Mark Jaccard  

As a sustainable energy researcher, I have been inundated with media requests to comment on the proposed new pipelines from Alberta’s tarsands, especially Enbridge’s Northern Gateway here in British Columbia. I have mostly declined, assuming that with such intense public interest the key issues would get a full airing. But I was wrong — for no one is discussing the proverbial “elephant in the room.” This is the connection between tarsands expansion and Prime Minister Stephen Harper’s 2007 promise to Canadians to reduce our greenhouse gas emissions 65 per cent by 2050.

Harper’s promise, recently reconfirmed, simply reflects the overwhelming scientific consensus that while any increase in average global temperatures from pre-industrial levels is dangerous, increases above 2 degrees Celsius will likely have cataclysmic effects for the ecosystems on which we depend. Yet human combustion of fossil fuels has already driven the temperature 1.2 degrees higher, and we are on a path of 4 degrees or more in this century alone, which will ultimately increase the sea level by tens of metres. This is why leaders of industrialized countries, like the U.S. and European Union, agreed to reduce emissions 80 per cent by 2050 and will work to require global emissions to start declining this decade.

A target 38 years hence might seem safely distant. But this is incorrect. All leading independent climate policy institutes concur that only with immediate action will we achieve a 65-80 per cent reduction in less than four decades. In the case of vehicles, this means the rapid deployment of near-zero-emission technologies which, thankfully, are already commercially available. These include hybrid vehicles using biofuels (ethanol or biodiesel), plug-in hybrid vehicles, and battery-electric vehicles. In contrast, our demand, and soon the global demand, for oil must contract, especially the demand for high-cost, high-emission tarsands.

Thus, for his promise not to be a lie, Harper cannot allow expansion of tarsands and associated pipelines, and he must require a growing market share of near-zero-emission vehicles. He knows this because his analysts are privy to the work of the world’s leading researchers. Canadians on all sides of the issue should read a 20-page report from MIT’s Joint Program on the Science and Policy of Global Change entitled *Canada’s Bitumen Industry Under CO2 Constraints* (found at [http://globalchange.mit.edu](http://globalchange.mit.edu)). The report shows how and why the Canadian tarsands must contract as part of a global effort to prevent a 4 degree increase in temperatures and catastrophic climate change.

Why, then, would anyone argue for tarsands expansion and pipelines like Gateway? The reasons are obvious, as writers have known through the ages. People who stand to get rich from tarsands development will delude themselves and try to delude others that the climate science is...
faulty or uncertain. As Upton Sinclair wrote, “it is hard to get a man to understand something when his income depends on his not understanding it.” And those who stand to gain from the tarsands indirectly (like politicians) will distract people from the obvious connection between tarsands expansion and climate catastrophe. “Tarsands are a small part of the problem.” “What about the Chinese?” “The tarsands will inevitably be developed.” “Low-emission vehicles and fuels are not ready yet.” And so on – all of it bogus. As H. L. Mencken wrote, “the truth that survives is simply the lie that is pleasantest to believe.”

The oft-heard argument that B.C. needs the jobs and tax revenue is particularly galling. This is like arguing we need jobs making a toxin or nuclear weapons. We are not helping ourselves and our children by creating jobs that spew CO2 into the atmosphere. We are already creating jobs that propel our vehicles without CO2 emissions, and we can do so much more.

And where is the logic in the almost-complete focus on pipeline or oil tanker spills by environmentalists and first nations? If Enbridge is able to convince the hearing panel that these local threats are acceptable, then the project goes ahead. But since climate change will devastate all of the ecosystems potentially affected by the project, efforts to prevent local damage from spills are fruitless if they are not part of a concerted effort to stop CO2 emissions. Otherwise, it’s like trying to prevent a fuel leak on the Titanic as it steams toward the iceberg. We need to turn the ship.

The facts are simple. Our political leaders are lying to us if they aid and abet the expansion of tarsands while promising to take action to prevent the imminent climate catastrophe. If you love this planet and your children, and are humble and objective in considering the findings of science, you have no choice but to battle hard to stop Gateway and other tarsands pipelines. It is time to face up to this challenge with honesty and courage.

And to the Liberal’s credit, these targets are backed by bold and decisive policies. These include a ban on dirty coal-fired plants, a tax on greenhouse gas pollution, and regulations to improve building and vehicle efficiency. But good intentions don’t matter if Clark leads B.C.’s northern communities in the direction of Alberta’s oilsands. A binge of resource extraction will only worsen environmental burdens on the next generations.

The sole purpose of liquefying B.C.’s natural gas is to feed the growing energy hunger of Japan, China, Taiwan and Korea. With continued depletion of B.C.’s most easily accessed natural gas reserves, Clark wants to meet Asia’s demand with B.C.’s shale gas. Extracting shale gas is a much dirtier process that emits more greenhouse gases and harms local ecosystems and water supplies. Like Alberta’s oilsands, shale gas development may produce some short-term economic gains while causing bigger problems for B.C.’s children and grandchildren.

The extraction and export of climate-warming fossil fuels is completely inconsistent with B.C.’s environmental commitments. Somehow, Clark reasons there is no problem in shipping B.C.’s shale gas halfway around the world to be combusted elsewhere. Unfortunately, the atmosphere doesn’t care where greenhouse gases are emitted — global warming accepts contributions from any country.
Further, the electricity demands of three enormous LNG plants will suck up most of BC Hydro’s plans for added supply over the next decade. This includes Site C, expansions to the Revelstoke and Mica dams, and approved developments for wind, run-of-river hydro and other renewable energy projects. But these expansions are already earmarked to meet the growing electricity demand of B.C.’s families and businesses.

