

The Smell Of Money: Alberta's Tar Sands

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There is no environmental minister on earth who can stop the oil from coming out of the sand, because the money is too big.

—Stéphane Dion, Canadian Federal Minister of Environment

At Syncrude's Wood Bison Viewpoint 35 km north of Fort McMurray Alberta, visitors usually first stop to take photos of the carbon spewing smoke stacks puffing away at the refinery in the near distance before turning their lenses to the grazing bison on 'reclaimed' Syncrude land. Syncrude Canada Ltd. is the largest producer of synthetic crude oil in the world, and one of the oldest companies in Alberta's oil patch, producing 111 million barrels of oil in 2007 alone. On a cold afternoon in March, I watched visitors from Ontario, California, Edmonton, Newfoundland and India pocket their cameras and tread carefully across the deep snow to catch a glimpse of Syncrude's famous imported bison grazing on reclaimed land a stone's throw from the refineries.

The land is not exactly boreal forest, with commercial trees, long grasses, and maintained animals being fed on hay that a local bus driver laughingly told me was brought by truck up Highway 63. The bison, once endemic to the region, have been re-introduced to this patch of reclaimed land with much fanfare. "That's the deal they made with the natives," proclaims an enthusiastic Newfoundlander to his visiting family as they gaze out over the snow at 4 or 5 bison casting little black shadows on the white fields, "to put this land back the way it was."

"As long as the buffalo can live here, anything can live here," explained the Newfoundlander guide.

This is ground zero of tar sands development and about as soaked in contradiction as could be expected from what has been coined¹ the largest industrial project in human history—and perhaps the largest environmental catastrophe on the planet right now.

You don't have to look much further than Canada's tar sands to see the petroleum economy spiraling out of control. And with oil prices soaring, the boom is booming ever faster.

What Are the Oil Sands?

Alberta sits over one of the largest recoverable oil patches in the world, second only to Saudi Arabia. Covering 149, 000 square kilometers, an area larger than England, the oil patch holds at least 175 billion barrels of recoverable crude bitumen, one of the dirtiest forms of oil production in the world.

Unlike conventional ways to recover oil, the tar sands “bitumen” is locked in sand, clay and silt. The bitumen is a sticky, tar like substance that rests 50 meters or deeper beneath boreal forest, muskeg², wetlands and river systems. It has long been a capital intensive, technologically challenging, endeavor to get this oil out of the sand, and it is only in the last number of years that the process has been feasible. Industry has invested billions of dollars to develop a massive infrastructure to extract the bitumen out of the sand with methods that continue to be extremely capital, energy and environmentally intensive. Two extraction processes are the most common: open pit mining, which literally mines the earth for bitumen, and Steam Assisted Gravity Drainage, known as SAGD, which pumps extremely hot steam deep underground to force the gooey bitumen to the surface.

Both processes use large amounts of fresh water and natural gas to extract the bitumen, producing more than three-times the CO2 emissions produced by a conventional barrel of oil, and disrupt thousands of square kilometers of boreal forest, fen and muskeg, creating gigantic toxic dams to contain the post-production waste water. This equates to more carbon emissions than many countries, with the current tar sands emissions outranking 145 out of 207 nations, sitting between the emissions of New Zealand and Denmark. The environmental footprint is huge in relation to water as well: surface-mining operations use between 2 and 4.5 cubic metres of water to produce just one cubic metre of oil.

1 See research on the “gigaproject” by Oil Sands Truth at www.oilsandstruth.org

2 Muskeg is type of bog land, the mossy soil in boreal forest.

While new processes exist that can substantially reduce water usage, at the moment they are either untenably expensive, producing only small amounts of bitumen, or still in experimental phases. Where gains are made to reduce carbon or water usage in one company or another, the total cumulative impacts continue to rise in all areas as a mad rush of new companies and projects come on line.

