



August 2, 2024

New Mexico Environment Department 1190 St. Francis Drive, Suite N4050 Santa Fe, NM 87505

Re: SWTCH Energy Inc. ("SWTCH"), ChargePoint and Electrify America Comments on New Mexico Environment Department ("NMED") Clean Transportation Fuel Standard Advisory Committee Technical Report

Dear Bureau Chief Borchert and Director Miano:

SWTCH, Electrify America and Chargepoint ("EV Charging Joint Parties") respectfully submit these comments on the Clean Transportation Fuel Standard Advisory Committee Technical Report dated July 26, 2024. The signatories of this letter represent leading providers of electric vehicle (EV) charging software, hardware, and services with significant experience in clean fuel market development and participation across North America.

#### **Background**

#### About SWTCH

SWTCH is a leading provider of electric vehicle (EV) charging and energy management solutions for multifamily, commercial, and workplace properties. Our end-to-end solution optimizes EV charging usage and manages load to benefit drivers, property owners, and the grid. With over 15,000 chargers deployed across North America, SWTCH participates in U.S. and Canadian markets with clean transportation fuel programs. SWTCH's charging management platform is built upon a foundation of open communication standards and interoperability to prevent stranded assets and to ensure future flexibility, scalability, and innovation.

#### About Electrify America

Electrify America, the largest provider of hyper-fast chargers—those offering charging speeds of up to 350kW—in the U.S. The company is investing more than \$2 billion over 10 years in Zero Emission Vehicle infrastructure, education and access. This investment will enable millions of Americans to discover the benefits of electric driving and support the build-out of a nationwide network of ultra-fast community and highway chargers that are convenient and reliable. To date, Electrify America has built a coast-to-coast network of DCFC stations across over 900 locations and with over 4,100 individual DC fast chargers in total. In New Mexico, Electrify America currently operates 9 direct current fast charging ("DCFC") stations with 49 DC individual fast chargers, and with more DCFC stations under development within the state.

#### About ChargePoint

Since 2007, ChargePoint has been committed to making it easy for businesses and drivers to go electric with one of the largest electric vehicle (EV) charging networks and a comprehensive portfolio of charging solutions. ChargePoint's cloud subscription platform and software defined charging hardware is designed internally and includes options for every

charging scenario from home and multifamily to workplace, parking, hospitality, retail, corridor, and fleets of all kinds. ChargePoint's primary business model is to sell our integrated charging software and hardware solutions directly to site hosts and provide services that enable them to provide charging services that align with their specific needs.

#### <u>Comments</u>

#### Automatic Acceleration Mechanism

EV Charging Joint Parties support several members favoring "the inclusion of a mechanism that automatically adjusts the CI [Carbon Intensity] target downward if certain conditions are met, namely the credit price decreasing beyond an established threshold."<sup>1</sup> Adding an automatic acceleration mechanism to the CTFS CI target will help avoid the market price volatility that other U.S. clean fuel programs such as California's Low Carbon Fuel Standard have experienced.<sup>2</sup>

#### Default EV Charging Credit Generators and Credit Assignment

EV Charging Joint Parties appreciate the Advisory Committee's attention to assigning default EV charging credit generators. <u>EV Charging Joint parties support credits accruing by default to network operators, with a condition that the network operator shall reinvest those proceeds into deploying charging infrastructure.</u>

Under the Summary of Oral Input, the Technical Report states "members suggest that credits generated from electricity used for residential transportation fuel should be assigned to the utility by default."<sup>3</sup> This credit generation and assignment structure reflects other U.S. states' clean transportation fuel programs. Under these programs, non-residential EV charging credit generation is assigned to the charging station equipment owner by default. Non-residential credits are generated for public, workplace, fleet, and multifamily housing (greater than four units) and the charging station owner can designate another entity to generate credits on their behalf such as a charging network operator.<sup>4</sup>

EV Charging Joint Parties encourage the NMED to to consider Canada's Clean Fuels Regulations ("CFR") as an alternative model. Under CFR, there are two main classifications of EV credit generators<sup>5</sup>:

- 1) EV charging network operators managing public or residential metered EV charging;
- 2) Charging site hosts who lease or own and install chargers for their fleets

EV charging network operators are defined as an entity that "operates a communication platform that collects data on the electricity supplied by a charging station and who is the

<sup>&</sup>lt;sup>1</sup> New Mexico Environment Department. *Clean Transportation Fuel Standard Advisory Committee Technical Report ("Technical Report")*. p. 13. July 26, 2024.

<sup>&</sup>lt;sup>2</sup> Sheehey, Phillip, Fang Yan. February 2024. *Analyzing Future Low Carbon Fuel Targets in California. Response to Staff Report.* p. 1-2.

https://static1.squarespace.com/static/5b57ab49f407b4a7ffa44ffa/t/65cd3c74d1a72f445cdc7a7e/170794917 3143/ICFReport2024.pdf

<sup>&</sup>lt;sup>3</sup> *Technical Report.* p. 9.

<sup>&</sup>lt;sup>4</sup> Rosenberg, Évan. *Role of EV Charging Under Clean Fuel Standards*. SRECTrade. Presented at July 12, 2024 CTFS Advisory Committee meeting.

<sup>&</sup>lt;sup>5</sup> Somers, John. "Utilizing the Canadian Clean Fuel Regulations credit program to help green your fleet." Electric Autonomy. April 10, 2024.

owner of that data."<sup>6</sup> By contrast a charging-site host "owns or leases a charging station and who has the legal right to have the charging station installed."<sup>7</sup> If credits are generated by an EV charging network operator, that entity must either "(a) expand electric vehicle charging infrastructure, including charging stations and electricity distribution infrastructure that supports electric vehicle charging, or; (b) reduce the cost of electric vehicle ownership through financial incentives to purchase or operate an electric vehicle."<sup>8</sup> By allowing credits to be generated by a network operator, these businesses are uniquely well positioned to accelerate the continued buildout of New Mexico's EV charging network. This reinvestment creates a virtuous cycle that will be critical to New Mexico achieving its policy goals such as Advanced Clean Cars II. Moreover, network operators have better access to data collection and reporting, which improves compliance outcomes.

#### **Monitoring Plans and Third-Party Verification**

Administratively burdensome monitoring plans and third-party verification should be minimized. These programmatic elements add cost and require additional resources, thereby increasing barriers to market participation and reducing the economic incentive of credit generators to participate. Instead, EV Charging Joint Parties recommend that NMED adopt existing solutions. For example, NMED can streamline monitoring and reporting by adopting basic Energy Economy Ratios (EER) values for vehicle types to simplify credit calculations. Additionally, NMED should wait at least one year before any kind of internal program audit is conducted and third-party verification is pursued. EV Charging Joint Parties support desktop reviews as a primary credit verification method for fueling activities such as EV charging, where fueling meters are dispersed across large geographic areas and the risk of inaccuracy is extremely low.

#### <u>Closing</u>

EV Charging Joint Parties appreciate the opportunity to submit comments on the Clean Transportation Fuel Standard Advisory Committee Technical Report. We look forward to continuing to engage in the rulemaking process, and please reach out if we can provide additional information.

Respectfully,

Ben Brint Policy Manager, Western U.S. SWTCH Energy Inc.

Anthony Willingham Government Affairs & Public Policy Lead – State Government Electrify America, LLC

Mal Skowron Manager, Regulatory Policy ChargePoint, Inc.

<sup>&</sup>lt;sup>6</sup> Government of Canada. *Clean Fuel Regulations (SOR/2022-140)*. Section 1 Interpretations, 1(1) Definitions. Registered June 21, 2022.

https://laws-lois.justice.gc.ca/eng/regulations/SOR-2022-140/page-1.html#h-1358715

<sup>&</sup>lt;sup>7</sup> Clean Fuel Regulations (SOR/2022-140). Section 1.1(1).

<sup>&</sup>lt;sup>8</sup> Clean Fuel Regulations (SOR/2022-140). Section 105 Compliance Credits, 103(a)(b) Use of revenue - electric vehicles. https://laws-lois.justice.gc.ca/eng/regulations/SOR-2022-140/page-12.html



August 2, 2024

New Mexico Environment Department Harold L. Runnels Building 1190 St. Francis Drive, Suite N4050 Santa Fe, NM 87505

Submitted via https://nmed.commentinput.com/?id=fG3AeTk6d

To Whom It May Concern:

On behalf of HF Sinclair Navajo Refining LLC ("HF Sinclair"), I would like to submit the following information to the New Mexico Environment Department's ("NMED" or the "Department") request for comment on New Mexico's Clean Transportation Fuels Standard ("CTFS") Advisory Committee Technical Report ("the Report"). This Report, as required by New Mexico House Bill 41 (HB 41), relays comments and suggestions collected by the Committee during its three meetings in order to instigate a robust discussion for NMED's consideration as it initiates the rulemaking process for CFTS in New Mexico.

#### Who We Are

HF Sinclair is an independent petroleum refining company with domestic operations across the Southwest, Rocky Mountains extending into the Pacific Northwest and in other neighboring Plains states and supplies high quality fuels to more than 1,500 branded stations. HF Sinclair is proud to have operated within the state of New Mexico for nearly 50 years and employs approximately 575 dedicated individuals in Eddy, Lea, and Bernalillo Counties. The Navajo Refinery in Artesia can process over 100,000 barrels of crude oil per day – primarily sourced from Permian crude fields – and manufactures nearly enough fuel to meet the State's daily road transportation demand. HF Sinclair's petroleum products are sold on a wholesale basis and delivered to several markets across the region. In addition to HF Sinclair's petroleum business, the Company has invested approximately \$650 million in New Mexico specifically dedicated to the production and processing of renewable diesel. The Navajo Refinery now produces 9,000 barrels per day of renewable diesel and operates a pretreatment unit which allows the facility to process different variations of low carbon feedstocks.

Throughout the limited stakeholder engagement process preceding the release of the Report, HF Sinclair and its subsidiaries have routinely provided NMED with feedback regarding the potential structure of the New Mexico CTFS. Specific to the current rulemaking being undertaken by NMED, we believe the following statements are relevant to the proper development of a new CTFS in the State of New Mexico.

#### **Advisory Committee Structure**

The legislative framework of House Bill 41 is relatively bare, allowing for significant adjustment by the Environmental Improvement Board and its technical Advisory Committee. The Committee advises on the development of rules related to the CFS and will periodically review them.

Per House Bill 41, codified at NMSA 1978, Sections 74-1-3, 7(A)(15), 8(A)(15), and 18, the New Mexico Environment Department established an Advisory Committee to provide technical input on the rules that



will govern the State's program. As directed by Section 74-1-18, NMED sought CTFS Advisory Committee members from transportation fuel producers and distributors, utilities, environmental protection groups, environmental justice groups, Tribal and local government representatives, and others with relevant expertise. As New Mexico's only gasoline and diesel producer in operation – and the only renewable diesel producer in New Mexico – HF Sinclair would seem to have been an obvious choice for the Advisory Committee. Presumably, the company's exclusion was made in error, but when the concern was raised with NMED, the Department informed HF Sinclair that there were no available seats for the company. However, statutorily, HB 41 does not limit the seats on Advisory Committee seats, and NMED continued to add participants while still excluding HF Sinclair

#### **Advisory Committee Meeting Schedule and Format**

HF Sinclair anticipated not only a more robust and detailed agenda for each meeting but expected policy options to be discussed and analyzed in detail while incorporating stakeholder feedback. Instead, the Advisory Committee convened by the Environmental Improvements Board seemed to convene "listening sessions," and the Report is si a compilation of submitted presentations, notes, and letters or comments. This could result in poorly considered implementing regulations and thwart the potential of the new state CFTS. HF Sinclair believes that a more detailed process could have helped New Mexico develop a rule that more easily achieves stated goals of HB 41.

Given the role the committee plays in the development of regulatory standards, NMED is advised that rules of administrative due process as reflected in the NM Administrative Procedures Act, NM Stat Section 12-8-1 et seq (2023) should be regarded as applicable to this Committee advisory process. Unfortunately, the spirit and letter of the NMAPA appears to be violated by a failure to adequately represent the regulated community on the Committee and the failure to produce a report of sufficient use and comprehensiveness to inform the rulemaking process.

#### NMED Should Adopt a Hybrid Program Incorporating Key Elements from California and Oregon

New Mexico is the fourth state to pass a clean fuel standard and the first non-West Coast state to do so. New Mexico differs from California, Oregon, and Washington in fuel transport systems and in-state oil refining capabilities, so it would benefit from modeling certain aspects of its State program after key components of the existing clean fuel standards to better account for some of New Mexico's situation. Both Oregon's and Washington's clean fuel standard incorporates certain aspects of the California LCFS, and in turn, these two states also present established programmatic considerations for NMED. New Mexico's CTFS as laid out by HB 41 is modeled largely after the California LCFS.

HF Sinclair raises two items for consideration: first, that New Mexico incorporate into its CFTS the California LCFS petroleum-based crediting regulation, which is discussed in more detail below; and second, that NMED replace the B5 and E10 baselines with baselines that reflect the true fuel mix of New Mexico in 2018 per the statute.

California's program has been underway since 2011, so it is an established model for state programs that follow in its footsteps while also providing critical lessons learned.

Oregon's Clean Fuels Program is more similarly positioned to New Mexico in implementation structure and development, as it is a more recently implemented program; therefore, HF Sinclair believes that New



Mexico should model their program after the Oregon Clean Fuels Program as much as possible. In HF Sinclair's experience in navigating multiple low carbon programs, it will be more effective learning and modelling from other programs in an effort to achieve the program objectives more efficiently and potentially avoiding program delays.

New Mexico's CTFS sets an incredibly ambitious timeline for baseline carbon intensity reductions. In order to achieve these reduction goals efficiently, HF Sinclair encourages NMED not to waste valuable time and resources reinventing the wheel and instead adopt certain measures from existing state clean fuel standards.

