**To:** Transportation & Climate Initiative Participants

**From:** Allen Greenberg (agcatp2@aol.com; 202-441-2138)

**Subject:** Comments on Program Design as Outlined on Sept. 16 and 29, 2020 TCI Webinars – Modeled 2032 Max Mileage Reductions from Reference Case of Only 2.0% is a Program Failure

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These comments cover two main topics – first, the “why” and “how” to significantly reduce vehicle-miles traveled (VMT) and related carbon emissions under the Transportation & Climate Initiative (TCI) framework, and second, making some improvements to the emissions containment reserve (ECR) and the cost containment reserve (CCR), as currently proposed.

The nine core scenarios evaluated under the TCI yield only the tiniest reductions from Reference Case VMT in 2032, ranging from a low of 0.3% to a high of 2.0%, according to the spreadsheets provided on the TCI website. These comments propose a new TCI program mechanism to encourage “low hanging fruit” state-level policy changes, especially those shifting fixed driving and parking costs to variable usage pricing, that would lead to very substantial VMT and carbon emissions reductions.

To accomplish this, I recommend setting up a third reserve account, on top of the two that TCI has already proposed, called a State Policy Innovations Bonus Reserve (SPIBR). The SPIBR would, as envisioned and detailed more below, reward states with bonus allowances for doing two things to reduce VMT– (1) taking actions that most significantly bolster foregone- or reduced-driving financial incentives; and (2) achieving the largest reductions in per-capita VMT among their TCI peer states (at least partly resulting from a combination of wise infrastructure investment decisions with TCI allowance revenues and adopting strong related supporting policies, such as Complete Streets and coordinated development policy and transport decision making).

Strategies that the SPIBR would encourage include state insurance laws and regulations requiring or rewarding pay-per-mile (sometimes known as pay-as-you-drive-and-you-save (PAYDAYS)) car insurance and state tax laws requiring employers to offer a parking cash-out option in lieu of subsidized car parking when they choose to offer the latter. A bundle of such price-shifting strategies has been modeled elsewhere (and is discussed in the Appendix) and was found to reduce VMT and related carbon emissions by 23.2% in 2030. Transportation re-pricing strategies save consumers a lot of money and/or provide them significant rebates for times they choose not to drive, while making the variable price for driving and parking significantly higher than would be realized even if allowance prices were at their highest, explaining why consumers would choose to substantially reduce their VMT. Dedicating some TCI revenues to SPIDR for incentives to states to adopt transportation re-pricing policies could bring this result about.

Reducing carbon emissions by curtailing VMT offers many policy co-benefits important to state governments that other emissions reduction strategies do not bring. Federal vehicle emissions standards for criteria pollutants are mileage-based and are unrelated to vehicle and fleet fuel economy, meaning fewer miles driven due to pricing of VMT equates to less pollution. Vehicle crashes for individual drivers are closely correlated with VMT, and thus VMT reductions support state-level “Vision Zero” goals. Of course, too, VMT reductions lead to congestion being curtailed, thus lessening infrastructure investment needs.

Unrelated to SPIBR, and reflecting upon what was communicated at the TCI September 16, 2020 program design webinar, and follow-on September 29, 2020 webinar focused on ensuring environmental justice and equity within the TCI program, TCI seems headed in the right direction structurally. Setting up a price collar as TCI is doing by simultaneously establishing an ECR—used to enforce the floor price—and CCR—used to operationalize the price ceiling, along with pledging to dedicate a minimum of 35% of TCI revenues be spent to benefit disadvantaged communities, are all good ideas.

As detailed below, this submission makes suggestions to strengthen the ECR and CCR to further reduce emissions and improve program performance. Specifically, I propose that the ECR be a mandatory component of TCI (not just a state option, as with the Regional Greenhouse Gas Initiative (RGGI)) and that the price floor not be set too low. I also propose that the CCR allowances be released only if both of two conditions occur—a carbon price higher than the CCR price (as already proposed) and average fuel price at or near historic highs (as the price to the consumer would still be reasonable otherwise). Since low fuel prices would be the primary reason for high allowance demand, this second condition would help preserve CCR allowances and make it less likely that emissions targets would be blown.

The State Policy Innovations Bonus Reserve Focusing on VMT Reductions

As currently designed, TCI would provide no direct reward to states for taking state-level actions beyond what is minimally required (or offered as is the case with revenues) for TCI, especially as related to reducing VMT. Per my earlier comments submitted on Feb. 28, 2020, the primary objective that TCI should strive to achieve is to reduce transportation emissions as much as possible—meaning at least a 25% reduction by 2032, instead of a 20 or 22% reduction which are also under consideration, and “sweeping up” any additional reductions that could be had with little cost and effort. Critical to program success, the TCI draft memorandum of understanding needs to be revised to overcome the policy failure of none of the nine core modeled TCI scenarios achieving greater than a 2% reduction in VMT.