The cycle is dramatic: on one end an increasingly large amount of water is extracted by an increasingly large industrial appetite, and on the other end cumulative carbon emissions quicken global warming and, in turn, water depletion.

The water used by industry ends up filling enormous toxic 'tailings ponds'; gigantic man-made dams, which store the waste-water collected from the extraction processes. The ponds are recycling vats meant to slowly revert water back to a state of non-toxicity. While some of this water is re-used, a large part of remains standing in the ponds. Current visions imagine that one day the toxins will settle to the bottom of the ponds leaving large artificial lakes speckling the landscape. Visible from space, Syncrude's Southwest Sand Storage (SWSS) Facility is currently one of the largest dams in the world.

Serious environmental worries about the tailings ponds already exist, including the threat of the migration of pollutants into the groundwater and the soil and surface water around the ponds. In Fort Chipewyan, 300 kilometers downstream from the major oil sands plants, rare cancers, leukemia, lupus and other auto-immune diseases are on a worrying rise. A recent study independent of government and industry commissioned by the community, Dr. Kevin Timoney found increased levels of arsenic, polycyclic aromatic hydrocarbons (PAHs), mercury and other carcinogenic chemicals associated with tar sands development at dangerously high levels in the soil and water. His report confirms what First Nations elders and community members have long been saying that have been seeing on the land and in the water, from fish with skin carcinomas and deformities to water levels decreasing.

With advancing technologies and increased expenditure in infrastructure to extract bitumen over the last decade, Canada has supplanted Middle Eastern sources to become the largest foreign supplier of oil to the US, with over a million barrels per day flowing south, 72% of which is used for transportation fuels (gas, diesel and jet fuel). The US has been vocal about seeing Canada as a 'friendly' and 'safe ally' in keeping North America afloat with the crude oil from Alberta for perhaps another 50 years.

Peak Oil, Climate Change and Water Scarcity: An Unholy Trinity in the Tar Sands

Whether or not we are actually at the summit of Hubbert's Peak—that peak oil moment—whether or not the oil-price bubble finally bursts, what we are probably witnessing is the largest transfer of wealth in modern history.
—Mike Davis

It is increasingly clear that we are living in a time of peak oil. The world consumes 83 million barrels of oil a day – a billion barrels every 12 days. But very few new oil deposits have been found. For every barrel of oil we now discover, we consume three. The connection between peak oil, climate change and the oil rush in Alberta is undeniable. The thing in itself as linked to capital is both an obvious and complex story to tell.

While many mainstream environmentalists have welcomed high oil prices in the hopes that it will force market-led solutions to tackle climate change and petrol-economics, it is increasingly clear that counter to the market rising up to develop solutions to climate change prompted by dwindling oil resources (such as rethinking hyper-consumptive lifestyles), it is advancing in just the opposite direction, attempting to squeeze oil out of the most untenable of regions with gross environmental and human consequences. At the moment we are witnessing what can only be described as the irrational, frantic push of market-forces in their most naked form, precisely at a time where reductions and radical transformation is required.

The tar sands are a case study in way in which the deregulated market-place so completely spirals out of control. Market-based logics depending solely on self-interest will inevitably come in violent opposition with the very ability of humanity to live. All rational logic has been set aside for the steel arm of the market to generate solutions. While government regulations exist as the Assistant Deputy Minister of the Oil Sands Division of Alberta Environment, Jay Nagendren, described, it is the market that directs the Environment Ministry, not the environment. Nagendren explained to me,

The premier has said that market forces will dictate the pace of development. So our job is, given that labor forces and finance will decide what kind of conditions need to be set in terms of the cumulative effects, to decide what kind of caps we will have to place on emissions, what kind of restrictions on water use, carbon capture storage, reclamation, tailings ponds, water use, etc.

