



April 4, 2024

The Honorable Michael Regan, Administrator
U.S. Environmental Protection Agency
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Washington, DC 20460
Email: Regan.Michael@epa.gov

Cc: Janet McCabe, Deputy Administrator
Joe Goffman, Principal Deputy Assistant Administrator, Office of Air and Radiation
John Lucey, Deputy Associate Administrator for Intergovernmental Relations

Dear Administrator Regan,

On September 14, 2022, I sent you a letter highlighting the potential harm that a reformulated gasoline (RFG) mandate could have on the economy of the State of Colorado. This requirement results from a decades-old Clean Air Act (CAA) mandate that is increasingly counterproductive in light of transformative opportunities to reduce ozone precursor emissions from the transportation sector that have come about in the intervening time. Since the 2022 letter, Colorado has continued to study the impact of the CAA RFG requirement to supply RFG to our state and the potential impacts to our residents. Our independent third-party consultant also assessed the emission reduction impact likely to result from a switch to RFG and the associated change in ozone concentrations in the Denver Metro/North Front Range (DM/NFR) nonattainment area conclusively demonstrating extreme and unusual fuel and fuel additive supply circumstances that are the result of a pipeline or refinery equipment failure, namely a lack of pipeline and only one facility prepared to serve our market which had traditionally only met a third of total demand, as well as other events that could not reasonably have been foreseen or prevented and are not the lack of prudent planning on the part of the suppliers of the fuel or fuel additive to such State or region.

The results summarized in this request for an RFG waiver and the full study, a copy of which is attached, validates my hypothesis from the 2022 letter. The bold actions Colorado has taken, and continues to take, to reduce emissions from the transportation sector and move away from the use of fossil fuels have negated any potential emissions or environmental benefit from the costly and harmful RFG mandate. RFG requirements threaten Colorado's fuel supply, will raise prices, and may result in shortages at the pump. Moreover, this antiquated mandate creates an additional unintended consequence: we are seeing significant activity and requests to expand fossil fuel facilities such as terminals in the most polluted areas of Colorado in the ozone nonattainment area to supply RFG. These proposed projects from your elective enforcement of this requirement will

increase emissions of volatile organic compounds (VOCs) and other ozone precursor emissions in the community, and given lack of supply in Colorado will increase intra- and interstate fuel delivery truck traffic resulting in more, not less, harmful air pollution in our most vulnerable communities. In short, forcing this requirement on Colorado will create more air pollution.

In a response letter dated September 15, 2022, you stated “EPA stands ready to work with Colorado to ameliorate the public health impacts of ground level ozone in a way that considers the unique needs of Colorado” and “EPA will work with (Colorado) to explore all flexibilities that may be available under the Act to best meet Colorado’s implementation needs and public health goals of the law.”¹ I urge you to keep this commitment of partnership and flexibility in mind as you and your team act on this waiver request and review my comments below.

Unlike the onerous and counterproductive impacts of RFG, Colorado is focused on reducing mobile source emissions and accelerating the adoption of clean vehicles by implementing the low and zero emission vehicle (ZEV) standards for cars and trucks. The Colorado Clean Cars (CCC) rule will require 82% of new light-duty vehicle sales to be zero emissions by 2032. Colorado’s Advanced Clean Trucks (ACT) rule will require 40% - 75% of new medium and heavy-duty vehicle sales be zero emissions by 2035. Another component of this rule is the Low Nitrogen Oxides (NOx) Truck rule that sets more stringent emissions standards for heavy-duty vehicles.

To support these rules and other actions, Colorado has implemented three new transportation electrification enterprises funded by fees on retail deliveries and transportation network companies that are forecast to invest over \$700M in transportation electrification over the next decade. The state has committed to investing millions of dollars into expanding vehicle charging infrastructure statewide, offering nation-leading incentives for the purchase of electric vehicles and supporting the electrification of public transit, as well as public and private vehicle fleets. The state has also taken action to make the use of public transportation more accessible through the implementation of the ‘Zero Fare for Better Air’ program. We are making further strides in expanding access to public transit, reforming land use policies to encourage more housing near transit, and are on a path for a concerted effort to establish passenger rail in the Front Range in just a few short years.

