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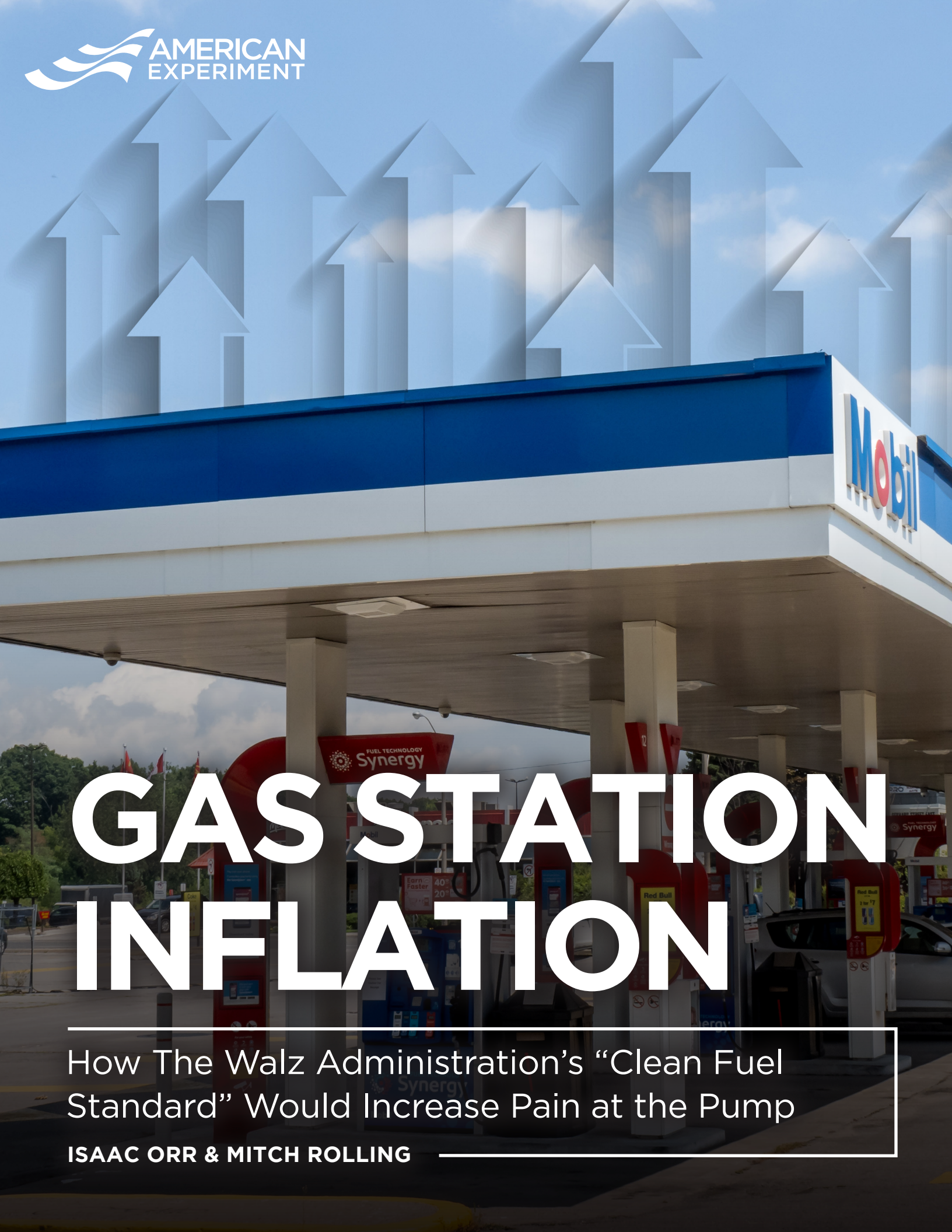

GAS STATION INFLATION

How The Walz Administration's "Clean Fuel Standard" Would Increase Pain at the Pump

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Executive Summary

- Average gasoline prices in Minnesota are over $3.95 per gallon for regular grade fuel, and diesel fuel prices are above $4.75 per gallon, the highest since 2013.[1,2]
- The Walz administration is currently seeking to impose a Clean Fuel Standard — a regulation that originated in California — to reduce the amount of carbon dioxide emitted from transportation fuels in Minnesota.
- This policy will cause gasoline and diesel prices to increase substantially.
- For example, the California fuel standards increased the cost of gasoline and diesel fuel by 22 cents per gallon in 2020 in California, according to an analysis by Stillwater Associates.[3]
- If enacted in Minnesota, Stillwater Associates estimates the California fuel standards would increase the cost of gasoline by 20 cents per gallon in the near term and 54 cents per gallon by 2035. Diesel prices are expected to increase by 20 to 53 cents per gallon on this timeline.[4]
- This would cost the average Minnesota household an additional $210 to $568 per year in additional gasoline costs in constant 2022 dollars.
- The cost of the California fuel standards will likely be even higher after 2035 as the regulations become more onerous.
- Rural families, single-parent households, and new arrivals to Minnesota would be hit hardest by these steep cost increases because they already spend a higher portion of their budgets on energy costs than more affluent households.
- None of the additional costs imposed on Minnesota families will pay for upgrading our roads and bridges.
- Instead, these extra costs would become profits for companies that generate credits under the mandates and sell them to gasoline and diesel producers. This can include companies that install electric vehicle charging stations or generate fuel with biomethane, renewable diesel, or other fuels.
- Despite its high costs, the California fuel standards will have zero measurable environmental benefits because the program will deliver an immeasurably small reduction in future global temperatures.
- The California fuel standards seek to reduce greenhouse gas emissions from Minnesota's transportation sector by 20 percent by 2035. However, this reduction would only decrease future global temperatures by 0.0002° C by 2100, an amount so small it is impossible to measure with even the most sophisticated scientific equipment.
- In fact, eliminating all of the greenhouse gases emitted by transportation in Minnesota would reduce future global temperatures by 0.00095° C by 2100.
- Furthermore, the costs of avoiding emissions under a California fuel standard exceed the Social Cost of Carbon estimates established by both the Obama and Trump administrations. As a result, the policy fails a basic cost-benefit analysis.
- Minnesotans deserve a clear explanation of the costs and benefits of the proposed California fuel standards so they know whether they are receiving value for paying higher prices at the pump. This would entail a thorough explanation of how the program will increase costs for Minnesota families by $210 to $568 per year in return for reducing future global temperatures by 0.0002 degrees C by 2100.

