Tar Sands

How Trade Rules Surrender Sovereignty and Extend Corporate Rights

By Patrick Tsai

Institute for Agriculture and Trade Policy

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INTRODUCTION

Neoliberalism exacerbates climate change and codifies the subjugation of indigenous communities through trade agreement rules that allow corporations to control natural resources and challenge government regulations. Liberalized trade and economic regimes promote policies that incentivize unrestricted extraction and access to resources without adequate consideration for maintaining social and environmental integrity. These policies result in systemic mismanagement of natural resources. Currently, free trade negotiations on energy focus primarily on unconventional fuels, characterized by notably higher life-cycle greenhouse gas (GHG) emissions than conventional oil. Tar sands are a form of unconventional oil and are a model of how trade rules negatively influence climate policy and aid in the violation of vulnerable communities. In a broader sense we are all affected by climate change, from the frequency of weather extremes we experience to the food crops we grow and consume, to the price we pay at the grocery store. Free trade has failed, for people and the planet, and we need to acknowledge its shortcomings before we can seriously address climate change and move away from the precipice of climate-induced disaster.

Agriculture is intrinsically connected to climate patterns. Crops are vulnerable to weather extremes and volatility. Subsequently, commodity market prices are influenced by the volatility of crop harvests. The frequency of drought, floods and other extreme weather–related phenomena have increased due to climate change. Since its establishment, the Intergovernmental Panel on Climate Change (IPCC) has reported on human activity’s contribution to increased greenhouse gas (GHG) emissions and the resulting climate change impacts. These IPCC findings are reinforced in the National Climate Assessment from the U.S. Global Change Research Program.²

In light of these facts, the current path of industry and consumption seem counterintuitive. Conventional oil reserves have been dwindling and oil companies are investing in unconventional sources to replace the projected conventional deficits. Unconventional sources, by nature, require more energy expenditure for extraction and processing, and therefore emit more overall life cycle GHGs. Unconventional fuels magnify climate change effects in exchange for comparatively less net energy output than conventional oil. The tar sands in Alberta, Canada are a source of unconventional oil.

The extraction and processing of tar sands bitumen is characterized by the stripping of boreal forests, evisceration of peatland and bogs, extensive water use resulting in toxic tailings ponds, high volumes of natural gas use to heat water in a steam assisted extraction process and greater carbon emissions due to more laborious processing.³ These attributes alone constitute a catastrophe. However, expanding this catastrophe are a number of negative social impacts attributable to the tar sands and its management. Foremost, the Athabasca Chipewyan First Nation and the Mikisew Cree First Nation in Alberta have experienced violations of their treaty no. 8 rights, a treaty meant to maintain traditional practices and livelihoods, infringed upon by tar sands water use and tailings disposal.⁴ Furthermore, the Albertan Government has practically given the tar sands away, instituting a lax royalty structure to entice foreign investment, receiving little in return for resource extraction.⁵,⁶ Low government revenue and increased inflation has led to withering infrastructure, unable to handle the increased demands of intensive development, all while oil industry profits have soared.⁷ The Albertan province is set to capture 95 percent of the GDP value of the tar sands as well as 86 percent of the new employment opportunities.⁸ This has driven unsustainable economic growth in a regionally biased way, leading to negative effects on exports in other Canadian industrial sectors, also known as Dutch Disease.⁹,¹⁰ The emphasis Canada has placed on its bitumen resources has bound its dollar to the market price of oil (Figure 1), leaving the country and its assets vulnerable to oil’s price volatility.¹¹ Additionally, the over-emphasis on such a carbon intensive industry has pushed Canada off course from meeting its 2020 Copenhagen Accord commitments (Figure 2).¹²

![Figure 1. Price of West Texas Intermediate compared to Canada-U.S. exchange rate, 1950–2012](image-url)

*Source: Sarah Dobson, Nathan Lemphers and Steven Guilbeault, Booms, Busts and Bitumen: The economic implications of Canadian oilsands development (The Pembina Institute and Équiterre, 2013) 12.
The U.S. Energy Information Administration (EIA) reports that January 2014 U.S. crude oil imports from Canada (106,540 thousand barrels) overtook all OPEC countries combined (102,741 thousand barrels). This is indicative of the trajectory U.S. oil imports have taken for the last 20 years (Figure 3). The U.S. Congressional Research Service estimates 46 percent of Canada’s crude oil production comes from the tar sands, a number projected to increase as conventional reserves decline and a greater portion of the tar sands is developed (Figure 4).

