# Clean Transportation Fuel Standard Advisory Committee Technical Report

July 26, 2024



Summarized and Compiled by the New Mexico Environment Department

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Committee Chair

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# INTRODUCTION

With the adoption of <u>House Bill 41</u> in March 2024, the State of New Mexico became the first state in the Intermountain West with a statutorily-mandated Clean Transportation Fuel Standard (CTFS). The CTFS is codified at NMSA 1978, Sections 74-1-3, 7(A)(15), 8(A)(15), and 18.

The CTFS uses a market mechanism to reduce greenhouse gas emissions from fuels used for transportation – while also supporting economic innovation. It is technology-neutral, which means it does not limit or favor any technology for accomplishing the purpose of the program. Instead, the purpose of the program is to encourage the development of all cost-effective, low-carbon intensity (CI) fuels.

Section 74-1-18 authorizes the framework for the CTFS program. NMED is developing the regulations that govern how the Clean Transportation Fuel program operates. Section 74-1-18 requires the Environmental Improvement Board to promulgate regulations to initiate the program no later than July 1, 2026.

As part of program development, Section 74-1-18(B) directs the Environment Secretary to convene a CTFS 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.

The Advisory Committee convened on June 21, June 28, July 12, 2024 to: 1) receive technical presentations from individual members and NMED staff on topics related to the CTFS program and 2) discuss questions posed by NMED staff. The Advisory Committee met a final time to discuss and approve the report on July 26, 2024. This report aims to summarize the technical input—both oral and written—that NMED received from members during the Advisory Committee process. It reflects the statements and perspectives of individual members, not the consensus of the committee as a whole.

The perspectives captured in this report highlight a diverse array of technical opinions and provide a robust discussion for NMED's consideration as NMED initiates the rulemaking process for CTFS in New Mexico.

# **CTFS Advisory Committee Members**

<u>Member Name</u>	Affiliation
Alaric Babej	Public Service Company of New Mexico (PNM)
Amy Brown	Adelante Consulting, Inc.
Anthony Willingham	Electrify America, LLC
Brian Bartlett	Valero Energy
Cara Lynch	Coalition for Clean Affordable Energy (CCAE)
Cory-Ann Wind	Clean Fuels Alliance America
Dalva Moellenberg	New Mexico Mining Association
Daniel Klein	Twenty-First Strategies and Libertad Power
Eduardo Barrientos	ExxonMobil
Ethan Epstein	New Mexico Tax Credit Alliance
Evan Rosenberg	SRECTrade
Gabriel Pacyniak	University of New Mexico School of Law Clinic
Graham Noyes	Sustainable Aviation Fuel Producer Group
Jane Sadler	Rocky Mountain Institute (RMI)
Jed Smith	Rio Valley Biofuels, LLC
Jessica Gregg	Carbon America
Joseph (Joe) Sorena	Chevron Products Company
Kari Buttenhoff	Christianson PLLP
Karl Feldman	Individual
Lloyd Funk	Phillips 66
Luis Reyes	Kit Carson Electric Cooperative
Matthew Weyer	Taos Ski Valley
Michael Teague	ONEOK
Robert Hagevoort	NMSU Dairy Extension
Sam Wade	Coalition for Renewable Natural Gas
Teresa Sosa	El Paso Electric Company
Tiffany Wallace Polak	Occidental Petroleum
Todd Trauman	Energy Mission Control, Inc. dba FuSE
Tom Dollmeyer	Individual
Travis Madsen	Southwest Energy Efficiency Project
Viswanath Krishnamoorthy	Qynergy Corporation

## **Report Format**

Since the purpose of this report is to capture the diverse array of technical input from Advisory Committee members, the body of the report focuses on that input. The report's appendices include presentations provided by the NMED CTFS team and individual AC members and meeting minutes. The NMED webpage dedicated to the CTFS includes a subsection on the Advisory Committee: <u>https://www.env.nm.gov/climate-change-bureau/clean-fuel-standard/</u>, which includes meeting agendas, minutes, presentations, and a link to the recordings of the meetings.

### **Commonly Used Acronyms**

- a) NMED: New Mexico Environment Department
- b) CTFS: Clean Transportation Fuel Standard
- c) AC: Advisory Committee
- d) Member: Advisory Committee Member
- e) *CI*: Carbon Intensity
- f) GHG: Greenhouse Gas
- g) Program: The rules of the Clean Transportation Fuel Standard
- h) LCFS: Low Carbon Fuel Standard
- i) RNG: Renewable Natural Gas
- j) *CARBOB*: the petroleum fraction of California reformulated gasoline before any fuel oxygenate, such as ethanol, is added
- k) EV: Electric vehicle
- I) *ICE*: Internal combustion engine
- m) eGRID: Emissions and Generation Resource Integrated Database
- n) *RECs*: Renewable Energy Certificates
- o) CCS: Carbon capture and storage
- p) CARB: California Air Resources Board
- q) ETA: Energy Transition Act
- r) SAF: Sustainable Aviation Fuel
- s) *GREET*: Greenhouse gases, Regulated Emissions, and Energy use in Technologies a suite of life cycle analysis models
- t) *ZEV*: Zero emission vehicle
- u) O&G: Oil and gas
- v) RD: Renewable Diesel
- w) RIN: Renewable Identification Number
- x) *DCFC*: Direct Current fast charging
- y) *ICAO CORSIA*: International Civil Aviation Organization Carbon Offsetting and Reduction Scheme for International Aviation

# **Summary of Oral Input**

**NMED Note:** The following section summarizes technical input provided by the Advisory Committee members during the June 21, June 28, and July 12 meetings. NMED strives to accurately represent members' oral remarks to the greatest practicable extent.

## 1) Current State of Transportation Fuel in NM

One member noted that most diesel imported into NM arrives by truck, aside from major markets, like Albuquerque, that are served by pipeline. The truckers importing diesel would become the obligated parties under existing LCFS programs' rules. In contrast, the same member explained, California imports the majority of the gasoline it consumes by tanker ship due to the unique CARBOB specifications it must meet, which is easier to manage at a larger scale. California produces and refines the remainder of its gasoline within the state, the member added. Another member pointed out that Oregon is more comparable to New Mexico in that they are both states with low carbon fuel standards and little to no in-state oil refining.

## 2) Carbon Intensity and Fuel Lifecycle Analysis

#### a. Baseline Carbon Intensity

Members observed the need for NMED to carefully consider the method and assumptions used in calculating the CI of petroleum products imported into New Mexico from surrounding states. They highlighted the composition, transportation distance, and transportation method of crude oil and petroleum products as salient factors. One member emphasized that most of the adjustments made by Oregon and Washington to the CI values in California's lookup table as part of their rule development relate to the difference in transportation distances of fuels.

#### b. Scope

- i. One member advocated for NMED to quantify CI by dividing the amount of associated GHG emissions by vehicle travel distance rather than units of energy.
- ii. One member's interpretation of the statute included the requirement for obligated parties to reduce the CI of each transportation fuel against its own fuel-specific 2018 baseline. Several members objected to this interpretation, taking the language in the statute to mean instead that the program will measure the CI of each obligated party's marketed fuel against a statewide average CI and generate credits or deficits accordingly. If the program compared each fuel's CI with a fuel-specific baseline, one member elaborated, the program would not incentivize lower carbon fuels.

#### c. Lookup Tables

i. Several AC members voiced their support for basing the CI values of transportation fuel pathways on existing lookup tables currently used by the Pacific Coast states with similar programs. They recognize that using lookup tables would reduce administrative burden and quicken the pace of program implementation. One member dissented, encouraging NMED to challenge the assumptions made by other states' lookup tables rather than adopting them outright.

ii. One member recommended that NMED employ third-party verifiers to evaluate the CI of any pathways that are not defined in existing lookup tables due to NMED's limited resources and the subject matter expertise that verifiers possess.

### 3) Credit Generation Opportunities

- a. Fuel Types
  - i. <u>RNG</u>
    - 1. Market Opportunity

Several members voiced their enthusiasm for RNG as a credit-generating fuel. One member noted that existing state incentives, such as the New Mexico Agricultural Biomass Income Tax Credit (<u>https://www.emnrd.nm.gov/ecmd/tax-incentives/agricultural-biomass-income-tax-credit/</u>) can be transferred or stacked on top of CTFS credits. Another member underscored RNG's potential, contingent upon regulation, to achieve negative CI as a transportation fuel when factoring in avoided

methane emissions. Additionally, they noted, RNG is fungible with conventional natural gas, which obviates the buildout of RNG-specific transportation and distribution infrastructure.

#### 2. Potential for Perverse Incentives

One member cautioned NMED to consider the risk of unintentionally inducing demand for methane-emitting dairy operations by allowing RNG credits. Another member disagreed, citing a lack of evidence of perverse incentives in established programs that include credits for RNG.

#### 3. Accounting Methodology

Another member highlighted the accounting challenges posed by RNG, though they conceded that book-and-claim accounting offers a solution.

#### 4. Infrastructure Barriers

One member remarked that a key challenge for industry participation in the marketplace is the time required to build infrastructure at fuel terminals, including permitting and construction.

ii. Biodiesel and Renewable Diesel

#### 1. Market Opportunity

Many members expressed confidence in the potential of biodiesel and renewable diesel as credit-generating fuels. As an example of the market opportunity for biodiesel, they noted that biodiesel currently constitutes only about 2% of diesel blends in New Mexico, whereas biodiesel's blend wall is 20%. One member claimed that 60% of California's diesel consumption is supplied by a combination of biodiesel and renewable diesel, suggesting a market opportunity of similar size in New Mexico. Another member cited Oregon's biodiesel blend rate, which is between 30-35%, as a more reasonable estimate.

2. Logistical Challenges

- a. Members noted that importing biofuels into New Mexico may present logistical challenges. Whereas the Pacific Coast states are able to import biofuels by ship, they explained, New Mexico will likely be importing biofuels by rail or individual truckloads, which implies more complex reporting requirements. One member, however, posited that reporting would become easier as the program matures and parties become more familiar with reporting requirements, which has been the case in the Pacific Coast states.
- b. One member provided examples of potential reporting requirements for biofuels: For individual trucks importing biofuels, Oregon's program required bills of lading certifying the CI of the transported fuel. Mass-balance accounting, which does not require perfect precision, is another potential solution.

#### iii. <u>Electricity</u>

- 1. Parameters
  - a. Members held diverging views as to how the program should determine the volume of electricity used for transportation purposes. Some members proposed that electricity usage should be calculated based upon what can be measured via meters in charging devices. Other members countered that only some chargers are capable of transmitting data, so a calculation based on adoption and utilization rates would prove more accurate.
  - b. One AC member recommended calculating the CI of electricity for each specific utility rather than using a single statewide average, as utilities already report on the CI of their electricity, and investorowned utilities have different priorities and requirements than electric cooperatives. Another member disagreed, arguing that the use of a utility-specific CI calculation disadvantages small, rural electric cooperatives because they would have a relatively low CI baseline and therefore less of an opportunity to generate credits, which may result in slower EV adoption among those ratepayers.
  - c. Some members proposed higher energy efficiency of EVs relative to ICEs to be factored into CI calculations on the basis that the statute's definition of fuel lifecycle includes end usage. Others disagreed, claiming that how the fuel is used is not an inherent attribute of the fuel itself.
  - d. On the subject of which electric vehicles should be defined as EVs used for transportation under the rules, one member recommended using the language in statute requiring utilities to implement a plan to expand transportation electrification.
- 2. Data Source

Per one member, California uses eGRID data to determine the CI of electricity as a transportation fuel, though there is also an opportunity for NM to use utility-specific data.

3. Regulatory Authority

One member expressed a concern that NMED may encroach upon NMPRC's jurisdiction by requiring the reporting of utility-specific data.

- 4. Renewable Energy Certificates
  - a. Several members advocated for the program to allow CI to be reduced through the use of RECs. One member stated that RECs allowed utilities to generate 100% carbon-free electricity for use as a transportation fuel. When RECs were added to the Oregon program, they elaborated, over 90% of the electricity used as transportation fuel was associated with RECs. Other members were skeptical of RECs, highlighting the risk that RECs may not contribute in a material way to the reduction of carbon emissions. Another member emphasized the need for the program to establish firm guardrails around the use of RECs, such as requiring the associated electricity to be generated within New Mexico.
  - b. Some members expressed the opinion that the program should allow all fuel producers, regardless of fuel type, to reduce their CI through the purchase of RECs. One member noted that e-fuel producers were interested in producing electrolytic hydrogen using renewable energy through the purchase of RECs.
- 5. Credit Assignment

Members suggest that credits generated from electricity used for residential transportation fuel should be assigned to the utility by default. One member suggested that Evan's presentation on credit assignment looked reasonable. Although the inability to claim credits may discourage a company from electrifying its fleet, for example, utilities can use their credits to pass along discounts to their customers in the form of rebates, explained one member. Another member urged NMED to design the program in a way that leaves no EV credits unclaimed.

iv. Other Fuels

Some members suggested that NMED consider including aviation fuel in the program as an opt-in fuel.

#### b. Non-Fuel Credit Opportunities

- i. Capacity Credits
  - Some members suggest that capacity credits run contrary to the technology neutrality provision in the statute. Furthermore, according to one member, vehicle efficiency should not be factored into the lifecycle CI calculation because the volume and CI of fuel delivered should determine credit generation, irrespective of how or whether that fuel is consumed.

- 2. If NMED did include capacity credits, one member proposed, they should apply not only to electricity and hydrogen projects but also to biofuel infrastructure. Another member offered a contrasting opinion, emphasizing the need for the emissions reduction value of one credit to be comparable to that of another, which is not possible when they originate from fundamentally different activities.
- 3. Other members disagreed. One member, for example, noted the benefits that capacity credits provide, such as incentivizing the buildout of larger and more numerous EV fast charging stations to meet future EV charging demand. Likewise, charging stations with battery storage help reduce stress on the electrical grid so that utilities avoid increased costs, the member continued. Another member pointed to the provision in the statute giving NMED the authority to consider creating additional credit opportunities for activities and projects that support reduction or removal of greenhouse gas emissions associated with transportation, which includes capacity credits.

#### ii. Project Credits

- 1. One member expressed support for CCS project credits on the basis that they would provide oil and gas producers with options to independently reduce their CI.
- 2. One member proposed that NMED honor the validity of EPA permits for subsurface CCS rather than creating its own permitting process, as the latter would increase the cost of permitting unnecessarily and thereby suppress these projects. In addition, deferring to EPA permitting would allow for projects that capture and sequester carbon in another state to export lowcarbon fuel to New Mexico.

## 4) Program Implementation

#### a. Timeline

- i. Some members advocated for the inclusion of an implementation period wherein parties are not yet obligated to reduce their CI but can instead focus on planning and reporting, in order to maximize compliance. They put forth California's program— which included an obligation-free period wherein CARB studied the cost, quality, and number of credits generated—as an example to follow. An obligation-free reporting period, they claimed, would also provide a sense of stability and thereby encourage investment.
- ii. One member warned that if state agencies are too slow to process and certify credit pathways, they may discourage participation in the program, as the processing delay reduces the value of the underlying incentive.
- iii. One member stressed the importance of NMED providing visibility into the annual CI targets as soon as possible.
- iv. If NMED sets aggressive CI targets during the first years of the program, one member suggested, then it is necessary to have a plan for credit generation that is going to enable participants to hit those targets. Another member countered that other LCFS programs have struggled with low credit prices as a consequence of setting conservative CI targets, and therefore NMED need not be too concerned about high credit prices so long as sufficient options exist for compliance.
- v. One member suggested that NMED establish a process to validate applications prior to submittal in order to ensure their rigor and improve the likelihood of approval.

#### b. Measurement, Reporting, and Verification

- i. Off-Road Credits
  - 1. Members were divided as to which off-road EV applications should be allowed to generate credits. Some members asserted that any EV that is doing any work in the form of transportation should be eligible to generate credits. Others maintained that electricity usage is exceedingly difficult to measure for some off-road EV applications, such as electric forklifts, and therefore those applications should be excluded from the program's scope.

2. One member recommended NMED adopt a flexible approach to metering requirements for electricity as a transportation fuel by basing the stringency of reporting requirements on the degree to which reporting is feasible. For example, on-road EV charging is easy to measure, and therefore reporting requirements should be strict, whereas electricity usage data for off-road applications like electric forklifts and refrigeration units is more difficult to measure and verify. In the latter case, the credit generator should be responsible for collecting and validating the data (using telematics, for example) rather than requiring that they conform to on-road measurement requirements. Other members disagreed. One member asserted that there is not a need to have a separate credit generation mechanism based on specific end uses, as they interpret CI to be based on the delivered fuel without respect to how it is used. Another member cautioned against pathways that make it too easy to generate credits, as this would lead to a low credit price and therefore less overall CI reduction. Finally, one member noted that Pacific Coast states did not initially include off-road applications for credit generation; they recommended that NMED wait to consider their inclusion during a later stage of the program.

#### ii. Verification

One member noted that a strong verification process is the key to ensuring that credits represent real reductions in CI.

iii. Third-Party Verification

One member stressed the importance of having an accreditation process by which NMED establishes a list of third-party credit verifiers. They recommended drawing from existing lists of accredited verifiers within the Pacific Coast states' programs. Furthermore, they continued, it is important to have transparency to distinguish verifier responsibility versus state responsibility, minimizing overlap as much as possible in order to shorten the timelines for verification. Another member counseled NMED to bear in mind that third party verifiers only verify conditions that are established by the regulation, not additional, external requirements. As such, it is important to include the conditions to be verified within the regulation.

#### iv. Credit Certification

In some instances, according to one member, bad actors have fraudulently transferred credits across states. For this reason, they stressed, it is important to have a robust credit certification process.

#### c. Interactions with Other Policies

- i. One member noted that the CI of electricity will continue to decrease as utilities comply with New Mexico's Energy Transition Act. In light of this interaction, utilities will have greater opportunity to generate CTFS credits over time.
- ii. One member recommended the use of a tracking system that retires RECs to ensure that the same RECs are not counted towards both ETA compliance and CTFS compliance. For example, a utility or entity should not be able to retire RECs after they have achieved their carbon neutrality goals.

iii. In response to a concern about obligated parties counting emissions reductions towards both the CTFS and the EPA's Renewable Fuel Standard, several members explained that they are complementary policies that are structured around different goals, and that the statute allows parties to generate CTFS credits for actions taken to comply with the renewable fuel standard.

### 5) Credit Market Dynamics

#### a. Cost Containment Mechanism

Members agreed that cost containment mechanisms are necessary to include in the program. One member recommended that NMED consider the cost containment mechanisms included in the proposed amendments to California's LCFS program. Another member suggested a cost containment mechanism wherein NMED issues additional credits into the market if the credit price increases beyond an established threshold.

#### b. Auto-Acceleration Mechanism

- i. Several members favored the inclusion of a mechanism that automatically adjusts the CI target downward if certain conditions are met, namely the credit price decreasing beyond an established threshold. One member noted that, although an auto-acceleration mechanism adds another layer of complexity to the program, it is a valuable tool for ensuring the program achieves its long-term goals, lest ad hoc CI adjustment proposals be obstructed or delayed in the regulatory review process. Furthermore, they added, using an auto-acceleration mechanism that responds to current market conditions reduces the program's dependence on long-term market forecasting that is inherently less accurate. Other members do not favor an autoacceleration mechanism, proposing that the periodic review process required by New Mexico's CTFS statute serves the purpose of adjusting CI targets, or that NMED only consider an auto-adjustment mechanism once the program reaches a certain maturity. One member offered their support of an auto-acceleration mechanism with the stipulation that it would also relax the CI target in response to market conditions.
- One member referred to the Regional Greenhouse Gas Initiative's concept of an "emissions containment reserve" as an alternative framing of an auto-acceleration mechanism.

#### c. Deferral Mechanism

One member urged NMED to be transparent about what economic conditions would trigger a deferral so that investors can have confidence in the stability of the program.

## 6) Environmental Justice & Equity

#### a. Indirect Land Use Change

Some members argued against limits to the volume of biofuels, so called "crop caps", to minimize negative externalities associated with indirect land use change. One reason for excluding crop caps, they claimed, is that it threatens certain pathways for reducing CI, such as CCS via biomass fermentation, cellulosic ethanol, and biofuel-based SAF. They also disagreed with the premise that biofuels led to indirect land use change, citing a lack of evidence.

#### b. Distribution of Benefits & Impacts

Responding to concerns that the benefits of transportation electrification tend to accrue disproportionately to those with greater financial resources, one member proposed increasing funding for EV rebates and carpooling as one solution and establishing credit pathways for public transit or para-transit services as another. Another member declared that some utilities are open to offering additional electrification incentives that benefit low-income and disadvantaged communities, on top of the incentives outlined in current state Transportation Electrification Plans. With regard to reinvesting credit market revenue into underserved communities, one member commented that utilities in Oregon are exceeding what is required of them.

## Written Technical Input

**NMED Note:** *NMED solicited written input from AC members on 11 prompts and has included their responses below. Responses are verbatim, anonymized unless otherwise requested, arranged by prompt and in the order in which NMED received them. Any additional written input that AC members submitted is included at the end of this section in a separate category.* 

# 1. What do you see as best practices that the New Mexico Environment Department (NMED) should consider for the first years of New Mexico's Clean Transportation Fuel Standard (CTFS) program?

While a net-zero economy may be the end goal of our environmental policies, progress toward that goal may be constrained in the short term by technological, economic, regulatory, and legacy infrastructure factors. Many environmental programs have succeeded in making environmental progress by laying out a clearly defined phased approach, where initial standards are still effective but set to be tightened over time. The federal acid rain program of the 1990s is an excellent example of an effective yet phased program.

Dear New Mexico Environment Department,

Christianson PLLP is a full-service public accounting firm based in Willmar, Minnesota and has worked with renewable fuel producers for over 35 years, providing technical assistance and professional services that promote industry compliance.

We are honored to be the trusted third-party validation and verification body for numerous biofuel producers participating in various U.S. clean transportation programs.

We are writing to share our perspective from our years of experience as an accredited validation and verification body by the California Air Resources Board (CARB) Low Carbon Fuel Standard (LCFS) and Mandatory Greenhouse Gas Reporting Regulation (MRR), as well as the Oregon Department of Environmental Quality (DEQ) Clean Fuels Program (CFP) and Greenhouse Gas Reporting (GHG) program.

Our comments, consistent across each state program, will focus on the following topics:

- Partner Rotation within Verification Bodies
- Pathway Validation Process Timetable
- · Sustainability Requirements
- · Less Intensive Verification
- · Streamlined U.S. Accreditation Process

#### Partner Rotation

The concept of adding rotation requirements of verification bodies for either a partner rotation or firm rotation has been proposed in U.S. low carbon fuel programs. A partner rotation allows the verification body team to retain its client by switching out the lead verifier. This allows for the retention of the team's knowledge built from extensive time spent understanding the regulated party processes, contributing to an efficient and effective audit.

Once an audit team becomes familiar with the various aspects of the client and their documentation, it then allows an auditor to find problem areas or unusual activity more easily for the client.

The audit quality and efficiency improve as the auditor becomes more familiar with the client and their processes. Upon resolution of major items in the first years of a new client audit, the auditor can redirect their time and energy towards other areas, thereby uncovering additional issues that might have been overlooked in the initial year of review.

Currently, public companies in the U.S. are required to rotate only the lead engagement partner for financial audits every five years. There is no requirement for a whole firm rotation. In addition, the American Institute of Certified Public Accountants (AICPA) stands against an audit firm rotation, stating that a mandatory firm rotation comes at a great expense to audit quality.

A firm rotation rather than a partner rotation is highly disruptive and costly to producers, especially when there is a small pool of accredited verification bodies available. This problem is further exacerbated with lookback periods in place in other states, making it more difficult for producers to find a quality verification body who has also not been utilized in previous verifications or in a consulting capacity.

Our company requests that if there is a desire to implement rotation requirements, that it be a partner rotation rather than a firm rotation, meaning the person leading the verification organization's services for a client be rotated every six to ten years and not the entire verification firm.

Additionally, if the desire remained for a full firm rotation, we strongly advocate for an exception for verification bodies that are also licensed CPA firms. Of the 30 CARB approved LCFS verification bodies, there are only four licensed CPA firms with those same 4 firms registered as verification bodies under the Oregon Clean Fuels Program

An approved verification body, that is also a licensed CPA firm, exceeds the standards in place for verification bodies and is already subject to additional oversight on the entity's quality control system in accounting and auditing practices through the required AICPA peer review process.

A licensed CPA firm differs from other consulting agencies by adhering to more rigorous standards and oversight at a state and national level. If a verification body were to violate a Lead Verifier rotation requirement, it would put the firm license at risk. The firm license is required for all services provided by the firm, not just the environmental verification services, thereby ensuring adherence to requirements.

We understand many of the verification bodies are not firms licensed under a separate set of professional standards. If NMED feels that firm rotation is necessary overall, we would like to suggest a partner rotation, rather than a firm rotation, for professionally licensed firms, such as CPA firms, that are subject to other professional standards and oversight.

#### Pathway Validation Process Timeline

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Proposed amendments to the current LCFS regulations in California aim to refine the validation process for submitted applications. Currently, validations must occur within six months of the submission date. However, the proposed amendment initiates the timeline from the moment the verification body receives the application from CARB, following the staff's application review.

This revised timeline allows the verification body a full six months to meticulously verify data and complete the validation, instead of requiring both staff review and third-party validation within the initial six-month period.

Additionally, the amendments introduce new requirements regarding the timeliness of data within the application, stipulating that data must be current within one quarter of the submission date.

These changes to the validation process ensure a process with a defined timeline, the most current CI calculations in establishing new pathways, and allows verification bodies and producers adequate time to complete the application. We believe implementing similar timelines will be advantageous for new pathways entering the program.

#### **Sustainability Requirements**

The concept of sustainability requirements for biofuels has recently emerged in California as a potential safeguard against land conversion to farmland. A similar initiative was introduced and implemented into Canada's Clean Fuel Regulations (CFR) program, which imposes stringent criteria for land use changes.

It is important to highlight that U.S. feedstock is exempted from Canada's Crops-Excluded land criteria based on the U.S. Environmental Protection Agency's (EPA) aggregate compliance approach, citing that "the U.S. Code of Federal Regulations provides a sufficient level of environmental protection with respect to the land on which the feedstock is harvested."

Furthermore, the USDA released its 2022 Census of Agriculture in February, revealing a 14 million-acre (4%) decrease in cropland across the U.S. since 2017. This decline reflects a longstanding trend in the U.S., rendering the argument of additional safeguards for cropland irrelevant to U.S. crop producers.

Considering the limited availability of accredited third-party verification bodies and the fact that renewable fuel producers already must qualify through the U.S. EPA's Renewable Fuel Standard aggregate compliance, imposing additional sustainability guardrails on renewable fuels produced in the U.S. is unwarranted.

#### **Less Intensive Verification**

Verification bodies play a crucial role in ensuring fuel producers meet the specified criteria for being considered low carbon. Less intensive verification is utilized in CARB's MRR program (section 95130) and in Oregon's Clean Fuels Program and GHG Reporting Program (340-272-0500 (4)). It provides that verification bodies may opt to do a less intensive verification which removes the requirement of a site visit, if they visited the site in the last two years and issued a positive verification statement.

CARB acknowledges, "there is little change of operation from reporting period to reporting period thus reducing the benefit of annual site visits." Additionally, staff rationale states, "There is no or little risk to the integrity of the program to allow for less intensive verification services without a site visit in the

annual verifications for the following two years. This should reduce the cost of verification services which is often passed on to program participants."

We acknowledge the importance of adhering to specified conditions that necessitate comprehensive verification services. These conditions include the issuance of an adverse verification statement or a qualified positive verification statement in the preceding year and the occurrence of a change in operational control of the reporting entity in the previous year.

In addition to the time and cost-savings benefit to verification bodies and producer clients, less intensive verification reduces the amount of greenhouse gas emissions from traveling to site visits for our many clients spread throughout the country. In 2023, our team traveled <u>21,818 miles</u> solely via passenger vehicles, with supplementary air travel to personally visit a portion of our client <u>base</u>. Through less intensive verification, this is an easy way to reduce carbon emissions while maintaining the program's integrity.

#### **Streamlined U.S. Accreditation Process**

Low carbon fuel programs stand as a cornerstone in a state's commitment to environmental sustainability. Integral to the program's effectiveness is the rigorous verification process conducted by accredited bodies to ensure compliance with carbon intensity standards. Throughout our company's years of experience as an accredited validation and verification body and the increasing number of states and even other countries implementing their own clean fuel programs, we find it important to streamline the process of accreditation for verification bodies.

We advocate for an accreditation process similar to California or Oregon's requirements for those seeking accreditation and a system of reciprocity for existing accredited verification bodies in state low carbon fuel programs. Such recognition underscores the shared commitment to environmental stewardship and regulatory excellence, facilitating compliance standards for stakeholders across state boundaries.

Granting reciprocity to accredited verification bodies yields multifaceted benefits. It streamlines administrative processes, reduces regulatory complexity and minimizes compliance burdens.

We at Christianson PLLP thank you for your time and consideration and are grateful to serve on the Clean Transportation Fuel Standard Advisory Committee.

Sincerely,

Kari Buttenhoff, CPA Partner, Christianson PLLP

Sustaining reasonable credit values is key to a successful Clean Transportation Fuel Standard. In the three states that have adopted such a program, each has produced a surplus, a plethora, of credits that have eroded their value and undermined the effectiveness of the program. In these states, deficit generation is low, so demand for credits is low; meanwhile, credit generation is high, so the supply is high. The programs are victims of their own success, but the result is deflated credit values. Credit values that are detrimentally low can relegate the CTFS to simply a "cost of doing business" rather than an effective tool

to reduce the carbon intensity of transportation fuels. So, maintaining appropriate credit values is important to ensuring that the CTFS program helps advance the state's goals.

During the early years of the CTFS program, NMED should ramp up the program in stages, schedule virtual meetings to brief stakeholders and answer questions, and create frequently asked question (FAQ) sheets from each meeting. The first stage should be registration, the second stage should be reporting and should occur before obligations attached and credits are generated. The third stage should be reporting with obligations and credit generation. NMED should determine the length and timing of each stage.

a. Having the first year as the phase-in period for reporting-only to allow time for start-up, compliance assistance, and learning.

b. Alternatively, you could allow generation of credits only, or of credits and half deficits, during the first year, but have any credits or deficits generated carried over into the second year.

c. Do not make too many changes during the first few years. Let the program get momentum and show that it is reliable and credit-worthy.

d. It will be especially important not to suspend the program the way that the biodiesel blend mandate has consistently been suspended since its adoption. The market has to have confidence in enforcement of the program in order to make investments in alternative fuel production in New Mexico and even just to ensure an adequate supply of cleaner fuels imported from out of state.

e. Backload the compliance curves to allow time for development of low carbon fuels and increased charging infrastructure.

#### Set the Strongest Carbon Intensity Targets Permitted by Statute

A wide portfolio of renewable energy and GHG reduction technologies are available to begin decarbonizing New Mexico's transportation sector immediately. All these technologies need to be implemented as quickly as possible given the state's ambitious goal of reducing statewide emissions by at least 45% by 2030. To create the greatest likelihood of achieving the economy-wide goals and maximizing contributions from the transportation sector, NMED should set the most stringent CTFS targets allowable by statute.

#### Regional Alignment and Reciprocity of CI Scores Should be a Key Goal

We strongly encourage synergy among existing CFS programs—thus we recommend that the CTFS allow for CI pathways approved by existing programs in other states. Such regional alignment will maximize the ability for RNG producers to swiftly respond to the joint signal sent by the clean fuel programs in these states. Significant attention should be placed on retaining cross-jurisdictional alignment of CI tools and scoring. To the extent feasible, NMED should continue to work closely with its West coast partners and attempt to make changes to CI models together.

#### Use of Renewable Electricity Credits and Renewable Thermal Credits

The use of Renewable Electricity Credits (RECs) and Renewable Thermal Credits (RTCs) is an important strategy to align accounting for the use of clean energy across applications including electric vehicle charging, hydrogen production, and clean fuel upgrading.

A significant portion of the GHG emissions represented in the average RNG fuel's life cycle are from electricity (and sometimes geologic gas) used to upgrade biogas to RNG. In these situations, the use of clean inputs into RNG production can positively impact a resource's CI score and can be easily tracked using existing systems<sup>[1]</sup> and assessed using the existing GREET model. Accordingly, NMED should allow for RECs and RTCs to qualify as an accounting method to reduce the CI score of RNG production.

Similarly, when another end use takes renewable power or gas as an input this should be recognized under the program's CI scoring. For example, RTCs should be able to be used to reflect RNG use as an input to make liquid fuels, hydrogen (including hydrogen for hydrotreating), or power (for EV charging or when used in other biorefineries).

[1] https://www.mrets.org/m-rets-renewable-thermal-tracking-system/

[Submitted on behalf of Cara Lynch and the Coalition for Clean and Affordable Energy, <a href="https://ccaenm.org/">https://ccaenm.org/</a>]

As NMED establishes New Mexico's CTFS, it is critical that the program has robust, transparent guidelines and requirements for clean fuels providers. It is also important for the program to build confidence among stakeholders that the program is reducing greenhouse gas emissions. In addition, it will be valuable to quantify the program's effect on other criteria pollutants, and how the benefits are distributed. For example, for credits generated by electric utilities, it will be important to understand the extent to which the revenues spent have increased access to EV charging and reduced criteria pollutants in low-income or disproportionately impacted communities.

1. Establish a clear role for credit aggregators within the CTFS by:

- Enabling default credit generators, for any fuel category (including project-based credits such as ZEV infrastructure credits, if any), to authorize third party credit aggregators to participate in the CTFS on their behalf

- Once authorized, enable credit aggregators to act in the same capacity and manner as a default credit generator, and manage all such activities within a single registry account

- Creating a template document by which default credit generators designate credit aggregators to act on their behalf. Require that a signed designation agreement by provided by credit aggregators at the time of registering fuel supply equipment

2. Publish program and market data early in the program development and frequently (each quarter). Program and market data will support greater participation and provide better transparency.

3. Consider establishing an auto-adjustment mechanism (AAM) that can automatically increase carbon intensity targets without the need of a rulemaking. The triggers of the AAM should be attuned to credit-deficit dynamics, such as the size of the credit bank or the achievement of CI reduction %.

4. When designing the software system that will serve as the backbone for the CTFS, considering developing an application programing interface (API) to enable third-party developers to interact with the system. Consider that the underlying software system will be used by many hundreds of entities to perform hundreds of thousands of actions, including submitting fuel pathway reports, registering fuel supply equipment, submitting fuel transactions, and submitting credit transfers. APIs allow for third-party software platforms to be developed and communicate with the underlying software, which can create significant efficiencies for both participant and regulator and reduce human error.

a. Best guess, it might take about 2 years for NMED and market participants to shake out all the details of implementation – recordkeeping, reporting, pricing – so NMED should require no or very low GHG reductions in Year 1 and low GHG reductions in Year 2. If reductions are required in Year 1, those deficits should be rolled over to Year 2 so compliance doesn't need to be demonstrated until the end of Year 2.

b. NMED should require recordkeeping and reporting as soon as possible so that the regulated parties establish good habits - identifying CIs for individual fuels rather than relying on CIs for blended fuels, knowing if the obligation is being passed on with the fuel or being separated, and how that documentation needs to occur.

c. NMED should begin recertifying fuel pathways that have been approved by other jurisdictions – California, Oregon, and Washington – as soon as possible. Or permit, in rule, that the out-of-state ones are valid for use in NM for the start of the program.

d. NMED should adopt as many routine items from the other jurisdictions as possible – energy economy ratios, energy densities, temporary carbon intensities, methodologies to calculate statewide CIs for electricity and fossil fuels, etc.

Program should adhere to the technology neutrality requirement in the statute. As such program should allow technologies which co-process feedstocks consisting of both renewable bio-mass and non-renewable biomass. This provides more option for investment and earlier implementation of projects to provide lower CI fuels for the program. This process is allowed in both the CA and WA programs. Program should clearly define Obligated parties and Fuels that would be obligated.

