



## Oil Sands Update

Energy From Athabasca

March 2010

### Letter from the Editor

Our first issue of 2010 finds the industry in a different place than a year ago. Last year was a year of relative slowdown in the industry, with a number of projects scaled back or deferred. This year, there is more optimism and activity, with a number of new projects announced or back under development.



Also new this year is a change in the dialogue about the oil sands. It is a positive change in my view as people have increasingly begun to see the oil sands as the important source of energy and economic contribution it is. More people have also begun to acknowledge that, while work must continue on reducing the environmental impacts of oil sands development, the industry has already made significant progress and is investing a great deal of time and energy to find additional improvements through development of new technology and application of new processes. OSDG continues to make information and resources available to answer questions individuals or groups have regarding oil sands development.

In this issue of Oil Sands Update we present stories which touch on the environmental and socio-economic side of the industry.

We bring some science to a discussion about the relative carbon footprint of crude produced from the oil sands; take a look at how the industry moves thousands of its people into, out of and around the oil sands region, day-in and day-out; and introduce a new initiative by the Regional Municipality of Wood Buffalo designed to help industry and government, prepare for oil sands activities in the future.

As always, comments and story suggestions are welcomed.

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### OSDG Website Launches New Sections

The [oilsandsdevelopers.ca](http://oilsandsdevelopers.ca) site continues to evolve with the launch of the “[Oil Sands Technologies](#)” section - a one-stop source of information about the new technologies being developed and applied by in-situ and mining operators. Check out the site to find out about the amazing new processes and equipment being developed to further mitigate the environmental effects of oil sands development and, in many cases, reduce operating costs associated with bitumen production.

OSDG also recently launched an interactive, searchable “[Oil Sands Projects](#)” database. This unique feature allows users to search and view information such as expected production, the technology involved, location and at what stage of operations the

Simply send an email to us at [info@oilsandsdevelopers.ca](mailto:info@oilsandsdevelopers.ca).

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## One, Two, Three...

Ensuring community services are keeping pace with oil sands development is one of the big challenges the oil sands industry, government and social agencies are focused on addressing. Key to addressing this issue is access to solid data about expected changes to the population in the Athabasca oil sands region.



Through its annual member survey, the Oil Sands Developers Group (OSDG) has collected data from association members for more than 10 years. That information, including estimated employment levels and associated housing and community service requirements, has been shared with the [Regional Municipality of Wood Buffalo](#) (RMWB) as well as with other regional and provincial agencies to help them with their planning in areas including health, education, and infrastructure.

Now the RMWB has adopted its own new population projection model, incorporating input from the Oil Sands Developers Group and other groups, to better support its planning processes in the region.

In a [news release](#) announcing the RM Council's decision, Gary Gordon, Acting Supervisor, Socio-Economic Analysis with the municipality's Planning and Development Department stated "This tool will let us accurately project, and then plan for, population growth in Wood Buffalo."

In addition to utilizing the model itself, the RM has also shared the model with the Oil Sands Secretariat to further enhance the collaboration between the RM and Government of Alberta in planning effectively for growth in the region.

[Suncor](#)'s Brenda Erskine, Chair of the OSDG Housing Committee says the adoption of a new model by the RM is a natural evolution of the process used by industry and government to plan better.

"There has been good progress made on this model, and we're pleased with the level of consultation the RM undertook as it put together the new model."

Erskine says OSDG is happy to have provided its population forecast to agencies in the past and to have contributed to the development of the current RMWB model, and she says the association will continue to offer its input going forward.

"The current model will be one of a number of tools industry and

project is. For more information, visit

[www.oilsandsdevelopers.ca](http://www.oilsandsdevelopers.ca).

### Pass it on

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government will draw upon for planning, and like the models which preceded it, will no doubt need further refinement through continuous improvement.”

Gary Gordon says fresh data will be input to the model on an ongoing basis, supported by regular meetings with oil sands companies to collect updates on the status of projects.

He says the RM expects to issue its next population forecast in the early fall, once the data from the next municipal census is collected and analyzed.

The RM has also committed to updating the projection model itself regularly saying, at most, it will be revisited biannually.

Links:

[Presentation to RMWB Council: January 12, 2010](#)

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## Measuring Life-Cycle GHG Emissions from Oil Sands Crude

During a recent trip to Canada, former U.S. Vice-President and climate change activist Al Gore claimed that “gas from the tar sands gives a Prius the same carbon footprint as a Hummer.” Gore’s assertion was quickly



[refuted](#) by both oil sands

producers and the Government of Alberta. In light of the apparent confusion, it is perhaps worth taking a closer look at the relative GHG emission intensity of oil sands crude.

Several independent studies by researchers in both Canada and the United States have established a basis for comparing the GHG footprint of various sources of oil based on their life-cycle emissions. This measurement considers total emissions produced from the time the oil comes out of the ground to its final consumption by the end user.

