Climate Caucus Briefing and Update: The Launch of the Transportation and Climate Initiative Program (TCI-P)

December 2020

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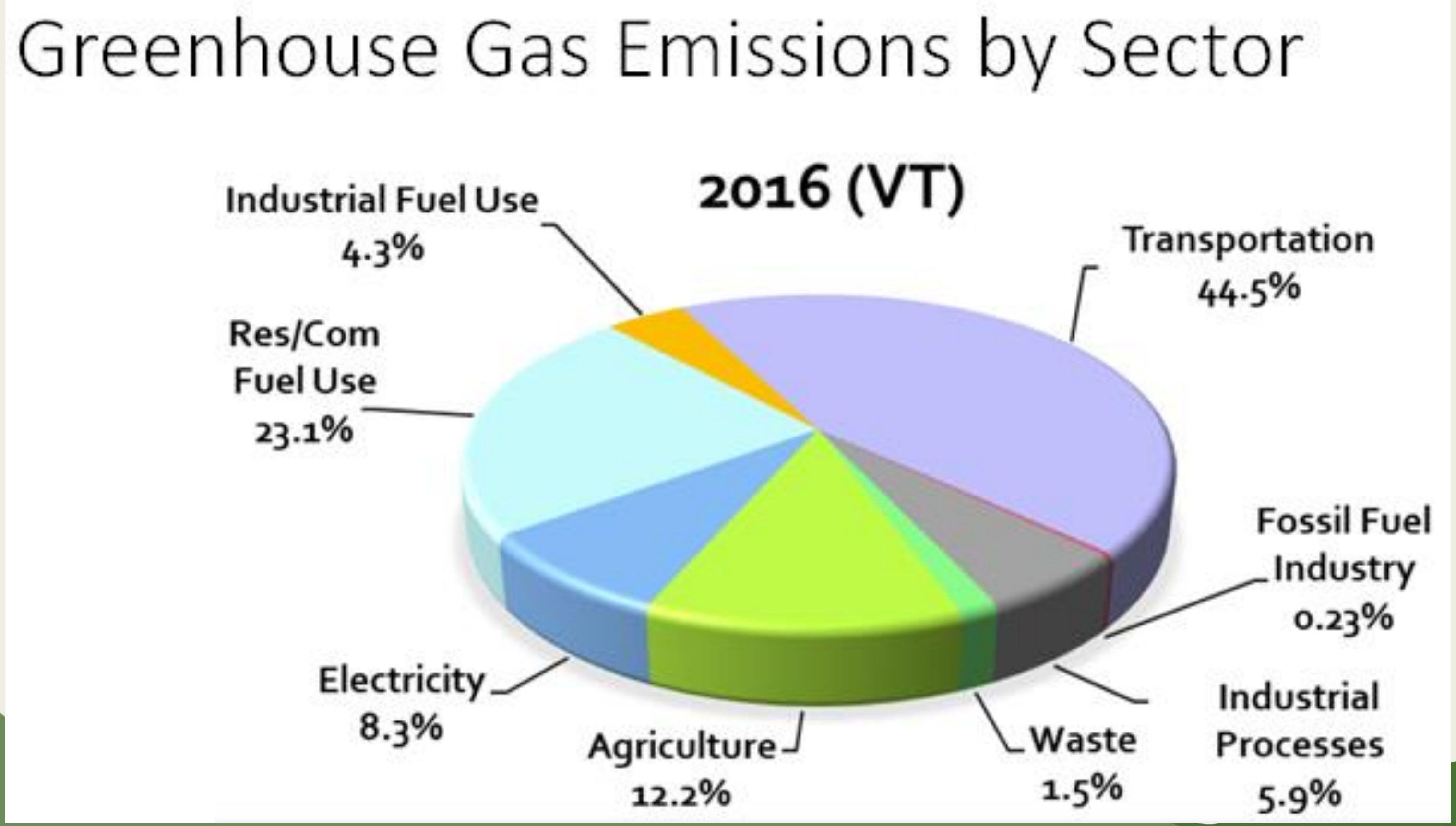
TCI-P Climate Caucus Briefing

- Transportation emissions/GWSA considerations
- Program overview
- Current status
- Program Elements
- Vermont Considerations
- Schedule

Why focus on transportation emissions?



