



NC DAQ's analysis of EPA's proposed repeal of GHG Vehicle Emission Standards

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Department of Environmental Quality



ICYMI: EPA Launches the Largest Deregulatory Actions in U.S. History with Proposal to Rescind Obama-Era Endangerment Finding

The EPA proposes gutting its greenhouse gas rules. Here's what it means for cars and pollution

EPA moves to end climate regulation under Clean Air Act

Pulling the Critical Block: EPA's Repeal of the Endangerment Finding Could Topple Climate Rules

Background on the 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards

- **Section 202 of the Clean Air Act**
- **Endangerment Finding**
- **Cause and Contribute**

- **Light- and Medium-duty vehicle standards**
- **Heavy-duty vehicle standards**

Summary of NC DAQ's Comments on EPA's Proposed Rulemaking – Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards

EPA's Proposal:

- Repeal of 2009 Endangerment Finding and GHG vehicle standards.
- Removal of GHG standards for light-, medium-, and heavy-duty vehicles.
- EPA is not revisiting vehicle emission standards for criteria and toxic air pollutants.
- EPA's proposal does not quantify the real-world impact of removing GHG vehicle standards on criteria and toxic air pollutant emissions.

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Historical context for setting vehicle emission standards:

- EPA previously used an integrated approach to set standards for multiple pollutants
 - CO₂ emissions - tied to fuel consumption and vehicle fuel efficiency
 - NO_x, VOC, and PM_{2.5} emissions depend on fuel consumption and emission control systems

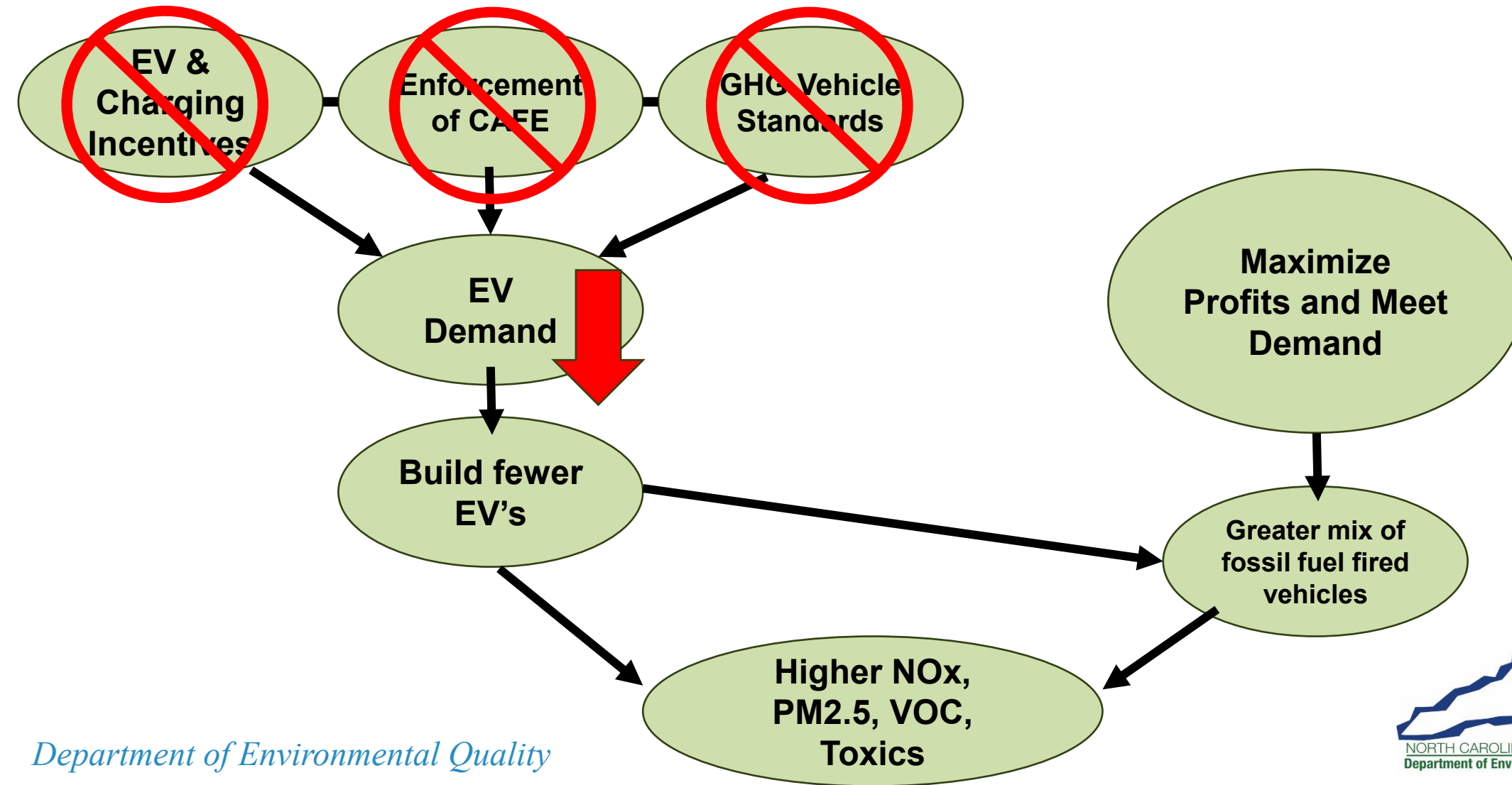
Legislative Change – “One Big Beautiful Bill Act”:

- Reset the maximum civil penalty for CAFE noncompliance to \$0.00
- Removed NHTSA's ability to enforce CAFE standards
- How will automakers respond?

