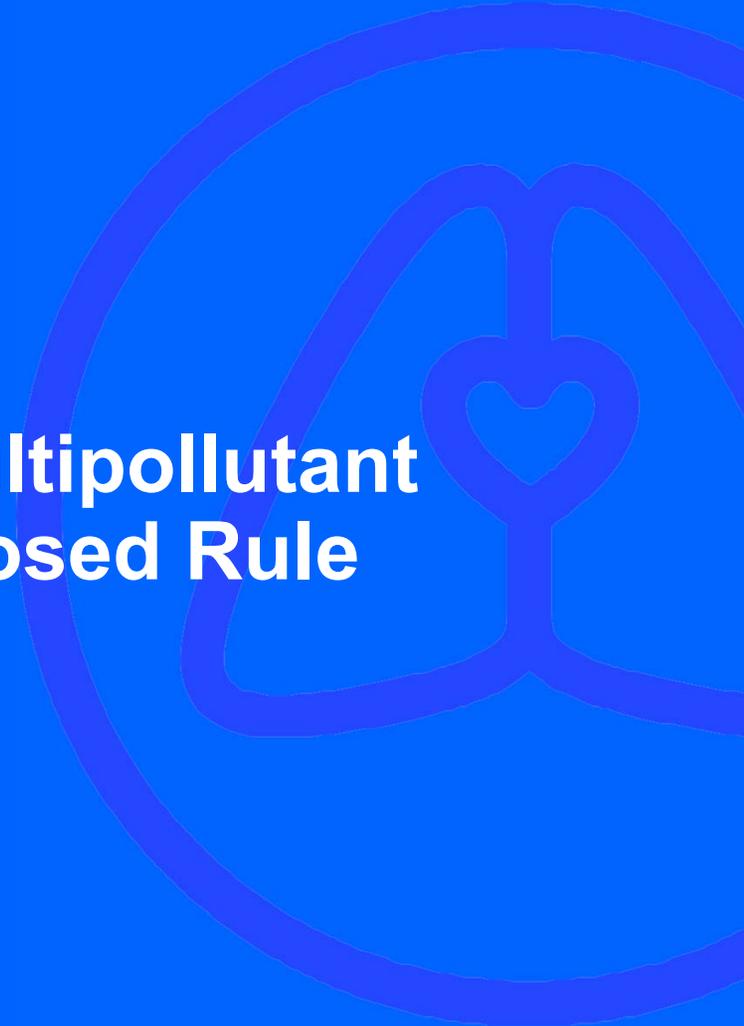




February 17, 2022

# OMB Briefing: Multipollutant LDV & MDV Proposed Rule



# Priorities for the Health Community

## Reduce Vehicle Emissions

- Transportation is the largest source of greenhouse gas pollution in the US
- LDVs are largest on-road source of GHG emissions
- LDVs & MDVs remain a major source of criteria pollution that threatens health & drives health disparities
- Rules must drive towards zero emissions for LDVs and MDVs
- Rules must also reduce criteria pollutants - NMOG, NOx and PM2.5
  - PM2.5 standard must be stringent enough to require gasoline particulate filters on all combustion vehicles
- Rules must extend to at least 2032 with no offramps or mid term reviews.
- Need Proposal in the Federal Register in March 2023

# Zeroing in on Healthy Air Report

## Transition to Zero-Emission Vehicles & Electricity Generation

- **Full Zero-Emission Vehicle Sales in the United States**
  - 2035, 100% Passenger Vehicle Sales
- **National Power Grid**
  - 2035, 100% Non-Combustion Electricity Generation
- **Fleet Modeling Tool: [US EPA MOVES3](#)**
- **Grid Mix Modeling Tool: [ICF IPM Model](#)**
- **Upstream Emissions: [Argonne National Lab GREET2021](#)**
- **Health Evaluation: [US EPA COBRA](#)**
  - *Note: Alaska and Hawaii not included in COBRA results*

