

Office of Regulatory Management

Economic Review Form

Agency name	Department of Environmental Quality
Virginia Administrative Code (VAC) Chapter citation(s)	9 VAC 5-95
VAC Chapter title(s)	Regulation for Low Emissions and Zero Emissions Vehicle Standards
Action title	Create New Chapter 95, Regulation for Low Emissions and Zero Emissions Vehicle Standards (Revision MR)
Date this document prepared	12/29/2023
Regulatory Stage (including Issuance of Guidance Documents)	

Cost Benefit Analysis

Complete Tables 1a and 1b for all regulatory actions. You do not need to complete Table 1c if the regulatory action is required by state statute or federal statute or regulation and leaves no discretion in its implementation.

Table 1a should provide analysis for the regulatory approach you are taking. Table 1b should provide analysis for the approach of leaving the current regulations intact (i.e., no further change is implemented). Table 1c should provide analysis for at least one alternative approach. You should not limit yourself to one alternative, however, and can add additional charts as needed.

Report both direct and indirect costs and benefits that can be monetized in Boxes 1 and 2. Report direct and indirect costs and benefits that cannot be monetized in Box 4. See the ORM Regulatory Economic Analysis Manual for additional guidance.

Table 1a: Costs and Benefits of the Proposed Changes (Primary Option)

<p>(1) Direct & Indirect Costs & Benefits (Monetized)</p>	<p>This regulation, adopted by the State Air Pollution Board on December 2, 2021, is required by Chapter 263 of the 2021 Special Session I Acts of Assembly, and adopts California’s vehicle emission standards pursuant to Section 177 of the federal Clean Air Act. The California Air Resources Board (CARB) has adopted the Advanced Clean Cars (hereinafter referred to as ACC I) program. ACC I established light duty motor vehicle (car) emissions standards that nominally would require that 22% percent of new car sales beginning in model year 2025 be Zero Emission Vehicles (ZEV) and certain Low Emission Vehicles (LEV); i.e., Plug-In Hybrids. The actual percentage, however, may be less than 22% due to ACC I’s complex fleet averaging and manufacturer credit mechanism.</p> <p>Direct costs are indeterminate but may be estimated as follows: In 2022, approximately 301,163 cars were sold in Virginia. The cost of a ZEV is generally considered on average to be approximately \$10,000 more than for a conventional internal combustion vehicle. ACC I nominally would require that 22% of new light duty motor vehicle sales be ZEV/LEVs. This percentage, however, may be less due to ACC I's complex credit and fleet averaging system. The MJ Bradley EV projection tool, which analyzes a range of scenarios taking into consideration the ACC I fleet averaging and credit system, projects that the actual sales of ZEV/LEVs for the 2025 model year under ACC I could be as low as 7%. Therefore, based on Virginia's 2022 automobile sales numbers, the range of total potential additional costs to automobile purchasers in Virginia resulting from imposition of ACC I would be:</p> <p>(i) Assuming the full 22% of ZEV/LEV sales in Virginia is realized in 2024, 300,000 2025 model year cars sold in 2024, and an additional \$10,000 per car - the total potential cost to Virginia consumers would amount to \$660 million; (ii) assuming only 7% is realized, a total potential cost to Virginia consumers would amount to \$210 million.</p> <p>Because of fleet averaging, automotive companies typically raise the cost of non-ZEV/LEVs in order to drive consumers to purchase the ZEV/LEV. Additionally, if they fail to meet their statutory quotas there could be financial penalties, which are passed on to consumers in terms of higher prices. These additional costs are indeterminate.</p> <p>Indirect costs are also indeterminate, but as the portion of ZEV/LEVs as new cars sold increases will include costs to deploy electric charging infrastructure, as well as costs by auto dealers to accommodate ZEV/LEV sales and servicing ZEV/LEVs. There will also be indirect</p>
---	--

	<p>costs associated with higher demands for electricity, which will have an increased cost required to increase electric generation, substations, and grid transmission.</p> <p>Direct benefits are indeterminate, but ZEV/LEVs emit fewer air pollutants, including greenhouse gases (GHGs). Motor vehicles contribute a significant portion of air pollution in Virginia and nationwide, in the form of both criteria pollutants and GHG pollutants. Therefore, depending on the potential for increased sales of ZEV/LEVs, this regulation could result in improvements to air quality.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) Indeterminate.	(b) Indeterminate.
(3) Net Monetized Benefit	Indeterminate.	
(4) Other Costs & Benefits (Non-Monetized)	Indeterminate.	
(5) Information Sources	CARB, F&I Tools, Kelly Blue Book, MJ Bradley EV projection tool, Northeast States for Coordinated Air Use Management (NESCAUM)	