## HF Sinclair Agrees with NMED that the New Mexico Clean Transportation Fuel Standard Must Be Technology Neutral

HF Sinclair supports the decision to make New Mexico's new Clean Transportation Fuel Standard technology neutral. HB 41 has set out an aggressive carbon reduction schedule – of 20% reductions in carbon intensity by 2030 from 2018 baseline levels and 30% by 2040 – that can best be met by recognizing all carbon reductions opportunities from the transportation sector. HB 41 Section 4C(3) states that the CTFS rules shall:

[e]stablish technology-neutral mechanisms for generating, obtaining, trading, selling and retiring credits among transportation fuel producers, fuel distributors and other individuals or entities in the transportation fuel market, including additional credit opportunities from activities and projects that support the reduction or removal of greenhouse gas emissions associated with transportation in the state.

Projects that reduce greenhouse gas emissions in the petroleum supply chain should not be marginalized in NMED's new CTFS and instead should be granted similar allowance as in the California LCFS program structure, which allows for innovative crude oil and refinery investment credit programs, along with renewable hydrogen and carbon capture and sequestration projects. Therefore, in accordance with the technology neutrality mandate as set out in statute, HF Sinclair recommends that NMED include petroleum crediting opportunities, including credits for producing and transporting crudes using innovative methods and refinery investment credits.

Allowing for petroleum-based credits matches the technology-neutral mandate called for in the statute. Furthermore, with an average vehicle age in New Mexico of nearly 14 years,<sup>1</sup> and gasoline and diesel vehicles continuing to be sold today, petroleum-based fuels will be on the road for years. Allowing these credits incentivizes actual carbon reductions from the transportation sector in light of the incumbent vehicle fleet turnover.

As mentioned briefly above, HF Sinclair recommends that NMED model a petroleum-based credit program after California's Code of Regulations Title 17, Section 95489 of the Low Carbon Fuel Standard. This Section, subsection a-b, requires a calculation of an annual Crude Average carbon intensity value for each calendar year using a volume-weighted average of crude carbon intensity values. HF Sinclair supports the inclusion of subsections c-e, which outline the petroleum-based crediting process; in particular, the

<sup>&</sup>lt;sup>1</sup>Alliance for Automotive Innovation, "State Facts: New Mexico," 2021,

https://www.autosinnovate.org/resources/insights/nm#:~:text=The%20New%20Mexico%20average%20age,as%20 of%20December%2031%2C%202022.



company supports subsection c, "Credits for Producing and Transporting Crudes using Innovative Methods" and suggests this should be allowed and modeled after California, which requires the crude to be delivered to a state refinery.

#### Grandfather Low-Carbon Fuel Pathways from California, Oregon, or Washington

Standing up an ambitious environmental program like a new clean fuel standard requires significant time investments from regulators and potential program participants. An overly burdensome implementation process could result in significant delays of the program. Therefore, many environmental programs have been most successful in achieving regulatory goals when the program is implemented in a phased approach that acknowledges where the regulated community is at the start of the program and sets out clear, stepwise targets for achieving the ultimate carbon reduction goal.

One time-intensive portions of implementing a new clean fuel standard is the evaluation of eligible lowcarbon fuel pathways. New Mexico's CTFS will have to require pathway verification for every low-carbon liquid fuel producer that may supply product to the state.

Unless NMED takes precautionary action, pathway approval will cause a significant delay in the full implementation of the CTFS while the state and fuel providers wait for verification of the low-carbon fuel applications. The quickest way for fuel pathways to become allowed to participate in the New Mexico CTFS and thus more rapidly achieve the state's ambitious GHG reduction goals is for NMED to permit via regulation that fuel pathways that are already certified for participation in California, Oregon, or Washington are valid for use in New Mexico for the start of its CTFS program. Alternatively, the fuel pathway holder could submit the verification report from California, Oregon, or Washington. Washington State began its clean fuel standard in a similar manner, initially accepting verification reports from California and Oregon of approved pathways.

While temporary pathways may be helpful for new facilities without operational Carbon Intensity targets (CIs), many producers who anticipate participating in the NMED CTFS have years of operational data that has already been through a robust verification and validation process. New Mexico will be better able to incentivize imports of the low-carbon fuels it needs by allowing producers to use existing pathways in other programs while NMED evaluates their applications.

HF Sinclair suggests that NMED not start from scratch and instead allow fuel pathways' well-to-wheels carbon intensity (CI) that is registered in California, Oregon, or Washington's low carbon fuel program to be grandfathered into New Mexico's CTFS. This process will provide additional assurances to fuel producers that a fuel will be compliant under the CTFS and will encourage increased adoption of the program requirements.

#### **Delay Consideration of Crop-Based Fuels Cap**

In the June 28 Advisory Committee meeting, members discussed the possibility of placing a cap on cropbased biofuels. Industry experts have yet to reach a consensus on the need for this cap, and, as one Advisory Committee member pointed out, this cap could have unintended consequences on sought-after fuels such as cellulosic ethanol and ethanol-based jet fuels. Currently, none of the other state programs have put a cap



in their rules. Notably, California Air Resources Board decided against such a cap on crop-based fuels in their latest proposed program amendments, citing "limited data, analysis, and supporting documents."<sup>2</sup>

Given the aggressive timeline that NMED is under to implement this program and the limiting nature of a crop-based fuels cap, HF Sinclair recommends that NMED move this topic to a later rulemaking where they can refine the original rule to better serve New Mexico's needs.

#### Allow Book and Claim for RNG

New Mexico has set out an ambitious timeframe for baseline reduction of greenhouse gas emissions in the new CTFS, so HF Sinclair recommends NMED include renewable natural gas (RNG) as a credit-generating fuel in the program. RNG offers numerous benefits as New Mexico begins the process of decreasing the use of carbon-intensive fuel sources in the state, from being a feedstock for renewable hydrogen to simply displacing the use of traditional natural gas. RNG can be produced by a variety of commercially available methods which have preferential lifecycle GHG performance. The clean fuel standards in both California and Oregon include RNG with favorable CI modeling, setting the precedent for New Mexico's inclusion of RNG in its new CTFS.

However, for RNG to be included in New Mexico's CTFS, NMED must permit a book and claim accounting model for RNG. As you are aware, the book and claim system is a valuable tool that provides an opportunity to de-couple specific environmental attributes from the physical product, such as reduced GHG emissions, and transfer them separately to another party via a dedicated registry. Without book and claim, RNG accounting would be an insurmountable challenge, as direct transfer of RNG from the producer to the facility or end user is an unrealistic verification alternative.

RNG has the ability to displace traditional natural gas and replace it with a product that has proven significant carbon reduction benefits. Use of this product to decarbonize the transportation market can be enhanced if it is allowed to generate credits not only when used in CNG vehicles, but also when used in place of natural gas in the production of renewable and petroleum-based fuels.

#### **Auto-Acceleration Mechanism**

The Report raises the question of including a mechanism that automatically adjusts the CI target downward if certain conditions are met, namely the credit price decreasing beyond an established threshold would be a valuable tool for ensuring the program achieves its long-term goals."<sup>3</sup>

An auto-acceleration mechanism has not yet been implemented in a state Clean Fuels Program. Given New Mexico's statutory reduction requirement of 20% by 2030, it is unlikely that the state will accumulate enough credits to trigger this mechanism in the first years of the program. Therefore, as with the crop-

https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/lcfs\_meetings/LCFSpresentation\_02222023.pdf

<sup>&</sup>lt;sup>2</sup>California Air Resources Board, "Low Carbon Fuel Standard Public Workshop: Potential Regulation Amendment Concepts," Feb. 22, 2023 at 37,

<sup>&</sup>lt;sup>3</sup>New Mexico Environment Department, "Clean Transportation Fuel Standard Advisory Committee Technical Report," July 26, 2024 at 13,

https://cloud.env.nm.gov/resources/ translator.php/OWJiMDAzNWVhMzJjZTAzMWRmZGZhNjdjOV8xNjQxNTg~.pd f



based caps, HF Sinclair recommends deferring a decision on auto-adjustment mechanisms to a future rulemaking.

Thank you for your consideration of the above comments by HF Sinclair. Please do not hesitate to contact me at <u>lisa.coachbuilder@hfsinclair.com</u> if you have any questions.

Sincerely, Lien Coachbailter

Lisa Coachbuilder Manager, Renewable Fuels Regulatory Compliance HF Sinclair Corporation

#### PACT Comments on Clean Transportation Fuel Standards Advisory Committee Technical Report

#### I. Introduction

Powering America's Commercial Transportation ("PACT") is pleased to provide these Comments in response to the New Mexico Environment Department's ("NMED") Clean Transportation Fuel Standards Advisory Committee Technical Report. PACT is encouraged to see the NMED's focus on medium- and heavy-duty ("M/HD") charging in this proposal, demonstrated by NMED's consideration of options to help M/HD vehicles scale. In these comments, PACT proposes a series of recommendations intended to strengthen a M/HD capacity crediting program. In addition, PACT appreciates the consideration of a capacity credits program and looks forward to continued engagement with NMED and Program Staff as the final program is developed.

#### II. About PACT

PACT is a coalition dedicated to accelerating the development and deployment of reliable nationwide charging infrastructure for medium- and heavy-duty zero emission vehicles ("M/HD ZEVs").<sup>1</sup> Our membership comprises stakeholders across the transportation electrification ecosystem, including leading truck manufacturers, charging infrastructure technology providers and developers, commercial fleets, fleet management companies, and utilities.<sup>2</sup> PACT is committed to promoting productive cross-sector collaboration to advance policies and regulations that improve access to and reduce barriers for M/HD charging infrastructure. PACT engages nationally on matters related to transportation electrification ("TE"), including and not limited to project energization timelines, infrastructure funding strategies, and make-ready programs. Such engagement is intended to accelerate the deployment of M/HD ZEVs and its attendant infrastructure.

#### III. PACT Engagement in Other LCFS/CFS Programs

PACT is pursuing engagement on NMED Clean Transportation Fuel Standard Rulemaking for multiple reasons, including and not limited to encourage alignment with similar programs being enacted (or updated), such as California Low Carbon Fuel Standard ("LCFS") Program and Washington's Clean Fuel Standard ("CFS") Program, where PACT is actively responding to the

<sup>&</sup>lt;sup>1</sup> M/HD refers to Class 6 - 8 vehicles, according to the Federal Highway Administration <u>https://afdc.energy.gov/data/10381</u>

<sup>&</sup>lt;sup>2</sup> PACT membership comprises ABB E-mobility, Amazon, Alpitronic, BC Hydro, Burns & McDonnell, Chateau Energy Solutions, Cummins, Daimler Truck North America, EV Realty, Forum Mobility, Geotab, Greenlane, InCharge, InductEV, J.B. Hunt Transport, Inc., Mortensen, Navistar Inc., Penske, Pilot Flying J, Pioneer eMobility, PittOhio, Prologis, Voltera, WattEV, Volvo Group North America, and Zeem Solutions.

Rulemakings. In California, PACT submitted comments in response to California Air Resources Board's ("CARB's") April 10, 2024, workshop regarding the proposed LCFS Program Amendments. PACT's comments expressly supported CARB's proposal to create a M/HD-FCI Program and provided recommendations for how the program may be strengthened to maximize the benefits of the program according to key industry stakeholders. In our Washington State engagement, PACT stated that the Clean Fuel Standard (CFS) has incredible potential to support decarbonization initiatives in Washington, and the state's overarching climate and clean air goals. PACT hopes that, in recognition of Ecology's aims to align the CFS with that of California, PACT's recommendations will be taken into consideration by the CFS and Climate Pollution Reduction Program Staff.

In New Mexico, ample charging infrastructure is critical to achieving state decarbonization targets, including the Advanced Clean Trucks ("ACT") regulation, which Governor Lujan Grisham adopted in 2023. The Clean Transportation Fuel Standard in particular–especially if adopted with PACT's recommendations provided below–will encourage the transition to M/HD ZEVs and support the build out of the necessary charging infrastructure because it will demonstrate the availability of important investment opportunities to key stakeholders.

PACT encourages New Mexico to align provisions of the Clean Transportation Fuel Standard program related to capacity credits with those under development by the CARB, and the Washington Department of Ecology. Alignment on capacity credit provisions will not only support New Mexico's clean air, climate, and TE goals, it will also improve cross-regional collaboration and market stability. Ensuring that the state's programs are aligned today will set the region on a strong path towards supporting the eventual electrification of the entire corridor, and will provide industry with the requisite market stability to make the necessary investments today.

#### IV. Fast Charging Infrastructure Capacity Credits

PACT strongly encourages NMED to consider adopting capacity crediting and to include provisions specific to the M/HD sector, and believes it is important to underscore the potential impact that such provisions would have on the market. The consideration to adopt capacity crediting would play a key role in ensuring that additional investments are made in M/HD ZEVs and the requisite charging infrastructure. This will, in turn, send clear market signals to the M/HD sector and its stakeholders that the industry can feel confident that the support needed to advance M/HD ZEVs will be available.

The Clean Transportation Fuels Program has the potential to be a paradigm-shifting resource to help New Mexico meet its electrification targets laid out in the ACT rule.

#### A. Include Private Charging

PACT strongly believes that the inclusion of private fleet charging sites would vastly expand the potential benefits of this program - specifically eligibility for shared use depots with access for multiple fleets. Private charging credits are critical to the success of M/HD charging in general as trucks refueling at private depots and public stations will both need the necessary infrastructure to continue operations. Including and expanding credits to private charging will help reduce the steep initial costs associated with the buildout of infrastructure and will better align with unique refueling needs of truck fleets. Current operational needs are diverse across M/HD sectors, and vary across many use cases and business needs.

Furthermore, with respect to meeting ACT mandates and other environmental improvement targets, the benefits provided by electric trucks do not depend on whether the charging infrastructure used is public or private. Equal treatment for public and private charging infrastructure will expand the anticipated climate as well as revenue benefits of the Clean Transportation Fuel Standard program and incentivize maximum participation.

#### V. Conclusion

PACT is pleased to provide these comments in response to the New Mexico's Clean Transportation Fuel Standard. PACT applauds NMED's progress towards developing a successful Clean Transportation Fuel Standard, and provides the following recommendations:

- Include capacity crediting for M/HD zero-emission vehicles.
- Include private charging in capacity crediting, including shared depots with multiple *fleet access.*
- Align with other state standards for cross regional collaboration and market stability.

