

“Stop Climate Crimes: leave the oil under the soil”

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A review of Cy Gonick (ed.), *Energy Security and Climate Change: A Canadian Primer*, Halifax and Winnipeg: Fernwood Publishing and Winnipeg: Canadian Dimension, 2007 (pp. 167).

On 16 September 2009 some 25 Greenpeace activists from Canada, the USA and France shut down Shell’s 125,000 barrel per day Albion oil mining project an hour north of Fort McMurray in the Athabasca tar sands. While Greenpeace displayed a banner accusing Shell of climate crimes the petroleum transnational claimed that it was in the forefront of environmental stewardship and energy efficiency. For support Shell cited a 2007 study by Alberta’s Pembina Institute. The deep background to this confrontation at the world’s largest industrial project is richly excavated in Cy Gonick’s collection, *Energy Security and Climate Change: A Canadian Primer*. Not only are NAFTA-dictated oil and gas exports depleting Canadians’ scarce reserves but the tar sands also account for half of the country’s Kyoto emissions gap and make serious emissions cuts impossible. The tar sands negatively impact water, forests, wildlife, the ways of life of indigenous peoples and the viability of small farmers. And through pipelines, natural gas extraction, refining, combustion emissions and land-fill, the tar sands affect everyone else.

Petr Cizek’s chapter exposes the co-optation of NGOs such as the Pembina Institute that are addicted to corporate money. Pembina’s economist Anielski falsely represented Canada’s boreal forests as significant carbon sinks whereas in fact they were net carbon emitters, “largely due to increases in forest fires and pest outbreaks, all related to global warming” (51). Cizek suggests that Anielski’s “deceptive conclusion that the boreal forest is now absorbing carbon and not actually producing it” fits nicely with his claim that the carbon absorbed each year was worth \$1.85 billion, “which could presumably be used to “offset” carbon emissions from the tar sands”. Cizek adds that the Pembina Institute “just happens to make money selling “carbon offsets” (50-51). An employee of the Canadian Parks and Wilderness Society, an environmental NGO, reported that the Canadian Boreal Initiative (funded by the Suncor-Sunoco Pew Charitable Trusts’ series of shell operations including Ducks Unlimited in Nashville and its Winnipeg branch-plant) is “reviewing and vetting their draft press releases” (54).

A pattern of corporate co-optation helps to explaining why most ecology organizations are more conservative than are Canadian citizens. While Canada’s energy workers’ union supports ‘public interest ownership’, a Leger poll in 2005 showed “that 51 percent of Canadians with an opinion supported nationalizing the oil corporations, including 60 percent of the young” (Laxer 95). Gonick’s contributors explain this massive NGO-citizen divide as arising from the capture of the Alberta and federal governments by largely US corporate power. As Warnock points out, Canadian energy policy “is the result of the overall political commitment of Canada to the

support of the Anglo-American political alliance to dominate the world” (75).

The “Canadian primer” succeeds brilliantly in presenting historical and factual narratives of two ramifying realities of our time: climate chaos and the transition from carbon (oil, gas, coal) to solar energies. The authors challenge the obscenity of mainstream ‘help the polluters profit’ discourse. Their eighteen chapters are short, provocative and ideal as tools in popular and student education. The primer addresses the reality of climate change and peak oil, the imminence of drowned cities, climate refugees, starvation, more intense resource wars and the trickery of green capitalists and their funded NGOs such as the Natural Resource Defense Council and Ducks Unlimited. Beyond these crucial themes the reader is given a list of twelve time-buying steps to combat climate change and an endorsement of eco-socialism.

The first part emphasizes oil and the second, climate change. Part 1 on peak oil, energy and water security features Julian Darley’s call to halt ecological ‘overshoot’ by relocalizing, living within the environment’s carrying capacity and reducing energy vulnerability. How? Darley recommends participation in a global rationing system. He recommends the Oil Depletion Protocol that calls for consumption cuts of 3% per year. Natural gas reserves will last less than a decade yet without it “people will die of cold in their homes in winter” since 80% of Canadian homes rely on gas for heat and “the tar sands themselves would more or less cease operating tomorrow morning if the gas spigot got turned off.... (Darley 27, 25).”