Our efforts to improve air quality with modern technology and policy solutions go well beyond the transportation sector, of course, and include an achievable sector-by-sector strategy. Examples include a first-in-the-nation rule for the upstream oil and gas sector to achieve at least 30% and 50% reductions in NOx emissions by 2025 and 2030 respectively; our Air Quality Control Commission adopted these rules swiftly at my request². We are also leading the nation in reducing pollution from the electric power sector, with utilities in the state on a path to achieve more than 80% clean energy by 2030 and entirely phase out coal electricity generation. I have put in place

¹ https://insideepa.com/sites/insideepa.com/files/documents/2022/sep/epa2022_1648.pdf

² <https://cdphe.colorado.gov/reducing-nitrogen-oxides-from-oil-and-gas-exploration-and-production>

similar rules and strong incentives across Colorado's economy including in the built environment and the first direct regulation of GHGs from industrial sources requiring maximization of co-pollutant reductions including ozone precursors³. Our wide-ranging strategies on air quality and climate change are too far reaching to summarize in full here but for some light reading I recommend reviewing my administration's second greenhouse [gas pollution reduction roadmap](#) which offers a nearly complete recapitulation of the voluntary efforts we have undertaken over the past five years and my commitments for the remaining three years of my governorship.

The EPA reclassified the DM/NFR to a severe nonattainment area under the 2008 8-hour ozone National Ambient Air Quality Standard (2008 ozone NAAQS), thereby subjecting the region to the requirement to sell RFG^{4,5}, in an October 7, 2022, action⁶ - nearly thirty years after the adoption of CAA language requirement the sale of RFG in severe nonattainment areas. Congress could not have anticipated the current advancements in technology and clean energy options in all sectors of the economy and, relevant to RFG, the transportation sector when it enacted this CAA language.

Fortunately, both Section 211(c)(4)(C)(ii) and Section 211(k)(6)(ii) of the CAA explicitly allows the EPA Administrator to waive the RFG requirements in a state or region. Under Section 211(c)(4)(C)(ii), EPA may grant a waiver if three conditions are met. Current circumstances in Colorado meet each of these conditions:

Condition 1) [E]xtreme and unusual fuel or fuel additive supply circumstances exist in a State or region of the Nation which prevent the distribution of an adequate supply of the fuel or fuel additive to consumers;

The requirement for the sale of RFG in severe nonattainment areas currently applies in 17 states and the District of Columbia⁷. Unlike Colorado, the other areas in which RFG is required have access to larger supply networks able to provide adequate supply of RFG under normal operating conditions. The Denver Front Range (DFR) market, inclusive of the DM/NFR nonattainment area, is unusually constrained both by pipeline access, lack of ports as a landlocked state, and pipeline capacity as well as by the limited number of refineries that are able to provide fuel to the region. As discussed in greater detail later in this letter, there are no pipelines that are able to provide fuel to the DFR from the Gulf Coast refineries that already have the capacity to produce RFG. This leaves Colorado entirely dependent on a limited number of existing refiners to provide the region with needed fuel. The high cost of upgrades these refiners would need to undertake to produce

³ <https://cdphe.colorado.gov/GEMM-phase-2-rule>

⁴ The summer season is defined as June 1 through September 15 for retailers and wholesale purchaser consumers, and May 1 through September 15 for all other persons.

⁵ See 88 FR 70602

⁶ See 87 FR 60926

⁷ <https://www.epa.gov/gasoline-standards/reformulated-gasoline>

RFG coupled with the fact that these refiners can leave the DFR markets for less regulatorily constrained markets leaves refining capacity well below Colorado fuel demand a near certainty under an RFG mandate leading to likely shortages.