PACT looks forward to continued engagement on this important program.

Sincerely, PACT

> /s/ David Bonelli Partner Venable LLP On behalf of PACT



August 2, 2024

Michelle Miano Environmental Protection Division Director New Mexico Environment Department 121 Tijeras Ave NE, Suite 1000 Albuquerque, NM 87102

Claudia Borchert Climate Change Bureau Chief New Mexico Environment Department 1190 St. Francis Drive, Suite N4050 Santa Fe, NM 87505

Submitted online via nmed.commentinput.com

#### **RE: 3Degrees Comments in Response to Clean Transportation Fuel Standard Advisory Committee Technical Report**

Dear New Mexico Environmental Department (NMED) Staff

Thank you for the opportunity to provide comments in response to the Clean Transportation Fuel Standard (CTFS) Advisory Committee Technical Report published July 26, 2024. 3Degrees Group Inc. ("3Degrees") is a global climate and clean energy solutions provider and is a strong supporter of the CTFS. We participate in existing clean fuel programs across North America as a designated reporting entity on behalf of a variety of opt-in parties with light-duty electric vehicle (EV) chargers, electric forklifts, hydrogen forklifts, and heavy-duty EV fleets. We are also an active fuel pathway developer.

Our initial recommendations for the CTFS regulation are outlined below. We look forward to engaging with Staff on these and other priorities leading up to, and during, the upcoming formal rulemaking process.

#### 3Degrees recommends that NMED recognize a "book-and-claim" accounting approach to substantiate renewable electricity using renewable energy credits (RECs).

Matching of off-site renewable electricity resources with EV charging via a book-and-claim accounting methodology is an established and effective means of substantiating a lower carbon intensity (CI) score for electric vehicle charging. RECs are recognized across the country in a plethora of policies as the mechanism used to track, transact, and consume renewable electricity on the shared North American grid. In California, Oregon, and Washington's clean fuel standard programs, participants may retire RECs in the Western Renewable Energy Generation

Information System (WREGIS) that meet certain criteria in proportion to the number of MWh that are used to charge qualifying electric vehicles. Typically, participants can claim a CI score of zero when pairing electricity with RECs from resources such as solar, wind, hydropower, or other non-emitting generators. As New Mexico falls primarily within WREGIS's operating territory and WREGIS allows RECs to be generated from generators within all of New Mexico, we recommend that NMED use this tracking system as well.

NMED should develop its own criteria for REC eligibility, similar to what California has done for their Low Carbon Fuel Standard program, rather than relying on any existing third-party certification. Using an external certifier presents unnecessary regulatory risk as standard changes could occur without input from the public or approval by NMED. Requirements to be established by NMED could include things like a minimum commercial online date for the generating facility, specific types of renewable resources, and a maximum age (vintage) for RECs from their point of generation, among others. 3Degrees would welcome the opportunity to consult with NMED to create reasonable rules that ensure that the benefits of the renewable energy counted in the CTFS are experienced locally.

In addition, we agree with comments by some Advisory Committee members to allow RECs to be used to offset electricity used both in EV charging and in the production of other transportation fuels, e.g. green hydrogen and eFuels. Given the broad applicability of RECs in offsetting electricity use, it makes sense to allow their broad use in the transportation space.

# NMED should mirror existing CFS programs in establishing the point of credit generation for electricity fueling.

3Degrees recommends that the eligible credit generator for electricity used in transportation be the charging equipment owner in the case of all non-residential electrified vehicle types (i.e., light-, medium- and heavy duty cars and trucks, forklifts, transport refrigeration units, and any other eligible applications). This approach streamlines and reduces the complexity of reporting and credit generation. For residential electric vehicle charging, the utility should be the eligible credit generator for charging with grid electricity as they are in the other clean fuel programs, while utilities, vehicle OEMs, and others with charging data are eligible to generate credits associated with other low-carbon electricity use. We recommend that NMED define "residential charging" as charging that takes place at a single-family residence. As implied by our comment above, off-road vehicles should be allowed to generate credits under the CTFS, as they are significant users of transportation fuels, particularly diesel.

# NMED should recognize that certain vehicles are more efficient than others via the inclusion of an energy efficiency ratio (EER).

Contrary to the comments of at least one member of the Advisory Committee, 3Degrees strongly advocates for the inclusion of an EER to recognize that energy use in different types of vehicles is not equal. For example, one kWh of energy dispensed into a light-duty EV does not displace an equivalent amount of gasoline from an ICE vehicle (3.6 MJ); rather it displaces significantly more energy - 3.4x as much energy according to other CFS programs. Given the goal of the CTFS

is to recognize emissions reductions from the transportation pool, it is imperative that calculations recognize the full impact of alternative power trains, including via the use of an EER.

## Enabling an aggregator opportunity for all program participants expands access to the program across industries.

3Degrees requests that NMED include clear details around designated reporting entities across credit generation opportunities. For each credit generation opportunity, the first fuel reporting entity should have the ability to designate fuel reporting status to a designated aggregator. The aggregator should then inherit the priority and any other preferential treatment of the designator.

The entity with the first right to credits is intended to align with that entity which is closest to the decision-making related to supplying low-carbon transportation fuels. Allowing eligible credit generators to designate an aggregator enables this entity to benefit from the program even if they do not have the resources to manage program participation themselves or might not otherwise be able to participate directly. Designating reporting status is particularly beneficial for smaller entities, including entities providing smaller volumes of credit-generating fuels.

## Infrastructure crediting is an important element of incentivizing zero-emissions vehicle (ZEV) adoption.

In line with comments made by several members of the advisory committee, 3Degrees advocates for NMED to establish infrastructure (or "capacity") crediting for public zero-emissions vehicle (ZEV) fueling infrastructure, including DC fast chargers and hydrogen refueling stations. This approach provides for a solution to the "chicken-and-egg" problem of ZEV adoption, namely that consumers don't want to buy ZEVs unless they are confident in the availability of fueling infrastructure, while infrastructure owners don't want to make investments unless they are confident that infrastructure will be heavily utilized. In addition, NMED should consider making infrastructure crediting available to heavy-duty fleets as is currently proposed by the California Air Resources Board as an amendment to the California low-carbon fuel standard.

# 3Degrees recommends that third-party verification requirements account for the unique feasibility considerations of electricity fueling activity.

In general, we recognize the benefits and welcome third-party verification. However, we think it is important that NMED does not take a one-size-fits-all approach to any site visit obligations that may apply as part of the verification process. It would not be reasonable to expect individual site visits for the thousands of disparate sites containing fueling supply equipment (FSE), particularly for designated aggregator entities. In the case of designated reporting entities or entities with more than a certain number of registered FSE, verifiers need only visit the designated reporting entity's central location for recordkeeping plus a subset of facilities based on a carefully-crafted sampling plan. Furthermore, site visits should not be required for metered residential charging due to practical and privacy implications for homeowners that likely outweigh assurances gained by a visual inspection of the meter.

# NMED should establish robust credit price containment and support mechanisms.

As stated by several members of the Advisory Committee, it is important for NMED to establish both cost containment *and* cost support measures for the CTFS. It is clearly important to prevent the program from causing undue economic harm by allowing costs to escalate too high. However, as demonstrated by the price behavior of other clean fuel standard programs, it is equally important to ensure that program prices are sufficiently high to encourage investment in low-carbon fuels without requiring legislative or regulatory intervention, both of which are typically too slow to respond to the rapidly-evolving low-carbon fuels markets. We therefore agree with the comments made by Advisory Committee members regarding cost containment, auto-acceleration, and deferral mechanisms.

#### We also ask NMED to consider the following:

- Utilizing GREET4.0 and California's updated model format would best streamline CTFS reporting and data.
- Should NMED implement a metering requirement for forklift credit generation as contemplated in other states, it should align with those programs and be phased-in so that industry has time to adjust their equipment and processes.
- We urge NMED to recognize the avoided methane benefits of renewable natural gas through its CI score, as the CTFS can play a key role in incentivizing methane emissions reductions at dairies, landfills, and other traditionally high-emitting facilities.

\_\_\_\_\_

3Degrees appreciates this opportunity to provide feedback and we look forward to continuing to work with NMED on the success of the CTFS program. Please reach out with any questions or for further discussion.

Sincerely,

<u>/s/ Helen Kemp</u>

Helen Kemp Policy Manager, Regulatory Affairs <u>hkemp@3degrees.com</u>

# Comments from Rio Valley Biofuels regarding Cost Containment Mechanisms and Price regulation.

In multiple sections, the Technical Report refers to Cost Containment Mechanisms and Market Regulation specifically regarding concerns around the price of credits and/or the price of renewable fuel exceeding an established limit.

It is critical that careful consideration be given to any limits on the price of credits or the price of renewable fuel. NMED must understand that the point of the program is to create and implement a program that reduces carbon emissions by a certain percentage by certain dates. The program, if implemented correctly, will set reasonable obligations using good models to predict deficits and credits. One of the comments provided in this technical document, recommends that NMED *"build a model of the New Mexico Clean Transportation Fuel Standard market out to 2040. The model can help NMED predict quantities of deficits and credits, resulting credit prices, and help the state make policy decisions to keep the standard on track…"* This is excellent advice and if this is done correctly, the program should be able to be designed to create a stable market for renewable fuels and control the credit cost.

Any cost containment mechanism needs to be based on the availability of credit generating fuels, and not on the price of the credits or the price of the renewable fuel. If the credits exceed a certain price, this will indicate the demand for more renewable fuels to be produced or imported to meet the goals of the program. It is not the goal of this program nor the responsibility of the folks managing this program to ensure that the cost of fuel is at a desirable level. It is a proven fact that these types of programs do NOT raise the price of fuel to the end users.

On page 13 of the Technical Report, under 5) Credit Market Dynamics, one comment suggested a cost containment mechanism wherein NMED issues additional credits into the market if the credit price increases beyond an established threshold. We do not believe this is a good suggestion nor would this be beneficial to the goals of the program. It is hard for us to understand how these "NMED issued" credits would be verified and we are also concerned that these "fake" credits would not be representative of any carbon reduction and may cause participants in the program to doubt the validity of the carbon reductions. If it is necessary for NMED to do something to control the credit price, it seems like a temporary deferral or decrease of the obligation would be effective, but only in the event that the necessary volume of credit generating fuel is not available.

In summary, we will reiterate comments that we provided earlier. Since New Mexico is committed to reducing carbon in the state, the program should only be deferred in a true

emergency. A force majeure type event, or Act of God, where the highways or railways to New Mexico are no longer operational due to an earthquake or other similar event, would cause the deferral mechanism to be triggered.

If a deferral appears to be necessary, a thorough root cause analysis needs to be performed and provided to the public by NMED to explain how a deferral can be avoided in the future.



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August 2, 2024

New Mexico Environment Department Climate Change Bureau Harold Runnels Building 1190 St. Francis Dr., Suite N4050 Santa Fe, NM 87505

Submitted electronically via email to: <u>https://nmed.commentinput.com/?id=fG3AeTk6d</u>.

# **RE: POET COMMENTS ON NEW MEXICO CLEAN TRANSPORTATION FUEL STANDARD ADVISORY COMMITTEE TECHNICAL REPORT**

Dear New Mexico Environment Department:

POET appreciates the opportunity to participate in the New Mexico Environment Department's ("NMED") Clean Transportation Fuel Standard ("CTFS") rulemaking through attending advisory committee meetings and providing both oral and written comments. POET supports NMED's dedication to decarbonizing the transportation sector in New Mexico and is committed to delivering low-carbon biofuels that will help the State achieve its climate goals.

#### I. Overview

POET's vision is to create a world in sync with nature. As the world's largest producer of biofuel and a global leader in sustainable bioproducts, POET creates plant-based alternatives to fossil fuels that unleash the regenerative power of agriculture and cultivate opportunities for America's farm families. Founded in 1987 and headquartered in Sioux Falls, POET operates 34 bioprocessing facilities across eight states and employs more than 2,200 team members. With a suite of bioproducts that includes POET Distillers Grains, POET Distillers Corn Oil, POET Purified Alcohol, and POET Biogenic CO<sub>2</sub>, POET nurtures an unceasing commitment to innovation and advances powerful, practical solutions to some of the world's most pressing challenges. Today, POET holds more than 80 patents worldwide and continues to break new ground in biotechnology, yielding ever-cleaner and more efficient renewable energy. POET is also a leading champion for nationwide access to E15, a renewable fuel blend made with 15% bioethanol.

Through technological innovation, investments in carbon capture and renewable energy, and programs to reduce on-farm emissions, POET is steadily lowering the carbon intensity ("CI") of its fuel. We see the potential for bioethanol to become a net-zero carbon liquid fuel on a life-cycle basis, operating to further decarbonize on-road transportation and serving as a feedstock for the next-generation fuels that will power the aviation industry and other hard-to-electrify sectors of the economy. But POET cannot realize this vision without appropriate regulatory incentives,

grounded in the best available science, that recognize and reward further investments in the decarbonization of our fuel. In shaping its new low carbon fuel program, New Mexico has the opportunity to lead and innovate and to provide the incentives necessary to bring net-zero carbon liquid fuel to the New Mexico fuel market.

#### II. NMED Should Recognize Bioethanol Climate and Health Benefits

Bioethanol offers significant air quality and GHG emissions reduction benefits compared to petroleum-based gasoline. To achieve New Mexico's emissions reduction and air quality goals, NMED must ensure that bioethanol plays a central role in the CTFS.

