Why fossil fuel divestment should be part of the Anglican Church of Canada's response to climate change

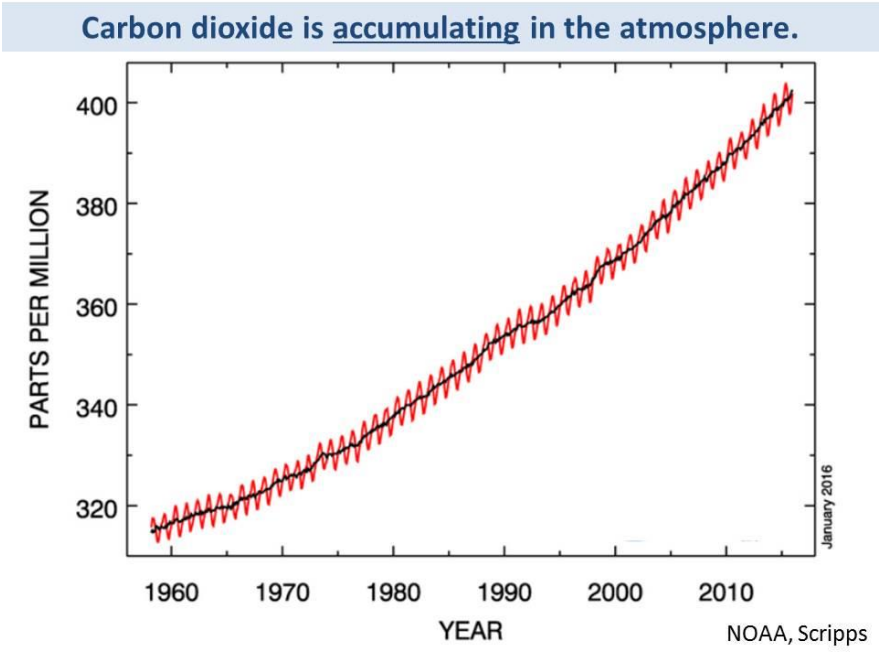
Lenore Fahrig, 8 May 2016
*Sources listed at the end, in order by topic.

1. Impacts of climate change

1.1 How and why the climate is changing

Globally, 2015 was the hottest year on record, and 2014 was the second hottest. These are the most recent years in an ongoing warming trend that started about 30 years ago.

The scientific evidence undeniably demonstrates that this warming trend is being caused by humans. This evidence relies on the work of thousands of scientists who analyze millions of data collected on earth, in the atmosphere and in the oceans. From these data scientists calculate the heat budget of the earth - all the factors that determine the difference between incoming energy (from the sun) and outgoing energy (back to space). These calculations reveal a net increase in energy on earth over the past few decades, caused almost entirely by an increase in the concentration of carbon dioxide in the atmosphere. The amount of carbon dioxide in the atmosphere is increasing because of the burning of fossil fuels - oil, coal and natural gas. Fossil fuels contain carbon that had been stored, buried in the earth, for millions of years. We burn fossil fuels to produce energy for human uses. When we burn them the previously stored carbon is converted to carbon dioxide and emitted into the earth's atmosphere. Carbon dioxide is a greenhouse gas; it traps the earth's heat. As we continue to burn fossil fuels, carbon dioxide is accumulating in the atmosphere, and heat is accumulating on earth.



While most people are aware that global warming is caused mainly by the burning of fossil fuels, many people are unaware of the fact that climate change is a 'one-way street'. Carbon dioxide *accumulates* in the atmosphere, which means that once we have caused the climate to change, even if we stop burning fossil fuels the climate will not go back to the way it was before, at least not within any meaningful time period. We need to stop burning fossil fuels before climate change becomes catastrophic.

1.2 Impacts of climate change on people - global

Climate change is much more than global warming. The accumulation of energy on earth is causing higher frequency and intensity of extreme weather events. Hurricanes are becoming more powerful, and extreme precipitation events are becoming more common and more extreme. Sea level rise, caused by expansion of warming ocean waters, and melting of glaciers and ice sheets, is resulting in increased coastal flooding events.

