CLEAN PRODUCTS MARKET ANALYSIS
PRESENTATION OF SURVEY FINDINGS

Presentation to MWAQC
May 24, 2017

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Language in the PM2.5 Maintenance Plan Update, Appendix C

"...the region will work with USEPA to demonstrate the feasibility of (and get SIP credit for) achieving reductions across the entire region from market forces that will result in cleaner products being distributed across the entire region even when the regulations driving the cleaner products have only been adopted in a part of the region."

Questions

- Which product-oriented regulations differ across the region?
- Are those products sold uniformly across the region or differently according to state regulations?
- If those products are sold uniformly, could SIP credit be taken for such emissions reductions?

Timeline

December 2016– Early January 2017

- Developed Methods and Presented to COG, States and TAC

January – March

- Distributed Surveys

April – May

- Analyzed Results
- Present Results to TAC and MWAQC ★
- Prepare SIP Documentation (TBD)

★ We are here

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Metropolitan Washington Council of Governments

BACKGROUND

- Differences in current product regulations in the member states (DC-MD-VA)
  - **Automotive Refinishing Coatings**: DC and Maryland have more stringent VOC limits.
  - **Residential Heating Oil**: DC and Maryland have sulfur content limits (currently 500 ppm; DC to go down to 15 ppm in 2018) while Virginia has none.

