

The Transportation & Climate Initiative

Background and Status

Presentation to the MassDOT and MBTA Boards
October 28, 2019



Goals of the Presentation

- To brief the Boards on the regional Transportation & Climate Initiative (TCI):
 - What problem are we trying to solve?
 - What is the regulatory context?
 - What TCI is and what is it not?
 - What are the goals of TCI?
 - How would a TCI program work?
 - Cap and Invest vs. Carbon Price
 - Where are we are in the process?

What Problem Are We Trying to Solve?

- Burning fossil fuels, including transportation fuels – used in cars, trucks, buses, trains, ships, aircraft, maintenance vehicles, and construction equipment– releases CO₂ into the atmosphere.
- The transportation sector is the largest contributor to carbon emissions.
- This is true not just in Massachusetts, but regionally, nationally, and globally.
- To tackle this challenge, MassDOT is working in close partnership with the Executive Office of Energy & Environmental Affairs, the Department of Environmental Protection, the Executive Office of Administration & Finance, and the Department of Revenue.

Worcester, Mass., metro area

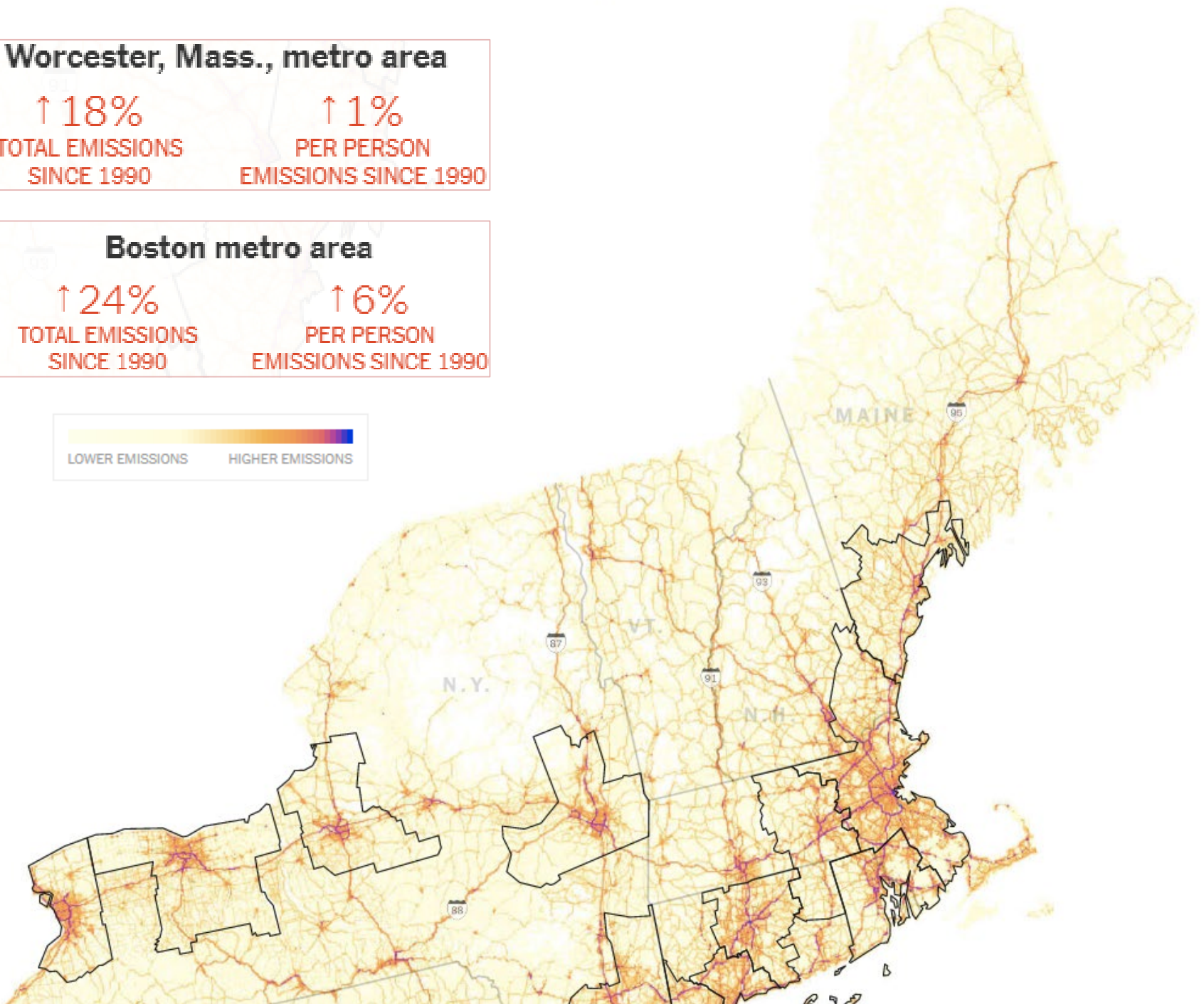
↑ 18%
TOTAL EMISSIONS
SINCE 1990

↑ 1%
PER PERSON
EMISSIONS SINCE 1990

Boston metro area

↑ 24%
TOTAL EMISSIONS
SINCE 1990

↑ 6%
PER PERSON
EMISSIONS SINCE 1990



What is the Regulatory Context Within Which We Are Trying to Address the Problem of Transportation Emissions?

- The Global Warming Solutions Act of 2008 required the establishment of economy-wide goals for reducing emissions.
 - 10%-25% percent below statewide 1990 GHG emission levels by 2020
 - 80% below 1990 levels by 2050 (may stretch for 100% by 2050)
 - Currently working to set an interim goal for 2030
- Every five years, the Commonwealth issues a Clean Energy and Climate Plan to lay out the pathways, by economic sectors, for achieving the required goals.
- The electricity sector has seen significant reductions over the last decade, and the building sector is making progress. The transportation sector remains essentially unchanged in its emissions levels.
- *Kain vs. Mass. DEP* (2016) reaffirmed that the emissions targets in the Global Warming Solutions Act are legally enforceable.
 - We need policy solutions that will reduce emissions from the transportation sector.

What Exactly is the Transportation & Climate Initiative?

- Voluntary collaboration among 13 Northeast and Mid-Atlantic jurisdictions to develop policy and programmatic ways to reduce transportation emissions.
- In December 2018, the TCI jurisdictions issued a joint statement committing to an intensive one-year process to design a regional transportation emissions-reduction program.