NHTSA = National Highway Traffic Safety Administration
CAFE = corporate average fuel economy



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How might manufacturers approach this? - A hypothetical...
For a particular model of a light duty vehicle...

With GHG Vehicle Emission Standards in place

In 2027:

- 40/100 EV's
- 30/100 Hybrid gas/electric
- 30/100 gas

Without GHG Vehicle Emission Standards in place

In 2027:

- 0/100 EV's
- 50/100 Hybrid gas/electric
- 50/100 gas

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Potential Consequences:

- Eliminating GHG standards & CAFE enforcement would seem to necessarily lead to an increase in emissions of criteria and toxic air pollutants.
- This may jeopardize compliance with NAAQS.
- Could increase toxic air pollutant exposure in North Carolina.

DAQ's request to EPA:

- Explain how EPA and NHTSA will coordinate to ensure:
 - No increase in criteria and toxic air pollutant emissions.
 - Compliance with Clean Air Act (CAA) anti-backsliding provisions, which protect foundational emission controls.

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What are the criteria pollutant impacts of the proposal?

EPA acknowledged in the preamble...

“...the possibility that this proposal could marginally impact emissions of criteria pollutants and air toxics.”

AND... EPA does not...

“believe that the proposed action would have a material adverse impact on the health of individuals with respect to non-GHG air pollutants, including on children, because the EPA anticipates that the impacts of repealing GHG emission regulations would have only marginal and incidental impacts on the emission of non-GHG air pollutants.”

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What are the criteria pollutant impacts of the proposal?

- DAQ developed estimates using EPA tools.
- Methodology:
 - MOVES5 – contains all of the current vehicle emission standards.
 - MOVES4 – excludes both of the vehicle emission standards that are proposed for repeal.
- Used only MOVES5 outputs, except for vehicle miles traveled (VMT) from EVs.

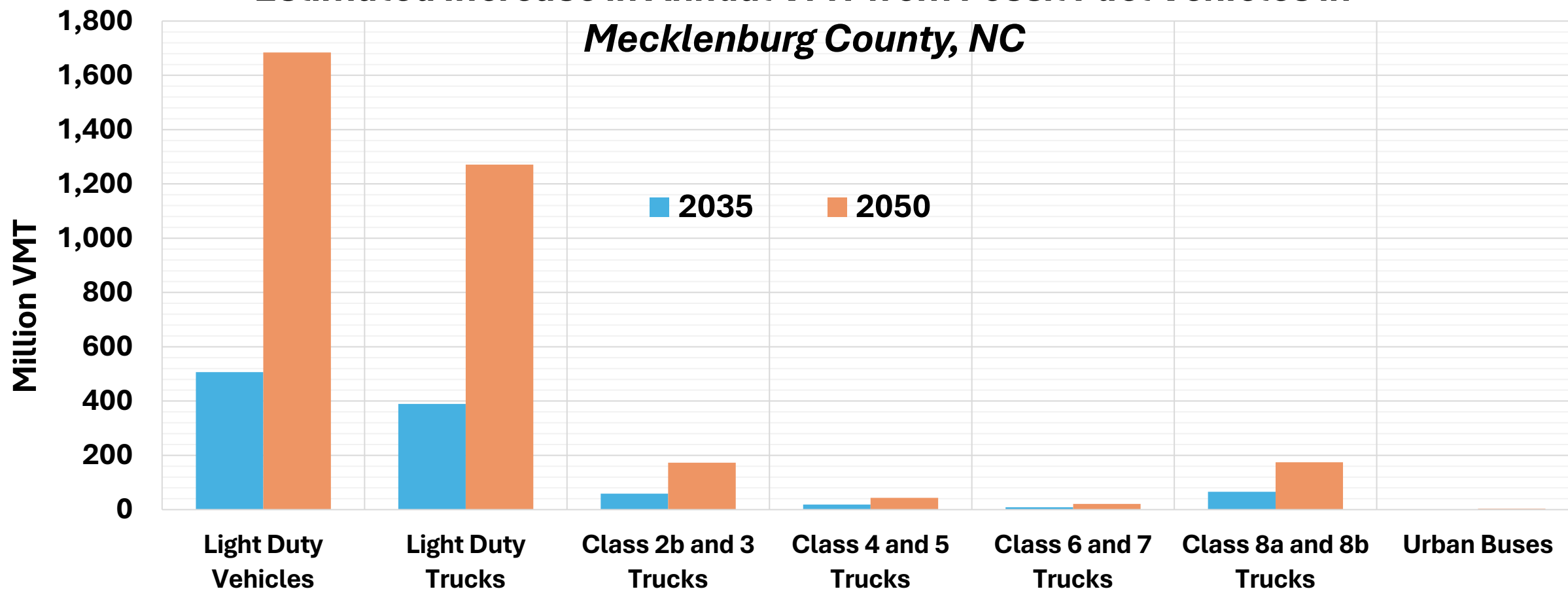
Summary of NC DAQ's Comments on EPA's Proposed Rulemaking – Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards

What are the criteria pollutant impacts of the proposal?