Introduction

Americans are struggling under the highest inflation in 40 years. The Bureau of Labor Statistics reports that prices for food, housing, cars, and energy are rising faster than wage growth.[5,6] Unsurprisingly, recent Quinnipiac University polling found Americans consider inflation to be the most urgent issue facing the country.[7]

Rampant inflation has also affected the price of gasoline and diesel. As of March 10, 2022, Minnesota families and businesses were paying more than $3.95 per gallon for gasoline and $4.75 per gallon of diesel fuel, the highest prices since 2013.[8,9] Unfortunately, gasoline and diesel prices could continue to rise because Minnesota Governor Tim Walz and other Democratic lawmakers are seeking to enact new California fuel regulations in Minnesota that will further increase prices, as they have in California and Oregon.

These regulations, which originated in California, are called a Low Carbon Fuel Standard (LCFS), and they caused Golden State gasoline prices to increase by 22 cents per gallon in 2020, according to an analysis by Stillwater Associates.[10]

If enacted in Minnesota, Stillwater Associates estimates the California fuel standard would increase gasoline prices by 20 cents per gallon in the near term, with costs eventually rising to 54 cents per gallon by 2035 as the regulations become more stringent over time. Diesel prices would eventually hit 53 cents per gallon, according to the analysis.

The additional costs resulting from adopting the California fuel standard in Minnesota would increase yearly costs for Minnesota families and businesses by $210 to $568 per household. Rural families, single-parent households, and new arrivals to Minnesota would be hit hardest by these steep cost increases.

Unsurprisingly, these proposed regulations are deeply unpopular. According to American Experiment's ***Thinking Minnesota*** poll, 50 percent of Minnesotans strongly oppose the new mandates, 9 percent somewhat oppose them, 16 percent somewhat support them, and 21 percent strongly support them. Only 4 percent had no opinion, and 1 percent refused to answer.[11]

"Rising gas prices are harmful to Minnesota families and businesses because it leaves them with less money for other important expenses like healthcare, education, or saving for a rainy day."

Rising gas prices are harmful to Minnesota families and businesses because it leaves them with less money for other important expenses like healthcare, education, or saving for a rainy day. Higher fuel costs will also lead to higher levels of inflation because businesses will have higher overhead costs, and they will attempt to raise the cost of their goods or services to make up for higher energy prices.

Recognizing the harmful impact of high gas prices on family budgets, and perhaps their electoral prospects, several Democratic lawmakers in the Minnesota House of Representatives have proposed a gas tax holiday from Memorial Day to Labor Day. This temporary tax holiday would save the average Minnesota family $73 during this three-month period. These savings are dwarfed by the permanent high prices Minnesotans would pay under the California fuel standard.

Rather than offering gas tax gimmicks during an election year, Minnesota policymakers should focus on making our energy supplies as secure and affordable as possible. Unfortunately, the California fuel standard increases prices for no measurable environmental benefits. ■

Section I: What is a California Low Carbon Fuel Standard, or Clean Fuel Standard?

The LCFS originated in California and has since been adopted by Oregon and Washington. In Oregon, the regulations are known as the Clean Fuels Program (CFP).[12] In Washington, they are known as the Clean Fuel Standard (CFS), which is the name the Walz administration is using for the proposed regulations.

While these programs have slightly different names, they are all based upon the regulations enacted by the California Air Resources Board (CARB). For the sake of simplicity, we refer to all these programs as the California Fuel Standard (CFS).

The CFS is a complicated cap-and-trade system created by the government aimed at lowering emissions of greenhouse gasses (GHGs). It attempts to do so by reducing the average amount of GHGs emitted by burning fuel for transportation in the state. The amount of GHGs emitted in each gallon of fuel is described as its carbon intensity (CI).

Proponents of enacting a CFS in Minnesota argue that it is a free market-based system for reducing GHG emissions from the fuels we rely upon every day. This argument is wrong on its face because government mandates, by definition, are market distortions that pick winners and losers. Mandates are not free markets.

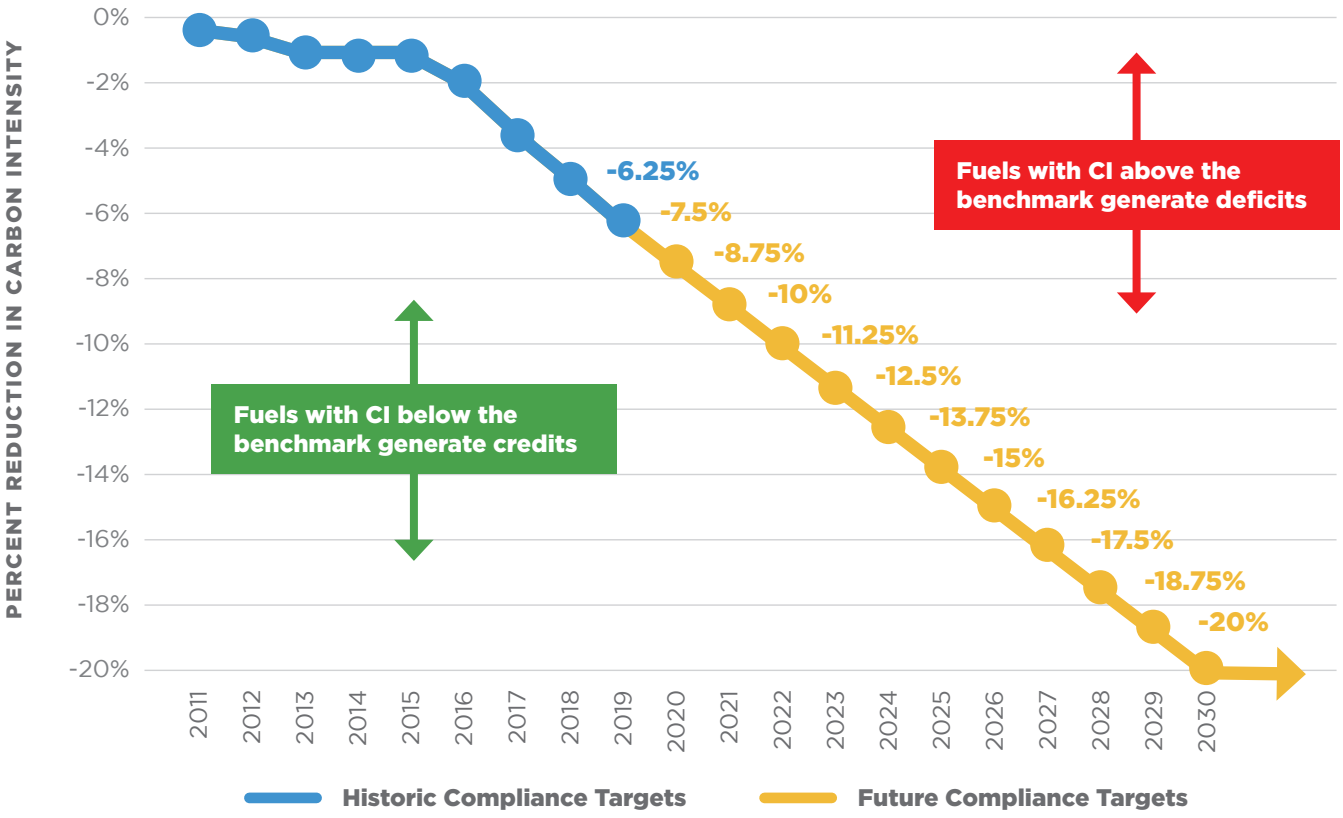
"...Government mandates, by definition, are market distortions that pick winners and losers. Mandates are not free markets."