Probably the most worrying global trend is the increasing intensity and persistence of droughts. In just the past 3 years there have been record-breaking droughts in China, Southeast Asia, India, Australia, the Middle East, Spain, Southern, Western, and North-eastern Africa, Western North America, Mexico, Central America, and Brazil. The UN is predicting a 40% shortage of fresh water by 2030, only 14 years from now. Within the next few decades, on our current trajectory, over half of the world's people will be living in or fleeing from areas suffering intense, permanent drought.

As a result of these impacts, the number of 'climate change refugees' is increasing rapidly. For example the low-lying island nations of the south Pacific are disappearing with rising sea level, pushing thousands of people to search elsewhere for a home. Climate change is also one of the factors leading to the Syrian refugee crisis. From 2006 to 2011 the Eastern Mediterranean region suffered the most intense drought in at least 700 years. In Syria, about 800,000 farmers lost their livelihoods and between 1.5 and 2 million people moved to the cities, which were not prepared for this sudden influx. This contributed to tensions in the lead-up to the conflict and ensuing refugee crisis.

As droughts intensify around the world, the number of people looking for a viable place to live will climb. On our current climate path, the numbers of climate change refugees are very likely to be in the hundreds of millions. At the same time, the ability of the world to accommodate new immigrants will decline, as the total costs of dealing with extreme weather events skyrocket.

In fact, Mark Carney, the governor of the Bank of England, warns that unchecked climate change will lead to global economic collapse. In a recent speech to the insurance industry, he linked economic risk to climate change causing "global impacts on property, migration and political stability, as well as food and water security." Carney also warned that, given the inertia in the economic system, "once climate change becomes a defining issue for financial stability, it may already be too late" for the global economy. We are already seeing increases in insurance and government pay-outs following 'natural' disasters such as floods and wildfires. These pay-outs are in the hundreds of billions of dollars annually. But there will be a limit to insurance; as stated

in a Lloyds report, "the world cannot insure its way out of climate change." In fact, some insurance companies are already changing their policies, reducing coverage to deal with the increasing claims.

Similar concerns for risks posed by climate change to the global economy have been expressed by the European Systematic Risk Board, the EU watchdog charged with identifying potential risks to the European economy. Their report "Too late, too sudden: Transition to a low-carbon economy and systematic risk" identifies inaction on climate change as a major risk to the economy. It is important to understand that if the global economy fails, our ability to rescue the starving and homeless victims of climate change will be severely impaired.

1.3 Impacts of climate change on Canadians

Canada has seen increases in extreme weather-related events due to climate change, although the impacts on Canadians have so far been buffered by our financial ability to rescue those affected, and to rebuild. In 2013, Alberta and Toronto had all-time record floods, with a combined cost of over $7 billion. Over the past 10 years, over half of the merchantable timber of British Columbia was destroyed by the mountain pine beetle. With increasing temperatures, many more beetles now survive the winter, leading to an explosion in beetle numbers and resulting devastation for the forestry industry in B.C. Increasing temperatures in western North America have also led to increasing frequency of large wildfires, and increasing total area burned. This year's fire in northern Alberta will be the most costly 'natural' disaster in Canadian history, to date.

The impacts of climate change on northern native communities have been less widely publicized, despite the fact that the most extreme temperature increases and associated impacts are occurring in northern Canada. As weather becomes increasingly unpredictable, community elders are becoming less able to provide sound advice on safe times and places for fishing and hunting. Travel is becoming more limited and unsafe, with earlier and unpredictable melt-times of lakes, rivers and sea ice. Incidents of people becoming stranded and unable to return home are on the rise. Some traditional travel routes across sea ice are now too unsafe to use. In addition, search and rescue missions are impeded by unpredictable weather patterns.

Food security is also an issue in the north. Access to hunting grounds is becoming impeded and hunters often have to travel farther to reach them. Lower water levels in rivers during summer are reducing fish populations. Increasing freezing rain events in winter are making food less available to caribou, which is reducing caribou populations. Storage of meat over the winter is becoming difficult as meat preserved in traditional outdoor caches is rotting due to thaw periods during the winters. In addition, there are concerns that warmer temperatures will cause disease outbreaks in northern fish and other game species.