The role of government to create a resistance to the excesses of capital is clearly not at play in the oil patch. The tar sands presents a gruesome yet succinct reflection of David Harvey's (2006) ideas of uneven geographical development, as it activates the conditionalities around "the material embedding of capital accumulation processes in the web of social-ecological life." What we are witnessing here is a capitalist push towards a total separation between the market's abstract and self-sustaining logic, and the social-ecological realities of our own lifeworlds. This disconnect is critically important, I think, at this particular moment in history when the balance between peak oil, climate change, and water shortages hang in a dangerous trinity, effecting the very bare life of most the planet's population (read here the expanded impacts on agriculture, food shortages, mass displacement and migration due to ecological disaster, labour migration to these frontiers of capital, droughts and flooding, effective access to food and safe drinking water, etc).

This material embedding of capital into our ecological life-worlds is crucially important, especially since many of the environmentalist challenges to climate change use 'green capitalist' logics as a frame for post-petrol arguments. When market-utopias take over completely, as we are seeing in the tar sands, its gross excesses become very difficult to curb. The absurdity of reclamation plans in the tar sands currently approved by government actually purport to reconstruct entire ecosystems with technologies that are still being developed (which of course there is faith that the market will succeed in developing in some ever-evolving future). They are market-utopias at their most extreme. Boreal forest is 'reclaimed' in terms of 'equivalent values', which in a recent case has meant that 40% of disturbed must be returned the 'commercial forest capabilities', effectively creating a natural environment of harvestable reconstructed commercial forest and artificial lakes. It's an absurdist creation only possible at this point in market-utopian logics.

The truth is that as the world runs out of oil, fresh water is also quickly drying up. Available fresh water represents less than half of 1 percent of the world's total water stock. By 2025 many analysts from both sides of the fence, from the World Bank to the Polaris institute, believe that we will be living in an era of serious water scarcity and water shortages across the globe. The logical incongruity between the pillage of water through the lust for money cannot be more apt. The realities of an impending water crisis impel us to seriously challenge market-led logics within industry and government before it is too late. Green capitalism is most certainly not going to lead us out of what is, ultimately, a market-driven, capital induced crisis.

The tar sands can only be seen as an advanced location of an untenable state of denial and psychoses around a market-based petrol-energy dependence. Some of the many deep cumulative human and environmental impacts deserve a brief recounting here:

1. Pipeline and refinery projects that cut straight through indigenous land throughout the continent, with serious social, ecological, sovereignty, and health implications for indigenous people, including the construction of the MacKenzie Gas Project which will bring natural gas from the Arctic straight through unceded Dehcho First Nation territory;
2. Health and human impacts of those living in the region of the developments, including the appearance of rare forms of cancers;
3. Depleting large amounts of cleaner energy, natural gas, to produce dirty crude, what some call 'turning gold into lead';
4. Intensive carbon production and adding to climate change;
5. Creating new systems of migration of wealth and bodies through trade, resources and labour agreements;
6. Depleting fresh water at a time of increasing fresh water scarcity;
7. Supplying oil for the military industrial project, as the Pentagon consumes about 85 percent of the U.S. government's of oil;
8. Impacts on fish and wildlife, including the destruction of thousands of hectares of boreal forest and muskeg that acts as an essential 'sponge' for water flows throughout the region.

Perhaps most disconcerting is that most of the tar sands oil ends up as dirty crude, and at the other end of its cycle puffs its way back into the atmosphere out the tailpipes of North Americans planes, cars and military vehicles. As Mike Davis writes, there is a madness to creating a more carbon intensive process at the very moment when we urgently need to reduce emissions:

Even while higher energy prices are pushing SUVs towards extinction and attracting more venture capital to renewable energy, they are also opening the Pandora's box of the crudest of crude oil production from Canadian tar sands and Venezuelan heavy oil. As one British scientist has warned, the very last thing we should wish for (under the false slogan of "energy independence") is new frontiers in hydrocarbon production that advance "humankind's ability to accelerate global warming" and slow the urgent transition to "non-carbon or closed-carbon energy cycles. (Mike Davis, 2008)

It is starkly clear that there is no just and sustainable way to continue living in a petroleum-based economy. The harsh truth remains that the only alternative is a radical rethink of the way in which we live, including a serious challenge to capitalism itself.