Under the regulations, the government sets a limit on the permissible CI score – called the CI standard – for fuels sold in the state, with the regulations becoming stricter every year. The mandated reductions in the CI standard for California are shown in Figure 1, which was created by CARB. Each year, the CI standard requires fuel producers to reduce the CI score of their fuels by a larger amount until reaching a 20 percent reduction by 2030.[13] California is also considering extending the CFS beyond 2030, potentially at an accelerated reduction rate.[14]

Fuels sold in the state with a CI score above the limits set by the government are assessed a deficit, and fuels sold with a CI score below the government-mandated benchmarks are awarded credits. (It helps to think of deficits as demerits and credits as merits). Each credit represents one ton of carbon dioxide emissions averted, compared to the prevailing CI standard.[15]

FIGURE 1

How the CFS Works: Credit and Deficit Generation



Every year, the government mandates a lower CI score for the fuels used in cars and trucks. By 2030, California will require a 20 percent reduction in CI, compared to the baseline, to generate credits instead of deficits.

To comply with the CFS regulations, fuel producers with deficits must either blend lower-carbon fuels with the gasoline or diesel fuel they sell or buy credits from other fuel producers that have accumulated credits. In other words, for every deficit that is created, a credit must be purchased to offset it. The system used to track and trade credits is created and administered by the government.

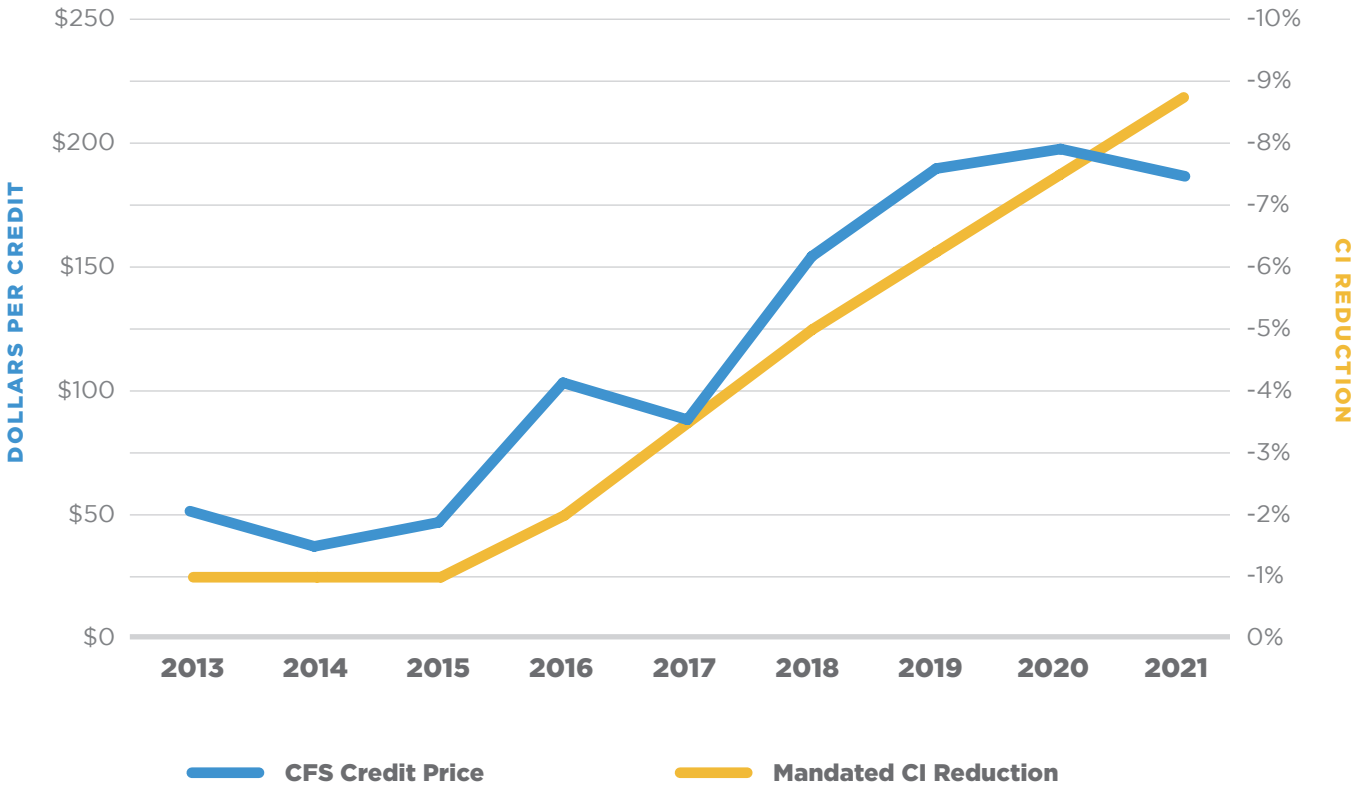
As the regulations become stricter every year, the cost of complying with them increases. This can easily be seen in California by examining the cost of the credits sold on the credit-trading system.