VT GHG Emissions – GWSA targets

- 1990: 8.65 $MMTCO_2e$
- 2005: 10.24 $MMTCO_2e$
- 2016: 9.76 $MMTCO_2e$

- *2025: 7.58* $MMTCO_2e$ (-26% from 2005)
- *2030: 5.19* $MMTCO_2e$ (-40% from 1990)
- *2050: 1.73* $MMTCO_2e$ (-80% from 1990)

Context:

- 2016 Transportation Sector: 4.34 $MMTCO_2e$
- 2016 Building Energy Use: 2.68 $MMTCO_2e$
- 2018 (projected): 9.02 $MMTCO_2e$

- Forest sequestration: ~5 $MMTCO_2e$

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History of Pollution Reduction Programs

- “Command-and-Control” - This is the traditional regulatory model that dictates the outcomes (based on legislative frameworks) each facility must achieve
  - These programs guarantee pollution reduction, but those reductions may come at higher cost
- “Cap-and-Trade” –By setting a shared outcome rather than individual ones and creating a market for pollution “allowances,” these types of program reach the overall shared outcome at the minimum cost for all facilities
  - This program seeks the same pollution reductions but accounts for the fact that different facilities that meeting program outcomes come at different costs to different facilities
  - Works best on programs where supply side reductions are cost-effective
  - Examples: Leaded gasoline phasedown and the Acid Rain Program

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History of Pollution Reduction Strategies

- “Cap-and-Invest” – Instead of being issued allowances, facilities have to purchase allowances in an auction (or continue to buy them from each other)
  - The auction proceeds are used to reduce consumer demand
  - The auction market finds the most cost-effective balance between the effect of the cap to clean up the supply and effect of reinvestment programs to reduce consumer demand

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"Cap-and-Invest" – VT's RGGI experience

- States in the Northeast and Mid-Atlantic launched RGGI in 2009
- Major power plants are required to buy allowances at auctions or from each other
- States invest revenue into efficiency and other initiatives that drive down consumer demand
- Emissions impact: More than 40% reduction in regional emissions cap at lowest cost
- Equity concerns: RGGI did not guarantee emissions reductions from all power plants and led to new plant siting in environmental justice communities
- New Jersey has rejoined, Virginia has recently joined, and Pennsylvania is in the process of joining

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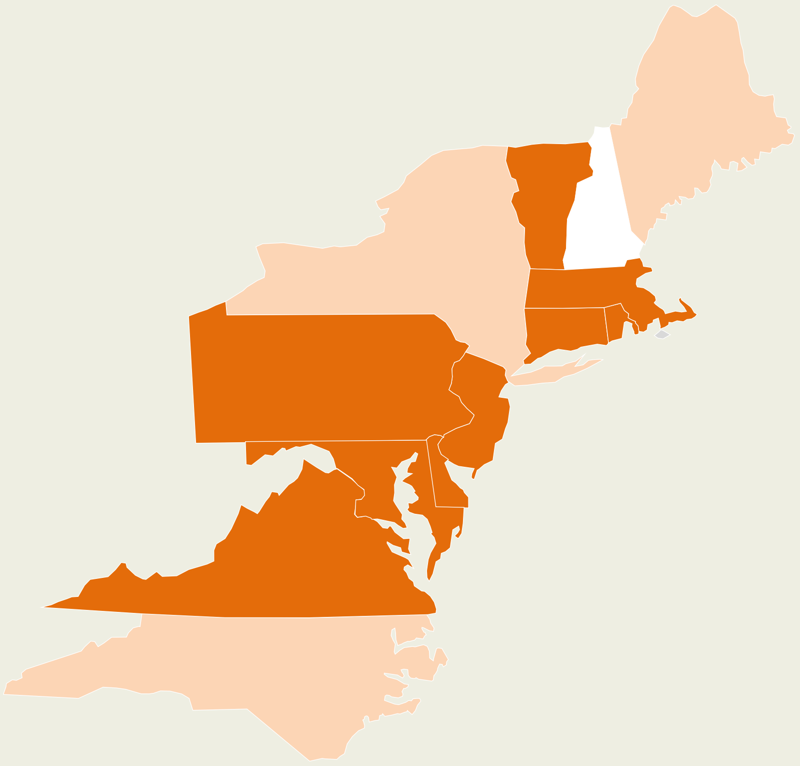
TCI-P Program Overview

