UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 26 2018

OFFICE OF
AIR AND RADIATION

Ms. Tricia Braid
Illinois Corn Communications Director
14129 Carole Drive
Bloomington, Illinois 61705

Dear Ms. Braid:

Thank you for your letter of February 23, 2018, on behalf of 19 signators to U.S. Environmental Protection Agency Administrator E. Scott Pruitt requesting that EPA adopt an updated analysis of the lifecycle greenhouse gas (GHG) emissions associated with corn starch ethanol. The Administrator requested that I respond on his behalf.

The Office of Transportation and Air Quality is responsible for implementing the Renewable Fuel Standard (RFS) program, including evaluation of biofuel lifecycle GHG emissions. Your letter says that EPA's lifecycle analysis of corn ethanol for the March 2010 Renewable Fuel Standard (RFS) rule (the "2010 LCA") is outdated and needs to be updated to reflect improvements in corn and ethanol production. However, for many of the reasons alluded to in your letter, the direct impacts of modifying our corn starch LCA on the RFS program may be quite limited due to the "grandfathering" exemptions and other definitions contained in the Clean Air Act (CAA):

- **The vast majority of corn starch ethanol currently produced in the U.S. is exempt from the 20 percent GHG reduction requirement to qualify as renewable fuel.**[1] CAA 211(o)(2)(A)(i) and 40 CFR 80.1403(d) exempt from the GHG requirements renewable fuel produced at facilities that commenced construction after December 19, 2007, or at ethanol plants fired by natural gas or biomass that commenced construction prior to December 31, 2009.
- **Modifying the 2010 LCA would have no direct impact on the RFS status of existing ethanol plants, even those that are not grandfathered**. Under CAA 211(o)(4)(G), any change in analytical methodology compared to the 2010 LCA, "shall only apply to renewable fuel from facilities that commence construction after the effective date of such adjustment, revision, or change."

[1] In 2017, 14.86 billion RINs were generated for conventional (D-code 6) ethanol. Technically, not all of this ethanol was produced from corn starch (it could be from other starches such as sorghum). Of those 14.86 billion RINs, 13.24 billion or 89% were generated using a grandfathered pathway.

- **The vast majority of corn starch ethanol already qualifies for the only RFS fuel category for which it is eligible.** The definition of advanced biofuel at CAA 211(o)(1)(B)(i) excludes "ethanol derived from corn starch." As described above, a large volume of ethanol is exempt from the GHG requirements to qualify as renewable fuel. Many producers who are expanding beyond their grandfathered baseline capacity have been approved under our expedited Efficient Producer Petition Process.[2]

While we appreciate the point raised in your letter that other countries may use EPA's analysis to justify tariffs or limit exports from the U.S., it is important to note that the 2010 LCA was designed to meet the requirements specified in the CAA. The CAA definition of lifecycle greenhouse gas emissions includes "significant indirect emissions such as significant emissions from land use changes." The scenarios considered for the 2010 LCA were specifically designed to evaluate corn starch ethanol used under the RFS program, and may not apply to other situations or policies. Other countries or jurisdictions reviewing EPA's 2010 LCA as part of their policy formation should do so carefully and appreciate its original purpose and scope. Your letter encourages EPA to adopt either "DOE/Argonne's latest published results or USDA's recently reported data." Both of these studies rely on the GTAP-BIO model to estimate indirect land use change (ILUC) GHG emissions associated with corn ethanol. For many of the reasons described in the March 2010 rulemaking, we continue to believe there are important limitations of the GTAP-BIO model that make it ill-suited for conducting the type of lifecycle analysis required under the CAA. We also note that the USDA report and the DOE/Argonne analyses used a different methodology than EPA's 2010 LCA, and it is not clear whether those studies satisfy the definition of lifecycle GHG emissions required by the CAA.

EPA continues to monitor the science regarding lifecycle GHG emissions associated with biofuels. Overall, new research since the 2010 LCA has improved our understanding of biofuel lifecycle GHG emissions, but given the inherent uncertainty associated with modeling of indirect emissions, the overall conclusions we can draw from this body of modelling have not changed. As we do lifecycle assessments for new fuel pathways, the most recent science and data are incorporated where possible. For example, EPA has updated the analysis to reflect new data on forest carbon stocks, projected yields, and agricultural inputs as appropriate. Our analyses have also incorporated advances in process technology efficiencies as biofuel facilities demonstrate improvements in their GHG emissions.

Your letter states that EPA's forthcoming Triennial Report to Congress "offers a new opportunity" to update our LCA of corn ethanol. The Agency is currently working to complete, in the spring of 2018, the report to Congress required under Section 204 of the Energy Independence and Security Act of 2007 (EISA). It is too early to comment on the contents of the forthcoming report.

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[2] For more information on the Efficient Producer Petition Process, see: https://www.epa.gov/renewable-fuel-standard-program/how-prepare-efficient-producer-petition-under-renewable-fuel

Thank you for your continued interest in RFS program. Please do not hesitate to contact me if you have any questions regarding this matter.

Sincerely,

Karl Simon, Director
Transportation and Climate Division