



Thomas Jefferson

THE TRANSPORTATION AND CLIMATE INITIATIVE – ALL PAIN AND NO GAIN

Executive Summary

What would you pay to reduce global temperature by 0.000018°C and in the process have to accept gasoline rationing while losing 20% of the money collected to repair roads? Seventeen cents per gallon. That's what Virginians would have to pay to join the Transportation and Climate Initiative – something Governor Northam wants to do. And this price escalates every year.

It's fair to ask, would this be a good decision. It's important to ask, what would we get from this new carbon car tax, what would we lose and is it worth it. Under the proposed Transportation and Climate Initiative (TCI), the answers to these questions are clear. We get nothing. It's not that we don't get something worth the cost – we don't get anything at all. And, we lose more than pocket money.

Information and models used by the U.S. Environmental Protection Agency (EPA) demonstrate TCI carbon gas tax and rationing would have absolutely no impact on climate – literally calculated as 0.000°C. The EPA Clean Air Scientific Advisory Committee received information showing TCI would not actually save any lives. EPA has already determined that Virginia air quality for other tailpipe emissions are below levels that actually cause harm to sensitive populations.

TCI also would have the effect of reducing revenues used for road maintenance by 20% in 2022, eventually causing the current gasoline-based revenues to be reduced to zero as gasoline fuel is eliminated. In sum, TCI has no environmental benefits but would cost Virginians billions. That is an “All Pain and No Gain” program.

No Change in Global Climate

The TCI is supposed to be a program to help forestall the catastrophic effects of climate change caused by carbon dioxide (CO₂) emissions from cars and trucks. So, let's look at the degree to which global temperatures from reduction of CO₂ will be reduced by the proposed carbon car tax, the companion and painful rationing of fuel and the subsidy for electric vehicles.

Bjorn Lomborg, former Executive Director of Denmark's Environmental Assessment Institute, reports that according to the International Energy Agency (IEA), with sustained political pressure and subsidies, electric cars could account for 15% of the much larger global fleet in 2040, but it notes that this increase in share will reduce global CO₂ emissions by just 1%.¹ IEA Executive Director Fatih Birol is more direct. “If you think you can save the climate with electric cars, you're completely wrong.”² In 2018, electric cars saved 40 million

tons of CO₂ worldwide, equivalent to reducing global temperatures by just 0.000018°C – or a little more than a hundred-thousandth of a degree Celsius – by the end of the century.

Looking closer to home, the Texas Public Policy Foundation (TPPF) examined the effect on global temperature of the full TCI program, if applied in the entire 11 northeast and eastern seaboard states who have been named as possible TCI participants. Using the same climate data model the United Nations' Intergovernmental Panel on Climate change (IPCC) and the U.S. EPA use (the MAGICC model), the projected temperature change is 0.000 degrees Centigrade.³ For this benefit, the TCI would require us to pay \$1.8 Billion in 2022, rising to \$6.9 Billion per year in 2032.

No Actual Health Benefits

Probably recognizing that the TCI does exactly nothing with regard to preventing catastrophic climate change, the TCI claims other benefits, suggesting that rationing car fuels to only 80% of current use (and declining to zero) would prevent six premature deaths and 338 asthma attacks. To get these numbers, the TCI engages in deeply flawed presumptions about the risk of car exhausts that demand careful examination.

No Reduced Deaths

TCI focuses most on very small particles, those smaller than 2.5 microns (PM_{2.5}), claiming reduction from fuel rationing would prevent six premature deaths. With the exception of a single county in Pennsylvania, none of the TCI states, including Virginia, have ambient air in violation of the National Ambient Air Quality Standards (NAAQS) for (PM_{2.5}).⁴ The value of any further risk reduction from still lower levels of PM_{2.5} is illusory and reflects no actual threat to human health because **the NAAQS are set at a level that will protect human health, with an adequate margin of safety**, including for sensitive populations such as children, the elderly, and individuals suffering from respiratory diseases.⁵

Dozens of studies back up EPA's conclusion of no meaningful threat from PM_{2.5}. October 2019 testimony to the EPA Clean Air Scientific Advisory Committee summarized the state of knowledge on exposure to PM_{2.5}.