While oil sands-derived crude is more carbon-intensive than the average barrel currently consumed in the United States, the gap is much smaller than Mr. Gore and other critics claim. Studies by [RAND](#), the [Council on Foreign Relations](#), the [Alberta Energy Research Institute](#), and [Cambridge Energy Research Associates](#) all confirm that the emissions of an average barrel of oil sands crude exceeds the U.S. average by between 5-20 per cent, depending on the project. This puts crude derived from oil sands in the same range as other crude oils imported into the North American market.

What does this mean in practical terms? The higher emissions from oil sands crude translates into a one-to four-mile decrease in vehicle mileage. Switching from an average U.S. barrel of oil to oil sands crude would be like switching from a Nissan Altima (23 mpg) to a Nissan Sentra (26 mpg). This is obviously not comparable to turning a Toyota Prius (50 mpg) into a Hummer H2 (approximately 10 mpg) in fact it is comparable to turning a [Prius into a Smart Car for two](#).

One consideration is that light oil is in steep decline across the world. In Canada, decline rates are about [four per cent](#), per year, and in other areas the rate of decline is higher. The reality is, the quality of oil sands crude will continue to improve as the quality of alternatives continues to decline.

What's more, oil sands producers are working determinedly to close this CO2 gap, having already reduced oil sands carbon dioxide emissions by 38 per cent since 1990. Oil sands producers, in close cooperation with academic and government partners, are developing innovative production technologies such as Toe to Heel Air Injection (THAI), or cold-solvent extraction. Each of these [technologies](#) holds the potential to reduce emissions by lowering energy input requirements.

The [International Energy Agency](#) predicts that our carbon constrained world will see a doubling of energy demand by 2050. Oil sands producers are committed to meeting that demand while simultaneously reducing our emissions intensity. This approach will ensure that we are able to keep Canada's energy flowing and economy moving while at the same time meeting our environmental goals.

Link: [Fuel Consumption Ratings](#) – find out how your car compares!

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## Employee Transportation in the Oil Sands

Getting employees to the worksite and back again can be a logistical challenge for oil sands producers. Providing transportation options that are both safe and accessible is key to operating in an industry



whose activities are spread across a large area with limited infrastructure. A diffuse labour force poses an additional challenge for producers, and an alternative transportation model is required for those employees that are unable to move to the region on a permanent basis. The oil sands industry has adopted several unique responses to these challenges.

Coaches, large buses used to transport passengers comfortably over long distances, are central to many producers' employee transportation plans. [Diversified Transportation Ltd.](#) has been

operating coach service locally for more than 40 years and is the largest ground transportation provider in the region. With a fleet of over 500 units, the company moves approximately 10,000 workers to and from local worksites every day.

Servicing primarily labour-intensive mine sites within commuting distance of Fort McMurray, coaches offer a wide range of benefits:

1. Reduced congestion – With an average capacity of 50 passengers, it is estimated that over two million vehicles are eliminated from Highway 63 in a year. This improves efficiency by pooling costs and reducing time spent in traffic.
2. Fewer carbon emissions – Diversified estimates that the use of high capacity diesel-fuelled coaches rather than personal motor vehicles saves approximately 40,000 tonnes of carbon emissions every year.
3. Improved safety – Coach schedules are aligned with workers' shift schedules, which can last ten hours or longer. By taking would be tired drivers off the road, coaches make it more likely that everyone will arrive home safely.
4. Employer/Employee benefits – Coach transportation gets people to work on time, well rested and safely.

Another example of a creative solution to the region's transportation challenge is the fly-in/fly-out service operated by several producers. Some worksites are simply too far from Fort McMurray for employees to commute by ground transportation. [Imperial Oil's](#) Kearl project, the first phase of which is currently under construction, will be a camp-based operation with its entire workforce operating on a fly-in/fly-out rotational schedule. In other cases labour demand requires regular shuttle service to cities outside the region. For example, the airstrip at [CNRL's](#) Horizon project accommodates Boeing 737s that bring in workers from Edmonton and Calgary.

Several major transportation infrastructure improvements are planned, or currently under construction, that will further improve regional employee transportation programs. A \$127 million five-lane bridge across the Athabasca River is scheduled to open in 2011 and [interchanges](#) at Thickwood Boulevard and Confederation Way will be completed in 2012. The Fort McMurray Airport, which was ranked the busiest centre in Canada in 2008, has proposed a \$100 million expansion that would greatly expand the facility's capacity. As the region continues to grow, creative transportation solutions that promote efficiency, safety and environmental performance will remain a top priority for oil sands producers.

©2010 The Oil Sands Developers Group is important in addressing the need for accurate, credible information about Athabasca oil sands activity. On behalf of our members, we work closely with oil sands operators and developers, related industries, government, Aboriginal peoples, and other organizations active in the Athabasca region. Through communication and collaboration, we help define and address regional issues related to oil sands development.

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