

# The Benefits of the Advanced Clean Cars II Program in Maine: Fact Sheet



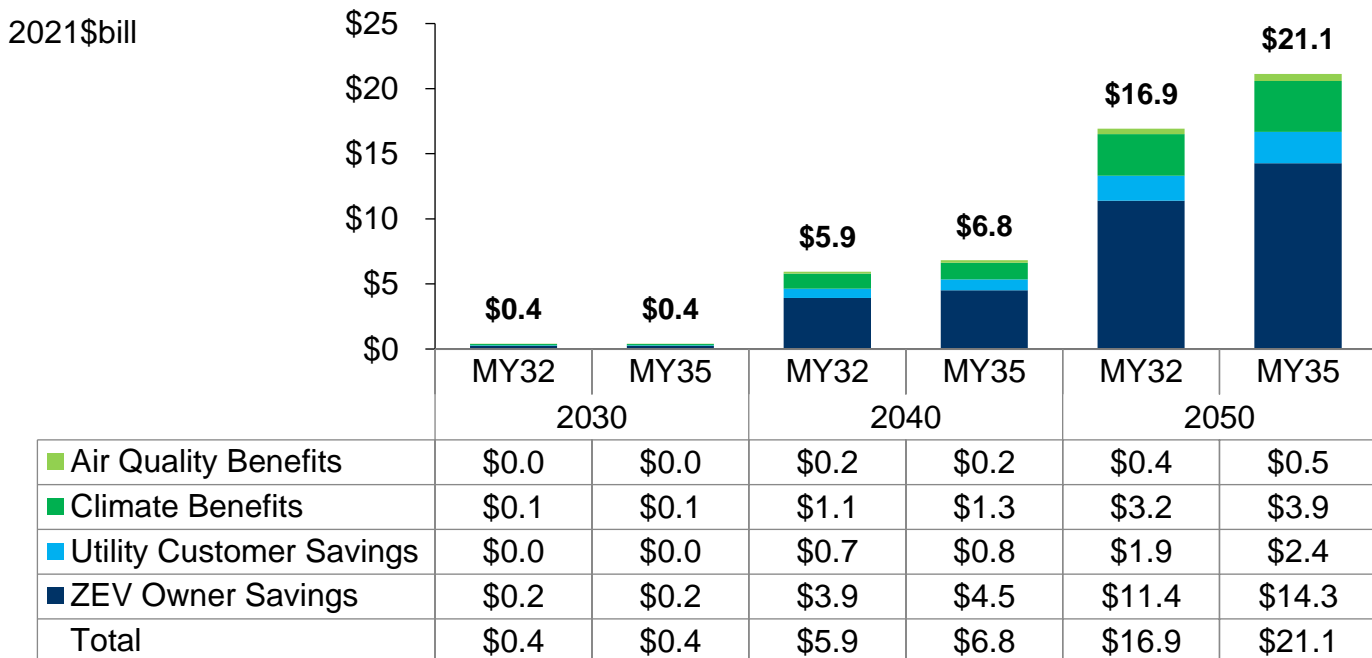
Adoption of the Advanced Clean Cars II (“ACC II”) Program in Maine would require vehicle manufacturers to increase sales of light-duty zero-emission vehicles (ZEVs) in the state. This fact sheet compares the environmental, public health, and economic benefits of two versions of the ACC II: 1) the program as proposed, which ends with model year (MY) 2032 and requires vehicle manufacturers to reach 82% ZEV share of new light-duty vehicle (LDV) sales<sup>1</sup>; and 2) the full program, which runs through model year 2035 and requires manufacturers to reach 100% ZEV share of new LDV sales.

To conduct this analysis, ERM modeled ACC II implementation assuming that manufacturers do not use any compliance flexibilities and assuming that Maine reaches 100 percent clean electricity generation by 2040. ERM then looked at compliance ending with MY 2032 (the “ACC II MY 2032 Scenario”) versus MY 2035 (the “ACC II MY 2035 Scenario”). Each scenario assumes that the final ZEV sales target required by the ACC II in that scenario holds steady in future years. These two scenarios were compared with a baseline “business-as-usual” (BAU) scenario in which all new 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.