# LDV Emissions



**63%**

**Light Duty Vehicle  
Share of  
2050 On-Road  
GHG Reduction**



**Light Duty  
Emission  
Reductions  
(2050)**

**NO<sub>x</sub> – 92%  
PM<sub>2.5</sub> – 58%  
GHG – 94%**

## Light-Duty Downstream Reductions with ZEV Transition

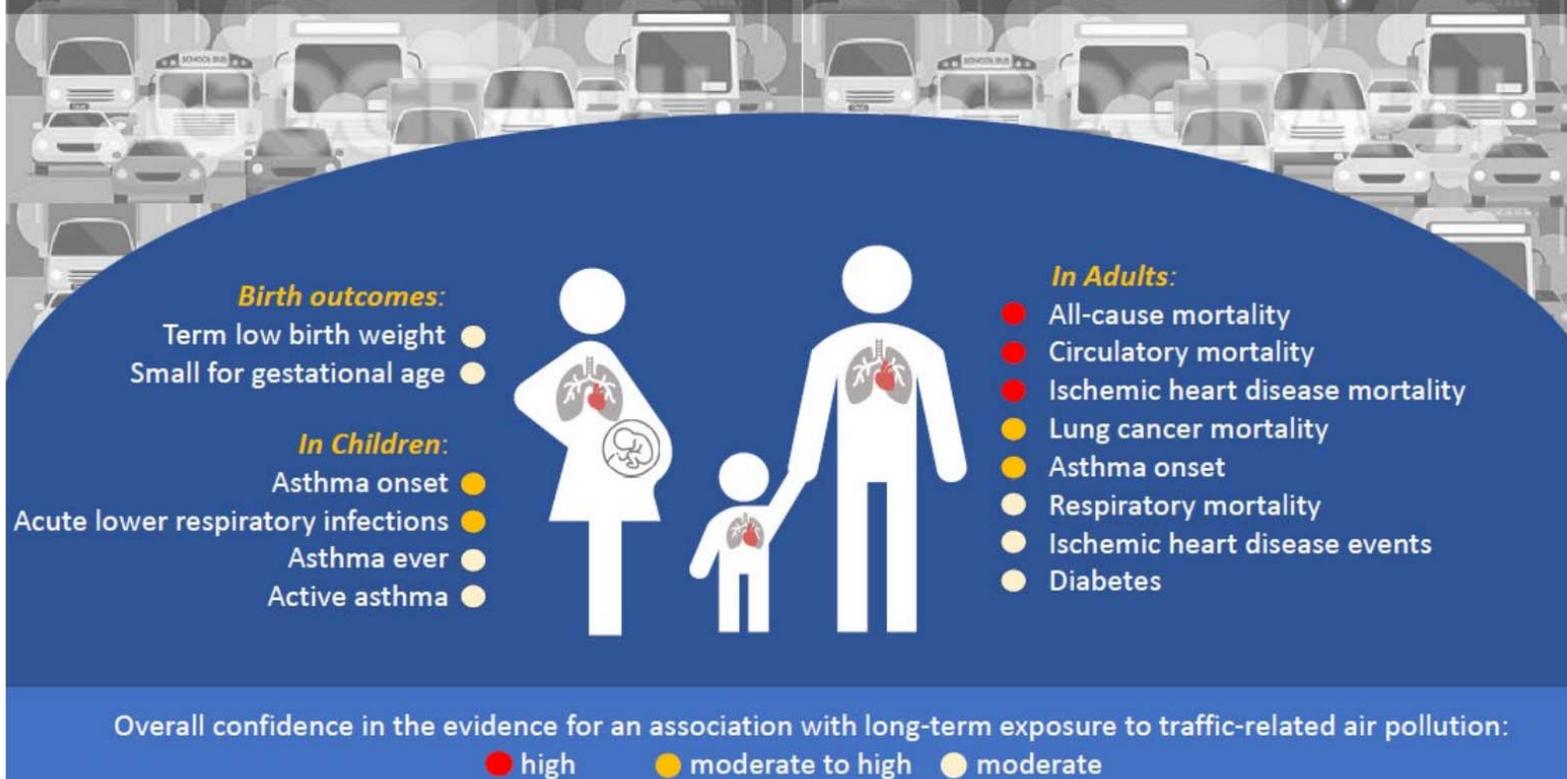
Assumption: 100 percent zero-emission light duty vehicle sales by 2035

On-Road Emission Reductions by Year			
	NO <sub>x</sub> (tpy)	VOC (tpy)	PM <sub>2.5</sub> (tpy)
2020	-284	-472	-25
2030	-23,124	-49,080	-2,903
2040	-80,975	-195,520	-11,369
2050	-111,168	-347,094	-16,170

Table 26. Estimated cumulative health benefits under the Non-Combustion Case from 2020 to 2050 for each vehicle Class.<sup>76</sup>