Today only about one barrel of oil is discovered for every five extracted. According to power-down advocate Heinberg, “those who “get” peak oil typically experience a profound paradigm shift - a reorientation of their thinking about the world” (31). He cites four benefits that would follow if governments cooperatively cut their reliance on oil production and consumption: it would conserve the resource while reducing price volatility, geopolitical competition for remaining supplies and carbon emissions (34-35).

Jack Santa-Barbara points out that oil has a high energy content compared to alternative energies. The energy content of one barrel of oil “is equivalent to manual labour from one person working for 12.5 years” (37). As oilfields mature the amount of oil that can be extracted declines. But what is insufficiently grasped is that in addition “the net energy also declines: it simply requires more energy to extract the remaining amount” (38). The net energy from conventional oil has gone from 100:1 at the beginning of the 20th century to 20:1 today (38). The tar sands are not a solution because even their promoters estimate that they will contribute less than 3 million barrels a day by 2020 or only a small part of current world consumption of some 80 million barrels a day. Moreover, the net energy of tar sands oil is much less than 5:1. The main energy alternatives all have net energy ratios below that of conventional petroleum: wind is about 18:1, hydropower is 12:1; passive solar is approximately 5:1; active solar is between 15:1 and 10:1 and geothermal is 8:1. Net energy from ethanol may not even be positive (40-41). Nuclear is between 10:1 and 3:1. But nuclear presents damning problems of exorbitant costs, radioactive waste, terrorists targets, reliance on non-renewable uranium and huge consumption of fossil fuels to build the reactors and mine the uranium with correspondingly high climate change emissions

(40).

Santa-Barbara makes two more crucial points. First, given global capitalism's reliance on fossil fuels for 80% of its energy, replacing the infrastructure that makes use of these fuels will require staggering amounts of fossil fuel energy at the very moment when both "the amount and net energy of fossil fuels will be declining." Second, because "there is yet no standardized method of calculating net energy ratios" these can be influenced not only by different technologies but also by "special interests" so that "those doing the calculations obtain the results they desire" (40). Peak oil is accompanied by climate chaos which will only become more severe because, as Santa-Barbara indicates, producing country governments do not want to leave the oil in the ground (the exceptions of Ecuador and possibly Bolivia are not noted), China is leading the coal resurgence; the 'cleaning' of coal reduces its energy ratio from between a high of 80:1 to less than 10:1; and while carbon dioxide can potentially (and at great expense) be captured and pumped into the ground, "what we do not know is whether it will stay there" (42).

What we need, writes Santa-Barbara, is "a new index of efficiency, one that minimizes the energy inputs per unit of human well-being" while ensuring "equitable access to energy to meet basic needs" (42). Policy makers at the very highest levels are making the fundamental mistake of "assuming that the energy loss accompanying peak oil has to be replaced" (43). A knee-jerk commitment to unending growth is accompanied by the pursuit through the World Trade Organization of further privatization of energy services. This weakens government policy capacities, strengthens private control over profit-making opportunities and rides roughshod over environmental and social sustainability. The current reliance on "market forces" (43) is part of a framework that "is fatally flawed and likely to destroy more ecosystems, create greater inequities and likely also generate more violent conflict. It will also make some people very rich, which is the reason why this is the policy trajectory we are now following" (44). Santa-Barbara recommends new quality-of-life indicators which reveal that an optimal level of well-being is achieved with about 110 giga joules (GJ) per capita per year. North Americans annually consume about 325 GJ and the average Afghani about 20GJ. The "key issue" for human civilization is whether we can make a paradigm shift from economic growth to meeting human needs. And time is running out. Can we make this paradigm shift to living within the biophysical limits of the ecosystem before climate change, peak oil and massive extinctions bring us to the environmental tipping points that signal ecocide?

Petr Cizek's chapter, "Scouring scum and tar from the bottom of the pit" is a model of fact-dense investigative journalism. It documents the US oil companies and government fixation on controlling Canada's oil sands, in part through setting up fronts to divert, distract, drag anchor and diffuse efforts by social justice activists to shape a life-affirming energy policy. Cizek provides essential background to the September 2009 protests in the US, Canada and the UK to keep the coal, uranium and oil under the soil. He recommends the 2006 report, *Fueling Fortress America*, by the Parkland Institute, Canadian Centre for Policy Alternatives and the Polaris Institute; as "the only bright light" in the NGO firmament because it "clearly advocates a moratorium on further tar-sands development, a national energy policy and an exemption (like

Mexico has) from the “proportional sharing” clause of the NAFTA free trade agreement, which allows Canada to reduce oil and gas exports to the United States only through imposing proportional reductions in our own consumption” (55).