- Methodology (continued):
 - MOVES5 projected electric VMT – MOVES4 projected electric VMT = Δ VMT.
 - Multiplied the Δ VMT by the emission factors (EF_{fossil}) from MOVES5 for fossil-fuel vehicles by vehicle class and year.
$$\Delta \text{ VMT} * EF_{\text{fossil}}$$
 - Projections for 2035 and 2050.
 - Mecklenburg County only.

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Estimated Increase in Annual VMT from Fossil Fuel Vehicles in Mecklenburg County, NC



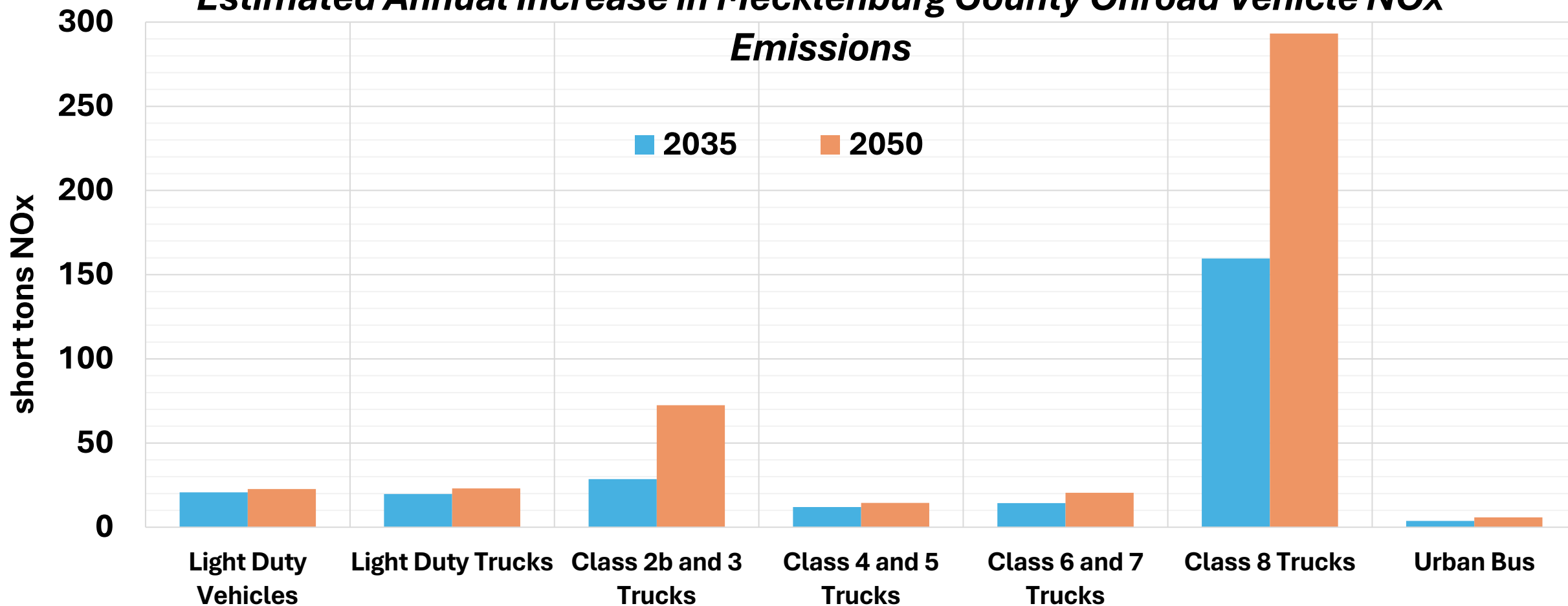
Total increases across all vehicle classes:

1.05 billion VMT in 2035

3.37 billion VMT in 2050

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Estimated Annual Increase in Mecklenburg County Onroad Vehicle NO_x Emissions