Figure 2 shows the California credit price increasing over time as the mandates became more stringent.[16] CARB data shows the average credit price hit nearly $200 per credit in 2019 and 2020 before falling in 2021 due to a drop in demand for gasoline resulting from the COVID-19 pandemic and an increase in renewable diesel production in California.[17]

As credit prices increase, the cost of doing business for gasoline and diesel fuel producers also increases because they are required to buy credits at more expensive prices. These additional costs are then passed on to the consumer in the form of higher prices for gasoline and diesel fuel at the pump. ■

FIGURE 2

Annual CARB CFS Credit Price vs Mandated CI Reduction



CFS credit prices have become more expensive as the government-mandated CI reductions have become more stringent.

SOURCE: CALIFORNIA AIR RESOURCES BOARD

Section II: Higher gas prices for Minnesota families and businesses

Adopting a CFS in Minnesota will saddle Minnesota families and businesses with higher prices at the pump for years to come.

According to Stillwater Associates, each incremental reduction in CI becomes increasingly costly because it requires bigger changes to the existing fuel mix.[18] This means the CFS is likely to have smaller up-front costs but become increasingly expensive over time.

U.S. Energy Information Administration (EIA) data show Minnesotans consumed 2.3 billion gallons of gasoline in 2019, which equates to approximately 1,053 gallons per household.[19] Increasing the cost of gasoline between 20 and 54 cents per gallon would result in an additional cost of $210 and $568 per year in gasoline expenses.

While some advocates of the CFS may argue that it will not increase fuel prices, the governments of California and Oregon freely admit that this policy has increased the cost of gasoline and diesel fuel in these states.[20] In fact, the Oregon Department of Environmental Quality (DEQ) has a webpage entitled "Annual Cost of the Clean Fuels Program," that details the cost increases caused by the CFS.[21,22] This webpage outlines the cost of the CFS in Oregon, and provides the formula needed to calculate future costs based on a variety of assumptions.

Comparing costs with Oregon

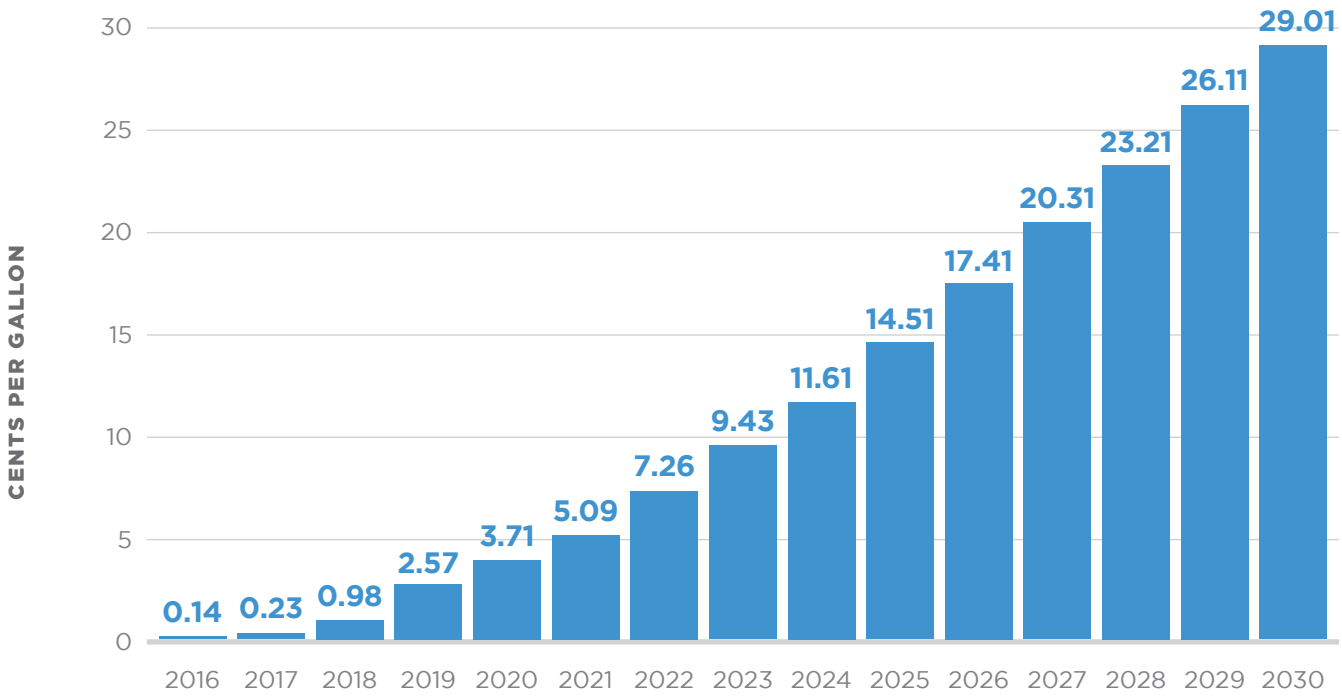
Other CFS advocates argue that the Oregon program only increased the price of gasoline by 3.7 cents per gallon in 2020. While this is true, it is also a misleading talking point because Oregon only required a CI reduction of 2.5 percent that year. As the program becomes more stringent every year, the cost of compliance will increase.

To demonstrate this point, American Experiment used the formula provided by the Oregon DEQ and plotted the expected annual increase in gasoline costs for Oregon based on the credit price of $123.85 reported for January of 2022 (See Figure 3).[23] Using this credit price, the Oregon program will increase the cost of gasoline by 7.26 cents per gallon in 2022, and 29.01 cents per gallon by 2030, when the law requires a 20 percent CI reduction.[24] The costs of the Oregon CFS will be higher than these estimates if the cost of credits increases over time, as they have in California.

It's important to note that the cost increase shown in Figure 3 is only the direct cost of the program and does not include the indirect costs that consumers will likely pay in the form of higher prices for groceries and other goods and services as a result of adopting CFS regulations.

FIGURE 3

Cost Increase for E10 Gasoline Under the Oregon CFS



The cost of the CFS program in Oregon is shown for each year using the formula provided by the Oregon DEQ. Prices are low in the early years, but quickly ramp up over time. A similar cost would likely be seen in Minnesota. Historical average annual credit prices are used for 2016 through 2021. Credit prices in the future are held constant at $123.85.

SOURCE: OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

In Minnesota, the cost of gasoline under a CFS will ultimately depend on the cost of the credits sold. Figure 4 shows the cost of the CFS in Minnesota based on three different credit prices, one based on Oregon prices of $123.85, one based on California prices of $167, and one credit price of $231 per ton, which is the price needed to increase prices to 54 cents per gallon in accordance with estimates by Stillwater Associates.[25,26]

As Figure 4 shows, gasoline costs will increase by almost 29 cents per gallon at Oregon credit prices, nearly 39 cents per gallon at California credit prices, and if credit costs reach $231 per credit, which is only slightly higher than the cost of credits in California in 2020 in 2022 dollars, it would increase the cost of gasoline by 54 cents per gallon in 2035.