- TCI-P is a program initiative of the Transportation and Climate Initiative that was launched as a collaboration amongst states and the District of Columbia to reduce GHG emissions from the transportation sector
- Regional initiative to reduce GHG emissions from the transportation sector (modeled after RGGI)
- Regional cap on <u>fossil CO_2</u> emissions from transportation fuels:
  - Motor gasoline (90% fossil)
  - On-road diesel (96% fossil)

TCI-P Program Overview –Jurisdictions



- Nine states plus D.C. signed December 2019 MOU
- Three states (NY, ME, NC) did not sign but actively participated in discussions
- NH did not participate

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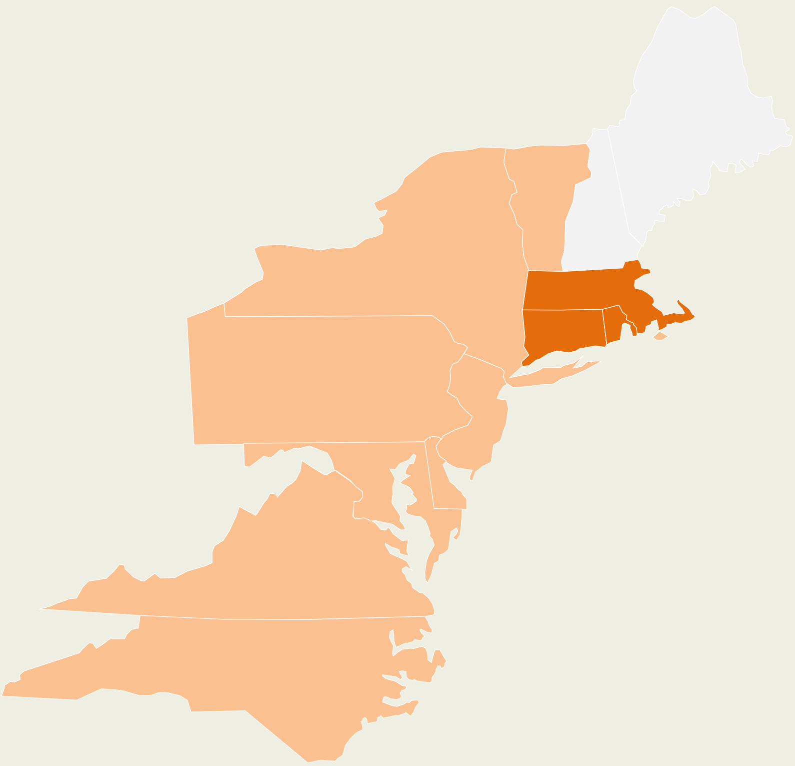
TCI-P Program Overview –Jurisdictions



- CT, DC, MA & RI have committed to establishing the program
- Eight states (DE, MD, NJ, NY, NC, PA, VA, VT) will continue to collaborate on program development
- Scale of opportunity
  - 80 million people (2019)
  - $5.99 trillion in GSP (2019)
  - 58.2 million registered motor vehicles (2017)

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TCI-P Program Overview – Design

- Regulated entities
  - Position holders: owners of fuel at terminal rack
  - Enterers: owners of fuel imported to participating jurisdiction
- Cap implemented through regional auction of emission allowances (same as RGGI)
  - Target initial allowance price to be the equivalent of ~$.05 per gallon of gasoline
  - Automatic increase or decrease in amount of allowances auctioned if prices move outside of target range of $6.50 to $12 in 2023 (increasing over time)

