

May 4, 2017

Mr. Sam Wade
Branch Chief
California Air Resources Board
1001 I Street
Sacramento, California 95814
sent via email: LCFSworkshop@arb.ca.gov

Dear Mr. Wade:

Re: CAPP Comments on CARB April 4 Public Working Meeting to Discuss Lifecycle Assessment Modeling for the Low Carbon Fuel Standard

The Canadian Association of Petroleum Producers (CAPP) represents companies large and small, that explore for, develop and produce natural gas and crude oil throughout Canada. CAPP's member companies produce about 80 per cent of Canada's natural gas and crude oil.

We appreciate the opportunity to submit comments regarding the proposed Oil Production Greenhouse Gas Emissions Estimator (OPGEE) v.2.a Model revisions as presented by Prof. Adam Brandt on April 4th during the California Air Resources Board (CARB) Low Carbon Fuel Standard (LCFS) Public Working Meeting to Discuss Lifecycle Assessment Modeling. Given the role that crude oil carbon intensity plays in determining diesel and gasoline carbon intensity, it is critical to ensure that the model and input data are robust and vetted. We support the efforts to improve the model and to extend its capabilities. Our comments are focused on the changes relating to Alberta heavy oils and oilsands crudes, including the mining and upgrading processes.

We understand from the presentation that the OPGEE model utilizes data from a variety of public sources including Alberta Energy Regulator (AER) reported energy use, COSIA (Canada's Oil Sands Innovation Alliance) default "templates" for mining and in situ operations, and the former AEMERA (Alberta Environmental Monitoring, Evaluation and Reporting Agency, now Alberta Environment and Parks – Environmental Monitoring and Science Division) data on fugitive emissions. Given the use of this data, we encourage the model authors to identify and address any inherent limitations

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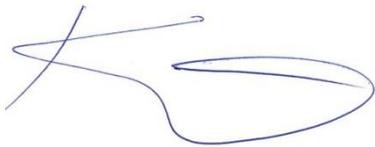
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this data may impose on the model. For example, since the COSIA templates are generic, the ranges provided are indicative of numerous variables, such as ore grade, and are not representative of any one particular facility. Consequently, using this data to represent specific crude types may not result in models that accurately represent those operations or their associated crude carbon intensity. We also note that the representation of cogeneration use in crude production may not be accurately reflected. For example, heat recovery steam generator (HRSG) duct firing is common in oil sands operations, however the model does not appear to include this and its associated higher efficiency; also cogeneration power export may not be accurately reflected.

While we appreciate that the model is open-source and available for all to use, it is inherently complex and difficult to interpret without significant experience using it. Consequently, at this time CAPP does not have specific comments to provide to CARB on the proposed model updates but we do have some questions for clarification. We believe that it would be beneficial for CAPP members to have a detailed discussion with Prof. Brandt to confirm and potentially expand his general understanding of the Alberta heavy and oilsands crude production processes and thus the use of the publically available input data. This discussion would also improve our understanding of the model and its input data, allowing us to comment constructively if necessary, on the proposed changes before the planned July 14th draft carbon intensity values workshop. We plan to reach out to Prof. Brandt over the next few weeks to facilitate a discussion.

CAPP appreciates this opportunity to comment on the proposed OPGEE v.2.a Model changes. If you have any questions, please feel free to contact me at 403-267-1135 or via email at krista.phillips@capp.ca.

Regards,

A handwritten signature in blue ink, consisting of a stylized 'K' followed by a large, sweeping loop that ends in a horizontal line.

Krista Phillips
Manager, Oil Sands