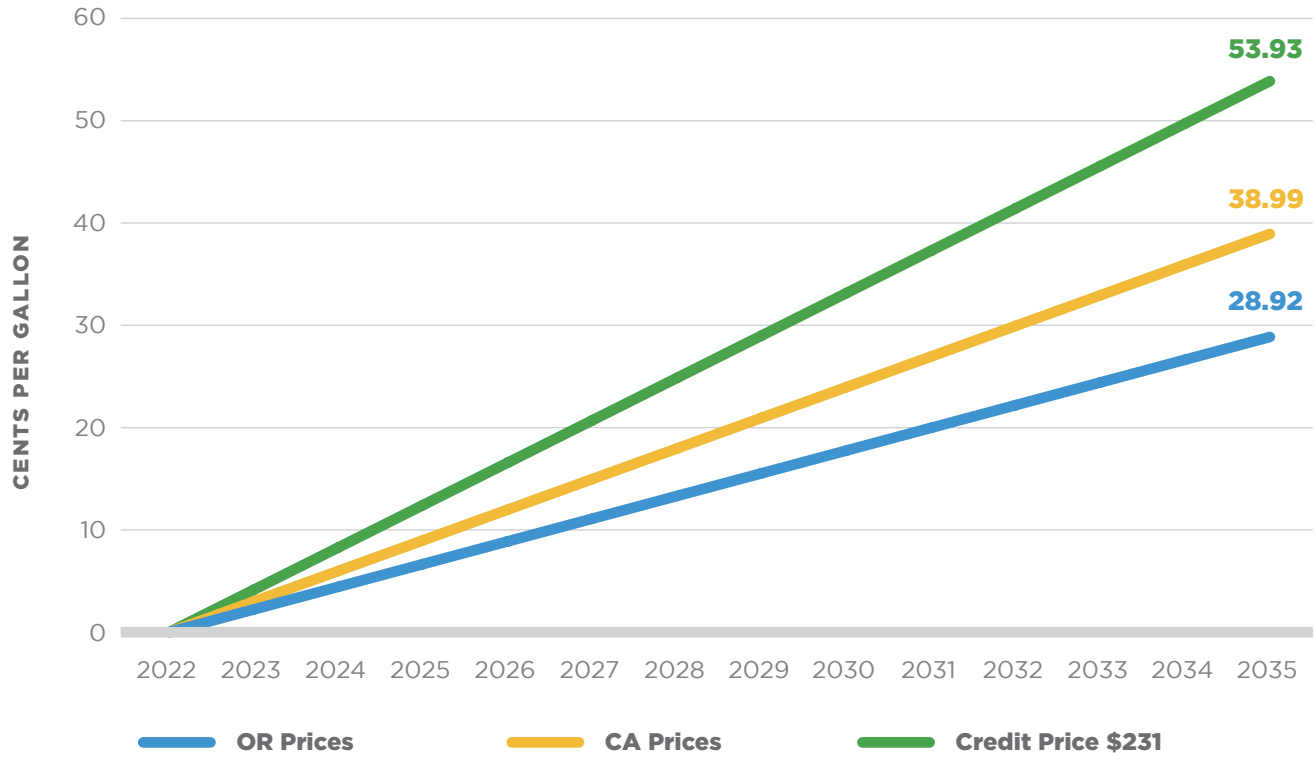
Why it matters

Advocates of the CFS in Minnesota are necessarily calling for increases to the cost of fuel in Minnesota, as has been demonstrated in California and Oregon.

Rising gas prices are harmful to Minnesota families and businesses because it leaves them with less money for other important expenses like

FIGURE 4

Minnesota CFS Potential Additional Cost Per Gallon



The cost per gallon of the CFS program will increase every year as the regulations become stricter. The price of gasoline under the program will depend on the price of credits under the mandate.

SOURCE: OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY, CARB

groceries, healthcare, education, or saving for a rainy day. Higher fuel costs will also lead to higher levels of inflation because businesses will have higher overhead expenses, and they will attempt to raise the cost of their goods or services to make up for higher energy prices.

Rural families would be disproportionately harmed by a CFS because residents of Greater Minnesota already pay higher energy bills than urban and suburban residents. Figure 5 below uses federal data to show household energy costs for home heating and electricity in each Minnesota county.[27] It is important to note that this map does not account for gasoline or diesel costs.

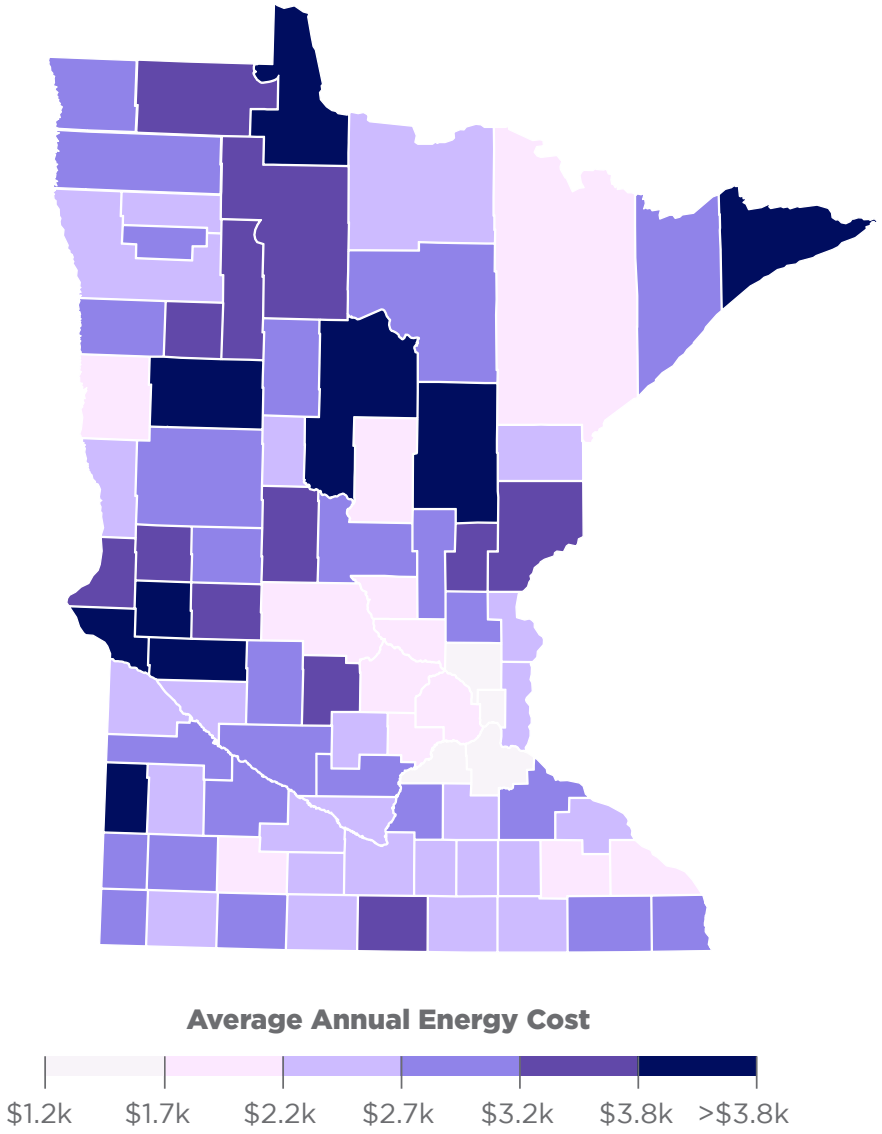
While Hennepin and Ramsey County residents only spend $1,731 and $1,513 for energy expenses, respectively, Becker and Big Stone County residents paid $3,876 and $4,188, respectively.