 - Modeled in part on the Regional Greenhouse Gas Initiative for the electricity sector.
 - The relationship among the states is positive and encourages compromise.
- TCI is not a regulatory or legal body, it cannot compel the states to participate or take particular actions, and it will not implement any eventual program.

What Are the Stated Goals of the TCI Jurisdictions?

- December 2018 - Joint Kick-Off Statement:

'...[to] 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, and allow each TCI jurisdiction to invest proceeds from the program into low-carbon and more resilient transportation infrastructure.'

'...[To advance] low-carbon transportation solutions for our region to improve the way people and goods move from place to place while addressing the threats posed by carbon and other pollution.'

- October 2019 - Draft Policy Framework:

'The TCI jurisdictions have committed to working with people and communities to develop and implement a regional policy that addresses the urgent need to reduce greenhouse gas emissions and other harmful pollutants generated by the transportation system, while seeking to improve equity, mobility and community engagement.'

'The TCI jurisdictions have committed to expanding low-carbon and clean mobility options in urban, suburban, and rural communities, particularly for populations and communities that are currently underserved by the transportation system or disproportionately adversely affected by climate change and transportation pollution.'

How Would the Proposed Program Work?

- Still under development, key details will be worked out over the next few months.
- Proposed framework:
 - A 'cap-and-invest' program to reduce the consumption of on-road fossil fuels
 - Not aviation fuel, not maritime fuel, not home-heating oil
 - Entities that sell on-road fuels must purchase permits (also called allowances) to sell that fuel
 - The exact 'point of regulation' is still under discussion
 - Gallons of fuel sold is a proxy for amount of carbon burned and emissions generated
 - Permits will be purchased through a regional auction
 - The number of available permits will decrease over time, raising the price and encouraging less fuel consumption (and thus fewer emissions)
 - Each state will receive a portion of the proceeds raised at auction
 - Proceeds will be distributed based on an allocation formula still under negotiation. Proceeds could be invested in 'green' projects, or to support other mobility or emissions-reduction needs.
 - Each state will make its own decisions about how to invest the proceeds
- **Will be the first transportation-only cap-and-invest program in the world.**

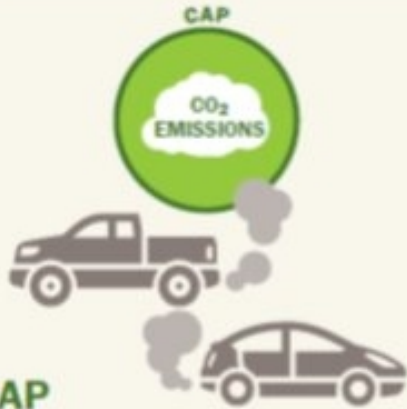
What Would the Proposed Program Do?

