U.S. ENVIRONMENTAL PROTECTION AGENCY: UPDATE ON MOBILE SOURCE AND PORT PROGRAMS

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Office of Transportation and Air Quality Mission

To protect human health and the environment by reducing air pollution, including the harmful greenhouse gases that contribute to climate change, from mobile sources and the fuels that power them.

National Vehicle and Fuel Emissions Laboratory

With a **world-class laboratory** and a deep reservoir of technical and policy knowledge we continue to…

- Build on GHG standards that increase energy security and help address climate change.
- Reduce air pollutants and toxics from vehicles and fuels.
- Sustain partnerships with NGOs, state and local groups, and industry.

Benefits of Major Rules

Air Quality Benefits of Mobile Source Programs by 2030

Benefit in 2030	Light Duty Tier 2	Heavy Duty 2007	Nonroad Diesel Tier 4	Locomotive & Marine Diesel	Ocean Vessel Strategy	2030 Total
NOx (short tons)	2,800,000	2,600,000	738,000	795,000	270,000	7,203,000
PM2.5 (short tons)	36,000	109,000	129,000	27,000	77,000	378,000
VOC (short tons)	401,000	115,000	34,000	43,000	0	593,000
SOx (short tons)	281,000	142,000	376,000	0	757,000	1,556,000
Total Cost (billion)	$5.3	$4.2	$1.7	$0.7	$3.1	$15
Net Monetized Benefits (billion)	$25	$70	$80	$11	$107	$290
Avoided Premature Mortality	4,300	8,300	12,000	1,400	13,000	39,000
Avoided Hospital Admissions	3,000	7,100	8,900	870	6,100	25,970
Avoided Lost Work Days	700,000	1,500,000	1,000,000	120,000	1,500,000	4,820,000

Light-Duty Greenhouse Gas Standards

The National Program for GHG and fuel economy standards was developed jointly by EPA and the National Highway Traffic Safety Administration and applies to light-duty cars and trucks in model years 2012-2025.

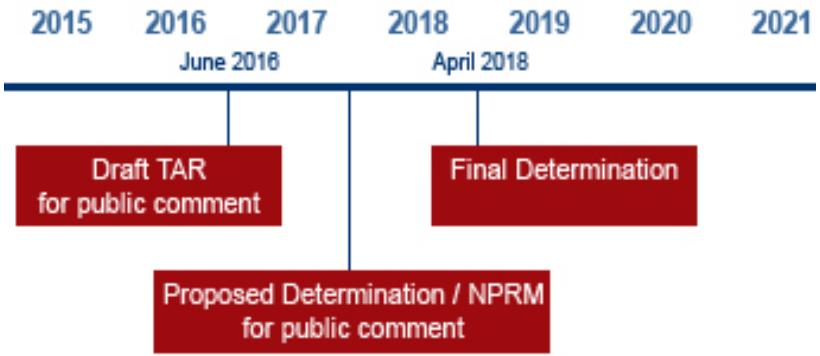
Current Status:

- Fuel efficient technologies are entering the market at a rapid pace
- In model year 2014 auto manufacturers outperformed standards by 1.4 miles per gallon.
- The standards have already prevented roughly 100 million metric tons of CO2 emissions.

Technical Assessment Report: Evaluation of Light-duty Vehicle Standards

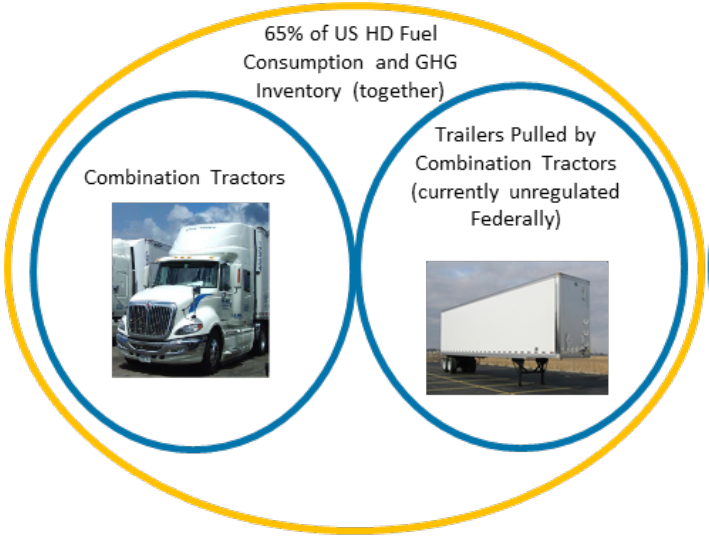
EPA is conducting a collaborative, data-driven and transparent mid-term evaluation of the standards for model years 2022-2025. EPA will examine a wide range of factors including:

- Developments in powertrain technology
- Vehicle electrification
- Light-weighting and vehicle safety impacts
- Penetration of fuel efficient technologies in the marketplace
- Consumer acceptance of fuel efficient technologies
- Trends in fuel prices and the vehicle fleet
- Employment impacts



Proposed Heavy-Duty Phase Two Greenhouse Gas Standards

The National Program for Heavy Duty Trucks was developed jointly by EPA and NHTSA, to reduce carbon emissions and improve the fuel efficiency of heavy-duty vehicles.