- Obligation should be at the rack or at point of import into the state.
- If intra-state jet is to be obligated, obligation should be on the airlines.

CTFS credits should be tradeable, bankable, should not expire and be usable against future obligations.

Recommend NMED implement a 6-12 month reporting period without obligation where early credits could be generated. This step enables the NMED to test program effectiveness and work out unforeseen challenges. The Canadian Clean Fuel Regulation (CFR) implemented this step. The CFR reporting began on June 2022, and the obligation started on July 2023. Moreover, clean fuel standard administrators from other states, such as OR and WA, have strongly recommended this step as a best practice for other agencies contemplating implementation of these policies based on their learnings. This step enables the regulatory agencies to develop and adjust as necessary all processes and tools, establish connections with reporting entities, and allow the industry to get ready for the program with a smoother transition.

• When defining obligated fuels, recommend including all transportation fuels and not limiting the definition to the petroleum-based portion of fuels. This precludes, for example, the need to revise the program in the future to obligate renewable fuels with carbon intensity (CI) above the annual standard. Oregon's program is a good example of how obligations could be defined (link: <u>OR Clean Fuels Program</u>)

• Under the technology neutrality statutory requirements recommend including definitions and provisions related to co-processing of lower carbon intensity fuels. Definitions are included in other U.S. state programs and in Canada's CFR (link: <u>CFR section 77</u> "Co-processed low-carbon-intensity fuel"). Consider the following definition, adapted from the <u>OR Clean Fuels Program</u>:

"Co-processing" means the processing and refining of biomass or alternative feedstocks intermingled with crude oil and its derivatives at petroleum refineries to produce lower lifecycle carbon intensity fuels.

Per HB41 Section 4.C(3), include additional credit opportunities from activities and projects that support the reduction or removal of GHG emissions associated with transportation in the State.
 Examples of projects that should be eligible for crediting under this provision can be found in the CFR credit creation class 1 (CC1) (<u>CFR section 30</u> "CO2e-Emission-Reduction Project") and California's LCFS program. Under project-based crediting, projects could include actions to reduce GHG emissions in the petroleum supply chain, including carbon capture and storage (CCS) or associated direct air capture.
 Crediting for projects is based on life cycle emission reductions, and credits are issued after the reported reductions are verified. Recommend not limiting credit generation to proportion of crude oil or liquid fossil fuel that is not exported from NM as with the CFR (link: <u>CFR section 37(6)</u>). This limits the incentive to invest in these technologies, as it renders many credit opportunities ineligible for the program.

o To maximize opportunities for credit generation, we recommend a streamlined and efficient CTFS framework that leverages federal regulations. Contribution from CCS projects should be pursuant to the EPA CCS Protocol:

- CCS project means a project by an eligible entity (defined below) that captures qualified CO2, transports and either physically or contractually disposes it in secure geological storage such that the qualified CO2 does not escape into the atmosphere pursuant to the U.S. EPA requirements for secure

geological storage and the United States Treasury/Internal Revenue 45Q regulations (<u>2021-00302.pdf</u> (<u>govinfo.gov</u>)) collectively referenced herein as the "EPA CCS Protocol"

- "EPA CCS Protocol" requirements for secure geological storage, such that the qualified carbon oxide does not escape into the atmosphere, specify that the injection well complies with applicable Underground Injection Control or other regulations, located onshore or offshore under submerged lands within the territorial jurisdiction of States or federal waters, and:

1. is not used as a tertiary injectant in a qualified enhanced oil or natural gas recovery project, in compliance with applicable requirements under 40 CFR part 98 subpart RR (<u>Subpart RR – Geologic</u> <u>Sequestration of Carbon Dioxide | US EPA</u>); or

2. is used as a tertiary injectant in a qualified enhanced oil or natural gas recovery project and stored in compliance with applicable requirements under 40 CFR part 98 subpart RR, or the International Organization for Standardization (ISO) standards endorsed by the American National Standards Institute (ANSI) under CSA/ANSI ISO 27916:2019, Carbon dioxide capture, transportation and geological storage—Carbon dioxide storage using enhanced oil recovery CO2-EOR) (CSA/ANSI ISO 27916:2019).

- NMED should recognize the following entities, which EPA deems eligible to submit project applications to NMED. If approved, these entities receive CCS credits associated with net GHG reductions from CCS projects, in accordance with EPA CCS protocol.

1. Alternative fuel (defined as any transportation fuel that is derived from biomass, waste streams, renewable energy sources, or gaseous carbon oxides) producers, petroleum refineries, and oil and gas producers that capture CO2 on-site, including at the location of the production of hydrogen used as an intermediate input, and geologically sequester CO2 either on-site or off-site.

2. An entity that employs direct air capture to remove CO2 from the atmosphere using chemical and/or physical separation and geologically sequester the CO2 produced in association with the fuels supply chain Direct air capture and sequestration projects must be physically located in the United States.

- A CCS project can receive CTFS credits either under the project-based provisions or through a fuel pathway. Projects and fuel pathways claiming CCS credits must be approved by the New Mexico Environment Department and must comply with the EPA CCS Protocol.

- CCS credits generated by refiners must be claimed under the Refinery Project Credit Program.

- CCS credits generated by crude oil and gas producers must be claimed under the Crude Oil and Gas Project Credit Program.

o Refinery Project Crediting Program recommendations:

- A refinery, or a hydrogen production facility physically providing hydrogen to a refinery, may receive credit for reducing GHG from its facility. Any such credits must be based on fuel volumes sold, supplied, or offered for sale in New Mexico as set forth below.

- General Requirements.

(A) The refinery project must occur within the boundaries of the refinery or at hydrogen production facilities that supply hydrogen to refineries.

(B) The following project types are eligible for the refinery project credits:

i. CO2 capture at refineries, or at hydrogen production facilities that supply hydrogen to refineries, and subsequent geologic sequestration. The sequestration sites do not need to be on-site at the refinery or the hydrogen production facility.

ii. Use of lower CI hydrogen in the production of fossil transportation fuels. The hydrogen carbon intensity value is determined by:

1) a Lookup Table using industry average values and approved by the NMED,

2) a hydrogen producer's CI determined using the DOE Argonne Labs' 45VH2-GREET Model (<u>https://www.energy.gov/eere/greet</u>) for the duration of the Inflation Reduction Act, Section 45V program (note: US Treasury/IRS proposed rule <u>2023-28359.pdf (govinfo.gov)</u> to be finalized soon)

3) an individual pathway's actual carbon intensity of produced hydrogen, underpinned by data in the EPA's <u>Greenhouse Gas Reporting Program</u> GHGRP.

iii. Use of low-CI electricity at refineries or at hydrogen production facilities and acquisition of Energy Attribute Credits, including Power Purchase Agreements and Renewable Energy Certificates (REC).

iv. Use of low-CI process energy including but not limited to biomethane, e-methane, geothermal, Differentiated Natural Gas, renewable propane, and renewable coke and low CI power (including but not limited to nuclear, geothermal, natural gas combined cycle with CCS), to displace fossil fuel at refineries or hydrogen production facilities.

v. Process improvement projects that deliver a reduction in baseline refinery-wide GHG. GHG reductions due to curtailment, simple maintenance; and crude oil switching that results in GHG reductions in the project system boundary without improvements in the processing units or equipment involved should not be eligible.

(C) Credits must be pro-rated for years where the units within the project system boundary were nonoperational. This pro-rating will consider the calendar days of operation relative to non-operation.

(D) Credits must be pro-rated if the hydrogen production facility that captures CO2 does not supply all of its hydrogen to the applicant refinery.

o Crude Oil Project Credit Program recommendations:

Under this program, credits can be generated for using the following methods in the production of crude oil and/or its transport and delivery to refineries to produce transportation fuels delivered and used in New Mexico:

1) A portion of the CO2 emissions associated with crude oil operations is captured and sequestered on-site.

2) Renewable energy is produced and consumed on-site, or the site acquires Energy Attribute Credits, including Power Purchase Agreements and Renewable Energy Certificates.

3) Renewable natural gas (RNG) or biogas energy. RNG or biogas must be physically supplied directly to the crude oil production or transport facilities.

Incentivizing the New Mexico DOT and other State of NM fleets to utilize alternative fuels to serve as both an example and share learning/experiences (education) with the rest of the state to encourage adoption.

• To deliver the greatest climate benefit, durable carbon removals that generate credits under the CFTP should meet the following:

o An ability to remove carbon dioxide (CO2) from the atmosphere and demonstrate that carbon removal projects can prevent the stored CO2 from re-entering the atmosphere

o A demonstrated ability to monitor, report, and verify (MRV) the amount of CO2 removed from the atmosphere and securely stored. This can include adherence to recognized standards for quantifying carbon removals.

§ For example, direct air capture projects will report the amount of CO2 removed from the atmosphere to the U.S. Environmental Protection Agency's (EPA) Greenhouse Gas Reporting Program.

§ Further, the U.S. EPA's Underground Injection Control Class (UIC) VI regulations are designed to protect underground sources of drinking water. The UIC Class VI regulations (and state regulations, which must be deemed at least as stringent as EPA regulations) include extensive provisions on site selection and characterization, operation, financial assurance, emergency and remedial response, monitoring, and site closure to ensure only suitable sites are permitted.

• Carbon removal projects that can demonstrate that they meet MRV and storage durability requirements should be allowed to generate credits, regardless of location.

• To ensure the greatest greenhouse gas emission reductions and program functionality, the CTFS should come under periodic review to access the carbon intensity (CI) target over time, and if necessary, allow for adoption of more stringent CI targets and other design mechanisms to achieve state climate and economic goals, including assessment of a sub-target for carbon removals.

• To achieve the greatest climate benefit, carbon removal projects will need low CI electricity. Providing guidance on low CI electricity usage in the CFTS for carbon removal projects will encourage its deployment at climate relevant scale. With guardrails around eligibility criteria for low CI electricity, the CFTS will enable high environmental integrity removals while promoting low CI electricity over time. This guidance should include:

o Usage of indirect Power Purchase Agreements (PPAs), and;

o Book-and-Claim crediting period for the associated environmental attributes of the procured zero or near-zero power.

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o Direct air capture with secure carbon storage (DACCS) projects should be allowed to utilize indirect accounting mechanisms for low CI electrical power.

§ Low CI electricity must be supplied under contract and contracts must be made available for review,

§ Environmental attributes associated with the electricity generated for the project must be claimed and retired for the project in a registry that can be audited.

o This guidance allows DACCS project developers to rely on existing contractual frameworks, developers, and supply chains to procure low CI electricity for DACCS at scale. It allows low CI electricity resources to be expanded into power grids where they have optimal climate conditions for generation. Finally, it allows for flexibility in environmental accounting for climate-based mitigation systems on a broad yet still auditable scale.

A best practice would be to focus the program initially on fuels used for highway/on-road transportation. There are many variables to consider for off-road fuel uses, and given NMED's aggressive schedule for developing a proposed rule, there is not sufficient time to identify and vet all of the issues that should be considered. This issue has barely been touched upon during the Advisory Committee process, and the process has not provided sufficient time to identify and vet all of the relevant issues. As a basis for this approach, other state programs have exempted various off-road fuel uses from the program, and those components of other state programs should be considered for the New Mexico program. As an alternative to exemptions, NMED could consider an opt-in process whereby off-road fuel uses are exempted unless and until those affected opt in to the CTFS program.

The first best practice that NMED should consider is to clearly define that the scope of the CTFS must include the lifecycle emissions per statute "...delivery and use of the finished fuel by the consumer...", or more simply stated as "well-to-wheel". To appropriately ensure that all carbon emissions of the use of the fuel are included, NMED should consider an energy economy ratio (EER) such as used in other states. The EER accounts for the difference in energy efficiency of an electric vehicle (~77%) versus an internal combustion vehicle (~12%-30%) according to the U.S. Department of Energy.

Second, NMED should make it clear that the intention of the CTFS is to reduce carbon emissions in the aggregate from the 2018 baseline, as is the case in other states and is the best practice for reducing emissions. The statute does not state that each fuel should be measured against itself. Indeed, this interpretation could negate the need for a marketplace where credit-producers sell credits generated by dispensing fuel below the baseline emissions to deficit fuel producers whose emissions are above the baseline.

Third, NMED should allow for electric vehicle adoption data to be used in lieu of requiring additional metering for the generation of credits. This practice has been accepted in other states and would greatly simplify the administration and credit generation. Because it will be impossible to directly capture every kWh used for fueling, especially as NM building code now requires EV-readiness in new construction, the ability to use EV adoption data creates an agreed upon method to capture credits from electric fueling. However, PNM notes that only restricting utilities to credits from residential charging is likely

not the best practice. While charging networks or fleet operators may have an interest in participating in the market to claim credits, there are many occasions where a customer may not want to participate, and utilities should be given the ability to capture as many credits from fueling as possible in these instances. This is important as utilities are required by statute to reinvest all revenues in this arena in supporting transportation electrification. Credits left unused reduce the utilities' ability to meet statutory goals.

Fourth, NMED should consider mechanisms to ensure that all possible credits from the use of electricity as a fuel are captured. In other markets, this has been the allowance of a backstop aggregator that can participate in the market on behalf of credit-producing fuels such as small utilities that do not have the bandwidth to participate directly. NMED should also consider for aggregators similar regulations to that of the requirements for electric utilities that all revenues are reinvested to further support transportation electrification.

Finally, NMED should consider EV infrastructure capacity credits to assist in the deployment of charging availability across the state. Capacity credits could be used to offset the initial costs of infrastructure installation as well as buy down demand charges in the early years of deployment when the utilization rate remains low.

Submitted by Travis Madsen for the Southwest Energy Efficiency Project:

In preparing the draft rule, NMED should keep these overarching principles in mind:

• Aim to achieve Governor Lujan-Grisham's 2030 economy-wide climate target, and long-term national targets for transportation sector decarbonization

-Credit generation should include options that can be deployed quickly; and

-Options that can help zero-emission technologies achieve scale

• Maximize co-benefits, including:

-Equity

-Consumer cost savings

- -Public health and air quality improvements
- -Economic growth
- Minimize externalities

-Consider market rules that can

- -Help prevent price spikes
- -Ensure meaningful and stable incentives for companies to invest in clean transportation

-Consider limits on credit types (such as lipid-based biofuels) in order to limit the risk of oversaturating the market with credits, or of unwanted land-use changes, etc.

#### In terms of technical steps:

#### Establish a clear and simple baseline

 In calculating the carbon intensity baseline, focus on the fuels that were responsible for the vast majority of transportation GHG emissions in 2018: gasoline and diesel. (These accounted for more than 95 percent of direct emissions from the sector in 2018, <u>per the Center for a New Energy Economy</u>. Citation = https://cnee.colostate.edu/wp-content/uploads/2020/10/New-Mexico-GHG-Inventory-and-Forecast-Report\_2020-10-27\_final.pdf)

• Electricity will be a negligible factor in the baseline. <u>According to Atlas Public Policy</u>, there were only 680 battery-electric vehicles and 680 plug-in hybrid vehicles registered in the state by the end of 2018. [Citation: https://atlaspolicy.com/evaluatenm/] I estimate those vehicles were responsible for ~ 0.01 percent of transportation-sector emissions in that year.

#### Use modeling tools to help make informed policy design decisions

• 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 design decisions to keep the standard on track in terms of GHG reductions and market stability. I recommend working with Dr. Colin Murphy at UC Davis to carry out this project. (https://lowcarbonfuel.ucdavis.edu/people/colin-murphy). Include local universities as a source of potential future NMED staff.

• Include the Clean Transportation Fuel Standard in the economy-wide climate action plan due to EPA in 2025 as part of the Climate Pollution Reduction Grant Program. Use that process to help inform what levels to set the annually declining targets at, keeping in mind that the legislation sets a floor, but not a ceiling, for the stringency of the policy. ("**at least** twenty percent below 2018 carbon intensity levels by 2030 and at least thirty percent below 2018 carbon intensity levels by 2040). HB41 Section 4C(2).

#### Build on existing policy

• The Clean Fuel Standard should be designed to drive additional progress in emissions reductions above and beyond what can be anticipated from the New Mexico Advanced Clean Car and Advanced Clean Truck rules. Make sure planning for how to balance credits and deficits via rule stringency and credit generation policy includes at least minimum compliance with these standards; and assume all ZEVs delivered to New Mexico will be deployed by consumers. For example, an analysis of the Clean Cars standards by consulting firm ERM projects that 16 percent of all light-duty vehicles on the road in the state in 2030 will be electric, and 68 percent by 2040; with a 93 percent reduction in petroleum use in 2050 relative to a business-as-usual scenario. [Citation:

<u>https://www.erm.com/globalassets/nm\_acc\_ii\_report\_final\_12jul23.pdf</u>]. A similar analysis for trucks projects that 37 to 53 percent of the on-road medium- and heavy-duty fleet will shift to zero emission technology by 2040, with a 45 percent reduction in fleet-wide petroleum use in 2050 (190 million fewer gallons). [Citation: <u>https://www.ucsusa.org/sites/default/files/2022-10/nm-clean-trucks-report.pdf</u>]. I recommend that the state incorporate projected fuel consumption data generated for the regulatory

impact analysis presented to the EIB during last year's clean vehicle standard rulemaking into any modeling done for the Clean Fuel Standard. [Exhibit 47 in the docket EIB 23-56: In the Matter of Proposed Amendments to 20.2.91 NMAC - New Motor Vehicle Emission Standards.] NMED commissioned this work, and I expect that the consultant who did the work would share the underlying spreadsheets with you for this purpose.

#### In terms of policy design features:

#### Deficit generation and mandatory regulated parties

• For simplicity, focus deficit generation on the fuels responsible for the majority of emissions.

• I think Oregon's policy is a reasonable model; it requires participation from in-state producers or importers of gasoline, diesel, ethanol, biodiesel, and renewable diesel to participate. [Citation: <a href="https://www.oregon.gov/deq/ghgp/cfp/pages/cfp-overview.aspx">https://www.oregon.gov/deq/ghgp/cfp/pages/cfp-overview.aspx</a>]

· Calculate deficits at the fuel distributor level.

• For deficit calculation, do not worry about what the end use of the fuel is (eg mining, ski areas, rail, etc). Do not exempt any end-use sectors (with the likely exception of aviation, due to what I understand as legal constraints, with the caveat that I am not a lawyer). Do not worry about the fact that some of this fuel might go toward minor non-transportation end uses (eg lawn care or backup generators). If the deficit-generating fuel could be used for transportation, it is a transportation fuel and it should be covered by the policy.

#### Credit generation and market regulation

• Credit generation pathways should be accessible and attractive enough that the vast majority of potential clean fuel credits are captured. Third party aggregators are likely necessary to ensure that no credit values go unused. For example, the rule should authorize cooperative and municipal utilities to contract with a third party to measure and capture the value of residential EV charging in their territories.

• Include an automatic acceleration mechanism that would tighten the standard and strengthen the price signal when credit prices fall below a trigger value, or when the amount of banked credits rises above a trigger threshold, or when the supply of credits exceeds deficits by a defined amount (or by some combination of these measures). This would provide a greater incentive for clean fuel providers to invest in more ambitious technologies and build momentum toward decarbonization. The trigger threshold definition should be informed by policy modeling and by discussions underway in California as part of the pending LCFS rule update.

• An alternative or supplemental mechanism might be to have an emissions containment credit reserve; funded by a fee on credit transactions, where a certain number of credits are banked by the state every year, and then retired if the standard is over-performing. (This same credit bank could be used to mitigate high costs by re-introducing them to the market if prices rise above a trigger level.)

• Include robust cost-containment mechanisms (discussed further under questions 10 and 11).

#### Include credit pathways aimed at helping zero emission technologies achieve scale

• Include credit generation pathways aimed at getting zero-emission transportation technologies to scale (including electricity and hydrogen), until market penetration reaches critical mass. This will be particularly important in the medium- and heavy-duty vehicle market. Options include:

- Allow capacity-based crediting for charging stations while they have low utilization (under the theory that building out a more robust charging network will inspire greater consumer confidence in electric transportation technology, accelerate vehicle deployment and lock in deeper emission reductions over time). (For example, see California's rule: https://ww2.arb.ca.gov/resources/documents/lcfs-zev-infrastructure-crediting)

- Allow fleets to take a portion of the value of their credits up-front when they deploy an electric or hydrogen vehicle, so they can put anticipated proceeds into the capital stack. This will help fleets overcome the initial cost hurdle to acquire a ZEV, again locking in emission reductions over time. (For example, see Oregon's rule: https://www.oregon.gov/deq/ghgp/cfp/pages/advance-crediting.aspx.)

• Although I am not a lawyer, I believe that these kinds of credit mechanisms are authorized by HB 41 Section 4C(3): "establish 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**."

Include credit generation pathways for other critical sectors, like aviation, that may not be possible to include in deficit generations due to legal restrictions.

· I'd support an opt-in credit pathway for sustainable aviation fuel consumed in-state.

#### Include credit generation pathways that are aimed at increasing equity.

• NMED should make increasing equity an explicit part of the design of the clean fuel standard from day 1. (See the answer to question 3 for detailed ideas on how this could work.)

#### Aim to prevent unwanted consequences from credit design decisions.

• If New Mexico's program begins to show significant quantities of negative CI biomethane in the market, the state should consider regulating biological sources of methane emissions, rather than assuming that those emissions are not possible to address outside of the clean fuel standard.

• NMED should consider placing limits on certain credit types (such as lipid-based biofuels) in order to limit the risk of oversaturating the market with credits, or to limit the risk of environmentally harmful land-use changes, etc.

Fees

• Set a registration fee for regulated parties at a level sufficient to cover the costs necessary to oversee a well-functioning program. Index the fee to inflation (or a similar cost escalator) in anticipation that the policy will last multiple decades. Avoid general fund appropriations.

 $\cdot$  If NMED decides to propose an information-gathering year to ease parties into the program, at least make sure the administration fee starts right away.

- a. Comment from Jed Smith at Rio Valley Biofuels, LLC
  - I want to provide a couple general comments on the overall implementation of the New Mexico Clean Transportation Fuel Standard (CTFS) program.
    It is exciting to see New Mexico positioned to be a frontrunner in establishing a Clean Fuels Standard in a state that is not on the West Coast. In general, I recommend that New Mexico follow the methods that have already been established by California, Oregon and Washington, to avoid re-inventing the wheel but there are a couple areas where the New Mexico program should be tweaked to accommodate New Mexico specifics. I will identify these later in my comments.

Regulated parties should be treated the same as they are in the Pacific states. Petroleum fuel importers, refiners and wholesalers in New Mexico should be required to reduce carbon intensity across their product lines under New Mexico's CTFS. The targets will need to be calculated annually and adjusted as needed.

There are some differences between New Mexico and the West Coast states and these need to be addressed during the rulemaking process. Most of the fuel in New Mexico is imported to New Mexico by truck by fuel "jobbers." Terminals and refineries throughout the state are the large position holders and in many cases, they will be the first receiver of renewable fuel in the state. I expect that there will be a learning curve for many of the people in the fuel supply chain during the first couple years of the program, but I don't believe this will be a large hurdle to overcome. Once the fuel suppliers, jobbers, and others in the supply chain understand the monetary value that they can capture through the credits, they will quickly adapt their business practices to participate in the program.

New Mexico's regulation has set a very aggressive target of reducing the carbon intensity by at least 20% by the year 2030. Even though it is aggressive, I believe it is very possible for this target to be reached, but I recommend that the target obligation be set at a low value for the first year or two, to keep from penalizing any of the parties as everyone adapts their businesses to comply with the program. That way, deficits will be low, but importers of renewables will begin to generate credits. The credits should not expire, but surplus should be allowed to be banked for future compliance.

I recommend that New Mexico copy CA GREET 3.0 (or 4.0) as the template for NM GREET for efficiency purposes, but New Mexico should do its own calculations and have a specific CI value established for electric generation in New Mexico.

New Mexico will need to establish baselines for the regulated fuels, using data specific to New Mexico. It is important that New Mexico does NOT include biofuels in the obligated or regulated fuels, as a blendstock or as a fuel. For example, ULSD baseline should be based on straight ULSD with no biodiesel blended in it. I understand that some states included a low biodiesel blend, but this was only because a biodiesel mandate had been in place in those states. Since no biodiesel mandate has been implemented in New Mexico, it is impossible to calculate accurately whether or not a biodiesel blend is sold throughout New Mexico and what level to estimate the blend was in 2018.

New Mexico, should not use baselines for the regulated fuels from other states. It is critical to establish accurate baselines based on the carbon intensity data from the refineries that are providing fuel into New Mexico and determine a weighted average for New Mexico for each fuel type.

- Ensure certified pathways are available in advance of program start
  - When Washington began their program, they initially accepted proof of an existing CARB or ODEQ pathway via email, and posted these on their website while the application portal was still in development
  - Biofuel suppliers will require some assurance that a fuel will be compliant under the program before they ship it, not just before they report
- Accept CA, OR, and WA approved pathways adjusted for transport and, if required, ANL GREET 2022 ILUC, including recertification of pathways from such programs
  - This and the following suggestions will expedite making pathways available for credit generation, provide consistency for renewable fuel producers, and minimize the administrative burdens for renewable fuel producers to access this market, which will minimize barriers to New Mexico's ability to attract supply
- Adopt Tier 1 & Tier 2 Calculators using ANL GREET 2022 emissions factors (EF)
  - If ILUC required, use ANL ILUC (GTAP-BIO + CCLUB)
- Utilize 3rd-Party Verifiers (Approvers) on behalf of NMED for review of Tier 1 & Tier 2 Pathway Applications, with 30-day automatic approval by NMED, if not specifically rejected by NMED
- Provide clear guidance on how opening inventories will be treated

- Allocate resources for a significant influx of pathway applications during the first year(s) of the program
- Hold workshops with entities and provide frequent guidance during the first reporting cycles
- First year should be "reporting only" period with option to generate early credits
  - NM is net importer of transportation fuels, with significant volumes supplied via trucks from neighboring states. This will result in a larger number of small/ limited resourced obligated parties (small jobber, marketers, and station owners), who have never participated in an LCFS and will require lead time to prepare and learn the obligations for which they will responsible
  - New Mexico does not yet have either the physical nor the administrative infrastructure in place to support overnight implementation of the program. Starting with a reportingonly year will provide valuable information to inform program implementation while providing time for NMED to develop a credit trading platform and for suppliers to at least begin the process of developing capital investments

# 2. How can NMED make it as easy as possible to generate clean fuel credits within New Mexico's CTFS program while ensuring that clean fuel credits represent real reductions in carbon intensity?

Reductions in carbon intensity are a key measure if GHG reductions are to be achieved. In New Mexico, one of the biggest sources of GHG emissions are methane emissions from O&G operations. Technically, this is also one of the easier emission sources in which progress can be made in a timely fashion. However, some of the proposed rules would clearly discourage progress in reducing methane emissions. For hydrogen production, the proposed 45V rules would use the GREET model to measure methane leakage rates from fossil fuel hydrogen feedstocks to derive well-to-gate emissions of producing hydrogen. Conceptually, this is how it should be. But rather than an actual measurement of methane leakage, 45VH2-GREET 2023 assumes that methane leakage during the natural gas recovery process and subsequent gas processing and transmission sums to ~0.9% of methane consumed by the reformer. My understanding is that this leakage rate is a fixed parameter in the GREET model, and not allowed to be changed by the user. This is unfortunate, in that it offers no incentive for natural gas suppliers to do anything better than the bare minimum required. In contrast, a well-designed and verifiable program to reduce or eliminate methane leakage should be allowed to override the default and fixed GREET parameters.

a. Requiring verification of unique fuel pathways and of reporting by accredited verifiers will ensure accuracy and assure confidence that real reductions are occurring.

i. I recommend that verifier accreditation from the other states with low carbon fuel programs be accepted in New Mexico, upon the verifier and validation/verification body (VVB) registering with the State.

b. Accept the fuel pathways verified and accepted by the other states with low carbon fuel programs, with any appropriate adjustments for New Mexico, such as adjusting emissions from delivery to New Mexico is the distance varies from the other states.

c. Having a look up table and online calculators available to determine carbon intensities for common fuel pathways so that not every fuel requires a specific lifecycle analysis.

d. Having a good reporting platform available to all reporting parties.

[Submitted on behalf of Cara Lynch and the Coalition for Clean and Affordable Energy, <a href="https://ccaenm.org/">https://ccaenm.org/</a>]

This is the critical tension NMED faces. NMED must develop a CTFS that 1) is robust and transparent, to ensure that clean fuel credits are providing real, additional, incremental emission reductions, and 2) develop a system that enables clean fuel providers to easily participate. The key is to develop systems that enable participation, while not sacrificing the integrity of the standard. For providers of clean fuels that are not electricity, NMED could develop a default methodology and data inputs for each type of fuel. That default calculation should use the most conservative assumptions for estimating the carbon intensity (and credits awarded) but allow the clean fuel provider to provide more specific data to apply for more credits. For example, the default calculation for a wastewater treatment plant methane capture project could estimate a baseline carbon intensity value; if the wastewater treatment plant can demonstrate that it is using specialized equipment or capture processes that result in a lower carbon intensity value, it may be awarded more credits. The methodology used to determine default values should be conservative, and the onus placed on the clean fuel developer to prove that it is achieving greater emission reductions. CCAE provides additional details on how this can be accomplished for credits generated by the sale of electricity as a transportation fuel in questions 8 and 9.

Defer considering verification requirements for a future rulemaking to allow time for the program to become established. NMED can later evaluate and audit the program and determine whether verification requirements would materially benefit the program.

a. Assuming that there isn't adequate data from 2018, NMED should establish a baseline that does not include ethanol or biodiesel. Their blending mandate has never been implemented and there is no incentive for blending biofuels in NM.

b. NMED should allow for indirect land use change values from any approved model – GTAP, CCLUB, GCAM, GLOBIOM, or ADAGE.

c. NMED should allow for credit generation from marine, rail, aviation, and other off-road transportation sectors.

Program should not prohibit Co-compliance with state (CTS) and Federal (RFS or any future programs).

Program should allow mass balancing: For any producer of renewable fuel that includes multiple products and/or multiple feedstocks (of both biomass and non-biomass origin) the alternative fuel will

be allowed to use the carbon intensity as certified by mass balancing as allowed by International Sustainability and Carbon Certification (ISCC) or Roundtable on Sustainable Biomaterials (RSB)

Program should Include a Refinery Investment Credit Program that allows for decarbonization of petroleum refinery projects to generate credits. Including carbon capture, power, hydrogen

Program should have expeditious process for new pathways depending on existing CI model frameworks and third-party verification.

• Priority to have an expeditious mechanism for obtaining new pathways from the state. Preference is to have an accepted, third party verified CI score accepted based on certification.

• Lifecycle based should be latest Argonne R&D GREET model or for SAF CORSIA to align with IRA and international aviation standards.

• The program should be focused on reducing CO2 emissions, not promoting particular technologies. To this end, recommend not including capacity/infrastructure credits, which enable the potential for CO2 emission reductions but do not necessarily result in CO2 emission reductions on its own. These types of credits are not measurable in terms of carbon intensity reductions and cannot be compared with other credit pathways within the program in an apples-to-apples manner. Inclusion of these credit opportunities will render the NM CFTS not in alignment with its statutory requirements of technology neutrality as it would be generating credit opportunities in benefit/enablement of a set of technologies as preferred pathways over others. Other policy instruments outside the CFTS may be better suited for addressing fuel/energy dispensing infrastructure. OR CFP and Canada's CFR did not include these additional credits, acknowledging that they were not measurable under the CI metrics defined within their programs. Furthermore, per HB41 Section 4.C(5), utilities that elect to participate in the program are required to invest all revenues from the sale of credits into distribution, grid modernization, infrastructure and other projects that support transportation decarbonization. Inclusion of capacity/infrastructure credits will create potential for double counting and market distortion.

• Under the technology neutrality statutory provisions of HB41 strongly recommend also not including "Advance Crediting" as in the OR CFP (Section 340-253-1100). Crediting for purchasing specific vehicle technologies is not technology neutral, and carbon intensity reductions associated with these vehicle purchases cannot be measured equally with other technologies because it is too speculative to assume driver behaviors. Neither the fuel supplier nor the policy administrator knows what type of vehicles fuels withing the program will go into or how these vehicles might be driven/utilized. The actual emissions from the vehicle (gCO2e/mile) may vary according to the size, weight, duty-cycle of the vehicle as well as driver behavior This would discourage investment in other lower carbon intensity technologies and potentially create market distortion.

Credits should have a method of tracking, the voluntary carbon market has a methodology for this that can be followed to allow for the proper tracking, verification, and retirement of credits. Clean fuel standards that are already in place in CA, OR, WA, and Canada also have developed frameworks that can be followed as a basis to create the rules for NM.

As a general principle, durable carbon removals can generate fungible credits to be used by obligated parties to satisfy the debits accrued under the CFTP. Carbon removal technology developers may not be obligated parties under the CTFP. Therefore, it is critical that the program is designed to allow non-obligated parties to generate credits that may be acquired by obligated parties.

I question whether "making it as easy as possible to generate clean fuel credits" is the correct statement of the goal. From a market economics perspective, such a goal is likely to increase the supply of credits. A higher supply of credits likely will result in a lower market value of all credits, which may discourage all credit generators from continuing to generate credits. The rules should attempt to strike a reasonable balance so that the costs and burdens of generating credits is not unreasonably difficult, but at the same time does not produce an overabundance of credits that would result in a low market value of credits.

The two considerations to make credit generation easy and a reflection of real CI reductions is to allow for EV adoption data to be used in lieu of direct metering and to include an EER to account for the added well-to-wheel efficiency of EVs.

In general, establish clear rules and procedures for credit generation, reporting and verification. Aim to achieve climate targets, but also aim to maximize co-benefits including equity and cost savings, and minimize externalities (as explained in more detail under question 1).

Collaborate with other clean fuel states to maximize the amount of shared clean fuel pathway certification you can do together, while taking appropriate care to account for any differences unique to New Mexico.

SWEEP also supports the recommendations from the Coalition for Clean and Affordable Energy, submitted separately. In particular, "for providers of clean fuels that are not electricity, NMED could develop a default methodology and data inputs for each type of fuel. That default calculation should use the most conservative assumptions for estimating the carbon intensity (and credits awarded) but allow the clean fuel provider to provide more specific data to apply for more credits." Clean fuel developers should bear the burden of proof that they are achieving greater emission reductions.

a. Comment from Jed Smith at Rio Valley Biofuels, LLC

I recommend that NMED use the CA credit generating methods with the recommendation that New Mexico make a few key modifications to the model. New Mexico should allow credit generating entities that are already registered in California or other states that have a Clean Fuels Standard, to bring their approved California pathway to NMED along with the model that the entity used and the applicant will modify a few key cells in the existing model to fit the NM model.

The entity should be able to simply be re-certified under the New Mexico CTFS by Third Party Accredited auditors under the NM program.
The calculations that need to be looked at very closely and modified (as needed) in the New Mexico Simplified Tier 1 Calculator are listed below:

- b. CI value for electric production (for New Mexico renewable fuel producers) to capture the CI reduction specific to New Mexico power generation
- c. UCO Transportation Values need to be reviewed and an accurate value established and New Mexico should not necessarily adopt the values from CA GREET 3 or CA GREET 4
  - i. New Mexico may want to allow the calculation of emissions allocated to Transportation of UCO in the UCO carbon intensity to be recertified through a modification of the Simplified Tier 1 Calculator.
  - ii. UCO appears to be unnecessarily penalized under CA GREET 4.0
- d. All energy inputs to Renewable Diesel production need to be reviewed in detail to ensure that all emissions are captured correctly
  - i. Specifically, the CI Value of hydrogen produced using petroleum based energy needs to be assessed.
  - ii. The hydrogen use in RD plants that are not co-processing with petroleum products needs to be assessed and the emissions valued correctly.