- The carbon-reduction potential of the program lies in two places:
 - Shifts in behavior that come from the new price signal
 - Transition to biofuels
 - Transition to low- and zero-emission vehicles
 - Transportation behavior change
 - New investments in projects and programs that can reduce driving, encourage shifts in fuels and vehicles, and/or reduce on-road emissions
 - New and better public transit
 - Low- and zero-emission buses
 - Bicycle and pedestrian infrastructure
 - Electric vehicle charging facilities
- **The pending Transportation Bond Bill would commit 50% of any proceeds to the Commonwealth Transportation Fund for expenditure at the direction of MassDOT, EOEEA, and ANF.**
- The intention is not to shock the economy or the mobility system but to gradually nudge changes in behavior and in the mix of investments.

How Would the Proposed Program Work?

CAP

A limit, or cap, is set on the amount of carbon dioxide (CO₂) that is released from vehicles using transportation fuels. The initial cap is based on a baseline or "business as usual" scenario and that cap may be reduced over time.



ALLOWANCE

Transportation fuel suppliers must obtain an allowance for every ton of carbon dioxide resulting from the fuel they sell.



AUCTION

The total number of available allowances is limited based on the cap. An auction is held. Transportation fuel suppliers (and other entities that wish to trade or retire them) can bid on available allowances.



INVEST

States receive payments based on the revenues raised from the sale of allowances. States invest proceeds to reduce transportation carbon emissions through subsidies of lower carbon transportation options.



Cap and Invest Program vs. Carbon Price/Gas Tax

- A cap-and-invest program, in which allowances are auctioned, allows the price to float in response to macroeconomic conditions.
 - A weaker economy = demand for fuel = cheaper auction prices.
 - *A fixed carbon price is static, regardless of economic conditions.*
- A cap-and-invest program allows the price per ton to be set by the market, based on fluctuating demand and emissions levels.
 - *A fixed carbon price requires the government to arbitrarily set a price, which then remains in place and is very challenging to change.*
- Under a cap-and-invest program, the number of allowances on the market will decline over time, providing more certainty about environmental outcomes.
 - *A fixed carbon price lacks this feature, and so misses the mandated requirement for the Commonwealth to incrementally reduce emissions.*
- Also: the proposed TCI program would be regional, spanning all or most of the East Coast, thereby avoiding the problem of cross-border shopping that state-by-state gas fees can encourage.

Where Are We in the Process?

- Draft program framework released for public review on October 1st.
- Modeling work in support of program development is underway:
 - Emissions reductions
 - Energy use and consumption
 - Macroeconomic impact and job creation
 - Public health
 - Allowances prices
 - Changes in fleet composition and vehicle sales
- Model results will be based on assumptions about the future and will contain some uncertainties, but are directionally valuable for setting policy and the cap. Additional 'sensitivity' analyses will help us to understand the impact of different program designs.
- October/November - Second round of public workshops in Massachusetts.
- December - Release of a draft program proposal in the form of a draft MOU, accompanied by modeling results as well as potential costs and benefits of different program options.
- Spring 2020 - Final Memorandum of Understanding (each jurisdiction will decide whether to sign).

Participating Jurisdictions

- Connecticut
- Delaware
- Maryland
- Massachusetts
- New Jersey
- Pennsylvania
- Rhode Island
- Vermont
- Virginia
- Washington, DC

Observers:

- Maine
- New York
- New Hampshire

What is the TCI Decision-Making Structure?

- Leadership Team - High-level representatives of every jurisdiction, both transportation and environmental agencies, set direction and make key decisions
 - Massachusetts is a co-chair
 - Meets monthly
- Executive Policy Committee - Transportation and environmental agencies from every jurisdiction, considers and prepares decisions for the Leadership Team
 - Massachusetts is a co-chair
 - Biweekly calls
- Working Groups - Populated by representatives from different jurisdictions, dive deeply into specific topics and issues
 - Technical - Co-chaired by Massachusetts
 - Investment and Equity - Co-chaired by Massachusetts
 - Legal - Co-chaired by Massachusetts
 - Communications
 - Weekly calls
- The team approach has been productive and positive.

Upcoming Public Workshops

- Monday, October 28, 2019
6:00pm – 8:00pm
Northern Essex Community College
Haverhill
- Wednesday, October 30, 2019
6:00pm – 8:00pm
Roxbury Community College
Boston
- Monday, November 4, 2019
6:00pm – 8:00pm
Holyoke Community College
Holyoke