

TCI comments Submitted by Climate Law & Policy Project

Pricing and revenue. According to the 2015 Cambridge Systematics report, TCI must raise, on average, \$3 billion per year to meet TCI's investment goals. RGGI raises only about one-tenth that amount, although it covers approximately the same level of emissions.

The TCI Statement of December 18 says: “[T]he participating TCI jurisdictions will design a regional low-carbon transportation policy proposal that would cap and reduce carbon emissions from the combustion of transportation fuels through a cap-and-invest program or other pricing mechanism ...”

- A carbon fee would be a better mechanism to raise revenue due to the inherent volatility and unpredictability of allowance prices, as well as the historically modest prices and revenues resulting from other cap & trade mechanisms (e.g., RGGI).
- However, if cap & invest is the mechanism of choice, it should be designed to provide sufficient revenue to meet TCI's investment goals – comparable to the revenues that would come from a carbon fee averaging \$20-25 per ton carbon equivalent. The four elements that could ensure high and stable levels of revenue are:
 - Stringency of the cap;
 - Allowance auctioning (which also prevents windfalls to regulated entities);
 - Price floor (reserve price); and
 - Emissions Containment Reserve (ECR).
- The cap should decrease and the price floor should increase annually to give regulated entities the ability to plan and adjust. In addition, as with RGGI, the ECR and Cost Containment Reserve (CCR) prices should increase annually, with the goal of providing revenues averaging at least \$3 billion dollars per year through 2030. We recommend that the reserve (floor) price start at \$15 in 2020 and rise \$1.50 per year to \$30 in 2030.
- An alternative pricing mechanism that might be considered is a “*feebate*” system applied to excise taxes. The excise tax could be higher for gas guzzlers, lower for “sippers,” and zero for electric vehicles (EVs). This could provide the additional funding that will be needed to expand EV infrastructure (e.g., charging stations) and fleets (including school and transit buses). As more EVs enter the market and EV prices drop, the EV “rebate” could be phased out and the revenue used instead to provide incentives to remove dirty vehicles from the road.

Program linkage. RGGI allowances sell for much less than what will be needed for TCI, hence linking the programs by allowing cross-trading could keep the price of TCI allowances well below the requisite level, resulting in insufficient revenue for TCI investment. On the other hand, demand for allowances in the transportation sector could raise the price of RGGI allowances.

- Assuming RGGI and TCI allowances are auctioned separately but allowed to cross-trade, a possible remedy would be to “weight” allowances based on clearing price. So, if a RGGI auction produces a clearing price of \$10 and a TCI auction produces a clearing price of \$20, two RGGI allowances would be required to cover one ton of transportation emissions. Economists may object on

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efficiency grounds, but decarbonization requires a careful balancing of electricity and transportation investment, which produces its own efficiency.

- Alternatively, and perhaps preferably, TCI, RGGI and other cap & invest programs could stand alone, with no linkage.

Accelerating reductions. A virtue of allowance-based (capped) systems is that, if properly enforced, they ensure an agreed quantity of emissions is not exceeded. However, this quantitative certainty can also be a drawback, as it does not easily permit *additional* reductions to be achieved through investment. In other words, capped systems limit both emissions and reductions. Existing cap & invest programs, such as RGGI, EU ETS, and WCI, have tended to invest in complementary programs to reduce cost but not to accelerate reductions. This creates a negative feedback — investment of revenues in abatement reduces demand for reductions, in turn causing allowance prices to drop, resulting in less revenue for investment.

- At least a portion of investment should go to obtaining *additional* reductions beyond what the cap alone determines, both to hasten climate reductions and to avoid undercutting allowance prices and revenue streams. Additionality could be achieved either by investing outside the cap (see Offsets below) or by removing allowances from the system (e.g., from subsequent budgets) to account for reductions achieved by investment. In a system where investment is the main driver of sectoral reductions, the latter is preferable.
- RGGI and EU ETS have been forced to conduct ad hoc backcasting exercises to lower the budget and remove excess (banked) allowances from the system to maintain allowance prices and the future integrity of the system. TCI should include from the beginning a multi-step ECR that begins to remove allowances from present or future budgets as soon as allowance prices begin to fall below target levels (e.g., \$20-25). If banking of allowances is permitted, it should be for a limited period of time (e.g., 3 years).
- Borrowing should be limited to the quantity of allowances made available through the Cost Containment Reserve and should be repaid within a specified period of time (e.g., 5 years) from a subsequent budget.