I recommend that New Mexico use Third Party Accredited Verifying bodies as auditors of the credit generating entities from the beginning of the program. This will give the regulated parties confidence in New Mexico's program.

- Accept CA, OR, and WA approved pathways adjusted for transport and, if required, ANL GREET 2022 ILUC, including recertification of pathways from such programs
- Streamline pathway approval processes
  - Adopt Tier 1 & Tier 2 Calculators using ANL GREET 2022 emissions factors (EF)
  - Ensure the Tier 1 application is able to accommodate most common fuel pathways
    - In California today, most renewable diesel pathways are Tier 2, which complicates and slows down the process compared to other fuels, thus delaying additional decarbonization
- Accept 3rd-Party verifications for the CA, OR, and WA approved pathways and their respective CI's
  - Use third-party verification and give both verifiers and regulated entities clear guidance on verification requirements
  - Rely on sound lifecycle analysis modelling, such as the ANL GREET model
- To ensure that credits generated for electricity production represent real reductions in carbon intensity:
  - Exclude the use of traded RECs tied to electrical generation outside of NM, or if allowed;

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- Limit the use of traded REC's to low-CI electricity production facilities within one of the balancing authorities serving NM, or balancing authorities with established transmission interconnections to NM markets
- Ensure a robust process is in place to account for retirement of REC environmental attributes (i.e. prevent "double counting" of emissions reductions)
- Establish standards for matching timing of clean fuel credit generation with timing of REC generation

# 3. How might NMED design a CTFS program to benefit New Mexican communities, especially those who live in low-income and disadvantaged communities?

NMED should encourage participating utilities to provide incentives for private investment in DCFC infrastructure in communities that have yet to see such investment. Utilities in other states, notably New York, offer rebates for make-ready infrastructure necessary to support the station in designated communities. Incentives like these can be the difference between a community being a viable location or not for the construction of a charging station.

NMED should not encourage utility-ownership of public DCFC infrastructure but for in "areas of last resort;" these are gaps in the state's charging network that have consistently been unable to generate private investment in charging infrastructure

NMED should work with Somos Solar, Native Renewables, RMI and other stakeholders to design a CTFS crediting mechanism that allows capacity crediting for EV chargers in disadvantaged communities that are publicly available and enhanced capacity crediting for EV chargers and solar power generation installed in disadvantaged communities that are not connected to the electric grid.

a. Credits could be made available to ZEV/LEV ride share programs that service low-income or disadvantaged communities or to support additional public transit. Or proceeds from the sale of the electric utilities' credits could support such programs.

b. Direct utilities to provide point-of-sale rebates for EV purchases, using proceeds from their credits to pay for them. Tax credits do not benefit low income communities.

c. Utilities could provide home chargers or electric bikes to low income consumers, using proceeds from their credits to pay for them.

[Submitted on behalf of Cara Lynch and the Coalition for Clean and Affordable Energy, <a href="https://ccaenm.org/">https://ccaenm.org/</a>]

NMED should consider the unique transportation needs of low-income and disadvantaged communities. Some ways to design such a program would be to consider services crucial to these communities, like transit, carsharing, and EV purchase or infrastructure incentive programs, and include them in the CTFS program - through allowing credits for funding these activities and/or requiring a portion of credit revenues to be spent on eligible activities. NMED should proactively consult with low-income and disadvantaged communities to center their transportation needs in the CTFS, determining what transportation needs they would like to see funded. This will ensure that community-identified needs are prioritized in designating how the CTFS program will benefit New Mexicans from low-income and disadvantaged communities.

a. By definition, many highly-impacted communities are those that are located closest to roadways and transportation hubs. Therefore, since the CTFS reduces pollution from the transportation sector, those communities benefit the most. The greater the reductions, the greater the benefit will be to those disadvantaged communities.

b. Further incentivizing projects that benefit disadvantaged communities can be done by directing investments funded through the sale of the residential electricity credit generation via the electric utilities.

Encourage use of SAF which has additional advantages beyond global GHG potential that include: Less particulate formation in the air and lower emissions of sulfur oxides (SOx)

• In relation to the <u>presentation</u> "Overview of Environmental Justice Concerns with CFS Programs" shared during the July 12th advisory committee meeting, here are some recommendations for NMED related to the presentation:

o "Concerns about Bio-Based Diesel ILUC Emissions": As pointed out in the presentation "California's environmental justice advisory committee (EJAC) has called for a cap on lipid fuels and phase-out timelines based on GHG risk". It is important to note that the California Air Resources Board (CARB) has decided against this and will not place an arbitrary cap on crop-based fuels in their latest proposed program amendments. In reaching this decision, CARB cities "limited data, analysis and supporting documents." Since there is no majority of stakeholders presenting a compelling argument in favor of such a significant programmatic change, this concept should not be incorporated in NM's CTFS. All options must be on the table under the technology neutrality statutory requirements of the program, and arbitrary caps would be limiting proven GHG reductions strategies that are technologically feasible and cost effective, and have garnered significant GHG reductions in other programs, including California. It is important to note that existing LCFS program measures and related federal programs provide sufficient guardrails to address potential land use changes associated with crop-based feedstocks. For instance, existent LCFS programs, such as California's LCFS, "uses land use change emissions estimates...[to] make fuel pathways from crop-based feedstocks more carbon intensive," thereby discouraging the use of crop-based fuels and incentivizing other pathways such as "waste and-residuebased" feedstocks. In addition, the federal Renewable Fuel Standard (RFS) program imposes mapping

and tracking requirements for foreign sourced crops, as well as specific forest-based feedstock requirements. This program mandates that crop-based feedstocks be sourced from existing agricultural land cleared or cultivated prior to December 19, 2007. For feedstocks grown outside of the United States or Canada, entities must map and track the point of origin to ensure that this restriction is met. For feedstock grown in the United States or Canada, the Environmental Protection Agency (EPA) verifies compliance when it issues a Renewable Volume Obligation. Regulated entities are also prevented from obtaining federal Renewable Identification Number (RIN) compliance credits for converting land not already in use as of 2007. Further, all feedstock used to produce renewable fuels in compliance with the program must meet the definition of "renewable biomass." Given these existing requirements, additional measures such as those highlighted in the aforementioned <u>presentation</u> will create an unnecessary burden for transportation fuel producers and may disincentivize investment in lower carbon intensity fuels. Here are some recommendations for NMED to consider:

- Discourage inclusion of arbitrary exclusions or caps on crop- and forestry- based fuel as they may impact the effectiveness of fuels policies with objectives to reduce lifecycle GHG emissions.

- Appropriate quantitative metrics, such as performance standards, are a better approach to encourage feedstocks and fuels with desirable sustainability characteristics. Indirect land use change (ILUC) CI-values quantify the market-mediated response to the utilization of crop-based feedstock to make biofuels.

- In the U.S., the Argonne National Lab's GREET model is a broadly recognized source of CI values for many biofuels and iterations of the tool are used to determine CI in many different Federal and State fuel policies. For instance:

• Farming practices continue to become more efficient over time (e.g., the United States Department of Energy report suggests much greater corn yields are possible without adding additional farming acreage. <u>HighYield ScenarioWorkshop, US DOE(2009</u>); Also, an analysis from the Food and Agriculture Organization shows that land use intensification far exceeded extensification in India, China, U.S., Ukraine, Canada and many other regions. <u>Babcock and Iqbal, 2014</u> (Figure 9)). This yield improvement or crop intensification mitigates potential indirect land-use change in other regions and therefore needs to be regularly factored into ILUC estimates. Taking this into consideration, some policies such as the Internal Revenue Code 40B tax credit "Sustainable Aviation Fuel Tax Credit" account for additional CI reductions from specific farming practices. Furthermore, the U.S. Department of Agriculture is currently requesting information on procedures for the quantification, reporting, and verification of climate-smart farming practices on GHG emissions associated with domestic biofuel feedstocks.

- Anti-deforestation polices have been shown to be effective if applied consistently (e.g., in Brazil public policy helped to slow down deforestation. <u>Nepstad et al., Science, Vol. 344, 1118 (2014)</u> and <u>Macedo et al. PNAS, Vol. 109, 1341 (2012)</u>. However, loss of commitment to such policies can result in reversals. <u>Silva Junior et al. Nature Ecology & Evolution volume 5, pages144–145 (2021)</u>.

- To prevent potential adverse land use and environmental impacts, many existing biofuels regulations already have protective measures in place:

• In the U.S., as mentioned above, the federal Renewable Fuel Standard (RFS) program, requires that biomass be sourced only from land cleared or brought into management prior to 2007, among other measures as stated above.

• Under Canada's Clean Fuel Regulation (CFR), Land Use and Biodiversity criteria has been established to mitigate negative environmental impacts from the use of crop or forestry feedstocks (link: <u>CFR Land</u> <u>Use and Biodiversity Criteria, section 45 – 55</u>).

- To enable import/export of fuels and feedstocks, regulations should recognize jurisdictions where attestations or equivalent sustainability measures are in place in the country or jurisdiction of origin.

- Globally recognized voluntary sustainability certification schemes may audit the biofuels supply chains to such standards.

As with any sustainability initiative, cost is one of the biggest factors. Low or no carbon fuels aside from electricity will most likely come with a premium. This excess in cost will most likely deter users from utilizing a more environmentally friendly alternative. The CTFS must consider the need for all people and businesses in NM to have access to these transportation fuels at no additional cost and with no added barriers. Fuels like renewable diesel that are "drop in" should be incentivized to cost the same or less as its fossil counterparts. Also, businesses that are vendors for renewable fuels should be incentivized to carry low or no carbon fuels to help drive their demand and adoption within the state.

From our experience testing renewable diesel, we have identified that not all RD is created equal. Fuel that we purchased from Marathon Petroleum from the Dickinson, ND plant had a positive 14-degree Fahrenheit cloud point (fuel from Neste, refined in Singapore, has a cloud point of -12 in the winter months, much more in line with our needs). Most of our winter operations happen at temperatures much colder than the cloud point, meaning we would not be able to use the fuel in our operations. It's important to keep in mind that just because an alternative fuel is available, doesn't mean that it is usable for all portions of the state. The rules should include verbiage to that point.

NMED should consider that some clean fuels require significant investments in infrastructure before they can be used by the general public. While the payback time for these investments can be shared among many customers in a large, urban area, rural low-income communities do not have the same economics and these clean fuels may be extremely financially burdensome on these communities, while providing little reduction in statewide carbon emissions.

EPA's 2020 National Emission Inventory shows that carbon dioxide transportation emissions are not evenly distributed throughout the State. The counties with the highest emissions are Bernailillo (22.03% of the statewide total), Dona Ana (8.10%), Sante Fe (6.28%), Sandoval (5.55%), McKinley (4.86%) and San Juan (4.19%). These 6 counties make up 51% of New Mexico's transportation emissions. A program that focuses on these counties would be more cost efficient than the other 27 counties, which would see diminishing returns as infrastructure costs increase. The statutory language regarding electric utilities' support for low-income and disadvantaged communities is clear and matches the highest standards of other states with regulation to ensure equity. PNM recommends following the plain language of the statute for electric utilities.

NMED should include credit generation pathways that are aimed at increasing equity in the draft rule.

### Broadly:

• NMED should include in the draft rule an equity credit pathway with the explicit purpose of expanding the direct benefits of clean fuel to low-income New Mexicans who either do not have access to a vehicle or who have limitations or preferences that prevent them from driving a vehicle. The pathway should provide an opportunity for mobility service providers, such as transit agencies, passenger rail agencies and paratransit services, to generate clean fuel credits to support their operations.

• These services should by default be able to generate an unlimited amount of credits through the use of low-emission fuels, such as electricity. In addition, however, mobility service providers should also be able to acquire a limited number of credits in recognition of the emission-reduction and equity value of shared vehicle use. (The U.S. National Blueprint for Transportation Decarbonization highlights the expansion of shared mobility options as an essential component of a decarbonized transportation system, along with zero emission technology and location-efficient community design). [Citation: <a href="https://www.epa.gov/greenvehicles/us-national-blueprint-transportation-decarbonization">https://www.epa.gov/greenvehicles/us-national-blueprint-transportation-decarbonization]</a>. For example, Washington statute explicitly allows credit generation for multimodal investments (citation: <a href="https://app.leg.wa.gov/RCW/default.aspx?cite=70A.535.050">https://app.leg.wa.gov/RCW/default.aspx?cite=70A.535.050</a>).

• I acknowledge that the accounting for multimodal service credits will be different and more challenging than other clean fuel pathways. SWEEP suggests that the credits be based on passengermiles and represent the absolute emissions difference between shared and single-occupancy vehicle use. Because a significant fraction of these credits would not represent "real" emissions reductions (because not all passengers have the option to use a single-occupancy vehicle, so some of the credited emissions prevention would already be happening), NMED should make an adjustment on the deficit side of the equation to make sure that the overall standard still arrives at a real-world emissions reduction result consistent with statute and overall state and federal climate goals. This could involve a special pool of "equity deficits and credits". For example, for every 20 regular deficits, regulated parties could be required to buy one additional equity credit. (There are likely many other ways to design an equity crediting provision with emissions integrity; this is just one idea.)

• This special equity crediting provision would provide an incentive and resources for mobility service providers to increase service and ridership, with any technology of their choosing. This would directly contribute to reducing transportation GHG emissions and achieving climate goals. It would also directly and concretely expand the ways that New Mexicans can benefit from the clean fuel standard – particularly low income New Mexicans.

• Although I am not a lawyer, I encourage NMED to interpret HB 41 Section 4C(3) as authorizing crediting pathways focused on increasing equity and expanding how New Mexicans can benefit from the program.

Specific to the electricity sector:

• The statute requires electric utilities to re-invest all credit revenues into transportation decarbonization (defined broadly), with 50 percent aimed at providing benefits for low-income and underserved communities. The rule should direct investor-owned utilities to incorporate this work into the existing transportation electrification plan process at the PRC and integrate it into existing public reporting requirements. (I see no need to create a separate process). I suggest that the rule require municipal and cooperative utilities to submit public reports about how they use their clean fuel revenues to the PRC on an annual basis; and authorize the utilities to collaborate with each other or hire a third party to simplify the work.

• I think that several existing programs offered by PNM provide a clear roadmap for how to do this well. In particular, I think directing clean fuel revenues into the low-income EV purchase rebate [See PRC Case No. 23-00195-UT] and EV carsharing services like the one PNM is collaborating with Forth on in Albuquerque [see: https://www.cabq.gov/sustainability/news/it2019s-electric-city-drives-toward-equity-with-new-affordable-mobility-platform] can create positive feedback loops that will help accelerate vehicle electrification and in particular help ensure that lower-income and underserved New Mexicans get meaningful access to the transportation cost savings that electric vehicles provide over conventional combustion technologies.

· I'd also like to see electric utilities focus credit revenue on particularly thorny infrastructure problems. Particularly important is expanding the ability of residents of low-income multifamily housing to charge vehicles at home on the most attractive electricity rates. Drivers of electric vehicles who exclusively use public fast chargers and drive ~10,000 miles per year pay more than \$2,000 extra per year on fuel compared to drivers who can recharge at home on a residential rate. That cost premium undermines the case for buying an EV for low- and moderate-income New Mexicans and will need to be thoroughly addressed in order to achieve widespread decarbonization of passenger vehicles in the state.

SWEEP agrees with CCAE in their separately-submitted comments that "NMED should proactively consult with low-income and disadvantaged communities to center their transportation needs in the CTFS, determining what transportation needs they would like to see funded."

a. Comment from Jed Smith at Rio Valley Biofuels, LLC

This program is not a mandate for individuals, so low income and disadvantaged communities will not have any negative impact from the implementation of the CTFS and instead, I expect the program to benefit low-income and disadvantaged communities simply by its implementation. Since the program will reduce transportation emissions as it is implemented, it will, by default, benefit New Mexican communities. In many cases, low-income and disadvantaged communities are located close to airports, highways, and congested areas with high pollution rates. As the program ramps up, clean fuels will be replacing fossil fuels with high emissions and this will provide immediate benefits to these communities in the form of cleaner air.

There is a narrow part of the program where the regulation requires utilities that participate in the program to use at least fifty percent of the revenues from the sale of credits to benefit low-income and underserved communities. I am not going to comment on the administration of the portion of the program regarding electric vehicles, except to state that NM GREET should have a specific CI value established for electric generation in New Mexico and should also allow utilities to establish pathways specific to their electric generation.

# 4. What information about New Mexico fuel markets does NMED need to know in analyzing New Mexico CTFS program options?

a. You need to know at which point any fuel coming into the state generates any kind of report to the State. Since some of the fuel is trucked in and surpasses any terminal, the collection of data for the CTFS program should be combined with any other required reports; for example, perhaps for fuel tax purposes, information about the amount and type of fuel is collected and report when the fuel is delivered to a gas station. The CTFS program should use that same data (or add the minimum amount of additional data needed) in order to make it easy for parties like retail gas station owners who are not used to reporting under other states' CFS programs.

Organic waste is a serious and growing issue, and the climate and other environmental impacts from these wastes require an immediate and ongoing solution. Globally, municipal solid waste is expected to grow 69% from 2.01 billion metric tons (BT) in 2018 to 3.4 BT in 2050 (around 50% of which is organic waste).[1] Moreover, these trends are underpinned by an expected 25% population increase of 2 billion people between now and 2050.[2] Capturing waste biogas for use as renewable energy is a proven technology for addressing greenhouse gas (GHG) emissions and other challenges in the waste sector, which are slated to worsen over the timeframe required to address climate change.

When derived from such waste feedstocks, all commercially available methods of producing RNG have excellent lifecycle greenhouse gas performance, exemplified by carbon intensity (CI) modeling employed by Oregon and California's<sup>[3]</sup> clean fuel programs. Moreover, some RNG projects capture and destroy a greater amount of GHG (as measured on a tons of carbon dioxide equivalency basis) than are emitted during the fuel's production and use, making it one of the few fuels available commercially today that can achieve a carbon-negative impact (i.e., better than carbon-neutral).

Furthermore, carbon-negative emissions technologies, and particularly those which operate based on the sequestration of biogenic carbon (e.g, bioenergy with geologic carbon capture and sequestration (CCS), biochar with soil carbon sequestration), present an opportunity to accelerate GHG reductions and provide useful, non-fossil CO2 chemical feedstocks. Employing these technologies will ultimately allow our economy to not only reach, but potentially move beyond carbon neutrality to a point where atmospheric carbon levels can be drawn down to stabilize Earth's climate, if needed. To this end, our industry is working toward the implementation of carbon capture and sequestration at RNG and biogas

production facilities, and to create carbon-negative renewable hydrogen or bioliquids as outlined in work conducted by Lawrence Livermore National Laboratory for California.[4]

The scientific community—including the most recent report from the United Nations' Intergovernmental Panel on Climate Change (IPCC)—continues to emphasize that global GHG emissions must reach net-zero in the first half of this century.[5] World renowned organizations such as the International Energy Agency[6] have pointed out that bioenergy—including bioenergy with CCS—is an important pathway to achieving net-zero. The importance of maintaining pressure on reducing methane emissions through RNG deployment is underscored by the recent IPCC report, which identifies "methane capture and recovery from solid waste management" as one of the best "short-term 'win-win' policies,"[7] and the joint U.S.-EU Methane Pledge, targeting a 30% reduction by 2030.[8] Policies that cover a large section of the economy, such as New Mexico's CTFS Program, will play an essential role in enabling these technologies.

### The Role of RNG/Biogas in a Clean Transportation Fuel Standard

RNG Coalition has long supported the use of CTFS-style policies to realize GHG reduction goals across the transportation, energy, and waste sectors. Over the last decade, policies focused on reducing GHG emissions have driven extraordinary growth within the RNG industry. There are now 334 operational RNG production facilities in North America with 165 under construction or in substantial development[9] compared to only 30 developed projects between 1982 and 2011. This recent growth has been incentivized largely by transportation decarbonization programs, including the Unites States Environmental Protection Agency's Renewable Fuel Standard (RFS) and state-level clean fuel standards such as the existing CFS programs in California, Oregon, Washington, and British Columbia.

The biogas and other organic waste resources targeted by our industry can be used to create pipelinequality RNG, produce renewable hydrogen, or to generate electricity. All three of these energy carriers will serve an important role in New Mexico's transportation sector.

As we presented at the June 28, 2024 CTFS Advisory Committee meeting, commercial RNG potential from anaerobic digestion feedstocks located in New Mexico (24.23 tBtu/year)[10] could potentially supply ~58X current natural gas vehicle demand in New Mexico (0.42 tBtu in 2022).[11] Therefore, to maximize the benefits of RNG/biogas use in the program, it will be crucial for NMED to be mindful of how to incentivize the use of organic waste feedstocks across all applications—including those where RNG is converted to electricity, hydrogen, or even sustainable aviation fuel (SAF).

<sup>[1]</sup> https://datatopics.worldbank.org/what-a-waste/trends\_in\_solid\_waste\_management.html

<sup>[2]</sup> https://www.un.org/development/desa/en/news/population/world-population-prospects-2019.html

<sup>[3]</sup> For example, see the lifecycle analyses conducted by California's Air Resources Board: <u>https://ww3.arb.ca.gov/fuels/lcfs/fuelpathways/pathwaytable.htm</u>

[4] LLNL, *Getting to Neutral: Options for Negative Carbon Emissions in California*, Baker et al., January, 2020, Lawrence Livermore National Laboratory (LLNL) <u>https://www-</u>gs.llnl.gov/content/assets/docs/energy/Getting to Neutral.pdf

[5] Intergovernmental Panel on Climate Change, *Sixth Assessment Report – Climate Change 2021: The Physical Science Basis*. <u>https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/</u>

[6] International Energy Agency, *Net Zero by 2050: A Roadmap for the Global Energy Sector*, May, 2021. https://www.iea.org/reports/net-zero-by-2050

[7] IPCC, 2021. *Climate Change 2021: The Physical Science Basis. Chapter 6. Short-Lived Climate Forcers.* https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC\_AR6\_WGI\_Chapter\_06.pdf

[8] https://www.state.gov/joint-u-s-eu-statement-on-the-global-methane-pledge/

[9] Based on RNG Coalition's production facility data as of February 28, 2024: https://www.rngcoalition.com/rng-production-facilities

[10] New Mexico Natural Gas Demand by End Use, US Energy Information Administration, https://www.eia.gov/dnav/ng/NG\_CONS\_SUM\_DCU\_SNM\_A.htm

[11] Renewable Sources of Natural Gas: Supply and Emissions Reduction Assessment, ICF for American Gas Foundation, 2019 <u>https://gasfoundation.org/wp-content/uploads/2019/12/AGF-2019-RNG-Study-Full-Report-FINAL-12-18-19.pdf</u>

a. The status of fueling infrastructure in NM.

b. How much fuel is produced in-state vs imported from out-of-state.

c. The mix of vehicles that can take E10 vs E15 vs E85.

d. What feedstocks are available to produce clean fuels? Crops, municipal waste in landfills, manure, food and green waste, forest biomass, etc.?

The sources of fuel used in state to determine points and mechanism of obligation. (e.g. significant supply from El Paso and Texas Panhandle racks)

Sources, logistics, access to renewable fuels to contribute to with credit generation

• Historical market transportation fuel demand by product type, and associated establishment of baseline emissions performance for these fuels.

• Commercial supply capabilities, logistics, blending and retail infrastructure available to support greater lower carbon fuel supply volumes necessary to meet required CTFS program standards. If inadequate availability and significant investment is required, it may be necessary to reassess the rate of CTFS CI reduction standards.

When considering credit generation, utilities in the New Mexico service territory are not currently equipped to track amount of kwh for residential EV fueling, and it is currently not realistic to add/require submetering for residential customers, as the added cost would potentially discourage EV adoption.

NMED should identify how fuel is distributed around the state, particularly to rural communities and the infrastructure investments that would be required. Also the availability or potential availability of low-carbon fuel in these communities.

NMED should be aware that electric utilities are regulated at both the state and federal level, with specific reporting requirements regarding carbon intensity. Electricity is perhaps the only fuel in the current transportation fuel mix that is on a regulated path to zero emissions in New Mexico. PNM recommends that NMED use standard and utility-specific reporting practices to reduce administrative burden. PNM currently reports GHG emissions to the EPA Clean Air Markets Division on a quarterly basis, and this data would be useful in creating the utility-specific emissions required for credit generation in the market.

As has been noted in the meeting of the Advisory Committees, much of the fuel in New Mexico is currently supplied by "fuel jobbers" from out of state. The big refiners and terminals are the largest position holders in the state and much of the renewable fuel coming into the state will go through the terminals.

The program will work similar to the way it works in other states. The CI value of the renewable fuel producer will be included on PTDs (Product Transfer Documents) included with the paperwork for each shipment of fuel.

NMED may need to have an outreach program to educate regulated parties on the program, but as I stated earlier in my comments, once the fuel suppliers, jobbers, and others in the supply chain understand the monetary value that they can capture through the credits, they will quickly adapt their business practices to participate in the program.

- NM is a net importer of transportation fuels
- The cost of compliance will be added by obligated parties to the costs of fuels sold within the state
  - This includes truck rack sales, retail consumer fuel sales, and in all consumer electric bills
- Fuel imported into the state by truck presents unique challenges
  - Truck importers will predominantly be small marketers, jobbers, and station owners, meaning that there will be numerous obligated parties demanding significant resources from NMED in terms of outreach and compliance support

- Small marketers and jobbers below the rack often do not have the same compliance resources as large producers and marketers, and may not be aware of or engaged with the program unless NMED takes proactive compliance measures
- Reporting and tracking is significantly more complex due to the higher number of transactions/movements required compared to bulk movements (i.e. pipelines and vessels)
- Fuels purchased outside of NM and imported via trucks (i.e. small jobber, marketers, and station owners) will need to account for compliance credit acquisition in the cost of the fuels they purchase outside of NM and then resell in-state
  - Each truck load will likely contain combinations of credit and deficit generating fuels (i.e. E10=CBOB + ethanol, B2= diesel+ biodiesel)
- Truck level importers will have limited ability to dictate biofuel blend percentages and CI of biofuels being blended at 3<sup>rd</sup> Party terminals outside of NM
  - Terminals (truck racks & suppliers) do not track or report CI of the blended fuels they sell or the components used in such blends, nor would they be required to do so, as their sales occur outside of NM, thus requiring commercial agreements and new data (PTD's) to support such activities
  - NM will need to develop documents and systems to report truck level CI transfers

## 5. How will New Mexico's CTFS program need to regulate deficit-generating fuels in New Mexico differently than the processes in West Coast states?

New Mexico is split between two Regional Entities, Western Electricity Coordinating Council (WECC) and Midwest Reliability Organization (MRO), so geography would be a factor in the calculation of carbon intensity and the credit generation ability of electricity as a transportation fuel. This may necessitate multiple pathways for electricity as a fuel to account for electricity derived from the grid and from renewables in both WECC and MRO.

a. If E-10 and B-10 isn't used all over the state, a different CI for fossil fuels should be used, unless NMED is comfortable with using average CIs statewide.

a. NMED should follow California's and Washington's regulations since those states also have in-state refineries. At a high level, there should be a statewide average for gas and diesel and CTFS should allow for credit generation from projects at refineries that reduce their GHGs.

b. NMED should allow for credit generation from improvements to oil and gas recovery projects since extraction is part of the lifecycle.

New Mexico does not have a captive fuel market like California and receives significant volumes of fuel sourced from terminals in other states. As such most of this fuel is pre-blended with ethanol. As the ethanol is from an out of state terminal it will not have an established carbon intensity (CI). The state will need to establish a default CI value for this product. As there is no tracking of ethanol sources into the baseline and default should be based on the EPA's minimum of 20% GHG reduction threshold for generating conventional RINs. A lower value for baseline determination is not justified. Further the state should establish the default CI at this level as well. This will incent ethanol producers to provide lower CI to the state and register the production ethanol pathways for use in New Mexico.

• Strongly recommend not including an Energy Economy Ratio (EER) multiplier in the NM CTFS. All lower carbon intensity (CI) fuels, including electricity, supplied into an LCFS market should be measured on the same basis, which is grams of CO2 equivalent per megajoule of **energy delivered** to a vehicle (gCO2e/MJ). Neither the fuel supplier nor the policy administrator knows what type of vehicle the fuel will go into or how the vehicle might be driven/utilized. The actual emissions from the vehicle (gCO2e/mile) may vary according to the size, weight, duty-cycle of the vehicle as well as driver behavior (e.g., Ford F-150 Lightning vs. Tesla Model 3 vs. Toyota hybrid). Therefore, vehicle efficiency should be based on vehicle attributes, which are already considered in federal vehicle policies. Vehicle policies and vehicle regulatory agencies have the protocols and methodologies to account for all vehicle attributes and driving cycles that represent real driving behavior. The EER included in current state LCFS policies is a significant oversimplification of a wide range of vehicle attributes. Therefore, an EER distorts the level playing field intended by the LCFS policy and acts as a "credit multiplier" for a specific set of technologies.

o It is notable that the NM legislature chose not to express consideration of an EER, as other LCFS programs have. In doing so, the legislature seemingly prioritized the importance of technology neutrality. In other states where an EER is considered, it applies only to a select set of vehicle technologies (e.g., BEV, PHEV), and not to other higher efficiency technologies (e.g., hybrid technologies, more efficient ICE technologies), underscoring that its inclusion is not technology neutral.

o The LCFS should provide a clear signal to entities that invest capital in the production of lower CI transportation fuels. Including an EER in the LCFS may result in excess credits from electricity, increasing disproportionately the State credit banking, which could impact credit prices and discourage investment in lower CI liquid fuels and thus result in the program not achieving its objectives. A clear example of this issue can be seen in the latest data reported by <u>California's LCFS</u>.

o Other policy instruments may be more effective for incentivizing alternative vehicle powertrain sales, not an LCFS.

o The carbon intensities in the program shall be determined under the statutory definitions of HB41. For instance:

"fuel lifecycle" means an assessment of the aggregate greenhouse gas emissions based on science-based models or protocols, including direct emissions and significant indirect emissions from indirect land use change, all stages of fuel and feedstock production and distribution, feedstock generation or extraction through the distribution, delivery and <u>use</u> of the finished fuel by the consumer, including consideration of storage, transportation and <u>combustion</u>

These definitions already account for lifecycle well to wheel (WTW) differences in transportation fuel delivered within the "end use" accounting.

• In addition to exclusion of EER, recommend ensuring the data used to generate baseline CI values for deficit-generating fuels is representative of the fuels and vehicles in New Mexico. Fuel properties could differ significantly between New Mexico and the West Coast states. Also, recommend choosing a static and fixed baseline to which all future fuel pathways are compared. Adjusting the baseline in future program revisions can cause uncertainty and not provide the market stability and durability signals the program must have for incentivizing investments.

• California, Oregon, and Washington have provisions in their regulations that require a Monitoring Plan (MP) for all parties subject to third party verification. The purpose of a MP is to enable the regulators and the verifiers to understand the operation of the facility covered by the MP by providing process diagrams, process descriptions, metering locations, etc. This makes sense for complex manufacturing facilities but is unnecessarily complex for fuel terminals. Recommend not requiring MP for fuel terminal operations or, if necessary, to greatly simplify the MP requirements for these facilities.

Recommend not including an automatic acceleration mechanism (AAM) for carbon intensity reduction standard setting. California's latest LCFS proposed amendments would add the AAM triggering mechanism which would advance the CI standard in a given year to a future year if specified market conditions are met, in order to bridge periods of credit surplus and maintain a steadier program signal. The effectiveness of this measure has not been yet tested in any lower carbon intensity markets and has several issues that need to be recognized. Rulemaking, in conjunction with the statutory requirement on HB41 Section 4.C(8) of a periodic review process that includes input from the advisory committee to determine potential adjustments if deemed necessary after review, is the appropriate process to update the CI targets. An AAM would defeat the spirit and market certainty of the CFTS regulation required to incentivize investments in lower carbon intensity fuel technologies. An AAM would also not appear to account for exceptional circumstances, such as the COVID pandemic nor recessionary-driven slowdown, that have demonstrably significant impacts on the fuels market as well. An AAM may lead to an excessive use of LCFS credits in the short term to the detriment of long-term compliance options. If NMED decides to incorporate an AAM, which I recommend it does not, in order to address any credits-to-deficit imbalance resulting from overly aggressive CI benchmarks triggered by an AAM, NMED should also contemplate a reset mechanism. This mechanism would strengthen the credit trading market by providing greater regulatory certainty and strike an appropriate balance between achieving reductions and offering sufficient business, technology, and financial support to industry, which would help ensure these accelerated targets are durable and achievable. Such a mechanism should be available in several circumstances tied to market activity signals and statutory factors, including: a recession or an accelerated growth period in the state of NM, a significant unforeseen event (e.g., a global pandemic), and any affordability and supply reliability issues. NMED should also consider impacts to retail fuel costs resulting from its regulations, including the CFTS program, before contemplating incorporation of an AAM in the initial rulemaking.

Taking guidance from CA LCFS, the following approach is recommended:

o Low CI electricity for the project must be additional (defined here as either built or repowered specifically for supplying the project),

o Low CI electricity must be supplied to the grid within the same local balancing authority as consumed,

o Book-and-claim accounting for low CI electricity must be matched to the grid over a set period,

It is recommended that permit book and claim accounting for low-CI electricity be allowed on no less than an annual basis. Allowing low-CI electricity matching to span a minimum of four quarters is

necessary for a number of reasons. First, solar and wind energy capacity is subject to significant seasonal variability, regardless of the geographic location of the solar or wind energy generation. In the case of solar energy generation, seasonal variation is well documented across the United States and becomes more pronounced as latitudes increase. Consequently, any new and additional solar energy sources will provide significantly more electricity than a DAC project will need during summer months, particularly during the later days of a second calendar quarter and early days of a third calendar quarter but significantly less than a DAC project will need during the fourth and first calendar quarters. Seasonal variabilities in wind energy capacity are also well documented, although more dependent on geographic location. While seasonal variation in wind capacity is more localized, it is particularly pronounced on the west coast. Consequently, renewable power capacity, regardless of location, experiences significant seasonal variations, independent of and across multiple calendar quarters. Therefore, the use of bookand-claim accounting must be allowed to span at least four quarters to encompass a full seasonal cycle. Further, some may suggest that renewable power generation combined with battery storage can address variabilities in the available renewable energy capacity. This is currently not a technically feasible or viable solution. Generally, large scale battery storage capacity is currently limited to less than four hours and suffers from pronounced energy degradation

In West Coast states, biofuels <u>have come to dominate the credit markets</u> via fuels like ethanol, biodiesel and renewable diesel. However, fuels that rely on biogenic feedstocks will face significant challenges when it comes to scaling up to meet the full needs of the state and face criticisms over how effective they may actually be at decarbonizing transportation.

Biogenic feedstocks used to create low-carbon fuels primarily come from lipid-based feedstocks like vegetable oil, waste oil, and animal fat, but also encompass cellulosic feedstocks like forestry and agricultural waste.

When demand for waste-based biogenic feedstocks exceeds supply, fuel producers may look to other non-waste biogenic feedstocks like vegetable oils, which can lead to <u>inefficient land use, increased food</u> <u>prices, and the undermining of the sustainability of the eventual fuel</u>. Sometimes, demand pressures on biogenic feedstocks can result in indirect land use change (ILUC) emissions that undermine the goals of a Clean Fuel Standard. A strong ILUC emissions policy is a crucial piece of a successful CFS policy.

The European Union recently illustrated the <u>challenges that arise</u> when biogenic feedstocks are overincentivized when European biofuel subsidies led to price increases for palm oil in Malaysia and Indonesia. As a solution, the EU passed regulations that banned the importation of palm oil unless it could be proven to not have caused deforestation. Minnesota's recent (unpassed) <u>Clean Transportation</u> <u>Standard Act</u> also attempted to solve this problem by prohibiting credit generation from biofuels made from feedstocks grown on land with less than five years of cropping history.

