

# A New Tool for Integrated Emissions and Control Strategies Analysis

**Emission Inventory Conference - Raleigh, NC**  
**Session 1. Emissions Modeling – May 15, 2007**

David Misenheimer, EPA / OAQPS / HEID / ABCG

Alison M. Eyth, UNC Institute for the Environment

# Purpose of Presentation

- Describe purpose, scope, and features of the Control Strategy Tool (CoST)
- Provide information on Control Measures Database that is a key component of CoST
- Demonstrate usage and features of the CoST software

# Purpose/Scope of CoST

- Support the preparation and analysis of **future year emission control strategies**
- Facilitate **multi-pollutant analyses**, including criteria pollutants and precursors, HAPs, and greenhouse gases
- Track information on **control measures**, their costs, and the emission sources to which they apply

# Basics of Control Strategy Development

2020  
Base  
Emission  
Inventory

x

Control  
Measure  
Database

=

2020  
Control  
Case  
Inventory

# Main Features of CoST

- **Multiple Options** for Importing, Viewing, Editing, and Exporting Input Data
  - Base case emissions, controls, costs, emission-control relationships, SCCs
- High Level of Flexibility in Setting Analysis **Conditions and Relationships**
  - defining geographic areas for analysis, max control costs, sectors and primary pollutants to be controlled, pollutants for assessment of cobenefits and dis-benefits

# Choosing Java as the Development Platform

- Connects easily with relational databases
- Object-oriented Java software is easy to extend
- A full featured Graphical User Interface library is available, and many types of open source libraries
- Applications run on Windows, Linux, etc.
- Some existing emission inventory readers and other code could be reused
- Easier interface with other EPA-developed Java applications

# Access to CoST

- EMF Code can be downloaded from SourceForge
- Software Requirements:
  - Java 1.4 or 1.5
  - PostgreSQL 8.1
  - Apache Tomcat
- Tested on Linux and Windows
- Should run on other operating systems that support Java and other required software



# Terminology

- **Major Pollutant** – Primary pollutant to be reduced by the control measure
- **Pollutant** – Any pollutant reduced by the control measure
- **Control Measure** – Control technology or practice
- **Control Strategy** – Collection of control measures applied to an emission inventory for a geographic area



# Progress to Date

- Completed beta test version
  - Includes core functionality for applying control measures for all sectors
- Converted control measure data from AirControlNET with some updates and additions

# Next Steps

- Gather cobenefit/disbenefit information for greenhouse gases, add to database
- Test for various use cases
- Import latest updates to control measure data
- Gather HAPs control information and add to database

# Future Plans

- Develop fully functional version of CoST for use within EPA (2007-2008)
- Prepare version for use by States and other external agencies (2008-2009)

# Software Demo