One of the most significant impacts of climate change on northern people is melting permafrost, caused by increasing temperatures and decreasing snow cover. Permafrost is the layer of saturated soil that remains frozen year-round, and has been frozen for hundreds of years. But now it is beginning to melt. When it melts the soil becomes liquid. Northern infrastructure - buildings, bridges, rail-lines - are built on permafrost. As it melts it causes this infrastructure to shift, crack and collapse. On coasts and hill slopes, permafrost melt leads to 'slumps', or sudden

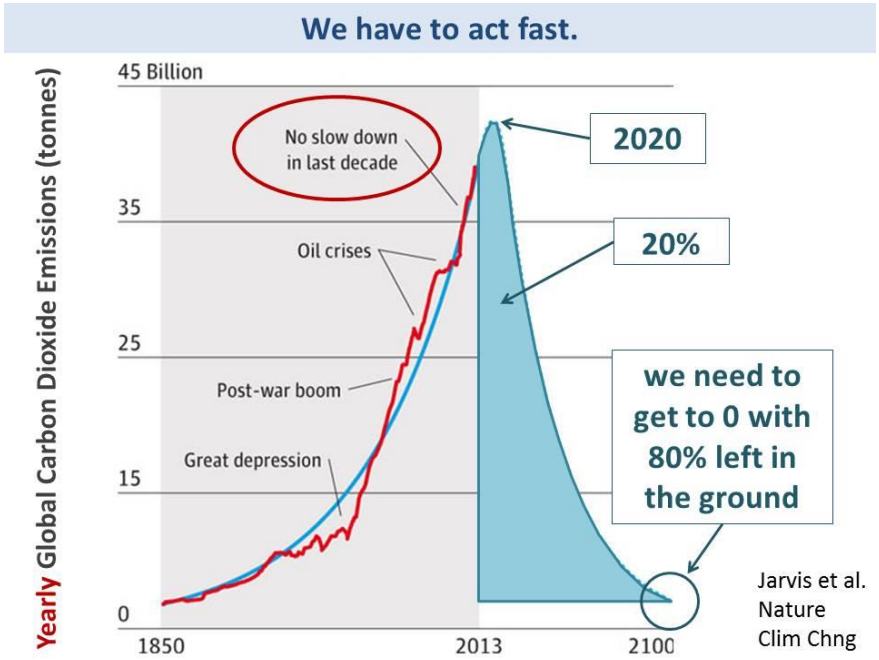
massive failure of the land. In coastal areas slumps can sweep buildings and other infrastructure into the sea. Some northern coastal communities are at risk of disappearing due to the combination of permafrost melt and sea level rise.

2. International and national commitments to stopping climate change

2.1 Limiting climate change to 2°C

Scientists have calculated that, to avoid the worst impacts of climate change, we need to limit average global warming to between 1.5 and 2°C above the average global temperature of pre-industrial times. We have already caused about a 1°C increase. The commitments made at the Paris summit in 2015, assuming they are actually met, will limit warming to about a 3°C increase, which is well above the level that can be sustained by human civilization.

To limit global warming to 2°C, we need to reduce and then stop adding carbon dioxide to the atmosphere. In other words, we need to reduce and then stop burning fossil fuels. In fact, to have a strong chance of staying under the 2°C limit, we need to leave 80% of the known deposits of fossil fuels ('fossil fuel reserves') in the ground, as stored carbon, never to be extracted and burned. Annual emissions need to start declining in the next 3-4 years and then they need to decline quickly to zero over the coming decades.



For Canada, the challenge is even bigger, because our oil reserves, in the form of bitumen, are extremely costly to extract. Extraction is costly in both dollars and climate change impact, as it requires a large amount of energy (fossil fuels) to extract the bitumen from the soil. In other words, we are emitting huge quantities of carbon dioxide into the atmosphere to extract the bitumen which, once refined into oil, will cause further emissions when it is burned for energy. In fact, about 25% of Canada's carbon emissions derive from the extraction of bitumen from the

oil sands. It has been calculated that, to limit global warming to 2°C, oil sands production will need to become 'negligible' by 2020, only 4 years from now. In other words, it will be impossible for Canada to uphold our commitment made in the Paris accord if we continue to mine the oil sands.

