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Final Rulemaking to Establish 2012-2016 Light-Duty Vehicle CAFE and GHG Standards

Joint Briefing for WP29
June 2010

www.nhtsa.gov

Overview

- Final Rule Overview
- Key Elements of Joint National Program
- Estimated Costs and Impacts

Final Rule Overview

- EPA and NHTSA have issued a joint Final Rule for closely-related standards that together comprise the "National Program"

- Rule finalizes strong and coordinated federal GHG and CAFE standards
  - Consistent with President Obama's May 19, 2009 Announcement and the EPA-NHTSA Joint Notice of Intent
  - Coordinated national standards which provide regulatory certainty and consistency for the auto industry
  - Avoids separate NHTSA, EPA, and state regulations
  - Automakers can meet NHTSA, EPA, and California requirements with a single national fleet

- National Program will achieve substantial reductions in fuel consumption and GHG emissions

EPA CO_2 Standards

- EPA's standards estimated to achieve a fleet-wide level of 250 grams/mile of CO_2 in model year 2016
  - Standards phase in beginning in model year 2012
- Fleetwide CO_2 standard can be met partially through credits from improved air conditioner (A/C) operation
  - A/C credits include CO_2 & hydrofluorocarbon (HFC) refrigerant reductions
  - HFC refrigerant is a powerful GHG
- The 250 gram/mile CO_2 standard corresponds to 35.5 mpg "equivalent" if all reductions resulted from fuel economy improvements

NHTSA CAFE Standards

- NHTSA's final CAFE standards require vehicles to meet an estimated combined average fuel economy level of 34.1 in 2016

- The difference between the EPA and NHTSA standards
  - Due in part to statutory differences, A/C improvements are not credited toward compliance with the NHTSA CAFE standards

Standards are Footprint Attribute-based

- Each manufacturer's standard based on the footprint of vehicles produced - actual standards are curves which equate a vehicle size to its specific CO2 or MPG target
- Each company's "standard" is footprint curve (see Appendix)

Vehicle Type	Example Models	Example Model Footprint (sq. ft.)	CO_2 Emissions Target (g/mi)	Fuel Economy Target (mpg)
Example Passenger Cars				
Compact car	Honda Fit	40	206	41.1
Midsize car	Ford Fusion	46	230	37.1
Fullsize car	Chrysler 300	53	263	32.6
Example Light-duty Trucks				
Small SUV	4WD Ford Escape	44	259	32.9
Midsize crossover	Nissan Murano	49	279	30.6
Minivan	Toyota Sienna	55	303	28.2
Large pickup truck	Chevy Silverado	67	348	24.7

EPA Program Flexibilities

- Emission banking and trading elements
- Flex-fuel vehicle (FFV) credits
  - MY2012 – 2015 credits similar to CAFE, MY2016+ credits based on actual E85 fuel use
- Air conditioning HFC and CO_2-related reduction credits
- Early credit opportunities for doing better than California or CAFE
- Innovative technology credits
- Advance technology credits
- Provisions for medium & small sales volume companies

NHTSA Program Flexibilities

- EPCA/EISA limit ability to offer flexibilities
- Credit banking
  - 5-year carry-forward
  - 3 year carry-back
- Credit trading and transferring, starting with credits earned in MY 2011, and with some EISA restrictions
  - Trading -- between manufacturers
  - Transferring– between a manufacturer's car and light truck fleets
- Alternative fueled vehicle credits allowed per EISA (e.g., the FFV credit)

Summary of Costs and Benefits

- For lifetime of 2012-2016 vehicles:
  - 1.8 billion barrels of oil reduced
  - 960 million metric tons of CO2 eq. reduced
  - 2016 per-vehicle costs of approximately $9,50
  - Compliance costs for the industry of <$52 billion
  - Total benefits of $240 billion & net benefits of $190 billion
    - Using $21/ton CO2 valuation and 3% discount rate
- Net present value of net benefits through 2050 with a 3% discount rate = $1.6 trillion

Consumer Impacts

- Main finding – payback period for MY 2016 vehicles
  - Less than 3 years for buyers who pay cash
  - Monthly fuel savings greater than loan payment increase by $11 to $15 per month for typical 5-year loan

- Lifetime net savings of more than $3,000 using a 3% discount rate (total fuel savings of ~$4,000)