But those realities seem to be totally beyond the political will of the Canadian government. Alberta's Premier Ed Stelmach is currently attempting to counter the increasingly negative view of the tar sands, spending \$25-million in a 're-branding' campaign. Just as the campaign was being unveiled earlier this year, hundreds of migrating ducks died after landing on one of the toxic tailings ponds at the Syncrude mine site. Usually water canons shoot into the air around the 'ponds' to keep birds off, but Syncrude claimed there had been a delay in the installation of the canons after the long winter. Workers I met in Fort McMurray said ducks dying on the ponds is not a new phenomenon. A former tailings pond worker who wished to remain anonymous admitted that when she worked on the ponds years ago they were asked to wring the necks of birds who had landed on the ponds and dispose of them in plastic bags.

Continental Market-Based Integration of Energy: SPP and NAFTA

While the environmental and human impacts are impossible to ignore, the industry continues to expand the black gold rush at break neck speed. Corporate interests aimed at integrating North America's economies and resources have become major players in forcing this unprecedented push for development. Industry investment into development of the oil sands now totals \$23 billion with \$7 billion worth of projects under construction and \$30 billion of projects forecast to be completed by 2012. As Harvey writes, "the circulation of money and of capital have to be construed as an ecological variable every bit as important as the circulation of air and water" (Harvey, 88).

Proposals are afoot to build pipelines that will span the continent: Enbridge's pipeline will move 400,000 barrels a day to Illinois by 2011; Kinder Morgan Canada has plans to pipe 300,000 barrels of crude per day from Alberta to Texas and TransCanada Corp's (TSX:TRP) Keystone pipeline will move 600,000 barrels to refineries in Illinois and Oklahoma. At the same time, the corporate arm is moving further and further north to extract natural gas for these processes. Imperial Oil, Exxon and TransCanada's gigantic Mackenzie Valley pipeline is still underway, and BP and ConocoPhillips are said to be planning to spend

\$600 million in start up costs for an Alaska pipeline before the end of 2010.

While trade agreements and resource frameworks continue to be a major focus of how this exploitation of natural resources play out in North America, they also signal a disintegration of the State as such, rapidly creating enclaves and borders around a new kind of capital expansion. Dissolving borders for capital while deepening and entrenching mechanisms of security for bodies and labour that is quickly becoming a hallmark of the tar sands.

Market-driven resource agreements, now being combined with the ideas around State energy 'security', make national contestations increasingly difficult. The North American Free Trade Agreement's proportionality clause ensures that an average percentage of Canada's energy resources continue to flow south. This guarantees an increasing export of a finite resource. Mexico was exempted from this clause, but Canada agreed to it in order to gain favorable bargaining chips in other areas of trade. Under the clause, Canada must produce the same percentage of export as over the previous three years, worrisome considering that Canada has increased oil exports to the US by 350% since 1990.

To deepen the irony of a locked-in energy deal with the US, Canada remains one of the only industrialized countries that has not reserved any energy for itself. Gordon Laxer, professor and director of the Parklands Institute at the University of Alberta, argues that Canada lacks a national energy policy that will guarantee energy supplies to some regions of the country in the event of an international energy crisis. Atlantic Canada, Quebec and some parts of Ontario may have to rely on offshore oil imports from Algeria, Saudi Arabia and Iraq in the event of shortages. The clause compromises Canada's energy independence while at the same time using a market-based analysis to determine fossil fuel extraction.

In addition, NAFTA clauses on "national treatment" would confer the same rights over Canada's water resources. The legal, social and technological precedents being set by the oil sands removal and pipeline expansion beg to be repeated with water.

