

The Benefits of the Advanced Clean Cars II Standard in New Mexico: Fact Sheet



This fact sheet compares the environmental, public health, and economic benefits of New Mexico adopting the full Advanced Clean Cars II (“ACC II”) program versus only adopting through earlier model years (MY). This program requires vehicle manufacturers to increase sales of light-duty zero-emission vehicles (ZEVs) within the state. The full regulation would require the state to reach 100 percent ZEV sales by MY 2035, while adopting only through MY 2032 would reach 82 percent ZEV sales. Adopting the full regulation would result in greater environmental, public health, and economic benefits to the state. To conduct this analysis, ERM modeled the following three scenarios which varied the manufacturer compliance mechanisms as well as the electric grid, and looked at compliance ending in four different model years MY 2032 through MY 2035:

- ACC II Flex Scenario: New Mexico adopts the regulation starting in MY 2027 and manufacturers use many of the compliance flexibilities offered to ease their transition to the required ZEV sales levels.
- ACC II Flex + Clean Grid Scenario: Manufacturers follow the sales trajectories in the ACC II Flex scenario, and New Mexico reaches 100 percent clean generation by MY 2040.
- ACC II Full + Clean Grid Scenario: Manufacturers do not use any of the offered compliance flexibilities and New Mexico also reaches 100 percent clean generation by MY 2040.

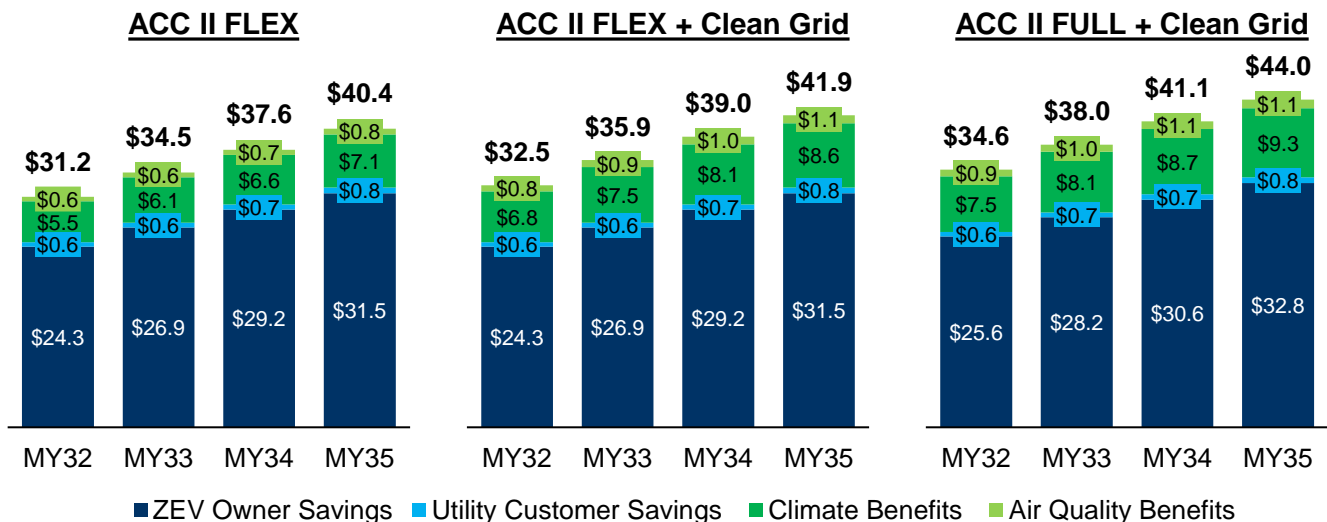
The New Mexico ACC II policy scenarios were compared with a baseline “business-as-usual” (BAU) scenario in which all new light-duty vehicles (LDVs) sold in the state continue to meet existing EPA vehicle standards, and ZEV sales increase but never reach more than a third of new vehicle sales each year. Assuming the rule ends in different MYs impacts the share of zero-emission LDVs on the road over time:

	MY 2032	MY 2033	MY 2034	MY 2035
Share of vehicle sales that are ZEV, held steady after MY in which rule is assumed to end	82%	88%	94%	100%
Resulting share of LDVs that are zero-emitting in 2050	77%	83%	88%	93%

Cumulative Net Societal Benefits

The net societal benefits from the modeled New Mexico ACC II scenarios include the monetized value of public health and climate benefits, net cost savings for vehicle owners, and net utility costs from increased electricity demand for EV charging. If New Mexico adopts the regulation through MY 2032, under the ACC II scenarios, the cumulative societal benefits by 2050 reach between \$31 and more than \$34 billion. Whereas, if New Mexico adopts the regulation through MY 2035, the cumulative societal benefits increase by nearly \$10 billion to reach between \$40 and \$44 billion.