Enacting a CFS will harm rural Minnesotans because they already pay higher energy bills than Minnesotans living in the Twin Cities, but they also drive further to get to work, the grocery store, or the doctor's office. As a result, the CFS will hurt rural residents most.

Despite the increasing pain at the pump that a CFS would cause in Minnesota, it would have zero measurable environmental benefits – which is the entire justification for this expensive program. ■

FIGURE 5

Average Annual Energy Cost by County



This map shows average household energy expenses by county in Minnesota. Rural counties spend more for home heating and electricity than urban and suburban households. This map does not consider gasoline or diesel fuel expenses.

Section III: Economically punitive, environmentally immeasurable

Governor Walz has argued that implementing a CFS is necessary to reduce GHG emissions from the transportation sector in Minnesota.[28] However, it is important to understand that implementing a CFS is an incredibly expensive way to reduce carbon dioxide (CO_2) emissions and that any emissions reductions achieved will have zero measurable impact on future global temperatures, making this proposal all pain and no gain.

Expensive emissions reductions

As discussed earlier, each credit under the CFS represents one ton of CO_2 equivalent reduced from the transportation fuel fleet. According to CARB, California credits were priced at $167 per credit in January of 2022, and credit prices in Oregon were $124 during February 2022.[29,30] The cost of these credits far exceeds the Social Cost of Carbon (SCC) estimates created by both the Obama and Trump Administrations.

The SCC is a metric that seeks to estimate the economic costs, or damages, of emitting one additional ton of CO_2 into the atmosphere and thus the benefits of reducing emissions.[31] The Obama administration estimated the SCC to be approximately $57 per ton (in 2022 dollars) in 2020, and the Trump administration estimated costs to be $1 per ton.[32,33]

Using the Obama SCC estimates, it would cost nearly three times more to avert a ton of CO_2 under the CFS than the damages incurred from the emissions, and it would cost twice as much using Oregon's credit price. Compared to the Trump administration's SCC estimates, it would cost 167 times more and 124 times more to reduce emissions, at California and Oregon credit prices, respectively, than the damages associated with the emissions.

This means the CFS fails a simple cost-benefit analysis using even the Obama administration's SCC estimates. This means it is better to do nothing than to implement the CFS. If Governor Walz's advocacy for enacting a CFS is truly based on science, this fact should force him to abandon the policy.

Zero measurable impact on temperatures

To understand how reducing GHG emissions from Minnesota transportation fuels by 20 percent by 2035 will impact future global temperatures, it helps to examine the impact of the Clean Power Plan (CPP), which was widely considered to be the

Obama administration's signature climate change initiative. Proponents of the CPP claimed it would have reduced annual CO_2 emissions nationally by 730 million metric tons by 2030.[34]

The climate model used by the Environmental Protection Agency (EPA) during the Obama administration to estimate the CPP's effect on global temperatures, the Model for the Assessment of Greenhouse-Gas Induced Climate Change (MAGICC), found the CPP would have reduced future warming by only 0.019° C by 2100, an amount too small to be accurately measured with even the most sophisticated scientific equipment.[35]

The 7.3 million metric tons of CO_2 no longer emitted as a result of the CFS would be roughly 1 percent of the CO_2 reductions projected for the CPP. As a result, it would potentially avert 0.0002° C of warming by 2100, an amount far too small to be measured. In fact, eliminating all the 36.5 million metric tons of GHGs emitted by the transportation sector in Minnesota would reduce future global temperatures by 0.00095° C by 2100.

Emissions reductions will benefit the wealthy, not the poor

One justification the Walz administration will likely use to support this huge increase in the cost of gasoline is that it will deliver large environmental benefits to people living in low-income communities and serve to increase racial equity.[36] However, the real-life data from California show the opposite to be true.

An analysis from the Washington Policy Center found rich Californians received twice as many air-quality benefits as the poor from air pollution reductions under the CFS, according to CARB data.[37]

The analysis examined the locations of all of the electric vehicle (EV) charging stations, hydrogen, and natural gas filling stations that generate CFS credits in California. These stations were examined because EVs and natural gas vehicles reduce emissions of particulates more than ethanol, which does less to reduce emissions of fine particles.

These filling locations were then matched to California median household income data from the U.S. Census, sorted by census tract. The analysis found that the wealthiest 10 percent of census tracts have the most EV charging stations and natural gas filling stations in the state. The census tracts representing the top 30 percent of income earners had 43 percent of the charging stations. In contrast, the census tracts with the poorest 30 percent of earners had only 22 percent of the EV stations.

In other words, the rich received twice the benefit as those in poor communities.

Despite what advocates of a Minnesota CFS may claim about the policy helping minority communities, the reality is exactly the opposite. Adopting a CFS will simply mean low-income communities would be saddled with higher energy costs for imaginary environmental benefits. In fact, these benefits would be disproportionately reaped by wealthy Minnesotans, while the costs would be borne by households who already pay a larger portion of their income on energy bills. This is trickle-down environmentalism where the poor are forced to pay higher prices at the pump to subsidize wealthy EV owners.

