



February 27, 2024

The Honorable Tom Vilsack
Secretary
U.S. Department of Agriculture
Washington, DC 20250

The Honorable Michael Regan
Administrator
Environmental Protection Agency
Washington, DC 20460

The Honorable Jennifer Granholm
Secretary
U.S. Department of Energy
Washington, DC 20585

The Honorable Michael Whitaker
Administrator
Federal Aviation Administration
Washington, DC 20591

The Honorable Janet Yellen
Secretary
U.S. Department of Treasury
Washington, DC 20220

RE: 40B(e)(2) GREET Model for Sustainable Aviation Fuel Lifecycle Greenhouse Gas (GHG) Emissions

Dear Members of the Sustainable Aviation Fuels Lifecycle Analysis Interagency Working Group:

As the much-anticipated deadline nears for the Interagency Working Group's (IWG) Greenhouse Gases, Regulated Emissions, and Energy Use in Technologies (GREET) model for sustainable aviation fuel (SAF) under Section 40B of the Inflation Reduction Act (IRA), I write on behalf of the members of the American Coalition for Ethanol (ACE) to stress the importance of GHG credits for climate-smart agriculture practices and a final methodology based on scientifically sound, real-world observations of land use change (LUC) instead of inflated assumptions generated from unreliable economic models.

ACE welcomed the initial decision by Treasury to recognize the Department of Energy Argonne National Laboratory's GREET model as a "similar methodology" to determine the GHG emissions of SAF under IRA section 40B because GREET is the global gold standard for calculating GHGs from transportation fuels and is the most up-to-date, accurate model reflecting the best available science, including on-farm practices. However, with the IWG's stated deadline of March 1st approaching, we are concerned President Biden's pledge that farmers would be providing 95 percent of SAF in the next 20 years will go unfulfilled if 40B GREET artificially inflates LUC and fails to properly value climate-smart agriculture practices.

Accompanying this letter is an analysis prepared by Ron Alverson, a member of our board of directors, comparing modeled estimates of LUC – derived from EPA's 2023 modeling comparison exercise (MCE) technical document – to what has occurred in the real world. Some of the models used in EPA's MCE, particularly economic models such as the Global Change Analysis Model (GCAM), generate significant and unverifiable indirect emissions which artificially inflate LUC for corn ethanol.



As our analysis shows, these economic models are wildly inaccurate and therefore unreliable for estimating LUC when compared to historical observations of real-world land use change. For instance, the economic models used in the EPA MCE shortchanged corn yields and production, and overstated conversions to cropland. Specifically, forest to cropland conversions as estimated by GCAM are 34 times higher than historical observations from USDA's National Resource Inventory (NRI). In fact, GCAM was the only economic model to predict significant forest to cropland conversions, which resulted in a total LUC penalty of 31 carbon intensity points assigned to corn ethanol. This is an outrageously high and unscientific estimate compared to other models.

For example, the 2023 version of the GREET model, including its Carbon Calculator for Land Use and Land Management Change from Biofuels Production (CCLUB) module and application of Global Trade Analysis Project (GTAP), results in a 6.84 carbon intensity point LUC penalty assuming corn yield increases, and an 8.64 carbon intensity point LUC penalty holding corn yields constant. GREET results, based on CCLUB and GTAP, continue to be the most closely aligned to observed, real-world LUC from ethanol production. The IWG must acknowledge GREET has proven to be more accurate for estimating LUC, and it would undermine scientific integrity to force unreasonably high LUC penalties from economic model estimations into 40B GREET.

One of the most effective tools at the disposal of the IWG to address concerns about LUC from corn ethanol production is to ensure modifications to GREET, for the purposes of the 40B SAF credit and the 45Z clean fuel production credit, take into consideration the GHG impacts of farming practices. In fact, we believe carbon credits for climate-smart agriculture are essential because they incentivize on-farm practices which can reduce or even prevent LUC-related emissions.

ACE has first-hand experience as a leader in the climate-smart agriculture space. Earlier this year, the United States Department of Agriculture (USDA) made a \$25 million investment in a Regional Conservation Partnership Program (RCPP) led by ACE. The funding will help farmers adopt reduced tillage, nutrient management and cover crops on nearly 100,000 acres across 167 counties surrounding 13 ethanol facilities partnering with ACE to implement the project in the 10-state region of Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Nebraska, Ohio, South Dakota and Wisconsin. The sites were strategically chosen to provide our project's scientific team with statistically significant data regarding the GHG effect of conservation practices in different soil types and climates.

This 10-state project builds our existing South Dakota-specific RCPP project, where more than 15,000 acres of reduced tillage, nutrient management and cover crops are currently under contract in a seven-county area.

ACE and our partners will accomplish three important objectives with this funding support from USDA for the multi-state project. First, we will incentivize farmers in 10 states to adopt conservation practices. Three-fourths of the funding will go toward farmer adoption of practices. Second, our team of soil scientists and agronomists will monitor, measure and verify how the conservation practices adopted by the farmers reduce GHG emissions from corn production. The data they collect will be shared with the U.S. Department of Energy who will use it to pressure test existing models to address real and perceived 'information gaps' which currently prevent farmers and ethanol producers from adequately monetizing climate-smart ag practices.



Third, our ultimate objective is to empower ethanol producers and farmers with modeling and calculator tools to earn higher IRA tax credits and premium prices in clean or low carbon fuel markets based on climate-smart ag practices.

Scientists and modelers indicate crop type, crop yield (total annual photosynthesis), precipitation, soil type, and temperature are essential factors used to determine the GHG benefits of climate-smart agriculture practices. These same modelers and market regulators are reluctant to assign carbon credits for farm-level practices without more locally verified data upon which to validate the GHG benefits. Our USDA RCPP project includes an experienced team of scientists from land-grant universities and the U.S. Department of Energy's Sandia National Lab who have developed a proven mechanism to collect data from farmers in the 167 counties. Our scientific team will be able to assess the real-world carbon sequestration and reductions in carbon dioxide, methane and nitrous oxide emissions from the climate-smart practices and validate them at a high confidence level required by modelers and market regulators.

Our project can help members of the IWG minimize or even control LUC if you ensure GREET is used to provide carbon credits for climate-smart ag practices, not only for 40B, but also for the 45Z clean fuel production credit. GREET currently estimates nitrous oxide emissions from fertilizer use, contains the previously mentioned CCLUB module for estimating LUC penalties and features a relatively new Feedstock-Carbon Intensity Calculator (FD-CIC) module estimating soil carbon emissions and sequestration credits for practices such as conservation tillage and cover crops on corn production.

Farmers and biofuel producers can and should do well by being part of the climate solution. The economic potential of capitalizing on climate-smart farming practices to produce corn ethanol for clean fuel markets or IRA tax incentives is significant. Through the 13 ethanol facilities partnering with us in the multi-grainshred RCPP, there's the potential to remove over 2,679,843 metric tons of CO₂ per year, or the equivalent of taking 596,346 cars off the road annually. Across the 10-state project area, this could amount millions of dollars per year in value from clean fuel markets or properly implemented IRA tax credits. To learn more about this project, visit ethanol.org/usda-rcpp.

Thank you for your time and consideration of these comments, and consider the attached analysis our response to EPA's request for comments on the GHG modeling comparison exercise. Please do not hesitate to contact me if members of your staff would like to learn more about our RCPP project.

Sincerely,

Brian Jennings, CEO
American Coalition for Ethanol