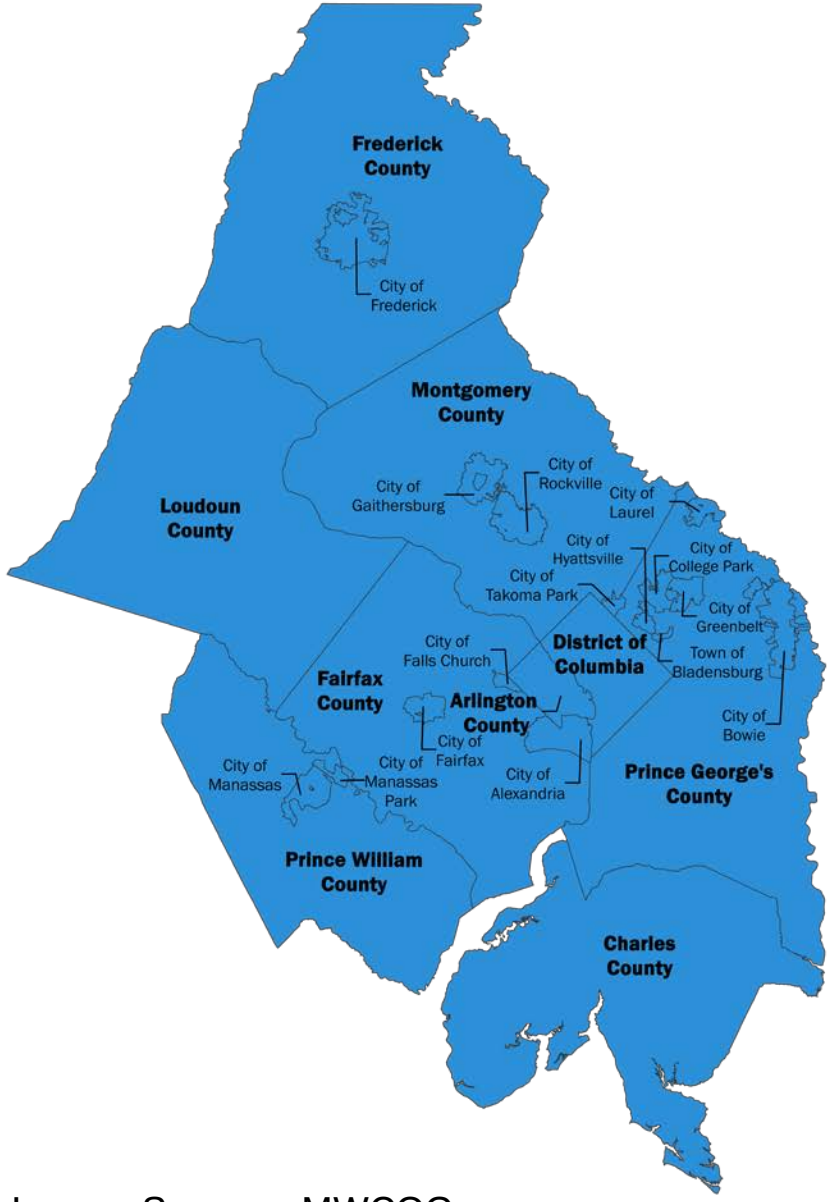
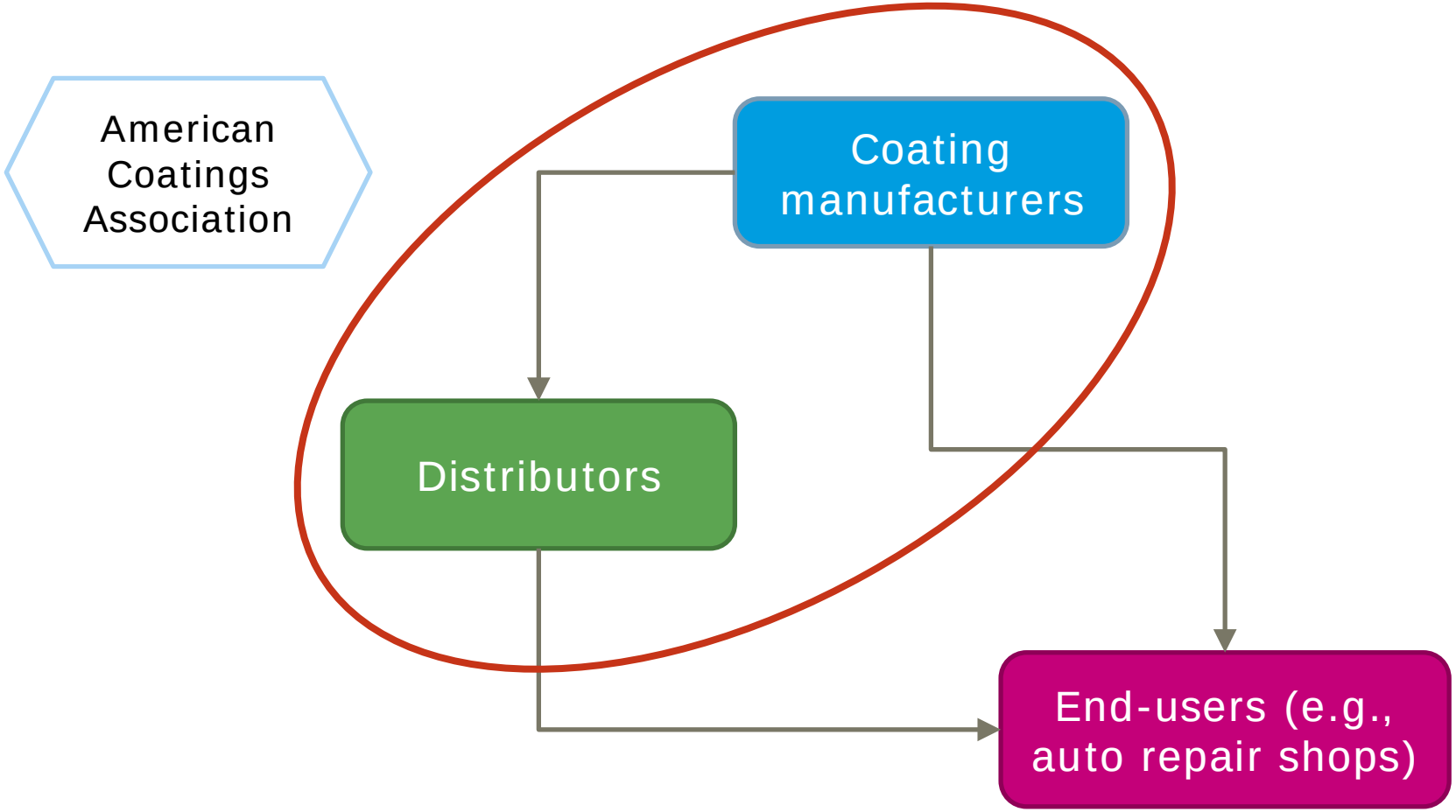