Our analysis projects that in the ACC II MY 2035 Scenario, 93% of the LDV fleet will be zero-emission in 2050, versus a 77% zero-emission LDV fleet in 2050 in the ACC II MY 2032 Scenario, a 16-percentage point decrease. This difference drives additional savings for Maine in the ACC II MY 2035 Scenario for every category modelled.

## Net Societal Benefits

ERM modelled net societal benefits including the monetized value of public health and climate benefits, net cost savings for ZEV owners, and net utility customer savings from increased electricity demand for EV charging. In the ACC II MY 2035 Scenario (“MY35” in chart below), Maine’s cumulative net societal benefits are more than \$21 billion. Whereas, projected net societal cumulative benefits in the ACC II MY 2032 Scenario (“MY32” in chart below) are roughly \$4.2 billion lower.



<sup>1</sup> The proposed rule contains a midterm review in which “incorporation of percentage requirements for subsequent years will be determined.” The ACC II MY 2032 Scenario models the standard as it is drafted—ending in MY 2032—not as it may be later amended.



### Climate Benefits

Adoption of the ACC II in Maine would produce significant reductions in greenhouse gas (GHG) emissions from the LDV fleet, even after accounting for the emissions from producing the electricity needed to power ZEVs. In the ACC II MY 2035 Scenario, GHG emissions are reduced by 89 percent by 2050, for a cumulative reduction of 49.1 million metric tons (MT) of CO<sub>2</sub>e (2027 through 2050 compared to the BAU Scenario). Whereas, in the ACC II MY 2032 Scenario, GHG emissions approach 75 percent reduction by 2050 (compared to 2025 levels), which corresponds with cumulative reductions of 40.1 million MT of CO<sub>2</sub>e between 2027 and 2050 compared to the BAU Scenario.

### Air Quality and Public Health Benefits

Adoption of the ACC II in Maine would also produce significant reductions in air pollution emissions from the LDV fleet, even after accounting for the emissions from producing the electricity needed to power ZEVs. In the ACC II MY 2035 Scenario, NO<sub>x</sub> and PM emissions are reduced by 91 percent and 85 percent by 2050, resulting in cumulative reductions of approximately 14,579 MT of NO<sub>x</sub> and 1,289 MT of PM<sub>2.5</sub> compared to the BAU Scenario. Whereas in the ACC II MY 2032 Scenario, NO<sub>x</sub> emissions exceed an 80 percent reduction, while PM emissions approach 70 percent reduction by 2050 compared to 2025 levels. These reductions correspond with cumulative reductions of 11,359 MT of NO<sub>x</sub> emissions and 1,020 MT of PM<sub>2.5</sub> compared to the BAU Scenario.

These reductions will improve air quality resulting in public health benefits from reduced mortality, hospital visits and lost workdays. The ACC II MY 2035 Scenario saves nine lives compared with the ACC II MY 2032 Scenario, and saves 45 lives compared to BAU:

#### Cumulative Public Health Benefits of Advanced Clean Cars II Adoption 2027 - 2050

Scenario	Cumulative Reduced Incidents (Counts)			Monetized Value (2021\$ mill)
	Mortality	Hospital	Minor*	
ACC II MY 2032	36	33	20,056	\$438
ACC II MY 2035	45	42	24,945	\$546

\* Minor health incidents include reduced cases of acute bronchitis and other respiratory symptoms and reduced restricted activity days and lost workdays

### Utility Customer Savings

In both scenarios, utility revenue from LDV electrification exceeds increased costs from LDV electrification. This results in net utility revenue, and that translates to savings for Maine consumers. In the ACC II MY 2035 Scenario, Mainers are projected to save \$20 million in 2030, rising to \$127 million in 2040 and reaching \$169 million in 2050. Mainers will save more than \$40 million more than in the ACC II MY 2032 Scenario.

### ZEV Owner Benefits

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 result in over \$14,000 in lifetime savings thanks to fuel and maintenance savings that outweigh the projected incremental purchase cost (around \$800 more than an ICE vehicle) as well as the charger costs. Additionally, for MY 2030 and beyond, the average ZEV purchase price is projected to be lower than the average ICE vehicle, such that ZEV owners will realize savings of more than \$15,000 over the lifetime of the vehicle. The ACC II MY 2035 Scenario is estimated to yield \$14.3 billion in cumulative net ownership cost savings for Maine ZEV owners between 2027 and 2050, \$2.9 billion higher than in the MY 2032 Scenario.