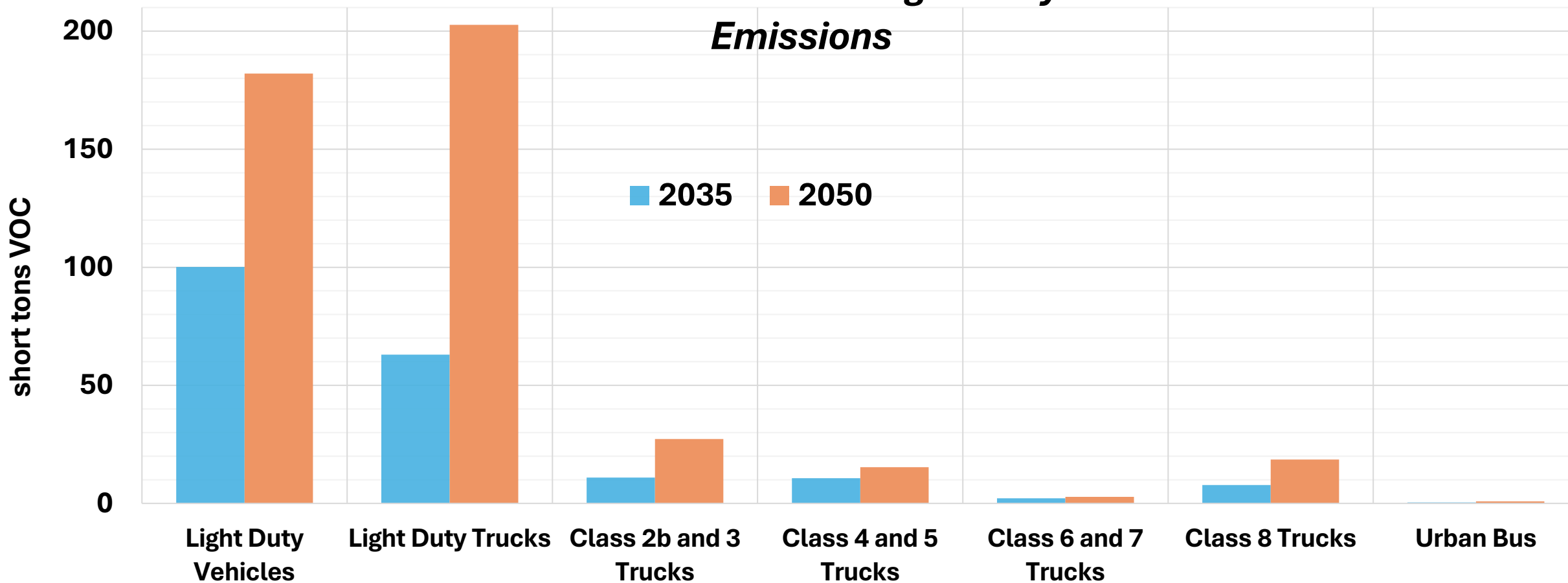
Total increases across all vehicle classes:

259 tons in 2035 (11.2%)

452 tons in 2050 (35.0%)

Summary of NC DAQ's Comments on EPA's Proposed Rulemaking – Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards

***Estimated Annual Increase in Mecklenburg County Onroad Vehicle VOC
Emissions***



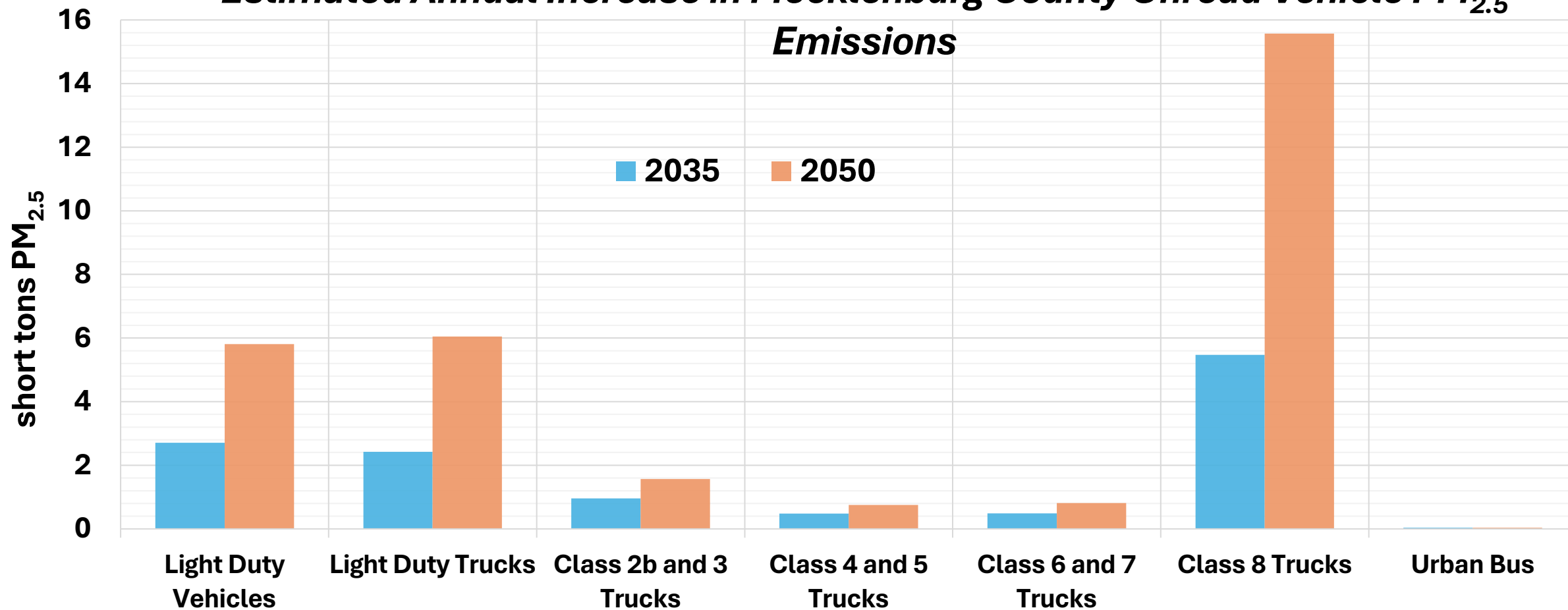
Total increases across all vehicle classes:

195 tons in 2035 (8.7%)

450 tons in 2050 (28.3%)

Summary of NC DAQ's Comments on EPA's Proposed Rulemaking – Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards

Estimated Annual Increase in Mecklenburg County Onroad Vehicle PM_{2.5} Emissions



