

**Rebuttal Period Comment on Clean Cars Minnesota
OAH Docket No. 71-9003-36416**

March 22, 2021

The Institute for Energy Research finds significant flaws in [the joint comment](#) presented by Fresh Energy, Minnesota Center for Environmental Advocacy (MCEA), Natural Resources Defense Council (NRDC), and Sierra Club submitted in support of Clean Cars Minnesota and the Minnesota Pollution Control Agency (MPCA) in adopting the Low-Emission Vehicle (LEV) and Zero-Emission Vehicle (ZEV) standards.

In Section 6 (“Benefits to Consumers”) Subsection C (“Some EV models already deliver cost savings in total cost of ownership”) the joint comment misleads readers towards the unfounded conclusion that electric vehicles are more affordable than gasoline-powered vehicles on a cost-of-ownership basis. In fact, as the sources cited by the joint comment show, electric vehicles tend to be both more expensive up front and on a cost-of-ownership basis.

The subsection makes at least three specific claims that are misleading and that are not justified by the cited sources.

The first dubious claim is that many EV owners already see cost savings. The joint comment argues:

“Although the upfront costs of some electric vehicles are currently higher compared to comparable gas-powered vehicles, many EV owners already see cost savings over the lifetime of their vehicles. This is because operating expenses—including fuel and maintenance costs—are typically lower for electric cars.”

The joint comment also makes the suspect claim that the nine most popular EVs are many thousands of dollars less expensive than gasoline-powered alternatives. Again, the joint comment:

“Taking the full cost of ownership into account, for all nine of the most popular EVs on the market below \$50,000, lifetime ownership costs were ‘many thousands of dollars lower than all comparable ICE vehicles’ costs, with most EVs offering savings...between \$6,000 and \$10,000.’”

Third, the joint comment claims:

“Similarly, in 2021 the Massachusetts Institute of Technology calculated the full lifetime cost of almost every new car model on the market and found that electric cars often had the lowest costs over time.”

By using the words “many” in reference to the number of EV owners and “often” in reference to the EV models, the joint comment avoids outright falsehood. These words have no definite meaning, but statistics on EV purchases and comparisons to gasoline-powered vehicles show clearly that the majority of EV buyers are purchasing expensive vehicles that have up-front prices *and* cost-of-ownership tallies that make them far costlier than gasoline-powered alternatives.

When examined closely, both [the October 2020 CR report](#) and [the MIT research](#) cited contradict the picture that the joint comment paints. A review of the original sources shows that the joint comment represents CR’s and MIT’s findings in a motivated fashion. (Curiously, the joint comment actually cites a New York Times article reporting on the MIT research in its footnotes rather than the easily-accessible MIT research itself.)

The Tesla Model 3, which starts at over \$37,000, accounted for 47 percent of all plug-in electric vehicles sold in 2019, according to [the U.S. Department of Energy](#). Excluding hybrids, the Tesla Model 3 accounted for over 60 percent of vehicles sold, making it a reasonable point of departure for cost-of-ownership comparisons.

According to MIT’s Carbon Counter, the Tesla Model 3 Standard Range Plus costs an owner more than \$400 per month when factoring in fuel and maintenance. The Model 3 Long Range AWD costs more than \$500 per month and the Model 3 Performance AWD costs almost \$600 per month. Among the many common models of gasoline-powered vehicles that cost less per month than the most affordable Tesla Model 3 are the Honda CR-V, the Volkswagen Passat, the Chevy Trailblazer, the Honda Civic (4Dr 1.5L), the Nissan Sentra, and the Volkswagen Jetta.

The mid-tier Tesla Model 3 Long Range AWD is costlier per month than gasoline-powered vehicles such as the Ford F150 (2WD 2.7L), the Jeep Wrangler, Audi Q3, the Dodge Durango, and the Dodge Grand Caravan.

At the more affordable end of the EV market, the Nissan Leaf (SV/SL 62 kW-hr battery pack) is costlier to own than the Nissan Altima and the Hyundai Sonata (2.5L 191HP). Even the lowest-price Nissan Leaf (40 kW-hr battery pack) is costlier per month to an owner than gasoline-powered vehicles such as the Chevy Spark and the Mitsubishi Mirage, both of which cost less than \$300 per month to own.

At the higher end of the EV market, the Tesla Model 3 Performance AWD is costlier than the Chevy Silverado (4WD 4.3L), the Ford F150 (4WD FFV 5.0L), the Jeep Gladiator (4WD), the Lexus ES (250 AWD), the BMW X1 (sDrive28i), the Cadillac CT5, and the Mercedes-Benz GLB250.

In each of the comparisons made above, the EV is not only costlier per month, but has a higher up-front cost as well, sometimes dramatically. The relationship holds across market tiers. The Tesla Model 3 Performance AWD starts at \$54,990; none of the seven vehicles to which it is compared here starts at more than \$40,000. The Nissan Leaf (40 kW-hr battery pack) has a sticker price that is double that of the otherwise comparable Chevy Spark and Mitsubishi Mirage.

The joint comment skirts these facts by using of the CR report's classification of the Tesla Model 3 as a "luxury" car and thus comparing it to other "luxury" cars. In an extraordinary omission, the CR report does not include any fully electric vehicle in its non-luxury sedan class. This elides the fact that America's best-selling sedan, the Toyota Camry, is both more affordable on a cost-of-ownership basis than the best-selling EV sedan, the Tesla Model 3 and on an up-front basis, where the buyer saves \$12,000 when choosing a Camry over a Model 3, according to MIT. Even according to CR's Appendix E, the Camry comes in at \$5,000 less expensive in the initial ownership period than the Model 3 and at \$2,500 less expensive over the vehicle's lifetime. This significantly undermines the joint comment's claim that EVs are, on the whole, more affordable than gasoline-powered cars. If the best-selling EV by over 100,000 units is costlier than the best-selling gasoline-powered sedan, it is difficult to justify the claim that EV owners are saving money with their purchases.

Another aspect of the CR report that calls the joint comment's analysis into question is its handling of the federal electric vehicle tax credit, which is as high as \$7,500 per purchase. According to the CR report, "For EVs for which federal tax credits were available, the value of the federal tax credit was subtracted from the vehicle purchase price."

Had it utilized the actual price of the vehicle at purchase (i.e., not subtracted value of the federal electric vehicle tax credit), CR would have found that in the hatchback and crossover classes the best-selling gasoline-powered vehicles, the Honda Civic and the Toyota Rav4, are less expensive than their EV counterparts, the Leaf E+ and the Ford Mach E, in both the initial ownership period and over the vehicle's lifetime.

The joint comment purposefully hides these inconvenient truths from its Minnesota readers.

A different, and quite obvious, analytical approach to the question of cost comparisons would be to compare vehicle models that come in both gasoline and electric versions, as does [this Car and Driver analysis](#). Car and Driver "chose two models in the US market that are available with both powertrains: The Hyundai Kona and Kona Electric, and the Mini Cooper Hardtop two-door and Mini Electric." Car and Driver's analysis found that the electric version of each vehicle was costlier *even with the value of the federal tax credit subtracted*. The joint comment evidently did not find this approach to be of use.

In conclusion, the joint comment presented by Fresh Energy, Minnesota Center for Environmental Advocacy (MCEA), Natural Resources Defense Council (NRDC), and Sierra Club offers a mendacious account of vehicle cost comparisons. Given the small window of time allotted for rebuttals, the Institute for Energy Research focused only on one subsection of the lengthy joint comment. The biased presentation in the subsection suggests that close inspection of each subsection for similarly misleading claims is warranted.