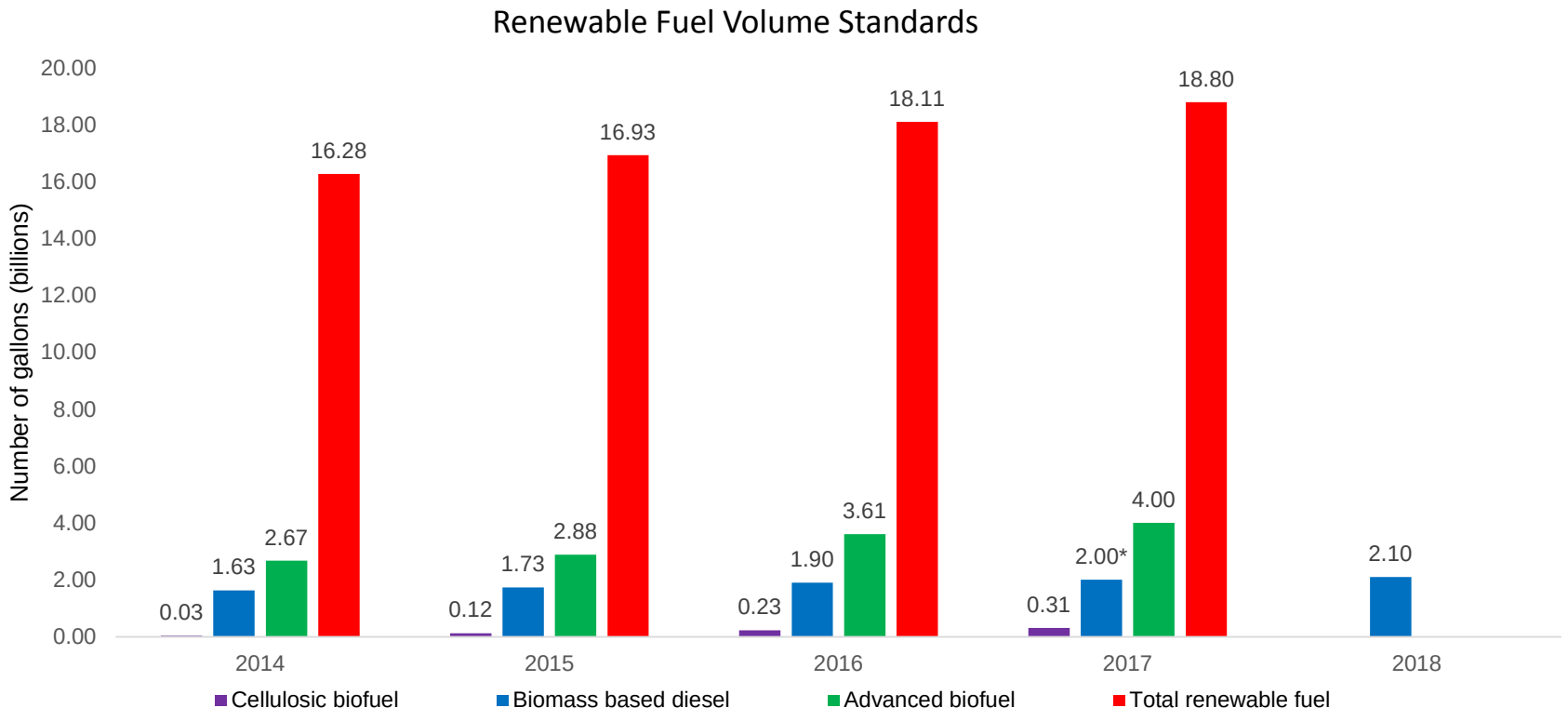


Standards in g/ton-mile and gallons/1000 ton-miles

Standards in g/ton-mile and gallons/1000 ton-miles

Standards in g/mile and gallons/100 miles

Renewable Fuel Standard



GHG Standards for Aircraft

- EPA proposed that GHGs emitted from large, mostly commercial, aircraft endanger public health and welfare under the Clean Air Act.
- A final endangerment finding is expected this summer.
- A subcommittee of the International Civil Aviation Organization (ICAO) recommended international CO2 standards in February.
- If the final endangerment finding is positive, EPA will proceed with a rulemaking under the Clean Air Act to adopt GHG standards.

Ports Initiative Overview

- Encourages environmental progress at ports and reducing climate risk
- Supports operational and technological improvements to increase efficiency
- Improves community health and air quality
- Encourages sustainable economic development that supports our economy and jobs.

Ports Initiative

Macro Assessment

Analyzes the role of **cost-effective technologies and operational strategies** in reducing air pollution from equipment, ships, and vehicles at ports. The Assessment:

- Provides outlook for funding needs,
- Guides national policy decisions,
- Improves port environmental footprint.

Micro Assessment

EPA is partnering with Port Everglades, who has volunteered to work with us to **create a very refined emissions baseline inventory** of port-related activity and emissions. This will:

- Better understand what actions will have the biggest impact,
- Present a number of emission control strategies port specific to be shared to other ports.

Ports Initiative Activities

Technology Study

- Shore power- Ships at dock can reduce emissions by 95% by switching off their engines
- EPA is assessing existing systems to make it easier for ports select the proper equipment.

Community Capacity Building and Engagement

- Emissions from ports disproportionately impact nearby communities
- EPA is working to facilitate effective communication and engagement among community groups, non-profits, and the ports themselves.

Ports Initiative

- EPA asked Mobile Source Technical Review Subcommittee for recommendations on development of EPA-led port initiative to improve AQ in communities near ports
- Diverse workgroup of stakeholders formed that worked rigorously for two years, produced a robust set of recommendations
- Next Step – present to CAAAC through webinar later this summer

Conclusion

“Driving Innovation for a Cleaner Future”

QUESTIONS