasized that the transition to more climate friendly fuels will take some 50 to 100 years. From an economic perspective, we can go “cold turkey” ,or plan a more orderly transition in Canada; the latter negatively impacting our GDP less in the short run.
- 39. CLIMATE CHANGE:** Smith (The World in 2050) has a wonderful discussion on climate change. He first draws the distinction between “weather” and “climate change”. Advanced industrial nations are becoming quite sophisticated in forecasting weather. However, we know much less about climate. Climate projections are obtained through “statistical models” , derived from millions of years of observations of “weather”. Climate projections are based on “averages” of “weather”, and other less obvious factors affecting weather. When new phenomena appear to affect our weather, the climatologists attempt to introduce these new phenomena into their climate models, when they have sufficient data about such phenomena. New factors only get introduced into the models when such “phenomena” become

“statistically significant” in the testing. Obviously temperatures play a significant role.

40. Less obvious to the layman, is the role of water, and its natural storage systems (stored in winter; released in the spring to feed agriculture). The point is that “climate” changes slowly, but can be interspersed by sudden changes in “weather patterns”. Changing weather , in its own right, does not signal “imminent climate change”.
41. From a “systems” perspective, while we want to take climate change seriously, in most circumstances, the situation should not call for “radical short change adjustments” in normal behaviour patterns. We should pay attention, and make “considered adjustments to behaviour” where change is obviously called for, but rarely will radical short term changes lead to short to medium change in climate models.
- 42. GLOBALIZATION:** Many see globalization as a spontaneous development. In fact it was a carefully orchestrated set of policies beginning after WWII, with establishment of 3 international institutions: the IMF; the WORLD BANK; and the WORLD TRADE ORGANIZATION. The UN is the fourth institution, rounding out this “international structure of governance”. The objectives of these organizations are, respectively: to manage world money; to help finance developing country economies; to promote world trade; and to coordinate the individual country initiatives within the context of these organizations.
43. This organizational structure facilitated coordination between countries, especially where individual countries might have trouble establishing similar policies domestically. It could be pointed out that such policies were established by international organizations over which domestic organizations do not have direct control. The “elite power structures” of individual countries became part of this “international decision making structure”.
44. The Paris climate change Accord is part of this international structure, for example. To reach agreement on this Accord, China, India, Africa, and the US did not agree to a time table in meeting the goals of this Accord (the US opted out of the accord altogether); this is how

agreement was reached. Canada's goal is a 30% reduction from its 2005 emission levels.

45. The federal government is aggressively establishing policies to meet this accord (without due consideration of individual provincial circumstances). The provinces are the recipient of these aggressive actions by the federal government; they are expected to implement such policies, irrespective of their individual provincial situations.

46. **CANADIAN GOVERNANCE:** Current federal government behaviour, such as outlined in the last paragraph, is putting stress on the Canadian federation. Savoie, in his latest book "**DEMOCRACY IN CANADA**", has observed that the "Canadian democracy" was designed for governing a "unitary state", and is ill suited to governing a state with strong regional interests. Our institutions are ill equipped to deal with this latter situation. Nor has Canada's relationship with its indigenous peoples been properly completed, in the form of reasonable treaties, to which all parties are signatories; and have sufficient specificity that strategic decisions by all parties can proceed with confidence, absent of conflict.

47. Savoie (**DEMOCRACY IN CANADA**) observes that politicians, especially national politicians, love "uniformity", which leads them to seek "equality" (not seeing the difference between the two). Representation; accountability; equality don't always mean what we think (by different parties). A capacity in federal institutions to accommodate regional interests in policy making is at the federal whim. Policies designed to foster a unitary state, may not serve the outer regions well. This latter aspect is most critical in today's Canadian democracy; it must be fixed, given the problems facing the nation. Canada is doing poorly when it comes to regional equality (of governance). Government coercion can cause depressions (Casey) by forcing policies on

regional governments that are at odds with a rational regional policy.

31. This leaves us with 3 choices:

31.1 Option 1: having an assertive federal government imposing common policies on all provincial entities; (the current federal model)

31.2 Option 2: having a loose federation wherein provinces get to exercise their full constitutional rights, without federal intervention;

31.3 a collaborative partnership between all provinces, that have full agreement, and cooperation between all parties (including government); thereby devising a common set of strategic plans that have the full agreement and cooperation of all geographic (including indigenous) entities.

32. Option 1 will divide the country; drive away capital investment that Canada desperately needs; leading to the prognosis captured in **A TALE OF TWO COUNTRIES** (SAVOIE: or maybe worse).

33. Option 2 would lead each province to pursue their own interests, and probably lead to an aggregate shortfall in environmental goals for Canada. It would exacerbate standards of living between provinces, and lead to the elimination of such policies as EQUALIZATION PAYMENTS.

34. Option 3, while requiring compromises for most provinces, would lead to the best outcome for the country as a whole. It must be based on a **RULE OF LAW**, that governs all parties.

