Presentation to Transportation and Climate Initiative Technical Workshop

Fuel System Considerations in the TCI Region

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Georgetown’s Analysis Focused on How a Cap-and-Invest Program for Transportation Might Work

- Which fuels would be included?
- Which entities would have a compliance obligation?
TCI Region Carbon Dioxide Emissions by Sector

Source: EIA State Energy Data System
Petroleum Fuel Supply Chain

Source: American Petroleum Institute
TCI Fuel System: Virginia

Product Supply
Southeast – (PADD 1C)
- = Bulk Terminal
- = Refinery
- = Product Pipeline
- = Colonial Pipeline
- = Plantation Pipeline
- = Product Flows
- = Marine Movements
- = Urban Areas

To PADD 1B
(Pipeline/Truck)
Metropolitan
Washington D.C.

Richmond
Roanoke
Norfolk
Ports of Hampton Roads
Recommended Fuel Coverage

Finished Motor Gasoline and On-Road Diesel

Why?

• Largest portions of transportation GHGs (>82%)
• Can readily limit the scope to transportation only (e.g., fuels for other sectors like natural gas or home heating oil are not covered)
• Using default emissions factors, simple to estimate combustion emissions based on volumes of fuel sold
• Availability of tracking data, plus existing regulatory programs
• Jet fuel and others could be added later, if desired
Determining the point of regulation for a cap and invest program for transportation emissions
Important Considerations for a Point of Regulation

1. Technical feasibility
2. Higher upstream means covering a fewer number of larger sources
3. Targeted coverage, minimize misreporting and miscounting
4. Avoid regulating activities outside state boundaries
5. Build on existing programs, reporting requirements and industry practices
6. Consistent approaches simplify compliance for companies that operate in multiple jurisdictions
7. Manageable program administration workload
Options That Can Be Dismissed Easily

- Crude oil at point of extraction
  - Not much in the region
  - Exceedingly difficult to determine its end use
- Retail fuel stations
  - 10,000s of entities
- Individual vehicles at point of combustion
  - Millions of entities
Narrows it down to Three Options

A. Refiners and Importers

B. State Fuel Taxation Entities

C. EIA Prime Suppliers
Option A: Refiners and Importers

Oil refineries, and entities importing fuels into the TCI region through pipeline, barge, railcar, and truck

Characteristics:

• Not one single database
• Most fuel consumed in the region is produced outside the region
• Oil refineries operate in global market for petroleum products
• Large entities

Seven refineries in the region:
Delaware (DE); Bayway, Paulsboro (NJ); Bradford, Philadelphia, Trainer, Warren (PA)
Option B: State Fuel taxation entities

**Characteristics:**

- The *federal* fuel excise tax is usually assessed at the bulk terminal rack.
- Each of the 13 TCI jurisdictions have a motor fuel excise tax.
- Entities subject to *state* fuel excise taxes vary widely:
  - Some small: local distributor.
  - Some large: like federal tax.
- Could build on existing reporting, regulatory, and tracking mechanisms.
  - But, mostly confidential business information.
Option C: EIA Prime Suppliers

Defined as: “A firm that produces, imports, or transports selected petroleum products across State boundaries and local marketing areas, and sells the product to local distributors, local retailers, or end users.”

Characteristics:

• Report volumes of fuel on a monthly basis to EIA (Form EIA-782C)
• Only 195 Prime Suppliers in the United States, and about 100 that report for any of the 13 TCI jurisdictions
• Reporting is mandatory
• Most Prime Suppliers are large companies that supply fuel to multiple states
Advantages of using Prime Suppliers as the point of regulation

1. State-based definition
2. Entities exist in every state
3. Consistent across states
4. Higher in the supply chain than many state points of taxation
5. Typically larger companies than those assessed by state taxes
6. Based on reporting requirement designed to avoid double counting
7. More adaptable:
   - Relatively easy to expand coverage to more fuel types
   - States could join (or leave) with less disruption to the program
Building on the EIA Prime Supplier report

**Reporting requirements to add:**

1. Fuel components: blendstock, ethanol, biodiesel, etc

2. Measures to reduce under-reporting and misreporting
Data sources to bolster the information in the Prime Supplier report

- *EPA Greenhouse Gas Reporting Program* - information on refineries as well as importers/distributors
- *EPA fuel sulfur program* - information on where custody of a batch of fuel is transferred
- *EPA Renewable Fuels program* - information about where final motor gasoline is created by blending
- *EIA-821 Annual Fuel Oil and Kerosene Sales Report*
- State taxation records
- 3rd party market information brokers
Summary

Recommendations:
• Cover finished motor gasoline and on-road diesel
• Use Prime Suppliers as the point of regulation, with some additional information used to strengthen reporting

Next steps:
• The TCI Technical Analysis Workgroup is exploring details (final decisions have not been made)

More details in Georgetown paper ➔
Thank you!

For more information, please find the paper here:


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