A new agreement called the Security and Prosperity Partnership (SPP), further expands NAFTA, ensuring energy security for the United States. Launched in 2005, the SPP extends and expands some the agreements that were troubling in NAFTA in an opaque, undemocratic forum closed to Parliament. Canadian New Democratic Party leader Jack Layton described the process as not simply unconstitutional, but "non-constitutional," held completely outside the usual mechanisms of oversight.

The SPP recommends a “continental energy and natural resources pact” that would create an integrated market place with “streamlined regulatory processes” and “deregulation in each country for cross-border oil pipelines, including a five-fold increase in Canadian tar sands production, and continuing the privatization of energy industries” (North American Energy sector workers meeting, August 2007). As Tony Clarke identifies, Canada is not an energy superpower, but in fact, it has become an energy colony, or energy satellite of the United States.

The North American Energy Sector workers meeting in August of 2007 stated that:

Through the SPP and the North American Energy Working Group, the governments of Mexico, United States and Canada have formed an unprecedented collaboration with energy corporations to promote the continental integration of our energy industries and infrastructures. ... While these working groups bring together government, regulators and corporations at the highest level, they have excluded labour, environmentalists and civil society movements and circumvented the oversight of our elected legislatures.

Rapid, scattered and questionable economic gains, a deepened entrenchment of fortress North America, the dissolution of national borders in order for capital and temporary foreign workers to move across, little to no energy security whatsoever for Canada, and a huge environmental and human catastrophe, leaves the balance between the costs and the gains of this project impossible to reconcile. William Marsden had it right when he titled his book on the tar sands: “Stupid to the Last Drop.”

While post-petrol energy sources may be inevitable, the “scraping the bottom of the barrel” approach and the almost fundamentalist zeal with which technological and market solutions are being vaunted in the oil patch make it hard to imagine any kind of smooth transition out of the oil crisis. The tar sands represent the crux of where a capitalist madness for oil driven by a market-economy has led us.

Keep the Oil in the Soil: Budding Resistances on the Pathways of Destruction

This is not only about protecting the environment, it is about protecting my people.

—Pat Marcel, elder Athabasca Chipewyan First Nation

There's a sickly smell that hangs around Fort McMurray like the plumes of yellow smog, a sadness that stick to your skin, what an Oil Sands Discovery Center tour guide called "the smell of money." During my first trips to the oil patch, I wondered how people did it; how they managed to dampen the way they felt when looking out at the ugly visual scar on the landscape. Talking to people, from riggers to single moms and Tim Horton's employees, it was clear that people just adapt. Like people do everywhere, you become accustomed to a certain level of discomfort, you can close your eyes to terrible things that you know are happening but feel powerless to stop. They are aware of the contradictions in the oil patch, but isn't it impossible, they wonder, to stop this massive machine fueling the planet's oil hunger?

There is a complicity to our collective blindness. The consumptive cycle does not function without our active engagement within it. Capitalism is not an abstract machine, but it is constructed out of the everyday actions of people everywhere. And their resistances. Simultaneously to the tar sands expansion, resistances are moving, forming, being born, and becoming contagious. While at one end of the spectrum there is a sadness, the bubbling of solidarities and the working out of a strategy is emerging all along the pathways of destruction.

What is most striking are the many average people standing up everyday and joining together through a sense of urgency and injustice in the wake of what once may have been the domain of electoral politics or democratic institutions. Joining together as indigenous communities, long standing activists, Environmental NGOs, disgruntled workers, foreign migrants, and many others, a diverse and eclectic movement is being born throughout North America.

All along the pathway of pipelines and refineries are communities that have already started to mobilize against this massive development, from the Dehcho whose rights are being trampled as their unceded territory is under corporate attack, to the Lubicon Cree who will see an enormous gas pipeline straight through their territory en route to Fort McMurray, communities are strategizing and building coalitions for the struggles to come.