In California, ICCT and NRDC both recently called for a market cap on lipid feedstock-based fuels under the CA LCFS program to avoid the negative outcomes related to ILUC from biofuels. The most recent proposed rule changes to California's LCFS do not go as far as introducing a cap on these feedstocks, but they do propose to prohibit palm oil-based fuels from generating credits and would require fuel producers to track crop and forestry-based feedstocks to their point of origin to avoid adverse impacts on carbon sinks like forests.

New Mexico could avoid the lock-in to biofuels that has occurred in California by exploring policies that prevent ILUC emissions and other negative side effects of biofuel dominance, potentially including instituting a cap the amount of lipid-based feedstocks that can generate credits in each sector from the start of the program, ensuring accurate accounting of the emissions associated with agriculture and

indirect land use change, and ensuring that biofuels and biofeedstocks are not over-incentivized compared to fully scalable decarbonization routes for transportation including electrification for light duty transport, hydrogen for some heavy-duty trucking, and hydrogen-based efuels for sustainable aviation fuel (SAF). A low hanging fruit example of these policies would be disallowing the use of palm oil for generating credits on the CFS market, as it seems that other programs are also moving in that direction. These policies may also be tailored to the current technological status of different fuels and the needs of the state. For example, a hypothetical cap on biofuels could be determined sector, allowing certain sectors to use more biofeedstocks than others. This reflects the technological reality that nonbiofuel decarbonization technologies are much more mature in sectors like trucking and light duty vehicles (hydrogen and electrification respectively) than in the aviation sector. Furthermore, this will continue to provide an offtake sector for biofuel feedstock in the near-term.

Focusing on the most scalable technologies and preventing biofuel credits from flooding the market will be crucial to achieve the CFS' goals if carbon intensity levels by 2030 and at least 30% below 2018 levels by 2040.

## https://rmi.org/how-states-can-use-low-carbon-fuel-standards-to-incentivize-clean-hydrogen-derivedfuels/

-Jane Sadler, Rocky Mountain Institute

- Baselines and CI Reductions
  - NM statute defines Transportation Fuel to include electricity or a liquid, gaseous or blended fuel (Section 1.I.)
  - All statutorily defined Transportation Fuels have a baseline CI from 2018 levels and must reduce their CI by 20% by 2030 and 30% by 2040 (Section 4.C.(2))
    - Gasoline (E10) and Diesel (B2) can be interpreted to be either a "liquid" or a "blended fuel", however regardless of interpretation the end result is the same, each Transportation Fuel (CBOB, ethanol, diesel, biodiesel) will need a baseline and each will have CI reduction obligation
    - Similarly, electricity will need its own baseline and have CI reduction obligations
      - NMED should consider the use of EPA's 2018 eGRID for the CTFS electricity baseline
- NM is a net importer of transportation fuels with refined products supplied from one in-state refinery, via pipelines from both Mid-Con and GC refining centers, and by out of state trucks
  - Unlike other LCFS programs, where the state has detailed information on the refinery complexity and the specific types of crude oils processed, NM's fuel supply is a combination of several refining centers which process a wide range of crude oil from heavy sours to light sweet crudes, further complicating NMED's baseline CI calculations
- 6. What might NMED incorporate in the CTFS program to attract businesses and supply chains to NM? NMED is interested in learning more about specific credit-generating fuels (e.g. renewable diesel, biodiesel, electricity, hydrogen, etc.).

The Clean Transportation Fuel Standard would incentivize private investment in DCFC infrastructure in New Mexico. Furthermore, the ability to generate capacity credits would incentivize, specifically, investment in the infrastructure necessary to support current and future demands for charging. Over the past five years, Electrify America has seen a multi-fold increase in the number of sessions provided and amount of electricity dispensed at each station. While this is undoubtably a positive statistic, a downside to increasing utilization is that legacy stations are experiencing congestion and queuing which makes for an unpleasant charging experience. As such, the company is building larger and faster stations and upgrading legacy stations to accommodate more vehicles and provide faster charging speeds. Capacity credits incentivize the construction of bigger and faster charging stations so that more vehicles can charge simultaneously, and turnover is quicker.

NMED should work with airlines, airports and sustainable aviation fuel (SAF) producers to establish crediting mechanisms for SAF uplifted to planes in New Mexico. These mechanisms and the regulatory language and/or guidance documents should address carbon accounting issues such as the relationship between CTFS program crediting and Scope 1 and Scope 3 issues. NMED should also develop crediting mechanisms for airport ground support equipment.

a. Having clear objective standards for when and how consumer price protections might be triggered and affect credit prices.

b. Incorporate a floor for credit prices, not just a ceiling.

c. Allow use of approved fuel pathways from the other states with low carbon fuel programs, with adjustments to account for transportation to New Mexico. This standardization should encourage established alternate fuel companies to do business in New Mexico.

d. Allow fuel producers – both fossil and alternative – to apply for a lower CI if they have incorporated innovative ways of reducing the carbon footprint of the fuels they are producing; do not require use of the look-up table or calculators if a producer wants to develop a fuel pathway/life cycle analysis specific to their fuel.

i. Use California's LCFS rules for allowing credits for producing crudes using innovative methods as the starting point for such rules here.

e. Consider allowing capacity credits for hydrogen production facilities or for fast EV chargers, as California has done.

f. Separately, New Mexico could adopt tax credits to encourage production or use of particular fuels here, layering on additional value.

a. The natural structure of the CTFS incentivizes the production and use of cleaner fuels in the state where it is being implemented. Renewable fuels should replace all fossil fuels - RNG should replace all

fossil CNG or LNG; BD and RD should replace all fossil diesel; RLPG should replace all fossil LPG; and renewable electricity should replace all non-zero-carbon electricity.

Further to response in item 1.

Program should not prohibit technologies that produce renewable fuels by coprocessing both renewable and non-renewable feedstocks. This will allow for producers to utilize existing assets and result in earlier project implantation.

Program should have no vegetable oil prohibitions for renewable biomass feedstocks

• Hydrogen should be treated as any other fuel under the technology neutrality statutory requirements without restrictions on production pathway.

• An entity should be able to generate credits for hydrogen used as a transportation fuel or for hydrogen used to produce an alternative transportation fuel. The hydrogen carbon intensity value can be determined by 1) a NMED-approved lookup table using industry average values, 2) a hydrogen producer's CI determined using the DOE Argonne Labs' 45VH2-GREET Model for the duration of the Inflation Reduction Act, Section 45V program, 3) an individual pathway's actual carbon intensity of hydrogen produced, underpinned by data in the EPA's Greenhouse gas reporting program (GHGRP)

### Greenhouse Gas Reporting Program.

• Consider inclusion of potential credit opportunities for alternative jet fuel and other off-road vehicles as <u>presented</u> during the July 12th advisory committee meeting. However, it is important to note these credit opportunities may be better established in a later rulemaking amendment once there is compliance data available and all other provisions have been assessed and effectively implemented during the first years of the program. If the NMED establishes opt-in credits for alternative jet fuel please consider the following definition:

"Alternative jet fuel" means a liquid fuel derived from biomass, waste streams, renewable energy sources, or gaseous carbon oxides; consists of synthesized hydrocarbons and meets the requirements of ASTM International Standard D7566; or the co-processing provisions of ASTM International Standard D1655 (or such successor standard)

• Although the CTFS is not the correct vehicle for incentivizing enabling infrastructure, is important to note that the State of NM has had a biofuel blending law in place for many years but continuously suspends it due to lack of blending infrastructure. Please consider other enabling policies that could complement the CTFS when evaluating all fuel options within the program.

Fuel tax incentives and other incentives to keep the price to the consumer on par with or below fossil fuels. Fuel producers may also be incentivized to produce and supply certain fuels to NM through tax breaks, or a more lucrative crediting system than other states.

Based on the language in HB 41, the rules are supposed to avoid creating relative advantages or disadvantages as between different transportation fuels, leaving that to the markets. New Mexico has certain natural advantages and disadvantages for various types of transportation fuel production that will determine whether business will be attracted to New Mexico, and the CTFS program is not likely to affect New Mexico's relative attractiveness to a large degree. The CTFS rules should first focus on not disadvantaging New Mexico's existing businesses so that existing businesses are not encouraged to move elsewhere due to the CTFS rules. As to attracting new businesses, design the rules in a marketagnostic manner that allows New Mexico's other market advantages to encourage new business in New Mexico.

CTFS programming will reduce emissions, support consumer adoption and further burnish New Mexico's reputation as a leader in environmental stewardship – components of the "sense of place" that will retain and attract the best and brightest for the state's workforce, which will spur investment. An EV infrastructure capacity credit could attract additional investment in New Mexico. For example, TeraWatt infrastructure has announced intentions to build heavy-duty EV fueling depots in NM (https://www.terawattinfrastructure.com/blog/terawatt-infrastructure-awarded-63-8-million-federal-ev-charging-grant). While this project required federal grant funding to move forward, capacity credits through the CTFS could entice similar businesses to install charging depots for all vehicle classes. These depots may also have additional economic development impacts in communities where they are located. Capacity credits could also be used to encourage businesses with direct carbon reduction targets to decide to locate in New Mexico with the understanding that some of the infrastructure costs for electric vehicle fleets could be covered.

### <u>SAF</u>

The sustainable aviation fuel (SAF) industry is currently in in its fledgling stage, but is poised to grow significantly in the coming decades due to both state policy (inclusion in Washington, California, and Oregon's Clean Fuel Standards and incentives like production and use tax credits) as well as recent federal investments (FAST-TECH and FAST-SAF grants, and federal 40B and 45Z SAF tax credits). New Mexico can attract these investments within its borders by including SAF as an opt-in fuel under its clean fuel standard. This mirrors the approaches of other states with Clean Fuel Standards, which all offer opt-in pathways for SAF.[i]

Importantly, under this "all carrot no stick" method, SAF uptake has been slow. In 2021, around <u>8 million</u> gallons of SAF qualified under California's LCFS, representing only 0.3 percent of LCFS credits sold. Additionally, the <u>only SAF pathway</u> that has been applied for under California's LCFS is based on biogenic feedstocks known as Hydrotreated Esters and Fatty Acids (HEFA), which includes used cooking oil, waste fats, and vegetable oils. HEFA's feedstocks are limited, so the <u>approval of hydrogen-based SAF</u> is necessary for full decarbonization. However, it should be noted that despite this small showing, California still leads US states in SAF deployment in part because of the SAF LCFS opt-in option. A <u>2023</u> <u>study on SAF</u> by the US Government Accountability Office (GAO) reported that over a third of the stakeholders they interviewed cited California's LCFS (the oldest and most established CFS program in the country) as a key incentive for SAF development. <u>A recent RMI report</u> found that the Rocky Mountain region (consisting of Colorado, New Mexico, Utah and Wyoming) already demands more <u>aviation</u> fuel than it can supply, and that that gap is likely to increase. Furthermore, the Albuquerque International Sunport is the third largest demand center for <u>aviation</u> fuel in the region. Including SAF in the CFS is one step authors identified that could begin to close that gap.

Despite the challenges mentioned in question 5, some biofuels will be necessary to decarbonize transportation, especially in sectors that do not currently have non-biofuel decarbonization technologies that are market ready, like aviation. However, biofeedstocks have limits on how much they can safely be blended into jet fuel.

It is likely that a true path to decarbonized aviation will rely on a combination of these fuel types in addition to hydrogen-derived efuels. For a full analysis of SAF pathways, demand forecasts, and SAF production potential in New Mexico (along with the three other Rocky Mountain states) please read the report here and attached to this response.

New Mexico could include SAF as an opt-in fuel under its CFS while simultaneously exploring options for additional policies that encourage SAF production and uptake within the state—especially hydrogenbased eSAF, which is the least technologically mature SAF pathway but offers strong scaling potential.

#### Hydrogen and Hydrogen-Derived Fuels

Clean hydrogen as a primary fuel is a potential credit generator under all three other Clean Fuel Standards. New Mexico could follow this lead by hewing its carbon intensity calculation for hydrogen to that of the <u>other three states</u>. This has the double benefit of easing the regulatory burden on the agency in determining carbon intensity scores for complex processes and encouraging trade of hydrogen across state borders. While hydrogen <u>is not best suited to decarbonizing light duty transport</u>, it will serve an important role in decarbonizing heavy duty trucking and other off-road applications. Attracting the hydrogen industry to the state will also catalyze New Mexico's role on important trucking routes between California and Texas, two Hydrogen Hubs states.

Hydrogen may also be used as a feedstock to produce efuels. Efuels, including power-to-liquid SAF, present a scalable opportunity to decarbonize aviation. The New Mexico CFS should provide a credit generating pathway for fuels that use clean hydrogen as a feedstock as well. <u>California has recently</u> proposed rules that would disallow the use of book and claim electricity for hydrogen used as a feedstock under LCFS. This will likely have significant dampening effects on both the clean hydrogen and the SAF industries, with little to no benefit. A strict book and claim system for electricity is a critical component for the production of ample clean hydrogen via electrolysis. If New Mexico would like to encourage hydrogen lift-off, then it will likely need to allow all hydrogen, whether it is used as a direct fuel or as a feedstock, to use book and claim electricity to qualify under the CFS.

https://rmi.org/wp-content/uploads/dlm\_uploads/2024/06/fueling\_up\_sustainable\_aviation.pdf

-Jane Sadler, Rocky Mountain Institute

[i] California is currently considering integrating intrastate flight as a mandated fuel under its LCFS.

Since New Mexico has an aggressive target in the statute, all possible renewable transportation fuels will need to be allowed under the program. Once the program is in place and the targets set, renewable businesses will be attracted to the state. I don't see a need for NMED to focus on attracting businesses to the state. The program will automatically incentivize renewable fuel businesses to build and expand production in New Mexico.

Immediately, biodiesel, renewable diesel, and ethanol will be available to generate credits and the other fuels will follow simply due to the existing demand.

- In addition to recertification pathways, we suggest NMED have resources to approve pathways not already certified in CA, OR, or WA timely, to attract new supply that is not already in those markets
- Product will not flow to NM in advance of approved pathways
  - Temporary pathway approvals are critical for new production facilities and at the start of the program
  - Temporary pathways should remain in effect pending agency action on pathway applications
  - Program stability and investor confidence over long time horizons will be key to attracting businesses
    - Appropriately set Cost Containment Mechanisms (CCM) (i.e. cap prices, with a buyout option) can instill both obligated party and investor confidence, however deferral mechanisms, with low or different thresholds, will undermine local investment in supply chain infrastructure and low-CI project development
    - Utilizing the deferral process to address pauses (i.e. freezes) at current CI reduction levels in response to multi-year CCM triggering or annualized MT credit prices at or near the cap set forth in the CCM, would not likely undermine investment
  - Biofuel supply chains and associated infrastructure (i.e. rail, tanks, and blending infrastructure) will develop under the appropriate program price signals
    - This is particularly true for out-of-state terminals (truck racks), where NM rack customers only account for a portion of the facilities supplier's throughput volumes, thus increasing the capital cost recovery burdens
  - It's worth noting that all of CARB's recent CATS model runs supporting their current LCFS amendment process reflect projected LCFS credit prices of \$221/MT for 2026

# 7. Presuming that the NMED CTFS program will likely use lookup tables for the CI value of regulated and some opt-in fuels, what might NMED consider in determining the well-to-wheel CI values that are used for this approach?

Reductions in carbon intensity are a key measure if GHG reductions are to be achieved. In New Mexico, one of the biggest sources of GHG emissions are methane emissions from O&G operations. Technically, this is also one of the easier emission sources in which progress can be made in a timely fashion.

However, some of the proposed rules would clearly discourage progress in reducing methane emissions. For hydrogen production, the proposed 45V rules would use the GREET model to measure methane leakage rates from fossil fuel hydrogen feedstocks to derive well-to-gate emissions of producing hydrogen. Conceptually, this is how it should be. But rather than an actual measurement of methane leakage, 45VH2-GREET 2023 assumes that methane leakage during the natural gas recovery process and subsequent gas processing and transmission sums to ~0.9% of methane consumed by the reformer.

My understanding is that this leakage rate is a fixed parameter in the GREET model, and not allowed to be changed by the user. This is unfortunate, in that it offers no incentive for natural gas suppliers to do anything better than the bare minimum required. In contrast, a well-designed and verifiable program to reduce or eliminate methane leakage should be allowed to override the default and fixed GREET parameters.

a. The GREET model adjusted for transportation to New Mexico should be primarily used.

[Submitted on behalf of Cara Lynch and the Coalition for Clean and Affordable Energy, <a href="https://ccaenm.org/">https://ccaenm.org/</a>]

NMED should use conservative estimates for its well-to-wheel CI values provided in lookup tables. In addition to these lookup tables, NMED should provide regulated and opt-in fuels with the opportunity to provide additional information and documentation, should they choose to do so, to earn additional credits. In short, the lookup tables – which will cover a broad range of fuels and be unable to provide precise CI values for each fuel's exact CI – should err on the side of caution with regards to CI values.

a. Establish CIs for common biofuel blends – E10, E15, B5, B20 – to make it easier for early reporting.

b. Use conservatively high CIs for the biofuels portions of the blends to encourage reporting of the individual fuels instead of the blends.

Recommend that Lifecycle Analysis (LCA) be based on the latest Argonne GREET model or for Sustainable Aviation Fuel (SAF) utilize CORSIA to align with IRA and international aviation standards.

Program should allow both defined default values and individual pathway petition processes:
Priority to have an expeditious mechanism for obtaining new pathways from the state. Preference is to have an accepted, third party verified CI score accepted based on certification.

• Consider the key lifecycle GHG emission calculation methodology choices that significantly impact CI values such as co-product allocation and inclusion and calculation of indirect emissions (i.e., ILUC). Consider aligning these methodology choices with recent federal programs and models (i.e., 40BSAF-GREET), per HB41 Section4.C(6) as these programs have recently been developed by the technical subject matter experts at National Labs and U.S. federal agencies.

• Develop NM specific disaggregated default carbon intensity values for each part of the supply chain (i.e., feedstock cultivation, fuel processing, etc.) and allow the use of a combination of default and actual values for certification and credit generation. Many programs have developed default lookup tables for the CI value of fuels. The programs that allow a mix of default and actual values provide paths for verification and credit generation through the default values and promotes continued investment in lower CI by incentivizing lower CI for feedstocks and/or facilities. The California LCFS and EU Renewable Energy Directive are examples of this approach shown below compared to other relevant methods:

o IRA 40BSAF-GREET – Requires use of default feedstock data and actual facility process data.

o California LCFS – CA-GREET4.0 model contains default feedstock data and requires actual processing data for facility verification. Contrary to 40BSAF-GREET model, individual feedstock pathways may be certified with a lower actual CI. This provides a default feedstock option for a simplified verification process, but still incentivizes the development of lower CI practices in feedstock cultivation/collection.

o ICAO CORSIA - Provides pathway specific lookup tables and default values and allows actual value calculation for facility specific fuel pathways that can achieve a CI lower than the default. However, when using the actual value method, all parts of the supply chain must also use an actual value calculation. This creates an additional unnecessary burden in primary data acquisition. For example, a fuel producer with a more efficient process would need to have all of their feedstock suppliers certified via the actual method in order to receive credit for their lower emission process – a data intensive and time-consuming process.

o EU Renewable Energy Directive – Provides lookup tables and default values for each step of the supply chain for each fuel pathway. This allows a combination of actual and default values to be used in the calculation creating an easier path to certification using default values while providing a simplified route to certification of actual value CI improvements at only one part of the supply chain.

PNM recommends using the utility-specific CI values for electric utilities. To account for the "to-wheel" section of the scope, PNM also recommends an agreed EER be used to accurately reflect the additional emissions reductions.

SWEEP agrees with the separately-submitted comments from the Coalition for Clean and Affordable Energy.

Employing rigorous methodologies to assess the carbon intensity of fuels is critical to ensuring fuels derived from clean hydrogen get evaluated fairly on the CFS market. Currently, California's LCFS program

includes an avoided 'dairy methane book and claim' method of accounting that allows blue and grey hydrogen producers (which use natural gas as a feedstock) to purchase carbon offsets from dairy farms located anywhere in North America that are converting biogas into methane in order to artificially lower their carbon intensity score of their hydrogen.

The CA LCFS considers this process to be carbon negative under the assumption that the biogas would have been released into the atmosphere otherwise. However, in terms of real emissions, <u>this process</u> <u>is at best carbon neutral</u> and in many cases results in *positive* emissions. So, these "carbon negative" credits used to offset the emissions of blue and grey hydrogen producers are actually emitting carbon themselves, resulting in double emissions (first from emissions associated with blue and grey hydrogen, and second from the dairy biogas). That fuel can then qualify as carbon negative under the CA LCFS.

By allowing blue and gray hydrogen to use these inaccurately accounted credits to claim carbon neutrality, California's current LCFS schema gives them a <u>competitive edge</u> and disadvantages lowercarbon options like clean hydrogen from electrolysis, while ultimately adding to overall emissions. Furthermore, the recent <u>proposed rulemaking</u> would allow this accounting method for blue and grey hydrogen projects to exist through 2045.

New Mexico's Clean Fuel Standard can avoid this loophole from the outset by not offering a dairy methane book and claim accounting method for blue and grey hydrogen, and by <u>updating the</u> <u>assumptions</u> around biogas carbon accounting to reflect the actual emissions associated with those operations.

-Jane Sadler, Rocky Mountain Institute

It may be valuable for New Mexico to establish a conservative CI Value for B5 and B20 blends of biodiesel with ULSD at the beginning of the program to allow for blends with no known CI to generate credits. This will allow the jobbers to immediately start taking advantage of the credit generating option and will also incentivize them to determine the actual CI value of the fuel.

- NMED likely will not have access to crude slate reporting for out-of-state refineries, so an alternative approach will be required
- MCON reporting and the incremental deficit are not appropriate frameworks for a state with out-ofstate fuel supply
- Oregon relied on the OPGEE model for crude slates and Cl's, and adjusted both crude and finished product transportation distances to create a simplified scenario for Oregon
- Accept CA, OR, and WA approved pathways adjusted for transport and, if required, ANL GREET 2022 ILUC, including recertification of pathways from such programs
- Streamline pathway approval processes
  - Adopt Tier 1 & Tier 2 Calculators using ANL GREET 2022 emissions factors (EF)

- Ensure the Tier 1 application is able to accommodate most common fuel pathways
- CTFS modeling should exclude the energy economy ratio (EER) in the fuel calculation, as EER is a vehicle calculation and not a fuel calculation
  - If an EER must be used, it should be updated annually to reflect the current state average fuel economy of internal combustion engine vehicles, energy efficiency of battery electric vehicles, and emissions intensity of grid electricity
- Credit generation from electricity should be based on actual use in transportation, not charging capacity (NM is already using Fed and State funding for charging infrastructure = not technology neutral & double taxation on liquid fuel consumers)

# 8. What data does New Mexico's CTFS program need to calculate CI for grid and renewable power, and the volumes of it used for transportation? What are the best sources of available data?

a. Utility specific CIs for electricity would be more accurate than a statewide average and would reward decarbonization of electricity.

b. For EVs charged at home, the number of EVs in a service area will need to be known and multiplied by the estimated amount of charging that would occur to use those EVs. Those credits should then be awarded to the utility serving that area.

c. For non-residential chargers, if a dedicated meter, submeter or smart charger is used, the charging infrastructure owner should receive the credits.

[Submitted on behalf of Cara Lynch and the Coalition for Clean and Affordable Energy, https://ccaenm.org/]

In calculating the total volume of power used for transportation, the CTFS program should require utilities to submit data they have on the number of EVs in their service territory. This data may be something that utilities already receive from sources such as the Electric Power Research Institute or may be obtained from the New Mexico Motor Vehicle Division. The number of EVs in each utility's service territory should be used as a starting point in determining the volume of electricity sold as a transportation fuel. In calculating the volume of electricity used as a transportation fuel, the utility should specify the number of each EV vehicle class in their service territory and the vehicle miles traveled on average by each vehicle class.

Specifically for determining the CI for electricity used as transportation fuel, the New Mexico CTFS should utilize an energy economy ratio ("EER"). Utilizing an EER is important in capturing the true CI (and thus, emissions reductions) from electricity's use as a transportation fuel. The need for an EER stems from the fact that EVs can use 77% of the electrical energy from the grid for vehicle power, whereas conventional gasoline vehicles are only able to convert 12-30% of the energy stored in gasoline to power

all the wheels.[1] This differential is important, as it captures the fact that an equivalent amount of energy will propel an EV farther than a gasoline vehicle counterpart. The NREL publication "Electric Vehicle Efficiency Ratios for Light-Duty Vehicles Registered in the United States" provides helpful considerations in determining the appropriate EER for use.[2]

The NM CTFS program should establish the accounting methodology for electric utilities to calculate emissions associated with charging electric vehicles, and the associated credits. As with other fuels, the methodology prescribed by the regulation should utilize the best, most accurate data available. Specifically, the regulation should direct the utility to:

1. Use utility-specific electricity emissions data and allow utilities to earn credits based on their average emissions intensity.

2. Submit additional data to earn incremental credits. To earn incremental credits, utilities must submit evidence that EV charging is occurring in time periods with lower emissions than their average emissions intensity. Such evidence could include data on EV load from a managed charging program, a time of use rate, or aggregated vehicle telemetry.

We also recommend that NMED include a provision in the rulemaking to revisit the assumptions for how volumes of electricity used as a transportation fuel are calculated and the carbon intensity calculation assumptions and process. We request this because utilities are rapidly implementing new approaches to disaggregating customer load and identifying EV charging in their service territories. As utilities continue to gain more knowledge of charging in their service territories, a more specific approach may become more doable.

Citations:

[1] All-Electric Vehicles (fueleconomy.gov) Link: https://www.fueleconomy.gov/feg/evtech.shtml

[2] <u>Electric Vehicle Efficiency Ratios for Light-Duty Vehicles Registered in the United States (nrel.gov)</u>Link: <u>https://www.nrel.gov/docs/fy23osti/84631.pdf</u>

a. NMED needs to determine the sources of electricity - which power plant and what is their energy source – and then develop a weighted average CI.

b. This can be done on a statewide basis or for an individual utility.

Utilities update on an annual basis their carbon intensity/carbon footprint value, typically provided in Ibs-CO2e/MWh. The value is specific per utility and is commonly found in the utility's Sustainability Report. However, the utility's carbon footprint is only part of the equation, and we recommend an efficiency multiplier to be used for the usage of EVs, to capture true well-to-wheel carbon intensity.

Utilities currently report the CI metrics for the grid, inclusive of both renewable and non-renewable energy. This is considered at the utility-specific level and PNM reports GHG emissions on a quarterly basis to the EPA Clean Air Markets Division. PNM also reports the renewable energy percentage of the

grid mix annually via the Renewable Portfolio Standard filings to the NM Public Regulation Commission. If additional renewable energy certificates (RECs) are to be retired to further offset the CI of fuels used for transportation, the RECs must be allocated specifically for this purpose and retired on behalf of this program via the Western Renewable Energy Generation Information System (WREGIS). The WREGIS accounting system will ensure that no double counting of RECs can occur. PNM recommends using currently available reporting metrics where available to reduce additional administration costs, which would in turn reduce the funds utilities have available to reinvest as per statute and reduce the time necessary to develop new reporting infrastructure.

Data for the volume of electrical energy used for transportation is less straightforward, as the vast majority of EV charging does not have a separate meter, nor does the utility or any other entity have visibility into the vehicle or charger. While some utility programs do include data sharing of participating customers, this is a small portion of the total electrical energy supplied. However, there is data that can be used to estimate the total electrical energy supplied. The first step is to identify the vehicles-in-operation within a given utility service area to understand the number of battery electric vehicles (BEVs) or plug-in hybrid electric vehicles (PHEVs). This can be obtained through market data, such as what PNM receives from the Electric Power Research Institute and reports on through the Transportation Electrification Program or from state or federal records such as the NM Motor Vehicles Division.

The second step is to understand the driving behavior of different vehicle classes using publicly available data. The U.S. Department of Transportation Bureau of Transportation Statistics is one such repository of transportation data. The New Mexico Department of Transportation may also have data that could be helpful in these assumptions.

Finally, by using the data for EV adoption, driving behavior, and the EER, the "well-to-wheel" CI can be calculated and the credits determined.

SWEEP agrees with the separately-submitted comments from the Coalition for Clean and Affordable Energy.

- EPA eGRID for statewide grid baseline, utility specific as reported and verified by each utility
  - Utilities report this annually as per presentation by Alaric Babej from PMN
- Vehicle telematics for kWh consumed, based vehicle registration address (to identify appropriate utility service provider)
  - NMED could require prior year kWh usage data as part of annual NM vehicle registration process
- Utilize EV Smart Charge data (easily accessible, as commented by Viswanath of Qynergy Corp, during 6/28 meeting)

# 9. What might New Mexico's CTFS program take into consideration in deciding whether to use an annual statewide versus utility-specific CI for electric grid power?

Given the complexity of shared generation facilities, power purchase contracts, and spot market transactions, determining utility-specific CIs can be very time-consuming and prone to errors. Statewide estimates, while not rendering utility-specific values, are less prone to data and methodological errors. However, rather than utility-by-utility measurements, consideration should be given to the growing deployment of behind-the-meter power sources. Clearly, if one builds and uses 100% of their power needs from renewable behind-the-meter resources, then that should be reflected in their CI calculation. Similarly, where behind-the-meter resources meet x% of the power consumed, the CI of those resources should be calculated apart from the CI of the 100-x% of power drawn from the grid.

Depending on the assigned CI f based on a state-wide calculation, a utility-specific calculation could incentivize the utility to reduce its carbon intensity and utility customers to opt in to their provider's more sustainable offerings. For example, a utility may offer customers the option of sourcing their electricity entirely or in-part from renewable sources. So, a utility-specific calculation may incentivize both the utility and its customers to source a greater portion of its electricity from renewables because doing so would reduce the electricity's carbon intensity and, thus, make it a more efficient credit generator.

NMED should allow book-and-claim accounting for low carbon fuels production facilities that allows these facilities to source low-CI power from low carbon energy sources using Renewable Energy Certificates (RECs). This will allow lower carbon intensity fuels to be produced. This system should be set up using the same requirements as CARB authorizes in the current regulation for energy used in electric vehicles and to produce electrolytic hydrogen.

a. Accuracy would be improved and additional decarbonization efforts would be incentivized if utilityspecific CIs are used. However, it will require more calculations, so it complicates credits for EVs.

[Submitted on behalf of Cara Lynch and the Coalition for Clean and Affordable Energy, <a href="https://ccaenm.org/">https://ccaenm.org/</a>]

As noted above, the CTFS should direct utilities to use the most specific data available when applying for credits. The emission rate of electricity produced by different utilities may vary significantly, and the emission rate may vary significantly during different periods of the year. Using an average statewide rate will underestimate the credits earned by utilities with significant clean energy resources, and accordingly, under-compensate utility customers who have invested in those clean resources. Conversely, using average statewide emission rates would overestimate and over-reward utilities that have more emissions-intensive generating fleets. For example, under New Mexico's Energy Transition Act, codified in NMSA 62-18-10, Public Service Company of New Mexico must not emit more

than 400 lbs/MWh, on average, starting in 2023[1]; after 2032, PNM must not emit more than 200 lbs/MWh.

Investor-owned utilities have robust data on their annual emissions and annual load, and therefore we see no need for those utilities to rely on a statewide average emission rate. Similarly, cooperatives served by Tri-State Generation and Transmission likely have access to Tri-State's annual system-wide and New Mexico-specific emissions data. Prior to rulemaking, we recommend NMED request information from all utilities regarding the availability of annual emission rates.

#### Citations:

[1] January 1, 2023 is the date proposed in the draft regulations in the pending PRC proceeding, Docket No. 23-00294-UT.

Establishing utility-specific CIs for electric grid power creates additional complexity when reporting EV charging quantities each quarter, as quantities must be differentiated by carbon intensity pathway code. Utility-specific CI also adds considerable administrative work each year as updated values must be determined. However, utility-specific CIs will yield more precise CI reductions than a statewide average.

We recommend that NMED consider whether the precision of CI reduction outweighs the additional complexity and reporting burden created by utility-specific CIs. If the distribution of utility-specific CIs is small, then we recommend using a statewide average.

Both Book & Claim (use of RECs) vs. direct-connection requirements have pros/cons, critical to have consistent treatment for EV charging and renewable fuel production. i.e. be allowed in the production of transportation fuel (as CA does prior to latest rulemaking) and not require direct used in transportation.

• One option is to use the carbon intensity of electricity for the NERC (North American Electric Reliability Corporation) region (link: <u>Power Profiler | US EPA</u>)

• Utility specific CI are also acceptable providing the CFTS credits the utility receive are returned to the ratepayer via the rate case and/or fuel reconciliation regulatory mechanism. Suggest these CFTS credits could be returned to the ratepayer to lower power costs and avoid the utility being double paid.

E-Grid does a good job of estimating the CI of the regional grid, however many utilities within New Mexico have much lower CI's than what is calculated at the regional level. For example, Kit Carson Electric Cooperative boasts that they provide 100% daytime renewable electricity from locally produced solar power in the summer. While this may not be entirely accurate due to daily weather fluctuations, a large percentage of grid power in Taos, Rio Arriba, and Colfax counties comes from solar power during the day. KCEC has plans to bring on 5-10 megawatts of battery storage in the coming months which will

increase renewable energy on the grid for non-daylight hours. There are other utilities statewide that have more renewable energy delivered to customers than the E-GRID emissions factors signify which is why it will be important to have specific utility CIs calculated for the CTFS.

Utilities update on an annual basis their carbon intensity/carbon footprint value, typically provided in lbs-CO2e/MWh. The value is specific per utility and is commonly found in the utility's Sustainability Report or other similar report.

While all utilities in New Mexico are subject to the Energy Transition Act (ETA), there are significant differences in the carbon intensity between utilities, be it investor-owned utilities, electric cooperatives, municipal utilities, or other. For example, the ETA requires investor-owned utilities to be carbon free by 2045 and PNM is on track to achieve that milestone. However, the ETA sets different deadlines and milestones for the electric cooperatives. A statewide average for the CI of the electrical grid reduces the incentive for individual utilities to reduce their carbon emissions as no additional credits would be granted. NMED should also consider that as utilities can select whether to participate in the market or not, it is possible that utilities may not participate if they are beholden simply to a statewide average rather than utility-specific CI.

SWEEP agrees with the separately-submitted comments from the Coalition for Clean and Affordable Energy.

- Electricity baseline should be NM's total output emissions rates in CO2e based on EPA's eGRID for 2018
- Utility specific emissions intensity should be utilized for annual CI reduction compliance and incremental credit generation (based on gCO<sub>2</sub>e/kWh production times kWh used in transportation, converted to MT)
  - Utility specific low-CI electricity must be in-state generated and service area connected to generate credits (i.e. book and claim within generation facilities and customer service areas)
  - To ensure that credits generated for electricity production represent real reductions in carbon intensity:
    - Exclude the use of traded RECs tied to electrical generation outside of NM, or if allowed;
      - Limit the use of traded REC's to low-CI electricity production facilities within one of the balancing authorities serving NM, or balancing authorities with established transmission interconnections to NM markets

- Ensure a robust process is in place to account for retirement of REC environmental attributes (i.e. prevent "double counting" of emissions reductions)
- Establish standards for matching timing of clean fuel credit generation with timing of REC generation
- Utilities should not be able to "double dip" on credit generation by achieving a reduction in baseline grid emissions through renewable generation and at the same time generate REC-based credits for the same renewable generation

## 10. How might NMED design the CTFS program's deferral mechanism?

a. The rules need to be very clear and based on objective determinations. It cannot be a repeat of the biodiesel blend mandate, which has been a failure because it is far too easy to suspend it (which happens every year). No one individual should be able to defer the CTFS.

### Avoid Excessive Flexibility for Deficit Generating Fuels

We recommend against practices such as the ability to carry forward deficits without penalty because entities taking advantage of this compliance flexibility would unintentionally weaken the collective stringency of the program and reduce demand for credits from low carbon fuels. We recommend that if any such deficit "carry forward"[1] is considered, that either a limited time window to cover these deficits be imposed and/or that some form of disincentive[2] for using this borrowing flexibility be imposed.