Marita Moll details the dangers of “the unbridled expansion of nuclear power plants to feed our ever-increasing demand for electricity,” noting that “the relationships between environmental and resource industry politicians and the nuclear industry are very close indeed” (63). Nuclear power provides no way out of the climate crisis: “radioactive waste, safety and security risks, as well as the unacceptably high amount of GHGs [green house gases] produced all amount to too high a price to pay for what we like to call progress” (67).

Oil and gas are ‘crown’ or publically-owned resources that are finite and non-renewable. Citizens in effect own hydrocarbons and are supposed to benefit from their extraction. Warnock’s concept-rich analysis provides tools for identifying who gains and who loses from oil exploitation. Canadian governments are getting as little as a sixth as much per barrel of conventional oil as the government of Norway while oil companies are making super profits (Laxer 95). In contrast the government of Libya negotiated deals with oil corporations in October 2005 that give the state-owned Libyan National Oil Company (LNOC) between 70 and 94 per cent of the oil extracted (74). LNOC can then sell the oil on the world market and keep one hundred per cent of the sales price. Through its state-owned company, Statoil, Norway has captured around 78 percent of the economic rent (monopoly profit or excess profit) arising from the large price increases to \$150/b in 2008 compared to \$10/b in 1999 (75).

Marjorie Griffen Cohen examines the integration of Canadian and US electricity under pressure of the 2005 US Energy Act which forces privatization of the electricity transmission system in Canada despite “its characteristic as a natural monopoly” 84. This privatization-integration “creates huge problems” (83). To what extent will the profit-making objectives of trade over-ride the social objectives of equity, low costs, regional development, aboriginal rights, reliability and conservation? “As trading areas extend thousands of miles across the continent, efficiencies are lost, reliability of the system is compromised and meeting local needs can be superseded by the lure of large incomes from exports” (83). Cohen concludes with eight recommendations for an energy policy that will maintain public provision of electricity in Canada. (85-87).

Gordon Laxer, director of the Parkland Institute, provides crucial history about Canadian energy policy. The political left and citizens’ movements in the 1970s pushed the Trudeau government to adopt Canada-first energy policies.

“These culminated in the National Energy program (NEP) in 1980. The Canadianization goals of the NEP were widely popular, hitting an 84 percent approval rating. The goal was to end foreign transnationals’ domination over Canadian oil and natural gas by rapidly expanding PetroCanada, the government’s oil company, and through promoting private Canadian ownership. The Canada-first policies of the 1970s and NEP reduced oil exports to the US and sent western Canadian supplies east to partly displace oil imports.

Canada continued to export oil though and charged US buyers the world price, which was higher than Canada's domestic price. The differential between the Canadian and the world price was captured by the federal government. It used the funds to lower oil prices for those eastern Canadians still consuming foreign oil. In this way, although Canada did not supply domestic oil to all Canadians, they all paid the same, low price, whenever they lived. As one can imagine, this was a very popular policy in eastern and central Canada. Keeping Quebec in Canada was a major goal of the government's bold energy-independence agenda. ... While popular in eastern Canada, the NEP was greatly resented by big oil and the US government" (93).

In the context of falling global oil prices in the 1980s, US corporations and their allies whipped up populist sentiment in Alberta. The provincial government "substantially cut oil supplies to eastern Canada and economic civil war ensued" (94): A famous bumper sticker said "Let the Eastern bastards freeze in the dark." It was an easy next step for the US oil companies to lever a "proportionality clause" into NAFTA. This diabolical stranglehold compels Canada to maintain exports to the US at the same level as the average of the previous three years of (not production) but of *total Canadian supply* (oil production, imports and inventory drawdown). In contrast, Mexico negotiated an exemption from any such obligation when it joined NAFTA.