Also at the frontlines of this emergent struggle are the residents of Fort Chipewyan, the oldest settlement in Alberta and the home to the Dene, Cree and Métis people. Carbon dating puts indigenous inhabitants here for almost 12,000 years. Almost overnight, the community of Fort Chip has been forced to the forefront of a fight to stop the rapid pace of oil sands development. Over the past year, the community has begun to piece together a government and industry cover-up around the true incidents of toxic contaminants that have

been flowing down the river towards them, complicit in the deaths of an increasing number of people in their community. Mobilized across historic divisions, the community has come out fighting at local, national and international levels. They have no choice. Their lives hang in the balance.

As Athabaskan Chipewyan First Nation chief Alan Adam told me:

What they're doing is wrong. Some of our members are thinking that way back home. We are radical. We were radical before I got elected... We are still radical. Now I have to use it in a different form. Industry and government don't like my approach. But I'm holding them accountable to what is happening to us. The government is going to have to answer our questions.

Chief Adam is one of the many new voices emerging in Fort Chipewyan. He walks slowly back from along the pier, clearly grappling with the road that is set ahead of him. "It's been easy for industry to get approvals for new developments from us in the past, but it won't be any more."

As folks in Fort Chip like to say: the tar sands are downstream from us all. The people of Fort Chip now know what they are up against, but they also know now that they are not alone. They have been the first to step up to the plate -- it is now for us all to follow.

Web Resources

- Alberta Energy Utilities Board. Available at <http://www.eub.gov.ab.ca>
- Athabasca Regional Infrastructure Working group (RIWG). Available at <http://www.oilsands.cc/>
- Blue Planet Project. Available at <http://www.blueplanetproject.net/>
- Canadian Association of Petroleum Producers. Available at <http://www.cpp.ca>
- Dehcho First Nations. Available at <http://www.dehchofirstnations.com/>
- Environmental Defense. Canada's Toxic Tar Sands: The Most Destructive Project on Earth, Available at <http://www.environmentaldefence.ca/reports/tarsands.htm>
- Friends of the Lubicon. Available at <http://www.lubicon.ca/>
- Government of Alberta, Oil Sands, Available at <http://www.energy.gov.ab.ca/89.asp>

- Greenpeace Edmonton, Stop the tar sands; end our addiction to oil. Available at <http://www.greenpeace.org/canada/en/recent/tarsandsfaq>
- Indigenous Environmental Network (IEN). Available at <http://www.ienearth.org/energy.html>
- Integrate This! Challenging the Security and Prosperity Partnership of North America. Available at <http://www.canadians.org/integratethis/energy/2007/Dec-13-2.html>
- Last Oil Shock. Available at <http://www.lastoilshock.com/>
- Mike Davis, Welcome to the Next Epoch. Available at http://www.tomdispatch.com/post/174949/mike_davis_welcome_to_the_next_epoch
- Mikisew Cree First Nation. Available at <http://mikisew.org/>
- North American Energy sector workers joint solidarity statement, August 2007. Available at http://www.commonfrontiers.ca/Single_Page_Docs/SinglePage_1col_docs/Aug18_07_joint_statement.html
- Oil Crisis. Available at <http://www.oilcrisis.com/tarsands/>
- Oil Depletion Analysis Centre. Available at <http://www.odac-info.org/>
- Oil Sands Discovery Center. Available at <http://www.oilsandsdiscovery.com/>
- Oil Sands Truth. Available at <http://oilsandstruth.org/>
- Pembina Institute, Available at <http://www.pembina.org/>
- Sierra Club of Canada. Available at <http://www.sierraclub.ca/>
- Suncor. Available at <http://www.suncor.com>
- Syncrude Canada. Available at <http://www.syncrude.ca>
- Tar Sands Watch. Available at <http://www.tarsandswatch.org/>
- Tar Sands Timeout. Available at <http://www.tarsandstimeout.ca/>
- To The Tar Sands. Available at <http://www.tothetarsands.ca/>
- World Water Council. Available at <http://www.worldwatercouncil.org/>