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

December 2020
TCI-P Climate Caucus Briefing

- Transportation emissions/GWSA considerations
- Program overview
- Current status
- Program Elements
- Vermont Considerations
- Schedule
Why focus on transportation emissions?

Greenhouse Gas Emissions by Sector

- Transportation: 44.5%
- Res/Com Fuel Use: 23.1%
- Agriculture: 12.2%
- Industrial Fuel Use: 4.3%
- Electricity: 8.3%
- Fossil Fuel Industry: 0.23%
- Waste: 1.5%
- Industrial Processes: 5.9%

VT - 2016
VT GHG Emissions – GWSA targets

- 1990: 8.65 MMTCO$_2$e
- 2005: 10.24 MMTCO$_2$e
- 2016: 9.76 MMTCO$_2$e

Context:
- 2016 Transportation Sector: 4.34 MMTCO$_2$e
- 2016 Building Energy Use: 2.68 MMTCO$_2$e
- 2018 (projected): 9.02 MMTCO$_2$e

- 2025: 7.58 MMTCO$_2$e (-26% from 2005)
- 2030: 5.19 MMTCO$_2$e (-40% from 1990)
- 2050: 1.73 MMTCO$_2$e (-80% from 1990)

- Forest sequestration: ~5 MMTCO$_2$e
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
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
“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
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 fossil CO$_2$ 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
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)
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
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
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
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
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
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
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
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
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