It is imperative that we understand what is driving the consumption of such a socially subversive and environmentally catastrophic energy source. Canadian tar sands expansion has been facilitated by a liberalized trade framework. NAFTA has already established unfettered access to Canadian energy products by the United States, effectively ceding Canadian sovereignty of these resources in times of need by establishing binding trade obligations. Opening markets through the current negotiations of the Transatlantic Trade and Investment Partnership (TTIP), between the U.S. and the EU, and the Comprehensive Economic and Trade Agreement (CETA), between Canada and the EU, present a potential for greater oil industry profits from increased tar sands development. Pressure stemming from these negotiations have already led to reductions in EU carbon pollution standards and calls to dismantle laws written to ensure national control of natural resources in the U.S. and Canada.
WHAT ARE THE TAR SANDS

The wealth of the tar sands is found in a petroleum-based substance called bitumen.\(^\text{20}\) The bitumen is contained within a mixture typically composed of 75 percent inorganic matter, 10 percent bitumen, 10 percent quartz sand and 5 percent water, making it hard to extract. Bitumen itself is characterized by high density, high sulfur content, high viscosity and high metal concentration. Bitumen is also hydrogen deficient, meaning that bitumen must be upgraded by adding hydrogen or removing carbon in order to be processed by oil refineries.\(^\text{21}\) The by-product of extracting carbon from bitumen is petcoke, which has a similar usage to coal but emits a higher amount of CO\(_2\) per unit of energy.\(^\text{22}\) The Congressional Research Service has described bitumen as a “thick, black, tar-like substance,”\(^\text{23}\) and author Andrew Nikiforuk has written that bitumen “makes a competent road cover, and the Hudson’s Bay Company used it to repair leaky roofs and canoes.”\(^\text{24}\) While the current debate over tar sands has focused mainly on the extraction occurring in Alberta Canada, tar sands reserves have been located in Venezuela, Madagascar, the Republic of Congo, the United States and the Russian Federation.\(^\text{25}\)

The extraction of bitumen is energy intensive due to its viscous nature, and the process of removing it from the ground and separating it from the substrate in which it is found. There are two general forms of extraction, mining and in-situ. Mining involves the removal of the sand like mixture with large hydraulic and electric powered shovels, it is then transported to a facility where separation of bitumen from the mixture takes place. In-situ extraction uses steam to heat the bitumen into a less viscous form able to be extracted. Whether bitumen is mined or extracted through in-situ methods depends on the amount of “overburden”—rock or soil—situated above. Bitumen covered by approximately 75 meters is able to be mined, any deeper and it becomes more favorable to use in-situ methods. Mining comprises about 50 percent of the current extraction and is expected to continue between 40 percent and 50 percent through 2030. It is estimated that 80 percent of recoverable reserves are only accessible by in-situ methods and it is assumed this will become the dominant method of extraction in the future.\(^\text{26}\)

Extracted bitumen is in a near solid state at ambient temperatures and must be diluted in some way before transported or processed in refineries. Often bitumen is diluted with liquid hydrocarbons or converted into synthetic light crude oil to produce “oil sands-derived crude” otherwise known as “oil sands crude.”\(^\text{27}\) The U.S. Congressional Research Service analysis places tar sands oil well-to-wheel life cycle GHG emissions 14 percent to 20 percent higher than the conventional transportation fuel average.\(^\text{28}\) The European Commission commissioned its own life cycle assessment through Stanford University which determined emissions from bitumen-derived fuel to be 22 percent greater than EU’s current transportation fuel.\(^\text{29}\) The outcome could not be any clearer, as human consumption of fossil fuel continues and the dominant form of fuel shifts from conventional to unconventional, climate change and its effects will occur at a faster pace.