Total increases across all vehicle classes:

12.6 tons in 2035 (6.6%)

30.6 tons in 2050 (17.5%)

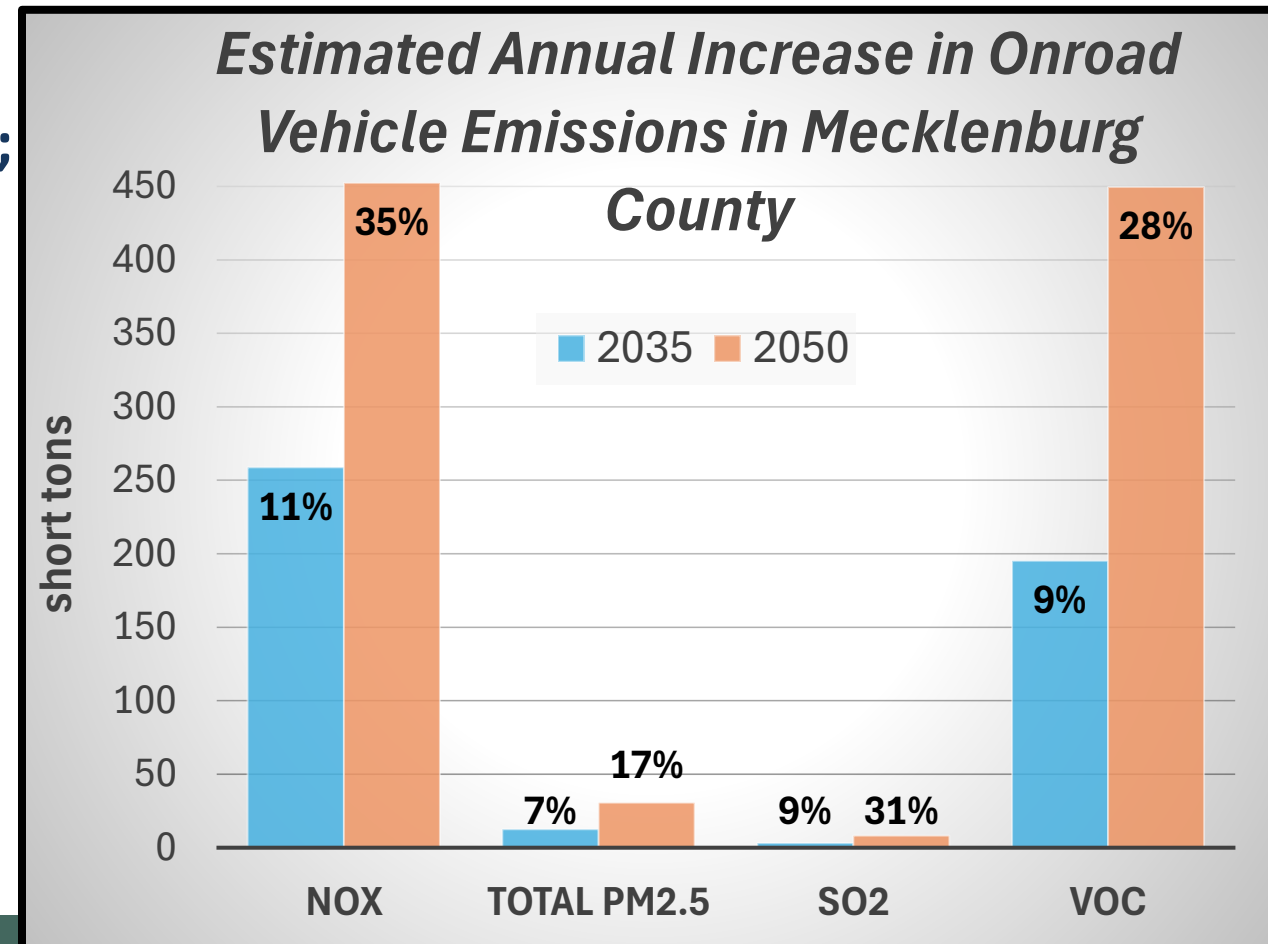
Summary of NC DAQ's Comments on EPA's Proposed Rulemaking – Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards

- The NC DAQ analysis shows the EPA's proposed repeal of the GHG vehicle emission standards may increase annual onroad mobile emissions of:

- NO_x by 11.2% in 2035, and 35.0% in 2050;
- PM_{2.5} by 6.6% in 2035 and 17.5% in 2050;
- SO₂ by 8.7% in 2035 and 31.4% in 2050;
- VOC by 8.7% in 2035 and 28.3% in 2050;