The effectiveness of any policy should be measurable. Minnesotans deserve a clear explanation of the costs and benefits of the proposed CFS so they know whether they are receiving value for their increased expenses. This would entail a thorough explanation of how the program will increase costs for Minnesota families by $210 to $568 per year in return for reducing future global temperatures by 0.0002° C by 2100.

Unfortunately, Minnesota residents are unlikely to get this explanation from the politicians pushing this costly policy. ■

Section IV: Where does the money go?

Under a CFS, Minnesotans will see large increases in gasoline and diesel fuel costs, but unlike a gas tax, which increases prices at the pump to pay for roads and bridges, none of the extra money Minnesotans will pay at the pump as part of a CFS will pay for these crucial infrastructure projects.

This begs the question, where will the money go?

Instead of being used for infrastructure projects, the extra costs paid by Minnesota families would become profits for the companies that generate credits and sell them to gasoline and diesel producers under the mandates. Among the companies that will be able to sell credits include companies that install electric vehicle charging stations or generate fuel with biomethane, renewable diesel, or other fuels.

What kind of fuels generate credits and deficits?

The types of fuels that will generate credits and deficits will depend on how the program is structured in Minnesota. During the early years, the CI standard will be lenient enough that most fuels receive a credit. As such, gasoline and diesel will generate deficits, and fuels like ethanol, biodiesel, and electricity will generate credits. However, based on California's CFS program, as time goes on vehicles using electricity or biomethane will generate far more credits than vehicles using ethanol or biodiesel. This will dampen enthusiasm for investment in these fuels.

Figure 6 shows that as the CFS becomes more stringent over time, common ethanol blends will become deficit generators, rather than credit generators. By 2035, it will be far more profitable to generate credits with electricity than ethanol, which means the CFS will reduce the demand for products grown by Minnesota farmers.[38]

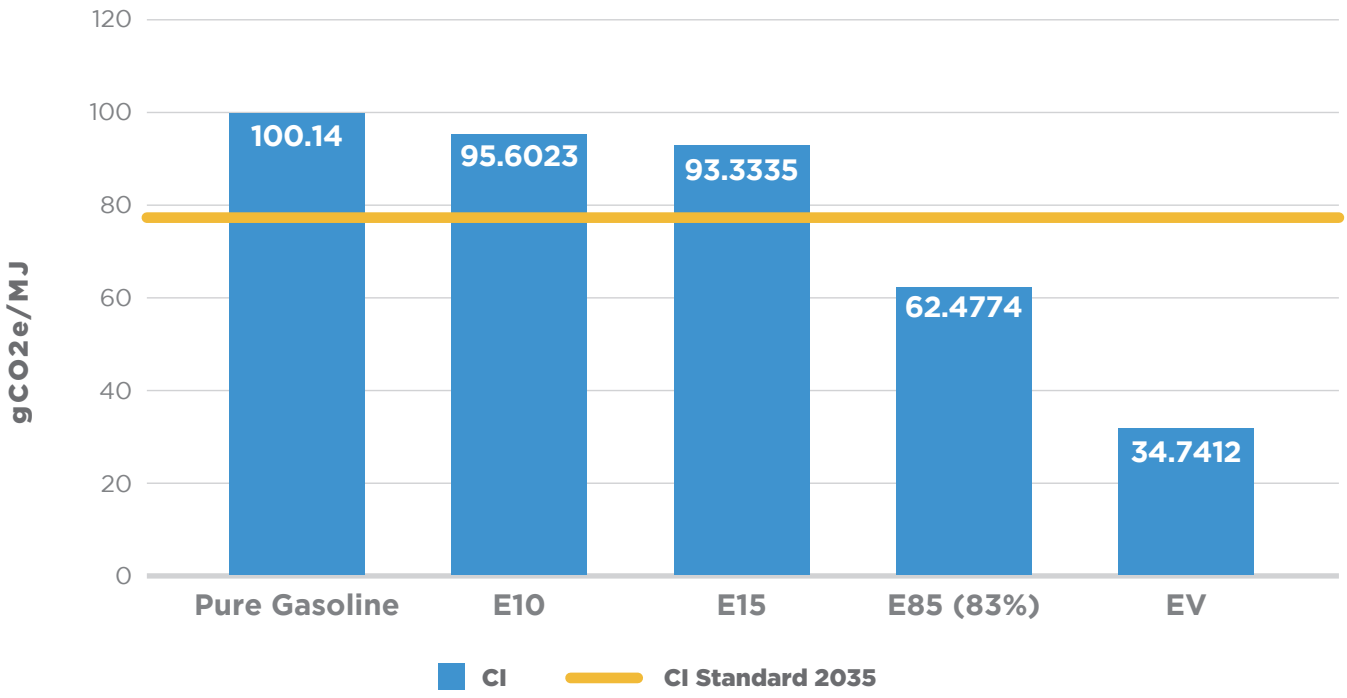
A "bait-and-switch" on biofuels

Some advocates of the CFS argue that it will help farmers by stimulating demand for Minnesota-grown biofuels like corn-based ethanol and renewable diesel made from soybean oil, which have lower CI scores than gasoline or diesel fuel. However, CARB gives these biofuels higher CI scores than other sources of energy like electricity, which means that as the regulations become more stringent over time, companies will be forced to transition away from meeting the mandates with biofuels toward promoting electric vehicles.[39]

This trend is already being observed in California, where CARB data show ethanol makes up

FIGURE 6

2035 CI Standards vs Common Minnesota Fuels



This graph shows a potential look at the type of fuels in Minnesota that will receive a credit or deficit by 2035 under Minnesota's CFS program. By 2035, the CI standard is so low that most common fuels will have to pay for credits, thus increasing the cost to end-users. The graph is adjusted to reflect the energy economy ratio of the fuels.

a smaller share of the credits sold over time and electricity increases (See Figure 7).[40]

Some ethanol producers are seeking to reduce the CI of their ethanol by capturing the CO_2 generated during the fermentation process, transporting it in a pipeline, and storing it safely underground.[41] Capturing and storing the CO_2 from ethanol plants would significantly reduce ethanol's CI score, allowing it to reduce its GHG emissions and compete with electricity for credits.

However, environmental activists have voiced their opposition to these pipelines, and a coalition of 22 environmental groups oppose expanding corn growth to meet the CFS.[42] Many of these same groups are aggressively promoting the electrification of the transportation fleet.

