## CARBON MARKETS INSIDER – COMMENTARY

### Oil Sands Production Needs Global Climate Attention



President **Barack Obama** must decide before the end of the year whether to approve the Keystone XL pipeline, which would ferry oil sands crude from Alberta, Canada to Texas. The decision has provoked debate in the U.S. about future greenhouse gas policies. **Marc Huot**, an analyst with the Pembina Institute's Oilsands Program in Alberta, tells Siobhan Wagner of Bloomberg New Energy Finance that emissions from oil sands production will make it tougher for Canada to meet its climate targets.

#### Q. What have companies done over time to make oil sands activities greener?

A: Since 1990, the industry has made some significant greenhouse gas intensity reductions. Early on, some of the practises were very carbon-intensive, like burning petroleum coke to produce heat and use coal-powered electricity instead of natural gas. Over that time period the industry switched to natural gas as a fuel and large operations started using cogeneration to produce heat and power together more efficiently. From 1990 to 2009, they made about a 30 percent per barrel improvement on greenhoue gas emissions. It is important to note that during this time period absolute emissions increased from 17 million metric tons per year to 45 million metric tons per year.

#### Q. Does this suggest similar improvements will be made in the future?

A: Over the last 20 years, the oil sands industry made some progress improving some of the "low hanging fruit" where there was an economic incentive to do so. Unfortunately, at least with greenhouse gases intensity improvements, the trend is suggesting that improvements have plateaued. According to the latest government data, the greenhouse gas intensity of the oil sands industry has actually leveled off and increased somewhat over the past four years. And, the improvements they have to make going forward are likely to be a lot more expensive. Currently, we're not seeing that take place because there aren't sufficient policy drivers requiring industry to make those further improvements. We have no greenhouse gas policies that require the oil sands industry to achieve anything beyond a very small 12 percent per barrel intensity reduction from their baseline.

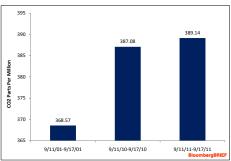
#### Q. What do Canadian oil sands have to do with the global climate?

A: Global attention on the oil sands is warranted based on Canada's failure to act on its climate commitments and because the oil sands represent the world's first major foray into unconventional oil. Relative to the whole world, emissions from the oil sands appear small – approximately less than a percent of global emissions. From a Canadian perspective the oil sands are a significant source of emissions, one that is going to make it a challenge to meet its climate targets. [Canada has pledged to cut greenhouse gas emissions by 17 percent by 2020, compared to 2005 levels.] If countries like Canada fail to meet their commitments, that will undoubtedly have implications for the global climate.

The Keystone XL pipeline is interesting because it's an international project where the U.S. is looking at purchasing crude from the oil sands, knowing that it is deciding whether to sign up for a 40-year contract to have higher emissions associated with its imported transportation fuels. This has brought up questions in the U.S. about its climate change commitments and whether importing a higher carbon intensity fuel from Canada is necessary. It is apparent that Canadian and Alberta officials are investing more effort in lobbying to weaken these procurement and climate policies rather than implementing policy to improve the greenhouse gas performance of oil sands oil. [Yet] the customer is finally starting to be concerned with the climate change implications of the product they're buying.

#### **ATMOSPHERIC CO2**

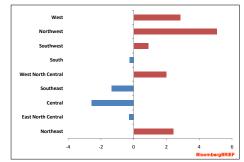
Carbon dioxide concentration levels are increasing at an accelerating rate decade to decade. Scientists say returning to an atmospheric carbon dioxide concentration below 350 parts per million is needed to avoid runaway climate change.



Source: NOAA/ESRL

#### **TEMPERATURE TRENDS**

Five out of nine U.S. climate regions were on average warmer than normal during the week of Sept. 4, compared with the weekly normal temperatures from 1971 to 2000. Temperature differences in degrees Fahrenheit are shown in red indicating warmer temperatures.



Source: NCDC/NOAA

## **GLOSSARY**

■ Bituminous Sands (Oil Sands)

Unconventional petroleum deposit comprising a naturally occurring mixture of sand, clay or other minerals, water and bitumen.

Shale Gas

Natural gas trapped within shale formations - finely grained sedimentary rocks.

# WHERE ARE CARBON PRICES GOING?



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