Table 1b: Costs and Benefits under the Status Quo (No change to the regulation)

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>Absent Chapter 263 of the 2021 Special Session I Acts of Assembly the Commonwealth would remain subject to the federal vehicle emission standards adopted by the U.S. Environmental Protection Agency (EPA). Since California may adopt vehicle emissions standards that are more stringent than those adopted by EPA, the cost of complying with federal standards as opposed to ACC I could be less.</p> <p>Direct costs of the status quo are indeterminate but include the costs embedded in the price of motor vehicles to comply with the federal vehicle emission standards.</p> <p>Indirect costs of the status quo are indeterminate but include the costs of higher emissions of air pollutants, including greenhouse gases, associated with vehicles that comply with the federal vehicle emission standards but not ACC I.</p> <p>Direct benefits of the status quo are indeterminate but include the availability, and lower prices, for new vehicles that comply with the federal vehicle emission standards but not ACC I.</p>
--	--

	Indirect benefits are indeterminate.	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) Indeterminate.	(b) Indeterminate.
(3) Net Monetized Benefit	Indeterminate.	
(4) Other Costs & Benefits (Non-Monetized)	Indeterminate.	
(5) Information Sources	See Table 1a.	

Agency Note: This is a nondiscretionary rulemaking required by Chapter 263 of the 2021 Special Session I Acts of Assembly. Therefore, Table 1c has been omitted.

Impact on Local Partners

Use this chart to describe impacts on local partners. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 2: Impact on Local Partners

(1) Direct & Indirect Costs & Benefits (Monetized)	Direct costs, indirect costs, direct benefits, and indirect benefits of this rulemaking do not affect local partners any differently than any other purchaser of new vehicles. Therefore, see Table 1a.	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) See Table 1a.	(b) See Table 1a.
(3) Other Costs & Benefits (Non-Monetized)	See Table 1a.	
(4) Assistance	See Table 1a.	

(5) Information Sources	See Table 1a.
-------------------------	---------------

Impacts on Families

Use this chart to describe impacts on families. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 3: Impact on Families

(1) Direct & Indirect Costs & Benefits (Monetized)	Direct costs, indirect costs, direct benefits, and indirect benefits of this rulemaking do not affect families any differently than any other purchasers of new vehicles or residents of the Commonwealth. Therefore, see Table 1a.	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) See Table 1a.	(b) See Table 1a.
(3) Other Costs & Benefits (Non-Monetized)	See Table 1a.	
(4) Information Sources	See Table 1a.	

Impacts on Small Businesses

Use this chart to describe impacts on small businesses. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 4: Impact on Small Businesses

(1) Direct & Indirect Costs & Benefits (Monetized)	Direct costs, indirect costs, direct benefits, and indirect benefits of this rulemaking do not affect small businesses any differently than any other purchaser or seller of new vehicles. Therefore, see Table 1a.	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) See Table 1a.	(b) See Table 1a.

(3) Other Costs & Benefits (Non-Monetized)	See Table 1a.
(4) Alternatives	See Table 1a.
(5) Information Sources	See Table 1a.

Changes to Number of Regulatory Requirements

Table 5: Regulatory Reduction

For each individual action, please fill out the appropriate chart to reflect any change in regulatory requirements, costs, regulatory stringency, or the overall length of any guidance documents.

Change in Regulatory Requirements

VAC Section(s) Involved*	Authority of Change	Initial Count	Additions	Subtractions	Net Change
9VAC5-95-10	Statutory:	0			0
	Discretionary:	0			0
9VAC5-95-20	Statutory:	0			0
	Discretionary:	0			0
9VAC5-95-30	Statutory:	0	+27		27
	Discretionary:	0			0
9VAC5-95-40	Statutory:	0	+6		6
	Discretionary:	0			0
9VAC5-95-50	Statutory:	0	+1		1
	Discretionary:	0			0
Total Net Change of Statutory Requirements:					34
Total Net Change of Discretionary Requirements:					0

Cost Reductions or Increases (if applicable)

VAC Section(s) Involved*	Description of Regulatory Requirement	Initial Cost	New Cost	Overall Cost Savings/Increases

Other Decreases or Increases in Regulatory Stringency (if applicable)

VAC Section(s) Involved*	Description of Regulatory Change	Overview of How It Reduces or Increases Regulatory Burden

Length of Guidance Documents (only applicable if guidance document is being revised)

Title of Guidance Document	Original Length	New Length	Net Change in Length

*If the agency is modifying a guidance document that has regulatory requirements, it should report any change in requirements in the appropriate chart(s).