Condition 2) [S]uch extreme and unusual fuel and fuel additive supply circumstances are the result of a natural disaster, an Act of God, a pipeline or refinery equipment failure, or another event that could not reasonably have been foreseen or prevented and not the lack of prudent planning on the part of the suppliers of the fuel or fuel additive to such State or region;

For the DFR market to be able to absorb an RFG mandate without fuel shortages the region would require additional pipeline capacity by either connecting the DFR to existing RFG suppliers in the Gulf Coast or to a new refinery. Colorado cannot mandate that any company construct a pipeline to the DFR market, so there are no reasonable steps the State could have taken in the time frame of the pending action to address this limitation. Further, as fuel suppliers are not required to supply the region with RFG there was no requirement for them to have undertaken prudent planning efforts to supply the DFR with RFG, let alone invest in infrastructure to provide additional capacity to the area.

If a fuel supplier were inclined to develop additional infrastructure to provide the DFR with RFG, it would likely require a new interstate pipeline to transport RFG. These pipeline construction projects involve multi-year and interagency processes that take years to be approved and permitted not including the additional time required for construction and probably litigation. Because of Colorado's unique and unusual circumstances, fuel suppliers would have had to begin project planning at least 5-10 years in advance in order to be adequately prepared for the 2024 summer driving season. As the DM/NFR was reclassified in October 2022, the earliest date for which a fuel supplier could reasonably foresee that the sale of RFG would be mandated for the area, that would still leave the state without needed capacity for years for a pipeline to be operational. Given the state's aggressive action to expedite the adoption of electric vehicles and limit the transportation sector's reliance on fossil fuels, requiring Colorado to invest time and resources in additional fossil fuel infrastructure is a perverse mandate. The lack of pipeline capacity could not reasonably have been foreseen or prevented and is not the lack of prudent planning on the part of the suppliers of the fuel or fuel additive to such State or region. Furthermore other disruptions to the price and availability of fuel include international events including the war in Ukraine, and unanticipated changes in the region such as shifting refinery and fuel terminal capacity, delays in refinery improvements and in some cases unexpected construction projects and refinery malfunctions.

Condition 3) [I]t is in the public interest to grant the waiver (for example, when a waiver is necessary to meet projected temporary shortfalls in the supply of the fuel or fuel additive in a State or region of the Nation which cannot otherwise be compensated for).

To fully understand the impact a mandate to sell RFG would have on the DFR market Colorado commissioned a study by Energy Analysts International, Incorporated (EAI), which is attached as an appendix to this letter. EAI identified ten scenarios that could occur as a result of the implementation of the RFG sales requirement. Out of the ten scenarios EAI analyzed, nine resulted in fuel shortfalls ranging from 15 to 44 MBPD, corresponding to a 15 to 45 percent shortfall compared to peak July demands in the nonattainment area. The one scenario where fuel demands were met was identified as the lowest probability scenario with the highest associated cost for Colorado residents. The EAI study further concludes that the implementation of the RFG sale mandate would result in a 60 cent per gallon premium that would be borne by Colorado residents and most impactful to disproportionately impacted communities. This is 20 times the cost that EPA projected in their letter to me September 2022.

As this letter and the attached study lay out, there is an extreme and unusual fuel supply circumstance in Colorado, the extreme and unusual fuel supply circumstance is the result of events that could not have been reasonably foreseen or prevented and are not the lack of prudent planning on the part of the suppliers of fuel, and it is clearly in the public interest to grant the waiver and avoid a shortage.