Multiple studies show that blending bioethanol into the transportation fuel supply results in significantly lower lifecycle GHG emissions compared to petroleum-based gasoline. Specifically, studies show that emissions reductions attributable to bioethanol range from 41 to 46 percent compared to emissions associated with petroleum-based gasoline. According to the Department of Energy's Argonne National Laboratory ("ANL"), typical corn ethanol provides a 44 percent GHG reduction compared to gasoline.<sup>1</sup> Similarly, researchers affiliated with Harvard University, MIT, and Tufts University conducted a meta-analysis showing that corn ethanol as of 2021 offers an average GHG reduction of 46 percent compared to gasoline ("Scully study").<sup>2</sup> For comparison, the average CI of pure gasoline is approximately 96 gCO2e/MJ.<sup>3</sup>

According to the USDA, from 2011 to 2019, the average CI of ethanol fuel decreased by approximately 25 percent.<sup>4</sup> This decrease can be attributed to (a) market-driven changes in corn production that lowered the intensity of fertilizer and fossil fuel use on farms; (b) more efficient use of natural gas and electricity at ethanol production facilities; and (c) improvements in land use change analyses based on hybrid economic-biophysical models that account for land conversion, land productivity, and land intensification.<sup>5</sup> In other words, older assessments using inexact data overestimated bioethanol's CI, and bioethanol has improved in environmental performance over time. As a result, more recent studies demonstrate that bioethanol provides much more significant emissions reductions than previously understood.<sup>6</sup>

https://www.pnas.org/doi/10.1073/pnas.2213961119, and the U.S. Department of Energy,

<sup>&</sup>lt;sup>1</sup> Lee, Uisung et al., *Retrospective Analysis of the U.S. Corn Ethanol Industry for 2005–2019: Implications for GHG Emission Reductions*, Biofpr Vol. 15 Issue 5, at 1328 (May 4, 2021) <u>https://doi.org/10.1002/bbb.2225</u>.

<sup>&</sup>lt;sup>2</sup> Scully, Melissa et al., *Carbon Intensity of Corn Ethanol in the United States: State of the Science*, ENVIRONMENTAL RESEARCH LETTERS, at 16 (March 10, 2021) <u>https://iopscience.iop.org/article/10.1088/1748-9326/abde08</u>

 $<sup>^{3}</sup>$  Id.

<sup>&</sup>lt;sup>4</sup> U.S. Dep't of Agriculture, *The California Low Carbon Fuel Standard: Incentivizing GHG Mitigation in the Ethanol Industry*, at 1 (Nov. 2020)

https://www.usda.gov/sites/default/files/documents/CA\_LCFS\_Incentivizing\_Ethanol\_Industry\_GHG\_Mitigation.p df.

<sup>&</sup>lt;sup>5</sup> *Id*. at 2.

<sup>&</sup>lt;sup>6</sup> A 2022 study by Lark, et al., estimates a higher LUC value for corn starch bioethanol. This higher estimate is an outlier, and rebuttals were published by Environmental Health & Engineering,

<sup>&</sup>lt;u>https://greet.es.anl.gov/publication-comment\_environ\_outcomes\_us\_rfs</u>. See Lark, Tyler et al., Environmental Outcomes of the US Renewable Fuel Standard, PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES (PNAS) (2022), <u>https://doi.org/10.1073/pnas.2101084119</u>.

In addition to GHG benefits, a recent analysis from leading national experts found air quality and public health benefits associated with higher biofuel blends in gasoline, including reductions in particulate matter ("PM"), carbon monoxide ("CO"), and total hydrocarbons ("THC").<sup>7</sup> This study was the first large-scale analysis of data from light-duty vehicle emissions that examines real-world impacts of bioethanol-blended fuels on regulated air pollutant emissions. The study found that CO and THC emissions were significantly lower for higher bioethanol fuels for portfuel injected engines under cold-start conditions. The study found no statistically significant relationship between higher bioethanol blends and nitrogen oxides ("NOx") emissions. With regard to PM, studies show that emissions decrease by 15 - 18% on average for each 10% increase in ethanol content under cold-start conditions.<sup>8</sup> A 2022 University of California Riverside ("UC") study assessing the impact of E15 on air pollutant emissions for model year vehicles 2016 to 2021 was consistent with these results, finding that replacing E10 with E15 reduced PM emissions by 18%, with cold-start emissions being reduced by 17%.<sup>9</sup> Analyses by professors at Tufts University show that the associated health benefits may be most significant in disadvantaged communities in areas of high traffic density and congestion.<sup>10</sup>

Bioethanol's current CI is a ceiling— not a floor. As the Scully study notes, "[m]arket conditions that favor greater adoption of precision agriculture systems, retention of soil organic carbon, and demand for co-products from ethanol production may [further] lower the CI of corn ethanol."<sup>11</sup> Furthermore, under the federal Inflation Reduction Act, biofuel producers like POET are incentivized to make investments in carbon-reducing technologies, including carbon dioxide capture and utilization strategies, and investments in low-carbon process energy that have the potential to drastically lower the CI of every gallon of ethanol we produce. As the ANL chart below shows, through investment and innovation, bioethanol has the ability to become a zero-carbon fuel.<sup>12</sup>

<sup>&</sup>lt;sup>7</sup> See Kazemiparkouhi, Fatemeh et al., *Comprehensive US Database and Model for Ethanol Blend Effects on Regulated Tailpipe Emissions*, SCIENCE OF THE TOTAL ENVIRONMENT, at 15 (March 2022), https://www.sciencedirect.com/science/article/pii/S0048969721065049?via%3Dihub.

<sup>&</sup>lt;sup>8</sup> Comprehensive US Database and Model for Ethanol Blend Effects on Regulated Tailpipe Emissions at 5, 11, 13.

<sup>&</sup>lt;sup>9</sup> Karavalakis, Georgios et al., 2022 Comparison of Exhaust Emissions Between E10 CaRFG and Splash Blended E15. Final Report, prepared for Riverside, California Air Resources Board, Growth Energy Inc./Renewable Fuels Association, and USCAR., at 22-23, 36 (June 2022), <u>https://ww2.arb.ca.gov/sites/default/files/2022-</u>07/E15 Final Report 7-14-22 0.pdf

<sup>&</sup>lt;sup>10</sup> See Appendix A, Tufts University Department of Civil and Environmental Engineering, *Air Quality and Public Health Comments to RFS* (Feb. 3, 2022) at 3-4.

<sup>&</sup>lt;sup>11</sup> Scully study at 17.

<sup>&</sup>lt;sup>12</sup> Argonne National Laboratory, *DOE Bioenergy Technology Office (BETO) 2023 Project Peer Review, Life Cycle Analysis of Biofuels and Bioproducts and GREET Development*, at 18 (April 4, 2023), https://www.energy.gov/sites/default/files/2023-05/beto-16-project-peer-review-dma-apr-2023-wang.pdf.



Because of the GHG and air quality emissions reductions associated with bioethanol, incentives to increase bioethanol blending into New Mexico's fuel supply advance the State's decarbonization and air quality goals. As bioethanol producers continue to reduce lifecycle emissions, bioethanol will continue to drive the emissions reductions New Mexico needs to decarbonize and improve air quality.

# III. NMED Should Adopt the ANL Greet Model and Provide Incentives that Promote Reduction of CI

As noted above, recent analysis performed by DOE's ANL demonstrates the possibilities for deep decarbonization at biorefineries and points towards net-zero fuel production.<sup>13</sup> To achieve these goals, POET urges New Mexico to adopt the ANL GREET model, as suggested by many members of the Advisory Committee. The ANL GREET model, incorporates up-to-date information to accurately score lifecycle GHG emissions for renewable fuels, such as corn ethanol, and establishes carbon intensity values for the full range of factors that impact the production of biofuels. Although some states have adopted customized versions of the ANL GREET model, <sup>14</sup> which is updated periodically to reflect the most recent developments in transportation fuel research.

Biofuel producers and the aviation industry are now aligned in the view that ANL's GREET model is an important tool for evaluating the lifecycle carbon intensity of biofuels that may be used as feedstocks for the production of sustainable aviation fuel. In a letter to the United States Treasury Department signed by Boeing and every major U.S. airline, a broad coalition of sustainable aviation fuel stakeholders encouraged Secretary Yellen to integrate ANL's model

<sup>&</sup>lt;sup>13</sup> Id.

<sup>&</sup>lt;sup>14</sup> Argonne National Laboratory, *Energy Systems and Infrastructure Analysis*. *R&D GREET Model* (Apr. 30, 2024), https://greet.anl.gov/index.php.

into regulations that will govern federal tax incentives for the production of SAF.<sup>15</sup> Among other things, the letter explains that "Argonne GREET allows users to account for climate smart and regenerative feedstock production practices," and touts ANL's model as "a well-settled, durable, and predictable framework for assessing program eligibility and risk."<sup>16</sup> In other words, there is significant agreement on efficacy and importance of the ANL GREET model as a tool to understand and incentivize practices and technologies that will decarbonize liquid fuel across transportation sectors.

In issuing its Inflation Reduction Act § 40B SAF Guidance, the Treasury Department ultimately did adopt the GREET model, and provided recognition and incentives for several carbon reducing practices and technologies that will operate to lower the carbon intensity of biofuels. *See* U.S. Department of Treasury, Notice 2024-37, § 40B SAF Credit Guidance (April 30, 2024) (§ 40B Guidance) *available at* <u>https://www.irs.gov/pub/irs-drop/n-24-37.pdf</u>. Among other things, Treasury's guidance recognizes that no-till farming, planting cover crops, and applying enhanced efficiency nitrogen fertilizer are all climate smart agricultural practices that help reduce carbon intensity (CI) for crop-based feedstocks such as corn. *Id.* NMED should adopt a similar approach, incentivizing the decarbonization of bioethanol for use as a transportation fuel and as a feedstock for SAF and promoting sustainability on American farms.

POET also encourages New Mexico to incorporate other CI reduction incentives identified by the Treasury Department into its program. For example, New Mexico can follow the Treasury Department's guidance in allowing book and claim accounting of zero-CI electricity as a mechanism to decarbonize bioethanol *See* U.S. Department of Treasury, Notice 2024-37, § 40B SAF Credit Guidance (April 30, 2024) (§ 40B Guidance) *available at* <u>https://www.irs.gov/pub/irs-drop/n-24-37.pdf</u>. As a practical matter, wind turbines and solar arrays cannot always be co-located with ethanol plants to provide behind-the-meter renewable energy. Allowing for the recognition of off-site renewable energy production would add to the overall renewable energy supply in the United States and lower the carbon intensity of the transportation fuel supply in New Mexico. Likewise, NMED should follow the lead of the Treasury Department and the State of California in allowing recognition of carbon reductions associated with carbon capture and sequestration (CCS) technologies. As shown in the ANL chart cited above, capturing and sequestering CO2 from bioethanol production can reduce the carbon intensity of bioethanol by 34gCO2e/MJ.

POET further urges New Mexico to incorporate into its program recognition for other carbonreducing fuel production technologies that are measured and quantified in the GREET model, but that have not yet been incorporated into existing federal tax policies or LCFS programs. In particular, Argonne National Laboratories has measured and quantified the carbon reductions associated with combusting biomass to generate heat at biorefineries, substantially replacing natural gas consumption. POET has been actively researching technologies to convert corn stover to steam, which, according to the GREET model, would reduce the carbon intensity of bioethanol production by 11.52%. NMED should design a program that incentivizes low carbon fuel producers to invest in and adopt such innovations, which have proven decarbonization values.

<sup>&</sup>lt;sup>15</sup> See Letter to the Hon. Janet Yellen re: Sustainable Aviation Fuel (SAF) Credit Eligibility dated Nov. 1 2023 available at <u>https://growthenergy.org/wp-content/uploads/2023/11/SAF-Modeling-Innovator-Letter-11.1.23-1.pdf</u>. <sup>16</sup> *Id.* at 1-2.

#### IV. NMED Should Allow for Re-Certification of Pathways Already Approved by Another LCFS Program

NMED should leverage existing low-carbon fuel standards by adopting third-party verification standards that account for fuel pathways already verified through different states' programs. Verification of CI pathways is useful to ensure compliance with a low-carbon fuel standard; however, there is no question that such verification requirements can be costly and time-consuming. Because of this, both Oregon and Washington have implemented or considered ways to take advantage California Air Resources Board's (CARB) Low Carbon Fuel Standard thorough pathway certification requirements. In particular, the Oregon Department of Environmental Quality's (DEQ) Clean Fuel Program currently allows a participating fuel producer to obtain a CI through re-certification of "a carbon intensity that is currently approved by the CARB." See OAR 340-253-0450. Similarly, Washington's Department of Ecology is considering an amendment to its Clean Fuel Standard that "would be exempt from Ecology verification" fuel pathways already verified through CARB or DEQ. See Washington Department of Ecology, Clean Fuel Standard Rulemaking, (May 2024), available 2, at https://ecology.wa.gov/getattachment/cfeb9fc5-7100-42d3-b80d-db6286ecd487/CFS-Rulemaking-May-Presentation.pdf (Slide 18). POET encourages NMED to adopt similar measures taking advantage of the efficiencies associated with streamlining efforts across complimentary state programs and avoiding redundant third-party verifications.

#### V. CONCLUSION

POET appreciates the opportunity to comment and looks forward to working with NMED to make the Clean Transportation Fuel Standard a success for New Mexico. If you have any questions, please contact me at Josh.Wilson@POET.com or (202) 756-5612.

Sincerely,

MPh.

Joshua P. Wilson Senior Regulatory Counsel

# ATTACHMENT A



February 3, 2022

Docket Number: EPA-HQ-OAR-2021-0324

**Comments of Drs. Fatemeh Kazemiparkouhi,**<sup>1</sup> **David MacIntosh,**<sup>2</sup> **Helen Suh**<sup>3</sup> <sup>1</sup> Environmental Health & Engineering, Inc., Newton, MA <sup>2</sup> Environmental Health & Engineering, Inc., Newton, MA and the Harvard T.H. Chan School of Public Health, Boston, MA <sup>3</sup> Tufts University, Medford, MA

We are writing to comment on issues raised by the proposed RFS annual rule, the Draft Regulatory Impact Analysis (December 2021; EPA-420-D-21-002), and the supporting Health Effects Docket Memo (September 21, 2021; EPA-HQ-OAR-2021-0324-0124), specifically regarding the impact of ethanol-blended fuels on air quality and public health. We provide evidence of the air quality and public health benefits provided by higher ethanol blends, as shown in our recently published study<sup>1</sup> by Kazemiparkouhi et al. (2021), which characterized emissions from light duty vehicles for market-based fuels. Findings from our study demonstrate ethanol-associated reductions in emissions of primary particulate matter (PM), nitrogen oxides (NOx), carbon monoxide (CO), and to a lesser extent total hydrocarbons (THC). Our results provide further evidence of the potential for ethanol-blended fuels to improve air quality and public health, particularly for environmental justice communities. Below we present RFS-pertinent findings from Kazemiparkouhi et al. (2021), followed by their implications for air quality, health, and environmental justice.