Health Endpoint	Change in the Number of Cases	Monetary Health Benefits (2017\$) <sup>a,b</sup>	
		3% Discount	7% Discount
<i>2020-2050, Non-Combustion Case, Light Duty Vehicle Class</i>			
Mortality, low estimate <sup>c</sup>	85,400.00	908,000,000,000	817,000,000,000
Mortality, high estimate <sup>d</sup>	89,300.00	949,000,000,000	855,000,000,000
Infant Mortality	410.00	4,350,000,000	3,920,000,000
Nonfatal Heart Attacks, low estimate <sup>e</sup>	10,200.00	1,610,000,000	1,570,000,000
Nonfatal Heart Attacks, high estimate <sup>f</sup>	94,500.00	14,900,000,000	14,500,000,000
Hospital Admits, All Respiratory	24,500.00	915,000,000	915,000,000
Hospital Admits, Cardiovascular (except heart attacks)	23,900.00	1,220,000,000	1,220,000,000
Acute Bronchitis	117,000.00	71,500,000	71,500,000
Upper Respiratory Symptoms	2,120,000.00	89,700,000	89,700,000
Lower Respiratory Symptoms	1,490,000.00	39,800,000	39,800,000
Emergency Room Visits, Asthma	45,900.00	25,900,000	25,900,000
Minor Restricted Activity Days	63,000,000.00	5,460,000,000	5,460,000,000
Work Loss Days	10,700,000.00	2,140,000,000	2,140,000,000
Asthma Exacerbation	2,220,000.00	163,000,000	163,000,000
<b>Total, low estimate</b>		<b>\$924,000,000,000</b>	<b>\$833,000,000,000</b>
<b>Total, high estimate</b>		<b>\$978,000,000,000</b>	<b>\$884,000,000,000</b>

# Health outcomes associated with traffic-related air pollution



Footnote: health outcomes for which the overall confidence in the evidence was low-to-moderate, low or very low are not in the picture.

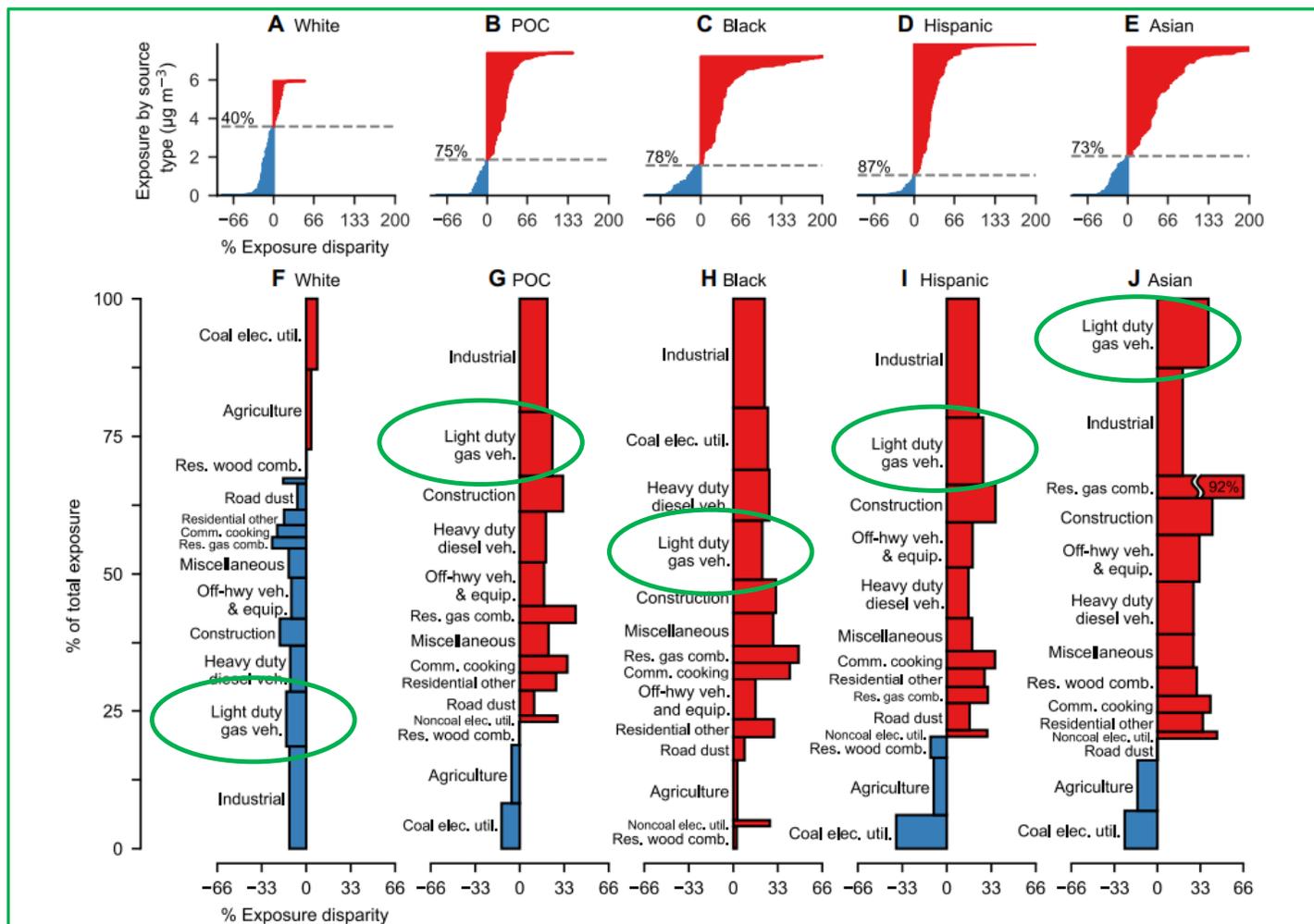
[Current knowledge on adverse effects of traffic-related air pollution: have we filled the gap? What more do we need to know?](#) Jul. 13, 2022 - Francesco Forastiere, Imperial College London