Recognizing the detrimental impact a fuel shortage could have on the residents, the CAA further contemplates the ability for state's to seek regulatory relief from the requirement to sell RFG under Section 211(k)(6)(A)(ii) in the event that there would be an "insufficient domestic capacity to produce gasoline". Seeking relief under this option would provide the EPA with the ability to allow for an initial one-year extension with the potential for additional subsequent one-year extensions and allow the agency time to develop a longer-term solution that allows our state to continue to pursue alternative solutions that achieve far greater environmental benefits. Given the unique constraints on the DFR market and limited number of refiners that can supply the DFR market it is nearly certain that there will be insufficient capacity to produce gasoline for sale in the DFR if the sale of RFG is mandated.

The State of Colorado is respectfully requesting that EPA use its existing authority under Section 211(c)(4)(C)(ii) or Section 211(k)(6)(A)(ii) of the CAA to make good on your pledge that extreme and unusual circumstances exist, and we look to work with you to develop a short- and long-term solution that waives the requirement for the sale of RFG in the DM/NFR 8-hour ozone nonattainment area.

My Administration has worked tirelessly to move Colorado’s economy away from reliance on fossil fuels broadly and towards lower emissions transportation choices in particular. To meet the challenges a shift to RFG will cause, Colorado will need to refocus efforts away from our comprehensive clean energy strategy and potentially towards pipeline construction projects, expansion of fuel terminals, and work with refiners to ensure they have the air permits and allowances for additional fossil fuel burning equipment to produce the RFG needed to fuel the DM/NFR markets. To prevent the refinery capacity shortages to produce RFG and the likelihood of insufficient pipeline capacity to transport required volume of RFG to meet consumer fuel demands this summer by the May 1, 2024 deadline, Colorado is asking for swift and reasonable action from EPA to evaluate and develop a solution for what is best for the state and our shared air quality goals.

The Denver-Front Range RFG Market Study Key Findings

To best understand the unique impact the mandated sale of RFG would have on Colorado and provide EPA with the most up to date information on current market conditions in the state, Colorado commissioned a study entitled “Impact of the Shift to Reformulated Gasoline on Colorado and Denver Front Range Fuel Markets” (EAI Study). The project team at EAI has decades of experience in the petroleum business, conducting studies of refined product markets and supply chains, including regionally, nationally, and internationally, including a member with particular expertise at Colorado’s only refinery. The consultants’ impressive credentials are attached. This objective study concludes that there is significant uncertainty that DM/NFR will be able to be supplied with an adequate amount of RFG this summer; in all but one of the scenarios evaluated there is a significant fuel supply shortage resulting from the RFG requirement.

The DFR market covers northeastern Colorado, extending from Pitkin County north to the state border and east to the Kansas border, and incorporates the DM/NFR nonattainment area. The DFR market had an average fuel demand of 114 MBPD as of 2022. Fuel demand in the DFR was anticipated to increase to 120 MBPD in 2024, or 1.8 billion gallons per year (*Figure 1*).