For example, the requirement could be to fully cover all deficits by the end of the following compliance period (i.e., next period required coverage of credits borrowed <u>and</u> all deficits incurred in the following period) with no subsequent borrowing allowed in the following period. Alternatively, if borrowing is to be allowed on a rolling basis (across multiple periods), there should be a disincentive imposed in the form of an interest rate increasing the net deficits owed (beyond the initial amount carried over) and some clarity around how this growing balance of deficits will eventually be addressed.

Similarly, we recommend against excessive "reporting only" years, automated program freezes, or other provisions designed to delay the onset of clean fuel use. If the New Mexico program design builds directly from other successful examples, there is no need for extensive trial periods or other tools that can be used to unnecessarily slow clean fuel adoption. The examples from the West Coast jurisdictions show that more ambition, not less, is both possible and needed in emerging clean fuel efforts and that these frameworks are well understood by all complying entities.

[1] We note that this carryforward is essentially a form of credit borrowing. Borrowing can help avoid short-term price spikes but because it can also shift the period of market tightness to create supply constraints in future years it is not often used. See: <u>https://www.c2es.org/content/cap-and-trade-basics/</u>

[2] For example, an "interest payment" that requires a greater number of credits to be surrendered or a financial payment to Ecology for the privilege of borrowing.

NMED should be careful not to be too prescriptive with this. It should only be used as a safety net in the extreme instance where disruptions in credit-generating fuels is an issue. There may be many causes of the disruptions but there might not be an obvious solution to the problem. Ultimately, NMED needs to provide certainty that the regulation will stay in place which will normalize credit prices. Too many deferrals will create uncertainty and lead to volatility in the market and be a barrier to future investments.

Program should have clearly defined off-ramps that can be objectively and timely applied to avoid supply disruptions and consumer impact.

Program should also include cost certainty mechanisms (e.g., cap and floor for credit prices). This will allow for value certainty for investments and cost controls that will not create an excessive burden on the consumer due to global or local market dynamics.

NMED may consider similar precedent established by other programs in considering unforeseen circumstances or emergencies that could give rise to a basis for program deferral. Specifically, the Energy Policy Act of 2005 established a process for granting waivers, in whole or in part, for the quantities of renewable fuel required by the program. The waiver process is outlined in 42 U.S.C. 7545. Positive aspects of the EPA's waiver program for the RFS include the authority for the Administrator, on petition of any person subject to the program (i.e., in NM's case a regulated entity) to petition for waiver of the volume requirements based on a determination that it is justified to avoid severely harming the economy or environment of the state or that there is inadequate domestic supply of a product. In both circumstances, the agency decisions are subject to notice and comment and importantly, in both instances the waiver process operate only as a safety valve, not a ratcheting mechanism to increase the program stringency. NMED might consider a similar process whereby regulated entities can petition for program deferral based on unforeseen factors or circumstances that could harm NM's economy or environment or where there may be insufficient supply of products in NM to keep the market price below an acceptable price cap. In addition, I would encourage the NM Secretary of Environment have the discretionary authority to make deferral decisions, absent petition from a regulated entity. Factors NMED might consider in making a decision to defer implementation of the program might include:

- o The prices of biofuels sold in NM relative to the prices of biofuels sold in other states,
- o Costs to consumers,

o Changes in domestic energy supply that affect domestic energy security,

o Changes in domestic energy demand that negatively impact the energy security of NM, the region, or the U.S.

o The stability of fuel supplies and domestic refining assets.

The deferral mechanism as authorized by HB 41 is a very important part of the rule package during transition into the CTFS program, in particular, and to account for other market imbalances. The deferral mechanism should consider undue burdens that that CTFS program may impose on existing businesses and allow relief for a period of time as approved by NMED or the EIB. The process for seeking and obtaining relief should be efficient and quick, and the submission of an application should provide temporary relief while the application is under review. These aspects of the deferral mechanism to avoid undue and unnecessary loss of existing business and jobs due to market imbalances that may be created during the early stages of the CTFS program and, after a transition period, to other market imbalances that may disrupt businesses.

Market certainty is critical for clean fuel providers, who are making large investments in new technologies and capacities. The rule should offer clean fuel providers with certainty that this policy will remain in place with durability over time, without disruptions.

NMED should design the program's deferral mechanism so that it is limited to truly extraordinary and highly unlikely conditions. The first line of defense should be the ability for regulated parties to bank credits for future use. The second line of defense should be a cost containment reserve, where the state could inject additional credits into the market to relieve pressure if costs rise above a defined trigger amount. Only if those mechanisms fail to contain costs should the state ever consider suspending the policy. My expectation is that compliance will be cheaper and easier than anticipated and the deferral mechanism will never be necessary. The draft rule should make it clear that deferral would only occur as a last resort.

Comment from Jed Smith at Rio Valley Biofuels, LLC

It is critical that New Mexico designs the program's deferral mechanism carefully or the program has the potential to be deferred indefinitely by unwilling participants of the program. NMED needs to establish clear criteria for deferral of the program. Criteria for deferral needs to be determined through an analysis of renewable fuel availability. The deferral mechanism will be triggered by forecasting the deficits that are expected in New Mexico based on the prior year's transportation fuel usage and then forecasting the availability of credit generating renewable fuels of all kinds that are allowed to generate credits under the New Mexico CTFS. The forecast should be based on a thorough qualitative analysis of renewable fuels available to New Mexico from all sources and all locales and the program should ONLY be deferred in an unlikely scenario where no biofuels are available. The qualitative analysis must be

performed by a party who is independent from the parties participating in the program and the study cannot be influenced by data provided by the parties participating in the program.

The economic impacts to regulated parties cannot be cause for a deferral. Even the economic impacts to New Mexicans from an increase in the price of fuel should not be cause for deferral of the program. It has been determined in multiple studies that increases in the price of fuels, including renewable fuels, cannot be conclusively attributed to Clean Fuel Standards but is much more likely a result of geopolitical events and their impacts on the price of a barrel of crude oil.

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. And in this scenario, renewable fuels may be more readily available than fossil fuels.

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.

The deferral mechanism should only allow for a temporary reduction of the compliance target or may be structured to allow for the credits generated by one type of available fuel to fill the deficit for another type of temporarily unavailable fuel. For example, in the event that there is insufficient SAF to fill the SAF obligation (assuming there is one), there may be plenty of biodiesel to make up for the lack of SAF credits, and the overall goal of the program would still be fulfilled.

Keep in mind the goal of the program is to reduce the carbon intensity of transportation fuels in New Mexico by 20% by 2030. It is not in the best interest of the success of this program to defer the program for any period of time.

- Program stability and investor confidence over long time horizons will be key to attracting businesses
  - An appropriately set CCM can instill both obligated party and investor confidence, however deferral mechanisms, with low and/or uncertain thresholds, will undermine local investment in supply chain infrastructure and production project development
    - It's worth noting that all of CARB's recent CATS model runs supporting their current LCFS amendment process project LCFS credit prices of \$221/MT for 2026

- Type of deferral will be key
  - Freezing the program at a reduction obligation level if/when certain thresholds are met is very different from program waivers
  - Utilizing the deferral process to address pauses (i.e. freezes) at current CI reduction levels in response to multi-year CCM triggering or annualized MT credit prices at or near the cap set forth in the CCM, would not likely undermine investment
  - o Any type of deferrals must have specific process to restart programs reductions
    - Deferrals may risk violating statute and may require rule-making and/or legislative action

### 11. What does NMED need to consider when defining "emergency or forecasted conditions?"

a. The need to assure the market that the program will not be deferred except under very specific and objective conditions. See comments regarding the failed biofuel blending mandate.

An emergency should be akin to an act of God or force majeure.

• Please consider Clean Air Act waiver language: <u>42 USC 7545(c)(4)(C)(ii)</u>

The rules should not be too specific or constraining in this regard, particularly in terms of the types of conditions that may warrant relief, as there are a wide variety of conditions that should be considered on a case-by-case basis. Attempting to be too restrictive or specific in this regard could result in unintended, but significant, consequences by not allowing for legitimate reasons for relief that are not anticipated by the rule, resulting in potential loss of business and jobs. Similarly, the rules should not be too restrictive as to what constitutes an "emergency" or what needs to be provided to support a forecasted condition, leaving that to case-by-case review of a particular request.

I think the simplest way to define "emergency or forecasted conditions" is in terms of credit price. The rule should set an upper bound credit price (ideally higher than the federal social cost of carbon) above which it will take action to cool the market. As noted above, the ability for regulated parties to bank credits will help mitigate any future credit shortages that could be driving price spikes. Beyond that, the state should maintain its own cost containment credit reserve, with the ability to inject those credits into the market if costs rise above a defined threshold (in effect lowering policy stringency). Only if those, or other market adjustment mechanisms fail – and prices exceed the upper bound level for an extended period of time (a matter of months?) should the state consider triggering a deferral.

The decisions on where to set trigger prices, and how large the cost containment reserve should be, should be informed by a model of the clean fuel standard as recommended above. Policy decisions should be made such that anticipated future conditions in the model *never* result in program deferral, plus a reasonable margin of error.

- Both definitional items run contrary to the concept of a well-designed CCM, as the CCM would preclude the need for specific "emergency" or "forecasted conditions" and vice versa, unless such definitions are used only as the offramp process for a multi-year CCM exceedance or annualized credit prices at or near the cap set in the CCM
  - It's worth noting that all of CARB's recent CATS model runs supporting their current LCFS amendment process project LCFS credit prices of \$221/MT for 2026
- Alternatively, should a CCM prove to be ineffectual (i.e. too expensive for NM consumers) or a state-wide emergency exist, the Governor could look to invoke emergency powers to temporarily address the CTFS
- Programmatically designing offramps (emergency & forecasted conditions), which are not a programmatic result of a multi-year CCM trigger and/or annualized MT credit prices at or near the cap set forth in the CCM, will undermine all investor confidence and investment

## **Additional Technical Input**

July 17, 2024

Climate Change Bureau Chief Claudia Borchert New Mexico Environment Department

525 Camino de Los Marquez

Santa Fe, NM

### **Re: New Mexico Clean Transportation Fuel Standard**

Dear Chief Borchert,

The Coalition for Renewable Natural Gas (RNG Coalition)<sup>1</sup> offers the following technical input in response to the New Mexico Environment Department's (NMED) request. The implementation of a clean transportation fuel standard (CTFS) in New Mexico is a significant step toward transforming the state's organic waste, energy, and transportation sectors through the development and use of biogas to create

<sup>&</sup>lt;sup>1</sup> <u>http://www.rngcoalition.com/</u>
renewable natural gas (RNG), renewable hydrogen, and renewable electricity for use in various transportation applications.

#### The RNG Industry

GHG Reduction Potential of Biogas-Derived Resources

Organic waste is a serious and growing issue, and the climate and other environmental impacts from these wastes require an immediate and ongoing solution. Globally, municipal solid waste is expected to grow 69% from 2.01 billion metric tons (BT) in 2018 to 3.4 BT in 2050 (around 50% of which is organic waste).<sup>2</sup> Moreover, these trends are underpinned by an expected 25% population increase of 2 billion people between now and 2050.<sup>3</sup> Capturing waste biogas for use as renewable energy is a proven technology for addressing greenhouse gas (GHG) emissions and other challenges in the waste sector, which are slated to worsen over the timeframe required to address climate change.

When derived from such waste feedstocks, all commercially available methods of producing RNG have excellent lifecycle greenhouse gas performance, exemplified by carbon intensity (CI) modeling employed by Oregon and California's<sup>4</sup> clean fuel programs. Moreover, some RNG projects capture and destroy a greater amount of GHG (as measured on a tons of carbon dioxide equivalency basis) than are emitted during the fuel's production and use, making it one of the few fuels available commercially today that can achieve a carbon-negative impact (i.e., better than carbon-neutral).

Furthermore, carbon-negative emissions technologies, and particularly those which operate based on the sequestration of biogenic carbon (e.g, bioenergy with geologic carbon capture and sequestration (CCS), biochar with soil carbon sequestration), present an opportunity to accelerate GHG reductions and provide useful, non-fossil CO<sub>2</sub> chemical feedstocks. Employing these technologies will ultimately allow our economy to not only reach, but potentially move beyond carbon neutrality to a point where atmospheric carbon levels can be drawn down to stabilize Earth's climate, if needed. To this end, our industry is working toward the implementation of carbon capture and sequestration at RNG and biogas production facilities, and to create carbon-negative renewable hydrogen or bioliquids as outlined in work conducted by Lawrence Livermore National Laboratory for California.<sup>5</sup>

<sup>&</sup>lt;sup>2</sup> <u>https://datatopics.worldbank.org/what-a-waste/trends\_in\_solid\_waste\_management.html</u>

<sup>&</sup>lt;sup>3</sup> <u>https://www.un.org/development/desa/en/news/population/world-population-prospects-2019.html</u>

<sup>&</sup>lt;sup>4</sup> For example, see the lifecycle analyses conducted by California's Air Resources Board: <u>https://ww3.arb.ca.gov/fuels/lcfs/fuelpathways/pathwaytable.htm</u>

<sup>&</sup>lt;sup>5</sup> LLNL, *Getting to Neutral: Options for Negative Carbon Emissions in California*, Baker et al., January, 2020, Lawrence Livermore National Laboratory (LLNL) <u>https://www-</u>gs.llnl.gov/content/assets/docs/energy/Getting to Neutral.pdf

The scientific community—including the most recent report from the United Nations' Intergovernmental Panel on Climate Change (IPCC)—continues to emphasize that global GHG emissions must reach net-zero in the first half of this century.<sup>6</sup> World renowned organizations such as the International Energy Agency<sup>7</sup> have pointed out that bioenergy—including bioenergy with CCS—is an important pathway to achieving net-zero. The importance of maintaining pressure on reducing methane emissions through RNG deployment is underscored by the recent IPCC report, which identifies "methane capture and recovery from solid waste management" as one of the best "short-term 'win-win' policies,"<sup>8</sup> and the joint U.S.-EU Methane Pledge, targeting a 30% reduction by 2030.<sup>9</sup> Policies that cover a large section of the economy, such as New Mexico's CTFS Program, will play an essential role in enabling these technologies.

#### The Role of RNG/Biogas in a Clean Transportation Fuel Standard

RNG Coalition has long supported the use of CTFS-style policies to realize GHG reduction goals across the transportation, energy, and waste sectors. Over the last decade, policies focused on reducing GHG emissions have driven extraordinary growth within the RNG industry. There are now 334 operational RNG production facilities in North America with 165 under construction or in substantial development<sup>10</sup> compared to only 30 developed projects between 1982 and 2011. This recent growth has been incentivized largely by transportation decarbonization programs, including the Unites States Environmental Protection Agency's Renewable Fuel Standard (RFS) and state-level clean fuel standards such as the existing CFS programs in California, Oregon, Washington, and British Columbia.

The biogas and other organic waste resources targeted by our industry can be used to create pipelinequality RNG, produce renewable hydrogen, or to generate electricity. All three of these energy carriers will serve an important role in New Mexico's transportation sector.

As we presented at the June 28, 2024 CTFS Advisory Committee meeting, commercial RNG potential from anaerobic digestion feedstocks located in New Mexico (24.23 tBtu/year)<sup>11</sup> could potentially supply

<sup>&</sup>lt;sup>6</sup> Intergovernmental Panel on Climate Change, *Sixth Assessment Report – Climate Change 2021: The Physical Science Basis*. <u>https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/</u>

<sup>&</sup>lt;sup>7</sup> International Energy Agency, *Net Zero by 2050: A Roadmap for the Global Energy Sector*, May, 2021. <u>https://www.iea.org/reports/net-zero-by-2050</u>

<sup>&</sup>lt;sup>8</sup> IPCC, 2021. *Climate Change 2021: The Physical Science Basis. Chapter 6. Short-Lived Climate Forcers.* <u>https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC\_AR6\_WGI\_Chapter\_06.pdf</u>

<sup>&</sup>lt;sup>9</sup> <u>https://www.state.gov/joint-u-s-eu-statement-on-the-global-methane-pledge/</u>

<sup>&</sup>lt;sup>10</sup> Based on RNG Coalition's production facility data as of February 28, 2024: <u>https://www.rngcoalition.com/rng-production-facilities</u>

<sup>&</sup>lt;sup>11</sup> New Mexico Natural Gas Demand by End Use, US Energy Information Administration, <u>https://www.eia.gov/dnav/ng/NG\_CONS\_SUM\_DCU\_SNM\_A.htm</u>

~58X current natural gas vehicle demand in New Mexico (0.42 tBtu in 2022).<sup>12</sup> Therefore, to maximize the benefits of RNG/biogas use in the program, it will be crucial for NMED to be mindful of how to incentivize the use of organic waste feedstocks across all applications—including those where RNG is converted to electricity, hydrogen, or even sustainable aviation fuel (SAF).

#### Additional CTFS Technical Input

The following recommendation are made with the intention to maximize the GHG reduction value of the CTFS, with consideration towards how this program should interact with existing markets.

Set the Strongest Carbon Intensity Targets Permitted by Statute

A wide portfolio of renewable energy and GHG reduction technologies are available to begin decarbonizing New Mexico's transportation sector immediately. All these technologies need to be implemented as quickly as possible given the state's ambitious goal of reducing statewide emissions by at least 45% by 2030. To create the greatest likelihood of achieving the economy-wide goals and maximizing contributions from the transportation sector, NMED should set the most stringent CTFS targets allowable by statute.

Regional Alignment and Reciprocity of CI Scores Should be a Key Goal

We strongly encourage synergy among existing CFS programs—thus we recommend that the CTFS allow for CI pathways approved by existing programs in other states. Such regional alignment will maximize the ability for RNG producers to swiftly respond to the joint signal sent by the clean fuel programs in these states. Significant attention should be placed on retaining cross-jurisdictional alignment of CI tools and scoring. To the extent feasible, NMED should continue to work closely with its West coast partners and attempt to make changes to CI models together.

Use of Renewable Electricity Credits and Renewable Thermal Credits

<sup>&</sup>lt;sup>12</sup> Renewable Sources of Natural Gas: Supply and Emissions Reduction Assessment, ICF for American Gas Foundation, 2019 <u>https://gasfoundation.org/wp-content/uploads/2019/12/AGF-2019-RNG-Study-Full-Report-FINAL-12-18-19.pdf</u>

The use of Renewable Electricity Credits (RECs) and Renewable Thermal Credits (RTCs) is an important strategy to align accounting for the use of clean energy across applications including electric vehicle charging, hydrogen production, and clean fuel upgrading.

A significant portion of the GHG emissions represented in the average RNG fuel's life cycle are from electricity (and sometimes geologic gas) used to upgrade biogas to RNG. In these situations, the use of clean inputs into RNG production can positively impact a resource's CI score and can be easily tracked using existing systems<sup>13</sup> and assessed using the existing GREET model. Accordingly, NMED should allow for RECs and RTCs to qualify as an accounting method to reduce the CI score of RNG production.

Similarly, when another end use takes renewable power or gas as an input this should be recognized under the program's CI scoring. For example, RTCs should be able to be used to reflect RNG use as an input to make liquid fuels, hydrogen (including hydrogen for hydrotreating), or power (for EV charging or when used in other biorefineries).

#### Avoid Excessive Flexibility for Deficit Generating Fuels

We recommend against practices such as the ability to carry forward deficits without penalty because entities taking advantage of this compliance flexibility would unintentionally weaken the collective stringency of the program and reduce demand for credits from low carbon fuels. We recommend that if any such deficit "carry forward"<sup>14</sup> is considered, that either a limited time window to cover these deficits be imposed and/or that some form of disincentive<sup>15</sup> for using this borrowing flexibility be imposed.

For example, the requirement could be to fully cover all deficits by the end of the following compliance period (i.e., next period required coverage of credits borrowed <u>and</u> all deficits incurred in the following period) with no subsequent borrowing allowed in the following period. Alternatively, if borrowing is to be allowed on a rolling basis (across multiple periods), there should be a disincentive imposed in the form of an interest rate increasing the net deficits owed (beyond the initial amount carried over) and some clarity around how this growing balance of deficits will eventually be addressed.

<sup>&</sup>lt;sup>13</sup> <u>https://www.mrets.org/m-rets-renewable-thermal-tracking-system/</u>

<sup>&</sup>lt;sup>14</sup> We note that this carryforward is essentially a form of credit borrowing. Borrowing can help avoid short-term price spikes but because it can also shift the period of market tightness to create supply constraints in future years it is not often used. See: <u>https://www.c2es.org/content/cap-and-trade-basics/</u>

<sup>&</sup>lt;sup>15</sup> For example, an "interest payment" that requires a greater number of credits to be surrendered or a financial payment to Ecology for the privilege of borrowing.

Similarly, we recommend against excessive "reporting only" years, automated program freezes, or other provisions designed to delay the onset of clean fuel use. If the New Mexico program design builds directly from other successful examples, there is no need for extensive trial periods or other tools that can be used to unnecessarily slow clean fuel adoption. The examples from the West Coast jurisdictions show that more ambition, not less, is both possible and needed in emerging clean fuel efforts and that these frameworks are well understood by all complying entities.

#### Cost Containment and Social Cost of Carbon

Despite our opposition to tools to delay program start or decrease program ambition, RNG Coalition supports the creation of cost-containment mechanisms in tradeable environmental credit markets. Such features can increase investor certainty in such markets and provide consumer protection. Furthermore, any such cost containment mechanisms should be designed so that operating low carbon fuel projects have ample opportunity to monetize the credits—which they've generated from proven emission reductions and prior to the availability of additional flexible compliance options.

#### Credit Clearance Market Mechanism to Provide High-Side Price Protection

We support the NM CTFS including a Credit Clearance Market (CCM), modeled after California's example,<sup>16</sup> that would provide additional compliance flexibility to regulated parties who have not met their previous year-end obligation. The CCM level should conceptually be set at a value that can reasonably expect to draw significant new supply of low carbon energy into the market. We believe that a maximum CCM price of \$300/metric ton CO<sub>2</sub>e would satisfy this test for RNG projects. Any CCM price must also remain well above the upper bounds of a credible assessment of the long-run social cost of carbon (SCC). However, should future updates of the SCC indicate a higher value is more appropriate, we would support future regulatory changes to facilitate alignment with the SCC. Tying the ceiling price to a strong upper bound estimate of the SCC ensures that investments that cost-effectively help address the potentially catastrophic environmental damages associated with climate change are properly valued and incented.

Including a CCM as an indicative ceiling price allows for easy calculation of the maximum revenue for developers of new projects and sets expectations for all counterparties engaged in credit generation and sales. Given that the CCM cap could be set at a level that is sufficient for many RNG projects to work financially, having such a cap will help financial products develop around the CTFS because a degree of uncertainty has been removed.

<sup>&</sup>lt;sup>16</sup> <u>https://ww2.arb.ca.gov/resources/documents/lcfs-credit-clearance-market</u>

Auto Accelerator Mechanism to Provide Low-Side Price Protection

An auto accelerator mechanism (AAM) guards against a case in which the near-term target step down is not sufficient to address an oversupply of credits. Again, we recommend that the CTFS consider an AAM provision conceptually modeled on California's draft design.<sup>17</sup> An AAM should be triggered when the CTFS credit bank is two-times greater than quarterly deficits. If the AAM conditions are met, the corrective mechanism should be able to trigger as often as needed.

#### Conclusion

New Mexico's CTFS Program has the potential to drive climate action across all sectors of the state's economy, and RNG is poised to play a key role in reducing GHG emissions in line with New Mexico's climate goals. Establishing the most ambitious GHG reduction requirements and strong price containment mechanisms possible will allow our industry to contribute efficiently and effectively toward these goals.

The RNG industry is excited about continued growth in clean fuels, both in New Mexico and globally, as policymakers look to address climate change and increase the resiliency of our energy systems. The CTFS will be a critical step for New Mexico toward those outcomes, and we look forward to continued engagement with NMED throughout the advisory process.

Sincerely,

/S/

Sam Wade Director of Public Policy Coalition for Renewable Natural Gas 1017 L Street #513 Sacramento, CA 95814 (302) 757-0866 sam@rngcoalition.com

9. How can NMED design the program to prevent credits from being double counted?

<sup>&</sup>lt;sup>17</sup> <u>https://ww2.arb.ca.gov/rulemaking/2024/lcfs2024</u>

Answer: New Mexico has several transferable tax credits that can be transferred numerous times, which gives rise to double counting potential. Accordingly, NMED should specify that credits can be transferred only once. Second, EMNRD can require credits be transferred through an "qualified aggregator" for tracking and for verification that unused credits are transferred. Please also see my below response to Question 17 for additional information.

#### 11. What accounting systems do we need to make book-and-claim accounting work?

Answer: The book-and-claim system is a good method to depict the credit custody chain, but NMED should produce certificates for good credits. There are several transferable state green credit programs and the reason why New Mexico, unlike many other states, has not experienced any fraud in these systems is due to the agency certification review process that the underlying transaction giving rise to the credit was good. NMED's credit system should follow New Mexico agency certification practices, which has been standard in our state's incentive programs for decades.

Pursuant to Section 6418 of the Internal Revenue Code, the federal government has allowed for ten renewable energy tax credits to be transferred; with the IRS opening its tax credit registration portal last December, hundreds of billions of tax credits are transferring over the next eight years. NMED should copy basic common-sense elements from that new federal transferable credit system. First, credits should only be transferred for cash (versus being able to technically be sold for Bitcoin, land, services, etc.). Second, transferring credits between unrelated parties would be good from an accounting perspective so that credit transfers are transactionally arms-length.

17. What is the role of aggregators in the CTFS credit market?

Answer: Aggregators should, broadly, be cooperators. Just like New Mexico's procurement system, as well as many other state systems, the forthcoming rule should logically give similar preferences to current in-state infrastructure requiring out-of-state aggregator's cooperation with our local transfer system, traditions, practices and culture.

House Bill 41 gives wide latitude in generating rules to trade credits. Aggregators should be trusted by and registered with NMED who should ethically provide expertise and liquidity in New Mexico's carbon credit marketplace. For various reasons (e.g., administrative efficiency/familiarity with New Mexico agencies, ensuring New Mexico aggregators are incorporated into our transfer system, etc.) carbon credits should be transferred through aggregators who have, or are affiliated with, a local presence that has least two years practice in trading transferable New Mexico credits without previous problems or concerns from the State of New Mexico. There was substantial discussion regarding equitable justice issues at numerous points during the stakeholder committee meeting and certainly NMED should be focused on helping its residents first, as fellow New Mexicans legislatively created this new system, which took years to do so.

NMED should incorporate the in-state education and experience derived from its fifteen years of having a transferable tax credit system through numerous green programs where those credits are almost always transferred through intermediaries. Incorporating New Mexico's qualified intermediary system is completely consistent with House Bill 41 and has/will provide an additional

check in the system to catch mistakes by the state, which should be expected to occur over time (e.g., intermediaries not transferring erroneously issued tax credits, altering the state of double credit issuances, etc.).

Significantly, there is precedent for transferring credits through New Mexico intermediaries. For instance, in 2008, based on Colorado's experience, just like the forthcoming state carbon credit system, New Mexico was then expecting substantial credits to be transferred and wanted to create better administrative ease and efficiency in creating a system where those credits must be transferred through a "qualified intermediary" taking that administrative burden largely off of the New Mexico Taxation and Revenue Department. *See* NMAC 3.13.20.15(D) ("an applicant shall use a qualified intermediary to transfer a land conservation incentives tax credit);" *please also see* TRD's RPD Form 41347 (Application for Designation as a Qualified Intermediary) regarding TRD's registration process with its tax credit transferring intermediaries. The rules should adopt a similar system where carbon credits should be transferred through New Mexico-based registered intermediaries approved by NMED.

-Ethan Epstein, New Mexico Tax Credit Alliance

Regarding the eligibility criteria for renewable energy credits (RECs):

- Require that renewable energy must be deliverable to New Mexico. Require RECs to be generated from facilities located in the western electricity coordinating council (WECC) in order to establish deliverability
- Do not create a generator in-service date. Generators that currently exist should be able to produce RECs eligible for the CTFS.
- Require RECs to be retired in a recognized tracking registry such as WREGIS.
- Do not require burdensome and costly certifications such as green-e. While green-e certification
  may be useful for other applications, it is not necessary to establish that RECs are valid and
  counted only once. Green-e certification requirements are subject to change and may
  inadvertently become misaligned with the CTFS. The experience under the Oregon Clean Fuels
  Program (CFP) demonstrates how Green-e certification unnecessarily layers the Green-e
  program's more restrictive requirements onto program rules, while creating additional
  administrative burdens for regulators and participants, without substantive benefitting the goals
  of the program.

1. What does NM's lower baseline CI relative to other LCFS states mean for the NM clean fuel market?

It means that less credits will be generated.

2. What criteria should NMED require 3rd party verifiers to incorporate in their evaluations and reports to NMED?

NMED should follow the regulations established by California and Oregon for 3rd party verification.What are the market opportunities for RNG in NM?

NMED should determine the demand for CNG or LNG in vehicles and that will be the estimated demand for RNG in NM. NMED should also determine the availability of feedstocks that can be used to produce RNG and the corresponding CI values for the various feedstocks and that will be the

estimated supply of RNG in NM. RNG can also be used to produce renewable electricity in places where RNG cannot be put into a pipeline or directly into a vehicle.

4. What are the market opportunities for biodiesel and renewable diesel in New Mexico? The diesel market in NM is approximately 750 million gallons per year. Biodiesel can be safely blended at a rate of 20% which translates into 37.5 million gallons per year. Renewable diesel can displace 100% of fossil diesel, which translates into 750 million gallons per year.

5. What role do we envision drop-in biofuels playing in New Mexico's CTFS? Specifically, how might the logistics and production processes for RD present any unique advantages and/or challenges?

Drop-in biofuels will play a critical short-term role in that no new infrastructure is needed for this. Longer-term, the diesel substitutes will continue to play a critical role for the sectors that are hard to electricity – primarily marine, aviation, and rail. These fuels are commercially available, compatible with existing technologies, and economically competitive.

6. What are the dynamics at play that might impact New Mexico's position as a biofuels importer compared to other states with clean fuel programs?

Oregon is also a net importer of fuels and has been successful in implementing a CTFS for several years. Clean fuel producers throughout the country and the world are already knowledgeable about the logistics that are needed to bring those fuels to NM and now the CTFR will provide the necessary market signals to make that happen.

7. What advantages might New Mexico have given that it's the first non-coastal state to have a clean fuel program?

NM will benefit from being between several large clean fuel producers and California; the fuel literally passes through NM on the way to their current market.

8. How can NMED design the program to prevent credits from being double counted?

By instituting rigorous book-and-claim and third party verification requirements.

9. When does book-and-claim accounting best represent real reductions and when is it questionable?

10. How does the timing work when a clean fuel credit is generated and when it's produced? A credit is generated when the quarterly report is submitted into the NMED reporting system.

11. What accounting systems do we need to make book-and-claim accounting work?

NMED should require retirement in a registry such as WREGIS or MRETS.

12. What mechanisms do we need to evaluate the emissions reductions from off-road applications? Credit generation from off-road applications is done through the development of an energy economy ratio. Look to other states first, when adopting them. New ones can be added through a Tier 2 pathway application process.

13. When is it possible to leverage existing gas and diesel CIs to use for determining credits, and when is it necessary to determine individual pathway baseline CIs?

Gas and diesel CIs are contingent upon the slate of crudes that feed into specific refineries so the best practice is to develop a weighted average of CIs based on the crude slate and use it as a statewide average CI for all gas or all diesel.

14. How do we keep off-road credits germane to the "Transportation" part of the CTFS? Just define the uses as off-road but for transportation. For example, rail, marine, aviation, forklifts, carbo handling equipment, ground service equipment are all off-road transportation uses; while generators, bbq grills, and home heating units are not transportation uses. 15. What EV activities should be eligible for credit generation, and who should be the default credit generator for these activities?

All transportation uses that can be electrified should be eligible to generate credits. The default credit generator should be the entity that can ensure that the electricity is used for transportation, typically that is the charger owner but in other cases it might be an operator instead.

16. Who is best positioned to collect EV charging data, and to benefit from clean fuel credit incentive?

The charger owner is best positioned to collect the charging data. The entity that invests the most into an EV system should benefit from the incentive. Sometimes that is the charger owner and sometimes it is the EV owner. Either way, the incentive can be shared between the entities contractually.

17. What is the role of aggregators in the CTFS credit market?

To maximize credit generation in the CTFS. To ensure that small credit generators have the ability to benefit from the incentive while minimizing or eliminating the administrative burden of CTFS.

18. Should REC book-and-claim rules be established, and under what eligibility criteria should they be considered?

19. How can the CTFS provide incentives for EV charging that work best with state and utility efforts to reduce grid emissions in line with the Energy Transition Act?

20. In what ways do transportation and power sector emissions reductions complement and compete with one another?

21. How can EV charging credits be best distributed among the different eligible recipients (OEMs, utilities, aggregators, charging station installers, residents), and who amongst them is most needed to ensure robust residential and non-residential credit generation?

22. Do you have any input to offer on the interplay between the Energy Transition Act and CTFS?

Related to Supplemental Discussion Prompt #14 ("How do we keep off-road credits germane to the "Transportation" part of the CTFS?") - we strongly suggest incorporating any transportation activity that has already been given an EER score from any other compliance program currently established. Decarbonization (especially electrification) efforts need to expand well into the off-road sector. Including the definition of "transportation" broad is extremely important. We frequently think of it as "anything that moves a human or a good" so as not to alienate any specific type of technology.

We strongly support harmonizing as much as possible the default credit generators with that of California's currently proposed rulemaking documentation, who has most recently went through the exercise of determining best use of incentive for electrification. Also, an enormous portion of electricity credit generation has gone to default utility for residential EV charging. If there was one area we suggest close scrutiny, or limited credit origination, we would place it there. Otherwise, being as broad and inclusive as possible of all transportation types is a good strategy. Ultimately, the consumer of the electrical energy is the one needing most incentive, so we are wary of strategies that award OEM's, utilities, or others that are not making as many direct concerted decisions on fuel selection.

- 1. What does NM's lower baseline CI relative to other LCFS states mean for the NM clean fuel market?
  - Baselines and CI Reductions

- NM statue defines Transportation Fuel to include electricity or a liquid, gaseous or blended fuel (Section 1.1.)
- All statutorily defined Transportation Fuels have a baseline CI from 2018 levels and must reduce their CI by 20% by 2030 and 30% by 2040 (Section 4.C.(2))
  - Gasoline (E10) and Diesel (B2) can be interpreted to be either a "liquid" or a "blended fuel", however regardless of interpretation the end result is the same, each Transportation Fuel (CBOB, ethanol, diesel, biodiesel) will need a baseline and each will have CI reduction obligation
  - Similarly, electricity will need its own baseline and have CI reduction obligations
    - NMED should consider the use of EPA's 2018 eGRID for the CTFS electricity baseline
- Lower baselines and baseline Transportation Fuel (obligated fuels) result in a more stringent program that will need to compete for the lowest-CI fuels available
- 2. What criteria should NMED require 3<sup>rd</sup> party verifiers to incorporate in their evaluations and reports to NMED?
  - NMED should allow for recertification of fuel pathways certified by another LCFS state.
    - For these recertified pathways, NMED should allow the fuel pathway holder to submit the verification report from their approved California, Oregon, or Washington verification.
  - NMED should publish clear guidance on verification criteria in advance to both regulated entities and verifiers.
    - Regulated entities cannot comply with verification requirements that they are not aware of and are not clearly in scope of the rule. Experiences in other LCFS programs have shown that verification requirements may be set differently from year to year or at different facilities by different verifiers, which makes compliance challenging for even the best actors
    - It is also important that all regulated entities are held to the same criteria regardless of the verifier they choose
  - NMED should engage with stakeholders as part of determining requirements for chain of custody, particularly for biofuel feedstocks.
    - Biofuel producers typically receive chain of custody documentation from their immediate upstream supplier. To establish further chain of custody, we have found it most successful for the third-party verifier to engage with the upstream supplier directly for confidentiality reasons. This process is consistent with other LCFS programs and ISCC-EU certification programs
- 3. What are the market opportunities for RNG in NM?
  - No comment
- 4. What are the market opportunities for biodiesel and renewable diesel in New Mexico?
  - Due to NM's above average diesel to gasoline demand ratio within the states liquid fuel usage, BD and RD can play a larger role in the states CTFS program
  - Additionally, both BD and RD can be blended at higher ratios of biofuel to fossil fuel than E10, with BD blends of up to B20 and RD being a drop-in replacement fuel for ULSD.