How should B.C. power these LNG plants? Large hydro projects are increasingly complicated — just look to Site C’s controversy. Bulk imports from Alberta or the U.S. violate B.C.’s goals for electricity self-sufficiency. And natural gas or coal generation would further increase B.C.’s climate-warming emissions. Developing additional electricity supply will also inevitably drive up BC Hydro’s electricity rates. Chalk up yet another financial hit to B.C.’s families.

Clark cannot responsibly move forward with this plan. B.C. needs to take responsibility for LNG emissions released after export to foreign countries. These added emissions would certainly sabotage efforts to meet 2020 emissions targets. Further, the costs of responsibly eliminating emissions from extracting and liquefying shale gas will make export unprofitable.

Clark promised that her LNG plans will benefit B.C. families without “changing environmental protections.” But the numbers don’t add up. Clark has two options. The responsible choice is to cancel the development of LNG plants — in the name of B.C. families and their next generations. Or she can confess to breaking B.C.’s commitments to the next generations in the interest of job creation for short-term benefit and political popularity. Families throughout B.C. and Canada want good jobs and strong economies. But surely B.C. can develop plans for prosperity that don’t pass the buck to B.C.’s next generations. If Canada is supposed to “start here,” make sure it’s a start that our grandchildren can live with.

In October, Jonn Axsen took part in the Dissertations Initiative for the Advancement of Climate Change Research VI (DISCCRS) in Colorado. The, or DISCCRS (pronounced “discourse”), seeks to help early career Ph.D.-level researchers by catalyzing the formation of collegial interdisciplinary peer networks. The program includes intensive weeklong symposia; a website with climate change and professional development resources, and a searchable Ph.D. Dissertation Registry to which all climate change scientists are encouraged to contribute; and a weekly electronic newsletter that contains time-sensitive information on climate news, resources, and interdisciplinary job announcements.

The Symposia is designed to provide training in interdisciplinary research skills, to foster new interdisciplinary directions, to enable the exchange of ideas, and to foster interdisciplinary collegial networks so that, in the years ahead, scholars will interact, exchange ideas, recommend colleagues and students for collaborations, and engage with each other in ways that will generate interdisciplinary research and contributions to societal efforts to address climate change. DISCCRS Symposia provide a unique opportunity for recent Ph.D.s because Symposium Scholars are competitively selected to constitute a small group of highly-qualified participants representing a diversity of disciplines, backgrounds, and perspectives. The Symposia foster intellectual exchange that promotes a peer network of early career interdisciplinary climate change scholars interested in working across traditional disciplinary boundaries in a socially-relevant context and in communicating effectively within and beyond the ivory tower. A small number of well-respected, interdisciplinary climate change experts are invited as mentors to provide perspectives on scientific, professional, and societal issues. Sessions during the Symposia also include communication training, interpersonal and team-development skills, keynote presentations, experiential learning, small-group exercises, and informal interactions.

The Energy Modeling Forum is a modelling comparison project where different groups from around the U.S. and Canada come together to perform a common modelling exercise around a particular issue. EMRG will be participating in EMF-26, EMF’s latest iteration, which deals with the implications of abundant natural gas (shale gas, tight gas etc) on the US energy landscape. In October 2011, Mark Jaccard and Ph.D. student Stephen Healey arrived in Washington DC to meet the other participating groups and to help scope the project with respect to scenarios explored and modelling assumptions used. The trip was highly informative, and Stephen has since begun work on modelling various U.S.-natural gas futures in CIMS. Our heroes are looking forward to the next trip sometime in April!
On November 25th, John, Karen, & Kristin attended the first Carbon Management Canada technology and innovation workshop in Vancouver at the Centre for Digital Media. The general objective of the workshop was to gain a better understanding of how we can foster collaborative, breakthrough innovation towards reducing carbon emissions in the fossil energy and large stationary emitters sectors. Interactive exercises and discussions were used to develop ideas on how technology or other means could be put to use in order to facilitate our roles as researchers. This was also a great opportunity to network, and to meet with members of the CMC-NCE leadership team and industry partners.

**Student Updates**

**Stephen Healey passes COMPS**

On November 29th, Stephen Healey completed and passed his Comprehensive Ph.D. Exam. Afterward, fellow EMRG students threw him a little party in the lab, which turned into drinks on Commercial Drive. Congratulations Steve!

**EMRG Ph.D. candidate Katya Petropavlova awarded research grant**

In January 2012, Katya Petropavlova was awarded the Sustainable Prosperity’s research grant that will support her Doctoral study entitled “Designing Acceptable and Effective Climate Change Policies in Canada.” The Sustainable Prosperity Research and Policy Network (SP Network) provides annual awards for interdisciplinary research projects on market-based approaches to environmental protection and economic sustainability. Katya's project will take an innovative integrative behavioural approach to identify the key attributes that make different Canadian climate change policies publicly and politically acceptable, as well as environmentally and economically effective. Based on the examination of past climate policy successes and failures in Canada as a whole, and the application of both ‘internal’ attitudinal and ‘external’ contextual aspects of climate policy support and risk perceptions, Katya will design the first Canadian integrative behavioural framework of policy support and test it using surveys of the general public and stakeholder groups. Ultimately, her study will benefit both policy-makers and Canadian citizens alike by providing practical recommendations for designing acceptable and effective climate change policies. For more information, please visit Katya’s research profile on the SFU Graduate Studies Student Updates

**Contact Us**

**EMRG News**

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