TAR SANDS DRIVEN BY TRADE

The tar sands represent incalculable wealth for Canadians. In order to maintain continued economic growth, Canada must promote and ensure the tar sands are open to extraction and trade. A well-managed system exerts control over profits, natural resources and possess accountability to its citizenry. These aspects are missing from tar sands management. At the root of this malfeasance is the existing NAFTA free trade framework and the current negotiations of the TTIP and CETA. Free trade agreements, by nature, reduce government sovereignty in favor of corporate rights to natural resources and profit. NAFTA’s energy proportionality clause and investor-state provisions present a model for just how trade agreements can undermine sovereignty. Additionally, the current TTIP and CETA negotiations have already been seen to put pressure on governments to weaken climate policy.

Energy Proportionality Clause

One of the more controversial yet lesser-known clauses contained within NAFTA is the energy proportionality clause, article 605. The energy proportionality clause is unique in that it’s only applicable to Canadian and U.S. energy trade, a similar clause cannot be found between any other trading partners. Article 605 requires Canadian energy exports to the U.S. to be maintained indefinitely at the average proportion to total supply of the previous 36-months.\(^\text{30}\) That proportion has varied over the course of the agreement, but because of Article 605, it theoretically cannot go down—only rise. This clause was negotiated at a time when Canada was seeking trading partners to accept its overabundance of energy products, and when the U.S. was looking for a stable and secure energy source as an alternative to its reliance on Middle Eastern oil.\(^\text{31}\) The energy proportionality clause seemed to fit both countries’ needs. However, as the U.S. gained a monopolistic hold over Canadian energy resources, it became clear this trade mandate compromises Canada’s energy security and Canadian sovereignty of natural resources. If Canada were to reduce energy production (such as for conservation purposes), or if there were a supply shock, Canada, one of the world’s largest oil producers, would be unable to satisfy its own people’s energy needs due to its export obligations to the U.S. The U.S. is Canada’s primary energy importer, importing around 98 percent of Canada’s total exported oil. More distressing is the U.S.’s steady rise in imports of total
Canadian crude oil supply, increasing from approximately 29 percent in 1989 to over 58 percent in 2011.\textsuperscript{35} Increases in share of total oil supply result in greater control of Canadian resources as mandated in article 605, and thereby place Canada and its citizenry in a more vulnerable position with no recourse to regain control of resources. Gordon Laxer’s 2007 calculations show that a 10 percent reduction in Canadian oil production, in line with the Suzuki Foundation’s suggestion to promote a more sustainable alternative energy future, would result in a shortfall of over 8 million barrels of oil for Canadians.\textsuperscript{39} The same 10 percent reduction, by 2012 numbers, results in a deficiency of more than 50 million barrels (Table 1). A greater than five-fold increase in projected energy shortfall suggests a degree of negligence in maintaining a balance between trade and securing citizen wellbeing. Proportionality not only compromises Canadian sovereignty of natural resources but can be seen as a regulatory force perpetuating non-renewable energy trade. And as the ratio of tar sands to conventional energy source exports increase the proportionality clause will maintain elevated levels of trade in tar sands oil, thereby further jeopardizing everyone who experience the effects of climate change by promoting fuel with inherently greater GHG emissions.

Though endowed with immense natural resource wealth, this NAFTA partnership renders Canada powerless in setting its own energy conservation policy, as Laxer and Dillon write:

When Prime Minister Harper refers to Canada as an “energy superpower,” it is clear he hasn’t consulted a dictionary. Superpowers influence events by projecting economic, military, political and cultural power on a world scale. Proportionality makes Canada more like an energy colony. A colony or satellite is a people who lose control of their resources to a foreign power. When you cannot safeguard your citizens against freezing in the dark, nor control how much you export, nor set the price at which citizens buy back their own energy from foreign transnational corporations, you know you are not a superpower. Instead, Canadian energy policies are geared toward ensuring U.S. energy security.\textsuperscript{34}

### Investor-state Provisions

NAFTA’s investment chapter, chapter XI, acts as a catalyst for tar sands investment. Industry uses chapter XI to circumvent and challenge regulations that negatively affect projected revenue. Chapter XI contains a number of provisions pertaining to foreign investment, and subsequent arbitration claims brought to dispute settlement are commonly referred to as investor-state cases. Chapter XI provisions were originally envisioned as protections for foreign investors subject to the risks associated with the influence of government regulation on investment and expected returns. They have since been leveraged by transnational corporations to oppose environmental regulation and/or “chill” government rule making under threat of lengthy arbitration, high litigation costs and large settlements.

