OILCHANGE INTERNATIONAL

May 2015

On the Edge:

1.6 Million Barrels per Day of Proposed Tar Sands Oil on Life Support

Photo credit: AP Photo/Larry MacDougal

Key Findings

In the wake of plummeting oil prices and ongoing market access constraints, the tar sands sector has placed on hold dozens of planned projects.

- Currently, 39 tar sands projects are delayed or 'on hold.'
- For every 1,000 barrels per day (bpd) of tar sands production capacity approved or under construction, there are over 500 bpd that are delayed or on hold.
- Delayed or on-hold projects represent over 1.61 million barrels per day of proposed tar sands production capacity.
- Delayed or on-hold projects contain nearly 13 billion barrels of total resources, which would amount to 7.8 billion metric tons of CO_2 if extracted and burned. The emissions are equivalent to 40 years of emissions from 51 average U.S. coal-fired power plants.
- An additional 550,000 bpd of production capacity (40,000 bpd currently operating) is owned by companies that have filed for bankruptcy.
- One of the bankrupt companies, Southern Pacific Resource Corp., is suspending operations at its 12,000 bpd *in situ* project.

Introduction

The Canadian tar sands is among the most carbon-intensive, highest-cost sources of oil in the world.[1,2] Even prior to the precipitous drop in global oil prices late last year, three major projects were cancelled in the sector with companies unable to chart a profitable path forward.[3]

Since the collapse in global oil prices, the sector has been under pressure to make further cuts, leading to substantial budget cuts, job losses, and a much more bearish outlook on expansion projections in the coming years.[4]

Low oil prices are just one of a number of factors that impact the potential profitability of tar sands extraction and expansion. The rapid growth of the industry over the past two decades has been contingent on a number of conditions, some of which were already deteriorating prior to the price drop.[5]

Ranging from unfettered market access, soaring U.S. oil demand, unquestioned political support, minimal regulatory constraints, and sustained high oil prices – little by little the foundations that these high cost frontier projects have depended on are crumbling.

On-Hold and Delayed Projects

We identify at least 39 projects (project phases) that have been delayed or put on hold (see Table 1). These projects represent over 1.61 million barrels per day of potential tar sands oil production capacity that companies are currently unable or unwilling to invest in.

This number, both in terms of project phases and barrels per day, has risen significantly over recent months. Most of the announcements were made during 2014 results reporting in early 2015. Most recently, Shell announced the delay of its 80,000 bpd Carmon Creek *in situ* project.[6]

The delayed and on-hold projects include three open pit mine projects with a combined capacity of over 450,000 bpd, and over 30 *in situ* project phases with nearly 1.2 million bpd capacity. The total resources (i.e. extractable tar sands oil) in these projects is almost 13 billion barrels. If all of that resource was extracted and burned, around 7.8 billion metric tons of CO_2 would be emitted. This is equivalent to 40 years of emissions from 51 average U.S. coal-fired power plants.

This potential production represents a significant portion of planned expansion in the near term. For every 1,000 barrels per day of production capacity that has been approved or is already under construction, there are over 500 barrels that are delayed or on hold.[7,8]

Bankrupt Companies

Our analysis also identifies an additional 550,000 bpd of production capacity (40,000 bpd currently operating) owned by companies that have filed for bankruptcy, another clear indicator of weaknesses in the sector (see Table 2). One of these companies, Southern Pacific Resource Corp., announced that it will cease production at its only operating project by July 2015.[11] This will shut in 12,000 bpd of production capacity.

Table 1: Delayed and On-Hold Tar Sands Projects

Company	Project	Phases	Mining/In Situ	Status	Capacity (BPD)	Resource (Rystad) Million Bbls
Brion Energy Corporation (PetroChina)	Dover	All Phases (1-5)	In Situ	Uncertain*	250,000	2,160
Brion Energy Corporation (PetroChina)	Mackay River	Phases 2-4	In Situ	Uncertain*	115,000	698
Cenovus	Telephone Lake	Phases A-B	In Situ	Delayed	90,000	226
Cenovus / Conoco	Narrows Lake	Phase B & C	In Situ	Delayed	90,000	661
Cenovus / Conoco	Foster Creek	Phase H & J	In Situ	Delayed	80,000	633
Cenovus / Conoco	Foster Creek	Optimizations	In Situ	Delayed	50,000	N/A
Cenovus / Conoco	Christina Lake	Phases G & H	In Situ	On Hold	100,000	1,157
CNRL	Kirby North	Phases 1-2	Mining	Delayed	100,000	922
Devon Energy	Walleye	Phase 1	In Situ	On Hold	9,000	60
E-T Energy	Poplar Creek	Phase 1 & 2	In Situ	On Hold	50,000	N/A
Harvest Energy (KNOC)	BlackGold	Phases 1 & 2	In Situ	Delayed**	30,000	260
Husky /BP	Sunrise	Phase 2 (A&B)	In Situ	On Hold	70,000	893
PTT Exploration & Production	Mariana	South Leismer	In Situ	On Hold	20,000	191
PTT Exploration & Production	Mariana	Thornbury	In Situ	On Hold	60,000	204
PTT Exploration & Production	Mariana	Hangingstone	In Situ	On Hold	20,000	369
Royal Dutch Shell	Carmon Creek	Phases 1 & 2	In Situ	Delayed	80,000	770
Shell Albian (Chevron & Marathon)	Pierre River	Phases 1 & 2	Mining	Application Withdrawn	200,000	1,838
Statoil	Kai Kos Dehseh	Corner	In Situ	On Hold	40,000	668
Total / Suncor	Joslyn North/ South	Phases 1-4	Mining	Application Withdrawn	157,000	983
TOTAL Capacity at Risk					**1,611,000**	**12,692**

