June 19, 2015

Samuel Wade
California Air Resources Board
Branch Chief, Transportation Fuels Branch
1001 I Street
Sacramento, CA 95814

Re: Proposed 15-day Regulation Order containing Modified Text and Availability of Additional Documents and Information for the Proposed Re-Adoption of the Low Carbon Fuel Standard

Dear Samuel Wade:

On behalf of DuPont, thank you for the opportunity to comment on the proposed modified text for the LCFS. DuPont has significant investments in advanced biofuels that meet the specified greenhouse gas reduction threshold. These fuels will make transformative contributions to our nation's energy security, reduce greenhouse gas emissions and strengthen rural economies. These fuels represent a tremendous shift in how we energize our planet and are being commercialized due in large part to visionary state fuels programs like the CA Low Carbon Fuel Standard. We look forward to doing business in California; however, the proposed modification to Provisional Pathways in sections 95488(c)(3) and (c)(4)(I)2 will prevent any new fuel from being sold in California beyond what is being produced today and is so overly restrictive in granting approvals for CI credits that many fuel producers will likely be driven out of business. These hurdles will also discourage additional investment in cellulosic ethanol and other advanced biofuels.

Introduction

DuPont is an industry leader in providing products for agricultural energy crops, feedstock processing, animal nutrition, and biofuels. Our three-part approach to biofuels includes: (1) improving existing ethanol production through differentiated agriculture seed products, crop protection chemicals, as well as enzymes and other processing aids; (2) developing and supplying new technologies to allow conversion of cellulose to ethanol; and (3) developing and supplying next generation biofuels with cellulosic ethanol and biobutanol.

We bring the perspective of a company deeply involved in the agricultural and biofuels industries. Our seed business DuPont Pioneer sells corn seed to farmers growing for a variety of end-use markets, including grain ethanol production. Our intimate relationship with our farmer customers and our extensive research provides us significant insight into the agronomics of the harvest and management of corn stover as a cellulosic feedstock. We provide a variety of products for the grain ethanol business as well, including saccharification enzymes and fermentation processing aids, and so have an intimate knowledge of the operation of these relevant sugar fermentation operations.

DuPont began its research into cellulosic technology a decade ago. What started as a lab scouting project grew into a full scale commercialization effort. In 2009, DuPont opened a demonstration facility in eastern Tennessee producing cellulosic ethanol from both corn stover and switchgrass. For the past four years, we have brought together growers, academia, public

institutions like the USDA and custom equipment makers to conduct harvest trials on corn stover. All this work culminated in the groundbreaking of a 30 million gallon per year facility in December of 2012 in Nevada, Iowa, located approximately 40 miles north of Des Moines. I am happy to report that we are in the very final stages of construction, commissioning has been initiated and we will be open for business later this year. We anticipate that a number of other companies in addition to DuPont will bring cellulosic volumes to the market. Multiple companies are constructing, starting up or operating facilities producing renewable fuels from a wide variety of cellulosic feedstocks including corn stover, switchgrass, wheat straw, municipal solid waste and wood fiber. Many of these are large, well-capitalized, sophisticated companies with long track records in designing, constructing and operating manufacturing facilities. This diversity of operations provides a high level of confidence for multiple technologies succeeding at commercial scale.

In addition to cellulosic ethanol, DuPont is pursuing another advanced renewable fuel with our partner BP in a 50/50 joint venture called Butamax™. The joint venture has developed and extensively tested bio-butanol, a higher alcohol fuel produced by fermenting biomass. Biobutanol has excellent fuel properties, with higher energy density than ethanol and the ability to be distributed via the existing gasoline infrastructure, including pipelines. It also reduces volatility, allowing butanol gasoline blends to be used in the summer in regions that currently require waivers from air quality regulation for the use of ethanol-gasoline blends. Because butanol has less affinity for water and is a weaker solvent than ethanol, it will be more compatible with existing equipment, including small engines.

The proposed modification to Provisional Pathways

In the Proposed 15-day Regulation Order containing Modified Text and Availability of Additional Documents and Information for the Proposed Re-Adoption of the Low Carbon Fuel Standard, the Air Resources Board proposes the following:

> (2) Provisional Pathways. As set forth in sections 95488(c)(3) and (c)(4)(I)2., LCFS fuel pathways are generally developed for fuels that have been in full commercial production for at least two years. In order to encourage the development of innovative fuel technologies, however, applicants may submit New Pathway Request Forms, as set forth in section 95488(c)(1), covering Tier 1 and Tier 2 facilities that have been in full commercial operation for less than two years, provided they have been in full commercial production for at least one full calendar quarter. If that form is subsequently approved by the Executive Officer, as set forth in section 95488(c)(2), the applicant shall submit operating records covering all prior periods of full commercial operation, provided those records cover at least one full calendar quarter. The following subsections govern the development, evaluation, and post-certification monitoring of such provisional pathways.

