The Future of Canada's Oil Sands Industry: Environmental Pressures Are Creating Uncertainty

Description

There are a range of issues that have brought the viability and sustainability of Canada's now-booming oil sands industry into question. In a previous article, I investigated the issue of high development and production costs. An equally pressing issue that has brought the sustainability of oil sands production into question — potentially confirming Jeremy Grantham's claim that oil sands assets will become "stranded" assets — is the environmental impact.

Opposition to oil sands development continues to grow
Already some politicians, business leaders, academics, and environmental activists assert that oil sands production is more environmentally damaging than other sources of unconventional and conventional oil production. They also claim that it is one of the most inefficient means of oil production, not only worsening the environmental impact but also driving production costs higher.

Among the most prominent are former U.S. Vice President and noted environmental campaigner Al Gore and fund manager Jeremy Grantham. Grantham's concerns about the high levels of greenhouse gas emissions — in particular those produced by the lower-grade oil that comes from oil sands — led him to publicly claim that the industry is not sustainable.

He then said that companies involved in the industry are a poor investment, because oil sands assets could become costly liabilities for those companies over the next two decades. There are also growing concerns about the inefficient, resource-intensive nature of oil sands production.

In a March 2013 op-ed for *The New York Times*, Thomas Homer-Dixon, a teacher of global governance at the Balsillie School of International Affairs, claimed that nearly 42% of Canadians are opposed to the industry on environmental concerns. Furthermore, the largest consumer of Canada's oil, the United States, currently has a president committed to reducing carbon emissions. (We've already seen President Obama take a critical view of the Keystone pipeline project.)

Just how inefficient is oil sands production?
The process for extracting oil from oil sands is highly water- and energy-intensive. In order to produce

one barrel of oil, two to four barrels of water are required. This has created huge tailing dams filled with toxic water, which cover around 70 square miles. Already, two of those tailings dams are so large that they are allegedly visible from space to the naked eye.

In comparison to conventional oil production, oil sands production is extremely energy-intensive. Only five barrels of oil are produced for every unit of energy used; conventional oil production yields 25 barrels of oil for every unit of energy used. As a result, Alberta — the heart of the oil sands industry — received the dubious distinction of being the leading per-capita producer of carbon dioxide in Canada.

Add all of that up and it means greater public scrutiny of the industry. It also means that the Canadian government will eventually introduce tighter environmental controls, which in turn would curtail production and increase costs, impacting profitability. Already industry participants are being asked to introduce a triple-bottom-line.

A “triple-bottom-line” requires a company to take into account the economic, environmental, and social aspects of oil sands production when calculating their bottom-line. While this has added additional development and production costs, it’s had its intended consequence of more rapidly moving the majority of industry participants toward developing sustainable and responsible production.

Canada’s oil sands industry is reducing its environmental footprint

Many of the issues relating to environmental damage have been recognized by industry participants, and they are already striving to make production more sustainable. A few examples include improved tailings management; reclamation projects; and introducing more environmentally friendly methods of oil production than mining, such as steam-assisted gravity drainage (which produces a tremendous amount of oil using a modest amount of water, leaving a relatively small surface footprint).

Many participants in the oil sands industry have moved to using steam-assisted gravity drainage as a primary method of oil production. This includes **Athabasca Oil Sands** (TSX:ATH), which has committed to using steam-assisted gravity drainage as its primary method of production. Athabasca Oil Sands has also committed to not using any surface water in its production process and recycling 95% of the water used.

Canada’s largest energy company, **Suncor** (TSX:SU), has spent more than $1.3 billion on developing more environmentally-friendly methods of production and minimizing the company’s environmental footprint. This includes the development of its TRO tailings management technology.

Suncor expects this technology to dramatically accelerate the reclamation of tailings ponds and mined lands and to reduce the need for future tailings ponds. It has also implemented a water management strategy, which is a region-wide approach aimed at reducing freshwater withdrawal and recycling wastewater.

The measures taken by Suncor were recently recognized in Sustainalytics list of Canada’s 50 most socially responsible corporations. It also recognized the measures that **Cenovus** (TSX:CVE) (NYSE:CVE) has taken. Cenovus’ Foster Creek and Christina Lake operations were recognized for having one of the lowest and most efficient “steam-to-oil” ratios in the industry. It was also recognized for fresh water use at its oil sands operations constituting less than 5% of all water used.

Foolish final thoughts

Clearly, environmental sustainability is a significant issue faced by the oil sands industry, and industry participants are focused on reducing the impact of development and production and reducing their environmental footprint.

This is good news for prospective investors. In my mind, it also brings into question the veracity of Grantham's statement that oil sands assets will become "stranded assets" over the next decade.

Canada = fueling a global shift in energy
Looking for a specific stock idea from the energy sector? The Motley Fool Canada's senior investment analyst has hand-picked two of his favorite in Canada. Download your copy of this Special FREE Report, "Fuel Your Portfolio With This Energetic Commodity," by clicking here!

The Motley Fool's purpose is to help the world invest, better. ***Click here now*** *for your free subscription to* ***Take Stock****, The Motley Fool Canada's free investing newsletter. Packed with stock ideas and investing advice, it is essential reading for anyone looking to build and grow their wealth in the years ahead.*

Disclosure: Matt Smith does not own shares of any companies mentioned.

CATEGORY

1. Investing

TICKERS GLOBAL

1. NYSE:SU (Suncor Energy Inc.)
2. TSX:CVE (Cenovus Energy Inc.)
3. TSX:SU (Suncor Energy Inc.)

Category

1. Investing

Date
2025/08/25
Date Created
2013/09/18
Author
mattdsmith