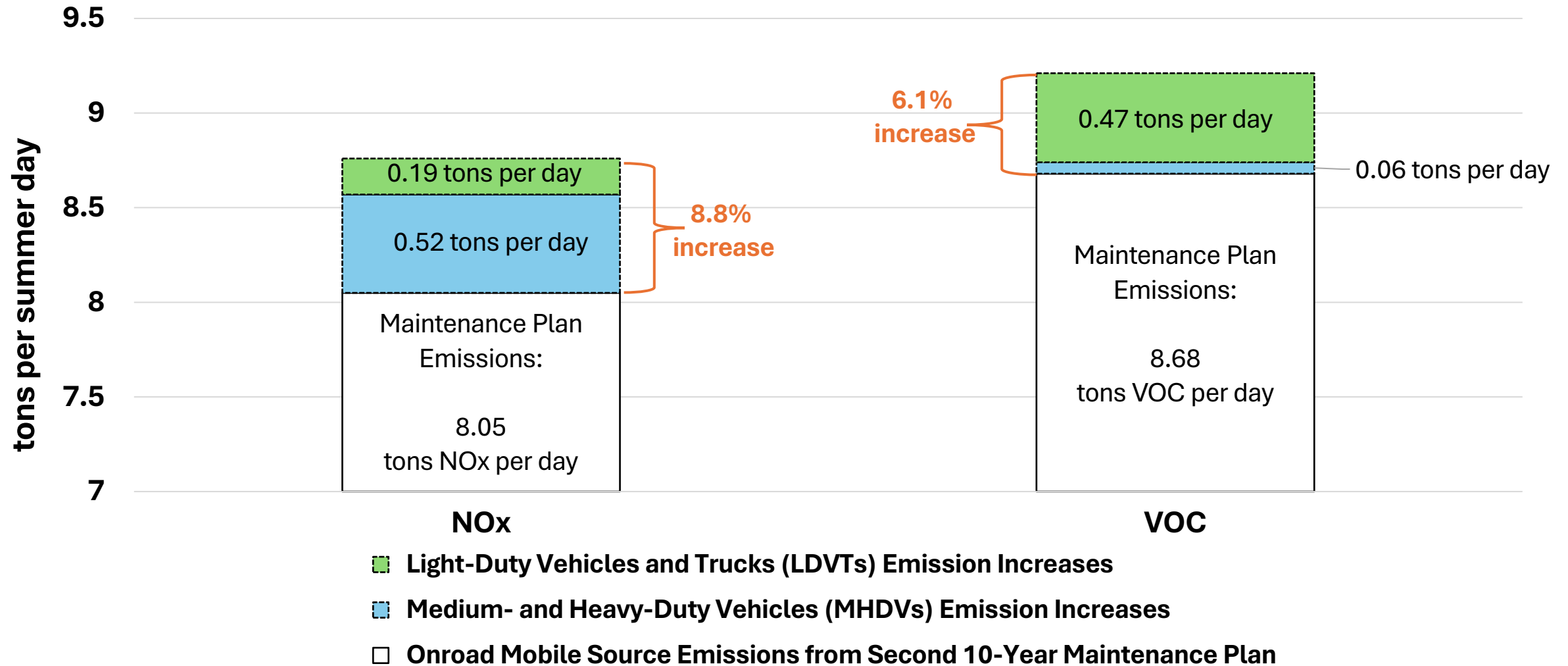
...in Mecklenburg County.

Department of Environmental Quality



Summary of NC DAQ's Comments on EPA's Proposed Rulemaking – Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards

Mecklenburg County Emissions Increases with Respect to Maintenance Plan Emissions



Summary of NC DAQ's Comments on EPA's Proposed Rulemaking – Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards

Critique of EPA's Regulatory Impact Analysis (RIA)

- Seven scenarios evaluated.
 - Contain significant shortcomings and technical pitfalls.
- Lacks air quality modeling and public health impact analysis.
- Ignores social cost of carbon and climate damages.
 - Stems from EO 14154.... Such analyses would *“result in flawed decision-making due to overreliance on balancing highly uncertain dollar figures against more concrete costs and benefits that can be appropriately quantified.”*

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Critique of EPA's Regulatory Impact Analysis (RIA) (Scenario 1)

- EPA used the same models, tools, and assumptions as in the 2024 Vehicle Rulemakings.
- Key issue:
 - EPA appears to reverse the costs and savings.
 - Costs from 2024 rulemakings are now shown as savings.
 - Savings from 2024 rulemaking are now shown as costs.
- Fundamental flaw:
 - The proposed repeal only affects GHG standards, not criteria pollutant standards.
 - Therefore, costs to meet criteria pollutant standards will still be incurred by manufacturers.
 - These costs should not be counted as savings under the proposed repeal.

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Final thoughts...

- EPA asserts that the proposed repeal could only have marginal impacts on public health or the environment at local or regional levels.
- EPA provides no supporting evidence to justify its claim of only marginal adverse impacts.
- NC DAQ's modeling analysis shows increases in NO_x, VOC, PM_{2.5} and SO₂.
 - Especially concerning for areas with narrow margins for meeting the NAAQS.
 - Hinders the state's ability to maintain on-going compliance, mitigate climate impacts, and support economic stability and growth.
- NC DAQ requested EPA withdraw the proposed repeal and urged collaboration with states and stakeholders to implement effective strategies that protect public health and economic growth.



