

# **Status of Attainment Modeling for 8-Hour Ozone Standard for Washington Nonattainment Region**

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# Basics of Attainment Modeling

## Purpose

- To demonstrate attainment of 8-hour ozone standard using various emissions reduction scenarios in the nonattainment region
- To calculate benefits of individual emission control measures in terms of ozone levels

## Models Used

- Meteorological Model – MM5
- Emission Model – SMOKE
- Photochemical Models:
  - CALGRID (Screening)
  - CAMx (Comprehensive)
  - CMAQ

# Current Status of Modeling

- Work Plan & Modeling protocol : NY DEC & MA
  - Complete
  
- Emissions Modeling (NY DEC):
  - 2002 Baseline Emissions inventory being refined: ver. 1 expected to be complete by the year end. ver. 2 by next Spring
  - Emissions processing & Attainment year EI preparation - Next steps
  
- MM5 Modeling (UMD & NY DEC):
  - Episode evaluation and assessment under progress
  - Preliminary results available (Aug. 6-16, 2002 episode) - Shows satisfactory results at 36 km grid level averaged across at entire modeling domain. Comparison at individual monitors not yet done. Currently being refined.
  - Work in progress
  
- CMAQ Photochemical Modeling (NY DEC):
  - Results using 1999 EI completed for preliminary evaluation of CMAQ modeling
  - Used SMOKE ver. 2.0 emissions processor
  - Under-prediction of daily max. 1 and 8-hour ozone
  - Expected as 1999 emissions not grown to 2002

# Next Steps

- Emissions Modeling:
  - 2002 Base case emissions processing
  - Attainment year EI preparation & processing
  
- MM5 Modeling:
  - Further refinement in progress
  
- Photochemical Modeling:
  - 2002 base case and attainment year EI used for modeling
  
- Control Strategy Development:
  - Review air quality & emissions database to identify potential sources of ozone in the OTR – NH, Other OTC states
  - CALGRID screening Runs – NH, MD, MA
  - Design control strategy for the OTR domain – OTC states