- Both fuels will require additional, but separate, logistics infrastructure, including receipt, storage/handling, and blending and both fuels will predominately be supplied into the market via rail to in-state and out-of-state rack terminals
- 5. What role do we envision drop-in biofuels playing in New Mexico's CTFS? Specifically, how might the logistics and production processes for RD present any unique advantages and/or challenges?
  - Similar to other LCFS programs, drop in biofuels will play a key role for obligated parties to comply with the CTFS and for NM to reach its goals
  - RD is a drop in liquid biofuel that can be utilized in the existing on- and off- road diesel engine fleets without further blending
  - RD Cl's can range from the high teens to mid-50's depending on the feedstock mix used in the production process
    - NMED should not restrict the types of feedstocks an RD production facility may process (i.e. no crop caps or exclusions of waste feedstocks), as all feedstocks provide significant GHG emissions saving and provide liquidity to the low-CI fuel markets while ensuring competitive compliance alternatives for obligated parties
      - EPA, USDA, and (for imports) U.S. Customs regulate, review, and provide feedstock oversight
      - NMED can also leverage third-party verification as a mechanism for feedstock verification
  - RD can be shipped via pipeline; however, RD will still need to be delivered to pipeline injection points, primarily via rail, and additional logistics infrastructure will be required for receipt, storage/handling, and pipeline injection of the RD
    - NMED should ensure RD can be mass balanced through the common carrier pipeline, which is the necessary practice for fuels transported by pipeline
  - Due to NM's inland nature, biofuels will be supplied via rail and truck, as is the case today for ethanol, however additional logistics infrastructure will be required to meet the receipt, storage/handling, and blending of such biofuels at the in- and out-of-state truck terminals (racks), as well as receipt and transloading infrastructure at the receiving railroad terminals. In some cases, at least initially, rail terminals may also provide splash-blending services (blending of biofuels into partially preloaded fuel trucks), which will require additional infrastructure, safety measures, and technology implementations
- 6. What are the dynamics at play that might impact New Mexico's position as a biofuels importer compared to other states with clean fuel programs?
  - NM is a net importer of transportation fuels
  - A significant portion of NM's fuel supply arrives in truck level deliveries directly to retail stations
  - Terminals (truck racks) outside of NM primarily service truck customers for their local markets (i.e. sales below the rack) as well as truck customers who will import truck loads into NM, as such, additional infrastructure, technology, and/or inventory tracking and report required for compliance with the NM CTFS will have increased capital cost recovery burdens per gallon throughput for NM customers and could be delayed
  - Terminal infrastructure project take between 12-24 months, following FID, including permitting, long lead item purchasing, construction etc.

- 7. What advantages might New Mexico have given that it's the first non-coastal state to have a clean fuel program?
  - For rail suppled biofuels, NM should benefit from marginal rail transportation costs, however lack of infrastructure and lower overall fuel volumes will increase the receipt, storage/handling, and blending costs on a per gallon throughput
- 8. How can NMED design the program to prevent credits from being double counted?
  - A primary way to prevent double counting of credits is third-party verification of both imports and exports from the state
  - Robust transactional level reporting with appropriate electronic data entry and business to business reconciliations
- 9. When does book-and-claim accounting best represent real reductions and when is it questionable?10. How does the timing work when a clean fuel credit is generated and when it's produced?
  - Fuel producers and credit generators are most often unrelated parties, this will be more significant for NM obligated parties due to the large volumes of truck level imports into NM
  - For out-of-state production, there is a timing difference between fuel production and fuel sale (inventory), and then between fuel sale and fuel import (transit time)
  - There is also a timing difference between fuel import and credit generation (reporting)
    - In other LCFS programs, credits are not generated and available until after the transaction has been reported, and reporting occurs on a one quarter lag
      - E.g. fuel may be produced in November, sold to another party outside the state in December, imported by that party in January, and reported in June. Credits would not be available until July 1
  - Once imported into the state there is also a potential lag between when that fuel is imported and sold within the state. Credits may transfer to another party with the subsequent sale
  - Expiring fuel pathways must provide for overlap periods to allow time for produced fuel to work its way through the supply chain
- 11. What accounting systems do we need to make book-and-claim accounting work?
  - Book-and-claimed fuels should be subject to the same third-party verification process as physical fuels; however, they should also require commercial contractual verifications, including non-double counting representations and warranties
- 12. What mechanisms do we need to evaluate the emissions reductions from off-road applications?
  - Off- and on-road fuels use the same base fuels
  - Assuming the CTFS obligation is similar to all other LCFS programs, the obligation (credit or deficit) will be based on the production or importation of a transportation fuel, the fuels will inherently include the appropriate credit or deficit
    - We also assume the CTFS will allow for transferability of deficit obligations between obligated parties above the truck rack
  - For emissions reductions from fuel switching, volumes of deficit generating fuels will decrease and will be measurable as lower demand volume and correlating lower GHG emissions, while

the volume of credit generating fuels will increase and will be measurable as higher demand volume and the correlating GHG emissions used in transportation

- Additional sector specific reporting can be accomplished by categorization of the obligated party or in the case of electricity, the PUC can provide sector level detail based on electricity provided for transportation use, as this type of conversion will require significant on-site system infrastructure
- 13. When is it possible to leverage existing gas and diesel CIs to use for determining credits, and when is it necessary to determine individual pathway baseline CIs?
  - Statutorily, HB41 requires that all Transportation Fuel, defined as electricity or a liquid, gaseous
    or blended fuel per Section 1.I., reduce their CI below 2018 levels by 20% by 2030 and 30% by
    2040 per Section 4.C.(2), as such each Transportation Fuel, and component of blended fuel,
    should have its own 2018 baseline.
  - Additionally, all produced or imported fuels will need individual CI pathways to determine the appropriate deficit or credit generation against the CTFS baselines
- 14. How do we keep off-road credits germane to the "Transportation" part of the CTFS?
  - Is NMED questioning if off-road fuels are transportation fuels?
    - From a fuel's perspective, ULSD used in the off-road markets is the same fuel quality as used in on-road diesel and is not differentiated until the final sale below the rack, where red dye is injected for Federal and State tax purposes. Gasoline is not differentiated for on- or offroad use
    - From a program level, no other LCFS program excludes off-road transportation fuels from generating deficits or credits
  - Likewise, non-transportation fuels, like heating oil, are excluded from other LCFS programs
- 15. What EV activities should be eligible for credit generation, and who should be the default credit generator for these activities?
  - Only the volume of electricity actually delivered to EV's should qualify to generate credits
- 16. Who is best positioned to collect EV charging data, and to benefit from clean fuel credit incentive?
  - Utilities are best positioned to collect charging data via metered information
    - As an alternative to direct metering, the state, who currently provides EV vehicle registration data to utilities for their service areas based on the registration address could require EV registrants to provide the kWh's used during the prior registration period. Combining these two data sets, enables a utility to precisely identify the volume of electricity used for transportation, significantly reducing double counting of GHG emissions savings
    - Utilities are also in the best position utilize revenues to increase electricity availability for EV transportation use
    - Utilities are also the only party in the electricity supply chain who can impact the carbon emission of the electricity on the NM grid, via individual in house production or via purchasing low-CI power from on system third party producers (i.e. solar or wind)

- Allowing a patchwork of parties to generate EV credits ensures that double counting will occur, as individual EV owners will use a combination of private and public charging, thus resulting in potentially significant overstatement of GHG emissions reductions
- 17. What is the role of aggregators in the CTFS credit market?
  - Aggregators are defined differently in different LCFS programs and can even be different types of market actors based on the type of transportation fuel being discussed within a single program. These include, but are not limited to, project developers, investors, credit generators, obligated parties, and in some programs speculative credit traders
  - NMED should review HB41, Section 4. C. 4., which addresses market participants, aside from obligated parties (deficit generators), as limiting "participation by persons who register in the market to facilitate credit generation." As such, how and with whom NMED ultimately sets credit generation will dictate the role of aggregators
- 18. Should REC book-and-claim rules be established, and under what eligibility criteria should they be considered?
  - To ensure that credits generated for electricity production represent real reductions in carbon intensity:
    - Exclude the use of traded RECs tied to electrical generation outside of NM, or if allowed;
      - Limit the use of traded REC's to low-CI electricity production facilities within the one of the balancing authorities serving NM, or balancing authorities with established transmission interconnections to NM markets
      - Ensure a robust process is in place to account for retirement of REC environmental attributes (i.e. prevent "double counting" of emissions reductions)
      - Establish standards for matching timing of clean fuel credit generation with timing of REC generation
- 19. How can the CTFS provide incentives for EV charging that work best with state and utility efforts to reduce grid emissions in line with the Energy Transition Act?
  - Utilities should be the credit generators, with credits flowing with the low-CI electricity, the same way low-CI biofuels transactions are handled
- 20. In what ways do transportation and power sector emissions reductions complement and compete with one another?
  - No comment
- 21. How can EV charging credits be best distributed among the different eligible recipients (OEMs, utilities, aggregators, charging station installers, residents), and who amongst them is most needed to ensure robust residential and non-residential credit generation?
  - As described in prompt 16, utilities who provide the electricity for transportation use should be the generator of all credits from electricity supplied to EV transportation use, however utilities should then deliver credits to their commercial customers (charging stations, fleet owners etc.) along with the low-CI electricity, the same as occurs for biofuel producers who sell their fuels to customers either in-state or for-import into states with LCFS programs today. This would

further align EV credit generation volumes with actual use and limit double counting, while providing credits (financial incentives) to charging stations or large commercial customers looking to electrify. Receiving entities (i.e. charging stations or fleet owners) should have the option to allow the utility to maintain and take the credit to market in exchange for reduced rates or infrastructure incentives etc. Credits generated by the utility for electricity supplied to residential customers EV fueling should remain with the utility, who under the CTFS and other programs have strict rules regarding how the utility uses the credit value (revenues) to benefit consumers (i.e. EV purchase programs, charging infrastructure, etc.)

- 22. Do you have any input to offer on the interplay between the Energy Transition Act and CTFS?
  - No Comment



#### STATE OF NEW MEXICO NEW MEXICO ENVIRONMENT DEPARTMENT Harold Runnels Building, 1190 St. Francis Drive Santa Fe, New Mexico 87505

#### MEETING MINUTES Meeting of the Clean Transportation Fuel Standards (CTFS) Advisory Committee June 21, 2024 9:00 a.m. Springer Building, Rio Grande Room 121 Tijeras Ave NE Albuquerque, New Mexico 87102

Members present in person: A. Babej, B. Bartlett, C. Lynch, D. Moellenberg, E, Barrientos, K. Feldman, L. Funk, T. Madsen.

**Members present on-line:** A. Brown, A. Willingham, C. Wind, D. Klein, E. Epstein, E. Rosenberg, G. Pacyniak, G. Noyes, J. Sadler, J. Smith, J. Gregg, J. Sorena, K. Buttenhoff, L. Reyes, M. Weyer, M. Teague, R. Hagevoort, S. Wade, T. Sosa, T. Polak, T. Trauman, T. Dollmeyer, V. Krishnamoorthy.

Members absent: T. Hawks.

Others present: Melissa White, Committee Facilitator and Moderator Michelle Miano, NMED Sydney Lienemann, NMED Claudia Borchert, NMED Kolt Vaughn, NMED Pam Jones, NMED Chris Vigil, NMED, Committee Counsel

The meeting was called to order by Melissa White at 9:05 A.M.

#### Item 1. Welcome and Housekeeping.

Action: Melissa White, Moderator, opened the meeting with a welcome and housekeeping item and then *called for a roll call.* 

Office of Public Facilitation staff called the roll. <u>A quorum of the committee was present in person and</u> <u>online.</u>

Moderator White called for approval of the agenda. Committee Member Funk moved, and Member Madsen seconded approval of the agenda as written. A voice vote was called; the motion passed unanimously.

#### Item 2. A welcome from NMED to the new Advisory Committee members

Action: Deputy Cabinet Secretary Lienemann and Michelle Miano, Environmental Protection Division Director made opening comments and welcomed the 32-member advisory committee, thanking them for their commitment to this work. They gave a brief overview of the work of the committee and set expectations.

### Item 3. Advisory Committee member introductions.

Action: Moderator White asked each member of the committee to introduce themselves and offer a brief description of their experience.

### Item 4. Discussion of requirements under the Open Meetings Act.

- Action: Christopher Vigil, counsel for the CTFS, explained the Open Meetings Act requirements for the committee and went over OMA compliance procedures.
- Item 5. 5-minute break.
- Item 6. Discussion of CTFS rulemaking timeline and process.
- Action: Claudia Borchert, Climate Change Bureau Chief, presented the rulemaking timeline and process.

### Item 7. Panel presentations regarding CTFS in New Mexico and other states.

Action: Michael Ford, NMED Economist, Cory-Ann Wind and Matthew Weyer, committee members, made presentations regarding CTFS in New Mexico and similar programs in other states. Discussion among the committee members was lively.

### Item 8. Nomination and Election of Committee Chair.

Action: Moderator White opened the floor for nominations for Committee Chair, outlining the duties and responsibilities of this role.

Member Babej nominated Travis Madsen to serve as CTFS Committee Chair. Member Brown seconded the nomination. There were no other nominations and Moderator White called for a vote. A voice vote was called; the motion passed unanimously, and Member Madsen was elected Chair.

### Item 9. Adjournment of meeting.

Action: Moderator White called for a motion to adjourn the meeting. Chair Madsen moved, and Member Funk seconded the motion. A voice vote was called; the motion passed unanimously. The meeting concluded at 12:21pm.

DocuSigned by:

5E21C2893D564CB... Committee Secretary

7/15/2024



# **New Mexico Environment Department**

### Clean Transportation Fuels Standard Process and Timeline

### Presentation for the Advisory Committee June 21, 2024

Claudia Borchert, Climate Change Bureau Chief





June – July 2024

August -September2024



# **AC Input Opportunities**

# **Before Rulemaking Petition:**

- Technical information sharing during Advisory Committee meetings
- Submit written comments to NMED on the AC Technical Report (via Smart Comment Portal)

# <u>After Rulemaking Petition:</u>

- Public meeting participation
- Submit written comments to EIB on the proposed rules (via Smart Comment Portal)
- Verbal public comments during EIB hearing



# New Mexico Environment Department

### **Clean Transportation Fuels Standard (CTFS) Overview**

**Presentation to the CTFS Advisory Committee** 

Michael Ford, Economist Climate Change Bureau June 21, 2024



# 2019 Executive Order: 45% GHG reduction by 2030 vs. 2005.

### New Mexico emissions by sector, 2005 and 2018 (million metric tons of $CO_2e$ per year)



Source: <u>New Mexico Environment Department</u> and <u>Energy</u>, <u>Minerals</u>, and <u>Natural Resources Department</u>. "Priority Climate Action Plan: Climate Pollution Reduction Grant, Phase 1." March 1, 2024. https://www.climateaction.nm.gov/wp-content/uploads/sites/39/2024/03/New-Mexico-Priority-Climate-Action-Plan-2024-03-01.pdf.

### Good progress, but more needed near-term: Enter CTFS.



### *Requires annual reduction of carbon intensity (CI) vs. 2018. Example:*





# OVERVIEW OF OTHER STATES' LCFS PROGRAMS

June 21, 2024

Cory-Ann Wind, Director of State Regulatory Affairs

Clean Fuels

### 90+% HARMONIZED

	Identical	California	Oregon	Washington
Began in		2011	2016	2023
Regulated & opt-in fuels/parties	x			
Exempt fuels/uses		All have different exemptions		
How to calculate credits/deficits	х			
How to obtain a fuel pathway - Tier 1 simplified calculator or Tier 2	x		Re-certifies CA pathways	Re-certifies OR & CA pathways
Quarterly and annual reports	x			
Credit transactions	x			
Indirect land use change – same except for corn		GTAP	CCLUB	GTAP
Third-party verification – required for fuel transactions & fuel pathways	x		Requires CA accreditation	Add in current rulemaking
Capacity charging for EVs		Yes	No	Yes



### **CARBON REDUCTION TARGETS**



- cleanfuels.org -



### **FUELS GENERATING CREDITS**

	<u>California</u>	<u>Oregon</u>	<u>Washington</u>
%Ethanol Credits	11.16%	20.06%	54.58%
%BD Credits	6.54%	17.41%	6.05%
%RD Credits	39.59%	40.58%	25.42%
%Electricity Credits	24.37%	16.58%	11.50%
%RNG Credits	17.67%	5.14%	1.58%
%H2 Credits	0.20%	0.01%	0.00%
%Naphtha Credits	0.38%	0.00%	0.00%
%LPG Credits	0.10%	0.22%	0.56%



### **CREDIT PRICES**



- cleanfuels.org -

Clean Fuels

# **CURRENT RULEMAKINGS**

**Proposed Rulemaking** 

Targets: 30% by 2030 & 90% by 2045 + step-down in 2025 + new automatic acceleration mechanism

New sustainability guardrails

Remove exemption for intrastate jet fuel

 $\Box$ 

Update electricity & RNG provisions

Anticipate 15-day modifications

Public hearing Nov. 8, 2024

$\frown$	Proposed Rulemaking
	No updates to targets
	Update OR-GREET to a with CA-GREET 4.0
ы В О В О	Expanded validation 8 verification requirement
Le Le	Expanded requiremen

ates to targets OR-GREET to align A-GREET 4.0

- led validation & tion requirements
- led requirements for sk pathways nign r

Anticipate adoption late 2024





### **OTHER POTENTIAL STATES**

- Hawaii
- Illinois
- Massachusetts
  - Minnesota
  - Michigan
  - New York
  - New Jersey

- cleanfuels.org -





B Corp Ski Resort

### Road to Net Zero by 2030



In 2019 Taos Ski Valley an ambitious goal to become Net Zero by 2030. Scope 3 Emissions minimitation Vehicles & Equipment Replace 100% of vehicles and equipment with all-electric Targeted Electrification alternatives. Electrify all on-mountain buildings. Design Guidelines Achieve 100% reduction of GHG Efficiency Retrofits emissions in new construction through design guidelines. Achieve 4% annual energy reduction in existing buildings. Renewable Electricity Reach 100% renewable electricity supply through three pathways: grid renewables, microgrid, and a large solar project. **Energy Infrastructure** Completed upgrades and preventative maintenance to electrical infrastructure.





### Taos Ski Valley – Energy End Uses



### <u>Ski lifts</u>

- Scope 2: From power consumption.
- 2 in summer, 12 in winter.
- Diesel backup, electric drive motor.

### Vehicles and equipment

- Scope 1: From direct use.
- Year-round: Wheel loaders, skid steers, dump trucks.
- Summer: Excavators, 6x6 Transport Truck.
- Winter: Snowcats, Snowmobiles, Highway Snowplows.

### **Buildings**

- Scope 1 and Scope 2.
- Electricity, auxiliary power (diesel or natural gas).

### **Snowmaking**

- Scope 2: Electric power load.
- 1.5-2 MW for compressors and pumps (winter only).







# Fleet Electrification

### **Current EV/Hybrid Fleet**

- 9 electric Taiga Nomad snowmobiles
- 1 Prinoth Husky E-Motion all electric snow groomer
- 1 Pistenbully 600 E+
   Hybrid snow groomer
- 3 Electric Toro snow blowers
- 1 Hisun e-UTV










Taos Ski Valley partnered with Marathon Petroleum to ship and test 1,000 gallons of RD-99 in April 2024

Fuel shipped from Dickinson, ND via tanker

HVO was burned in our grooming fleet for the final week of the 2023/24 ski season.

Successful testing and working to procure more from Neste.









# **HVO** Testing

### **Rd-99** Issues

Cloud points too high for winter ops +14F

Cost – \$8.50/gal shipped from North Dakota

One off deliveries only, no steady supply



### Future RD-99 Plan

- Buy direct from Neste
- \$.50-\$1 premium
- -12F Cloud Point without blending
- RD99 summer
- RD50 winter
- Additive BG DFC+ HP2







### STATE OF NEW MEXICO NEW MEXICO ENVIRONMENT DEPARTMENT Harold Runnels Building, 1190 St. Francis Drive Santa Fe, New Mexico 87505

#### **DRAFT MEETING MINUTES**

#### (SUBJECT TO APPROVAL) Meeting of the Clean Transportation Fuel Standards (CTFS) Advisory Committee June 28, 2024 9:00 a.m. Springer Building, Rio Grande Room 121 Tijeras Ave NE Albuquerque, New Mexico 87102

Members present in person: B. Bartlett, E. Barrientos, E. Epstein, J. Sorena, K. Feldman, L. Funk, M. Teague, S. Wade, T. Madsen

**Members present on-line:** A. Babej, A. Brown, A. Willingham, C. Lynch, C. Wind, D. Moellenberg, E. Rosenberg, G. Pacyniak, G. Noyes, J. Sadler, J. Smith, J. Gregg, K. Buttenhoff, M. Weyer, T. Sosa, T. Polak, T. Trauman, V. Krishnamoorthy

- Members absent: D. Klein, L. Reyes, R. Hagevoort, T. Dollmeyer
- Others present: Melissa White, Committee Facilitator and Moderator Michelle Miano, NMED Claudia Borchert, NMED Kolt Vaughn, NMED Chris Vigil, NMED Kelly Villanueva, NMED, Committee Counsel Owen Peterson, NMED

The meeting was called to order by Melissa White at 9:01 A.M.

#### Item 1. Welcome and Roll Call.

Action: Melissa White, Moderator, opened the meeting with a welcome and then *called for a roll call*.

Owen Peterson, NMED, called the roll. Due to a technical issue, NMED staff allowed additional time for missing members to join virtually.

Claudia Borchert, NMED, meanwhile welcomed the group and provided information about upcoming meetings, the technical report, and public participation.

Owen Peterson, NMED called the roll again. <u>A quorum of the committee was present in person and online</u>.

#### Item 2. Approval of the Agenda

Action: Moderator White invited the Committee to approve the agenda. Chair Madsen moved, and Member Barrientos seconded approval of the agenda as written. A voice vote was called; the motion passed unanimously.

#### Item 3. Approval of Open Meetings Compliance Procedures

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Action: Christopher Vigil, counsel for the CTFS, introduces co-counsel Kelly Villanueva and invites the Committee to consider and adopt the Open Meetings Compliance Procedures. Physical copies of the document were available to members in-person, and a link to a digital copy was provided in the virtual meeting chat.

Member Babej requested time to review the document. Chair Madsen moved for a 5-minute recess to review the document. Member Epstein seconded the motion. A voice vote was called; the motion passed unanimously.

Chair Madsen motioned to reconvene the meeting, and Member Sorena seconded. A voice vote was called; the motion passed unanimously.

CTFS Counsel Vigil invited the Committee to discuss and vote on approval of the Open Meetings Compliance Procedures. Member Teague moved to vote on approval, and Member Babej seconded. A voice vote was called; the motion passed unanimously.

Moderator White invited the Committee to discuss and vote on including time for public comment on the agenda for future meetings. The Committee discussed the matter.

Chair Madsen moved to include 45 minutes of public comment to the agenda for the Committee meeting on 7/19/24, and Member Pacyniak seconded. A voice vote was called; the motion passed unanimously.

#### Item 4. NMED presentation and discussion regarding CTFS topics

Action: Moderator White invites the Committee to consider extending the meeting until 12:30pm. Member Sorena motioned to extend the meeting until 12:30pm, and Member Barrientos seconded. A voice vote was called; the motion passed unanimously.

Michael Ford, NMED Economist, presented on CTFS topics, including: current availability and use of fuels in New Mexico, carbon intensity calculations of fuels, and credit-generating fuels. Questions and comments were taken from Committee Members.

#### Item 5. 10-minute break.

#### Item 6. Panel presentations and discussion regarding CTFS topics

Action: Moderator White called the meeting back to order. Chair Madsen and Members Babej, Wade, Teague, and Wind presented on topics related to clean transportation fuel credit generation. Committee Members discussed questions posed by NMED staff.

Member Smith asked for an opportunity for Committee Members to provide written input to be considered for inclusion in the technical report. Claudia Borchert, NMED, agreed to consider the request.

#### Item 7. Final roll call and adjournment

Action: Owen Peterson, NMED, called roll a final time for Committee Members who joined the meeting late.

Claudia Borchert, NMED, reminded the Committee of details regarding upcoming meetings.

Member Feldman moved to adjourn the meeting, and Member Wade seconded. A voice vote was called; the motion passed unanimously.

DocuSigned by:

7/26/2024

Committee Secretary



# New Mexico Environment Department

## Fuel Used in New Mexico, Fuel Lifecycle Analysis, and Clean Fuel Credit Generation Opportunities

Clean Transportation Fuel Standard Advisory Committee

> Michael Ford, Economist Climate Change Bureau June 28, 2024



## What kinds of transportation fuels does New Mexico use currently?

New Mexico fuels consumption by year, 2012-2022 (millions of megajoules per year)



Source: U.S. Energy Information Administration, <u>State Energy Data System: New Mexico</u>. <u>https://www.eia.gov/beta/states/states/nm/data/dashboard</u>. Note: All fuel types largely used for transportation, but data is for total overall consumption. New Mexico has no diesel-fired power generation. Note: Electricity not included because the are no data on volumes consumed for transportation at the state level. Renewable diesel volumes are zero. \*Ethanol and biodiesel volumes are subtracted from finished motor gasoline and diesel volumes and listed separately.



# Electric vehicles (EVs) now 5.35% of new LDV sales, and 0.87% of all LDVs on the road. Charging stations seeing growth.

## Cumulative EV registrations in New Mexico, by quarter

Light-duty vehicles (LDVs) – Battery Electric Vehicles (BEVs) and Plug-in Hybrid Electric Vehicles (PHEVs)



Source: Atlas Public Policy. "Evaluate NM." Snapshot from June 1, 2024. https://atlaspolicy.com/evaluatenm.



## Where does New Mexico get its petroleum fuels?

United States Petroleum Administration for Defense District (PADD) regions



Source: U.S. Energy Information Administration, U.S. Energy Atlas (eia.gov) https://atlas.eia.gov/apps/e1c92d7601b9490697d22dfe2da1b4ac/explore.



# Lifecycle Fuel Analysis

## How does it work?

Evaluated at every stage, from "well to wheel."



Source: Wang, Michael. "Biofuel Life-cycle Analysis with the GREET Model." <u>Argonne National Laboratory</u>. Presentation at the EPA Biofuel Modeling Workshop. March 1, 2022. <u>https://www.epa.gov/system/files/documents/2022-03/biofuel-ghg-model-workshop-biofuel-lifecycle-analysis-greet-model-2022-03-01.pdf</u>.

### Carbon intensity (CI) of gasoline and diesel fuel in clean fuels standard states

State	Gasoline	Diesel	Source link
CA	100.60	105.76	https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2024/lcfs2024/lcfs_appa1.pdf
OR	100.14	100.74	https://www.oregon.gov/das/OEA/Documents/Clean%20Fuels%20Forecast%202023.pdf
WA	100.37	101.09	https://ecology.wa.gov/getattachment/e97a5150-9ed2-4512-a4fd-6b0317f907dc/OTS- 3854-4-For-Filing.pdf.

Note: CI is measured in grams of carbon dioxide equivalent per megajoule of energy consumed, or  $gCO_2e/MJ$ . Note: California CI from proposed regulatory update, Oregon CI from fuel forecast, and Washington CI from regulation.



## Docusign Envelope ID: AF9FDCC7-FCAF-44B4-8128-54D0AD824F9D **Baseline Carbon Intensity**

## Why does this matter?

- Contrasts with the West Coast (PADD 5), where more gasoline and diesel is ٠ imported, refineries receive over two-thirds of their crude from other PADDs and countries, and process heavier crude that requires more processing.
- The result: Baseline CI for PADD 3 will be lower than other clean fuels states.

## **Discussion prompts:**

- What does this mean for credits and deficits in the New Mexico clean fuel credit market?
- What other information about New Mexico fuel markets does NMED need to know in analyzing our options?



# Carbon Intensity Pathways



Discussion prompts:

- Given that the NMED program will likely use lookup tables for the CI value of regulated and some opt-in fuels, what does NMED need to be aware of in using this approach?
- What fuel-specific implications might this approach have?

Supplier provides facility specific inputs, air permits, process flow diagrams, full lifecycle CI report.



# **New Motor Vehicle Emissions Standards**

# New emissions standards result in the increased use of electricity as a transportation fuel – but limited by vehicle turnover rates

Projected percentage of New Mexico light-duty vehicles (LDVs) that are zero-emissions vehicles (ZEVs)



Source: <u>Eastern Research Group</u>. "Modification of NM ACC II Benefits Calculation Developed by STI (02022023)." Published in <u>Eastern Research Group</u>. "New Mexico Advanced Clean Cars II, Advanced Clean Trucks and Heavy-Duty Omnibus Rules: Assessment of economic, health and environmental impacts." October 23, 2023. <u>https://www.env.nm.gov/opf/wp-content/uploads/sites/13/2023/10/EIB-23-56-NMED-Exhibits-45-pg-14-48.pdf</u>.

## **Discussion prompts:**

- What data is needed to calculate CI for grid and renewable power, and the volumes of it used for transportation?
- What are the considerations of statewide versus utility-specific CIs for grid power?

# Credit Generating Fuels

## Relative share of credit generating fuels vary by state



Data source: Wind, Cory-Ann. "Overview of other states' LCFS programs." Presentation to the New Mexico Clean Transportation Fuels Standard Advisory Committee. June 21, 2024.

# New Mexico Clean Fuels Credit Policy Discussion

June 28, 2024

Travis Madsen, Transportation Program Director



# **Ensuring Program Integrity**

Ideal Credits Are:

- Real
- Additional
- Verifiable
- Permanent
- Enforceable



## Align Credit Policy with Big-Picture Goals and Values:

- Aim for State and National Climate Targets
  - short and long term

## Maximize Co-Benefits

- Consumer cost savings
- Local economic growth
- Public health and local air quality improvements
- Equity

## • Minimize Externalities

- Excess consumer costs
- Food market disruptions
- Unwanted land-use changes (eg deforestation)



# So what should qualify for credit?

- Transportation fuels with certified CI benefits
- Pathways to help scale zero-emission technologies, eg:
  - Capacity-based crediting (CA) / Advanced crediting (OR)
  - Vehicle purchase incentives (aligned with Clean Cars / Trucks)
- With guardrails to keep the market on track (quantity, duration)
- "additional credit opportunities from activities and projects that support the reduction or removal of greenhouse gas emissions associated with transportation in the state" (Section 4-C-3)



# CREDIT GENERATING FUELS -ELECTRICITY

NM CLEAN TRANSPORTATION FUEL STANDARD COMMITTEE - JUNE 28, 2024

## GENERATING CREDITS: ELECTRIC VEHICLE FUELING

#### Available Data

- Fueling EVs
  - Determining exact kWh for fueling difficult
  - If EV charger connected to service panel for other loads, requires either submetering or telematics to disaggregate from building load

### EV Adoption Data

- EPRI data includes both market share and vehicles in operation (VIO) per county
- Energy use is understood in the aggregate and possibly verified with proxy sample data if utility has access

### Applicable Regulations

- New Mexico Building Code
  - 2021 IECC adopted for NM
  - Requires new construction (both residential and commercial) to include EV readiness
- CTFS Statute Sec. 4.C(5)
  - All revenues (minus admin costs) must be invested in supporting transportation electrification
  - Submetering all EV chargers is not possible or cost effective. Telematics data would require significant incentives be paid to EV drivers

## FUEL CARBON INTENSITY

- Utilities report their carbon intensity/ carbon footprint values publicly, typically in lbs-CO2e/MWh
- This value is specific per utility, and the carbon intensity of fuels in the market should reflect the unique utilities as fuel providers and market participants
- However, the carbon intensity of the fuel is only part of the equation. EVs are much more efficient than internal combustion, so an efficiency multiplier is needed to capture the energy conversion



EVs convert over <u>77% of the electrical</u> <u>energy</u> from the grid to power at the wheels. Conventional gasoline vehicles only convert about <u>12%–30%</u> of the energy stored in gasoline to power at the wheels.

Source: U.S. Dept of Energy - Fueleconomy.gov

## CAPACITY CREDITS



- Capacity credits are an opportunity for charging stations and networks to earn credits for the total capacity installed, minus the energy dispensed
  - Utilities could claim the energy credits, but not capacity
- The ability to sell capacity credits could buy down utility demand charges
  - This could proliferate fast charging necessary to further drive EV adoption while utilization rates of fast chargers are low

## Mike Teague – OneOK Discussion of Biodiesel and Biofuel Logistics





## Renewable Natural Gas in New Mexico's Clean Fuel Standard

New Mexico Clean Transportation Fuel Standard Advisory Committee

Presented by Sam Wade June 28, 2024



## **About the Coalition for Renewable Natural Gas**

- Provide education and policy advocacy on behalf of renewable gas and adjacent industries in North America
- We advocate for the sustainable development, deployment and utilization of renewable gas so that present and future generations will have access to domestic, renewable, clean fuel and energy
- 400+ members including: RNG developers, marketers, financiers, technology providers, consultants, utilities and labor coming together
- 98%+ of the RNG supply in North America

https://www.rngcoalition.com/



## **RNG Captures Methane from Organic Waste and Puts it to Productive Use**



- RNG projects capture methane from existing organic waste sources (food waste, animal manure, wastewater sludge and garbage) and redirect it away from the environment, repurposing it as a clean, green energy source.
- 25+ years of research and support from US Environmental Protection Agency (AgStar,<sup>1</sup> LMOP<sup>2</sup>)
- Proven clean energy technology that also addresses many waste and agriculture emission issues as part of a circular economy

<sup>1</sup> US EPA AgStar Program: https://www.epa.gov/agstar/benefits-anaerobic-digestion#:~:text=Anaerobic%20digesters%20can%20destroy%20more,to%20human%20and%20animal%20health. <sup>2</sup> US EPA Landfill Methane Outreach Program: https://www.epa.gov/Imop/benefits-landfill-gas-energy-projects



## **RNG Pathways Have the Best CI Scores When They Mitigate Methane**



Some RNG pathways have very low carbon intensity (CI) scores because they capture emissions that would otherwise be released to the atmosphere. For farms with manure lagoons that currently emit high levels of methane, RNG production can yield negative CI scores. The diagonal-line overlays on bars represent the *range* of carbon intensity scores that can be achieved with corresponding RNG projects. (CA = California; CNG = compressed natural gas;  $CO_2e$  = carbon dioxide equivalent; g = gram; MJ = megajoule; RD = renewable diesel; WRRF = water resource recovery facility.) (ANL GREET)

Figure Source: Argonne National Labs https://www.anl.gov/sites/www/files/2020-11/RNG for Transportation FAQs.pdf



## New Mexico RNG Resource Potential in 2040 (tBtu/y)

	via Anaerobic Digestion				via Thermal Gasification			
	Landfill Gas	Animal Manure	Wastewater	Food Waste	Ag Residues	Forest Residue	Energy Crops	Municipal Solid Waste
Low Estimate Commercial Potential	3.441	8.988	0.106	0.041	0.159	0.258	0.168	1.273
High Estimate Commercial Potential	5.651	17.976	0.157	0.444	0.398	2.641	1.805	4.629
Technical Potential	8.150	29.961	0.471	2.318	2.147	12.222	7.031	11.600

- RNG from NM Anaerobic Digestion (High Estimate) could potentially supply 58X current natural gas vehicle demand in NM (0.42 tBtu in 2022).
- AD (High Estimate) could potentially supply 14% of all gas currently delivered to NM customers (81.23 tBtu in 2022, excluding power gen).

