

HOW TO SIMULTANEOUSLY REACH EMISSION TARGETS AND ADVANCE EQUITY IN THE TRANSPORTATION & CLIMATE INITIATIVE

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SUMMARY

STRICT CAP LEVELS: Most TCI states have adopted goals to achieve an 80 percent reduction in emissions by 2050, compared to 1990 levels. The cap levels for 2030 and beyond must be sufficient to reach this goal, which means at least a 40 percent reduction in transportation emissions by 2030.

UNSUPPRESSED ALLOWANCE PRICES: Allowance prices must be allowed to reach whatever levels are necessary to achieve this reduction, except under extraordinary circumstances. To suppress the allowance price, either through an oversupply of allowances or an unreasonably low-price ceiling, is to threaten the environmental integrity of the program.

PROTECT VULNERABLE POPULATIONS: In order to justify price containment mechanisms that are sufficiently high that they do not allow the cap to be violated, TCI states should concentrate on returning revenue to low and moderate-income households, as well as environmental justice (EJ) communities, in order to ameliorate the impacts of the program on their cost of living. This can be done by (1) targeting investments to address the needs of their communities for low-carbon transportation and to reduce health impacts from fossil-fuel transport, and (2) returning a portion of the money to them through rebates and tax cuts.

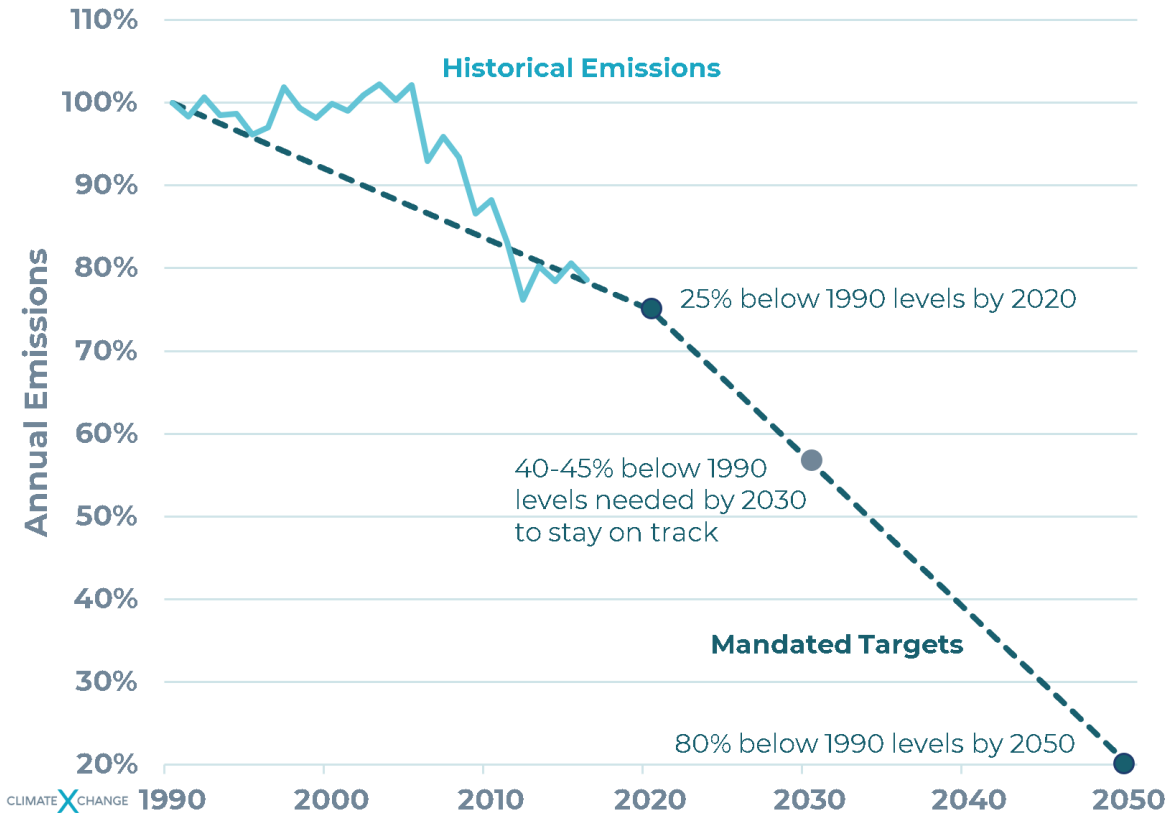
HIGHER ALLOWANCE PRICES WILL CAUSE EMISSIONS TO DROP: Higher allowance prices will by themselves, apart from the impact of investments, cause emissions to drop, over ten years or more.