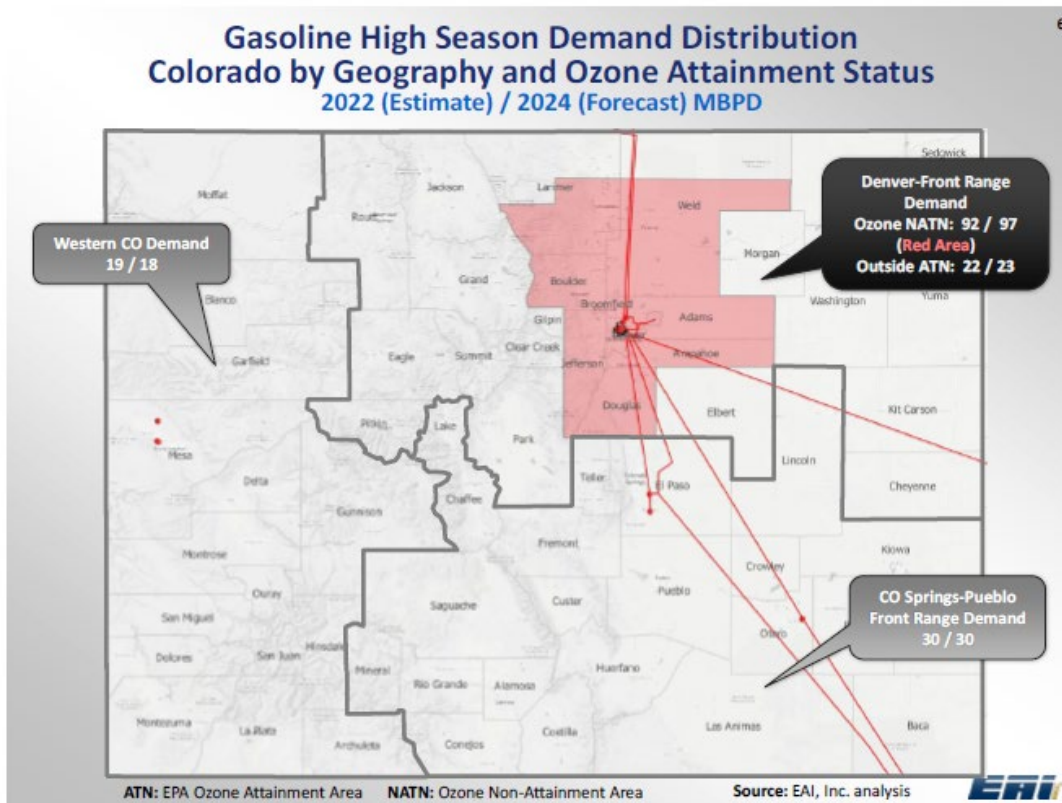


Figure 1. DFR Market area, with DM/NFR nonattainment area noted in red, and current (2022)/projected (2024) fuel demand levels in MBPD).

There are 2 key extreme and unusual supply constraints to the RFG DFR/Colorado market:

1. DFR is uniquely constrained in pipeline and supply capacity geographically due to the geographic isolation from the major Gulf Coast refineries and trunk pipelines and separation from the national distribution network.
2. Colorado has insufficient in-state refining capacity and depends on outside fuel providers to supply the bulk of Colorado’s market needs. Out-of-state fuel providers are not required to sell their product in Colorado and their contracts allow them to leave the market at any time which could create a dynamic that produces instability when market conditions are modified.

The Suncor refinery, located in Commerce City— a severely polluted, disproportionately impacted environmental justice community— provides the DFR market with approximately 38% of its marketable gasoline, varying by season and demand. The rest of the supply is brought into the region by five major pipelines. These pipelines have historically been constrained during the summer months, operating near or at capacity. Additionally, these pipelines also transport needed diesel and jet fuel into the DFR market, reducing the amount of gasoline they may carry. In

response to the need for increased pipeline capacity, a smaller product pipeline from the Texas Panhandle has been recently repurposed to carry refined product. (Figure 2)

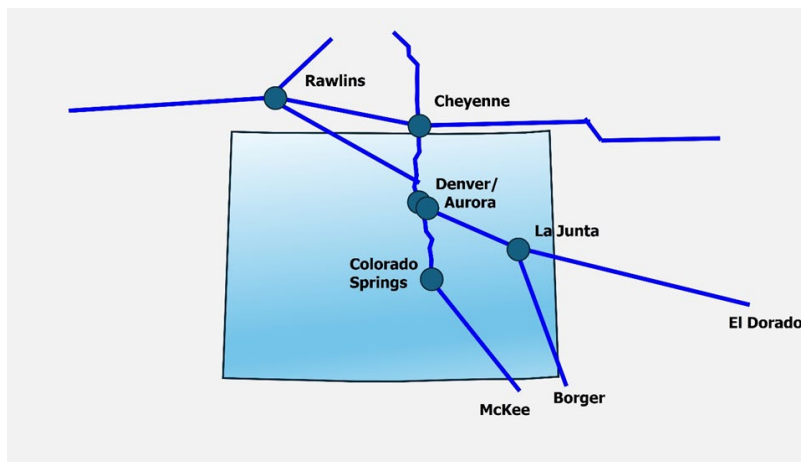


Figure 2. Major distribution pipelines servicing the DFR market. Based upon Magellan system map with selected Front Range suppliers. Texas Panhandle pipeline not depicted. (March 2020)