#### Summary of Kazemiparkouhi et al. (2021)

Our paper is the first large-scale analysis of data from light-duty vehicle emissions studies to examine real-world impacts of ethanol-blended fuels on regulated air pollutant emissions, including PM, NOx, CO, and THC. To do so, we extracted data from a comprehensive set of emissions and market fuel studies conducted in the US. Using these data, we (1) estimated composition of market fuels for different ethanol volumes and (2) developed regression models to estimate the impact of changes in ethanol volumes in market fuels on air pollutant emissions for different engine types and operating conditions. Importantly, our models estimated these changes accounting for not only ethanol volume fraction, but also aromatics volume fraction, 90% volume distillation temperature (T90) and Reid Vapor Pressure (RVP). Further, they did so

<sup>&</sup>lt;sup>1</sup> <u>https://doi.org/10.1016/j.scitotenv.2021.151426</u>

<sup>200</sup> College Ave – 113 Anderson Hall, Medford, MA 02155 | TEL: 617.627.3211 | FAX: 617.627.3994 | www.engineering.tufts.edu/cee

under both cold start and hot stabilized running conditions and for gasoline-direct injection engines (GDI) and port-fuel injection (PFI) engine types. Key highlights from our paper include:

Aromatic levels in market fuels decreased by approximately 7% by volume for each 10% by volume increase in ethanol content (Table 1). Our findings of lower aromatic content with increasing ethanol content is consistent with market fuel studies by EPA and others (Eastern Research Group, 2017, Eastern Research Group, 2020, US EPA, 2017). As discussed in EPA's Fuel Trends Report, for example, ethanol volume in market fuels increased by approximately 9.4% between 2006 and 2016, while aromatics over the same time period were found to drop by 5.7% (US EPA, 2017).

We note that our estimated market fuel properties differ from those used in the recent US EPA Anti-Backsliding Study (ABS), which examined the impacts of changes in vehicle and engine emissions from ethanol-blended fuels on air quality (US EPA, 2020). Contrary to our study, ABS was based on hypothetical fuels that were intended to satisfy experimental considerations rather than mimic real-world fuels. It did not consider published fuel trends; rather, the ABS used inaccurate fuel property adjustment factors in its modeling, reducing aromatics by only 2% (Table 5.3 of ABS 2020), substantially lower than the reductions found in our paper and in fuel survey data (Kazemiparkouhi et al., 2021, US EPA, 2017). As a result, the ABS's findings and their extension to public health impacts are not generalizable to real world conditions.

Fuel ID	EtOH Vol (%)	T50 (°F)	T90 (°F)	Aromatics Vol (%)	AKI	RVP (psi)		
E0	0	219	325	30	87	8.6		
E10	10	192	320	22	87	8.6		
E15	15	162	316	19	87	8.6		
E20	20	165	314	15	87	8.6		
E30	30	167	310	8	87	8.6		
<b>Abbreviations:</b> EtOH = ethanol volume; T50 = 50% volume distillation temperature; T90 = 90%								

Table 1. Estimated market fuel properties

volume distillation temperature; Aromatics=aromatic volume; AKI = Anti-knock Index; RVP = Reid Vapor Pressure.

PM emissions decreased with increasing ethanol content under cold-start conditions. Primary PM emissions decreased by 15-19% on average for each 10% increase in ethanol content under cold-start conditions (Figure 1). While statistically significant for both engine types, PM emission reductions were larger for GDI as compared to PFI engines, with 53% and 29% lower PM emissions, respectively, when these engines burned E30 as compared to E10. In contrast, ethanol content in market fuels had no association with PM emissions during hot-running conditions.

Importantly, our findings are consistent with recent studies that examined the effect of ethanol blending on light duty vehicle PM emissions. Karavalakis et al. (2014),

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(2015), Yang et al. (2019a), (2019b), Schuchmann and Crawford (2019), for example, assessed the influence of different mid-level ethanol blends – with proper adjustment for aromatics – on the PM emissions from GDI engines and Jimenez and Buckingham (2014) from PFI engines. As in our study, which also adjusted for aromatics, each of these recent studies found higher ethanol blends to emit lower PM as compared to lower or zero ethanol fuels.

Together with these previous studies, our findings support the ability of ethanolblended fuels to offer important PM emission reduction opportunities. **Cold start PM emissions have consistently been shown to account for a substantial portion of all direct tailpipe PM emissions from motor vehicles**, with data from the EPAct study estimating this portion to equal 42% (Darlington et al., 2016, US EPA, 2013). The cold start contribution to total PM vehicle emissions, together with our findings of emission reductions during cold starts, suggest that a 10% increase in ethanol **fuel content from E10 to E20 would reduce total tailpipe PM emissions from motor vehicles by 6-8%.** 



Figure 1. Change (%) in cold-start emissions for comparisons of different ethanolcontent market fuels<sup>a</sup>

<sup>a</sup> Emissions were predicted from regression models that included ethanol and aromatics volume fraction, T90, and RVP as independent variables

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 NOx, CO and THC emissions were significantly lower for higher ethanol fuels for PFI engines under cold-start conditions, but showed no association for GDI engines (Figure 1). CO and THC emissions also decreased under hot running conditions for PFI and for CO also for GDI engines (results not shown). [Note that NOx emissions for both PFI and GDI engines were statistically similar for comparisons of all ethanol fuels, as were THC emissions for GDI engines.] These findings add to the scientific evidence demonstrating emission reduction benefits of ethanol fuels for PM and other key motor vehicle-related gaseous pollutants.

#### Implications for Public Health and Environmental Justice Communities

The estimated reductions in air pollutant emissions, particularly of PM and NOx, indicate that increasing ethanol content offers opportunities to improve air quality and public health. As has been shown in numerous studies, lower PM emissions result in lower ambient PM concentrations and exposures (Kheirbek et al., 2016, Pan et al., 2019), which, in turn, are causally associated with lower risks of total mortality and cardiovascular effects (Laden et al., 2006, Pun et al., 2017, US EPA, 2019, Wang et al., 2020).

The above benefits to air quality and public health associated with higher ethanol fuels may be particularly great for environmental justice (EJ) communities. EJ communities are predominantly located in urban neighborhoods with high traffic density and congestion and are thus exposed to disproportionately higher concentrations of PM emitted from motor vehicle tailpipes (Bell and Ebisu, 2012, Clark et al., 2014, Tian et al., 2013). Further, vehicle trips within urban EJ communities tend to be short in duration and distance, with approximately 50% of all trips in dense urban communities under three miles long (de Nazelle et al., 2010, Reiter and Kockelman, 2016, US DOT, 2010). As a result, a large proportion of urban vehicle trips occur under cold start conditions (de Nazelle et al., 2010), when PM emissions are highest. Given the evidence that ethanol-blended fuels substantially reduce PM, NOx, CO, and THC emissions during cold-start conditions, it follows that ethanol-blended fuels may represent an effective method to reduce PM health risks for EJ communities.

#### Summary

Findings from Kazemiparkouhi et al. (2021) provide important, new evidence of ethanolrelated reductions in vehicular emissions of PM, NOx, CO, and THC based on realworld fuels and cold-start conditions. Given the substantial magnitude of these reductions and their potential to improve air quality and through this public health, our findings warrant careful consideration. Policies that encourage higher concentrations of ethanol in gasoline would provide this additional benefit. These policies are especially needed to protect the health of EJ communities, who experience higher exposures to motor vehicle pollution, likely including emissions from cold starts in particular, and are at greatest risk from their effects.

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July 31<sup>st</sup>, 2024

Ms. Claudia Borchert Climate Change Policy Coordinator New Mexico Environment Department <u>claudia.borchert@state.nm.us</u> 505-699-8489

#### **RE:** New Mexico Clean Fuel Standard Advisory Committee Technical Report

Dear Claudia,

Smart Charging Technologies LLC (SCT) is an active player in the Clean Fuel programs in California, Oregon, Washington, and Canada, as a program administrator and credit aggregator for many companies using electricity to power fleets of medium/heavy duty vehicles and material handling equipment.

We, at SCT, have reviewed the Advisory Committee Technical Report published on July 26, 2024, and have the following comments concerning the highlighted sections:

#### 3) Credit Generation Opportunities. a. Fuel Types. iii. Electricity. 1. Parameters

## How should the program determine the volume of electricity used for transportation purposes?

- SCT agrees with the comment that some industrial chargers are not capable of transmitting data, so a calculation based on adoption and utilization rates is needed.
- SCT has experience with chargers fitted with metering devices wirelessly connected to the cloud.

#### 4) Program Implementation. b. Measurement, Reporting, and Verification. i. Off-Road Credits

#### Which off-road EV applications should be allowed to generate credits?

- SCT agrees with the opinion that any EV that is doing any work in the form of transportation should be eligible to generate credits.
- In the case of off-road equipment, e.g. forklifts, it can be fitted with metering devices wirelessly connected to the cloud to capture the kWh supplied.
- There is a need to have a separate credit generation mechanism based on specific end uses as they tend to have different energy efficiency ratios, thus credit issued are proportional to efficiency.
- NMED should initially include off-road applications for credit generation as this will contribute to CO2 emission reductions early on.

#### 5) Credit Market Dynamics. b. Auto-Acceleration Mechanism

SCT favors the inclusion of a mechanism that automatically adjusts the CI target if certain conditions are met, namely the credit price decreasing beyond an established threshold, as it is a valuable tool for ensuring the program achieves its long-term goals.



SCT looks forward to start working on the CTFS program and help reaching a sustainable healthy environment in New Mexico.

Respectfully,

/s/ Ma'n Altaher

Ma'n Altaher Director, Regulatory & Program Management Smart Charging Technologies LLC Email: <u>maltaher@smartchargetech.com</u> Tel: (773)968-7761



August 2, 2024 Submitted via NMED Comment Portal

Ms. Claudia Borchert Climate Change Bureau Chief New Mexico Environment Department 1190 St. Francis Drive, Suite N4050 Santa Fe, NM 87505

## Re: Valero Comments on New Mexico Clean Transportation Fuel Standard Advisory Committee Technical Report

Dear Ms. Borchert,

Valero Energy Corporation and its subsidiaries (collectively, "Valero") appreciate the opportunity to serve as a member of the New Mexico Clean Transportation Fuel Standard (CTFS) Advisory Committee. Valero offers the following comments regarding the CTFS Advisory Committee Technical Report and the diverse technical opinions contained therein.

In addition to being one of the world's largest independent refiners, Valero is a major biofuel producer. Valero was the first traditional petroleum refiner to enter the large-scale ethanol production market and is now one of the largest ethanol producers in the U.S. Valero is also a joint partner in Diamond Green Diesel LLC, one of the largest renewable diesel producers in the world, and as such is credited with significant contributions toward meeting the declining carbon intensity targets under the California Low Carbon Fuel Standard. In accordance with commitments to shareholders, Valero is actively engaged in the construction of sustainable aviation fuel production capabilities and is pursuing carbon sequestration opportunities as well.

As indicated in the Technical Report<sup>1</sup>, New Mexico Environment Department (NMED) has set an aggressive timeline for this rulemaking, with a hearing targeted for late 2024 and program implementation targeted for early 2025. While we commend NMED's efforts to complete the rulemaking process in a timely fashion, we urge the department to spend the necessary time to continue stakeholder engagement on the wide array of technical considerations raised by the Advisory Committee before bringing a proposed rule to the Environmental Improvement Board. This feedback from future market participants is critical to NMED's goal of creating a market that will successfully drive long-term innovation to help New Mexico to achieve its climate goals.

#### **Carbon Intensity and Fuel Lifecycle Analysis**

The Technical Report states that a member advocated to express carbon intensity in terms of vehicle travel distance rather than in units of energy. Valero disagrees with this approach and underscores the importance of a universal definition of carbon intensity across global low carbon programs. Energy is the fundamental property which allows the emissions associated with different fuel types to be compared on the same basis.

<sup>&</sup>lt;sup>1</sup> See Advisory Committee Technical Report at <u>https://service.web.env.nm.gov/urls/jeDOxDem</u>.



Several presentations given during Advisory Committee meetings as well as much of the written technical input supplied by committee members acknowledge Argonne National Laboratory's (ANL) GREET model as the standard for lifecycle analysis modeling in other LCFS programs in the United States. Valero recommends that NMED adopt the ANL GREET model as the lifecycle analysis model for the CTFS, and additionally adopt Tier 1 calculators based on the ANL GREET model, similar to the approach adopted by California, which will simplify and standardize the fuel pathway application process. As ANL often updates the GREET model to incorporate additional research and accurately reflect current scientific understanding and industry practices, Valero encourages NMED to use a recent version of the GREET model (2022 or later) for the lifecycle background data, including land use change.

#### **Credit Generation Opportunities**

Advisory Committee members noted throughout the oral and written discussions the potential for renewable diesel to be imported to the state primarily via truck, rail, and pipeline, as opposed to the Pacific states which are able to receive larger quantities of renewable diesel by ship. Valero agrees with the Committee members who state that the available means of transportation into New Mexico may complicate reporting requirements when compared to other LCFS programs. The fuel supply chain into New Mexico will almost certainly require different fuels with different carbon intensities to be commingled in storage and transport, and appropriate flexibility for fuel suppliers to mass balance the fuels in their inventory will be critical to ensuring the availability of liquid biofuels in the state.

The Technical Report states that several Advisory Committee members suggested the inclusion of sustainable aviation fuel (referred to in other LCFS programs as alternative jet fuel) as a credit-generating fuel in the CTFS. Valero supports this proposal which will help create opportunity for sustainable aviation fuel uptake in the state.