CAP LEVEL MUST BE SET AT A 40% REDUCTION OR MORE BY 2030

Our coalition, the Massachusetts Campaign for a Clean Energy Future, has two basic principles for an acceptable carbon pricing policy:

- Achieve, in combination with other policies, the state's GHG reduction mandates;
- Ensure that the vast majority of low-income, and most moderate-income, people come out ahead or even from the combination of carbon pollution charges and use of the resulting revenues for rebates/tax cuts and reinvestment.

Massachusetts, as with most of the states that are part of the TCI, has a legally-mandated target to reduce emissions by at least 80 percent by 2050. To keep on track to get to 80 percent these states must reduce emissions by 40 to 45 percent by 2030.

Figure 1: Massachusetts Percent Emission Cuts from 1990

As the leading source of greenhouse gas emissions, transportation must get on the same track as electricity, building, and industrial fuels and cut emissions by at least 40 percent by 2030, and by about two-thirds by 2040.

Thus, Climate XChange proposes that the **TCI adopt a cap of at least a 40 percent reduction in transportation emissions for 2030, compared to 1990 levels**. Since TCI is only expected to cover ground transport, other sectors such as air travel must be addressed with complementary policies.

Given the state of the global warming crisis worldwide, any reduction of less than 40 percent as a target, and as the level to which the TCI emissions cap is set, is simply unacceptable.

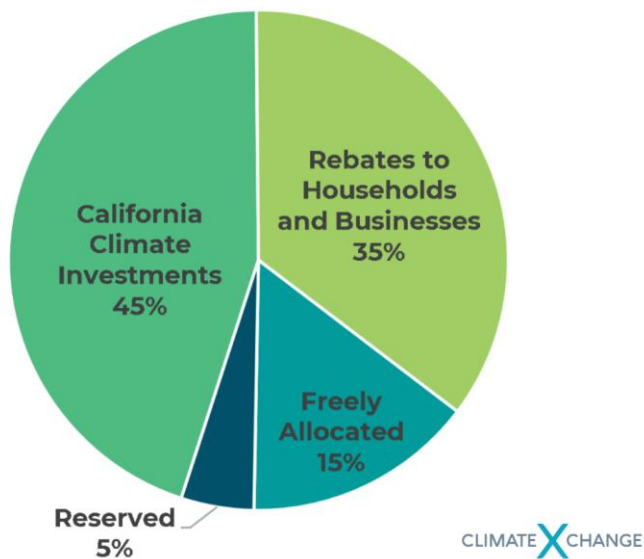
ALLOWANCE PRICES MUST REFLECT WHATEVER PRICE IS NECESSARY TO STAY UNDER THE CAP TRAJECTORY

The objection to a tight cap level is that it could lead to higher than acceptable allowance prices. Typically, cap-and-trade systems have suppressed allowance prices by setting the initial cap excessively high and allowing polluters to bank surplus allowances for future years. Alternatively, program designers can choose to suppress costs by setting a cost containment reserve and/or price ceiling very low. Both decisions could compromise the program's ability to achieve a 40 percent reduction by 2030.