2.2 Commitments by the Anglican Church in the world

In February 2015 a group of Anglican bishops from around the world, including two Canadian bishops, National Indigenous Bishop Mark MacDonald and Bishop of Edmonton Jane Alexander, met in Johannesburg to discuss the Church's response to climate change. In their report, *The World is Our Host*, the bishops commit to fostering three kinds of action on climate change: prayer, education, and responsible investment, the latter including support for "environmental sustainability and justice by divesting from industries involved primarily in the extraction or distribution of fossil fuels." They also encourage Anglicans around the world to reduce emissions and implement energy saving measures.

In April 2016, the Archbishop of Canterbury gave the presidential address at the Anglican Consultative Council in Zambia. In it he identified the two most pressing challenges for Anglicans worldwide: religiously-motivated violence, and climate change. The Archbishop had just recently spent time with a group of African Anglican youth, whose concerns about climate change and their future had a profound impact on him. In his speech he makes a clear link between justice and climate change action saying that, "underlying the issue of climate change is the reality of global injustice and inequality." The Archbishop did not suggest particular actions to deal with climate change, but he clearly understands the severity of the situation, and that Anglicans must play a role in the solution.

One of the most noticed actions of Anglicans around the world has been efforts to shift the economy off fossil fuels and onto renewable energy, through investment decisions. Many individual dioceses and three Anglican provinces (see below) have committed to fossil fuel divestment - eliminating investments in the fossil fuel extraction industry - as a statement of the injustice of climate change, and the moral imperative to shift off fossil fuels and onto renewable energy.

2.3 Commitments by the Church in Canada

In 2013 the Anglican Church of Canada added a new promise to our baptismal covenant, to "strive to safeguard the integrity of God's creation, and respect, sustain and renew the life of the Earth." Climate change is the greatest threat to the planet, so this beautifully worded baptismal promise commits Canadian Anglicans to be part of the climate change solution.

So far, other action in the Canadian Church has been at the level of individual parishes and dioceses. For example, many parishes have conducted green audits of their church buildings and have implemented various energy-saving measures. Some parishes are producing solar energy and some are heating their buildings with geothermal energy. Individual parishes are also hosting educational events on climate change. At least three dioceses in Canada are divesting from fossil

fuel extraction companies, and several others are having discussions around divestment and/or have committed to partial divestment.

3. Why the National Church should divest from fossil fuel companies

The general purpose of any divestment campaign is to put pressure on governments to act responsibly. For example, in the 1980's divestment from South African companies was aimed at pushing the South African government to end Apartheid. Similarly, the global fossil fuel divestment campaign is aimed at pushing governments around the world (including Canada) to foster a rapid shift to an economy based on renewable energy.

Fossil fuel divestment focuses on the fossil fuel extraction industry because this industry is at the base of the fossil fuel economy. To maintain a livable planet, we need to shift completely off fossil fuels, leaving 80% of known deposits undeveloped. This means that the fossil fuel industry will have to change their business plan, to abandon their 'assets' - the fossil fuel reserves on their books - and shift to a different kind of industry, preferably renewable energy. So far they are not doing this. On the contrary, the fossil fuel industry worldwide continues to spend billions of dollars annually looking for more fossil fuel deposits, and they receive billions of dollars in subsidies. In fact the subsidies to the fossil fuel industry far outstrip subsidies to renewable energy. Much stronger public policy is needed to 'push' the transition to renewable energy, in time to avoid catastrophic climate change.

There is also a strong financial argument for fossil fuel divestment. This was well articulated in the University of Ottawa's recent decision to divest of fossil fuels. The decision notes that "the nations of the world have now committed to reducing the use of fossil fuels considerably by 2050, raising questions about the future of investments in this sector and creating an element of long-term risk in relation to those investments."

But ultimately, fossil fuel divestment is about ethics. In our baptismal covenant we promise to "safeguard the integrity of God's creation." Climate change is destroying the integrity of God's creation, and if we have investments in the fossil fuel extraction industry, we are complicit in this destruction. As Ellen Dorsey eloquently puts it, "If you own fossil fuels, you own climate change."