The debate around chapter XI’s necessity for investors and its debilitating effect on government, and to a degree democracy, centers on the interpretation of article 1110 and the rights granted in article 1116. Article 1110 concerns expropriation (a Canadian term) comparable to eminent domain in the United States. Interpretation of article 1110

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**Table 1. Crude oil and equivalent — Supply and disposition, Canada**

<table>
<thead>
<tr>
<th></th>
<th>Production</th>
<th>Imports</th>
<th>Total supply</th>
<th>Domestic Demand</th>
<th>Export to the United States</th>
<th>U.S. % of Total Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>993.8890368</td>
<td>309.7286214</td>
<td>1303.617658</td>
<td>651.4748407</td>
<td>680.67</td>
<td>0.522135589</td>
</tr>
<tr>
<td>2009</td>
<td>987.215559</td>
<td>294.6790169</td>
<td>1281.894576</td>
<td>628.383098</td>
<td>677.9</td>
<td>0.528823343</td>
</tr>
<tr>
<td>2010</td>
<td>1039.927228</td>
<td>281.2446331</td>
<td>1321.171861</td>
<td>634.0225327</td>
<td>703.13</td>
<td>0.532201158</td>
</tr>
<tr>
<td>2011</td>
<td>1105.831123</td>
<td>247.9206437</td>
<td>1353.751767</td>
<td>602.6817172</td>
<td>797.03</td>
<td>0.58875657</td>
</tr>
<tr>
<td>Total 2009 to 2011</td>
<td>3132.97391</td>
<td>823.8442937</td>
<td>3956.818204</td>
<td>1865.0873479</td>
<td>2178.06</td>
<td>54.9927023666667</td>
</tr>
</tbody>
</table>

**Projected 2012**

<table>
<thead>
<tr>
<th></th>
<th>Production</th>
<th>Imports</th>
<th>Total supply</th>
<th>Domestic Demand</th>
<th>Barrels U.S. Entitled to</th>
<th>Domestic Shortfall</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% reduction from 2011 production levels</td>
<td>995.2480107</td>
<td>274.614764566667</td>
<td>1269.862775266667</td>
<td>621.695782633333</td>
<td>698.331849</td>
<td>50.164861</td>
</tr>
</tbody>
</table>

Source: http://www.statcan.gc.ca/pub/57-601-x/2012001/t038-eng.htm
forms the basis of many chapter XI disputes. Affected parties have construed expropriation as a perceived loss of profit due to government regulation, which they argue constitutes an indirect expropriation and therefore a government seizure. Article 1116 “allows an investor the ability to initiate an arbitration claim against the government of a NAFTA party.”

Taken together, these articles are fraught with constitutional and sovereignty issues, and can be used to undermine natural resource and environmental regulation.

Industry has used chapter XI extensively to challenge government regulation. These industry initiated cases have disputed environmental law (Ethyl Corporation v. Government of Canada), natural resource conservation (Sun Belt Water Inc. v. Government of Canada and Pope & Talbot Inc. v. Government of Canada), and the jurisdiction of municipal governments (Metaclad Corporation v. The United Mexican States). Free trade agreements undermine governments’ sovereignty by eliminating protective policy or by giving investors legal recourse against governments. The University of Toronto Faculty Law Review acknowledged the threat of tar sands investment to Canadian authority over environmental law by publishing a paper titled “NAFTA Chapter XI and Canada’s Environmental Sovereignty: Investment Flows, Article 1110 and Alberta’s Water Act”. The paper explains how NAFTA’s chapter XI gives transnational corporations invested in the tar sands the ability to challenge already established water conservation laws, within Alberta’s Water Act. Challenges may be raised during drought or low flow by arguing reductions in water access retard productivity, negatively affecting expected economic returns, and therefore constitute an indirect government seizure warranting litigation. Tar sands water usage has already been associated with adverse effects in indigenous communities who depend on water flow of the Athabasca River for transportation, hunting and cultural practices (Figure 5). Chapter XI’s potential to remove regulation aimed at limiting water usage from the Athabasca River at times of low flow would not only further subjugate these indigenous communities, but also negatively impact the aquatic ecosystem.

