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To: Transportation Climate Initiative

From: Ellen Valentino, MAPDA

RE: COMMENTS on Proposed TCI Model Rule

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The proposed Transportation Climate Initiative (TCI) Model Rule is unlikely to reduce carbon dioxide emissions from motor vehicles by a targeted 66 million tons a year by 2032. In fact, using real-world examples from California, the Rule may have no impact at all on emissions. It is clear, however, that gasoline and diesel fuel prices will rise under the Model Rule. Fuel distributors must buy emission allowances under the Model Rule, and the cost will be passed onto consumers at the pump. TCI's Model Rule is actually a regressive tax costing all families about the same. TCI will cost each family thousands of dollars over the next decade, and those in poverty are least able to absorb those costs. In addition, the Model Rule establishes a fixed budget of available allowances by year (pg. 44) and fuel can't be delivered without an allowance. If TCI estimates of program success are wrong, and fuel demand doesn't fall as expected, needed fuel can't be delivered. TCI could plunge the region into motor fuel shortages and 1970's style lines at the pump.

The Model Rule also moves motor fuel taxing authority from states to a non-governmental regional authority. We believe that ceding authority in this way is always a bad idea. Unlike traditional gasoline taxes, the revenue raised from allowance auctions will not go to maintaining and building highways in the local area. TCI plans to spend most of the money raised subsidizing electric vehicles, public transportation, and walking and biking trails. Electric vehicles weigh an extra thousand pounds, which adds more strain on highways, but pay no tax toward highway trust funds. States will have to raise gas taxes to make up for this revenue shortfall.

TCI claims 35% of funds will be spent on projects to bring more equity for low income communities (pg. 41), but the Model Rule is short on specifics. Urban areas already rely on public transportation. Subways and trains already run on electricity. Much of the nation's bus fleet has already been transitioned from diesel to lower emitting natural gas and propane¹. Replacing buses with electric versions that cost two to three times as much provides little additional value. Plans to add walking and biking trails in urban areas will likely find recreational use, but are unlikely to reduce commuting travel, especially in cold, wet weather.

Feeding and fueling the economy through gas, coffee, food, heating oil and propane.

MAPDA is an association of convenience stores and energy distributors in Maryland, Delaware & the District of Columbia.

The Model Rule establishes target emission allowance prices where allowances will be added or removed from the auction to control the auction price (pgs. 9-10). That is an engineered exercise to manipulate the price of emission allowances rather than a market-rate auction. TCI forecasts an average price that would add 11 cents to a gallon of gasoline in 2022, rising to 27 cents by 2032. TCI's own worst case estimate pegs a surcharge as high as 41 cents². At a minimum, TCI will cost a typical household \$2,000 over the next decade, or about \$187 a year³. The worst case scenario could cost households \$414 in 2032, and total \$4,550 by 2032. Low income rural families will be hurt the most, and the Model Rule offers no relief for those families.

Adding to the economic injustice, much of the money raised from the emission allowances will be used for subsidies for electric vehicles. Many studies show that electric vehicles are often bought by wealthy individuals for access to High Occupancy Vehicle lanes as a single occupant. The national Renewable Energy Laboratory estimates 86% of EVs are bought by people making over \$60,000 a year⁴. TCI money will also be given as subsidies for public and private electric vehicle charging stations so those wealthy families can recharge their vehicles anywhere. Since over 80% of charging occurs overnight at home⁴, utilities are offering lower electric rates after 8 PM saving these wealthier families even more money.

TCI documents² target a 6% reduction in emissions from an expected 2022 forecast level of 253 million tons, or 15 million tons per year emission savings by 2032 for twelve states and the District of Columbia. An emission allowance budget is established for each state. In the appendix of the September, 2020 TCI webinar a study by ICF International indicates only 11.8 million tons will be saved annually and that is partially offset by increased emission of 3.7 million tons from increased electric generation to power the increased number of electric vehicles. The actual emissions savings may only be 8 million tons per year, or 3%.

TCI is partially counting on higher prices to discourage driving, but travel necessity makes fuel use inelastic. A study by the U.S. Energy Information Agency⁵ found motor fuel prices would need to increase 25 to 50 percent to reduce driving by 1 percent, or to about \$3.72/gallon in today's dollars. The Model Rule forecasts a maximum price of 27 cent/per gallon which might only reduce emissions by about 0.2%, or 0.5 million tons.