**3.6X**

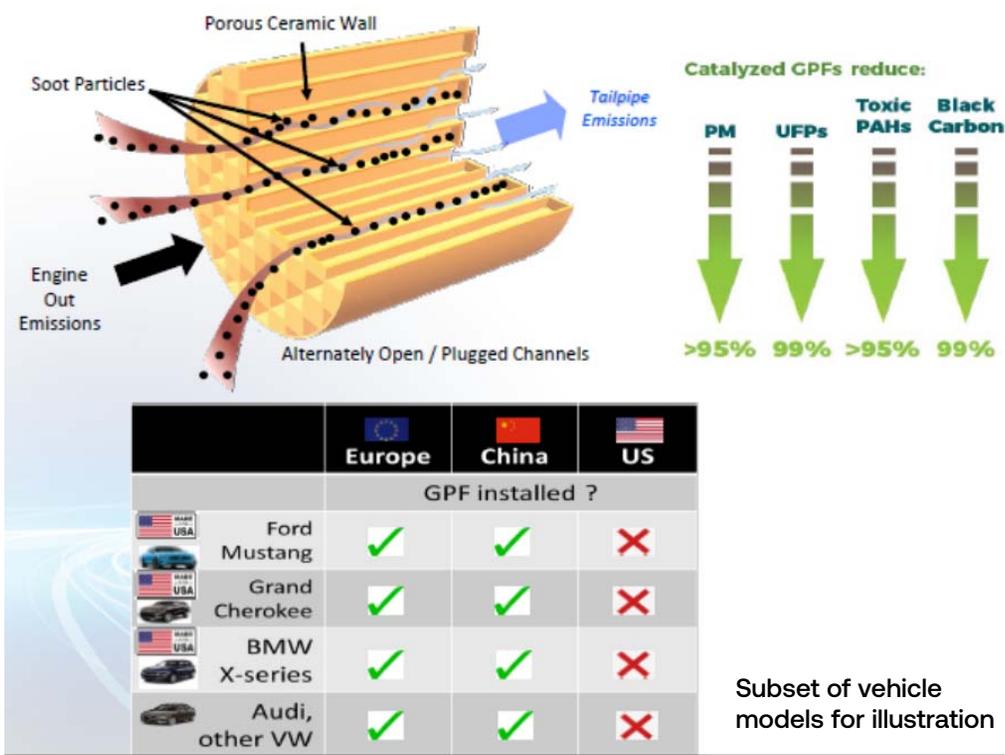
**People of color are 3.6 times more likely** than white people to live in a county with 3 failing grades



**PM2.5 pollutants disproportionately and systemically affect people of color in the United States**

Tessum, Christopher W., et al. "PM 2.5 Polluters Disproportionately and Systemically Affect People of Color in the United States." *Science Advances*, vol. 7, no. 18, 2021, <https://doi.org/10.1126/sciadv.abf4491>

# Gasoline Particulate Filters



Source MECA Supplying Clean Mobility