



TIME'S UP FOR THE TAR SANDS



PIPELINES FUEL CLIMATE CHAOS



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In 2016, Earth was hotter than it's been in 120,000 years, breaking the record set just a year earlier, which broke the one set a year before that. Global warming is going into overdrive.

Our planet is already 1.1 degrees warmer than it was before the Industrial Revolution.

This freakish warmth has led to drought-fuelled wars in the Middle East and North Africa, the imminent extinction of the Great Barrier Reef and successive super typhoons rocking the Philippines and the South Pacific. Frankly, this is no time for half-measures in cutting the fossil fuel pollution that is changing our global climate.

Humanity cannot build any new coal, oil or gas infrastructure — anywhere on the planet — if it hopes to achieve the goal of keeping global warming at a safe level, set at the 2015 Paris Climate Change Conference.¹

Unfortunately, Prime Minister Justin Trudeau has turned his back on that goal by approving two massive tar sands pipelines and cheering on a third. Canada is hell-bent on pursuing the world's dirtiest oil.

Now, in the face of declining crude oil prices and plummeting investor interest in Canada's tar sands, the Prime Minister is touting new pipelines as a solution. Yet this will do nothing to change reality. Tar sands oil is the dirtiest and most expensive on Earth.

What it takes to produce a barrel of tar sands oil is mind-blowing. It starts by clear-cutting the boreal forest so you can

strip mine huge truckloads of oily sand. Then you wash it with massive amounts of fresh water from the Athabasca River.

Finally, using gas from nearby fracking operations, you have to boil it to separate the oil and dilute it so it flows through a pipe.

While Canada is doubling down on its dirtiest, most polluting industry, the rest of the world is moving on. Countries like China and India are barreling forward with plans to slash carbon pollution.

Building new pipelines ignores this reality. The National Energy Board expects tar sands production to double by 2040 to 4.8 million barrels per day.² Yet in order to have any hope of a safe

climate for humanity, all tar sands production must cease by then.³

The Kinder Morgan, Line 3 and Keystone XL pipelines — the three projects that have been approved by Prime Minister Trudeau and President Trump — would expand capacity by 1.5 million barrels per day.⁴ From mine-to-wheel, that oil would create more carbon pollution than all of Canada currently emits.

Thankfully, leaders from coast to coast to coast are taking action to break free from fossil fuels. Cities are reshaping around transit and changing building codes. Ontario is using \$7 billion from its carbon price to ditch natural gas and embrace electric vehicles.⁵ Indigenous nations are banning tar sands pipelines from crossing their territory.

It is clear the world is leaving fossil fuels in the rearview mirror, due to an understanding of the extreme threat of climate change and the boom in clean technology. Both of these factors will kill the Canadian tar sands. We need strong action from governments to embrace this low-carbon future or we'll be left behind too.

While Canada is doubling down on its dirtiest, most polluting industry, the rest of the world is moving on.



Photos top: Tar sands in AB (Garth Lenz), Salish Sea canoe gathering paddlers in front of Burnaby Chevron Oil Refinery, BC (Michael Wheatley).

Photos above: 1.5 Degrees is projected on the Eiffel Tower as part of the 2015 World Climate Change Conference, Paris (Creative Commons), BC Coastal grizzly bear (Robert McCaw).

NEW PIPELINES ARE FOR TAR SANDS EXPANSION

Tar sands cheerleaders tell us pipelines are mere transport infrastructure, the tar sands will expand regardless and we're wasting time on a symbolic fight. It's time to put that myth to rest once and for all. "It will only come by rail!" is a popular refrain. That's nonsense.

Higher costs, capacity constraints and unreliability make rail a poor stopgap measure. Low prices have already caused North American oil-by-rail shipments to plummet.⁶ Tar sands projects are simply not viable if forced to rely on rail shipping.

Another myth is the concept that oil companies need these pipelines for current production. Truth is, the tar sands have all the capacity they need for projects that are already under construction or in operation.⁷ Proposed pipelines are not for existing production but rather for a massive expansion that is incompatible with a safe climate.

Finally, there's the oft-repeated concept that Alberta needs these pipelines to get its oil to "tidewater," or what most people call the ocean, to fetch a higher price. That may have applied from 2011 to 2014,⁸ but any small price difference now is only due to the lower quality of tar sands oil.



Photos: Technicians remove a section from an Enbridge pipeline oil spill, Oil tanker train cars (Creative Commons).

WATER IS LIFE



Indigenous people across Turtle Island (North America) are at the forefront of every fight against pipelines. During the protests against the proposed Dakota Access Pipeline led by the Standing Rock Sioux, a rallying cry emerged — "Water is Life."