Rather than threaten the integrity of the program, governments can spend their revenue in such a way that the allowance price can rise as high as needed, while holding vulnerable populations harmless. There are two ways to do this:

1. **Invest the money in appropriate ways for both individual households and communities** – via public transit, incentives for electric vehicles, charging stations, etc. California has established strong equity requirements in their investment program, and estimates that 57 percent of projects are benefiting disadvantaged communities. Whether this spending will fully counteract the impact of rising prices for fuels, address existing burdens from fossil-fuel based transportation, and address cross-sectional issues such as public health and improvement of mass transit is yet to be seen. Our organization is currently conducting a study on California’s equity requirements and spending programs. TCI must fully investigate to what degree investment spending can cover the increased costs of the program, rectify prior burdens of disadvantaged households, and improve equity for such communities.
2. **To the degree that spending money on investments is not sufficient, for either low/moderate income or EJ families, the TCI states must return the money to households**, with a higher proportion going to vulnerable populations, presumably via rebates, tax credits, or other methods. In California, about 35 percent of its total cap-and-trade allowance value is being returned to households (via equal rebates per household on electric and natural gas bills) and small businesses, while 15 percent is directly allocated to particular industries. About 36 percent of the total revenue goes to transportation investments and 9 percent to other climate-related investments. See Figure 2 below:

Figure 2: California’s Use of Allowance Value from Cap-and-Trade

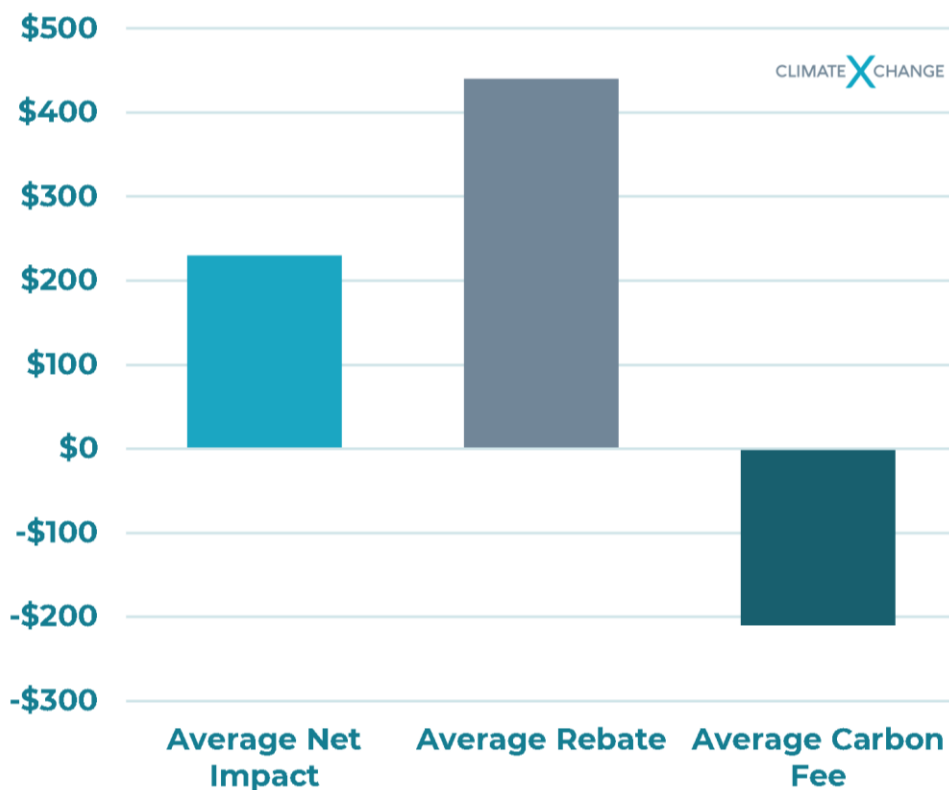


From: *Regional Cap and Trade: Lessons from the Regional Greenhouse Gas Initiative and Western Climate Initiative*, Jonah Kurman-Faber and Marc Breslow, Climate XChange, 2018

Given that TCI will only cover transportation, it would be appropriate to use a substantial portion of the revenues for rebates/tax cuts for low and moderate income households, and possibly for higher-income households¹ – to the extent that their costs cannot be effectively covered by investments in their communities.