Chapter XI does not only affect Canada’s ability to govern its natural resources and environmental law, the United States is equally at risk of being subject to litigation. Public Citizen reported in 2012 how, if the Keystone XL presidential permit is denied or if the process is unnecessarily prolonged, TransCanada may use chapter XI to argue that the company has not received fair and equitable treatment resulting in an “indirect expropriation” to their “expected future earnings.”

In a Financial Post article, Claudia Cattaneo conveyed Canadian government sentiment, reporting that former Canadian Prime Minister Brian Mulroney finds the Keystone XL decision delays counter to the “spirit of the agreement,” and stated in an April 9th 2014 interview:

“A negative verdict by the U.S. government would contravene a major tenet of NAFTA under which the U.S. was guaranteed unfettered supply in exchange for unfettered access by Canadian exporters to its market.”

Cattaneo also quotes international trade lawyer Lawrence L Herman, based in Toronto, who points out that, as an investor, TransCanada (owner of Keystone XL) has not been subject to fair and equitable treatment compared to other cross border pipeline projects. Herman’s argument has similar
underpinnings as Public Citizen’s analysis, and further establishes the reasoning behind a chapter XI case against the U.S. stemming from the tar sands.

**Pressure for a Transatlantic Energy Trade in Unconventional Fuels**

The current text and negotiations of the Transatlantic Trade and Investment Partnership (TTIP) and the Comprehensive Economic and Trade Agreement (CETA) are held in secret and not open to public scrutiny. We may, however, infer some understanding of what is being negotiated by statements made by officials. In the Financial Post article cited above, Catteneo quotes former chief of staff to Brian Mulroney, Derek Burney in regards to the indecision of Keystone XL:

> The best answer from Canada is to find another market for our energy... That is the only issue that is going to get attention in Washington. As long as they [the United States] have a monopoly position on our resource, they [the United States] will behave as they are behaving.\(^4^4\)

Burney’s statement suggests Canada is looking to expand energy trade by diversifying energy trading partners and that oil production capacity has either already exceeded or is on pace to surpass the current export infrastructure. Actualization of the former would result in further tar sands development encouraged by Canada’s commitment to NAFTA’s energy proportionality clause, while the latter indicates a degree of mismanagement of tar sands development resulting in overproduction and subsequently oversupply. Pembina Institute has reported that there is already 2.2 million barrels of bitumen produced per day and that regulators have already approved projects that would increase production to over 5 million barrels per day (Figure 6).\(^4^5\)

The EU has voiced eagerness to expand accessibility to energy sources. In an address to the Center for Strategic and International Studies in Washington D.C., EU energy commissioner Günther Oettinger stated:

> Ensuring a reliable and steady flow of energy is a fundamental requirement for our modern economies and the high quality of life that we have achieved today... Together with the Trans-Atlantic Trade and Investment Partnership discussions that are underway, we now have a real opportunity to take the joint lead in setting the rules and standards for the global energy market. And with the growing energy potential of the North American continent, there is the real possibility of a renewed trans-Atlantic energy trade.\(^4^6\)

Both Burney and Oettinger’s comments demonstrate the political pressure that exists on both sides of the Atlantic to expand energy production and markets. This rhetoric suggests that energy is a key component in the currently negotiated free trade agreements concerning Canada and the EU (CETA) and the U.S. and EU (TTIP). Potential to expand energy markets may equate to immense profits for oil companies, however from a climate policy perspective, the potential of opening a Trans-Atlantic energy market has already deteriorated regulations aimed at combating climate change and has jeopardized international GHG reduction commitments.