To increase the production and supply of RFG to the DFR market, the mid-continent refineries would require significant long-term investments and plant upgrades which would likely lead to increased emissions footprints to adapt to new fuel specifications. This risk is also true of Colorado's only refinery in Commerce City. Each refinery's circumstances and operational constraints are unique with some requiring substantial overhauls to increase RFG production capacity. The actions required to supply RFG to the DFR market is counter-productive to the Biden Administration's work to reduce greenhouse gas and ozone precursor emissions to achieve NAAQ standards and GHG targets. The switch to RFG has the potential to cause significant product shortfalls if these refineries cannot produce RFG in volumes necessary to meet the needs of Colorado residents, or decide to leave the market altogether. The introduction of summertime specifications for RFG is a major source of supply instability and uncertainty, along with the resulting possible supply shortages and price spikes.

The EAI study conducted a thorough analysis of supply impacts associated with the adoption of RFG, analyzing ten potential scenarios. Out of the ten scenarios EAI analyzed, nine resulted in RFG production shortfalls ranging from 15 to 44 MBPD. The only scenario where fuel demands were met was determined to be the lowest probability scenario with the highest associated cost. The scenarios identified by EAI result in a 15 to 44 MBPD shortfall, corresponding to a 15 to 45 percent shortfall compared to peak July demands in the nonattainment area (EAI Study). It should also be emphasized that refineries operate less efficiently and at a lower capacity to produce RFG. Increasing operations and most likely, emissions, at refineries to meet market demand for RFG is again, counterproductive to progressive actions Colorado has taken to achieve significant emission

reductions across our state and harms our most vulnerable communities most exposure to current and historic air pollution.

Colorado's unique geography and infrastructure limit RFG market supply and also have a potentially significant impact on the price Colorado consumers will pay for a gallon of RFG. I am concerned that these cost increases will have the biggest impact on the most vulnerable communities, only compounding the difficulties with inflated cost of living and in turn be exacerbated in environmental justice communities neighboring our and other refineries. Currently, the Gulf Coast, a highly competitive environment with little supply constraint, has a premium of 10 cents per gallon for RFG over the equivalent price of conventional gasoline. This is the likely minimum premium the DFR market could anticipate with the implementation of RFG. In the EAI Study, the most likely scenario concluded RFG prices in the DFR would average over 60 cents per gallon over the equivalent price of conventional gasoline (assumed to be mid-continent prices in the EAI study) with price spikes of over one dollar a gallon (EAI Study).

Air Quality Benefit Assessment

In partnership with the Regional Air Quality Council (RAQC), staff at Colorado Department of Public Health and Environment's (CDPHE) Air Pollution Control Division (Division) conducted an assessment of the emission reduction benefit likely to result from the requirement to sell RFG and the associated change in ozone concentrations in the DM/NFR nonattainment area.

The analysis was conducted using the EPA's Motor Vehicle Emission Simulator Version 3 (MOVES3) tool and estimated a 2 tons per day decrease in VOC emissions, a 0.5 tons per day decrease in NOx emissions, and no decrease in greenhouse gas emissions associated with the sale of RFG in the DM/NFR during the summer months. An additional analysis was conducted using photochemical grid modeling (PGM) to determine what impact the sale of RFG would have on ozone concentrations in the DM/NFR. This analysis showed a *maximum* benefit of a 0.1 part per billion (ppb) decrease in ozone concentrations. This decrease is primarily seen in the Denver metro area, with no benefit anticipated at monitors in the north front range that historically measured some of the region's highest ozone concentrations.