Source: Oil Change International (Resources data from Rystad Energy UCube-April 2015).

Why Delayed and On-Hold Projects Matter

High profile cancellations and major infrastructure delays do not go unnoticed, but in reality, companies rarely outright cancel projects. Industry has had little to lose by leaving proposals 'live', or letting them continue to work their way through Alberta's regulatory review process, which has never rejected a tar sands proposal. This ensures that if market conditions improve, they have lost minimal ground.[12]

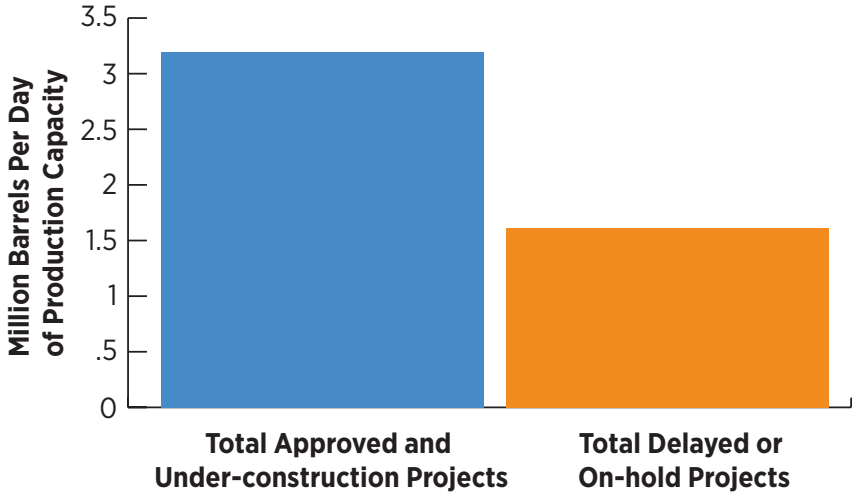
But in today's geopolitical climate, hurdles are growing for tar sands projects, and delayed and on-hold projects can only become increasingly exposed to these growing risks. For example, a new provincial government is expected to prioritize diversification of the Alberta economy and action on climate change;

* PetroChina announced it is trying to swap its tar sands assets having found little interest from potential buyers.[9] Until some deal is reached the future of these projects is uncertain. Mackay Phase 1 starts production later this year.
** Project is built. Company holding back on steaming the first wells until WTI is "somewhere above $60"[10]

public campaigns against major pipeline projects such as TransCanada's Keystone XL and Energy East pipelines and Kinder Morgan's TransMountain are gaining traction; and First Nations continue to organize resistance to tar sands expansion in defense of their treaty rights.

Delays also matter in very practical ways for frontline communities that would otherwise be exposed to increased air and water contamination and the associated health risks, as well as the livelihood impacts of the destruction of boreal forest and traditional hunting and fishing territory of First Nations.

Figure 1: Tar Sands Production Capacity Currently Delayed and On Hold



Source: Oil Change International

Furthermore, delays give space for political pause, which is particularly relevant with the intense scrutiny on the province in terms of environmental and climate regulations.

Notably, the recent (and largely unexpected) shift in provincial politics in Alberta has generated significant uncertainty in the tar sands sector, with the incoming government set to revisit the structural role of the sector in the provincial economy and energy mix with an eye towards diversification, emissions reductions, improved relationships with First Nations, and reducing the province's exposure to the boom and bust cycle of an oil sector that is generally at the wrong end of the production cost curve.

Table 2: Tar Sands Projects Owned by Bankrupt Companies

Company	Project Name	Phase	Project Type	Status	Production Capacity (BPD)	Resource (Million Barrels)
Connacher	Pod One		In situ	Operating	10,000	209
Connacher	Great Divide	Algar	In situ	Operating	10,000	209
Connacher	Great Divide	Expansions	In situ	Approved	24,000	166
Laricina Energy	Germain	Phase 1	In situ	Operating	5,000	27
Laricina Energy	Germain	Phases 2-4	In situ	Application	150,000	884
Laricina Energy	Saleski	Experimental Pilot	In situ	Operating	1,800	20
Laricina Energy	Saleski	Phase 1	In situ	Approved	10,700	70
Laricina Energy	Saleski	Phases 2-6	In situ	Announced	260,000	1,226
Ivanhoe	Tamarack	Phases 1-2	In situ	Application	40,000	N/A
Southern Pacific Resource	STP MCKay	Phase 1	In situ	Operating	12,000	232
Southern Pacific Resource	STP MCKay	Phase 1 Expansion	In situ	Application	6,000	42
Southern Pacific Resource	STP MCKay	Phase 2	In situ	Application	18,000	131
TOTAL Capacity at Risk					**547,500**	**3,216**

Source: Oil Change International (Resources data from Rystad Energy UCube-April 2015).