From Coast Salish territory on the west coast, through Anishinaabe lands around the Great Lakes, to Mohawk communities on the St. Lawrence River, Indigenous opposition to these projects is often centered around their right to protect their waters and traditional foods from a toxic oil spill.

In 2016, the Treaty Alliance Against Tar Sands Expansion joined over 115 Indigenous nations from across the continent in banning new tar sands pipelines from their territories under Indigenous law.

Canada is finally talking about reconciliation with Indigenous peoples, but we're still violating their basic human rights. Their inherent right to withhold consent for pipeline projects on their territory has been enshrined in the United Nations Declaration on the Rights of Indigenous Peoples. Our leaders must respect this right and it's our responsibility as Canadians to defend it when they don't.



Photos: Traditional First Nations fishing (Garth Lenz), Treaty Alliance Against Tar Sands Expansion signing (Lasia Kretzel/News 1130).

ONE DOWN, FIVE TO GO

Northern Gateway — STOPPED

Enbridge's ill-conceived pipeline from Edmonton, AB to Kitimat, BC in the Great Bear Rainforest was no match for the hard work of the communities in its path. On June 30, 2016, the federal government's approval of Northern Gateway was overturned by a Federal Court of Appeal due to a failure to properly consult First Nations.⁹ This gave the new government the chance to kill the project for good.

Kinder Morgan

Kinder Morgan's twinning of its existing Trans Mountain pipeline from Edmonton, AB to Burnaby, BC would triple its capacity to 890,000 barrels per day.¹⁰ Despite overwhelming opposition on the west coast, the federal government approved the project in November 2016. However opposition forces have launched 18 court cases on everything from Indigenous consultation to endangered species, while pressuring the provincial government to revoke or withhold permits. Meanwhile, Kinder Morgan doesn't actually have the money to

build the thing and is struggling to find investors. If the company does start work, mass protests could halt construction.

Grand Rapids

This 460 km pipeline would carry 900,000 barrels of oil per day to Edmonton from the tar sands where it would feed refineries and other pipelines.¹¹ The Athabasca Chipewyan First Nation took the Alberta Energy Regulator to court in 2016, charging that the pipeline was approved without consulting the community even though it crosses through their territory. Construction of TransCanada's pipeline is expected to finish in 2017 unless halted by the courts.



Photo: Mount Robson Provincial Park near the proposed Kinder Morgan pipeline route, near the BC/AB border (Michael Wheatley).



BETTING AGAINST THE WORLD

How times have changed. In recent months, Statoil, ExxonMobil, Koch Industries, ConocoPhillips, Marathon Oil, and Shell have either sold off, written down or scrapped their tar sands assets.

In a world flooded with cheap oil, the most expensive deposits make no sense to develop. Only Canadian companies with nowhere else to go are doubling down on the dirty tar sands.

This implosion of the tar sands is pure economics. Yet concerns about global climate action definitely underlie the current flood of oil on world markets. Producers are trying to sell off their stocks before nobody wants it anymore.

It has now become a battle to see who will sell the last barrel of oil — and it's not Canada.

New Canadian tar sands projects rely on a process where natural gas is burnt to produce steam underground and melt oil out of

the sand. This process doesn't even get three barrels of oil for every equivalent one it puts in. Conventional oil gets 25 barrels for the same.¹⁵ That insane math might make sense when oil is \$110 a barrel, but nobody expects it to ever reach those heights again.

Proponents have often commented that "the world will always need oil." Politicians making such false promises insist that the tar sands have a future. That will buy some votes in Alberta but it's a bare-faced lie.

Even the government's own advisors warn pipeline investments "could be at high risk of becoming economically unviable as prices in renewable energy further decline."¹⁶

If the commitments made in Paris to achieve a zero-carbon economy are to be taken seriously, we must accept that there will be no market for our oil much sooner than we think. Our future jobs depend on it.



Photo: Milk River near the proposed Keystone XL and Line 3 pipelines (Branimir Gjetvaj).

Keystone XL

After six years of delay and ultimate rejection from former US President Barack Obama, the Trump administration approved the Keystone XL pipeline in March 2017. It would add 510,000 barrels per day to nearly double the capacity of TransCanada's existing Keystone system.¹² Though it has federal approval, it still needs the go-ahead from the states. Landowners from Bold Nebraska will likely revive a lawsuit to stop the project and environmental groups are challenging the approval in court since it was based on an out-of-date assessment.

Line 3

Enbridge's Line 3 pipeline will replace a 50-year-old pipeline that currently carries light crude from Hardisty, AB to Superior, WI in the US. It would carry 760,000 barrels of tar sands oil, reviving the old capacity that was cut back due to age.¹³ After Prime Minister Trudeau approved the pipeline, the Assembly of Manitoba Chiefs sued to overturn the decision. It also faces opposition in Minnesota due to a change in the final length of its route, which would cross the Mississippi River.