Data Sources: Renewable Sources of Natural Gas: Supply and Emissions Reduction Assessment, ICF for American Gas Foundation, 2019 <u>https://gasfoundation.org/wp-content/uploads/2019/12/AGF-2019-RNG-Study-Full-Report-FINAL-12-18-19.pdf</u> New Mexico Natural Gas Demand by End Use, US Energy Information Administration, https://www.ei1a.gov/dnav/ng/NG\_CONS\_SUM\_DCU\_SNM\_A.htm



## **Coalition Contact Info**

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## OVERVIEW - BIODIESEL & RENEWABLE DIESEL June 28, 2024

Cory-Ann Wind, Director of State Regulatory Affairs



## NEW MEXICO MARKET FOR BD & RD

New Mexico consumes about 700 million gallons of diesel annually
At a 20% blend of biodiesel, that is about 140 million gallons of biodiesel
At a 100% of renewable diesel, that is about 700 million gallons of renewable diesel



## KEY FACTORS FOR BD/RD MARKET

 In-state production from Rio Valley Biodiesel and Holly Frontier Artesia

- Key location between the Gulf states and West Coast
- On-road and off-road uses, especially for rail
- Indirect land use change factor for canola and soybean feedstocks



### STATE OF NEW MEXICO NEW MEXICO ENVIRONMENT DEPARTMENT Harold Runnels Building, 1190 St. Francis Drive Santa Fe, New Mexico 87505

### **DRAFT MEETING MINUTES**

#### (SUBJECT TO APPROVAL)

#### Meeting of the Clean Transportation Fuel Standards (CTFS) Advisory Committee July 12, 2024 9:00 a.m. Springer Building, Rio Grande Room 121 Tijeras Ave NE Albuquerque, New Mexico 87102

Members present in person: A. Babej, A. Brown, C. Wind, E. Barrientos, E. Epstein, J. Smith, J. Sorena, L. Funk, T. Madsen.

**Members present on-line:** B. Bartlett, C. Lynch, D. Klein, D. Moellenberg, E. Rosenberg, G. Pacyniak, G. Noyes, J. Sadler, J. Gregg, K. Buttenhoff, M. Weyer, M. Teague, R. Hagevoort, S. Wade, T. Sosa, T. Polak, T. Trauman, T. Dollmeyer, V. Krishnamoorthy.

Members Absent: A. Willingham, K. Feldman, L. Reyes.

Others present:	Melissa White, NMED, Committee Facilitator and Moderator
•	Michelle Miano, NMED
	Michael Ford, NMED
	Owen Peterson, NMED
	Kolt Vaughn, NMED
	Pam Jones, NMED
	Chris Vigil, NMED, Committee Counsel

The meeting was called to order by Melissa White at 9:07 A.M.

#### Item 1. Welcome and Housekeeping.

Action: Melissa White, Moderator, opened the meeting with a welcome and review of housekeeping items and then *called for a roll call*.

Office of Public Facilitation staff called the roll. <u>A quorum of the committee was present in person and online.</u>

#### Item 2. Approval of the Agenda

Action: Moderator White called for approval of the agenda. Committee Member Funk moved, and Member Sorena seconded approval of the agenda as written. A voice vote was called; the motion passed unanimously.

#### Item 3. Approval of the 6/21/24 AC Meeting Minutes.

Action: Moderator White called for approval of the Minutes from 6/21/24. Committee Member Funk moved, and Member Epstein seconded approval of the minutes. A voice vote was called; the motion passed unanimously.

#### Item 4. Presentations and discussions on: a. Fossil gasoline, fossil diesel, and their lower carbon intensity substitutes. b. Clean fuel credit market dynamics. c. Environmental justice considerations.

Action: Brian Bartlett presented slides covering fuel supply chain issues. The committee raised questions and made comments at the conclusion of the presentation.

Jed Smith offered his presentation on Rio Valley Biofuels. The committee raised questions and made comments at the conclusion of the presentation.

Graham Noyes presented potential crediting alternative jet fuel and other off-road crediting opportunities. The committee raised questions and made comments at the conclusion of the presentation.

Evan Rosenberg presented slides covering the role of EV charging under clean fuel standards. The committee raised questions and made comments at the conclusion of the presentation.

Moderator White read aloud CTFS Advisory Committee prompts. Discussion of each prompt ensued.

Gabe Pacyniak presented on Environmental Justice considerations. The committee raised questions and made comments at the conclusion of the presentation.

At the conclusion of all the presentations, Moderator White offered the committee the opportunity to raise open questions and make general comments. It was suggested that the CTFS prompts be sent via email to each committee member for their records. It was agreed that the committee needed additional time to offer comments for submission in the Final Report.

#### Item 5. Adjournment of meeting.

Action: Moderator White called for a motion to adjourn the meeting. Member Barrientos moved, and Member Sorena seconded the motion. A voice vote was called; the motion passed unanimously. The meeting concluded at 12:01pm.

DocuSigned by

7/26/2024

Committee Chair



# CTFS Regulated Fuels and NM Transportation Fuel Supply Chains

CTFS Advisory Committee Meeting 7/12/24

## Regulated Fuels: Statutory Definitions and Requirements



**SECTION 1.** Section 74-1-3 NMSA 1978 (being Laws 1971, Chapter 277, Section 3, as amended) is amended to read: "74-1-3. DEFINITIONS.--As used in the Environmental Improvement Act:

- B. "carbon intensity" means the quantity of fuel lifecycle greenhouse gas emissions per unit of fuel energy, expressed in grams of carbon dioxide equivalent per megajoule;
- D. "fuel lifecycle" means an assessment of the aggregate greenhouse gas emissions based on science-based models or protocols, including direct emissions and significant indirect emissions from indirect land use change, all stages of fuel and feedstock production and distribution, feedstock generation or extraction through the distribution, delivery and use of the finished fuel by the consumer, including consideration of storage, transportation and combustion;
- "transportation fuel" means electricity or a liquid, gaseous or blended fuel, including gasoline, diesel, liquefied petroleum gas, natural gas and hydrogen, sold, supplied, used or offered for sale to power vehicles or equipment for the purposes of transportation."

**SECTION 4.** A new section of the Environmental Improvement Act is enacted to read: "CLEAN TRANSPORTATION FUEL STANDARD PROGRAM--RULES.—

- A. The board shall promulgate rules to implement a clean transportation fuel standard program **no later than July 1, 2026**.
- C. The clean transportation fuel standard program rules shall:
  - (1) establish a statewide **technology-neutral** clean transportation fuel standard based on a schedule for **annually decreasing the carbon intensity of transportation fuels used in the state**;
  - (2) apply the clean transportation fuel standard to account for the fuel lifecycle in order to reduce the carbon intensity of transportation fuel used in the state by at least twenty percent below 2018 carbon intensity levels by 2030 and at least thirty percent below 2018 carbon intensity levels by 2040;

Unlike other state LCFS programs, New Mexico's CFTS requires CI reductions of all "transportation fuel" from 2018 levels
Docusign Envelope ID: AF9FDCC7-FCAF-44B4-8128-54D0AD824F9D How will New Mexico's CTFS program need to regulate deficitgenerating fuels in New Mexico differently than the processes in West Coast states?



### New Mexico is the first state to define Transportation Fuel as "electricity or a liquid, gaseous or blended fuel" AND to require all Transportation Fuel to meet mandated CI reductions of 20% by 2030 and 30% by 2040

• This is contrary to other state LCFS programs which require CI reductions of only fossil gasoline (CBOB's) and diesel, primarily accomplished through blending of lower CI components or via fuel displacement

#### In addition to resulting in lower CI baselines for "gasoline" and "diesel", each Transportation Fuel will require its own baseline:

• Gasoline (E10) and Diesel (B2) can be interpreted to be either a "liquid" or a "blended fuel", however regardless of interpretation the end result is the same....each component (transportation fuel) will need a baseline and each will have CI reduction obligation



#### Example Inputs:

- E10 CI baseline is an estimate of 90 CI (stemming from CTFS AC discussions of E10 baselines)
- Ethanol CI baseline is the reference CI for the published OPIS California Ethanol quote's
- CBOB CI baseline is calculated based on the E10 and Ethanol Cl's
- Energy Densities are from the California LCFS regulation

Docusign Envelope ID: AF9FDCC7-FCAF-44B4-8128-54D0AD824F9D How will New Mexico's CTFS program need to regulate deficitgenerating fuels in New Mexico differently than the processes in West Coast states?



• Electricity baseline – if the baseline were set based on EPA's eGRID, 2022 state-wide average reduction reached 26% vs 2018 and would be a net credit generator for all kWh used for transportation

State	Total output emission rates (g/kWh)									
	CO2	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e	Annual NO <sub>x</sub>	Ozone Season NO <sub>x</sub>	SO <sub>2</sub>			
NM 2018	604.7	0.0	0.0	608.0	0.5	0.5	0.1			
NM 2022	447.2	0.0	0.0	449.8	0.3	0.3	0.1			

 Credits generated from electricity used as transportation fuel should be based the 2018 electricity baseline gCO2e/kWh minus the current year's actual gCO2e/kWh, multiplied by the kWh used as a transportation fuel and convert from grams (g) to metric tons (MT)

## Illustrative Example: E10 Gasoline CI Baseline



Gasoline	Year	Blend %	CI <sub>base</sub>	Cl <sub>act</sub>	$\mathbf{CI}_{red}$	$\text{Cl}_{\text{std}}^{\text{XG,D}}$	CI <sub>rpt</sub> XG,D	CI <sub>net</sub> XG,D
E10 Gasoline (Statutory Baseline)	2018		90.00	90.00	0.00%	90.00	90.00	-
E10 Gasoline (Statutory Baseline)	2026		90.00	90.00	4.00%	86.40	90.00	(3.60)
E10 Gasoline (Statutory Baseline)	2027		90.00	90.00	8.00%	82.80	90.00	(7.20)
E10 Gasoline (Statutory Baseline)	2028		90.00	90.00	12.00%	79.20	90.00	(10.80)
E10 Gasoline (Statutory Baseline)	2029		90.00	90.00	16.00%	75.60	90.00	(14.40)
E10 Gasoline (Statutory Baseline)	2030		90.00	90.00	20.00%	72.00	90.00	(18.00)
E10 Gasoline (Statutory Baseline)	2035		90.00	90.00	25.00%	67.50	90.00	(22.50)
E10 Gasoline (Statutory Baseline)	2040		90.00	90.00	30.00%	63.00	90.00	(27.00)
CBOB (refined)	2018	90.0%	91.06	91.06	0.00%	91.06	91.06	-
CBOB (refined)	2026	90.0%	91.06	91.06	4.00%	87.42	91.06	(3.64)
CBOB (refined)	2027	90.0%	91.06	91.06	8.00%	83.78	91.06	(7.29)
CBOB (refined)	2028	90.0%	91.06	91.06	12.00%	80.14	91.06	(10.93)
CBOB (refined)	2029	90.0%	91.06	91.06	16.00%	76.49	91.06	(14.57)
CBOB (refined)	2030	90.0%	91.06	91.06	20.00%	72.85	91.06	(18.21)
CBOB (refined)	2035	90.0%	91.06	91.06	25.00%	68.30	91.06	(22.77)
CBOB (refined)	2040	90.0%	91.06	91.06	30.00%	63.74	91.06	(27.32)
ETHANOL (CORN)	2018	10.0%	75.97	75.97	0.00%	75.97	75.97	-
ETHANOL (CORN)	2026	10.0%	75.97	75.97	4.00%	72.93	75.97	(3.04)
ETHANOL (CORN)	2027	10.0%	75.97	75.97	8.00%	69.89	75.97	(6.08)
ETHANOL (CORN)	2028	10.0%	75.97	75.97	12.00%	66.85	75.97	(9.12)
ETHANOL (CORN)	2029	10.0%	75.97	75.97	16.00%	63.81	75.97	(12.16)
ETHANOL (CORN)	2030	10.0%	75.97	75.97	20.00%	60.78	75.97	(15.19)
ETHANOL (CORN)	2035	10.0%	75.97	75.97	25.00%	56.98	75.97	(18.99)
ETHANOL (CORN)	2040	10.0%	75.97	75.97	30.00%	53.18	75.97	(22.79)

#### Item of Note:

- Both the CBOB and Ethanol generate deficits against the baselines, unless the actual CI (Cl<sub>act</sub>) of the fuel components are reduced **Example Inputs**:
- E10 CI baseline is an estimate of 90 CI (stemming from CTFS AC discussions of E10 baselines)
- Ethanol CI baseline is the reference CI for the published OPIS California Ethanol quote's
- CBOB CI baseline is calculated based on the E10 and Ethanol Cl's

## Illustrative Example: Diesel(B2) CI Baseline



Diesel	Year	Blend %	Cl <sub>base</sub>	Cl <sub>act</sub>	$\mathbf{CI}_{red}$	$\text{Cl}_{\text{std}}^{\text{XG,D}}$	CI <sub>rpt</sub> XG,D	CI <sub>net</sub> XG,D
Diesel B2 (Statutory Baseline)	2018		92.00	92.00	0.00%	92.00	92.00	-
Diesel B2 (Statutory Baseline)	2026		92.00	92.00	4.00%	88.32	92.00	(3.68)
Diesel B2 (Statutory Baseline)	2027		92.00	92.00	8.00%	84.64	92.00	(7.36)
Diesel B2 (Statutory Baseline)	2028		92.00	92.00	12.00%	80.96	92.00	(11.04)
Diesel B2 (Statutory Baseline)	2029		92.00	92.00	16.00%	77.28	92.00	(14.72)
Diesel B2 (Statutory Baseline)	2030		92.00	92.00	20.00%	73.60	92.00	(18.40)
Diesel B2 (Statutory Baseline)	2035		92.00	92.00	25.00%	69.00	92.00	(23.00)
Diesel B2 (Statutory Baseline)	2040		92.00	92.00	30.00%	64.40	92.00	(27.60)
Diesel (refined)	2018	98.0%	92.67	92.67	0.00%	92.67	92.67	-
Diesel (refined)	2026	98.0%	92.67	92.67	4.00%	88.96	92.67	(3.71)
Diesel (refined)	2027	98.0%	92.67	92.67	8.00%	85.26	92.67	(7.41)
Diesel (refined)	2028	98.0%	92.67	92.67	12.00%	81.55	92.67	(11.12)
Diesel (refined)	2029	98.0%	92.67	92.67	16.00%	77.84	92.67	(14.83)
Diesel (refined)	2030	98.0%	92.67	92.67	20.00%	74.14	92.67	(18.53)
Diesel (refined)	2035	98.0%	92.67	92.67	25.00%	69.50	92.67	(23.17)
Diesel (refined)	2040	98.0%	92.67	92.67	30.00%	64.87	92.67	(27.80)
BIODIESEL (VEG OIL)	2018	2.0%	<b>56.95</b>	56.95	0.00%	56.95	56.95	-
BIODIESEL (VEG OIL)	2026	2.0%	56.95	56.95	4.00%	54.67	56.95	(2.28)
BIODIESEL (VEG OIL)	2027	2.0%	56.95	56.95	8.00%	52.39	56.95	(4.56)
BIODIESEL (VEG OIL)	2028	2.0%	56.95	<b>56.95</b>	12.00%	50.12	56.95	(6.83)
BIODIESEL (VEG OIL)	2029	2.0%	56.95	56.95	16.00%	47.84	56.95	(9.11)
BIODIESEL (VEG OIL)	2030	2.0%	56.95	56.95	20.00%	45.56	56.95	(11.39)
BIODIESEL (VEG OIL)	2035	2.0%	56.95	56.95	25.00%	42.71	56.95	(14.24)
BIODIESEL (VEG OIL)	2040	2.0%	56.95	56.95	30.00%	39.87	56.95	(17.09)

#### Item of Note:

- Both the Diesel and Biodiesel generate deficits against the baselines, unless the actual CI (Cl<sub>act</sub>) of the fuel components are reduced **Example Inputs**:
- B2 CI baseline is an estimate of 92 CI (stemming from CTFS AC discussions of B2 baselines)
- Biodiesel CI baseline is a mid-range reference CI for a vegetable oil based biodiesel from the California LCFS
- Diesel CI baseline is calculated based on the B2 and Biodiesel CI's

# Pipeline Supply of Refined Products (CBOB & Diesel)

New Mexico (NM) is a net importer of transportation fuels, with refined products supplied via one in-state refinery, Mid-Con and GC refining centers via pipeline, and out of state trucks

- NM's in-state refinery (Artesia) provides product via in-state and inter-state pipelines and via instate trucks
- Three refineries in Texas (McKee, Borger, and El Paso) provide refined products via pipeline
- The OneOK pipeline system supplies refined products from the GC to NM markets
- Recent reconfiguration of parts of the Enterprise Texas Western (TW) Products system has significantly increased supply of GC produced refined products into NM



Sources: U.S. Energy Information Administration, U.S. Energy Atlas (eia.gov), <u>https://atlas.eia.gov/apps/e1c92d7601b9490697d22dfe2da1b4ac/explore</u> Enterprise Products Partners L.P, TW Products System: <u>https://ir.enterpriseproducts.com/news-release/news-release-details/enterprise-begins-initial-service-tw-products-system</u> HF Sinclair Facilities Data: <u>https://www.hollyfrontier.com/operations/facilities/default.aspx</u>

# **Truck Supply of Blended Transportation Fuels**



Blended fuel imported into NM by truck presents unique challenges:

- CTFS obligations will be incurred by the importing party
- Truck importers will predominately be small marketers, jobbers, and station owners, significantly increasing the number of obligated parties
- Each truck load will likely contain combinations of deficit and credit generating fuels (i.e. E10=CBOB + ethanol, B2= diesel+ biodiesel)
- Reporting and tracking is significantly more complex due to the higher number of transactions/movements required compared to bulk movements
- Importers will need to account for compliance credit acquisition in the cost of the fuels they purchase outside of NM and resell in NM



Sources: U.S. Energy Information Administration, U.S. Energy Atlas (eia.gov), <u>https://atlas.eia.gov/apps/e1c92d7601b9490697d22dfe2da1b4ac/explore</u> Enterprise Products Partners L.P, TW Products System: <u>https://ir.enterpriseproducts.com/news-releases/news-release-details/enterprise-begins-initial-service-tw-products-system</u> HF Sinclair Facilities Data: <u>https://www.hollyfrontier.com/operations/facilities/default.aspx</u>



### CTFS ADVISORY COMMITTEE Meeting - July 12, 2024





**Rio Valley Biofuels** 

## **Rio Valley biofuels**

- Rio Valley Biofuels, LLC started producing biodiesel in April of 2006
  - First Biodiesel Producer in New Mexico
- In May of 2014, combined operations with Global Alternative Fuels, located in El Paso, TX
- Production of 17 Million gallons per year at El Paso, TX plant



**10 VALLEY BIOFL** 

## **Biodiesel production process**

- Biodiesel is produced in a process called transesterification, whereby fats and oils are converted and subsequently refined into the finished fuel.
- This typically involves reacting with an alcohol, such as methanol, in the presence of a liquid catalyst. A glycerin by-product is produced which is utilized in pharmaceuticals or cosmetics



The biodiesel we produce is blended with ULSD and sold as a blend

Biodiesel blends are identified by the percentage of biodiesel in the blend. For example, 20% biodiesel blended with 80% ULSD is called B20. B20 is used commonly throughout NM and TX year-round.

Other blends are B5, B10, and B99 or B100





Biodiese' has the lowest coduction costs, the highest feedstock efficiency, the highest emission reduction performance, and the lowest carbon abatement costs, according to multiple scientific studies.





VENT TANK WHEN UNLOADING

Clean fuels standards benefit renewable fuel producers where but even more importantly, they benefit the states where but even more importantly.









# Thank you!



#### **Rio Valley Biofuels**



### Potential Crediting of Alternative Jet Fuel and other Off-Road Fuel Crediting Opportunities

New Mexico Clean Fuel Transportation Committee (CFTS) Advisory Committee

July 11, 2024 Graham Noyes Managing Attorney, Noyes Law Corporation



# Meeting industry objectives will require SAF production in excess of 400 MT p.a., which will need to be met by the rapid scaling of SAF capacity across existing and future technology pathways



Source: Bergero et al. (2023); IATA; ATAG (2020); WEF (2021)

9 | Fuelling the Future of Aviation

#### <u>3/17/17 LCFS Workshop Materials</u> <u>CARB Discussion RE: Crediting Alternative Jet Fuel on</u> <u>Opt-In Basis in California LCFS\*</u>

#### CARB Proposal:

Allow alternative jet fuel (AJF) to generate LCFS credits as an opt-in fuel
Conventional jet fuel would not be subject to the regulation and would not generate deficits

#### CARB Reasoning:

- Provide potential environmental benefits
- Diversify sources of jet fuel and reduce volatility in price
- Improve reliability and security of supply
- Provide other economic benefits

\*Later Followed by Oregon DEQ; Washington CFS statute prescribed opt-in status for AJF.

Alternative Jet Fuel (AJF) and Sustainable Aviation Fuel (SAF) are not equivalent terms- AJF is broader, more flexible term •AJFs are drop-in fuels which can replace conventional jet fuels without the need to modify aircraft engines and existing fuel distribution infrastructure

- •When blended with conventional jet fuel, AJFs have the same performance characteristics as conventional jet fuel
- In order to generate credits, AJF must have lower CI than annual standard
- •Feedstocks include both renewable and non-renewable sources
- Sustainable Aviation Fuel term connotes other requirements

# Policy Design Issue: SAF CI Benchmarks vs. Other Fuels (California LCFS Example)



Proposed Annual CI Benchmarks

# CARB Slide 34, 2/22/23 LCFS Workshop

# Intrastate Jet Fuel | Existing Regulation and Guidance

- July 2022 letter from the Governor to CARB Chair: Requests that CARB "adopt an aggressive 20% clean fuels target for the aviation sector" and that CARB "evaluate and consider an increase in the stringency of the Low Carbon Fuel Standard...to accelerate refinery transitions away from petroleum to the production of clean fuels."
- 2022 Climate Change Scoping Plan signals a need for rapid decarbonization of the aviation sector, including a goal of meeting 20% of aviation fuel demand with zero emission fuels in 2045
- Inflation Reduction Act of 2022 introduces \$1.25-1.75/gal tax credit for Sustainable Aviation Fuels

# CARB Slide 35, 2/22/23 LCFS Workshop

### Potential Method to Include Deficit Generating Intrastate Jet Fuel in LCFS

- Scope: Conventional jet fuel supplied in California for intrastate flights
  - Intrastate definition: flights that take-off in CA and land in CA
- Reporting:
  - Fossil jet: airlines would be the first fuel reporting entities
  - Alt jet: no change to current structure (producers and importers are first fuel reporters)



# CARB Slide 32 RE: AJF, Board Hearing 9/28/23

# **Decarbonizing Aviation**

- Aviation sector is 1% of statewide GHGs
- Alternative jet fuel is an optional credit generator in LCFS (current volume is 15 million gallons per year)
- The Department of Energy's Sustainable Aviation Fuel Grand Challenge is targeting 3 billion gallons per year by 2030
- To further decarbonize aviation, staff are evaluating how to increase the use of alternative jet fuel in the State



#### LanzaJet Input RE: Policy Design

#### Performance of SAF under CA opt-in only

• SAF and RD are made with virtually the same technology

• In programs like California that include diesel but exempt jet fuel with opt-in only for SAF, producers choose RD over SAF



### NM should consider an LCFS standard for jet fuel to avoid disincentives for SAF that exist when jet fuel is exempted and SAF is opt-in credit generator (California Example)



Source: data from Stillwater 2023 ; updated with EIA Jet Fuel Spot Price data

IRA tax credits with bonus values for SAF like 45Z and 40B can help but do not fully bridge the gap and lack longterm certainty to support investment signal.

GN:

- IRA 40B credit through 2024
- IRS 45Z credit through 2026
- Industry working to extend

28

### Modern LCFS programs should include jet fuel along with road fuels

- Existing programs exempted jet fuel in earlier years, when SAF technologies were immature and supply unavailable
  - > SAF is now rapidly commercializing around the world; exemptions are no longer necessary
- A standard for ALL jet fuel encourages SAF production on par with road fuels
  - A standard limited to intrastate jet fuel marginally encourages SAF production, but helps more than opt-in only
- US states have legal authority to obligate jet fuel under the LCFS, according to rigorous legal analysis commissioned by a group of SAF producers

> New Mexico legislation does not exempt jet fuel, leaving the decision to regulators

- Compliance costs from a CA intrastate LCFS standard would be modest and have ~no effect on consumer demand
  - UC Berkeley estimates a \$0.01/gal increase in jet fuel cost—well within the volatility of jet fuel prices, which have ranged from \$1-\$5/gal over the last 20 years
  - UCB also estimates -0.04% change in domestic aviation demand in 2030—air passengers are equally or better able to absorb compliance costs than road drivers

#### **Current policy landscape**

**California**: proposed eliminating existing exemption for intrastate jet fuel; CARB has signaled likely to pass

**British Columbia:** eliminated exemption for all jet fuel in 2023; jet fuel now fully covered by LCFS

**Oregon & Washington:** jet fuel exemption in statute

Source: UC Berkeley comments, LCFS public workshop April 2024

# A tidy solution: the British Columbia model sets a jet fuel standard with a shallower compliance curve for jet fuel



- SAF is more nascent, lacks 15 years of crediting and industry building globally
- Corrects incentive imbalance between SAF and RD
- Lower compliance costs for airlines- less political pushback
- A win-win

# What are the obligated fuels in California?

#### • § 95482. Fuels Subject to Regulation.

- Applicability of the Low Carbon Fuel Standard. Except as provided in this section, the California Low Carbon Fuel Standard regulation, California Code of Regulations (CCR), title 17, sections 95480 through 95503 (collectively referred to as the "LCFS") applies to any transportation fuel, as defined in <u>section 95481</u>, that is sold, supplied, or offered for sale in California, and to any person who, as a fuel reporting entity defined in <u>section 95481</u> and specified in <u>section 95483</u>, is responsible for reporting a transportation fuel in a calendar year. (...)
- §95481(149) "Transportation Fuel" means any fuel used or intended for use as a motor vehicle fuel or for transportation purposes in a non-vehicular source.
- "Motor Vehicle" has the same meaning as defined in section 415 of the Vehicle Code.

# What are the exempted fuels in California?

• § 95482 (c) *Exemption for Specific Fuels*. The LCFS regulation does not apply to: (...)

Conventional jet fuel or aviation gasoline. (...) Any deficit-generating fuel used in military tactic

Any deficit-generating fuel used in military tactical vehicles and tactical support equipment as defined in title 13, CCR, section 1905(a) and CCR, title 17, section 93116.2(a)(38), respectively. (...)

*(d) Exemption for Specific Applications.* The LCFS regulation does not apply to any transportation fuel used in the following applications:

(1) Locomotives not subject to the requirements specified in CCR, title 17, section 93117; and

(2) Ocean-going vessels, as defined in CCR, title 17, section 93118.5(d). This exemption does not apply to shore power provided to ocean-going vessels at-berth, nor to recreational and commercial harbor craft, as defined in CCR, title 17, section 93118.5(d); and

(3) Any deficit-generating fossil propane and CNG used in school buses purchased prior to January 1, 2020.

• GN Note- some provisions not included that are of lesser relevance.

# **Opt-In Provision for Alternative Jet Fuel (LCFS)**

- (a) \$95482 (b) Opt-In Fuels. Each of the following alternative fuels ("opt-in fuels") is presumed to have a full fuel cycle, carbon intensity that meets the compliance schedules set forth in sections <u>95484(b)</u> through (d) through December 31, 2030.A fuel provider for an alternative fuel listed below may generate LCFS credits for that fuel only by electing to opt into the LCFS as an opt-in fuel reporting entity pursuant to <u>section 95483.1</u> and meeting the requirements of this regulation:
- ٠
- (1) Electricity;
- (2) Bio-CNG;
- (3) Bio-LNG;
- (4) Bio-L-CNG;
- (5) Alternative Jet Fuel; and
- (6) Renewable Propane.

# What other sectors could receive opt-in treatment?

Large-scale fuel users are of primary interest. The fuel substitution model can be utilized to determine crediting opportunity (e.g., replacing diesel fuel used in farm tractors or in generators at ski resorts with renewable diesel or with electrified equipment).

- Agriculture
- Forestry
- Mining
- Ski Resorts
- Others?

An opt-in structure avoids obligations unless market participant opts in to enable credit-generation. By opting in, participant triggers standard compliance obligations- registration, reporting, verification. (

# Thank you for the Opportunity to Discuss

Graham Noyes Noyes Law Corporation 419 Broad Street, Suite E Nevada City, CA 95959 <u>www.fuelandcarbonlaw.com</u> (206)856-8784 Cell graham@noyeslawcorp.com





# Role of EV Charging Under Clean Fuel Standards

Evan Rosenberg Director, Strategy & Business Development SRECTrade



Xpansiv



#### **Distribution of EV Credits in 2023 - California LCFS**



Source: California Air Resources Board



#### **Distribution of EV Credits in 2023 - Washington CFS**

Source: Washington Department of Ecology


### **Distribution of EV Credits – New Mexico CTFS**

# ?

### **Common Practices – EV Credits**

#### • Default Credit Generators

- Residential EV Charging Credits allocated to utility based on formula
  - Reinvestment requirements
  - CA & WA allow other parties to claim "incremental" credits
- Non-Residential EV Charging Credits generally allocated to charging station owner

#### Trend: a lignment across programs to a llocate credits for off-road EV charging to station owner

- Aggregators / Designation
  - Programs generally allow default credit generators to <u>designate another party</u> to generate credits on their behalf
  - OR & WA have standardized designation forms required at the time of asset registration
  - Aggregators generate a significant portion of non-residential EV credits
- Assigning Credit Rights
  - Programs generally allow default credit generators to allocate <u>the right to generate credits</u> to another party
  - Som ewhat inform albut programs may require proof of ownership / credit rights during registration or in the event of a dispute

### **Common Practices – EV Pathways**

- Fuel reporting entities for EVs only use default or look-up-table pathways
- Programs allow for "pairing" of renewable energy to lower the CI of electricity used in EV charging and generate incremental clean fuel credits
- Under certain market conditions, the value of incremental clean fuel credits is greater than the cost of the REC
- 1 REC = 1 MW h of electricity
- REC eligibility criteria include geography, vintage, and generation type



Source: California Air Resources Board

#### Xpansiv

### **Potential Discussion Questions**

- What EV activities should be eligible for credit generation?
- Who should be the default credit generator for these activities?
  - Who is best positioned to collect EV charging data
  - Who is best positioned to benefit from clean fuel credit incentive?
- What is the role of aggregators?
- Should credit rights be "assignable" and if so, how?
- Should REC book-and-claim rules be established?
- If so, what eligibility criteria should be considered?

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### Overview of Environmental Justice Concerns with CFS Programs

By Gabriel Pacyniak Professor of Law UNM School of Law July 12, 2024

### Some Caveats

#### I don't speak for EJ communities

- My students and I do represent EJ clients in our clinic, but I am not representing anyone on CFS advisory committee
- I have reviewed EJ criticisms of CFS programs
  - California's EJ Advisory Committee Recommendations
  - Input from EJ Groups to CARB during LCFS program review
  - Other critiques of CFS programs
- I am not evaluating legal constraints under NM CFS enabling legislation



Stanford Climate & Energy Policy Program Woods Institute for the Environment

#### California's Low Carbon Fuel Standard: Simulating an EJ Scenario using CARB's CATS Model

Authors: M. Wara, M. Ahumada-Paras, M. Mastrandrea, H. Zhu, C. Morton, R. Chor

The California Air Resource Board (CARB) runs the Low Carbon Fuel Standard (LCFS) program to incentivize the technological innovation and adoption of alternative transportation fuels with lower carbon intensities (CI) in support of California's climate goals. Compliance targets are modeled through the California Transportation Supply (CATS) Model, an optimization tool that simulates the future transportation fuel mix incentivized under LCFS by finding the least cost solution to meet fuel demand given a greenhouse gas (GHG) of straint. The compliance target represents the allowed average Class a parameter within the CATS e in which the LCFS program model that div

Assembly Bill 32 Environmental Justice Advisory Committee (EJAC) Assembly BII 32 Environmental Justice Advisory Committee (EJAC) DRAFT Recommendations to the California Air Resources Board (CARB) on the Jow Cachen Erich Standard Denviration Undates Draft Version 1: Posted August 24, 2023 At the August 25, 2023, EJAC meeting, the fourth item on the agenda is "Discussion n une magnat دی. جندی جنمی meeting, the journ meth on the agenca is uncussif on the Low Carbon Fuel Standard Panel and Provide EJAC Recommendations to ראספר The draft EJAC resolution below supports the August 25th discussion in preparation The draft EJAC resolution below supports the August 25th discussion in preparet for the joint EJAC/CARB Board meeting planned for September 14, 2023. EJAC WHEREAS, the Low Carbon Fuel Standard (LCFS) has exacerbated and entrenched recommendations are advisory in nature. errenews, use user variant run standard (vers) has exectable and entered air water, and odor pollution in communities most impacted by environmental WHEREAS, the LCFS has worsened environmental injustice issues across the state, WRENCAS, the U-FS has worsened environmental injustice assues across the size nation, and world by increasing and entrenching pollution on the frontlines of WHEREAS, California Air Resources Board (CARB) has the authority to regulate WHEREAS, California Air Resources Board (CARB) has the authority to regulate methane emissions from livestock as soon as January 1, 2024, pursuant to Health and Sefere Code section 2072/0 70-10 WHEREAS, the LCFS has exacerbated and entrenched harmful pollution in frontline

WHEREAS, the LCFS has exacerbated and entrenched harmful pollution from oil refinery communities; while lessening tailpipes by incentivizing combustion fuels; WHEREAS, the LCFS has exacerbated and entrenched harmful pollution to global ality outcomes Communities from deforestation and using food for fuels; WHEREAS, the LCFS has exacerbated and entrenched harmful pollution in WHEREAS, the LCFS has exacerbated and entrenched harmful pollution in communities near and regions containing large dairies and other confined animal feeding operations by incentivizing the production, storage, and land application of under security. WHEREAS, insolar as the LCFS reduces carbon emissions from the transportation

WHENEAS, insolar as the LLP'S reduces carbon emissions from the transportation sector, the provision of LLPFS credits for carbon removal such as direct air capture

ed arbon Fuel ats sono i edats sporter y driver di se target e parameter the key driver of proposed compliance target th 2030 to avoid speculation Gasoline Diesel Electricity Hydrogen CNG Jecruel sportation Standard ure | February 1, 2024 ounded by CARBs current led by the Scoping Plan proposed energy demand

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CENTER ON RACE, POVERTY & THE CRPE ENVIRONMENT

### **Environmental Justice Considerations**

### Significant EJ Criticisms of CFS

- CFS doesn't necessarily distribute benefits
   of clean transportation equally
- CFS doesn't necessarily reduce conventional air pollution equitably
  - Increased biofuels can actually increase NOx
- Some credited mechanisms can maintain or exacerbate other types of upstream pollution
  - E.g., pollution from dairy farms and oil and gas pollution



March 15, 2023

Cheryl Laskowski, Ph.D. Low Carbon Fuels Standard (LCFS) Program California Air Resources Board Sacramento, CA 95814

#### Re: Climate Justice Coalition Comments on Feb. 22, 2023 Workshop

The undersigned environmental justice and environmental organizations write jointly to highlight grave concerns about the Preliminary Draft of Potential Regulatory Amendments to the Low Carbon Fuel Standard and Amendment Concepts ("Preliminary Draft"). While we will each submit individual organizational comment letters with further detail, the fates of our communities are linked. Without intervention, the Preliminary Draft will exacerbate harms to lower income communities and communities of color who are disproportionately overburdened by pollution from industrial agriculture, oil refining infrastructure, and fuel combustion at the talipipe.