Such rebates/tax cuts would effectively negate the argument against higher allowance prices. A variety of studies have shown how this can be done at the state and federal level, including our own studies for Massachusetts and Maryland.² See Figure 3 below, which shows the impacts on the bottom 20 percent of households from House Bill 1726 in Massachusetts, based solely on rebates.

Figure 3: Impacts on the bottom 20 percent of households from House Bill 1726 in Massachusetts, based solely on rebates



¹ A portion of low/moderate income households, if they are paying into a state’s income tax system or other state taxes, can be covered by tax cuts, or by a system such as California uses to cut household electric and natural gas bills. For a substantial fraction of such households, however, rebates outside of the tax system will be necessary, probably through existing low-income benefit programs. For example, in Massachusetts the state’s SNAP agency has said that rebates could be added to the EBT cards that SNAP recipients use.

² [A Short-Run Distributional Analysis of a Carbon Tax in the United States](#), Anders Fremstad and Mark Paul, Working Paper Series, Number 434, Political Economy Research Institute, August 2017; [Analysis of a Carbon Fee or Tax as a Mechanism to Reduce GHG Emissions in Massachusetts](#), Marc Breslow et al, Massachusetts Department of Energy Resources, December, 2014; [An Analysis of Impacts on Households at Different Income Levels from Carbon Pollution Pricing in Maryland](#), Marc Breslow and Chynna Pickens, Climate XChange, May 2018.

HIGHER ALLOWANCE PRICES WILL CUT EMISSIONS FURTHER

We understand that the primary purpose of TCI is to provide incentive money for clean transportation. But of course, as with all cap-and-trade systems, raising prices is expected to cut demand for fuel. Georgetown's 2015 study, even with low allowance prices, estimated small cuts as higher prices induce drivers to buy more fuel-efficient cars, to switch to electric vehicles, and to drive less. With higher allowance prices the reductions in emissions will be greater.

Our own studies, and those done for other states, such as the Maryland Commission on Climate Change's (MCCC), have estimated these changes. It is important to remember, that just as with mass transit investment, it takes a number of years for these impacts to show up, as they primarily influence the demand for new vehicles. Since it takes up to 15 years for vehicles to be discarded, it will take a long time for the impacts of higher prices to fully come into effect.

The study done for the MCCC, by Energy+Environmental Economics, estimated that higher carbon prices would cause a **9 percent reduction in energy consumption by 2030 and 35 percent by 2050.**³

CONCLUSIONS

To summarize, we conclude that:

STRICT CAP LEVELS: The cap levels for 2030 and beyond must be sufficient to reach the 80 percent or greater reductions in overall emissions that most TCI states have adopted; and this means a cap level for 2030 that is at least 40 percent below the 1990 level.

UNSUPPRESSED ALLOWANCE PRICES: Cost containment mechanisms must allow allowance prices to reach whatever levels are necessary to achieve the caps, except in extraordinary circumstances. With high allowance prices, a portion of the revenue should be returned to vulnerable customers to counteract the increase without violating the environmental integrity of the program.

PROTECT VULNERABLE POPULATIONS: In order to justify a strict cap and price containment mechanisms that are sufficiently high that they do not allow the cap to be violated, TCI states should concentrate on returning revenue to low and moderate-income households, as well as environmental justice communities, in order to ameliorate the impacts of the program on their cost of living and to reduce health impacts from fossil-fuel transport. This can be done by (1) targeting investments to address the needs of their communities and (2) returning a portion of the money to them through rebates and/or tax cuts.

HIGHER ALLOWANCE PRICES WILL CAUSE EMISSIONS TO DROP: Higher allowance prices will by themselves, apart from the impact of investments, cause emissions to drop, over ten years or more.

³ [Maryland Pathways, Policy Scenario 3: Carbon Price Scenario](#), Tory Clark et al, Energy+Environmental Economics, Nov. 13, 2018; [The Greenhouse Gas Reduction Impact of a Carbon Pollution Charge in Maryland](#), August Granath and Marc Breslow, Climate XChange, May 2018.