Much Advisory Committee discussion reflected in the Technical Report related to credit generation opportunities for electricity, including conflicting opinions amongst members about the use of Renewable Energy Certificates, or RECs. Valero agrees with the Advisory Committee members who suggest that NMED establish firm guardrails for RECs to ensure that the resulting credits represent real reductions in carbon intensity. The report also reflects disagreement amongst members on how the CTFS should determine the volume of electricity used in transportation and therefore which volume is eligible to generate credits. We believe it is important to generate credits which are measurable and verifiable, and therefore agree with members who suggest that electricity credits should be based on measured quantities of electricity delivered for transportation use as opposed to estimations based on adoption or capacity.

#### **Program Implementation**

Valero agrees with the Advisory Committee members who advocated for the inclusion of a "reporting-only" period at the beginning of the program. The first section of oral input in the Technical Report highlights the difference in fuel supply chains between New Mexico and states with existing LCFS programs. The high volume of fuel imported to the state via truck by small marketers and jobbers will likely result in a large number of obligated parties with limited resources and more complex reporting requirements, who will require time to prepare to comply with the program. New Mexico also does not yet have the physical nor administrative infrastructure in place to support immediate program requirements, and a reporting-only period will allow NMED to gain valuable information about New Mexico fuel markets which will support further implementation. In addition to a reporting-only year, NMED could consider an early credit generation period such as that implemented under the recent Canadian federal Clean Fuel Regulations.



Advisory Committee members stressed the importance of a streamlined pathway process and third-party verification as important components of a successful program in both their oral and written input. The overview of state LCFS programs presented in the June 21, 2024 meeting highlighted the harmonization across existing programs, including the mechanisms for Oregon and Washington to recertify pathways from other jurisdictions. Valero encourages NMED to adopt these expedited fuel pathway recertification processes in the CTFS due to both the department's limited resources as well as the immense value of such processes in attracting the necessary renewable fuel supply to meet New Mexico's emission reduction goals in the early years of the program. Valero also agrees with Committee members who highlight the need for transparency about verification requirements and verifier responsibilities with both verifiers and regulated entities so that all parties have the necessary information to fulfill their compliance role.

The Technical Report notes that a number of Advisory Committee members counseled NMED against limits on biofuel volumes, including crop caps. Valero agrees with the points made by Committee members that such limits would reduce availability of fuels capable of immediately reducing emissions in New Mexico and that the increased use of liquid biofuels over the past several years has not been demonstrated to increase land use change.

#### **Credit Market Dynamics**

Advisory Committee members agreed on the necessity of cost containment mechanisms (CCM) in the CTFS program while encouraging NMED to be cautious and transparent when setting conditions for program deferral so as not to undermine investment and program stability. Valero agrees that long-term stability and investor confidence will be key to attracting business and innovation in the state. Appropriately set CCM, such as credit price caps with opportunities for obligated parties to purchase credits at the cap price to satisfy their obligation, can instill confidence in both obligated parties and investors. However, mechanisms for program deferrals or waivers with low or unclear thresholds will disincentivize local investment in supply chain infrastructure and project development. A deferral process in which program reduction targets are frozen at their current level due to multi-year triggering of CCM or cap prices is a more appropriate alternative to attempting to define "emergency or forecasted conditions".

Valero appreciates the opportunity to provide these comments. If you have any questions regarding this submittal, please contact me via email at mandy.garrahan@valero.com.

Sincerely,

Amande Gal

Amanda Garrahan Executive Director, Strategic Planning and Public Policy

#### **Xcel Energy Comments for NMED CTFS Advisory Technical Committee Report**

Xcel Energy is working hard to advance programs and investments in transportation electrification that will reduce carbon emissions from the transportation sector across our states. We are committed to providing carbon free electricity to our customers by 2050 and offering robust clean transportation programming to support transportation electrification. We see Clean Transportation Fuel Standards (CTFS) as an important supportive policy to reduce the carbon intensity of transportation fuels during the clean energy transition.

We appreciate the monumental efforts by the CTFS Advisory Committee embodied in the Technical Report. Standing up a CTFS requires much technical rigor and detailed consideration. While we have not had sufficient time to dive into every detail of the report, we have reviewed the topline findings and recommendations and offer our feedback on issues of top importance to Xcel Energy:

- 1. Utilities must be the default credit generator for electricity on our grid.
- 2. The use of credit revenues must align with our existing TEP process.
- 3. Carbon intensities for electricity must be utility specific.
- 4. We support the use of Greenhouse gases, Regulated Emissions, and Energy use in Technologies (GREET) model for lifecycle analysis maintained by Argonne National Laboratory.
- 5. The utility specific grid mix should reflect the electricity delivered to customers.

#### Utilities must be the default credit generator for electricity on our grid.

Xcel Energy is in alignment with recommendations that credits generated from electricity used for residential transportation fuel should be assigned to the utility by default. We believe utilities should be the credit generator for residential charging (including single family and multi-family residences) and at any charging stations owned and operated by the utility.

#### The use of credit revenues must align with our existing TEP process.

We are also supportive of CTFS credit revenues to provide funding for activities that promote greater EV adoption and address equity objectives. If applicable, reinvestment requirements directing spending to disadvantaged communities should align with appropriate state or federal definitions. Additionally, CTFS policies should create a mechanism for alignment with our existing Transportation Electrification Plan (TEP) process including cost recovery. Credit revenues generated by utilities could be considered additive to approved EV programs and TEPs or could offset the costs recovered from customers.

#### Carbon intensities for electricity must be utility specific.

Additionally, we agree with the recommendations in the report that support calculating the carbon intensity (CI) of electricity as a transportation fuel based on each specific utility rather than using a statewide or regional average. This will result in an incentive for use of cleaner energy and therefore less emissions. Xcel Energy reports on the CI of our electricity and it makes sense to use the available data that is specific to each utility's electric grid, allowing for increased accuracy. This is data that the Company makes publicly available, but we want to emphasize that we still recognize NMPRC as the primary regulator of electric utilities. The CI data we currently provide to customers is based on robust greenhouse gas accounting standards, but it is not on a lifecycle basis as required for this use case. A lifecycle basis is commonly used for low carbon fuel standards, but not in accounting for the electric

sector. However, the grid mix data supporting the CI we currently provide to customers can be used as an input to a lifecycle model, such as GREET.

#### We support the use of GREET model for lifecycle analysis.

In terms of the approach to lifecycle analysis, we agree with comments in the report that suggest clearly defining the scope of lifecycle emissions per statute "...delivery and use of the finished fuel by the consumer..." or "well to wheel". We support the GREET model as the preferred lifecycle analysis modeling tool. We agree look up tables would reduce the administrative burden but encourage New Mexico to create state-specific look up tables as fuel production pathways and electricity mix are likely to differ from the Pacific Coast. Examples from other states would be a great starting point.

We have some related experience using the GREET model for a different application in Minnesota to calculate lifecycle emissions for the Natural Gas Innovation Act. There, electricity is considered an alternative fuel for natural gas. Our understanding is that GREET can be used to calculate utility specific CI score on a lifecycle and per MJ basis by inputting annual utility specific grid resource mix data as a user defined input. The state will need to conduct this analysis or build a framework for credit generators to use the GREET tool working with stakeholders. GREET is essentially a robust calculator with many options for users. Therefore, states commonly provide tailored tools, like CA-GREET, and policy guidance directing how it should be used. GREET is a complex tool – the state and utilities will likely need third-party consultant expertise to guide this endeavor.

#### The utility specific grid mix should reflect the electricity delivered to customers.

We advocate that the utility specific energy mix be based on owned generation, power purchase agreements, and unspecified market purchases assigned a market average with market sales subtracted at the utility grid average. This approach will be most representative of the energy a utility delivers to customers and negates the need for the use of RECs. If the state wishes to allow the inclusion of RECs, we urge careful consideration. We understand the desire of utilities and customers to purchase clean energy and be given the credit for doing so, but the limitations and complications of RECs in this use case must be acknowledged.

RECs only represent renewable energy and can be traded over the course of the year. Renewable energy, even paired with current energy storage technologies is intermittent and cannot provide firm 100% carbon-free electricity on an annual basis. We should not incentivize policies that misalign clean energy claims with the energy that is physically consumed. This will not lead to a reduction in emissions, and disincentivizes support for the clean energy transition. We urge the state, stakeholders, and customers to work with utilities to create a supportive ecosystem of funding and favorable policy to advance the clean firm technologies necessary to make a 100% carbon-free future a reality.

Further, REC accounting is complex. The use of RECs would need boundaries – geographic, or available transmission – to ensure the clean energy claimed could be physically delivered to the end user. It also creates the need for a complex accounting methodology based on a residual mix where RECs claimed by one entity are subtracted from the energy available to others. The state would need to create guidance through a stakeholder process and this subject is ripe for opposing viewpoints. If our proposed methodology for utility mix is utilized, the need for RECs can be avoided.



#### Clean Transportation Technologies and Solutions

www.calstart.org

August 2, 2024

Clean Transportation Fuel Advisory Committee & New Mexico Environment Department Harold Runnels Building 1190 St. Francis Drive Santa Fe, New Mexico 87505

## SUBJECT: Clean Transportation Fuel Standard Advisory Committee Technical Report

Dear Clean Transportation Fuel Advisory Committee & New Mexico Environment Department staff,

CALSTART appreciates the opportunity to provide comments on the Clean Transportation Fuel Standard (CTFS) Advisory Committee Technical Report. The CTFS has the potential to significantly reduce greenhouse gas (GHG) emissions by decreasing carbon in the State's fuel pool and accelerating the deployment of zeroemission fuels.

#### About CALSTART

CALSTART is a globally renowned 501(c)3 nonprofit organization dedicated to the advancement of zero-emission vehicle and infrastructure technology. With a global member consortium of more than 300 technology, government, industry, and community partners, CALSTART has worked for over 30 years to accelerate the commercialization and deployment of advanced technologies and solutions. Through policy development, incentive program administration, and first-of-its-kind deployment partnerships, CALSTART has designed and managed programs that drive the market for clean transportation technologies needed to achieve critical greenhouse gas and criteria pollutant emission reduction goals.

#### Comments on the CTFS Advisory Committee Technical Report

The CTFS program will play an important role in achieving the State's climate goals, not only via the diversification of fuels that move us away from petroleum, but also by advancing Zero-Emission Vehicles (ZEV) and ZEV infrastructure.

CALSTART strongly urges NMED and the committee to include capacity credits for both light-duty and medium- and heavy-duty charging stations and hydrogen fueling infrastructure within the CTFS. California has successfully implemented capacity credits for light-duty charging and, as with Washington, is working to adopt similar provisions for medium-and heavy-duty ZEV infrastructure. Supporting early infrastructure investment is necessary to electrify the transportation sector at the scale and pace needed to achieve its greenhouse gas reduction goals.

The technical report captures some discussion among committee members on the topic of capacity credits, and we would like to respond to a few of the objections/concerns cited in the report.



Some committee members request that capacity credits should not be allowed due to lack of technology neutrality and others request that capacity credits be allowed for all fuels. (Pages 9 and 10 of the technical report)

The authorizing statute for the CTFS program explicitly allows for, "additional credit opportunities from activities and projects that support the reduction or removal of GHG emissions associated with transportation in the state." Electrification is necessary in order to reduce emissions from the transportation sector, and infrastructure is foundational to doing so quickly and effectively.

Not providing capacity credits to ZEV infrastructure would disadvantage ZEVs, as biofuels already have refueling infrastructure via legacy petroleum infrastructure. New Mexico has already determined that the future is ZEV and has adopted regulations requiring the sale of ZEVs for both light-duty and medium- and heavyduty vehicles. By incentivizing the infrastructure needed to have widespread adoption and use of ZEVs, the State can better ensure the success of its electrification mandates. As ZEVs become more widely used, more infrastructure is needed, whereas liquid infrastructure needs will likely decline.

If necessary, NM could limit the number of credits used for capacity building, similar to the California program, although to date, this cap has not been met.

One committee member suggests that vehicle efficiency not be used in the credit generation calculation, suggesting that knowing how or even if the fuel is used is unnecessary. (Page 9 of the technical report)

The CTFS program is a transportation emissions reduction program, so there must be a demonstration that the fuel is used for some purpose and that the purpose be transportation-related. Further, the efficiency of a fuel-vehicle type is essential to how many GHGs are avoided by a low carbon fuel. California's LCFS CI is a comparison of the GHGs used for a low-carbon fuel compared to a fossil (gas or diesel) standard.

The energy efficiency ratio (EER) is a critical component allowing fuels to be appropriately evaluated for their GHG reduction potential. ZEVs are 2 to 5 times as efficient as other fuels (per the California program) and should be rewarded for requiring less energy than other fuel types.

Thank you,

Nicole Hutchinson State Policy Director CALSTART <u>nhutchinson@calstart.org</u>



August 2, 2024

Michelle Miano Environmental Protection Division Director New Mexico Environment Department (NMED) 121 Tijeras Ave NE, Suite 1000 Albuquerque, NM 87102 (505) 479-2596 <u>michelle.miano@env.nm.gov</u> Claudia Borchert Climate Change Bureau Chief NMED 1190 St. Francis Drive, Suite N4050 Santa Fe, NM 87505 (505) 699-8489 <u>claudia.borchert@env.nm.gov</u>

My name is Tammy Klein and I am founder and CEO of Transport Energy Strategies, a firm that provides research analysis and strategic advice on fuels issues to clients in the automotive, oil, biofuel and alternative fuel sectors, as well as governments, NGOs and private equity. I have worked on biofuels and low carbon fuel issues for the last 25 years for clients in the foregoing sectors and served on Western Governors Association Alternative Transportation Fuels for the Future Advisory Committee, a precursor initiative to the development of the California Low Carbon Fuel Standard (LCFS). I applaud the New Mexico Legislature, Environment Department (NMED) and the Advisory Committee for its efforts to create and develop a Clean Transportation Fuel Standard (CTFS) for the state. I write to briefly offer a few comments in response to the Technical Report for consideration as the regulatory process moves forward.