*SPIBR Part 1 -*

To accomplish this, TCI should aim for the adoption of as high a variable cost to driving and parking as feasible, enabled politically by converting fixed and hidden driving and parking costs to usage pricing, where total costs to most drivers will nonetheless actually go down. Incentives applied at the level of the individual driver are critical to meeting or hopefully surpassing TCI’s carbon reduction goals, and states have many available policy levers to accomplish this. It is proposed here that half of the SPIBR funds be dedicated to rewarding states with extra allowances for adopting policies that achieve such driver incentives. Allowance awards for this part of the SPIBR program should be apportioned to states based upon the total amount of new variable prices paid for driving and the total new non-driving savings/rebate opportunities offered for each of the first three years of the state policy changes that have led to this. Additional background and discussion can be found in the Appendix. Experts under the Georgetown Climate Center should be tasked with creating and deploying the analytical methodology for determining the per-state totals of new pricing and new savings, and the related allowance allocations.

*SPIBR Part 2 -*

The other half of SPIBR funds should be dedicated to solving a second TCI program deficiency—failure to engage states to consider if the totality of their transportation investment and policy decisions lead to substantial VMT and related emissions reductions. Without the SPIBR, state engagement is largely limited to how they choose to spend their allowance revenues, constrained only by the “policy floor” that they have to make at least some contribution to reducing transportation carbon emissions and also that they must spend at least 35% of the revenues to benefit low-income communities. State-level policy and investment decisions can have a big impact on transportation emissions and TCI incentives should be designed accordingly. To maximize regional VMT and emissions reductions, allowances should be set aside to reward states for making exemplary transportation investment and policy decisions that show significant early results in reducing VMT and related carbon emissions.

Structurally, I would recommend that half of the SPIBR funds be set aside each year to reward the top two participating states with the highest three-year rolling average in per capita VMT and related carbon emissions reductions. I would reward two-thirds of such set-aside funds to the highest achieving state and one-third to the second highest. Experts under the Georgetown Climate Center should be tasked with creating and deploying the analytical methodology for determining the state winners.

The Emissions Containment Reserve

The ECR is especially important for two reasons. First, it is very clear from a scientific standpoint that, to avert global calamity, society needs to cut emissions more than is currently globally planned and also more than major societal players have shown they understand how to achieve. Reductions that are available for less than a very low price should be grabbed and kept by retiring the ECR allowances. (I’d urge a starting ECR price of at least $10 per ton rather than the $6 per ton being enacted for RGGI in 2021.) The second reason for a price floor is that it would enable a guaranteed revenue stream that is essential for issuing investment bonds to support clean transportation investments. (States frequently bond their state gas tax revenues to facilitate major investments). Without a price floor, paired with bonding, revenues would be uncertain, could at times be low, and would not allow for planned, major clean transportation investments.

A price floor, if it does kick in, would also increase the economic incentive to travelers to reduce their carbon footprint. Even if the auction price always remains above the floor price, however, it would still, at the margins, likely have some impact on longer term consumer decisions related to purchases of vehicles (for fuel efficiency) and housing (for location efficiency) by creating an expectation that future fuel prices may be higher than otherwise.

I understand the ECR that will be started for RGGI in 2021 is at state option. It should not be with TCI, as its benefits, as outlined above, come only from the certainty of state-level enactment.

The Cost Containment Reserve

The CCR is an antidote to the assertions of cap-and-invest opponents that, evidence notwithstanding, allowance prices will be very high. Proponents, then, are essentially compelled to accept a price ceiling to show confidence in their more modest projections. This will be fine if emissions are heading toward what proponents project. If they are much higher, though, whether because of higher than expected VMT, lower than anticipated fleetwide fuel economy, or a combination of the two (most likely caused at least in part by fuel prices lower than projected by the TCI Reference Case) and the price ceiling kicks in, the results could be problematic.

If the price cap is designed to be “hard,” meaning that allowance prices are capped regardless of whether a sufficient number of CCR allowance permits had been set-aside to meet demand at the capped price, then more permits will have to be released to accommodate demand. (If both quantity and price were to be capped, a secondary market would likely emerge, thereby then effectively blowing the price cap.)

The substantial risk of a CCR failure caused by low fuel prices is easily mitigated by modifying the program design to reflect that public concerns about permit prices will be low when fuel prices are low, since people care a lot more about how much they have to pay in total for gasoline than how much of their purchase price is going to the fuel supplier versus to the government (including though supplier purchases of required allowances). When fuel prices (excluding required allowance purchases) and allowance prices are together less than levels approaching historic fuel price highs, the CCR should not kick in regardless of how high allowance prices may climb.

Appendix:

Details about Transportation Re-pricing: Modeling, Public Support, and Deployment

Previous research, published originally by the National Academy of Sciences, Transportation Research Board (see: <https://journals.sagepub.com/doi/abs/10.3141/2530-14>), and subsequently expounded upon (see: [www.vtpi.org/G&E\_GHG.pdf](http://www.vtpi.org/G%26E_GHG.pdf)), demonstrated that re-pricing transportation by converting fixed and hidden transport costs to variable charges and rebates would very significantly curtail transportation-related Greenhouse Gas (GHG) emissions. It was further shown that such emissions reductions would be substantially more than from imposing carbon pricing on transportation fuels at the highest levels that may be politically plausible. Transportation re-pricing is the rare pricing policy that offers people the opportunity to save money by driving less and forgoing a workplace parking benefit, and typically not costing them more money if they choose to continue their current levels of driving.