Cumulative Benefits from 2027 to 2050 (2021\$ billion)



ZEV Owner Benefits

For all the modeled ACC II scenarios, the analysis estimated annual incremental costs associated with purchase and use of light-duty ZEVs compared with baseline internal combustion engine (ICE) vehicles that operate on petroleum fuels. The average light-duty ZEV purchased in MY 2027 will cost nearly \$800 more than an ICE vehicle, but the fuel and maintenance savings outweigh the projected incremental cost of the vehicle as well as the charger costs, resulting in over \$14,450 in lifetime savings. Additionally, for MY 2030 and beyond, the average ZEV purchase price is projected to be lower than the average ICE vehicle, such that the ZEV owners will realize savings of up to \$16,850 over the lifetime of the vehicle. As shown in the dark blue bars in the figure above, cumulative net ownership cost savings for New Mexico ZEV owners vary by modeled ACC II scenario and accumulate the most when the rule is adopted through MY 2035:

	MY 2032	MY 2033	MY 2034	MY 2035
<i>Cumulative ZEV owner savings MY 2027 to MY 2050</i>	\$24.3 - \$25.6 billion	\$26.9 - \$28.2 billion	\$29.3 - \$30.6 billion	\$31.5 - \$32.8 billion

Environment and Air Quality Benefits

The modeled ACC II scenarios produce significant reductions in NOx, PM, and GHG emissions from the LDV fleet, even after accounting for the emissions from producing the electricity needed to power ZEVs. Adopting the regulation through different MYs in New Mexico impacts the emissions savings benefits:

- Through MY 2032: NOx, PM, and GHG emissions approach nearly 80 percent reductions by 2050. Cumulative emissions reductions from 2027 to 2050 across scenarios range between 19,200 and 30,000 metric tons (MT) of NOx, 1,770 and 2,670 MT of PM2.5, and 68 and 94 million MT of CO2e compared to the baseline.
- Through MY 2033: NOx, PM, and GHG emissions exceed 82 percent reductions by 2050. Cumulative emissions reductions from 2027 to 2050 across scenarios range between 21,730 and 32,980 MT of NOx, 1,980 and 2,900 MT of PM2.5, and 75 and 102 million MT of CO2e compared to the baseline.
- Through MY 2034: NOx, PM, and GHG emissions approach nearly 90 percent reductions by 2050. Cumulative emissions reductions from 2027 to 2050 across scenarios range between 25,050 and 35,550 MT of NOx, 2,180 and 3,130 MT of PM2.5, and 82 and 109 million MT of CO2e compared to the baseline.
- Through MY 2035: NOx, PM, and GHG emissions exceed 94 percent reductions by 2050. Cumulative emissions reductions from 2027 to 2050 across scenarios range between 26,180 and 38,000 MT of NOx, 2,350 and 3,340 MT of PM2.5, and 88 and 116 million MT of CO2e compared to the baseline.

Public Health Benefits

NOx and PM reductions will improve air quality resulting in public health benefits from reduced mortality and hospital visits. The following table provides additional details including the monetized value of the reduced mortality and hospital visits.

Health Metric	MY 2032			MY 2033			MY 2034			MY 2035		
	Flex	Flex + Clean Grid	Full + Clean Grid	Flex	Flex + Clean Grid	Full + Clean Grid	Flex	Flex + Clean Grid	Full + Clean Grid	Flex	Flex + Clean Grid	Full + Clean Grid
<i>Avoided Premature Deaths</i>	66	68	73	73	75	80	79	81	87	85	87	93
<i>Avoided Hospital Visits</i>	61	63	68	68	70	75	74	76	81	80	81	86
<i>Avoided Minor Cases</i>	37,275	38,295	41,333	41,260	42,328	45,367	44,931	46,043	49,082	48,291	49,443	52,482
<i>Monetized Value, 2021\$ (billions)</i>	\$0.80	\$0.82	\$0.89	\$0.89	\$0.91	\$0.98	\$0.97	\$0.99	\$1.06	\$1.04	\$1.06	\$1.13

Full Report Information

The full report, including the corresponding technical document that provides additional details of the assumptions used, is available at <https://www.erm.com/advanced-clean-cars-ii-analysis-natural-resources-defense-council-sierra-club/>.