TCI-P Program Overview – Design

- Auction proceeds invested in programs to reduce emissions
  - E.g. EV incentives/charging equipment, improved transit, bike/ped infrastructure
- Regional priority to address overburdened/underserved communities
  - MOU includes non-binding commitment of 35% of revenues

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TCI-P - Current Status

- Four jurisdictions signed the MOU in December 2020 and committed to program initiation by 2022
- Work continues on developing program model rule
- Administrative organization to be created in early 2021
- Regulated entities engagement – at regional and state level, to solicit comment on regulated entities concept

TCI-P – Program Elements (1)

- Regulated fuels: motor gasoline and on-road diesel
- Regulated entities: Position holders, enterers, terminal operators (reporting only)
- 1-year reporting-only period (2022); first compliance year 2023

TCI-P – Program Elements (2)

- 2023 regional emission cap 267.6 million metric tons, scaled to participating jurisdictions
- Cap declines by 3.33% of 2023 amount per year through 2032
- Allowances apportioned to states based on fuel sales, with 1% minimum share

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TCI-P - Program Elements (3)

- Establishment of dedicated regional organization
- Offset projects: adopt existing RGGI project categories, allow use of RGGI offsets for compliance
- No link to another program (e.g. RGGI or WCI) at outset, but linking possible in the future

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TCI-P – Vermont Considerations

- Regulated Entities
- Potential proceeds
- Alignment with GWSA reduction goals
- Health benefits (TRECH study, VDH study)
- Economic effects/COVID Recovery

TCI-P Vermont Considerations (2)

- Regulated Entities
  - Primary compliance entity – position holder at terminal rack
    - Note: no active fuel terminal in Vermont
  - Secondary compliance entity – enterer (owner of fuel imported into participating jurisdiction)
    - Subset of DMV licensed distributors (est. ~ 25 in Vermont)
  - Position holders, enterers, and terminal operators will have reporting obligation

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TCI-P – Vermont Considerations (3)

- Potential proceeds
  - VT TCI-P estimated allowance budget 2025: 2.68M
  - Potential Vermont proceeds estimate (2025): $18.5M (@$6.90)
  - Share of Vermont fuel sales to out-of-state residents (2019 pre-COVID): ~25% (ACCD estimate)

TCI-P – Vermont Considerations (4)

- Alignment with GWSA reduction goals
  - GWSA targets are economy-wide CO2e; TCI-P budgets are on-road transportation CO2
  - TCI-P cap-and-invest is multi-jurisdictional and annual emissions in any jurisdiction could be higher or lower than their budget
  - Assuming transportation share of emissions remains constant at 44%, potential Vermont TCI-P emissions budget represents 96% of 2025 GWSA on-road transportation fossil reductions

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TCI-P – Vermont Considerations (5)

- Health benefits
  - Harvard TRECH: Program results in health benefits in every state with benefits weighted to more urbanized areas. 280 fewer premature deaths, $2.7B in est. reg. health benefits
  - VDH Transportation and health analysis of achieving 2016 CEP emission reductions showed much greater benefits for Vermont – 2,000 fewer premature deaths, $1.1B in avoided health care costs and increased productivity

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TCI-P – Vermont Considerations (6)

- Economic effects
  - Preliminary regional macroeconomic modeling (REMI) indicates very modest regional economic benefit 2022-2032 (essentially no long-term impact)
  - Preliminary modeling indicates lower income households bear less cost in early years but accrue less benefit later

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TCI-P – Schedule (1)

- December 21: Release of final MOU with signatures of initial participating states
- Spring 2021: Final Model Rule; participating jurisdictions initiate rulemaking process; establishment of regional organization

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TCI-P – Schedule (2)

- January 2022 – start of reporting-only period
- Late summer/fall 2022 – possible first (early) auctions
- January 2023 – start of first compliance period

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