Investment strategies. As the TCI program develops, many ideas will be put forward for investment strategies.

- Criteria for choosing which strategies to invest in should take abatement cost into account to obtain maximum reductions as early as possible. Delaying higher-price investment strategies may also provide time for further development and innovation.
- Abatement cost cannot be the sole criteria for choosing among abatement strategies, however. Planners must have a relatively clear idea of what the transportation sector of the future will look like to avoid foreclosing options altogether due to early, hasty investments. As an example, highway expansion could lead to reduced congestion and lower emissions for a period of a few years but could induce more congestion later. Improved public transit, car-sharing, and improved land use planning are proven alternatives. In the foreseeable future, autonomous and semi-autonomous EVs that “talk” to each other could vastly improve traffic flow without the need for costly and disruptive lane expansion. In addition, near-term investments in some high-abatement-cost options may be necessary in order for technologies or services that will be required for long-term deep decarbonization of the sector to have time to grow and mature so they are available when needed.

- To make investment dollars as impactful as possible and to avoid overlapping with the carbon price signal, investments should ideally subsidize, where feasible, only the portion of the abatement cost that exceeds the allowance price. This approach could result in a substantial increase in reductions and merits further study.

Health and equity. Although this is a topic for a future workshop, a few points bear mentioning here. Environmental justice groups have expressed concerns about cap & invest, not without reason. While a GHG cap is generally neutral with respect to criteria pollutants, if the most expensive abatement opportunities exist at emitting sources close to low-income communities, a cap & invest program could degrade the air in those communities, leading to higher rates of asthma and other pulmonary disease. Moreover, like any pricing mechanism, cap & invest can be highly regressive, costing low-income families a much larger percentage of their income. This regressive impact is exacerbated by the fact that many of the actions available to upper-income families to avoid higher costs due to carbon pricing, such as purchasing EVs, are beyond the means of low-income households. It is vital to the success of TCI to ensure that it benefits rather than harms low-income communities. Thus, the investment portion of the program should not be neutral but should tilt heavily in favor of low-income communities.

- Environmental and social justice groups, particularly those from frontline communities, must be *at the table* during the TCI design phase, and equity principles need to be agreed and adopted at the front end of the design phase.
- More than 50% of revenue investment should directly benefit low-income communities, rural communities, and workers who may bear additional costs from the transition to clean transportation (e.g., truckers). These stakeholders' views should take priority in deciding how money is invested in their communities and sectors to achieve emission reductions.
- RGGI protects low-income households through ratepayer assistance (rebates applied to utility bills). TCI could follow suit, compensating for higher transportation fuel costs by providing rebates to car-driving low-income households to offset higher prices at the pump. Win-win investments that would reduce both household costs and GHG emissions, such as subsidized or free transit passes and free bus-rail transfers, should be favored.
- Priority should be given to GHG emission reduction opportunities that also reduce air and noise pollution in low-income communities, such as offering greater incentives to EV trucks and buses that service these areas. Because these areas often have the highest rates of pulmonary and respiratory disease, such as asthma, reducing air pollution in these communities can provide a greater benefit relative to cost than similar reductions in other areas.

Offsets. Offsets are often attractive as alternative forms of compliance because they are cheaper than paying a carbon price. In theory, this can lead to more reductions for a given cost, but experience has shown that offset programs may give rise to abuse because they can be difficult to quantify and can create moral hazards (witness the HFC fiasco with the Clean Development Mechanism). Nevertheless, when carefully designed, offset programs can lead to improved environmental and economic outcomes, particularly in sectors that may not be amenable to carbon pricing or other forms of regulation.

- As noted earlier, investments in sectors outside the scope of the cap can help achieve reductions additional to those achieved by the cap. However, as the main driver of reductions in the

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transportation sector under TCI will be the investment (as opposed to the carbon price itself), as little of that investment as possible should be redirected outside the sector. TCI should establish a relatively low maximum percentage of investment that can be directed toward offsets.

- All offsets must be verifiable, enforceable, and permanent.