Following the provisional certification of a fuel pathway application, the applicants shall submit copies of receipts for all energy purchases each calendar quarter until the Executive Officer is in possession of receipts covering two full calendar years of commercial production. At any time during those two years, the Executive Officer may revise as appropriate the plant's actual operational CI based on those receipts. Based on timely reports, the applicant may generate provisional credits. Such credits may not be sold, transferred, or retired for compliance, nor may fuel with a provisional CI be transferred with obligation. The applicant may not sell credits generated under a provisionally-approved fuel pathway, or transfer the provisional fuel with obligation, until the Executive Officer has adjusted the CI or informed the producer that the provisional CI has been successfully corroborated by operational records covering a full two years of commercial operation.

(A) If the plant's operational CI is higher than the provisionally-certified CI, the Executive Officer will replace the certified CI with the operational CI in the LRT-CBTS system and adjust the producer's credit balance accordingly.

(B) If the plant's operational CI appears to be lower than the certified CI, the Executive Officer will take no action. The applicant may, however, petition the Executive Officer for a provisional CI reduction to reflect operational data. In support of such a petition, the applicant must submit a revised application packet that fully documents the requested reduction.

Analysis and Recommendations

The proposed text is overly restrictive and burdensome for both California and biofuels interests that are set to bring new technologies and fuels to market in California. DuPont fully appreciates the need for accurate CI values for fuel that is sold pursuant to the LCFS while also encouraging production and growth for the advanced biofuels sector. For this reason, we are highlighting the following major concerns with the proposed modified text from above:

1. Requiring biofuels manufacturers to produce commercial fuel for a full calendar quarter prior to submitting New Pathway Request Forms is overly burdensome, unnecessary and does not meet the stated goal of encouraging the development of innovative fuel technologies. Fuel and plant specific data if it is required to be submitted to the Air Resources Board prior to commercial production will provide the requisite information

needed for a Fuel Pathway. In addition, actual biofuel production for the first quarter or any period thereafter does not warrant a de facto CI value equal to gasoline.

2. A provisional certification that prevents a biofuels producer from generating certified CI credits (not provisional credits) for any period of time will prevent fuel from being sold in California. DuPont's cellulosic ethanol is being manufactured in Iowa. Without the benefit of the CI credit, it would be unreasonable for us to make special arrangements to ship our fuel to California. In addition, obligated parties in California would have no reason to purchase fuel without CI credits. Given their obligations under the LCFS, they would need to purchase fuel with CI credits.

3. The provisional certification covering two full calendar years of commercial production will drive many biofuel producers out of business. New technologies and plants are especially sensitive to economics. New facilities need to be able to sell fuel for full market value from initial production in order to survive. In addition, encouraging growth in the cellulosic and advance biofuels sector can only be achieved with supportive federal and state biofuels policies. A provisional certification will discourage rather than encourage growth.

Given the concerns above, we recommend that the Air Resources Board significantly revise the details for Provisional Pathways and Fuel Pathways. While there may be some situations when provisional pathways and/or provisional certifications should apply, a blanket provisional pathway or certification is fundamentally unfair to all new biofuels facilities that are not yet producing fuel. In addition, the provisional certification would put new facilities at a disadvantage to facilities that received pathway approval prior to start-up under the current regulation. For all biofuel producers who intend to sell in California, there should be an immediate pathway to qualifying for CI credits. Any waiting period, even six months is burdensome and will discourage fuels being sold in California. DuPont absolutely supports the energy data collection via copies of receipts on a quarterly basis so that the Air Resources Board can adjust the CI value as needed. We would also support additional auditing measures if it meant that certified CI credits would be available to fuel producers upon commercial fuel production.

Thank you for the opportunity to comment on the Proposed 15-day Regulation Order for the Proposed Re-Adoption of the Low Carbon Fuel Standard as this is an important issue for DuPont's biofuels business. Please contact me at Jan.Koninckx@dupont.com if you have any questions about the comments provided.

Sincerely,

Jan Koninckx, Global Business Director for Biorefineries
DuPont Industrial Biosciences