[In research conducted by EPA,] although EPA exposed hundreds of elderly and sick people to extremely high levels of PM, not a single adverse effect was reported. None. Despite unrealistically intense exposures, not a single lab animal has ever been killed by PM. Although PM levels in China and India have hit astronomical levels, there are no reports of actual deaths. None. Not one. In Beijing, PM levels are anywhere from 5 to 10 times higher than Washington, DC on average. But life expectancy is greater in Beijing. Underground coal miners are allowed to inhale PM at a rate of 1,500 micrograms per cubic meter on a full-time basis. There are no reports of coal miners dying from acute PM exposures. As to chronic exposures, non-smoking coal miners have a greater life expectancy than the average worker. There is no evidence lending any biological plausibility to the notion that PM has killed anyone... anywhere... ever.⁶

In other words, the TCI estimate of six premature deaths prevented from PM_{2.5} reduction is simply puffery.

We Already Meet Protective Standards for Nitrogen Oxide Emissions

TCI attempts to gild its health scare lily by claiming benefits from reduction of Nitrogen Oxides (NO_x). EPA has established a NAAQS for NO_x as well. Every state in the union has met the NAAQS for NO_x since 1998.⁷

We Are Already Safe from Ozone

TCI also claims it will prevent 338 cases of asthma by rationing fuels and subsequently reducing ground-level ozone. Ozone is another pollutant controlled through a NAAQS, a standard set at 0.07 ppm. Seven of the 12 states under the TCI banner have “Marginal” Ozone nonattainment. These are very minor exceedances and reflect no actual threat to human health because the exceedances were within the margin of safety, below the level causing actual harm. In a legal challenge attempting to force EPA to reduce its Ozone NAAQS, the U.S. Court of Appeals for the District of Columbia accepted EPA’s argument that there was insufficient evidence that exposures below 0.075 ppm cause harm to humans.⁸

EPA categorizes ozone violations as Extreme, Severe-17, Severe-15, Serious, Moderate and Marginal.⁹ Like the other six TCI nonattainment states, Virginia is in the “marginal” category.¹⁰ Indeed, until the 2015, when EPA reduced the Ozone standard from 0.075 ppm to 0.07 ppm, Virginia was in full attainment.

How we measure Ozone attainment helps to understand the meaning of Virginia’s nonattainment. Virginia has 24 Ozone monitoring stations. Each station reports daily on their maximum Ozone level. Each year, from March through October, Virginia records 5,760 measurements. It ranks these by level recorded.¹¹ It then takes the fourth-highest observation for each of three years and averages these three measurements. If the average is greater than 0.07 ppm, the state fails to meet the Ozone standard. Over the past three years there were fewer than 5 days a year when Ozone levels exceed the standard. What this means is that 99.9 percent of the time, the state meets the standard and even on the five days it exceeds the standard, it is within the margin of safety where no harm arises.¹² The 338 cases of asthma don’t exist. They are no more than an artifact of assuming no threshold of effect and a presumption that there is no safe level of Ozone – as with PM_{2.5}, an assumption not supported by actual clinical experimentation.

We Don’t Need to Put More Pedestrians at Risk

TCI goes still further down a road built on assumptions rather than fact. By pushing people out of their cars, TCI claims credit for making people exert more physical activity which they suggest will reduce deaths because of better health from more exercise. This is based on a computer model that assumes associations between exercise and longevity. Association is not causality and this estimate is junk science.

No one knows whether pushing people out of cars would increase or reduce their health. It would increase the number of pedestrians, and this would increase the likelihood of pedestrian deaths. According to the Virginia DMV, for a five-year period, from 2012 to 2016, pedestrian

fatalities in Virginia ranged from 78 in 2013 to a high of 121 deaths in 2016.¹³ In 2018, there were 123 pedestrians killed.¹⁴ The TCI report disregards the fact that by pushing people onto the streets, they will increase pedestrian death, and considering the highly questionable estimates of lives they think will be saved, it may well be that increases in pedestrian deaths will be greater than lives saved from better physical condition.

