The Transportation and Climate Initiative

Mitigation Work Group

January 21, 2020
TCI

- Collaboration among 13 jurisdictions.
- Developing potential regional clean transportation policy
- Modeled on successful Regional Greenhouse Gas Initiative (RGGI) – “Cap-and-Invest”
What is “Cap and Invest”?

1. Require pollution sources to turn in allowances for CO2 emissions.
2. Only issue a limited number of allowances.
3. Let sources trade allowances.
4. Invest proceeds from allowance auctions into energy programs.
How would a CO2 Cap work in TCI?
Fuel wholesalers would comply with a regulation by holding enough allowances to cover the CO2 from combustion of fuel sold (sometimes distributors, too).

Gas stations and consumers would not have any regulatory obligation.
States would make allowances available to fuel companies through auctions.

Proceeds from these auctions would come back to the states, to invest in clean transportation.

Example: RGGI auction price history.
How might Cap and Invest Achieve our Clean Transportation Needs?

**CAP**
- Reduces CO2 emissions that cause climate change through declining pollution cap
- Creates proceeds for state investments
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- Expand and improve clean transportation options in communities
- Reduce CO2 emissions that cause climate change through clean transportation projects
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Together: Better climate, stronger economy, healthy air and communities
Current Status

- Released draft Memorandum of Understanding for comment (due Feb 28)
- Evaluated benefits from several program options

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The draft plan points to TCI as a potential program to enable transportation measures (esp. EVs) and TCI has provided sophisticated analysis on EVs, which we can incorporate into the final plan.

![Graph showing EV Sales Shares in TCI Analysis vs GGRA Draft](image-url)

- **EV Sales Shares in TCI Analysis vs GGRA Draft**
  - TCI analysis EV projections (solid lines) compared to GGRA scenarios (dashed lines)
  - Electric share of Light Duty Car and Truck Sales in TCI States
  - 25% TCI Cap
  - 22% TCI Cap
  - 20% TCI Cap
  - No TCI
  - GGRA Base Case
  - GGRA Low Adoption Case

The graph illustrates the projected electric vehicle sales share in TCI states compared to GGRA scenarios, highlighting the potential impact of TCI and the GGRA draft plan.
Other Assumption Updates

- We can also incorporate the TCI analysis EV cost projections into the final GGRA plan.

Mid-Size Car Purchase Price by Fuel Type

TCI analysis EV costs (solid lines) versus convention gasoline (dashed).
Base price, not average purchase price.
Excerpts from Regional Analysis

Full results and webinar recording at:

TransportationAndClimate.org
A declining emissions cap could lock in decreases in carbon dioxide emissions that are expected through 2032 and drive additional reductions.

In policy cases, emissions decline by roughly the levels prescribed by each cap from 2022 to 2032:

- Emissions decline slightly less in the later years, because of allowance banking.
*If fuel companies decide to pass on allowance costs it could mean an incremental price increase in 2022 of $0.05, $0.09 or $0.17 / gallon in the 20%, 22% and 25% Cap Reduction Scenarios, respectively. This is not a prediction of gasoline prices in the future. Several factors affect future gas prices, including policy and market forces.
Clean Transportation Investments to Reduce Pollution in Modeled TCI Scenarios

- **Electric Transit Buses:**
  Up to 44,000 transit buses by 2032.

- **Bus service and transit Improvements:**
  Up to $1.1 billion annually

- **Electric school buses:**
  Up to 42,000 by 2032.

- **Electric Trucks:**
  Up to 84,000 by 2032.

- **Bike Lanes & Sidewalks:**
  Up to $5.6 billion region-wide through 2032

(Regional totals)

Transportation & Climate Initiative
Of the Northeast and Mid-Atlantic States
Preliminary Public Health Benefits

- Fewer asthma symptoms
- Fewer premature deaths
- Fewer traffic-related injuries
- Total estimated public health benefits in 2032: $3.2 billion to $10.5 billion
Avoided Climate Impacts

$249 million – $892 million in avoided climate impacts in 2032
Conclusions from Macroeconomic Modeling

• Program has a positive impact on the economy.

• GDP, income, and jobs are projected to be greater than business as usual in 2032 and substantially net positive over the 2022-2040 timeframe.

• Significant progress towards achieving climate goals by reducing GHG and other pollution from transportation at modest cost and net benefit to the economy.

<table>
<thead>
<tr>
<th>Economic Indicators in 2032</th>
<th>20% Cap Reduction</th>
<th>22% Cap Reduction</th>
<th>25% Cap Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase in GDP growth, from Reference Case</td>
<td>$0.7B (0.01%)</td>
<td>$1.4B (0.03%)</td>
<td>$2.9B (0.05%)</td>
</tr>
<tr>
<td>Increase in DPI growth, from Reference Case</td>
<td>$0.5B (0.01%)</td>
<td>$0.9B (0.02%)</td>
<td>$1.9B (0.04%)</td>
</tr>
<tr>
<td>Increase in Jobs, from Reference Case</td>
<td>1,900 (0.004%)</td>
<td>3,982 (0.001%)</td>
<td>8,900 (0.02%)</td>
</tr>
</tbody>
</table>
• Initial annual proceeds range from $1.4 billion at start in the 20% case up to $5.6 billion in the 25% case.

• Allowance prices reflect the combined effect of the cap and the investments

• More stringent caps result in greater proceeds for investments.