#### **Accurate Measurement Matters**

I echo the concerns of others in prior Advisory Committee meetings who have emphasized the importance of measuring transportation fuels, including electricity for EVs, using the best available data to ensure accurate carbon intensity (CI) scores, greenhouse gas emission reductions and ultimately, minimum program costs paid by New Mexican residents. From my perspective, for electrification, it includes employing telematics data to accurately measure the electricity consumed for credit generation purposes. Further, I agree with other commenters that utility-specific CIs for electricity would be more accurate than a statewide average and would reward decarbonization of electricity. This would help ensure no duplication of renewable energy credits (RECs) and CTFS credits as well.

#### **Properly Credit Actors in the Electricity Value Chain**

Successfully implementing the CTFS will require actors responsible for fuel production, dispensing measurement, and deployment of vehicles capable of consuming low-CI fuels. The actors for various fuels may differ and it may be prudent to reward or apportion credits among the actors. While the traditional fuel value chain that can incorporate biofuels is more straightforward with the actors and credit generators clear, it is not the case for electricity for EVs dispensed through residential and non-



residential charging.

For residential charging, electricity could be supplied by a utility, generated on-site or claimed with a REC. Measuring delivered quantity could be done through utility sub-meter, charger and especially, telematics data, which is readily available and used in California for purposes of compliance with the LCFS program. Automakers must develop and deploy efficient EVs to consume electricity as a low-CI fuel. Depending on the residential situation, it is plausible three different actors (utility, charging provider, automaker) could be responsible for reducing fuel CI and thereby having CTFS credits shared three ways. It is also plausible that an automaker could retire RECs and use vehicle measurement of charging electricity to claim all the CTFS credits. It seems likely most credits earned for residential charging could be shared by a utility and automaker (a suggested 50-50 split even though the EER is responsible for >90% of LCFS credits when using the 2023 grid CI value). NMED should consider the appropriate credit apportionment among the actors to encourage the greatest potential for use of low-CI electricity.

For non-residential electricity, multiple actors could supply low-CI electricity. However, sole actors exist for dispensing measurement (charging provider) and vehicle deployment (automakers). In this case, it seems appropriate for NMED to assign credits solely to the charging provider since having public charging access improves the utility of EVs making them easier to deploy and electricity provided by a utility is paid for through a consumption tariff. Moreover, electricity providers are already compensated for the electricity supply with carbon intensity reduction targets that are dictated by the state's Renewable Portfolio Standard (RPS). "Double dipping" of RECs and CTFS credits should not be allowed, and any credits that are awarded should be "additional" to RPS requirements. Full credits awarded to EV charging providers should help facilitate the scale up of charging in the state.

It is important to point out that passenger vehicles will come standard with a capable charger starting with model year 2026-2027 electric vehicles since the state has adopted the Advanced Clean Car (ACCII) program. Given this mix of possible actors, credits should be available to more than just utilities and diversifying may help speed the scale up and adoption of transportation electrification in the state, particularly in disadvantaged communities.

#### **Consider Behind-the-Meter Sources**

Consideration should be given to the growing deployment of behind-the-meter power sources. In particular, distributed generation such as solar can offset electricity demand growth for transportation and may serve as an important additional source of electricity for EV charging. As such installers or owners of distributed generation sources should have the opportunity to generate credits under the program.



#### **Maximize Participation Opportunities for All Fuel Types**

Treat process energy (low-CI electricity and RNG) the same as directly consumed energy. For example, the California LCFS allows electricity for fuel processing to be generated/consumed anywhere and the low-CI impact is embedded in the produced fuel whereas directly consumed electricity has geographic limitations associated with accepted RECs. NMED should accept low-CI electricity that can physically reach a vehicle via processed fuel or wires to maximize carbon reduction at minimum cost. It is true that generating zero/low-CI electricity within the CTFS-regulated region could reduce criteria emissions, but that is not the primary intent of the CTFS.

Capacity credits available in other clean fuel standard programs make purchasing a clean fuel vehicle feasible and should be available to all clean fuels. Something to consider is the concept of "paying back" capacity credits over time with consumption credits. This would remove the concern that capacity credits don't represent actual GHG reductions. It would require careful thought to make this work since the refueling station, for example, could change ownership or close before paying back all awarded capacity credits. California LCFS capacity credits programs are basically grants instead of an advance so they are limited in availability (credit cap & eligibility requirements) and favor specific fuels which I think goes against the principle of a technology neutral market instrument and has opened the program to criticism that could be avoided here.

#### **Public Participation Timelines**

It is understandable that NMED wishes to develop and promulgate the CTFS program with all due haste. However, one week to comment on the Technical Report given the complexity of the discussions (and ultimately the program) is not reasonable and actually discourages public participation.

Thank you for the opportunity to contribute these comments.



August 2, 2024

New Mexico Environment Department Climate Change Bureau 1190 St. Francis Drive, Suite N4050 Santa Fe, NM 87505

#### SUBMITTED ELECTRONICALLY AT: <u>www.nmed.commentinput.com/?id=fG3AeTk6d</u>

## Re: Comments on the Clean Transportation Fuel Standard ("CTFS") Advisory Committee Technical Report

Rivian Automotive, LLC, ("Rivian") appreciates the opportunity to comment on the CTFS Advisory Committee's recently released report summarizing technical input provided to the New Mexico Environment Department ("NMED") concerning the design and implementation of the state's CTFS.

Rivian has long supported efforts to establish a CTFS in New Mexico and we applaud NMED's leadership in developing the state's new policy. Rivian participates in CTFS-like programs in other U.S. states as a public charging provider, fleet operator, and manufacturer of EVs that generate program value through residential charging. We look forward to participating in the formal rulemaking process for the CTFS and are grateful for this initial opportunity to reflect on the Advisory Committee report.

New Mexico is fortunate to be developing its policy with the aid of lessons learned from other jurisdictions. The example of peer policies clearly demonstrates the importance of planning ahead for potential overcompliance with the targets and taking a results-oriented approach to the rules governing electricity credit generation. We recommend that NMED establish the CTFS with provisions for an auto-acceleration mechanism ("AAM") to preempt excessive overcompliance in the program that could undermine the credit market. We also recommend that NMED allow charging providers to earn capacity-based credits for DC fast charging installations; provide EV manufacturers an opportunity to earn a share of residential EV charging credits; use up-to-date EV energy economy ratios ("EERs"); and avoid excessively restrictive eligibility criteria for RECs used for electricity claims.



### **About Rivian**

Founded in 2009, Rivian is an independent U.S. company. With over 16,000 employees across the globe, Rivian's mission is to Keep the World Adventurous Forever. Rivian's focus is the design, development, manufacture, and distribution of all-electric adventure vehicles, specifically pickups, sport utility vehicles ("SUVs"), and commercial vans. Key to the success of our mission, these vehicles will displace some of the most polluting conventional vehicles on the road today.

Rivian brought the first modern electric pickup to market in 2021 when we launched the R1T from our manufacturing facility in Normal, Illinois, followed shortly thereafter by the R1S SUV and the EDV commercial van for Amazon. The R1T and R1S—both medium-duty passenger vehicles ("MDPVs")—provide all-electric options in segments where added utility is a necessity. The R1T has an EPA-certified range of up to 410 miles. The R1S is certified at up to 400 miles. The truck also features 11,000lbs of towing capacity, while the R1S is a seven-passenger full-sized SUV. Both are well-equipped for off-roading in a range of climates. Separately, our Class 2b and 3 commercial vans eliminate tailpipe emissions from last-mile delivery. Rivian is committed to producing 100,000 vans for our launch customer, Amazon, with more than 15,000 already in service in 800+ U.S. cities. The van is now also available for purchase by other fleet customers in addition to Amazon. Beyond our vehicle lineup, Rivian is also building a network of DC fast chargers across the country known as the Rivian Adventure Network ("RAN"). Our first New Mexico RAN site is opening this year.

## NMED Should Consider Several Key Design Questions When Developing the CTFS

A clean fuels policy is a proven emissions reduction tool and a powerful enabler of transportation electrification. Clean fuels policies have been in force in other jurisdictions for many years, demonstrating both their value and opportunities for improvement that exist for new policies established with the experiences of other states in mind. To that end, Rivian welcomes the discussions of the Advisory Committee summarized in its report. We offer comments on certain issues highlighted by the report below.

Significant overcompliance in other markets suggests the need for an AAM in the CTFS from day one. Both California and Oregon have experienced large runups in their credit banks



leading to dramatic declines in credit prices.<sup>1</sup> Without regulatory provisions to course-correct the policies, market participants in both states have had to endure prolonged periods of uncertainty. Therefore, we welcome comments made by several Committee members in support of an AAM—a concept now being developed for California's regulation in response to the issues faced in that market. Much as cost containment provisions address the risk of runaway compliance costs, building in an AAM from the beginning will prepare the CTFS to respond to periods of sustained and substantial overcompliance that threaten to destabilize the program.

Rivian believes an AAM should operate as simply, transparently, and accessibly as possible. Regulated and opt-in entities should be able to plan compliance and market participation in light of the mechanism's governing provisions. And NMED should leverage the work of other jurisdictions like California to simplify the process of developing and implementing an AAM. In the interest of simplicity and minimizing compliance burdens, we recommend harmonizing key aspects of New Mexico's AAM provisions as much as possible with those soon to be finalized in California. This would mean, for example, establishing a trigger condition based on the credit bank-to-deficit ratio and advancing the existing CI reduction schedule by one year each time the mechanism is triggered. This would be a simple, transparent action with a known outcome that regulated entities and market participants can model and plan for. It would also minimize the administrative burden for NMED.

#### Capacity-based credits are a proven tool for accelerating investment in charging

**infrastructure.** New Mexico has ambitious EV goals and sales requirements that will require significant investment in EV charging. Unfortunately, the economics of public charging stations, in particular, can be quite challenging while EV stocks and charger utilization are low. Time-limited capacity credits help address this problem, creating a powerful incentive to deploy chargers 'ahead' of the demand, both building public confidence in the charging network while ensuring that New Mexico is EV-ready. We appreciate that there was some disagreement among Committee members on this topic but recommend that NMED consider the capacity-based credit provisions in California and Washington regulation as examples to adopt. Capacity credits should be available for both light- and medium-/heavy-duty public charging infrastructure.

<sup>1</sup> Neste, *California Low Carbon Fuel Standard Credit Price*, available at <u>www.neste.com/investors/market-data/lcfs-fuel-standard-credit-price</u>; Oregon DEQ Clean Fuels Program, *Monthly Credit Transaction Report*, available at <u>https://www.oregon.gov/deq/ghgp/cfp/Pages/Monthly-Data.aspx</u>.



EV manufacturers should have the opportunity to share in residential credit generation.

Committee discussions suggested that all residential charging credits should flow to utilities by default. This would be a missed opportunity. Rivian's preferred approach would incentivize automakers to empirically substantiate their vehicles' residential charging activity with telematics data, with manufacturers earning a portion of base credits in return. This approach promises several benefits.

- Accurate accounting of residential charging events. Bringing automakers into the program would allow NMED to use empirical telematics data to enhance the accuracy and environmental integrity of the CTFS. An approach that awards credits earned by EVs to utilities would likely rely largely on an estimation methodology.
- Create the conditions to address the issue of take-home fleets. We expect that CTFS • will provide clear allocation guidelines for electricity credits generated by fleets when charging takes places in non-residential contexts. However, some fleet EVs—both MHD vehicles like pickups and vans as well as light-duty cars and trucks—might charge often or mostly at private residences. Consistent with the principles at work in the non-residential context, Rivian believes that fleets should be eligible to earn at least a share of the residential credits generated in such circumstances. The importance of any associated credit revenue for the economics of fleet-switching should not be discounted. When California adopted the Advanced Clean Trucks rule, CARB assumed that commercial MHD vehicle owners/operators would realize charging credit revenue from the LCFS as part of cost-benefit calculations for the rule. This would be impossible for take-home fleets if all residential credits are awarded to utilities. But a fresh approach leveraging telematics data opens the door to potential solutions. For example, EV manufacturers, in partnership with fleets and NMED, could harness their data to support fleets in reporting eligible residential charging events by fleet vehicles while avoiding double-counting.
- Reflect the contributions of multiple stakeholders while enhancing the incentives for automakers to invest in their EV products and decarbonization. The opportunity to earn residential credits would create a pull factor for additional EV investments and sales in the New Mexico market while also incentivizing REC-matching by automakers to deepen the emissions reductions achieved by residential EV charging. This reflects the reality that each stakeholder responds to clean fuels policies in unique ways.

**NMED should use up-to-date EERs for EVs in the CTFS.** Use of EERs is standard practice in clean fuels programs but existing policies in the United States are outdated. The current lightduty EER value of 3.4 stems from a determination originally made by CARB in the 2011



rulemaking for the California LCFS—and is thus now more than a decade old and unrepresentative of the contemporary EV fleet.<sup>2</sup> Manufacturers have made substantial improvements to EV efficiency in the years since the California LCFS was first developed and continuing to use an outdated EER systematically undervalues those efficiency improvements, the real-world displacement of fossil fuels achieved by EVs, and the true role EVs play in decarbonizing the transportation fuel pool in support of the CFP's objectives. Examples of revised EERs exist in other clean fuels programs and point the way to a more appropriate figure for use in the CFP. Canada's regulation, for instance, specifies an EER of 4.1 for lightduty vehicles.<sup>3</sup> Rivian would be pleased to discuss this issue further and we strongly encourage NMED to incorporate a revised EER in the final CTFS.

**REC eligibility should not be excessively restricted.** At least one comment in the report emphasized setting "guardrails around the use of RECs, such as requiring the associated electricity to be generated within New Mexico."<sup>4</sup> While Rivian appreciates the intent of this comment and the concerns behind it, excessive restrictions on REC eligibility for purposes of electricity book-and-claim can work against the objectives of policies like the CTFS. For example, constraints on eligibility put upward cost pressure on eligible RECs, with the potential to significantly reduce the incentive to pair charging sessions with zero-carbon electricity and thus achieve greater emissions reductions from the EV fleet. By the same token, broader REC generation eligibility eases cost pressure but the benefits don't stop there. It also incentivizes resource development where it can have the greatest avoided emissions impact.