Laxer provides a ten-point program to deal with climate change and energy insecurity. At the heart of this new paradigm is democratic control over energy (94-95). In addition to building a national electricity grid for power sharing across Canada, Laxer's program includes

"imposing an immediate moratorium on new tar sands projects; getting a Mexican exemption on compulsory energy exports to the US, or giving six months notice and exiting NAFTA; reinstating the twenty-five years of "proven" supply of oil and gas for Canadians before export licences can be issued; insisting that 100 percent of the economic rents [excess profits] on existing oil and gas should go to the resource owners - citizens of energy-producing provinces and First Nations; and, following Canadian public opinion, nationalizing or provincializing part or all of the oil and gas industry" (Gonick 17).

We have to dramatically cut fossil fuel consumption if life on earth is to continue. Are there historical precedents whereby societies switched from high to low oil dependence? Paul Phillips argues that Cuba has shown the world how to get off unsustainable oil and gas addicted agriculture. On a global scale, industrial agriculture that is dominated by four transnationals, now consumes about a sixth of all energy used. For some 30 years Russian oil had underpinned Cuba's production of sugar and citrus fruit for the Soviet market. But in 1991 the Soviet Union collapsed and with it the export of oil. Cuba's GDP fell by 85 percent and the average weight of Cubans fell by 20 pounds (and their health indicators improved dramatically). Because central planning and local organizations were in place, Cubans were able to kick the oil addiction and switch from plantation exports to small scale, local, organic agriculture reliant on much less energy more of which is renewable (102).

Part II of Gonick's collection focuses on climate change. Heinberg argues that 'conservationists' concerned about global warming and 'depletionists' concerned about peak oil must work together to promote energy efficiency and the curtailment of consumption (116). In confronting climate change, Metta Spencer appeals to "ethical idealism" and urges us to "become moral entrepreneurs" (126). Canadians must shut down the tar sands if they are to stay within emissions limits (123). In his introduction, Cy Gonick underlines the link between war and oil. Spencer adds that the military is significantly responsible for climate chaos: "An F-16 fighter jet uses twice as much fuel in one hour as the average motorist consumes in a year. Emissions from military operations account for 6 to 10 percent of global air pollution. In 1988, Pentagon activities produced 46 million tons of carbon - 3.5 percent of the US total. When the need for cutbacks become[s] urgent, citizens whose values are peace-oriented may force their governments to reduce military activities for the sake of a habitable climate" (122).

The allies won WWII because of the US oil supply lifeline. But US domestic oil production peaked in 1970 and today would not be enough to fuel combat on the scale of WWII. The irony is that today US armed forces are engaged in war to secure sufficient oil to enable it to engage in war. The result is that the US war machine is reduced to the ultimately futile project of trying to use Middle Eastern oil against Middle Eastern peoples. With the US military the world's largest single buyer of oil, the strategic importance of tar sands oil is hard to overestimate. The other side of that coin is the potential power of those seeking a moratorium. The merging issues of climate change and global military dictatorship bring together constituencies allied to establish democratic control over both natural resources and coercive force.

Kevin Smith's "Obscenity of carbon trading" pillories the junk economics underpinning the falsehood that 'the market' can curb climate change. Well before the September 2008 financial crisis revealed the pyramid schemes of casino capitalism, Smith exposed the fraud at the root of attempts to commodify air: "Market-based mechanisms such as carbon trading are an elaborate shell game of global creative accountancy" (133). The privatization of the Earth's carbon-cycling capacity through the allocation of tradable rights to pollute combined with generating surplus carbon credits through neo-imperial so-called 'clean development mechanisms' merely enclose third world commons for profit and do not stop emissions (128). It "borders on insanity" that "we are continually being asked to believe that the flexibility and efficiency of the market will ensure that carbon is reduced as quickly and as effectively as possible, all the time that experience shows that lack of firm regulation creates, rather than solves, environmental problems" (129). Smith insists that

"effective action on climate change involves demanding, adopting and supporting policies that reduce emissions at source as opposed to offsetting or trading. Carbon trading isn't an effective response; emissions have to be reduced across the board without elaborate get-out clauses for the biggest polluters. There is an urgent need for stricter regulation, oversight, and penalties for polluters on community, local, national and international levels, as well as support for communities adversely impacted by climate change" (133).