North Carolina and the National Ambient Air Quality Standards

Attaining all federal public health air quality standards for:

3 6 5 3

days...

and counting!

as of August 26, 2025

Ozone

Particulate
Matter

Lead

Nitrogen
Dioxide

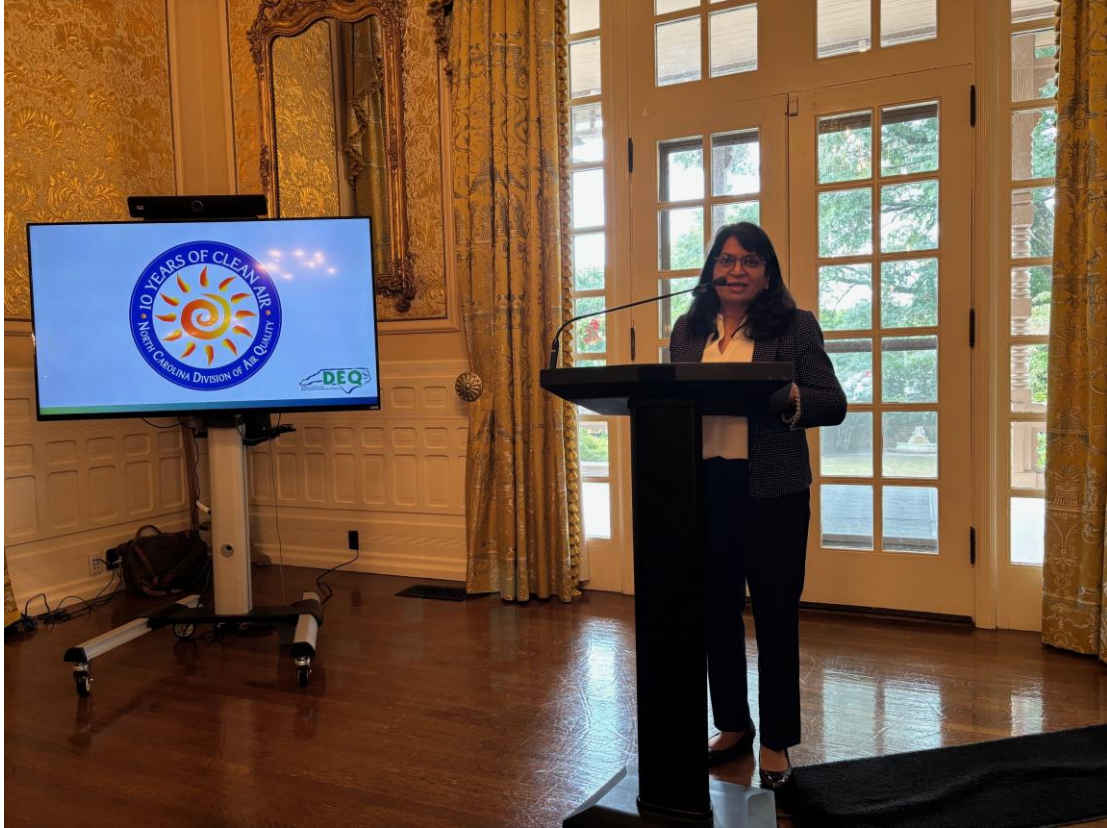
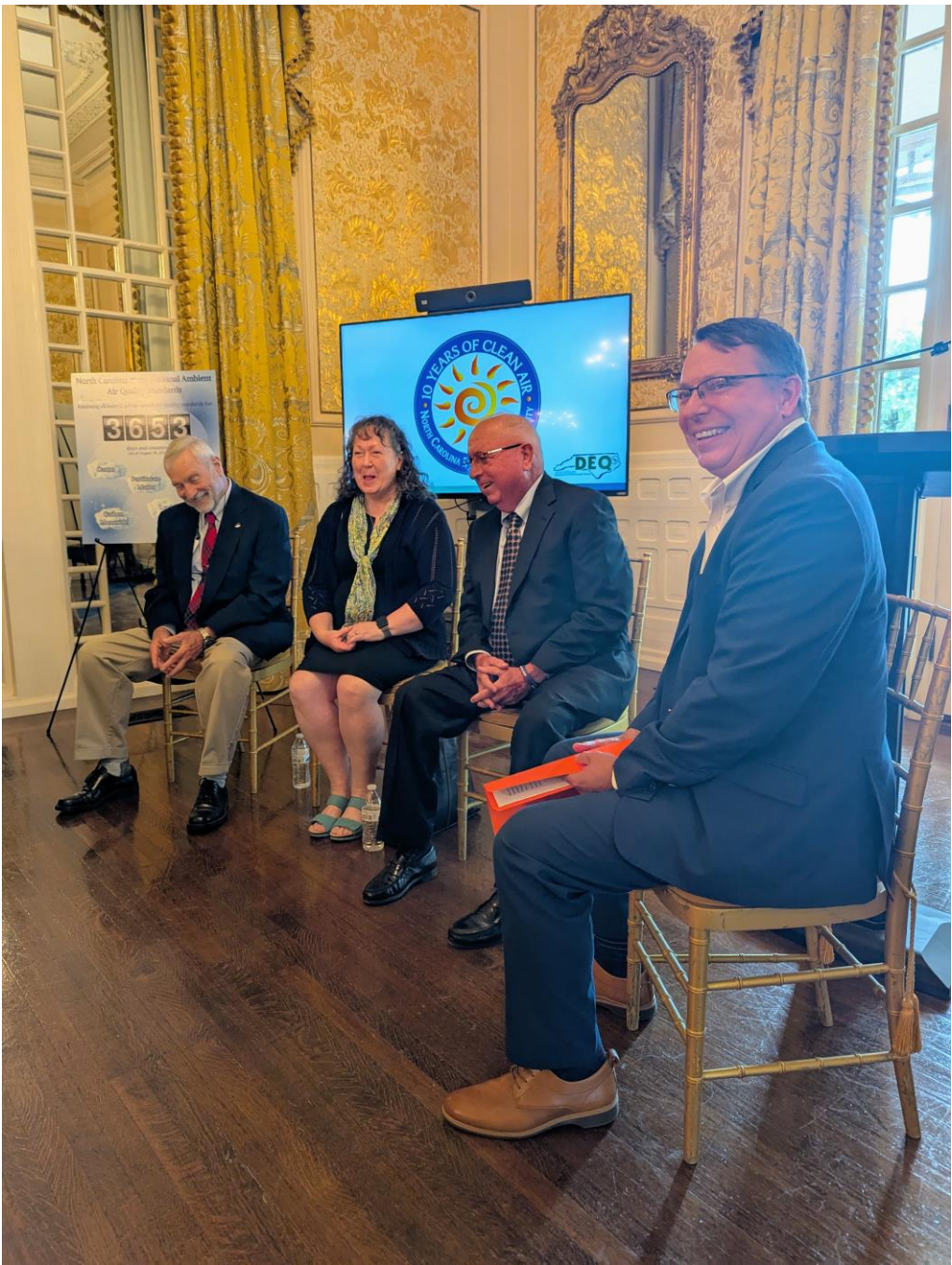
Sulfur
Dioxide

