United States
Federal Executive Branch

15
Executive Departments

Department Of Transportation
13 Administrations & Bureaus

NHTSA

65
Independent Agencies, Commissions & Government Corporations

Environmental Protection Agency
U.S Environmental Protection Agency
Clean Air Regulatory Authority

- EPA has general rulemaking authority
- Clean Air Act provides specific authority
  - Key sections: 202 and 213
    - EPA shall prescribe regulations applicable to any class of motor vehicles, highway or nonroad engines that cause or contribute to air pollution.
    - Such standards shall achieve the greatest degree of emissions reductions achievable, taking into account factors such as cost and safety
    - Need to consider appropriate lead time for such standards
    - Obligation to revise standards from time to time
  - EPA regulations are technology-forcing, performance-based requirements
  - Clean Air Act also includes requirements for product certification, enforcement of standards, penalties
U.S Environmental Protection Agency
Noise Regulatory Authority

- Noise Control Act provides specific authority
  - Key sections: 5.0 and 6.0
    - EPA shall identify major sources of noise that can adversely affect public health and welfare
    - EPA shall prescribe noise emission regulations for motors and engines that power equipment or vehicles that produce noise capable of adversely affecting public health or welfare
    - Such standards shall achieve the greatest degree of emissions reductions achievable with best available technology, taking into account technical feasibility and cost
    - Obligation to revise standards from time to time
  - EPA regulations are technology-forcing, performance-based requirements
  - Noise Control Act also includes requirements for enforcement of standards and non-compliance penalties
What Analyses Go Into A Rulemaking?

- Assessment of environmental need for new standards
- Assessment of technical feasibility
- Analysis of engineering costs
- Analyses of societal costs and benefits
- Analysis of small business impacts and flexibility options
- Analysis of other regulatory and non-regulatory options
- Other considerations as needed to ensure sound decisions
EPA expends significant resources during rule development

Major rules are multi-year commitments
- Negotiations with industry, public health groups and other non-government entities,
- EPA laboratory technology testing and development to justify proposed control measures,
- Example: For U.S. new car/truck requirements, EPA purchased an SUV and modified it to demonstrate that new standards were feasible.
Government and Public Role in Rulemaking

- EPA works with stakeholders to develop a proposed rule
  - Proposal includes primary control requirements and options
- Proposed rule undergoes review by other Federal agencies and the Executive Office of the President.
- Proposal issued for public comment – all interested party’s including foreign entities (average 60 day comment period).
- EPA reviews comments, addresses issues, and develops final rule
- Final rule package undergoes review by other Federal agencies and the Executive Office of President
- EPA Administrator signs rule
- U.S. Congress has 60 days to review, with ability to vacate rule
- Affected parties can legally challenge final rule provisions
  - All rule challenges go to U.S. Court of Appeals for the District of Columbia, whose decision can be reviewed by U.S. Supreme Court
Rule Package Contents

Rule package includes:

- Preamble that explains regulatory provisions, health impacts and benefits, enforcement mechanisms, technical justification
- Regulations contain binding compliance requirements
- Regulatory Impact Analysis/Technical Support Document
  - Includes technical justification for new requirements, description of health effects and benefits, cost and benefit estimates, economic analyses
- Response to Comments document detailing how EPA addressed each comment
- These packages are very detailed and provide EPA’s complete justification for its actions (Recent nonroad rule documents total approximately 2,500 pages)
Example: Engineering Cost Estimation for Diesel Engine Standards

**Variable Costs**
- Engine hardware
  - (fuel system, PM filter, NOx aftertreatment, etc.)
- Equipment hardware
- Warranty

**Fixed Costs**
- Engine R&D
- Equipment redesign
- Engine tooling
- Equipment tooling
- Engine Certification
- Service tools and manual updates

**Operating Costs**
- Fuel cost
- Fuel consumption
- Oil change interval
- Cleaning and other maintenance

Per-vehicle Cost Estimates
Total Program Aggregate Costs
Input to Cost-Benefit Analysis
Recent Impacts of Public Input on EPA Rulemaking

- Stakeholder input on technical feasibility, cost, health benefits and other factors very important
  - Stakeholders provide factual evidence supporting their recommended positions
  - As appropriate, changes are made to proposed and final rules based on this feedback

- Final Rule – Example - Tier 2 Car/Light Truck Emission Requirements
  - Offered more flexibility to automobile manufacturers in meeting the final standards by allowing them to produce vehicles that meet a wider range of emission limits as long as the average emissions of all their vehicles meets interim standards.
  - Provided additional time to the oil industry to phase in sulfur restrictions
  - Included, for the first time, emission standards for the heaviest passenger vehicles (Gross vehicle weight of 8,500-10,000 pounds)
  - Added provisions for both vehicle manufacturers and refiners to obtain extra credit for early compliance.

  - Adjusted fuel compliance program from 100% in 2006 to a phase-in of 80%-20%.
  - Included provisions to provide extra credit for earlier compliance.

- Final Rule – Example - Non-Road Diesel
  - Included a requirement for locomotive and marine diesel fuel to be at 15ppm sulfur.
  - Did not finalize CO controls for less than 75hp.
  - Based on technological feasibility comments, changed standards for engines 750hp and greater.