In a terse *tour de force* David Noble excavates “The corporate climate coup.” He shows that from the late 1990s the so-called green capitalists tried to eclipse a global social justice movement with fear tactics and the reassertion of “market-based mechanisms” (138). In 2000 at the World Economic Forum in Davos, Switzerland, a clique of corporate CEOs declared that “climate change is the greatest threat facing the world” after which “many of the same players including Dupont, BP, Shell, Suncor, Alcan and Ontario Power Generation, as well as the French aluminum manufacturer Pechiney, joined forces with the US advocacy group Environmental Defense to form the Partnership for Climate Action” or PCA (138). The potential for “profit making from climate change gained the avid attention of investment bankers, some of whom were central participants in the PCA through their connections with the boards of the Pew Center and Environmental Defense. *Goldman Sachs became the leader of the pack*” (Nobel, 139. My emphasis). This is significant given the centrality of Goldman Sachs in the (orchestrated?) financial collapse of September 2008, and in the subsequent gargantuan transfer of wealth from citizens to Goldman Sachs, other banks and the auto industry owners. Goldman Sachs executives are now the key operatives in the Obama administration.

“If the corporate climate-change campaign has fueled a fevered popular preoccupation with global warming”, concludes Nobel, it has also accomplished much more:

“Having arisen in the midst of the worldwide global justice movement, it has restored confidence in those very faiths and forces that that movement had worked so hard to expose and challenge. These include globe-straddling profit-maximizing corporations and their myriad agencies and agendas; the unquestioned authority of science and the corollary belief in deliverance through technology; and the beneficence of the self-regulating market with its panacea of prosperity through free trade, and its magical powers which transform into commodities all that it touches, even life. All the glaring truths revealed by that movement about the injustices, injuries and inequality sowed and sustained by these powers and beliefs have now been buried, brushed aside in the apocalyptic rush to fight global warming” (142).

Since Nobel wrote these words in 2007, any “restored confidence” in the magic of the capitalist market has been eliminated by the implosion first of the financial superstructure and then of the ‘real’ global economy after September 2008. As the market mantra was exposed as false, the attention of global social justice movements has returned to the affirmation of life against profit, notably through the rise of direct action to reduce emissions at source.

Tony Clarke raises the alarm about bulk water exports to the US and points to Prime Minister Harper’s call for “economic and security” integration with the US, entailing a continental energy strategy that would include “a range of other natural resources” (144). Clarke subsequently released the best yet tar sands analysis entitled *Tar Sands Showdown: Canada and the new politics of oil in an age of climate change* (Toronto: Lorimer, 2008).

Dale Marshall reviews the federal vacillation and deception with respect to climate change

policy. He highlights the fact that “total greenhouse gas emissions” will “still be 11 percent above [the 1997] Kyoto Protocol targets in 2020” despite the fact that Canada needs to be 25 percent below 1990 levels by then (157). Harper uses tricks to “fudge the accountability of this climate math by playing games with the numbers ... [first] by changing the baseline year;” and second, by using “intensity-based GHG emission targets” which means that emissions per unit of GDP or barrel of oil could go down while overall GHG emissions would continue to rise (154). Federal rules “seem to be carefully crafted to have little effect on oil production from the tar sands, which are expected to triple by 2015” (157).

Cy Gonick and Brendan Haley conclude the book with a twelve-step program to buy time to slow down global warming. We need, inter alia; redesigned cities, public transit, energy rationing, fuel efficiency standards, tar sands and coal mines moratoria, an end to oil and gas subsidies, and absolute emissions caps with public takeover of violators. Beyond this program “must lie an eco-socialist future that will fundamentally change the way we organize ourselves, the way we produce and what we produce and the way society’s limited resources are used to meet the needs of all its members in an equitable and democratic way” (165).

Gonick’s primer, assembled prior to the 2008 financial collapse, is one of the few books that the on-going meltdowns have made more, not less, relevant. This is because it challenges the myth of the free market. The “market” will not deliver energy security or a cool earth. With the demise of neoliberal triumphalism it is more universally self-evident that we cannot cede to ‘market magic’ our responsibility to act against polluters. Gonick’s collection provides essential information and perspective to citizens seeking to influence the December 2009 negotiations for Kyoto II. It is a weapon in the hands of those wanting a safe, planned solar transition to a carbon-balanced future. It legitimizes efforts to keep oil under the soil. Gonick is an experienced teacher, editor, publicist and communicator. He has given campaigners and politicians an arsenal of short, hard-hitting but theorized analyses. He has given teachers and activists a tool that is valuable for high school, undergraduate and graduate students, as well as for union and popular discussion groups. The careful bibliographies are replete with website links and references to key historical documents.