Conclusion

The tar sands industry has been showing signs of weakness for a number of years driven primarily by rising costs, stagnated oil prices and successful campaigns to restrict market access.

The recent oil price crash is a part of the reality of volatile commodities markets, which industry expects and anticipates. But in the case of the tar sands, this particular cycle is exposing more structural weaknesses. Delays and on-hold projects are one indicator of these weaknesses, and the reality that for every 1,000 bpd of approved production, over 500 bpd is trapped in delayed projects is significant.

The combination of citizen action to block pipelines and development and the rising tide of climate policies and alternative technologies, which are together leading to lower oil demand growth and lower oil prices, signal very strong headwinds for an oil source that is both high cost and high carbon.

This suggests that, if these headwinds persist, the rate of growth may slow significantly in the coming years – potentially avoiding lock-in of a significant amount of GHG emissions.

Companies will always delay pulling the plug completely until all hope is lost, but as risks and hurdles continue to grow – the tar sands sector faces some stark choices. The future of many of the currently 'delayed' projects will depend on several favorable conditions realigning. The question is not when, but if that will happen.

This paper was conceived, written and researched by Hannah McKinnon and Lorne Stockman, with support from Elizabeth Bast, Stephen Kretzmann, and Greg Muttit.

Oil Change International (OCI) exposes the true costs of fossil fuels and identifies and overcomes barriers to the coming transition towards clean energy. Oil Change International works to achieve its mission by producing strategic research and hard-hitting, campaign-relevant investigations; engaging in domestic and international policy and media spaces; and providing leadership in and support for resistance to the political influence of the fossil fuel industry, particularly in the United States.

www.priceofoil.org
Twitter: @priceofoil

References

1 Pembina Institute, Oilsands Climate Impacts. http://www.pembina.org/oil-sands/os101/climate
2 Carbon Tracker Initiative. May, 2014. 'Carbon Supply Cost Curves: Evaluating financial risk to oil capital expenditures.' http://www.carbontracker.org/report/carbon-supply-cost-curves-evaluating-financial-risk-to-oil-capital-expenditures/
3 Oil Change International and The Institute for Energy Economics and Financial Analysis, October 2014, 'Material Risks: How Public Accountability Is Slowing Tar Sands Development.' http://priceofoil.org/2014/10/29/material-risks-how-public-accountability-is-slowing-tar-sands-development/
4 Yadullah Hussain, January 02, 2015. 'Almost $60-billion in Canadian projects in peril as 'collapse' in oil investment echoes the dark days of 1999.' Financial Post. http://business.financialpost.com/news/energy/almost-60-billion-in-canadian-projects-in-peril-as-collapse-in-oil-investment-echoes-the-dark-days-of-1999?__lsa=fda6-799e
5 Environmental Defence, December 2014, 'Far from Inevitable: The Risks of and Barriers to Tar Sands Expansion' http://environmentaldefence.ca/reports/far-inevitable-risks-and-barriers-tar-sands-expansion
6 Lauren Krugel, May 08, 2015, 'Carmon Creek oilsands project delayed by Shell Canada' The Canadian Press http://globalnews.ca/news/1988859/carmon-creek-oilsands-project-delayed-by-shell-canada/
7 There are currently 3,192,120 barrels per day of tar sands production capacity that has been approved or is under construction according to Oilsands Review (www.navigator.oilsandsreview.com/listing). Oil Change International's analysis shows 1,611,000 barrels per day of tar sands production capacity that is associated with projects that have been delayed or placed on hold.
8 For this analysis, it has been assumed that if a project phase is placed on hold or delayed, subsequent expansion phases of the same project are also delayed.
9 Aibing Guo, March 27, 2015. 'PetroChina mulls Canadian oilsands asset swap to ride out low oil' Financial Post. http://business.financialpost.com/news/energy/petrochina-mulls-canada-oilsands-asset-swap-to-ride-out-low-oil?__lsa=bdc6-df36
10 Dan Healing, April 01, 2015, 'BlackGold oilsands project on hold, Harvest cuts 105 jobs' Calgary Herald. http://calgaryherald.com/business/energy/blackgold-oilsands-project-on-hold-harvest-cuts-105-positions
11 Yahoo Finance, May 14, 2015, 'Southern Pacific Plans to Suspend Operations at STP-McKay' http://finance.yahoo.com/news/southern-pacific-plans-suspend-operations-165100309.html
12 Similarly, projects with a long time horizon (i.e. construction not planned for the near term), are unlikely to be officially delayed or put on hold even if the economics do not look promising.