

# Training for the EMF Control Strategy Tool

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# Purpose of Training

- Present information on purpose and scope of the Control Strategy Tool (CoST),
- Provide information on efforts to **collect data** on criteria pollutant and HAP control techniques and cobenefits/disbenefits to climate change gases
- Demonstrate usage and features of the CoST software, which is embedded within the EMF

# Training Schedule

- 1-2:30 CoST presentation and Hands-on training on Control Measures
- 2:30-2:40 Break
- 2:40-3:50 Training on Control Strategies
- 3:50-4:00 Break
- 4:00-5:00 EMF Advanced training on QA Steps, etc.

# Purpose/Scope of CoST

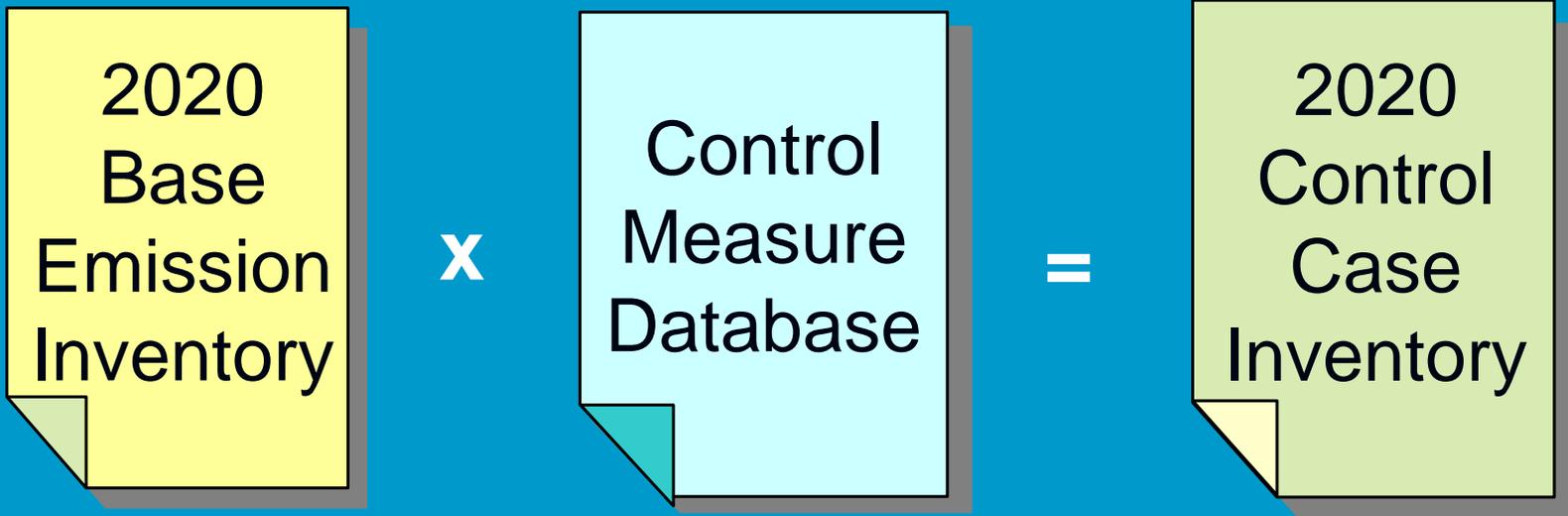
- Support the preparation and analysis of **future year emission control strategies**
- Facilitate **multi-pollutant analyses**, for criteria pollutants, HAPs, and climate change gases
- Track information on **control measures**, their costs, and the emission sources to which they apply

# CoST and the EMF

- CoST was integrated into the EMF by adding two key concepts:
  - **Control Measure** – A control technology or practice that is used to reduce emissions of one or more pollutants
  - **Control Strategy** – Specifies how control measures should be assigned to an emissions inventory
- A key output of a Control Strategy is a controlled inventory for use by SMOKE

# Control Strategy Development

## Emissions Modeling Framework



SMOKE

# Main Features of CoST

- **Multiple Options** for Importing, Viewing, Editing, and Exporting Data
  - Base case emissions, control measures, costs, source-measure 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
- **Manage and compare** multiple strategies

# Progress to Date

- Completed a beta version for testing
  - Includes core functionality for applying control measures for all sectors (point, on-road mobile, non-road mobile, and nonpoint)
- Created a control measure database for criteria pollutants based on data from AirControlNET with some updates and additions

# Next Steps

- Gather cobenefit/disbenefit information for climate change gases and add those to database
- Validate results and test for various use cases
- Import latest updates to control measure data
- Add support for cost equations

# 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)

# Hands-on Training Outline

## 1. Learn about **Control Measures**

- See how control measure data is stored, edited, and managed
- Cost-per-ton control measure data is available for point, nonpoint, onroad mobile, and nonroad mobile sources
- For simplicity, the training will be based on **on-road mobile control measures only**
- The available on-road measure data are county-specific (other source categories have state specific or US specific data)

# Hands-on Training Outline

## 2. Learn about Control Strategies

- See how to create, set parameters for, and review the results of several strategies
- Compare the results of several strategies

# Measure Terminology

- **Major Pollutant** – Usually, the pollutant that is most reduced the control measure
- **Pollutant** – A type of emissions that could be reduced by a control measure (many measures reduce multiple pollutants)
- **Locale** – A 2 digit state FIPS code or a 5 digit state+county FIPS code
- **Cost Year** – The year for which costs are valid. Cost data are adjusted for years other than the cost year based on GDP.

# Control Measure Training Overview

- See available Control Measures in the Control Measure Manager
- See which pollutants are controlled by the measures
- See the impact of changing the cost year
- Edit a control measure
- Examine control efficiency records
- Examine SCC mapping to match the measure to sources in an inventory
- Copy a control measure

# Hands-on Control Measure Training

# Control Strategy Training Overview

- **Control Strategy** – Specifies how control measures should be assigned to an emissions inventory
- Define, run, and review the results of three different control strategies:
  - an initial control strategy that applies selected control measures to the entire inventory
  - a second control strategy that applies other measures to specific counties in the domain
  - a third control strategy that applies some constraints on cost and reduction when applying measures

# Steps for First Strategy

- Set the **summary parameters** for the strategy, such as target pollutant and cost year for the results
- Specify the **emissions inventory** to use
- Specify a list of **control measures** to apply in the strategy
- **Run** the strategy (Note that the algorithm used is **Maximum Emissions Reduction**)
- View the **detailed output** of the strategy
- View **summaries** of the output
- Create a **controlled inventory** that implements the strategy

# Hands-on Control Strategy Training