While *Energy Security and Climate Change* is the best primer on offer, two caveats must be mentioned. First, there are at least two references, both brief, to population overshoot without mention of maldistribution and in-built creation of false scarcity despite huge overcapacity. In fact, all references to “over population” need to be carefully contextualized to separate them from discourse by genocidists who welcome die-off by any means. Any discussion of population needs to make it clear that skewed distribution of the necessities of life spurs population growth while on the other hand, sufficiency promotes effective population planning so that in as short a time as one generation or 15 years, birth rates can drop to less than two children per couple.

The second caveat pertains to ‘provincialization.’ As an Albertan from the tar sands and gas fields of the northern Peace River country, I am all too familiar with the cheap populism that rails against Ottawa and Toronto’s Bay Street lawyers while ignoring the US oil company elephant in the living room. The rights of citizens of provinces need to be harmonized with the rights of

citizens of the country and the world. Demagoguery aimed at insecure small business people has long driven Albertans into the arms of Texas millionaires while breaking national solidarity. How can Canadians overcome this neo-colonial, divide-and-rule tactic? The snow job works only to the benefit of big oil and its political fixers. Fortunately, the rise of a new paradigm of ‘globalization from below’ is exposing the class-based, self-serving corporate propaganda as simple-minded but dangerous provincial chauvinism subordinated to corporate rule and its life-threatening consequences.

These caveats notwithstanding, Gonick’s collection is valuable for helping us understand global society beset as it is with climate and financial meltdowns. It critically informs the new world situation with the concepts, the framing and the alternative paradigm that Cy Gonick calls “eco-socialism.” But how do we get from here to there? Who are the agents of change to cool the earth? Who are their allies? What actions have peoples taken to address emissions and alternatives to fossil fuels? What can we learn from these actions, from their alliances, organizations, gender and ethnic relations, advances and retreats? How have these initiatives intersected with campaigns on related issues such as food, transport, housing, peace, water, welfare and equity. What works to strengthen cross-border solidarity and coordination? What is weaving together the local and the global?

In Gonick’s collection the problems of climate chaos and peak oil are elaborated, but what are the solutions? Many authors provide welcome policy check-lists. Gonick prioritizes the need for alliances between labour and environmentalists. He points to indigenous peoples’ rights. But who will make the changes needed? Which Canadians are shaping a carbon-balanced world? The forces of indigenous struggle and feminist action, daily more visible, may provide the answers. The hidden heroes are certain activists from within the indigenous peoples. They, along with select allies (including from among ‘settler’ populations in Canada), affirm ways of life in harmony with a ‘commoning’ and ‘sufficiency’ or ‘subsistence’ approach. Such commoning includes oil-free food self-reliance through localized organic farming, plowing with horses, food preservation and farmers’ markets. Indigenous activists are linked to their counterparts outside Canada through such initiatives as the Indigenous Environmental Network. Through these channels globalization from below is expressed.

The primer does very well what it sets out to do. It presents the problem of climate change in the context of limited hydrocarbons, including coal; and lists steps that citizens and governments should take to buy time. It goes further. It outlines life-centred values: equity, the overcoming of poverty, indigenous rights, the imperative to resist the privatization of the atmosphere, and the need to refuse carbon trade along with its entailed enclosure of third world commons. These values help us assess the corporate and government positions beneath the spin. They help us distinguish between organizations that are fighting ecocide through building alternatives rooted in and constituting global eco-socialism, on the one hand; and on the other, organizations that are part of the problem. The collection succeeds in contrasting the war-based political economy running on the ‘slave labour’ captured in a barrel of crude with the really existing carbon-balanced practices and their practitioners prominent amongst whom are rural and indigenous women.