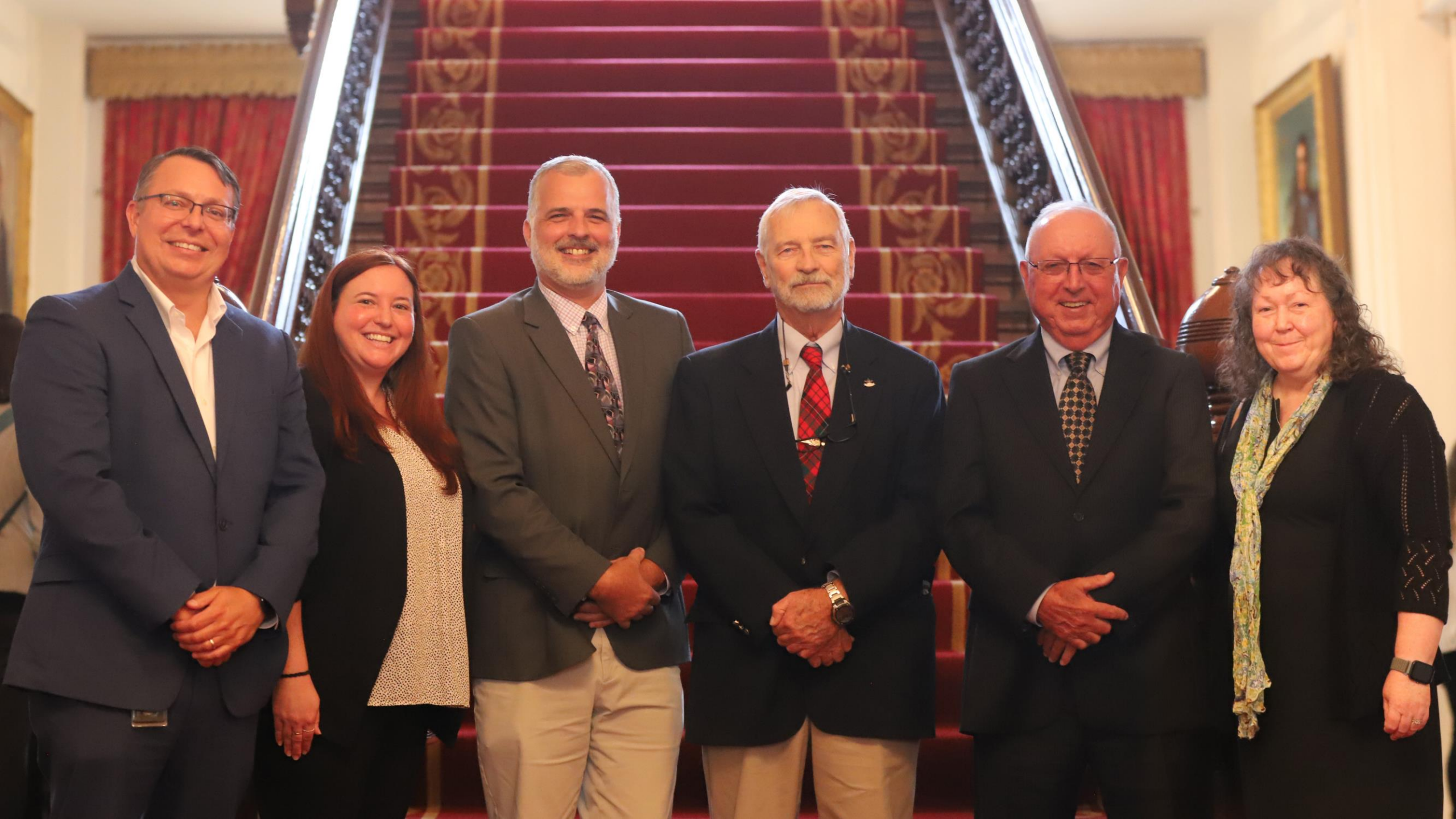
Carbon
Monoxide













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