CONCLUSIONS

35. **CLIMATE**: Climate is long term average weather (really long term, over millions of years). When we have weather variability, we try to average it into our climate equations, but a single weather observation, or several, is unlikely to carry any statistical significance in a climate

equation, and so is unlikely to influence the professional view of climate. But we do know temperatures are rising. Smith (**The World in 2050**) notes that this expected temperature increase (1 degree, perhaps 2 degrees, is already baked into the climate picture) is increasing livability in the northern reaches of the countries around the Arctic Circle , for example.

36. Since the 1970s, Canada has been the **Secretariat** of the “**Arctic Council**”; a group representing all 8 countries touching on the arctic circle, including Russia and the US. (A good friend of mine (now deceased) was the head of the Secretariat for some 20 years). This whole geographic area has vast reserves of undeveloped resources, and limited populations, largely composed of indigenous peoples.
37. The policy Canada adopts with respect to its resources in this area raises two issues: who is going to make decisions on resource use in this territory; how is Canada going to handle pressures from other countries for access to our unused resources when the world starts to run out of such resources (Klare: Resource Wars) if we have been sequestering (or limiting) our use. These decisions get to the heart of Canadian Governance: who decides.
38. **GOVERNANCE:** The decisions, in the previous paragraph, get to the heart of the structure of governance in Canada. It is imperative that we resolve the governance issue that Savoie highlights (**DEMOCRACY IN CANADA**), and which we have recently experienced in BC. It also emphasizes the need for a cooperative decision making environment, instead of federal government dominance , or complete provincial independence. The indigenous people must be integrated into this governance system in a meaningful, acceptable, manner. It must be based on an explicit system of “rule of law”, accepted by all parties.
39. **GDP and national standards of living:** In the context of the previous discussions, sequestering resources is not a reasonable policy. Even if we could reach agreement amongst “all” Canadians, we would

soon find ourselves facing demands from other countries, when they start to run out of resources. These demands might start politely, but as **Klare (Resources Wars)** documents, they will soon escalate into conflict if not satisfied .

40. Further, Canada is going to find that its standards of livings are going to decline going forward. We need more capital investment. The recent emasculation of decision making that we recently witnessed (in the BC natural gas project), and the withdrawal of capital from Canada, highlighted by Buffett’s recent decision on a natural gas plant in Quebec, convey that Canada is not viewed as a place to invest under these circumstances. Artificially restricting the use of energy will exacerbate these declines.
41. Another indicator of weak GDP is the drop in listings on the TSX (now down below 800 companies). Capital Investment relies on an adequate supply of “Savings” (“funds”) for capital investment. Increasingly , we are relying on “private equity” and “venture capital” for the sources of funds for investing. These funds are directing their investing towards “technology and artificial intelligence” endeavors” rather than into our resource economy, which is still the basis for our prosperity. This orientation is going to foster more inequality of income.
42. The Canadian government is going to be facing massive increases in expenditures for health care and income support for seniors. Any reduction of GDP will exacerbate the problems in meeting these needs..
43. We still need a strong vibrant economy ; the problems cited herein , at present, do not instill confidence that this will occur unless current government policies are changed.
- 44. LONG TERM PLANNING :** In order to handle all of the foregoing problems we need a long term plan, with all of the foregoing problems being properly prioritized within the framework of such a

plan (probably a 20 year Plan, with more detail in the earlier years, and less as we go further out). The resolution of each problem must be analysed, and solutions proposed, within the total system framework laid out. We cannot have individual problems being addressed, and solutions implemented, outside this systems framework. Compromises will have to be reached by all parties for this approach to work.

45. In the absence of such an approach, Smith hypothesized another possible outcome: business interests and cultural similarities between the Canadian provinces and the northern States, in the absence of the resolutions proposed above, could lead to an amalgamation into regions like: Cascadia (pacific northwest centred on Vancouver-Seattle); Atlantica (New York, Vermont, New Hampshire, NS, NB, and PEI); Super region (Toronto, Hamilton, Detroit, Indiana, Ohio, and the Midwestern states). If governments do not foster practical solutions, the people will forge their own.

46. In summary we must:

46.1 reach a new GOVERNANCE arrangement for Canada, and all affiliated parties (federal government, provinces, indigenous peoples) that will allow decision making without conflict, or veto. (A “system of RULE OF LAW”)

46.2 adopt a climate change approach that embodies a total systems approach , giving full recognition to the need to maintain our standards of living, as well as recognizing our climate change interests. (these interests need to reflect the needs of the domestic population, not international organizations).

46.3 strive to promote capital investment in Canada to provide a better balance between capital and labour in our production processes. Relying on “venture capital and private equity” directed at technology and artificial intelligence activity will not meet our broader capital needs.

46.4 manage government finances in a sustainable manner, while ensuring that our health and retirement needs for our aging population, are addressed.

46.5 establishing a presence in the North, that recognizes Canada's interest's in the Arctic Circle geographic region, thereby discouraging other nations from taking advantage of our legitimate wealth in these geographic areas.