This brings us to the question of power and counter-power. Who is actually making progress in cutting emissions at source? Significant here are a rash of actions to keep oil in the ground. These include the Costa Rican popular initiative to ban all oil exploration and production which was approved by the government in 2002. They embrace the Ecuadorian Yasuni action to invite any global citizens and organizations to pay money to keep the oil in the ground in Yasuni indigenous territories.

One of the most positive consequences of the economic meltdown of September 2008 is the global wave of nuclear energy cancellations, including projects valued at \$26 billion in Ontario. But will this 'No Nukes' drive include the two projected (and opposed) northern Alberta plants to boil dirty oil out of the tar sands? As natural gas reserves are exhausted, tar sands operators press for more exploitation and more pipelines in Alaska, northern Canada and through native land into the US. But resistance to gas pipelines is growing. Encana pipelines near the BC-Alberta border have sustained six explosions between October 2008 and September 2009. Encana is offering a reward of \$1 million for information leading to the arrest of the perpetrators who are being described as eco-terrorists despite the absence of human harm. In contrast, anti-oil activist Weibo Ludwig of Trickle Creek Farm near Hythe, Alberta; published an open letter to the pipeline bombers noting their commendable restraint in selecting remote sites. Ludwig, who got out of jail in 2001, two-thirds of the way through a 21 month sentence on conviction of 'mischief' reminded us in a September 2009 interview that in fact it had been demonstrated that Royal Canadian Mounted Police (RCMP) officers were the 'black op' agent provocateurs and perpetrators of pipeline sabotage plans. In his open letter Ludwig expressed regret that Encana's reward offer had divided the community and promoted general suspicion. It had weakened citizens' efforts to resist the oil and nuclear companies' onslaughts.

The different forms that resistance can take are illustrated by the six 2008-09 Encana pipeline explosions on the one hand, and the Greenpeace occupation of Shell's tar sands site on the other. On 16 September in the lead up to the December 2009 Kyoto II negotiations in Copenhagen; Canada's pro-industry, climate-change denying prime minister Harper met Barack Obama in Washington DC to lobby for more dirty oil exports to the USA. In an orchestrated array of protest against ecocidal emissions, activists in three countries sought to use the September heads-of-state meeting in Washington DC to direct media attention to the imperative of stopping tar sands oil and the burning of coal. In this context, coordinated direct action against climate change perpetrators has coupled the carefully-timed Shell tar sands protest with a simultaneous banner drop on the US side of the Peace Bridge at Niagara Falls (climate justice and tar sands with arrows pointing forward and backward); and a "Climate Lies Uncovered" naked protest by seven people in London, at the public relations firms working for Germany's E.ON, builder of the proposed Kingsnorth coal-fired electricity generating plant in Kent. At the same time participants in a 'Carbon Camp' in London organized a demonstration against the Royal Bank of Scotland (RBS) that is financing tar sands exploitation. Their logic was that democratic control of the bank necessarily followed from the 2008 UK-government bailout that entailed the state taking 70 percent ownership of RBS. While 150 protested outside, others disguised as construction workers entered the bank and super-glued themselves to the trading floor.

To this partial list of mobilizations must be added the protests in Nigeria to stop Shell, Chevron and other oil companies from flaring natural gas and the dramatic success of the Movement for the Emancipation of the Niger Delta in shutting down almost all on-shore oil and gas production. The July 2009 general strike of Peru's indigenous people (and their non-native allies) against oil and gas activities has been remarkably effective in extracting concessions and global support. Coal mines are also being targeted by a rapidly growing network spurred by one group called 'leave it in the ground'. UK activists insist that coal not be used to generate electricity and that coal mines be banned. In 2009 shut down camps were organized at mine sites for coal and oil from Wales to Pittsburgh to Ecuador. Of greatest importance to Canadians is the now very widespread demand to shut down the tar sands.

Beyond halting fossil fuel production at source are many other initiatives to curb emissions by exerting power at downstream stages of the petroleum or coal commodity chains. There is growing awareness that "we are all downstream" paying the price in cancers and attenuated quality of life from the myriad activities of big oil. Direct action to keep the oil in the ground has stimulated a concern to both re-negotiate NAFTA and, more fundamentally, to regain control of the commons. Such action is crucial in conserving fast-depleting hydrocarbons that we need for a planned, just transition to an emerging solar-powered global peoples' democracy.