



Pacific Institute
for Climate Solutions
Knowledge. Insight. Action.

Briefing Note 2010 – 18

9 September 2010

BC's Low Carbon Fuel Standard

Produced in partnership with [ISIS | A Research Centre | Sauder School of Business | UBC](#)
Author: Calyn Shaw, MA, ISIS Research Centre, Sauder School of Business, UBC
Editors: [Dr. Alison Shaw](#), [Dr. James Tansey](#), [Ivan Watson](#)

Issue

The low carbon fuel standard (LCFS) was enacted in BC in 2008 with the objective of reducing the average carbon intensity of transportation fuels by at least 10% by 2020. Similar legislation exists in California but with one vital difference - BC has not incorporated indirect land use values into the lifecycle analysis. With this provision, California's LCFS indicates higher emissions from unconventional oil, such as from Alberta's oil sands, than from conventional sources.ⁱ As a result, the Canadian petroleum industry has come out in support of the BC standard and has criticized California's approach. News releases from the BC and California governments indicate that the fuel standards are identical, despite the differences in direct and indirect land use calculations. Whether or not BC intended to structure their policy to favour the oil sands is not as important as the fact that it could be perceived to be "oil-sands friendly."ⁱⁱ

Background

In 2008 BC passed the Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirements) Act.ⁱⁱⁱ This legislation requires the implementation of a low-carbon fuel standard (LCFS). It mandates fuel suppliers to sell gasoline and diesel containing 5% renewable fuels by 2010, and allows the provincial government to set thresholds for the carbon intensity of fuels, taking into account their entire carbon footprint. The LCFS is intended to reduce the average carbon intensity of transportation fuels by at least 10% by 2020.

The LCFS requires fuel distributors to measure the average carbon intensity of their products and reduce them over time.^{iv} The carbon intensity value is determined by calculating the grams of carbon dioxide yielded per megajoule of energy produced.^v Intensity is measured using a lifecycle or 'well-to-wheels' approach, which takes into account all emissions-creating activities related to the production and use of the fuel, including land use change. The California standard accounts for the reality that GHG emissions associated with land use conversion in oil sands surface-mining are higher (1.5-3.1 gCO₂e/MJ) compared to conventional oil production (0.025-1.40

gCO₂e/MJ).^{vi} This higher value incorporates indirect land-use effects such as peat oxidation that yields CO₂ and tailing pond impacts that contribute to methane, a significant greenhouse gas associated with oil sands surface mining.

This discrepancy has led to reports in the media claiming that the BC LCFS is “oil-sands-friendly” and that the California standard is unfairly stringent on the Alberta oil sands.^{vii} In 2009, the Canadian Natural Resources Minister, Lisa Raitt, complained that the proposed rules appear to single out oil sands producers for punitive treatment, “We are concerned that crude oil derived from Canada’s oil sands may be discriminated against as a high [carbon-intensity] crude oil, while other crude oils with similar upstream emissions are not singled out.”^{viii} The problem is not immediate because California is not currently a substantial importer of oil-sands petroleum^{ix}, however, it does represent a potential future market. The Canadian Association of Petroleum Producers (CAPP) has stated that the oil industry could live with adoption of low-carbon fuel standards, so long as they follow British Columbia’s “oil-sands-friendly” model rather than the California approach.^x The current battle is not as much about changing California’s standard as it is about making sure that future LCFS in Canada and the US follow BC’s format and not California’s.

Conclusion

In trying to lead in meeting their emissions targets within their borders, California could be charged with using protectionist measures and BC could be charged with protecting Canada’s unconventional oil sands emissions in Alberta. In the US, trade associations for the oil, chemical and trucking industries recently filed suit in federal court to make California’s LCFS void for their industries. The suit states that California’s standards are protectionist, discriminating “against transportation fuels imported from outside of California with the intended effect of promoting in-state production of transportation fuels and keeping consumer dollars local.”^{xi} BC has created an alternative approach that critics have identified as more acceptable because they require less adjustment from the oil sands industry. For these regulations to achieve their intended objectives, it is recommended that an improved understanding be developed of the impacts of life cycle assessment (LCA) methods associated with transportation fuels. Moreover, improvements need to be made in quantifying uncertainties and variability in oil sands data; these make it difficult to accurately portray oil sands pathways compared to a conventional crude baseline^{xii}.

BC’s Climate Action Secretariat is currently researching the issue of indirect land-use calculations for the LCFS. The province plans on integrating these more stringent calculations where appropriate by 2012, and this will be a vital move for the province with regard to taking leadership on the issue in Canada and meeting its own efficiency and greenhouse gas reduction objectives.

Sources

- ⁱ Yeh, S. et al. (2009) 'Land Use Greenhouse Gas Emissions for Conventional and Unconventional Oil Production', *Institute of Transportation Studies*, University of California, Davis.
- ⁱⁱ The Globe and Mail, January 7, 2010 'Oil sands producers prefer B.C. carbon rules' by Shawn McCarthy: <http://www.theglobeandmail.com/report-on-business/industry-news/energy-and-resources/oil-sands-producers-prefer-bc-carbon-rules/article1423127/>
- ⁱⁱⁱ Province of British Columbia, 'Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirements) Act' located at the BC government website at: <http://www.bclaws.ca/Recon/document/freeside>
- ^{iv} BC Ministry of Energy, Mines and Petroleum Resources, 'Low Carbon Fuel Requirements Regulation': <http://www.empr.gov.bc.ca/RET/TransportationPolicyPrograms/LCFRR/Pages/default.aspx>
- ^v UK Department of Transportation, January 2008, 'Carbon and Sustainability Reporting Within the Renewable Transport Fuel Obligation: Requirements and Guidance', <http://www.dft.gov.uk/pgr/roads/environment/rtfo/govrecrfa.pdf>
- ^{vi} Yeh, S. et al. (2009) 'Land Use Greenhouse Gas Emissions for Conventional and Unconventional Oil Production', *Institute of Transportation Studies*, University of California, Davis.
- ^{vii} The Globe and Mail, January 7, 2010 'Oil sands producers prefer B.C. carbon rules' by Shawn McCarthy: <http://www.theglobeandmail.com/report-on-business/industry-news/energy-and-resources/oil-sands-producers-prefer-bc-carbon-rules/article1423127/>
- ^{viii} The Globe and Mail, April 23, 2009, 'Oil sands braces for American green fuel regulation' by Shawn McCarthy.
- ^{ix} San Francisco Chronicle, June 6, 2007, 'California standards could crimp Canada oil boom / Schwarzenegger's deals might affect Alberta's tar sands' by Robert Collier: http://articles.sfgate.com/2007-06-06/news/17249554_1_tar-sands-oil-sands-sands-production
- ^x Ibid.
- ^{xi} LA Times, February 3, 2010 'Industries sue to void California's low-carbon fuel regulations' by Margot Roosevelt: http://www.latimes.com/news/local/la-me-oil-suit3-2010feb03_0,4569077_story
- ^{xii} Carpentier, A. (2009) 'Understanding the Canadian oil sands industry's greenhouse gas emissions', *Environmental Research Letters*: 4