

Emission Inventory Growth Assumptions

Sunil Kumar

TAC

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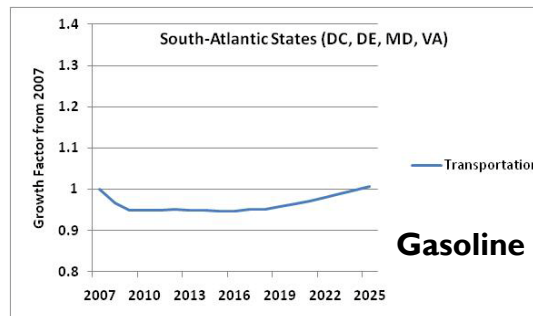
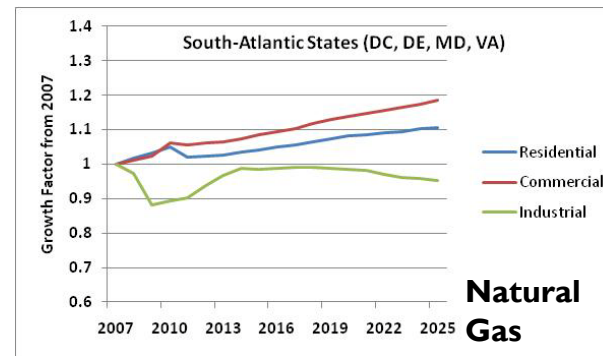
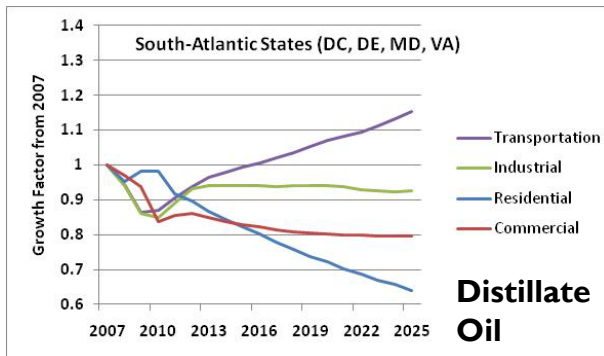
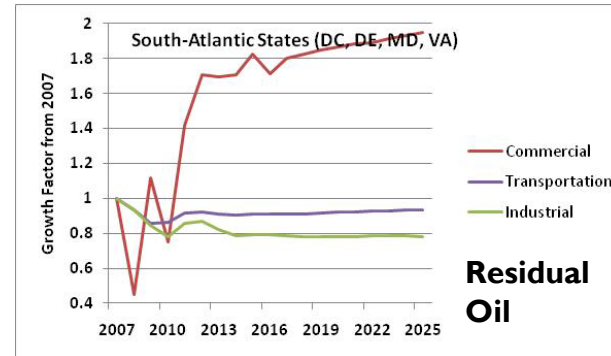
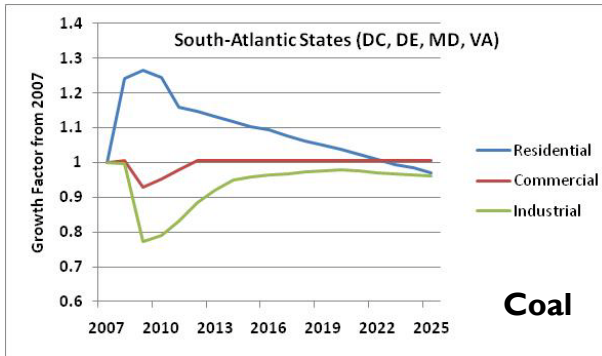
Growth Factors - Basics

- Base Year Emissions = (Activity Data in Base Year) * (Emission Factor)
- Future Year Emissions = (Base Year Emissions) * (Growth Factor) * (Control Factor)
- Growth factors (GF) –
 - Project base year emissions inventories to future years in SIP
 - Emissions trend and control analysis
 - Other AQ planning purposes
- Different source categories are projected using different related GFs (e.g., Fuel consumption, employment, population, households, VMT)

Negative Growth

- Historically most GFs positive (increased emissions between BY and FY)
- MARAMA 2010 Ozone NAAQS Inventory - Some GFs like fuel consumption and manufacturing employment are negative
 - Economic downturn
 - Alternative fuel/renewable energy development and usage
 - Other
- Sources associated with above two GFs are very important from emissions point of view.
- Negative growth = lower future year area source and NEGU emissions.
 - Potentially fewer controls needed in SIP
 - Historically more accurate portrait of actual growth

AEO2010 Fuel GFs



Source - MARAMA

Negative Growth – NEGU Sources

- Historically economic-based GFs (EGAS) showed upward trend for NEGU sources.
- EPA analysis – Long term NEGU emissions trend downward, while production output higher.
- GFs did not account for increased efficiencies and technologies.
- EPA working on new GFs for NEGU sources to replace EGAS factors for these sources.

Negative NEGU Growth & ERC

- Lower future NEGU emissions realistic? What about Emissions Reduction Credits (ERC)?
- DC – Using AEO2010 GFs (positive & negative)
- MD – Using employment & population when AEO2010 GFs are negative.
 - Both of these factors show flat or slight growth
 - Allows for potential generation of emission reduction credits if a facility shuts down. While viewed as a conservative approach it allows for reverse in economic trends
- VA – Using AEO2010, but no growth assumed in case of negative growth.