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The big zero in Ottawa's net-zero plan

One of the key politicians overseeing Canada's natural resources policy crisis is Trudeau's Natural Resources Minister, Seamus O'Regan, who flew to Alberta this week to explain that Ottawa does not have a plan to achieve the miracle of net-zero carbon emissions by 2050. "Net-zero, we believe, is a marker for your ability to take this seriously," he told the CBC's Power and Politics. In an interview with the Calgary Herald, O'Regan announced that "You cannot get to net zero without Alberta, you cannot get to net zero without the Canadian oil and gas industry."

And you can't get to zero without a plan, which O'Regan admitted Ottawa does not have. "The sooner that we have a plan ... the sooner that investors know what direction we're heading in and what the rules are," he told the CBC.

But here's the reality. Canada can never get to net zero — not without a miracle from a saviour who walks into Alberta and changes all the fossil fuels into carbon-free energy that can be extracted with an app via a cellphone.

Canada signed on to the net-zero carbon targets — adopted in 2015 at an "historic" United Nations' Conference of the Parties meeting in Paris — without having a clue as to the feasibility of net-zero targets. Nor did the rest of the nations in Europe, Asia and South America — who signed the agreement (see graph).

Even greens are now conceding that the net-zero targets are fantastical creations of the UN policy mobs dedicated to promoting global climate panic and radical economic policies. Vancouver's National Observer, home of relentless climate agitation, last week bannered a headline "The Paris Agreement set an unrealistic target for global warming. Now what?"

There is plenty of high-level policy wonkery around that claims to have solutions that seem wildly unconnected to the real world. The piece in the National Observer cited the ex-

CAN NEVER GET TO NET ZERO — NOT WITHOUT A MIRACLE

ample of bioenergy and carbon capture and storage as a replacement for fossil fuels. But it notes, citing a Nature magazine article, that such a combination would require a land mass 1.5 times the size of India.

There is no viable alternative to fossil fuels at scale and there is no technology available to capture carbon. Lack of technology, however, has not prevented advisers, consultants and policy-makers from using carbon capture as the black hole into which all the problems of net zero are stored. We have no idea today how to hit the 2050 targets, so let's assume we will have the technology some time in the future.

Other alternatives include building more non-fossil energy sources, renewables, such as hydro, wind, solar and nuclear. But to produce the power needed in Canada to offset fossil fuels would require building two-and-a-half \$13-billion hydro dams every year for the foreseeable future. Internationally, it's estimated that getting to zero would require building one new 1.5-gigawatt nuclear power plant every day for the next 30 years.

The unreality of net zero has not deterred climate advocates, circular economy advisers and sustainable development proponents from cranking out schemes and proposals. A commentary last week in Policy Options says "Canada can lead on net-zero transition for heavy industry."

It said that moving to net-zero could raise aluminum, steel and other material costs by 25 to 60 per cent, and therefore Canada needs a great national heavy industry plan, perhaps modelled along plans allegedly under development in Europe. The details are complicated and highly speculative.

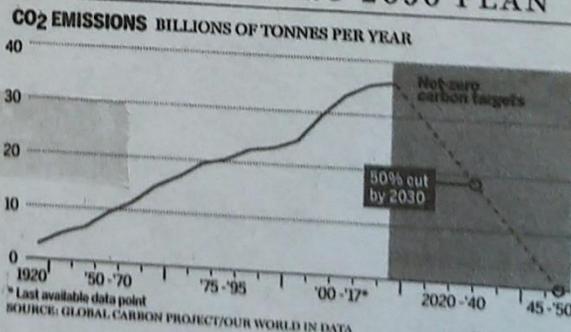
Since Ottawa does not have a net-zero plan for fossil fuels, it certainly does not have one for heavy industry.

But does Canada really need a net-zero strategy? Despite policy moves from Europe, the global net-zero process has been described as an "ad hoc, hand-to-mouth approach (that) is clearly inadequate." What the world requires instead, according to the head of the Policy Institute at King's College London, is a global institution that will "combine both analysis of the challenge and the development of practical solutions."

Good idea. Ad-hoc and hand-to-mouth is a generous description of the Trudeau government's approach to the Paris Agreement's net-zero. But there is reason to doubt a new global institution can save the world from a fantasy political policy objective concocted at a UN meeting of 197 nations in Paris five years ago.

Rather than rush to action, perhaps Canada would be better off waiting for the next meeting of the UN Climate Change Conference of Panic (COP26) set for Glasgow in November this year, at which time the world may come to appreciate that net-zero is not a real thing.

THE UN NET ZERO 2050 PLAN



CAN NEVER GET TO NET ZERO

2016	2021	2026	2031	2036	2041	2046	2051
1700000	1728900	1758291	1788182	1818581	1849497	1880939	1912915

A productivity growth rate of 1.6% per annum would keep the GDP at the current 2016 level.

48. However, if we measure the change in GDP, related to energy use, we have the scenarios below.

9.8323	9.8323	9.9994	10.1694	10.3423	10.5181	10.6969	10.8788
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