Energy East

TransCanada's 4,500 km pipeline from Hardisty, AB to Saint John, NB would carry 1.1 million barrels per day, which makes it the longest and largest proposed pipeline on the continent.¹⁴ In 2016, the National Energy Board was forced to restart its review of the project due to inappropriate public meetings between the regulator and a TransCanada lobbyist. Widespread and staunch opposition among First Nations and municipalities along the route is a key barrier to the project moving forward.

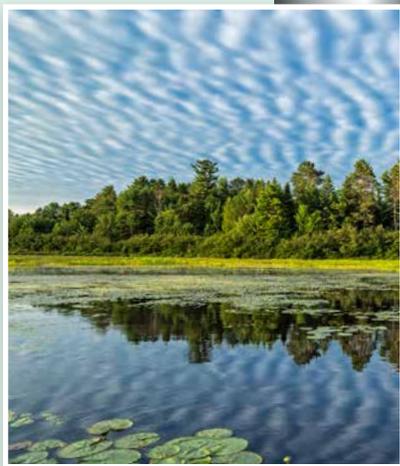
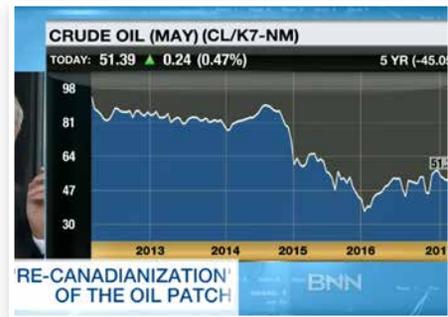


Photo: Lake Travers in Algonquin Provincial Park, ON, near the proposed Energy East pipeline (Mike Grandmaison).



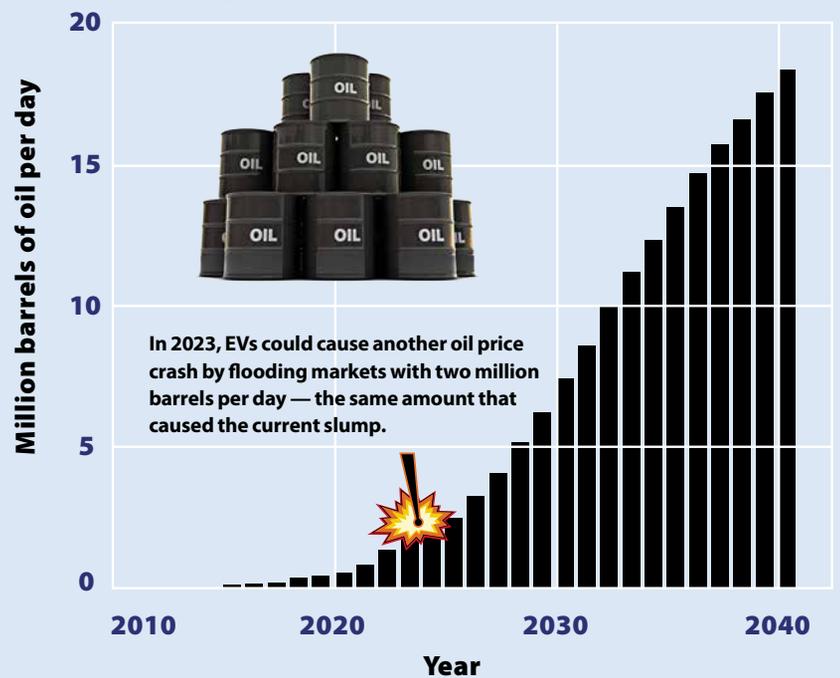
Photos: Partially built Dakota Access pipeline (Creative Commons), Foreign oil majors leave the tar sands as prices crash.



HOW MUCH OIL WILL ELECTRIC CARS DISPLACE?



This graph was featured in an episode of Bloomberg's "Sooner Than You Think" which highlighted how electric cars will cause the next oil crisis.



THE REVOLUTION WILL BE BATTERY POWERED



Alberta's government and industry are operating on the false hope that current low prices and oversupply are temporary. But all eyes are already on the technologies that will kill fossil fuels for good. Canada's desperation for new oil markets ignores the fact that the world is actively abandoning fossil fuels.

Renewable energy has seen skyrocketing growth in the last several years. Solar and wind are already cheaper than fossil fuels in more than 30 countries,¹⁷ leading to more renewable capacity being installed than coal or gas.

Until now, the biggest barrier to renewable power has been reliability concerns. The sun isn't always shining and wind doesn't always blow. But the world is quickly solving that problem too.