4. Frequently asked questions

4.1 Who is divesting?

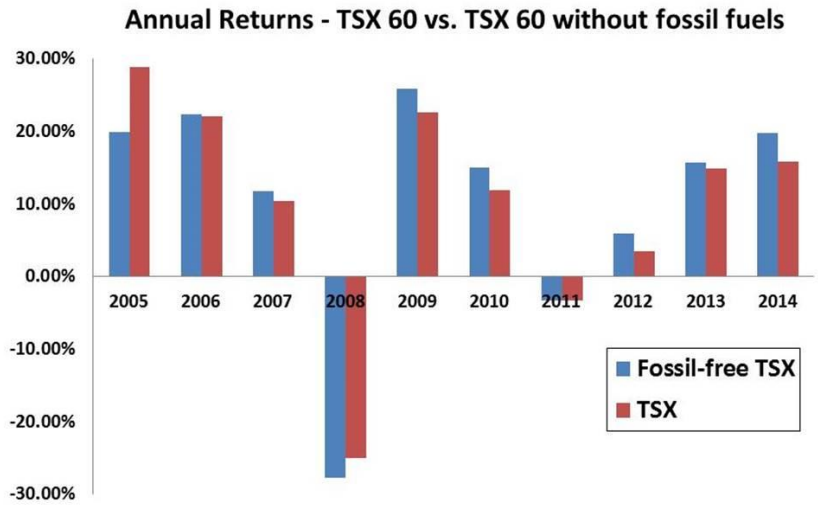
Over 500 organizations world-wide have committed to divest from fossil fuels. These include faith-based groups, universities, governments especially cities, foundations, pension funds, non-governmental organizations, and others. Notable Canadian examples include the City of Victoria and the Canadian Medical Association.

Churches and other faith-based groups are the largest group committing to divest. Some examples include the World Council of Churches, the Lutheran World Federation, many Unitarian and Quaker congregations, the Council of Progressive Rabbis of Australia, Asia and New Zealand, the United Church of Canada as well as several individual United Church congregations, several Methodist and Presbyterian churches, the United Reformed Church of Scotland, and the Uniting Church of Australia.

Within the Anglican communion, the following provinces and dioceses have committed to divest of fossil fuels: the Anglican Province of Aotearoa, New Zealand and Polynesia, the Church of England (partial divestment), the Episcopal Church of the USA, and the Dioceses of Auckland, California, Canberra and Goulburn, Dunedin, Los Angeles, Massachusetts, Melbourne, Montreal, Nebraska, Olympia, Ottawa, Oxford, Perth, Quebec, Waiapu, Waikato and Taranaki, Wellington, and Western Massachusetts.

4.2 Will the Church lose money by divesting from fossil fuels?

Analyses show that portfolios without fossil fuel stocks have done better than portfolios with fossil fuel stocks, over the past 10 years. Analyses of the S&P 500 and the TSX 60 show the same trend. Some investment advisors argue that oil and gas stock values are low now, and so this is the wrong time to sell, as they will go up again. While stock values will undoubtedly fluctuate, betting on fossil fuel stocks becoming strong performers is tantamount to betting on the failure of government commitments such as the Paris Accord. The only way governments can meet those commitments is if we stop extracting and burning fossil fuels. If this happens, then companies that continue to extract fossil fuels will not be strong performers on stock markets.



4.3 Should the Church do shareholder engagement rather than divestment?

Some argue that divestment is a bad idea because it means giving up shareholder influence over the companies. For example, some shareholders in fossil fuel companies, including the Church of

England, have brought shareholder motions essentially asking the company to shift out of fossil fuels. So far, these have not succeeded.

There are several reasons why divestment by the Anglican Church of Canada is more likely than shareholder engagement to have a positive impact on the climate. First, asking a fossil fuel company to shift out of fossil fuels is analogous to asking a shoe company to shift out of shoes. The obvious response is, 'if you don't like the product, don't invest in it' (i.e., divest). In addition, our church is a relatively small shareholder, making it a small player in company decisions.

Finally, as discussed above, the most important influence of divestment is on public policy. A divestment decision by the Anglican Church of Canada would be highly publicized and this would send a message to provincial and federal governments that they need to implement strong policies that will move our economy away from fossil fuels. This would do far more to push climate change policy in the right direction than any shareholder engagement the Church could pursue.