For all these reasons, NMED should establish relatively expansive geographic boundaries for RECs for book-and-claim accounting. The programs in Oregon and Washington are instructive examples. In both cases, RECs may be sourced from anywhere in the Western Electricity Coordinating Council ("WECC") territory—a model NMED should consider adapting for its purposes.

<sup>&</sup>lt;sup>2</sup> California Air Resources Board, Appendix A: Proposed Regulation Order, October 26, 2011, available at www.arb.ca.gov/sites/default/files/barcu/regact/2011/lcfs2011/lcfs2ppa.pdf.

<sup>&</sup>lt;sup>3</sup> Environment and Climate Change Canada, *Clean Fuel Regulations: Specifications for Fuel LCA Model CI Calculations, Version 2.0*, January 2023, p. 85, available at <u>www.data-</u> <u>donnees.az.ec.gc.ca/data/regulatee/climateoutreach/carbon-intensity-calculations-for-the-clean-fuel-</u> regulations/en/Resources/?lang=en.

<sup>&</sup>lt;sup>4</sup> Clean Transportation Fuel Standard Advisory Committee Technical Report, July 26, 2024, p. 8.



### Conclusion

Rivian welcomes this opportunity to comment on the Advisory Committee report. We appreciate the hard work of NMED staff in facilitating the Committee's discussions, as well as the valuable contributions of Committee members. We believe this process laid a strong foundation for the upcoming CTFS rulemaking.

Please contact me with any questions and thanks again to NMED for this opportunity to provide input. We look forward to continued discussion with you and all stakeholders during the rulemaking process.

Sincerely,

Bon K. Hen

Tom Van Heeke Senior Policy Advisor Rivian Automotive, LLC <u>tvanheeke@rivian.com</u> | 641-888-0035

### David Morrison

EIB decision makers with direct ties to oil and gas corporations must recuse themselves from all aspects of the Clean Transportation Fuel Standards.

### Michael Barrio

#### Overall Feedback (On behalf of Advanced Energy United)

Clarify CI Calculation Methods

-We emphasize the importance of using robust, transparent CI calculation methods that consider the specific conditions of New Mexico and suggest adopting best practices from other states while ensuring local adaptability.

Incorporate Grid Resilience Measures

-We recommend integrating measures that enhance grid resilience, such as incentivizing energy storage solutions that can support EV charging infrastructure and grid stability.

Focus on Infrastructure Development

- We encourage a strong focus on developing the necessary infrastructure for EV charging and renewable fuel distribution and highlight the need for public-private partnerships and leveraging federal funding opportunities.

Support Comprehensive Reporting and Verification

-We emphasize the importance of comprehensive reporting and third-party verification to ensure the integrity of the CTFS and advocate for a phased implementation approach to allow stakeholders to adapt to new requirements.



August 2, 2024

Claudia Borchert Bureau Chief - Climate Change Bureau New Mexico Environment Department Harold L. Runnels Building 1190 St. Francis Drive, Suite N4050 Sante Fe, New Mexico 87505

Submitted via NMED online portal

Ms. Borchert,

Thank you for the opportunity to provide written comments in response to the New Mexico Environment Department (NMED) Clean Transportation Fuel Standard's (CTFS) Advisory Committee and its technical report. Growth Energy is the world's largest association of biofuel producers, representing 97 U.S. plants that each year produce more than 9.5 billion gallons of renewable fuel; 119 businesses associated with the production process; and tens of thousands of biofuel supporters around the country. Together, we are working to bring better and more affordable choices at the fuel pump to consumers, improve air quality, and protect the environment for future generations. We remain committed to helping our country diversify our energy portfolio in order to grow more green energy jobs, decarbonize our nation's energy mix, sustain family farms, and drive down the costs of transportation fuels for consumers.

We applaud New Mexico's efforts to reduce carbon emissions through the CTFS. Growth Energy has previously provided extensive comments on similar programs in California, Washington, and Oregon, ensuring those states recognize the carbon reduction value of increased bioethanol use. In California, biofuels have been among the largest contributors to the success of the LCFS program to date and are poised to continue to do so with appropriate updates to the program.<sup>1</sup> Additionally, as mentioned in the June 28 Advisory Committee meeting, bioethanol has been a significant credit generator in the Oregon and Washington programs.<sup>2</sup> Like those states, we believe the CTFS has the opportunity to utilize biofuels as a means of immediate greenhouse gas (GHG) reduction in the current light-duty vehicle fleet as future technologies are further developed.

<sup>&</sup>lt;sup>1</sup> <u>https://www.transportationenergy.org/wp-content/uploads/2023/07/Decarbonizing-Combustion-Vehicles\_FINAL.pdf</u>

<sup>&</sup>lt;sup>2</sup>https://cloud.env.nm.gov/resources/\_translator.php/OWEwYTlmZjgwMjk2NWEyMTYwZTcxOWI4ZF8xNjE0ND g~.pdf

#### Environmental and Economic Value of Bioethanol

According to recent data from Environmental Health and Engineering, today's bioethanol reduces GHG by nearly 50 percent compared to gasoline and can provide even further GHG reductions with additional readily available technologies.<sup>3</sup>

The potential for fuels with higher blends of ethanol to reduce GHGs are further illustrated in a national analysis showing more than 146,000 tons in GHG reduction in New Mexico alone if E10 gasoline was replaced with E15.<sup>4</sup> This is the GHG reduction equivalent of removing 32,000 vehicles from New Mexico's fleet just by using a higher ethanol-blend fuel.



Bioethanol's other environmental benefits are also noteworthy. As has been researched by the University of California, Riverside and the University of Illinois at Chicago, the use of more bioethanol and bioethanol-blended fuel reduces harmful particulates and air toxics such as carbon monoxide, and benzene.<sup>5</sup>

#### Use of GREET for Life Cycle Analysis Modeling

We believe the Argonne National Laboratory's GREET model is the most accurate tool to examine the life-cycle greenhouse gas emissions of all fuels and considers a wide range of carbon reduction processes and technologies that bioethanol production can utilize. It is the gold standard for measuring the emissions-reducing power of farm-based

<sup>4</sup> http://www.airimprovement.com/reports/national-e15-analysis-final.pdf

<sup>&</sup>lt;sup>3</sup> <u>https://iopscience.iop.org/article/10.1088/1748-9326/abde08/pdf</u>

<sup>&</sup>lt;sup>5</sup> <u>Comparison of Exhaust Emissions Between E10 CaRFG and Splash Blended E15, https://fixourfuel.com/wp-content/uploads/2018/04/UC-Riverside-Study.pdf</u>

feedstocks and biofuels. It incorporates up-to-date science that more accurately scores lifecycle carbon intensity (CI) for corn ethanol and other renewable fuels.

#### Reject Caps and Sustainability "Guardrails" on Biofuels

As several members of the CTFS Advisory Committee noted in presentations and we reiterated above, biofuels have been a major driver of GHG reductions in existing fuel standard programs. They have been able to be so despite onerous, and we believe unnecessary, land use change (LUC) penalties for cornstarch bioethanol of varying values, including 19.8 gCO2e/MJ in California's Low Carbon Fuel Standard. This penalty was designed to mitigate alleged land use change with respect to cornstarch ethanol's production. We believe these scores to be outdated and not based on the most up to date research. A review of more recent science indicates a decreasing trend in land use values with the newer data indicating values closer to 4 gCO2e/MJ.<sup>6</sup>

Concerns over land use change for cornstarch ethanol are unfounded. The United States is planting grain corn on roughly the same number of acres as it was in 1900. At the same time, the per acre yield has increased more than 600%.<sup>7,8</sup> Capping the use of bioethanol in the CTFS or adopting a sustainability framework similar to what has been proposed by the California Air Resources Board would create an unfair double penalty on cornstarch ethanol in addition to violating the New Mexico legislature's directive for technology neutrality in the program.



<sup>&</sup>lt;sup>6</sup> https://iopscience.iop.org/article/10.1088/1748-9326/abde08/pdf

<sup>&</sup>lt;sup>7</sup> <u>https://www.nass.usda.gov/Publications/Todays\_Reports/reports/croptr19.pdf</u>

<sup>&</sup>lt;sup>8</sup> https://www.nass.usda.gov/Charts and Maps/Field Crops/cornac.php

#### Expanding E15 and Higher Blends

Emissions reductions through the use of E15 also come with meaningful consumer costsavings. During the summer of 2023, E15 was sold at 15 cents less per gallon where available on average nationwide. In some locations, we saw E15 selling consistently for as much as 60 cents less per gallon than E10.

Consumers have embraced E15's reputation as a more environmentally beneficial, more affordable fuel. Since the US EPA approved E15 in 2011, at which time there were *zero* retailers offering it, its availability rapidly expanded to what is now more than 3,400 retail sites in 32 states. Since then, drivers in America have relied on E15 to drive 100 billion miles.<sup>9</sup>



#### **Recognizing Carbon Capture and Other CI Reduction Methods**

Bioethanol producers constantly make improvements to their production process, increasing economic efficiency and more importantly, reducing CI. Among the newest tools bioethanol producers are utilizing to reducing CI is carbon capture utilization and sequestration (CCUS). Recently, California adjusted their modeling to account for CCUS, recognizing its importance in carbon reduction. By accounting for CCUS, the pathway CI for E85—approved for use in California—was updated such that it reduces the assumed CI score for ethanol from 66 gCO2e/MJ to 35 gCO2e/MJ.<sup>10</sup> We urge NMED to also recognize the CI reductions CCUS provides to biofuels pathways.

<sup>&</sup>lt;sup>9</sup> <u>https://growthenergy.org/2024/01/29/100-billion-miles-e15-growth-energy/</u>

<sup>&</sup>lt;sup>10</sup> https://ww2.arb.ca.gov/sites/default/files/2023-08/CATS%20Technical 1.pdf

Additionally, we have recently advocated for expanded crediting for low-CI power sourcing in California's LCFS, Currently, the ability to credit low-CI power in a pathway is limited to specific fuel pathways. While CARB is considering expanding crediting ability to hydrogen-as-fuel pathways, we believe the ability to credit *new* low-CI power sourcing—power not included in a utility's preexisting capacity—through power purchase agreements should be available to all feedstocks and pathways. With bioethanol production occurring entirely outside of New Mexico, the state has an opportunity to become a national leader by encouraging, via the CTFS, the adoption of low-CI power for bioethanol producers in other jurisdictions. We encourage NMED to consider the ability of all fuel pathways to credit low-CI power sourcing in their CI score.

On-farm carbon reduction practices, commonly called climate-smart agriculture (CSA), should also be credited in the CTFS. With the use of the GREET model, including the model's Feedstock Carbon Intensity Calculator, along with the USDA's database of CSA practices, the carbon reduction values can easily be quantified and verified.<sup>11</sup> Among these practices are the use of cover crops, low or no-till farming, precision fertilizer application, and the use of enhanced efficiency fertilizer.

Non-SAF	Plant	/Feeds	tock	Types	
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Corn Starch

Nat Gas Dry Mill Coal Wet Mill Nat Gas Wet Mill

#### Corn Kernel Fiber

Nat Gas Dry Mill Coal Wet Mill Nat Gas Wet Mill

#### Sorghum Starch

Nat Gas Dry Mill

#### Sorghum Fiber

Nat Gas Dry Mill

#### **Non-SAF Technologies List**

CCS (Biogenic) CCS (Non-biogenic) Landfill RNG Livestock RNG **Biomass Heat** Combined Heat and Power (on-site) Combined Heat and Power (over-the-fence) Wet Distiller's Grains Membrane Dehydration Thermal Energy Storage Power Energy Storage Mechanical Vapor Recompression Thermal Vapor Recompression High-Yield Yeasts and Enzymes **Biomass Electricity** Wind Electricity Solar Electricity Nuclear Electricity Hydro Electricity Waste Electricity

<sup>&</sup>lt;sup>11</sup> https://www.nrcs.usda.gov/sites/default/files/2023-10/NRCS-CSAF-Mitigation-Activities-List.pdf

SAF Plant/Feedstock Types	SAF Technologies List (Feedstock Production)		
Corn Starch Nat Gas Dry Mill Coal Wet Mill Nat Gas Wet Mill Corn Kernel Fiber Nat Gas Dry Mill Coal Wet Mill Nat Gas Wet Mill Distiller's Corn Oil Nat Gas Dry Mill Coal Wet Mill Nat Gas Wet Mill Sorghum Starch Nat Gas Dry Mill Sorghum Fiber Nat Gas Dry Mill Distiller's Sorghum Oil Nat Gas Dry Mill	CCS (Biogenic) CCS (Non-biogenic) Landfill RNG Livestock RNG Biomass Heat Combined Heat and Power (on-site) Combined Heat and Power (over-the-fence) Wet Distiller's Grains Membrane Dehydration Thermal Energy Storage Power Energy Storage Mechanical Vapor Recompression Thermal Vapor Recompression High-Yield Yeasts and Enzymes Biomass Electricity Wind Electricity Solar Electricity Nuclear Electricity Hydro Electricity Waste Electricity		

Bioethanol producers have a wide variety of tools at our disposal to reduce our product's carbon intensity. We strongly urge NMED to consider maximizing the opportunities for bioethanol producers to lower the CI for bioethanol pathways.

#### Sustainable Aviation Fuel (SAF)

As producers of one of the most scalable feedstocks for SAF production, we appreciate NMED's attention to development of this key market. We encourage NMED to work with SAF producers, biofuel feedstock producers, and airlines to seek ways to accelerate use of these important fuels to help decarbonize the aviation sector.



Thank you for the opportunity to provide input on the CTFS Advisory Committee's technical report. The CTFS will be a critical tool in New Mexico's decarbonization efforts, and we look forward to working with NMED to ensure the role of biofuels in making New Mexico's fuel mix more sustainable and help the state achieve its progressive climate goals through the expanded use of bioethanol. Additionally, we are happy to make ourselves available for any questions NMED may have.

Sincerely,

Chris Bliley Senior Vice President of Regulatory Affairs Growth Energy