Image Source: MWCOG

INDUSTRY STRUCTURE: AUTOMOTIVE COATINGS



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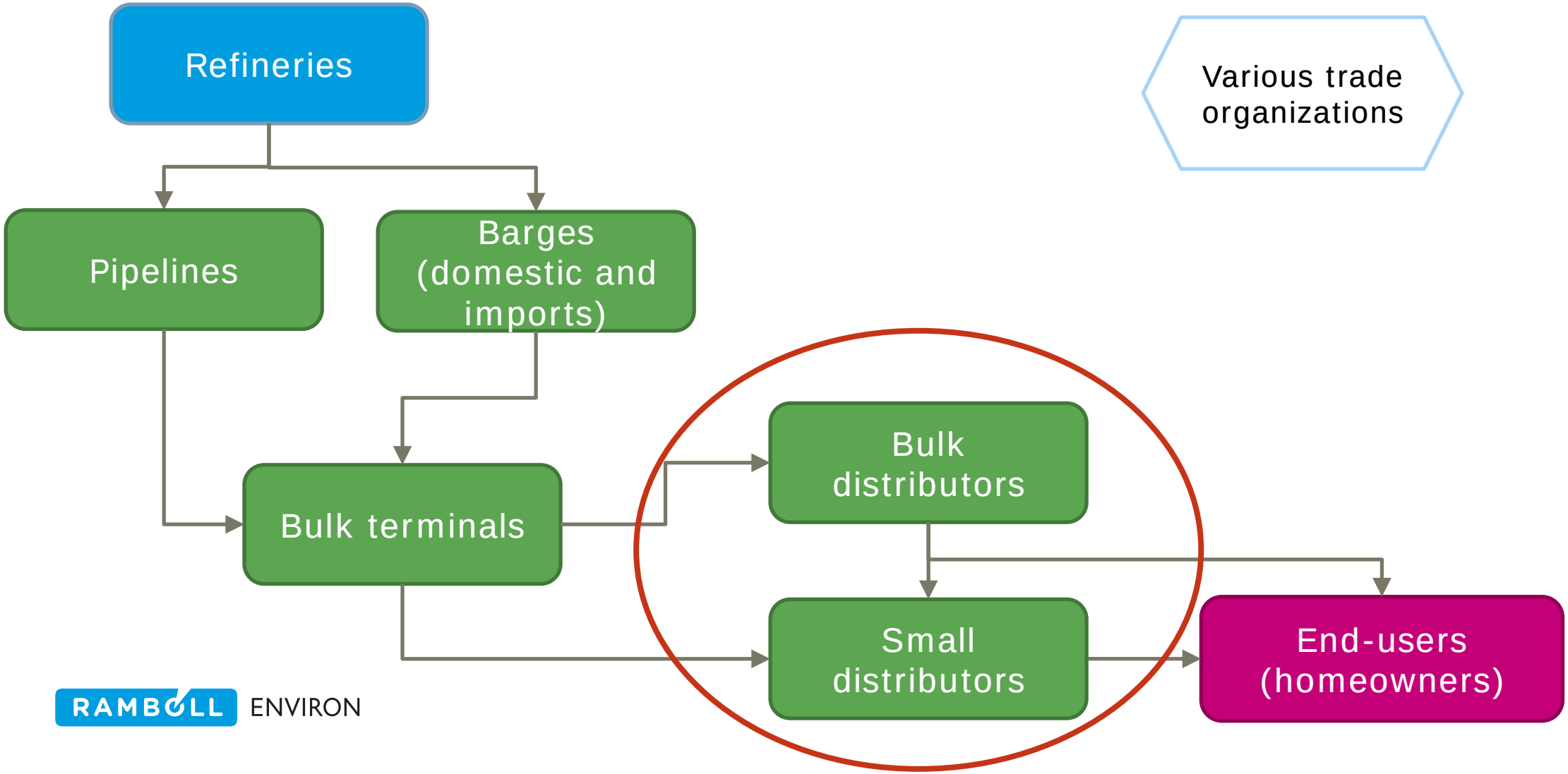
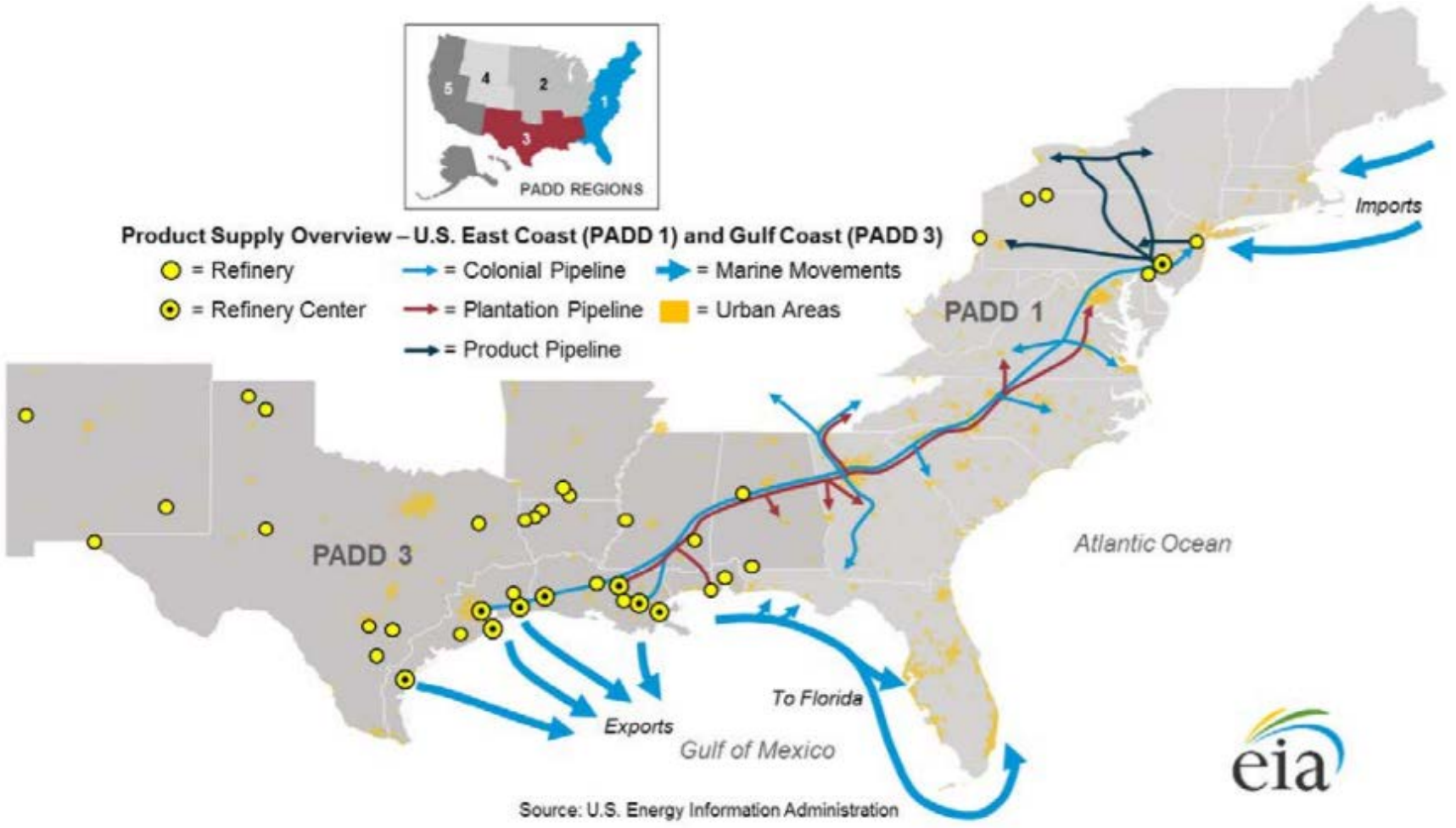
INDUSTRY STRUCTURE: RESIDENTIAL HEATING OIL