#### 1. CARB's Inflated Values for Factory Farm Gas and its Failure to Directly Regulate Methane Emissions from Livestock is Environmental Racism.

CARB must correct the LCFS Carbon Intensity calculations for factory farm gas. Specifically, CARB must end avoided methane crediting; the faulty lifecycle assumptions that exclude upstream and downstream emissions from the production of factory farm gas including enteric emissions and nitrous oxide emissions from composted and land-applied digestate; and the failure to consider that supposed GHG emission reductions from factory farm gas have already been claimed by other programs or are otherwise non-additional to emission traductions that

### 1. Equitable Benefits

- Concern: consumer benefits of CFS may disproportionately go to more affluent consumers
  - E.g., electrification credits may only benefit more affluent consumers that are able to purchase an electric vehicles.
- CA, WA, OR programs all include programs that direct electrification benefits to specific communities

#### CLEAN FUEL STANDARD DIRECTED BENEFIT MECHANISMS TO PROMOTE EQUITY

By Abby Husselbee, Cara R. Lynch, and Gabriel Pacyniak\*

The transportation sector contributes the largest share of greenhouse gas (GHG) emissions in the United States and is one of the most difficult to decarbonize. One policy to reduce GHG emissions in the united states is a Clean Fuels Standard (CFS), which requires fuel suppliers to reduce the carbon intensity of their fuels in the aggregate. California, Oregon, and Washington have already implemented such a program, and New Mexico is in the process of doing so. A CFS also produces important co-benefits, such as reduction of conventional health-damaging air pollutants, mobility, and economic development benefits, however these benefits may not be distributed equally among all communities. This article for the first time describes how the three existing programs use mechanisms that seek to direct these benefits in order to promote a more equitable transportation system, identifies other mechanisms that could be used or similar purposes, and notes legal considerations for expenditures of revenues to provide benefits.

The transportation sector is the largest contributor to greenhouse gas emission in the United States,<sup>1</sup> and one of the hardest to decarbonize.<sup>2</sup> The most significant step taken at the federal and state level to reduce emissions in this sector is the establishment of GHG and fuel economy standards for

....

<sup>&</sup>lt;sup>2</sup> Store Banker, Decorboriting The Transportation Sector Will Be A Herculean Task, FORMS, <u>https://news.forbes.com/sites/inters/banker/2013/06/02/decarbonizing-thetransportation-sector-will-be-z-barculean-task/(fast visited Jm 18, 2024).</u>



<sup>\*</sup> Abby Husselbee is a staff atomey at the Harvard Law School Environment and Energy Program; Cara R. Lynch is a clean energy and transportation attorney in private practice who serves as outside counsel to the University of New Mexico Natural Resources and Environmental Law Clinic; Gabeiel Pacyniak is a professor of law at the University of New Mexico. This research was supported by funding from the Great Plains Institute, [funder X], and [funder X]. The authors are grateful to Brendan Jordan, Carrie Jenks, Hannah Pearls, and representatives of states participating in the Clean Fuel States Collaborative for helpful comments on this paper and related presentations. All views and errors are the authors alone.

OAR US EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks, (2017), https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-einks (last visited Jun 18, 2024).

### State Comparison

California	Oregon	Washington
50% of CFS revenue <i>must</i> <i>be used</i> for the <i>primary</i> <i>benefit</i> of disadvantaged or low-income communities	Utility CFS revenue must <i>strive</i> to identify <i>potential benefits</i> that could flow to underserved community	30% of revenue <i>must</i> <i>benefit</i> nonattainment areas or disproportionately impacted communities
Regulatory requirement	PUC guidelines	Statutory requirement

### PRC will likely play a Role

### Environment Department

- Administers a CFS
- Promulgates most CFS regulations

### **Public Utility Commission**

- May regulate utility engagement in a CFS
- Typically regulates credit revenues
- May be engaged in determining how revenue gets directed

### **NM CFS Authorizing Statute**

### > CFS program rules shall require:

- > a utility that elects to participate ... to invest all revenues from the sale of credits,
  - > not including administrative ... costs, into ...
- projects that support transportation decarbonization
- > with at least fifty percent .... supporting low income and underserved communities

> Also:

"additional credit opportunities from activities and projects that support the reduction or removal of greenhouse gas emissions associated with transportation in the state;"

### EJ Concerns about Program Design Components

### Concerns

- Maintaining, exacerbating, or increasing industry practices that result in other pollution harms
- Accounting challenges that do undermine GHG outcomes
- Overall ask from CA EJAC: Multi-pollutant evaluation of pathways
  - "Conduct and incorporate a full life cycle assessment of all air pollution and greenhouse gas (GHG) emissions for all pathways, and their implications for environmental justice communities."

### Potential for Exacerbating Dairy Methane Pollution

- > Dairies are significant sources of water and soil pollution
- CFS dairy digesters crediting can incentivize larger, more industrialized farms
- In some places, smaller farms using other technologies can better reduce GHG emissions per cow on a lifecycle basis
- GREET model not a sophisticated accounting of lifecycle dairy emissions
- CA model for crediting dairies assumes avoided emissions based *avoided agricultural*, not transportation emissions
- Concern is that CFS chiefly incentivizes larger, more industrialized farms using anaerobic digesters and overcredits with "negative credits"
- CA EJ advocates asking for an elimination of avoided methane credits



#### MITIGATING EMISSIONS FROM CALIFORNIA'S DAIRIES

Considering the Role of Anaerobic Digesters in Mitigating Emissions from California's Dairies

By Ruthie Lazenby

UCLA School of Law Emmett Institute on Climate Change & the Environment law.ucla.edu/emmett

### Concerns about Bio-Based Diesel ILUC Emissions

- Bio-based diesel is potentially leading to deforestation and displacing food crop growth
  - GREET analysis of indirect land use is not sophisticated
  - Changes to indirect land sue can lessen, or even erase, GHG benefits of bio-based diesel
  - Can exacerbates food prices
- In CA, combination of federal RFS + state CFS credits is flooding market
  - Unmitigated double crediting arguably not "technology neutral"
- CA EJAC called for cap on lipid fuels and phase-out timelines based on GHG risk



## Concerns with Crediting Carbon Capture and Sequestration

- CA has created CCS protocol
- Stricter then federal Class VI requirements SDWA
  - E.g., includes broader siting requirements, longer monitoring period

#### EJ concerns that:

- CCS crediting for DAC, EOR will allow non-transportation based offsets that will reduce incentives for clean transportation fuel development
- > Can exacerbate other pollution from fossil fuel industry (refineries, wells)
- CCS permanent GHG reductions not proven

#### CA EJAC recommendations:

- > Prohibit enhanced oil recovery as an eligible sequestration method.
- > Do not issue LCFS credits for carbon removal projects such as Direct Air Capture

### Thank You

CA EJAC Recommendations: https://ww2.arb.ca.gov/sites/default/files/2023-08/EJAC%20Low%20Carbon%20Fuel%20Standard%20Recommendations%20Versi on%201%20082423.pdf

Abby Husselbee, Cara Lynch, and Gabriel Pacyniak, Clean Fuel Standard Directed Benefit Mechanisms to Promote Equity (June 28, 2024). UNM School of Law Research Paper No. 2024-07, Available at SSRN: <u>https://ssrn.com/abstract=4879942</u>

 Gabriel Pacyniak, State Sequestration: Federal Policy Accelerates Carbon Storage, But Leaves Full Climate, Equity Protections to States (November 7, 2022). 14 San Diego J. Climate & Energy L. 95 (2023), UNM School of Law Research Paper No. 2022-25, Available at SSRN: <u>https://ssrn.com/abstract=4269719</u>

#### NEW MEXICO CLEAN TRANSPORTATION FUEL STANDARD ADVISORY COMMITTEE: 2024 OPEN MEETINGS COMPLIANCE PROCEDURES

#### I. Open Meetings

Pursuant to NMSA 1978, Sections 10-15-1 (A) and (B), all meetings of a quorum of members of the Clean Transportation Fuel Standard Advisory Committee ("CTFSAC" or "Committee") held for the purpose of formulating public policy, discussing public business, or for the purpose of taking any action within the authority delegated to the Committee shall be open to the public, except as otherwise provided by law. The location of such open meetings shall be as specified in the Notice of Open Meeting as discussed in Section II, below. Any member of the public may attend an open meeting and listen to the deliberations and proceedings of the CTFSAC. The public will be given an opportunity to present their views on issues discussed at the meetings, at the discretion of the Committee. A majority of the CTFSAC members constitute a quorum for the transaction of business.

#### II. Notice of Regular Open Meetings and Meeting Agendas

Prior to meeting, the New Mexico Environment Department (NMED) will post a Notice of Open Meeting, including the date, time, and place of the open meeting, at least ten calendar days prior to each meeting. Notice shall be posted on the Environment Department webpages including for matters related to the CTFSAC under the Boards and Commissions webpage (https://www.env.nm.gov/opf/clean-transportation-fuel-standards-ctfs-advisory-committee/), the Calendar (https://www.env.nm.gov/events-calendar/), and the Climate Change Bureau's Clean Transportation Fuel Standard webpage (https://www.env.nm.gov/climate-change-bureau/clean-fuel-standard/). Notice shall also be provided to the following newspapers: the Albuquerque Journal, the Santa Fe New Mexican, and the Las Cruces Sun News. NMED provides notice to any newspapers of general circulation and broadcast station licensed by the Federal Communications Commission that have provided a request, in writing or by e-mail, for such notice. NMED will give e-mail notices to persons who are registered on the Climate Change Bureau listserv. Registration for the listserv is available on the Climate Change Bureau's Clean Transportation Fuel Standard webpage.

NMED will post an agenda of the meeting at least 72 hours before the meeting, or in accordance with emergency situations as defined in NMSA 1978, Section 10-15-1(F). The agenda shall be posted on the Environment Department webpages including for matters related to the CTFSAC under the Boards and Commissions webpage (https://www.env.nm.gov/opf/clean-transportation-fuel-standards-ctfs-advisory-committee/), the Calendar (https://www.env.nm.gov/events-calendar/), and the Climate Change Bureau's Clean Transportation Fuel Standard webpage (https://www.env.nm.gov/climate-change-bureau/clean-fuel-standard/).

The agenda shall indicate the date, time, and place of the meeting, a description of the matter being discussed or considered for formal action, a list of any other specific items of business to be transacted, and the nature of the action contemplated at the open meeting. The order of items on the agenda may be revised at any time. Except for emergency matters as defined by NMSA 1978, Section 10-15-1(F), the Committee shall only take up matters appearing on the agenda.

#### **IV. Notice of Emergency Open Meetings**

In the event of an emergency as defined in NMSA 1978, Section 10-15-1(F), NMED shall provide 24hours' notice of an emergency meeting, if practicable, and shall report the actions taken and circumstance creating the emergency to the New Mexico Attorney General within ten days provided that no reporting to the New Mexico Attorney General shall occur if a state or national emergency has been declared if the need for the emergency meeting arises from facts and circumstances related to the declaration of the state or national emergency.

#### V. Minutes

NMED shall keep written minutes of all its meetings. The minutes shall include at a minimum: (a) the date, time, and place of the meeting; (b) the names of members in attendance and those absent; (c) the substance of the proposals considered; (d) and a record of any decisions and votes taken that show how each member voted. All minutes are available for public inspection. Draft minutes shall be prepared within ten working days after the meeting and shall be approved, amended, or disapproved at the next meeting where a quorum is present. Minutes of the CTFSAC are not official until approved by the CTFSAC.

#### **VI. Closed Meetings**

Meetings of a quorum that would otherwise be open shall not be closed except in conformance with NMSA 1978, Section 10-15-1(H). If any meeting is closed, the closure shall be made in an open meeting and approved by a majority of the CTFSAC. The authority of the closure and the subject to be discussed shall be stated with reasonable specificity in the motion calling for the vote on a closed meeting. The vote shall be taken in an open meeting, and the vote of each member shall be recorded in the minutes. Only those subjects announced or voted upon prior to closure by the CTFSAC may be discussed in the closed meeting. If the closed meeting is called for outside of an open meeting, the Notice of Open Meeting shall state the provision of law under which the closures will take place and state the subject to be discussed. The minutes of a closed meeting shall state whether only those subjects specified when the meeting was closed were discussed in the closed meeting. Except as provided in NMSA 1978, Section 10-15-1(H), any action taken because of discussions in a closed meeting shall be made by vote of the CTFSAC in an open meeting.

#### VII. Participation by Telephone or Videoconference

Pursuant to NMSA 1978, Section 10-15-1 (C), a CTFSAC member may participate in any open meeting by means of a conference telephone or other similar communications equipment when it is otherwise difficult or impossible for the member to attend the meeting in person, provided that each member attending and participating by conference telephone or videoconference can be identified when speaking, all participants can hear each other at the same time and members of the public attending the meeting are able to hear any member who speaks during the meeting.

Adopted and issued by the Clean Transportation Fuel Standard Advisory Committee on June 28, 2024.

DocuSigned by:	7/26/2024
5E21C2893D564CB	
Travis Madsen, CTFSAC Chair	Date

Clean Transportation Fuel Standard Advisory Committee: 2024 Open Meetings Compliance Procedures

From:	cleanfuel.standard, ENV	
To:	ENV-CTFS Advisory Committee Members and NMED Staff	
Subject:	CTFS Advisory Committee - 06/21 meeting information	
Date:	Thursday, June 20, 2024 3:40:21 PM	
Attachments:	image001.png W9 Blank.pdf DFA Travel 101 Training.pdf	
	image003.png	
Importance:	High	

### Greetings and welcome to the Clean Transportation Fuel Standard (CTFS) Advisory Committee,

This email contains some key information you need to know about tomorrow's meeting. Members are permitted to join in person or virtually. Please let us know if you're planning to join virtually.

#### Meeting agenda:

- English: <u>https://service.web.env.nm.gov/urls/GYxRsoZO</u>
- Español: <u>https://service.web.env.nm.gov/urls/bvRqpBNr</u>

#### **Physical location:**

Springer Building, Rio Grande Room 121 Tijeras Ave NE Albuquerque, New Mexico 87102 [see "B" on the map below or view in <u>Google Maps</u>]

#### Parking:

Parking is permitted in the lot immediately east-northeast of the Springer Building [see "A" on the map below or view in <u>Google Maps</u>]. The lot entrance is just off Commercial St. NE. Parking permits are not required.

#### Virtual attendance:

If joining virtually, please let CCB staff know and, when the time comes, join the meeting with the email address you're using here. Because you submitted your application to the committee using this email address, we've granted this email address certain meeting permissions. So, using this address to log in to the virtual meeting will ensure you have the proper authorities in the virtual meeting place, including the ability to un/mute and control your camera. Logging in with another address will only give you viewing access (i.e., no audio/visual permissions).

Webex meeting information:

- Meeting link: <u>https://nmed-oit.webex.com/nmed-oit/j.php?</u> MTID=m9a5fca8b312e473fae5fe10e71db776a
- Meeting number: 2630 320 6552
- Meeting password: 4D9vSFYU5PT

Otherwise, please visit <u>https://www.env.nm.gov/climate-change-bureau/clean-fuel-standard/</u> to find and stay up to date on open meeting announcements and agendas. Notices are also published on <u>https://www.env.nm.gov/public-notices/</u> and meeting details can be found on <u>https://www.env.nm.gov/events-calendar/</u>.

#### Per Diem:

NMED would like to offer Advisory Committee members per diem for their participation. Per the state's per diem policy, the maximum rate expected is \$45 per meeting, whether in person or virtual, plus mileage (assuming you can prove your mileage driven). If you're interested in claiming per

diem, please review the DFA Travel 101 Training presentation, let us know as soon as possible, and return the completed W9 (attached).

#### Attachments:

- W9 (Blank)
- Dept. of Finance and Administration (DFA) Travel 101 Training presentation

We look forward to seeing you tomorrow at 9 AM!

Best, Kolt

Kolt H. Vaughn, MPA (he/him/his)

Environmental Scientist & Specialist

New Mexico Environment Department

Environmental Protection Division

**Climate Change Bureau** 

505-819-8205 kolt.vaughn@env.nm.gov Request a meeting. X: @NMEnvDep #lamNMED

Science | Innovation | Collaboration | Compliance

From:	cleanfuel.standard, ENV
То:	ENV-CTFS Advisory Committee Members and NMED Staff
Subject:	CTFS AC - 06/28 agenda & 06/21 presentations
Date:	Tuesday, June 25, 2024 10:03:01 AM
Attachments:	image002.png

#### Greetings CTFS Advisory Committee,

Thank you to those of you who submitted suggestions for the 06/28 agenda. We've generally tried to capture those recommendations in the final agenda we've published, available at <a href="https://www.env.nm.gov/climate-change-bureau/clean-fuel-standard/">https://www.env.nm.gov/climate-change-bureau/clean-fuel-standard/</a>.

Likewise, some of you requested access to the presentations from the 06/21 meeting. You can now find it on the site as well. Please reference the image below to see where both documents are located. Otherwise, NMED will upload the draft meeting minutes for public inspection within ten business days of all meetings, as required by the Open Meetings Act. Then, draft minutes require Advisory Committee approval to become final.

<ul> <li>CTFS Advisory Committee: Open Meeting Announcements, Agendas, and Members</li> </ul>
As part of program development, House Bill 41 directs the Environment Secretary to convene a Clean Transportation Fuel Advisory Committee to inform the rules that will govern the state's program. The Clean Transportation Fuel Advisory Committee will include stakeholders from transportation fuel producers and distributors, utilities, environmental protection groups, environmental justice groups, Tribal and local government representatives, and others with relevant expertise. Announcements and agendas for the Advisory Committee meetings can be found below.
June 21, 2024, CTFS Advisory Committee Meeting Information:
Meeting Announcement:
<ul> <li>English: https://service.web.env.nm.gov/urls/SSBcMegW</li> <li>Español: https://service.web.env.nm.gov/urls/FQwtNJPo</li> </ul>
Meeting Agenda:
<ul> <li>English: https://service.web.env.nm.gov/urls/GYxRsoZO</li> <li>Español: https://service.web.env.nm.gov/urls/bvRqpBNr</li> </ul>
Meeting Minutes and Copies of Presentations:
<ul> <li>Minutes: Coming soon!</li> <li>Presentations: https://service.web.env.nm.gov/urls/dtQjbPmN</li> </ul>
June 28, 2024, CTFS Advisory Committee Meeting Information:
Meeting Announcement:
<ul> <li>English: https://service.web.env.nm.gov/urls/KUJzJzFX</li> <li>Español: https://service.web.env.nm.gov/urls/IvQUByRA</li> </ul>
Meeting Agenda:
<ul> <li>English: https://service.web.env.nm.gov/urls/zDhPPoeM</li> <li>Español: Coming soon!</li> </ul>
July 12, 2024, CTFS Advisory Committee Meeting Information:
Meeting Announcement: Coming soon!
Meeting Agenda: Coming soon!

We look forward to seeing you Friday!

Best, Kolt Kolt H. Vaughn, MPA (he/him/his) Environmental Scientist & Specialist New Mexico Environment Department Environmental Protection Division Climate Change Bureau

505-819-8205 kolt.vaughn@env.nm.gov Request a meeting. X: @NMEnvDep #lamNMED

Science | Innovation | Collaboration | Compliance

From:	cleanfuel.standard, ENV	
То:	ENV-CTFS Advisory Committee Members and NMED Staff	
Subject:	07/12 CTFS Advisory Committee Meeting Info	
Date:	Thursday, July 11, 2024 4:48:13 PM	
Attachments:	image001.png	
	image003.png	

Greetings Advisory Committee,

This email contains some key information you need to know about tomorrow's 9:00 AM meeting.

#### **Meeting Announcement:**

https://service.web.env.nm.gov/urls/eEtNsnPD

#### **Meeting Agenda:**

https://service.web.env.nm.gov/urls/HOyhaNYt

#### Virtual attendance:

https://nmed-oit.webex.com/nmed-oit/j.php? MTID=me02191c21c10a442e7a73131d4b53512 Meeting number: 2632 714 0288 Password: yXG9mUYpc32 Join by phone: +1-415-655-0001 US Toll Access code: 2632 714 0288

#### **Physical location:**

Springer Building, Rio Grande Room, 121 Tijeras Ave NE Albuquerque, New Mexico 87102 [see "B" on the map below or view in <u>Google Maps</u>]

#### **Parking:**

Parking is permitted in the lot immediately east-northeast of the Springer Building [see "A" on the map below or view in <u>Google Maps</u>]. The lot entrance is just off Commercial St. NE. Parking permits are not required.

Best, Kolt

Kolt H. Vaughn, MPA (he/him/his) Environmental Scientist & Specialist New Mexico Environment Department Environmental Protection Division <u>Climate Change Bureau</u> 505-819-8205 kolt.vaughn@env.nm.gov <u>Request a meeting.</u>

X: @NMEnvDep #lamNMED

Science | Innovation | Collaboration | Compliance

Upcoming Out of Office Dates (inclusive):

- 07/10 & 07/11 | Working, but in a virtual conference.
- 07/17 07/22 | PTO.

From:	Borchert, Claudia, ENV
To:	Borchert, Claudia, ENV
Cc:	Vaughn, Kolt, ENV; Miano, Michelle, ENV; Peterson, Owen, ENV
Subject:	RE: Update to CTFS Advisory Committee meeting dates and process for submitting technical input for CTFS AC Technical Report
Date:	Friday, July 12, 2024 9:03:08 AM

Dear Advisory Committee,

As you will hear from me shortly in your meeting at 9, one of the two due dates in the previous email is incorrect. The correct deadline for written technical input for the report is **9 am MTZ, Monday, July 15.** 

I apologize for the confusion.

Best,

Claudia

From: Borchert, Claudia, ENV
Sent: Tuesday, July 9, 2024 3:46 PM
To: Borchert, Claudia, ENV <Claudia.Borchert@env.nm.gov>
Cc: Vaughn, Kolt, ENV <kolt.vaughn@env.nm.gov>; Miano, Michelle, ENV <michelle.miano@env.nm.gov>; Peterson, Owen, ENV <owen.peterson@env.nm.gov>
Subject: Update to CTFS Advisory Committee meeting dates and process for submitting technical input for CTFS AC Technical Report

Hello again CTFS Advisory Committee!

We have a few updates for you.

- The deadline for submitting your technical input to the Advisory Committee Technical Report is now 9 am MTZ, Monday, July 22. As a reminder, NMED recommends that you first fill out the attached Word document and then enter your responses to the CODA form that was emailed to you from <u>no.reply@env.nm.gov</u> yesterday around 5 pm. If you didn't receive this email, please check your spam/junk folders and then reach out to Owen at <u>owen.peterson@env.nm.gov</u>.
- 2. To meet open meetings notice requirements NMED needs to move the July 19 meeting to July 26, which will be virtual only. This meeting will include review and approval of the report and public comment, so NMED wants to make sure the committee has a quorum. If you cannot make it, please let NMED know as soon as possible by replying to this email.
- 3. NMED will email the draft report to you by Tuesday, July 23 for your advanced review.

For the following committee members, I don't believe I've received confirmation that you have read my previous email: Alaric Babej, Amy Brown, Anthony Willingham, Brian Bartlett, Cara Lynch, Dalva Moellenberg, Eduardo Barrientos, Ethan Epstein, Gabriel Pacyniak, Graham Noyes, Jane Sadler, Jed Smith, Jessica Gregg, Joe Sorena, Kari Buttenhoff, Lloyd Funk, Luis Reyes, Matthew Weyer, Michael Teague, Robert Hagevoort, Todd Trauman, Tom Dollmeyer, and Travis Madsen. Please do let me know that you have received it.

Thank you for your continued participation in developing a strong CTFS for New Mexico.

#### Respectfully, Claudia

Claudia Borchert | Climate Change Bureau Chief | she/her/hers c: 505.699.8489 | <u>https://www.env.nm.gov/climate-change-bureau/</u>

New Mexico Environment Department 525 Camino de los Marquez, Santa Fe, New Mexico www.env.nm.gov |Twitter: @NMEnvDep|#IamNMED

#### Science | Innovation | Collaboration | Compliance

From: Borchert, Claudia, ENV
Sent: Monday, July 8, 2024 11:16 AM
To: Borchert, Claudia, ENV <<u>claudia.Borchert@env.nm.gov</u>>
Cc: Vaughn, Kolt, ENV <<u>kolt.vaughn@env.nm.gov</u>>; Miano, Michelle, ENV <<u>michelle.miano@env.nm.gov</u>>
Subject: Technical Input Prompts for CTFS AC Technical Report

Dear CTFS Advisory Committee,

I hope you enjoyed the 4<sup>th</sup>!

You may recall that at the last meeting, AC members requested that the Advisory Committee members be allowed to submit technical input for the CTFS AC technical report. I'm pleased to report that NMED has developed a process that will turn this request into reality - albeit the submittal process has a quick turnaround time. We do appreciate any technical input you are willing to provide the NMED rulemaking team on New Mexico's CTFS program.

#### Input Requested:

- Attached is a Word doc with the specific prompts on which NMED is seeking input for the CTFS rule development. You may recognize some of the same prompts from the previous AC meetings; we plan to surface others at the upcoming July 12 meeting.
- Your responses to these specific prompts will be grouped in the technical report with no attribution.
- You may also provide technical input on any other CTFS-related topic of interest for inclusion in the report, again without any attribution.
- We appreciate you providing links to reference materials that you recommend to the NMED rulemaking team and the interested public.

#### Report Content:

The report will include:

- an introduction on the context of a CTFS in New Mexico;
- a high-level summary of how a CTFS works;
- the AC members listed by name and organization;
- the purpose of convening the AC; and

• the technical input NMED has received and will receive from the AC (summarized during discussions during AC meetings and from your submittals to the prompts).

The report appendices will include:

- all of the meeting presentations;
- meeting minutes; and
- and communications between NMED and the AC.

#### Process:

NMED recommends that you organize your responses in the attached Word doc under the given prompt, with the option, of course, to not respond to any or all of the prompts. To make the compilation easier for the NMED team, NMED is working to set up a portal through which you can add your response to each prompt. Please stay tuned for further instructions on this.

#### Deadline:

Please provide your responses to the prompts or any other topics on which you wish to provide technical input to NMED **by 9 am on July 15 <del>July 12</del>**, when the AC meets again. We need your responses by this date so that we can incorporate your comments into the report and provide the draft report to you for review by Tuesday, July <del>16</del> 23.

#### Report Approval:

We plan to email you the draft technical report by Tuesday, July <del>16</del> 23, along with the agenda for the July 26<sup>th</sup> meeting. Both will also be available on the <u>NMED CTFS webpage</u>. The AC July 26 agenda will be dedicated to discussion and approval of the report and 45-minutes for public comments.

#### Report Release:

NMED hopes to release the report by July 29 and will seek public input on it through an NMED Smart Comment Portal for approximately 7 calendar days. Anyone, including AC members, is welcome to provide technical comments on the report. All comments submitted through the NMED Smart Comment portal can be publicly viewed. The NMED team will review all submitted comments and incorporate the input into rule development.

Because NMED wants to make sure you are aware of this change in process, I'm sending this email will a read receipt, and I will follow up with those of you from whom I don't receive one.

Also, as an FYI, below is the published agenda for your Friday meeting.

#### Respectfully,

Claudia

Claudia Borchert | Climate Change Bureau Chief | she/her/hers c: 505.699.8489 | <u>https://www.env.nm.gov/climate-change-bureau/</u>

New Mexico Environment Department 525 Camino de los Marquez, Santa Fe, New Mexico www.env.nm.gov |Twitter: @NMEnvDep|#lamNMED

#### Science | Innovation | Collaboration | Compliance

From: New Mexico Environment Department <<u>nmed@public.govdelivery.com</u>>
Sent: Tuesday, July 2, 2024 9:04 AM
To: Borchert, Claudia, ENV <<u>Claudia.Borchert@env.nm.gov</u>>
Subject: July 12 - Clean Transportation Fuel Standard (CTFS) Advisory Committee Meeting

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2	

OPEN MEETING ANNOUNCEMENT: Clean Transportation Fuel Standard (CTFS) Advisory Committee

New Mexico Environment Department (NMED) Climate Change Bureau (CCB)

Announcement Date: July 2, 2024

Meeting Purpose: CTFS Advisory Committee Meeting

Meeting Date: July 12, 2024

Meeting Time: 9:00 AM to 12:00 PM MT

#### **Meeting Invitation:**

CCB invites the general public to attend this open meeting. The public may join in person or virtually and the information provided below explains how to attend and participate.

Physical location:

Springer Building, Rio Grande Room 121 Tijeras Ave NE Albuquerque, New Mexico 87102

Virtual information:

When available, the virtual meeting link will be posted on NMED's calendar: <u>https://www.env.nm.gov/events-calendar/?</u> <u>trumbaEmbed=view%3Devent%26eventid%3D175292502</u>

How the public may participate:

Any member of the public may attend an open meeting virtually or in person and listen to the deliberations and proceedings of the Advisory Committee.

If any person requires assistance, an interpreter, or an auxiliary aid or service to participate in the meeting, please contact Bonney Hughes, Planning and Operations Section Manager of NMED's Climate Change Bureau as soon as possible or at least one week prior to the meeting (TDD or TTY users please access the number via the New Mexico Relay Network, 1-800-659-1779 (voice); TTY users: 1-800-659-8331). Public documents, including the agenda and minutes, can be provided in various accessible formats. Please also contact Bonney Hughes if a summary or other type of accessible format is needed.

#### **Bonney Hughes**

Planning and Operations Section Manager, Climate Change Bureau New Mexico Environment Department 1190 St. Francis Drive, P.O. Box 5469 Santa Fe, NM 87502 505-479-2207

#### bonney.hughes@env.nm.gov

The general public may provide public comments on the CTFS rule promulgation in multiple ways:

- The public may provide written comments to NMED on the CTFS Advisory Committee's technical report. The report will be available in late July or early August and comments will be collected through a comment portal. Stay tuned for that portal to open.
- Once the proposed rule has been petitioned to the Environmental Improvement Board (EIB) and the EIB has agreed to consider the rule, the public can provide comments to the EIB through a comment portal. Stay tuned for that portal to open.
- The public may directly address the EIB if it holds a future hearing on the proposed rule.
- Members of the public can request a meeting with the NMED rulemaking team, by submitting a meeting request form (<u>https://www.env.nm.gov/request-a-meeting/</u>).

#### Meeting Dates, Past and Future\*:

- Past:
  - June 21, 2024
  - o June 28, 2024
- Future:
  - July 19, 2024, at 9:00 AM
  - Additional meetings, to be determined.

\*Note these are subject to change until finalized by CCB.

#### Agendas and more information about past, current, or future CTFS Advisory Committee meetings or CTFS:

To find agendas and more information, visit:

Santa Fe, New Mexico 87505

- <u>https://www.env.nm.gov/climate-change-bureau/clean-fuel-standard/</u> and
- https://www.env.nm.gov/opf/clean-transportation-fuel-standards-ctfs-advisory-committee/.



This email was sent to <u>claudia.borchert@env.nm.gov</u> using GovDelivery Communications Cloud on behalf of: New Mexico Environment Department · Harold L. Runnels Building · 1190 St. Francis Drive · Suite N4050 ·



From:	Peterson, Owen, ENV
To:	Peterson, Owen, ENV
Bcc:	ENV-CTFS Advisory Committee Members and NMED Staff
Subject:	CTFS Advisory Committee Prompts & Updates
Date:	Monday, July 15, 2024 4:37:00 PM
Attachments:	2024-07-08 Technical Input Prompts for CTFS Advisory Committee TechReport- Final.docx

Dear Advisory Committee,

We have a couple updates for you:

- At our meeting last Friday, 7/12/24, several AC members requested a comprehensive list of discussion prompts from AC meetings building on the list of prompts NMED previously provided to you for the purpose of submitting written technical input on CTFS. In response to this request, we have appended 22 supplemental prompts to the original list of 11. Please find the updated document attached.
  - a. Please note: NMED is only soliciting written input on the original list of 11 prompts found on the first page of the attached document. The supplemental prompts on the second page are intended for your reference only. If you nevertheless choose to respond to the supplemental prompts, please do so via the same form that was sent to you by email on Monday, 7/8/2024, <u>but categorize your response under the "Other" section</u>. Please try to limit multiple form submittals as much as possible.
- 2. NMED has extended the deadline for written input form submissions to **Friday**, **7/19/24 at 12pm MT**.
  - a. After the submittal deadline, NMED will send an email to the Advisory Committee with the list of members from whom we have received submissions, in order to flag any potential errors in the submittal process.

Please reply to this email with any questions. We appreciate your continued participation in the Advisory Committee process!

Best, Owen

#### **Owen Peterson**

**Program Coordinator (Temp)** New Mexico Environment Department Environmental Protection Division Climate Change Bureau 505-487-0920 owen.peterson@env.nm.gov

From:	Peterson, Owen, ENV	
То:	Peterson, Owen, ENV	
Bcc:	ENV-CTFS Advisory Committee Members and NMED Staff	
Subject:	RE: CTFS AC Technical Report & Agenda	
Date:	Tuesday, July 23, 2024 10:49:00 AM	
Date:	Tuesday, July 23, 2024 10:49:00 AM	

To clarify, the link to the technical report on the CTFS webpage is located under the section "CTFS Advisory Committee: Open Meeting Announcements, Agendas, and Members", under the header "July 26, 2024, CTFS Advisory Committee Meeting Information". Apologies for the rapid follow-ups.

Best, Owen

Owen Peterson Program Coordinator (Temp) New Mexico Environment Department Environmental Protection Division Climate Change Bureau 505-487-0920 owen.peterson@env.nm.gov

From: Peterson, Owen, ENV <owen.peterson@env.nm.gov>
Sent: Tuesday, July 23, 2024 10:30 AM
To: Peterson, Owen, ENV <owen.peterson@env.nm.gov>
Subject: RE: CTFS AC Technical Report & Agenda

Dear all,

Please excuse the quick follow-up. It appears that my previous email bounced back from some members due to file size limits. For your convenience, you may also find the report linked on the CTFS webpage: <u>https://www.env.nm.gov/climate-change-bureau/clean-fuel-standard/</u> (located under

For those who did not receive my previous email, please see it below, as it contains important information about the report and Friday's meeting. Apologies for any inconvenience.

Best, Owen

Owen Peterson Program Coordinator (Temp) New Mexico Environment Department Environmental Protection Division Climate Change Bureau 505-487-0920 <u>owen.peterson@env.nm.gov</u>

From: Peterson, Owen, ENVSent: Tuesday, July 23, 2024 9:20 AMSubject: CTFS AC Technical Report & Agenda

Dear Advisory Committee,

I have attached the draft version of the Clean Transportation Fuel Standard Advisory Committee Technical Report for your review prior to our scheduled meeting this Friday, July 26. While the report is lengthy, please note that pages 15-88 consist solely of the written input that many of you kindly submitted to us, which we included verbatim. Given this, we encourage you to focus on pages 1-14. We look forward to your discussion and subsequent vote on approval of the report on Friday.

Reminder: The July 26th meeting at 9 AM is entirely virtual. The agenda can be found at <u>https://service.web.env.nm.gov/urls/xopWHZBu</u>. The agenda calls for adopting the 06/28 meeting minutes (available at <u>https://service.web.env.nm.gov/urls/eWsbigWJ</u>) and the 07/12 meeting minutes (available at <u>https://service.web.env.nm.gov/urls/vdLVVkwX</u>).

Please find the virtual meeting link below for your convenience:

#### **Virtual Meeting Info**

Link: https://nmed-oit.webex.com/nmed-oit/j.php? MTID=me8ce549294a0f899f2b95264ffc4715c

Meeting number: 2634 463 3183 Password: S4Cwp2JJpY3

Please reply to this email if you have any questions, and thank you again for your continued participation in the CTFS Advisory Committee process.

Best, Owen

Owen Peterson Program Coordinator (Temp) New Mexico Environment Department Environmental Protection Division Climate Change Bureau 505-487-0920 <u>owen.peterson@env.nm.gov</u>