TCI also claims that fewer cars will result in fewer traffic-related deaths, arguing that there will be a bit less than three fewer traffic deaths per year with 20% reduction in fuel from rationing. Spread out over the TCI states, that's less than 1 per state per year. Pedestrian deaths will likely increase more than that, something TCI ignored.

We Can't Afford to Lose Gas Taxes Used to Maintain Roads

Finally, the TCI fails to examine the opportunity cost of fuel rationing associated with existing methods used to ensure roads and bridges are well maintained. A 20% reduction in fuels sales is also a 20% reduction in existing gas taxes, revenues used expressly for road maintenance. Because TCI wants to eliminate use of gasoline and diesel fuels for on road vehicles, under TCI, this revenue would eventually be eliminated. What would this really mean for Virginia?

At present, 40% of Virginia's secondary roads, 15% of primary roads and 9% of interstate roads are in poor or very poor condition.¹⁵ Virginia needs \$5.2 Billion to get structurally deficient roads up to only "fair" condition and \$7.9 Billion to get structurally deficient bridges into no better than "fair" condition.¹⁶ The Virginia Department of Transportation highway construction budget is \$2.8 Billion per year.¹⁷ The TCI would rob Virginia of its ability to keep its roads safe for the electric vehicles it would have to replace gasoline and diesel fueled vehicles.

In sum, TCI has no environmental benefits, but would cost Virginians billions. That is an "All Pain and No Gain" program.

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Endnotes

¹ <https://www.marketwatch.com/story/your-electric-car-and-vegetarian-diet-are-pointless-virtue-signalling-in-fighting-climate-change-2019-12-26>.

² *Id.*

³ Tahuahua, K., Texas Public Policy Foundation (Dec. 19, 2019) (The model only reports to three digits after the decimal place. In light of the international reduction reported by the IEA, the TCI number is likely to be less than 0.000001 deg. C.).

⁴ PM-2.5 Nonattainment Area State Map, current as of Nov. 30, 2019. <https://www3.epa.gov/airquality/greenbook/knmapa.html>.

⁵ Clean Air Act § 109(b)(1).

⁶ Milloy, S. “Presentation to EPA CASAC re claim that PM kills” (Oct. 22, 2019) <https://junkscience.com/2019/10/milloy-presentation-to-epa-casac-re-claim-that-pm-kills/>.

⁷ U.S. EPA Green Book, <https://www.epa.gov/green-book/green-book-nitrogen-dioxide-1971-area-information>.

⁸ U.S. EPA, Policy Assessment for the Review of the Ozone National Ambient Air Quality Standards, p. 1-10. <file:///E:/OTJI/TCI/Ozone%20Policy%20Statement.pdf>.

⁹ U.S. EPA Green Book, Ozone Designation and Classification. <https://www.epa.gov/green-book/ozone-designation-and-classification-information>.

¹⁰ U.S. EPA Green Book, 8-hour Ozone (2015) Nonattainment Areas (current as of November 30, 2019). <https://www3.epa.gov/airquality/greenbook/jnc.html>.

¹¹ 80 Fed. Reg. 206, p. 65467 (Oct. 26, 2015) <https://www.govinfo.gov/content/pkg/FR-2015-10-26/pdf/2015-26594.pdf#page=1>.

¹² Virginia DEQ Dashboard: Air, <https://www.deq.virginia.gov/AboutUs/DEQDashboard/Air.aspx>.

¹³ Va. DMV, Pedestrian Safety, <https://www.dmv.virginia.gov/safety/#programs/pedestrian/faq.asp>.

¹⁴ WSLS 10 News, “Number of Virginia pedestrians hit and killed by cars reaches 10-year high” (Nov. 8, 2019) <https://www.wsls.com/news/2019/11/08/number-of-virginia-pedestrians-hit-and-killed-by-cars-reaches-10-year-high/>.

¹⁵ https://www.virginiadot.org/info/resources/State_of_the_Pavement_2018.pdf.

¹⁶ <https://wtop.com/dc-transit/2018/04/fixing-virginia-potholes-pavement-bridges-cost-13-1b/>

¹⁷ *Ibid.*