FUEL SUPPLY:
RESIDENTIAL HEATING OIL



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SURVEY IMPLEMENTATION

- Beta-testing of questionnaire with a subset of industry participants
- Two-part questionnaires
  - Part 1: Basic company information, geographic markets (DC, MD, and/or VA), and presence/absence of cleaner product offerings
  - Part 2: Product sales volume, percentage of products meeting lower emission limits, market share, future changes in sales
- Two-contact approach for each questionnaire part

OVERALL SURVEY RESPONSE RATES

Parameters	Automotive Refinishing Coatings	Residential Heating Oil
Recipient type	Manufacturers and distributors	Distributors and wholesalers
Number of survey recipients	24	13
Response rate (target = 25%)	17%	23%
Market share representation	> 60%	Not estimable based on information provided

AUTOMOTIVE REFINISHING COATINGS

OVERVIEW OF FINDINGS: AUTOMOTIVE REFINISHING COATINGS

- A limited proportion of lower VOC products are sold in NoVA
  - Varies by product category and company
- Motivated by customer demand and product performance
- Large manufacturers and distributors segment the market by regulatory differences; expressed support for harmonized regulations.
- 8-13% reduction of VOCs (equivalent to 4.9 to 7.5 tons per year) from baseline.

RESIDENTIAL HEATING OIL

OVERVIEW OF FINDINGS (CONTINUED): RESIDENTIAL HEATING OIL

- **Findings (from surveys)**:
  - All respondents distribute 15 ppm heating oil
    - Respondents a small share of the total market
    - Reported declining sales - households switching to electric heat, natural gas
- **Findings (from interviews of upstream suppliers and government data)**:
  - Pipelines and terminals supply exclusively 15 ppm or 500 ppm fuel oil
  - Virginia: Predominantly 15 ppm (pipelines)
  - Maryland: Mix of 15 ppm and 500 ppm (pipelines, barges)
    - Tank testing indicates an average of 250 ppm
  - 61-77% reduction in SO_2 and $PM_{2.5}$ regional emissions (143-181 tons/year SO_2, 5-6 tons/year $PM_{2.5}$)

CONCLUSIONS

Automotive refinishing coatings

- Limited VOC reductions
- Significant adoption of low VOC coatings in NoVA is unlikely without regulation
- **Apply for SIP credit?**
  Not recommended

Residential heating oil

- Majority of fuel oil distributed in NoVA is 15 ppm; lesser extent in MD
- Market declining due to fuel switching and newer equipment
- **Apply for SIP credit?**
  Maybe

DISCUSSION