In research supporting this approach (conducted nationally, with state-by-state results reported), the primary policy that was initially explored was a regulatory approach, using the U.S. Environmental Protection Agency (EPA) Clean Power Plan under the Obama Administration as a framework, to set state-level transportation GHG reduction targets that are based on simultaneously deploying “no new taxes” (a) PAYDAYS car insurance, (b) parking cash out, and (c) the conversion of fixed state and local vehicle purchase sales taxes into mileage-based fees designed to raise equivalent revenue.

A spreadsheet model was developed to provide state and Federal level estimates of year-2030 emissions reductions from this transportation re-pricing policy bundle. The study concluded that a universal application of these transportation re-pricing measures could reduce GHG emissions by 257 million metric tons (MMT) of carbon dioxide equivalent (CO2e) in year-2030 or 69% of the 375 MMT of CO2e reduction projected to result from implementation of the Clean Power Plan rule.

Isolating the results of the 13 TCI jurisdictions (12 states plus the District of Columbia) from this study, reductions of 45.8 MMT of CO2e in year-2030 were projected from the transportation price-shifting bundle. Using the same modeling approach to estimate the impacts of a $50 price per ton of transportation emissions on TCI states (anchored off the U.S. Government Interagency Working Group on Social Cost of Carbon 2015 assessment), projected reductions of CO2e (excluding consideration of revenue use) would be 15.4 MMT. Nationally, it was calculated that the transportation re-pricing policy bundle would on its own reduce year-2030 VMT and carbon emissions by 23.2% (a 257 MMT CO2e reduction from the 1,108 MMT CO2e U.S. EIA VISION 2014 AEO Base Case light-duty vehicle emissions projected). At first glance, this figure might seem high, but it results from a very substantial amount of transportation re-pricing that would be occurring due to the modeled policy.

States, of course, could deploy transportation price shifting in a manner that is either less aggressive or more aggressive than that which was modeled, with the proposed SPIBR program design rewarding states based on the amount of price shifting that ultimately materializes. There were additional transportation price shifting policies that were not modeled, including states converting annual vehicle registration fees to mileage fees (much like vehicle purchase sales taxes being converted to such fees, which was modeled). “Lighter” versions of modeled policies are also possible. If, as an example, instead of mandates, states enacted tax credits to insurance companies to offer PAYDAYS insurance, SPIBR program rewards to the states would be based on the number of companies and consumers that are newly offered such insurance pricing after tax credit enactment.

A 2018 YouGov poll found a decent amount of public support for transportation re-pricing, especially when compared to other transportation pricing strategies. Public support nationally for a 42 cent per-gallon gasoline tax with revenues returned by lowering other personal taxes was at 44.7%. There was similar but slightly lower support (42.7%) if revenues are instead used for transportation purposes. Support in the Northeast was found to be a bit higher at 50.0% with gas tax revenues returned to lower other taxes, but only 46.6% if revenues are used to support transportation investments to reduce carbon emissions, as is the TCI plan. Nationally, there was higher overall public support for PAYDAYS car insurance at 47.6% (53.0% in the Northeast), parking cash out at 53.6% (57.2% in the Northeast), and converting vehicle sales taxes to comparable mileage fees at 53.1% (54.8% in the Northeast). (PAYDAYS insurance polls a little bit lower than the other price-shifting strategies likely because of concerns related to insurance costs for long drives. Products available in the marketplace typically cap such costs, but it is doubtful that many who were polled knew that.)

Transportation price shifting has the potential to garner bipartisan acceptance, as there is a history of Republican and conservative support for it. Federal tax credits for PAYDAYS insurance, for example, were written into a bill in 2007 by then Congressman Gerlach (R-PA).  Section 302 (Insurance Savings Incentive Program) of H.R. 2296, the Future Fuels Act, from the 110th Congress contains the applicable language.  The libertarian Reason Foundation has in the past called for enactment of a Federal parking cash-out law, at the time as a compromise to eliminate the then-existing Employee Commute Options program under the Clean Air Act (see: <http://reason.org/files/48d0848927c01bf5f340968091de65e9.pdf>).

The very significant carbon reduction benefits from transportation price shifting would be realized at no cost to the TCI states implementing them or to individual motorists, which could partially explain their popularity relative to other transportation pricing strategies. Parking cash out is revenue positive to governments because a portion of employees who drive alone to work and are provided a tax-exempt car-parking benefit from their employers would, if offered, choose to accept an alternative commute benefit that in many instances would include some taxable cash. Drivers typically save money from transportation re-pricing. For example, Brookings Institution research projected that 63.5% of households with insured vehicles (63.7% of urban households, 62.9% of rural households, and approaching 80% for the poorest of households) would save an average of 28% on their total premiums, or about $496 annually for households that do save with fully variable PAYDAYS premiums (Bordoff and Noel, 2008).