4.4 Shouldn't we support fossil fuel companies that are investing in renewable energy?

Yes, and that is how the proposed resolution has been worded. The resolution states that the Church will divest from the list of fossil fuel extraction companies maintained by FossilFreeIndexes.com. These are the companies whose untapped reserves of fossil fuels represent the largest risk to the Earth's climate, if extracted and burned, as currently planned by those companies. This list is re-evaluated annually by FossilFreeIndexes.com. If a company on the list were to decide to forfeit its fossil fuel reserves and shift to renewable energy production (or something else), it would go off the list, and the Church could invest in it again.

It should be noted that, so far, major fossil fuel extraction companies are making only very small, token investments in renewable energy. For most companies this amounts to less than 1% of their investments. About a decade ago BP had a “green-washing” period in which it re-branded itself as “Beyond Petroleum.” Even at that time, BP was directing only 6% of its investments to renewables. BP has since abandoned its investments in renewable energy. Over the longer term, fossil fuel companies will have to change their core business and embrace renewable energy if they are to survive. When they do, the Church should reinvest in them.

4.5 What about job losses in the fossil fuel industry, particularly in Alberta?

Jobs have already been lost and will continue to be lost in the fossil fuel industry, as long as governments hold to their commitments to reduce emissions. However, the number of jobs lost in fossil fuels has been outstripped by new job creation in the renewable energy industry. In fact, in 2013 the rate of job growth in Canada’s clean energy sector outpaced that of every other sector in the country.

It is important to remember that Alberta has many skilled workers, and many more opportunities than just oil and gas. Workers' skills can be redirected to renewable energy and sustainable companies. This will benefit the province in making it less dependent on one sector. In fact, some of the trades in Alberta are already seeking re-training for the renewable energy sector.

Alberta already has a strong wind energy sector, and has enormous potential for growth in both wind and solar energy production.

4.6 Can we survive without fossil fuels?

Yes, we can survive without fossil fuels. In fact, our civilization will not survive if we keep burning fossil fuels. A group of Canadian academics has calculated that, with the right incentives, the Canadian economy could shift to renewable energy within 35 years, by 2050. Solar power is increasing in Canada at an annual rate of 13% and Canada now ranks sixth in the world for investment in new domestic clean energy generation projects. We have the technologies needed to make the transition. We need the social and political will to implement policies to bring these technologies to the fore and shift the economy away from fossil fuels.

4.7 Won't scientists come up with a solution to climate change?

Scientists and engineers have already come up with the solutions to climate change. They have spent 30 years building the technological solutions necessary for shifting off fossil fuels. We now have the technologies; we just have to implement them and stop emitting carbon.

One issue that people point to is that renewable energy such as wind and solar are intermittent and so represent an unreliable energy supply. The solution to this is energy storage. Great strides have been made in recent years in energy storage research. The solutions are wide ranging. For example, in Germany, excess wind energy is used to pump water up-hill, which is then used for hydro-electric power when the wind is not blowing.

4.8 Wouldn't divestment at this time just allow others to get a bargain price on fossil fuel stocks?

This question implicitly assumes that the stock values of these companies will go up. While the stock values will undoubtedly fluctuate, betting on fossil fuel stocks becoming strong performers is tantamount to betting on the failure of government commitments such as the Paris Accord. The only way those commitments can be met is if we stop extracting and burning fossil fuels. If this happens, then companies that continue to extract fossil fuels will not be strong performers on stock markets.

4.9 Can't we just adapt to climate change?

We will, hopefully, be able to adapt to a certain amount of climate change, but there is a limit. That limit is estimated to be between 1.5 and 2°C average global temperature increase above pre-industrial levels. Beyond that limit, humanity will not be able to adapt to the wide-scale droughts in agricultural regions and flooding of coastal regions that will come about if we fail to shift off fossil fuels.

4.10 Won't carbon capture and storage (CCS) allow us to keep burning fossil fuels?

The scale needed is too large, the time needed is too long, and the cost is too high for CCS to allow us to keep extracting and burning fossil fuels. Sequestering carbon dioxide is far more

costly than avoiding the emissions in the first place by shifting to renewable energy. To bury just 20% of carbon emissions (rather than emitting them) would require a CCS industry that is twice as big as the entire oil industry. Power plants with CCS would need to be 30% larger and consume over 30% more fuel than regular power plants, making them uneconomical in comparison to renewable energy.

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