Another flawed TCI assumption is a planned \$4,000 subsidy per electric vehicle against a premium purchase price of \$12,000 will stimulate sales by 10 million vehicles by 2032². This will use up to 80% of the expected emissions allowance auction revenue. TCI's assumption does not connect with actual experience. Currently, there is a more generous federal subsidy of \$7,500 per vehicle which has only stimulated sales of about 300,000 vehicles a year⁶. This translates to 3 million vehicles over ten years, for a CO2 reduction of about 2 to 5 million tons a year by 2032.

Considering the low impact of higher fuel prices on the miles people drive, and likely lower electric vehicle sales than forecasted, direct emission savings from TCI might only be about 2.5 to 5.5 million tons per year, a fraction of the 15 million ton forecast.

The big TCI forecast savings, 51 million tons, is supposed to come from federal programs for higher mile per gallon standards and alternative fuels. The US Energy Information Agency released its 2021 Annual Energy Outlook and only expects a 4% reduction in petroleum based transportation emissions between 2022 and 2032 equaling only a 10 million ton reduction in the TCI region by 2032⁷.

In addition, transportation emissions in the TCI region in 2018 were 347 million tons so reaching the 2022 target of 253 million tons would require a 27% reduction, or 94 million tons⁸. Between 2012 and 2018 emissions actually increased 9.5% as miles per gallon improvement was eclipsed by more miles traveled, and more vehicles on the road. It is unlikely the TCI region will meet the starting goal of 253 million tons by 2022.

Taking into account a higher emission starting point in 2022 and a slower contribution to emission reductions from federal programs by 2032, we believe the expected 51 million ton 2032 TCI target is a pipe dream. Based on TCI's own documents it is actually possible there will be zero emissions reductions by 2032 even if all the regional target jurisdictions adopt TCI. Yet the number of allowances allowing fuel delivery will be reduced in lockstep with the TCI plan which assumes the 66 million ton TCI forecast reduction. The imbalance in available allowances compared to actual demand could lead to massive shortages of motor fuel.

In conclusion, TCI will likely fail to significantly reduce carbon dioxide emissions from motor fuels, but will raise fuel prices hurting the poor the most, while leaving states short of highway trust funds, and out of the loop in controlling taxes. Worst case, the plan may result in fuel shortages leading to panic and long lines at the pump. This is a bad idea for Maryland and Delaware.

References:

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- 2) TCI 9/16/20 Webinar, <https://www.transportationandclimate.org/sites/default/files/Fall%202020%20modeling%20webinar%2C%20final%20as%20shown%20on%2020200916.pdf>
- 3) Average miles driven per year in 12 states for 2019, 13,264 with 3,644,509 licensed drivers, <https://www.mycarinsurance123.com/average-miles-driven-per-year/>, Number of households in 2019, 2,287,452 <https://www.statista.com/statistics/242258/number-of-us-households-by-state/>, equals 2 drivers per household X 13,264 = 21,964 miles per household, average miles per gallon in 2019, 22.3, <https://www.greencarcongress.com/2019/12/20191203-doetax.html>, fuel use per household 21,964/22.3 = 985 gallons X \$.19/gallon = \$254 TCI tax/year/household
- 4) National Renewable Energy Laboratory, Electric Vehicle Charging Implications for Utility Ratemaking in Colorado, [Electric Vehicle Charging Implications for Utility Ratemaking in Colorado \(nrel.gov\)](https://www.nrel.gov/transportation/electric-vehicle-charging-implications-for-utility-ratemaking-in-colorado/)
- 5) US Energy Information Agency, 12/15/2014, 'Gasoline prices tend to have little effect on demand for car travel', <https://www.eia.gov/todayinenergy/detail.php?id=19191>
- 6) Light Duty Vehicle Sales US Energy Information Agency Annual Energy Outlook Table 44 2020 to 2050, <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=17-AEO2021&cases=ref2021&sourcekey=0>
- 7) US Energy Information Agency, Annual Energy Outlook, CO2 emissions by sector 2020 to 2050, <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=17-AEO2021&cases=ref2021&sourcekey=0>
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