The benefits of the requirement to sell RFG pale in comparison to other measures the state has taken to decrease ozone concentrations. For example, in October 2023, the Colorado Air Quality Control Commission (AQCC) adopted revisions to its low emission vehicle program to accelerate the adoption of electric vehicles in Colorado⁸. In support of these revisions, Division staff assessed the emission reduction benefits associated with the adoption of the rule. This analysis shows a 0.65 ton per day (tpd) reduction in VOC and 0.6 tpd reduction in NOx the first year of implementation

⁸ [5-CCR-1001-14_eff-021424.pdf](#)

compared to baseline conditions, and a 3,075 metric tpd reduction in greenhouse gasses⁹. This reduction benefit increases to a 15.8 tpd reduction in VOC, 6.9 tpd reduction in NOx, and 36,873 metric tpd in greenhouse gasses once fully implemented.¹⁰ And unlike with RFG, policies like this one reduce, not increase, consumer costs.

Conclusion

Analyses conducted by EAI indicate that existing supply networks will be insufficient to meet supply, requiring distributors to take extraordinary measures to identify alternative sources to meet consumer demand if the sale of RFG is mandated next month. These extraordinary measures may include actions like significant increases in trucking in products resulting in environmental impacts Colorado is working to minimize. Any supply shortages could significantly hamper Colorado's economy and undermine adequate consumer supply. Coupled with the unique geographic isolation of the DM/NFR, the requirement to sell RFG could lead to unreasonable increases in the retail prices of gasoline. In the most likely scenario identified by EAI, if the requirement to sell RFG is not waived Colorado would be subject to a 60 cent per gallon premium for RFG, while also experiencing a 15 to 44MBPD shortfall of available fuel. With an average daily fuel demand of 114 MPBD, this means Coloradans will be spending an additional \$2.9 million dollars per day on fuel with nearly imperceptible reductions to ozone concentrations in a limited portion of the DM/NFR nonattainment area. As there is not sufficient domestic capacity to supply the DM/NFR nonattainment area with RFG, it is appropriate and necessary for EPA to provide a waiver of the RFG requirement under Section 211(c)(4)(C)(ii) and develop a longer term regulatory solution that contemplates how technological advances and state policy are and will achieve significantly more impactful air quality benefits that are good for Colorado's economy and consumers, not a burden.

Lastly, I am deeply disturbed by the impact this federal mandate would have on environmental justice communities in Colorado. While EPA's authority to issue a waiver centers primarily on fuel supply (a justification for which is rigorously supported by the quantitative analysis included in this submittal), I urge you to take EPA's statutory discretion implied by an RFG exemption for "the public interest" as seriously as I do. We are already seeing new permit applications to expand fuel terminals to ensure adequate storage and transportation of imported RFG. Without a waiver, the Colorado communities already most burdened by pollution from fossil fuel activities and heavy truck traffic will shoulder the brunt of the harms caused by this irrational federal mandate.

I know the administration and the EPA share our goals to improve air quality, advance environmental justice, and protect consumers from unnecessary, unhelpful, and inefficacious requirements like this RFG mandate. While neither of us can compel Congress to solve the root

⁹ Greenhouse gas emission reductions are reported in terms of carbon dioxide equivalent (CO₂e)

¹⁰ [APCD_FinalEIA_Regulation 20.pdf](#)

problem— a 34-year-old legacy requirement of the Clean Air Act— you fortunately have the unambiguous ability, and our full support, to temporarily waive this irrelevant and counterproductive decree. A long-term solution is needed that avoids this requirement in favor of more effective interventions. And if a longer term solution is impossible under current law, at the very least we need assurance that a reprieve is made available through the waiver requested in this letter to the people of Colorado.

Sincerely,

A handwritten signature in blue ink that reads "Jared Polis". The signature is written in a cursive, flowing style.

Jared Polis
Governor of Colorado