Rulemaking Documents and Additional Information

HTTP://WWW.NHTSA.GOV/FUEL-ECONOMY

HTTP://WWW.EPA.GOV/OTAQ/CLIMATE/REGULATIONS.HTM

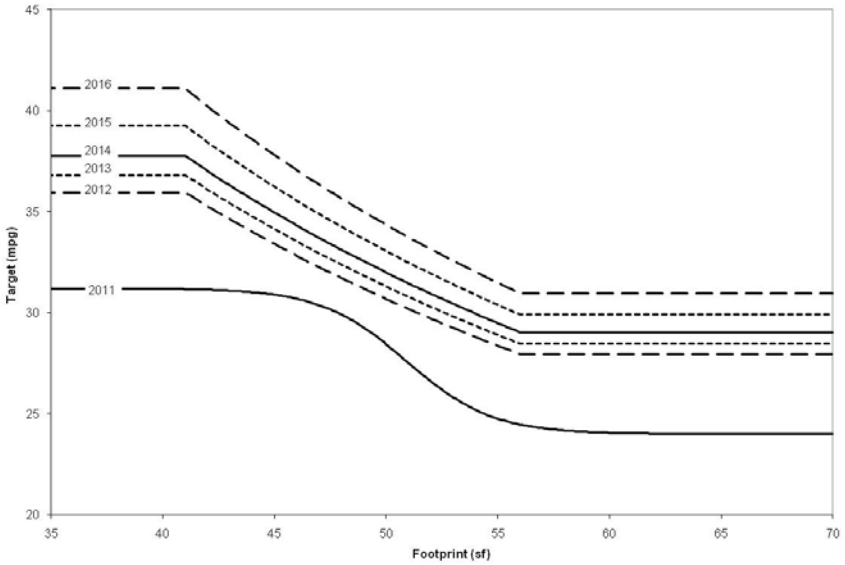
Appendix

Standards are Footprint Attribute-based

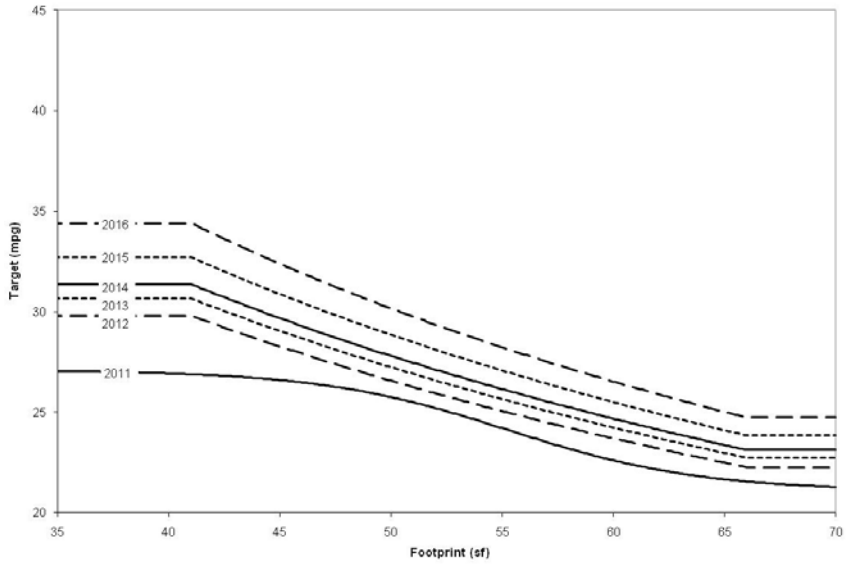
- Each manufacturer's standard based on the footprint of vehicles produced - actual standards are curves which equate a vehicle size to its specific CO2 or MPG target

- Final NHTSA Car and Truck Standard Curves:

Car standard curves



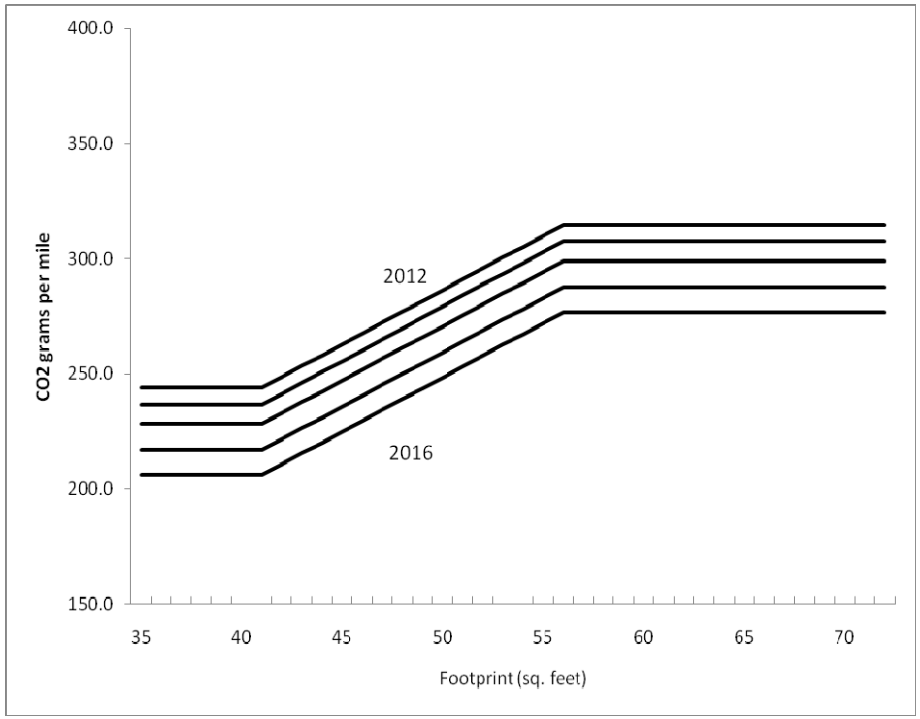
Truck standard curves



EPA Standard Curves

- Final EPA CO2 Standard Curves:

Car standard curves



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