Standing in the way of a tar sands Trans-Atlantic energy trade is EU climate policy aimed at lowering transportation fuel emissions. This has been recognized by North American governments and oil companies alike and has been the focus of lobbying campaigns meant to weaken emission standards and eliminate the ability of governments to promote fuels that emit fewer GHGs. The EU committed to reducing GHG emissions by 20 percent of 1990 levels by 2020 at the 2009 Copenhagen climate conference (COP 15). In line with their Copenhagen Accord commitments the EU would like to reduce overall life cycle GHG emissions for transportation fuels by 6 percent. In order to do so the EU replaced its 1998 Fuel Quality Directive (Directive 98/70/EC) with an updated version (Directive 2009/30/EC) in April 2009.\(^4^7\) The 2009 Fuel Quality Directive intends to give fuel suppliers a methodology for calculating current GHG fuel emissions and a system of fuel categorization that aids in meeting GHG reduction targets. The Fuel Quality Directive article 7a concerns categorization. Each fuel feedstock is differentiated on physical characteristics and assigned an average GHG emission based on “well to wheel” life cycle assessments (Table 2). An EU commissioned report on tar sands life cycle emissions of tar sands oil by Stanford University\(^4^8\) determined bitumen based oil emits 22 percent more GHG than the average conventional oil used in the EU (Figure 7).\(^4^9\) Although article 7a appears...
to be a reasonable agent for GHG reductions, controversy and lobbying efforts from oil proponents, who would like tar sands oil to be marketable in the EU, have stalled its implementation and effectively scrapped the Fuel Quality Directive after 2020.\textsuperscript{30}

Drought, floods and other extreme weather phenomena present a major threat to agriculture. Human activity has been identified as a major driver of climate change and tar sands oil has been shown to emit significantly higher GHGs than conventional oil. The link between trade and the environment cannot be overstated. The current free trade agenda has created a system of unfettered extraction, where social and environmental laws have become subject to corporate litigation, and climate policy is able to be challenged and dismantled by corporate lobbyists. The tar sands are an example of compromised sovereignty, from its Canadian origin, through potentially greater transportation in the U.S. to future European destinations.

- NAFTA’s proportionality clause has ceded control of Canadian energy products to the U.S.
- NAFTA’s investment chapter allows the opportunity for corporations to litigate against governments. The University of Toronto Faculty Law Review published work showing water conservation laws jeopardized by Chapter XI and Public Citizen has reported on a potential chapter XI case against the U.S. government to circumvent regulatory processes in order to push through tar sands specific pipelines.
- And a potential EU tar sands market created through TTIP and/or CETA has been heavily lobbied for by the U.S. and Canada, resulting in delayed implementation of transportation emission standards and the dismantling of the Fuel Quality Directive after 2020.

From extraction to combustion the tar sands operate in a system of surrendered sovereignty and extended corporate rights.

Free trade looks to GDP growth as indicators of success masking social and environmental externalities. There can be little progress on emission standards, natural resource management and climate change if sovereign law is able to be influenced and/or superseded by trade agreement rules. 20 years of NAFTA has resulted in lost jobs for the U.S., decreased wages, increased income inequity, displacement of family farms and rural Mexican populations.\textsuperscript{51} The secrecy around the current trade talks is a tactic to keep the public in the dark. When the only entities to be heard at the negotiating table are governments and corporations, we can only speculate to whom these trade agreements will benefit most. Elizabeth Warren has said of the secrecy surrounding the Trans-Pacific Partnership (TPP), “I actually have had supporters of the deal say to me ‘They have to be secret, because if the American people knew what was actually in them, they would be opposed.’”\textsuperscript{52} As citizens, we should be demanding...
the renegotiation of NAFTA, and the opening of the closed-door talks that are occurring around TTIP, CETA and the TPP. Without public scrutiny the resulting trade agreements will only further the mismanagement of natural resources and increase corporate control. Only with an open text and a voice at the table, will we have a real opportunity to take the joint lead in setting the rules and standards for the global energy market that reflect a different set of values with respect to people and the planet.

ENDNOTES
4. Craig Candler, Rachel Olson, Steven DeRoy and the Firelight Group Research Cooperative, with the Athabasca Chipewyan First Nation (ACFN) and the Mikisew Cree First Nation (MCFN) 2010: As Long as the Rivers Flow Athabasca River Knowledge, Use and Change (Alberta, Canada: Parkland Institute, University of Alberta, 2010) 10-12.
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49. Pembina Institute, Reducing greenhouse gas emissions through transportation fuel policy The European Union’s proposed fuel-quality directive and implications for Canadian oilsands producers (The Pembina Institute, 2012) 4.