Storing energy as heat in molten salt or silicon allows it to be saved for when it's needed. Batteries of all shapes and sizes are arriving on the market with total storage capacity expected to grow 50-fold within a decade.¹⁸

Better yet, the batteries in electric cars, trucks and buses are improving

everyday. New solid-state lithium batteries charge faster, have greater range and last longer.¹⁹ It won't be long until electric cars soak up extra solar power during the day and feed it back to their owner when they come home.

Unsubsidized electric vehicles will be as affordable as gas cars by 2022,²⁰ and are already enjoying a 60 per cent annual growth rate. Though most cars still run on gas, switching over at this pace will displace two million barrels of oil sometime between 2023 and 2028.

That's displacing almost the entire current production of the Canadian tar sands — even without government action. However, the places we want to sell our oil are moving even faster. India wants to have only electric vehicles on its roads by 2030. China sold 400,000 such vehicles in 2016, a 150 per cent year-over-year increase.²¹ It is looking to set mandatory targets for their adoption.

Today's oil price crash is likely due to producers opening the floodgates before people quit buying the stuff. But tomorrow's collapse will be both abrupt and permanent as the world simply moves on.



Photo: Electric vehicle batteries (Creative Commons).

CANADA NEEDS MORE THAN A CARBON PRICE

Prime Minister Trudeau tries to sell his pipelines on the fact that his government has introduced a Canadian climate framework and brought in a mandatory carbon price. Yet tar sands expansion is the clear elephant in the room.

A token carbon price starting at just \$10 per tonne in 2018 — especially when the five most populous provinces already had plans for one — is hardly an excuse to ramp up

Canada's most polluting industry.

Research shows a carbon price would have to be over \$200 a tonne to meet Canada's 2030 target on its own.

Canada subsidizes the fossil fuel industry by \$3.3 billion per year.

Prime Minister Trudeau made an election promise to phase out oil

subsidies but has failed to do so. Those extraction incentives and free research and development amount to a \$19 per tonne reverse carbon price — we're paying oil producers to pollute.²²

Meanwhile, the government adopted the same climate targets as the Harper era, even though the Liberals called them

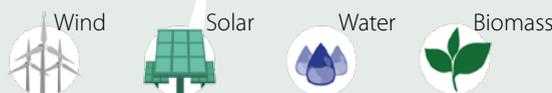
inadequate at the time. The latest data shows that Canada won't even meet this weak goal of a 30 per cent reduction by 2030.²³

Our oil is simply not needed if humanity is to succeed in combating climate change, but Canada is trudging on like nothing has changed. If we are to do our part to usher in a zero-carbon future, we must take on our fossil fuel exports.



Photo: Activists outside public meeting for Kinder Morgan (Jolan Bailey).

NO WORKER LEFT BEHIND



Transforming our economy is obviously going to cause some disruption. We need to make this transition as fast as possible, with the least negative impact.

Despite claims that without the tar sands the country would be an impoverished hellscape, the industry

only contributes two per cent of the country's economy²⁴ and employs around 112,000 people.²⁵

That may seem like a lot but it's worth noting that the film and television industry employs 262,700 people in Canada²⁶ while the technology sector employs 864,000.²⁷ But 41 per cent of Canadians think the tar sands' economic contribution is six to 24 times higher than it really is.²⁸

Fossil fuel jobs will disappear. That much is clear. What is needed is a program to manage that flux so workers are not left behind in the transition to a clean economy. Instead, the government offers empty assurances that the tar

sands have a future — and our competitors take the lead developing clean energy industries.

Pipefitters can install solar panels. Geologists can find geothermal potential instead of oil deposits. Welders are just as able to fuse together wind turbines.

There is so much work to be done in the transition to a zero-carbon economy. Investments in public transit, renewable energy, high-speed rail and building renovations could put a million Canadians to work.²⁹ It's time for Canada to embrace this inevitable future instead of making futile attempts to keep the tar sands afloat.



Photos: Solar panel installation and manufacturing (Creative Commons).

TAKE ACTION

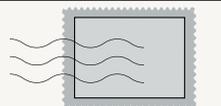
Please write to the Prime Minister of Canada and urge the federal government to freeze tar sands expansion by:

- ▶ Ending fossil fuel subsidies immediately, including exploration incentives and research support.
- ▶ Rejecting all new tar sands pipelines and reversing approvals for Kinder Morgan and Line 3.
- ▶ Respecting the rights of Indigenous communities to withhold consent for tar sands projects.
- ▶ Developing a plan for transition to a zero-carbon economy that puts Canadians to work.



Photo: Anti Kinder Morgan pipeline protest rally and march in Vancouver, BC (Michael Wheatley).

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