It is also important to note that the share of electricity credits would also increase in Minnesota due to other policies to support EVs that are currently being pursued by the Walz administration and other liberal lawmakers in St. Paul. These include the California car mandates, as well as direct subsidies for purchasing EVs and building EV charging stations.

The CFS will incentivize the increased use of EVs in Minnesota, and whatever benefits biofuel producers receive because of CFS regulations will likely be temporary.

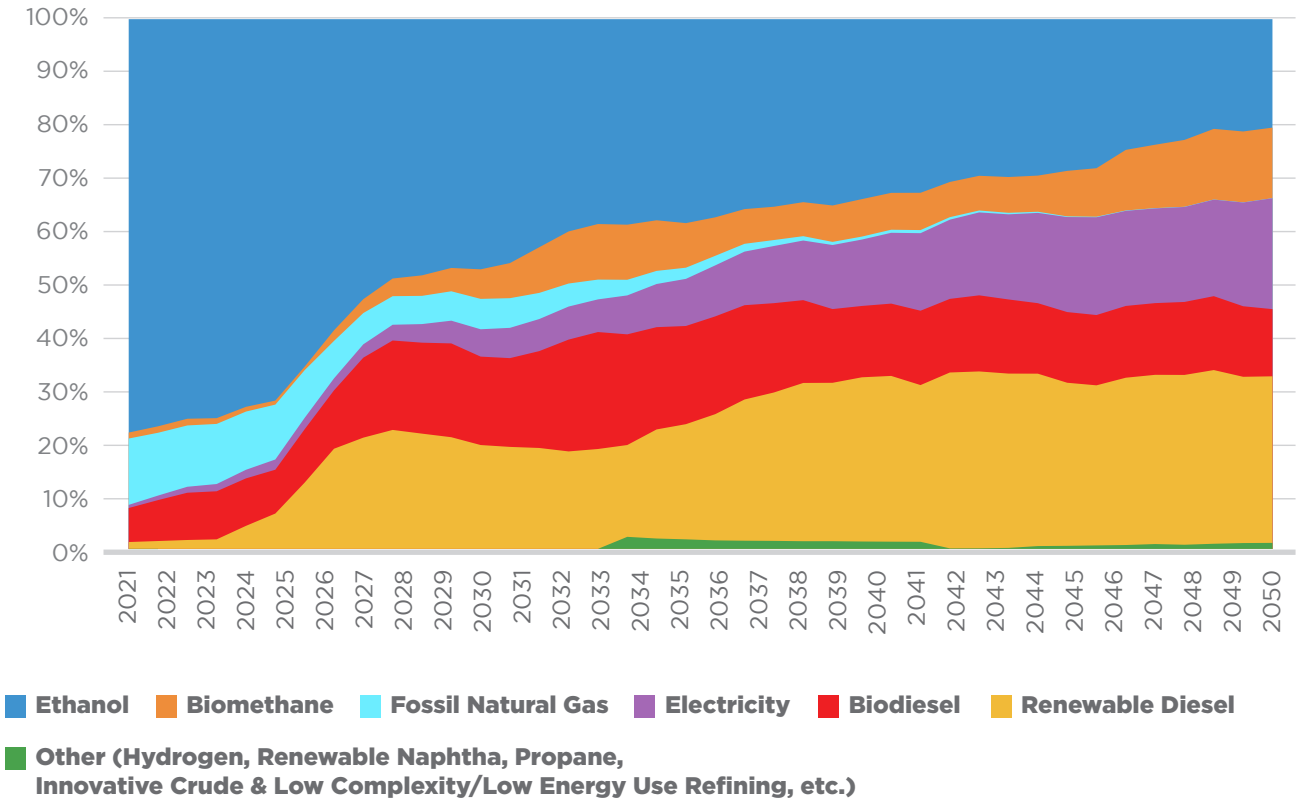
California car mandates

The CFS is not the only policy designed to promote EVs the Walz administration has imported from that state.

Last year, the Walz administration unilaterally

FIGURE 7

California CFS Credit Percentage



Ethanol accounted for nearly 80 percent of CFS credits in California in 2011, but this share had fallen to approximately 20 percent by 2020 as renewable diesel, electricity, biomethane, and biodiesel increased their share of credit generation.

instructed the Minnesota Pollution Control Agency (MPCA) to impose California's mandates for low emission vehicles (LEVs) and zero emission vehicles (ZEVs) in Minnesota.

The LEV mandate will require all cars sold in Minnesota to meet California's gas mileage standards, and the ZEV standards will force 6.2 to 7.4 percent of all vehicles stocked in the state to be EVs every year.[43] This equates to about 13,000 to 14,000 new electric cars to be stocked in the state annually.

Considering the Walz administration's history with importing expensive environmental policies from California that increase the cost of living for Minnesotans, Minnesota families and businesses should be wary of other policies implemented by the Golden State and the ability of the MPCA to implement their own versions of them in the Land of 10,000 Lakes.

For instance, California Governor Gavin Newsom issued an executive order banning the sale of new gasoline and diesel-powered cars in California by 2035.[44] A policy such as this has no place in Minnesota. However, in a hearing of the Minnesota Senate State Government Finance and Policy and Elections Committee, MPCA Commissioner Katrina Kessler stated the agency believes it has

the authority to authorize additional CARB rules, such as the ban on gasoline car sales and additional regulations on off-road vehicles, small engines, and trucks.[45]

While the commissioner claimed that the agency does not plan to impose additional California regulations at this time, farmers should be wary of spending thousands of dollars on new equipment to increase their ability to provide grains for biofuels markets when it is possible, and perhaps likely, that the MPCA will seek to regulate biofuels out of business in the future. ■

Conclusion

All Minnesotans want a clean environment to pass on to future generations. However, environmental policies in Minnesota need to prioritize affordable measures that do not burden residents with dramatic price increases for little to no environmental gain. Unfortunately, the Walz administration's proposed CFS will increase costs to Minnesotans for zero measurable environmental benefits.

The administration's pursuit of this policy is shockingly out of touch with the needs of families who are already struggling to put food on their table as the nation experiences the highest rates of inflation in 40 years and gas prices surge to the highest levels since 2013.

Lawmakers should not artificially increase the cost of energy on Minnesota residents during a global energy crisis by adopting CFS regulations. Instead, the Walz administration should focus on ways of making our energy supplies more secure and more affordable for all Minnesota families by promoting American energy production. ■

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