



December 6, 2019

Office of Administrative Hearings
Ms. Sheena Denny
OAH Legal Assistant
600 North Robert Street
P.O. Box 64620
St. Paul, MN 55164

Re: Proposed Rulemaking 36416 PCA, Revisor's I.D. No 04626 (OAH Docket No. 71-9003-36416; R-4626), "Possible Amendments to Rules Governing Passenger Vehicle Greenhouse Gas Emissions (Clean Cars Minnesota), Minnesota Rules, Chapter 7023"

Summary and Background

Consumer Reports is an independent, nonprofit membership organization that works side by side with consumers for truth, transparency, and fairness in the marketplace.¹ We are pleased to offer our support for Minnesota's adoption of the Low Emission Vehicle and Zero Emission Vehicle programs (currently followed by the "Clean Car" states), which upon implementation, will benefit Minnesotan consumers. 512 Minnesotans have signed a petition supporting the LEV and ZEV programs, and their signatures are included as an attachment. The consumer benefits are summarized and then detailed below.

The Low Emission Vehicle (LEV) Standard

1. The LEV Standard will save consumers money and reduce vehicle emissions.
2. The LEV Standard is unlikely to affect the sales volume of new vehicles in Minnesota.
3. If there is an effect on vehicle sales, the LEV Standard is likely to increase the sales of new vehicles.
4. The LEV Standard will help lower-income Minnesotans.

The Zero Emission Vehicles (ZEV Standard)

1. The ZEV Standard will increase attractive consumer choices.
2. The ZEV Standard will reduce emissions.

¹ For 80 years, CR has provided evidence-based product testing and ratings, rigorous research, hard-hitting investigative journalism, public education, and steadfast policy action on behalf of consumers' interests. Unconstrained by advertising or other commercial influences, CR has exposed landmark public health and safety issues and strives to be a catalyst for pro-consumer changes in the marketplace. From championing responsible auto safety standards, to winning food and water protections, to enhancing healthcare quality, to fighting back against predatory lenders in the financial markets, Consumer Reports has always been on the front lines, raising the voices of consumers.

3. The ZEV Standard will support increasing consumer demand for electric vehicles (EVs).
4. The ZEV Standard can save consumers money.

THE LOW EMISSIONS VEHICLE STANDARD

1. The LEV Standard will save consumers money and reduce vehicle emissions.

By adopting the LEV standard, Minnesotans would save nearly \$9 billion, according to a recent Consumer Reports study.² These net savings include the fuel savings as well as the technology costs needed to reduce vehicle emissions.

As efficiency gains and emission reductions have been made in the vehicle fleet nationally under existing federal standards, vehicle sales have increased, new vehicles have gotten safer, and the affordability of vehicles has been preserved.³ The federal fuel economy and greenhouse gas program has a proven record of success, and there is still room to continue improvements and increase consumer benefits. Overall, the existing emission standards, which affect vehicles from MY2017-2025, would net Americans \$660B in savings relative to the standards in place for MY 2016.⁴ If the federal government rolls back emissions standards as indicated in its proposed rule dated August 2018, then joining the “Clean Car” states that maintain this standard would help preserve these savings.

The robust technical analysis conducted by the Environmental Protection Agency (EPA) and National Highway Traffic Safety Administration (NHTSA) in 2016, as well as more recent reports from ICCT show that many cost-effective technologies to reduce fuel use and emissions are currently underutilized.⁵ If standards are weakened, those improvements will remain underutilized in the vehicle fleet, and consumers will have to give up significant savings. If NHTSA and EPA’s preferred rollback is put in place for MY 2021-2026, consumers will lose \$460B of the \$660B net consumer savings from the existing program, which is equivalent to the owners of a MY 2026 vehicle paying an average of \$3,300 more over the life of that vehicle. And because the currently expected fuel savings each month is greater than the additional monthly payment for the planned fuel economy and emissions improvements, the rollback would cost buyers who finance their vehicles more starting from the first month they own their vehicles. An analysis of the proposed rule from MJ Bradley & Associates also indicates net

² Chris Harto & Shannon Baker-Branstetter, The Un-SAFE Rule Update, Consumer Reports (November 2019), <https://advocacy.consumerreports.org/wp-content/uploads/2019/11/UnSAFE-Addendum-11.13.19.pdf>

³ Tyler Comings & Avi Allison, More Mileage for Your Money: Fuel Economy Increases While Vehicle Prices Remain Stable, SYNAPSE (March 15, 2017), <https://consumersunion.org/wp-content/uploads/2017/03/Synapse-CU-Affordability-Report-3-15-corrected-1.pdf>

⁴ Calculation based on net benefits (fuel savings in excess of cost of compliance) during the lifetime of MY 2021-2035 vehicles.

⁵ Nic Lutsey et al., Efficiency Technology and Cost Assessment for U.S. 2025-2030 Light-Duty Vehicles, ICCT (March 2017), https://www.theicct.org/sites/default/files/publications/US-LDV-tech-potential_ICCT_white-paper_22032017.pdf.

consumer losses, estimating the rollback will cost an average household \$200-500 per year after 2025, or \$1,200-\$3,000 over 6 years.⁶

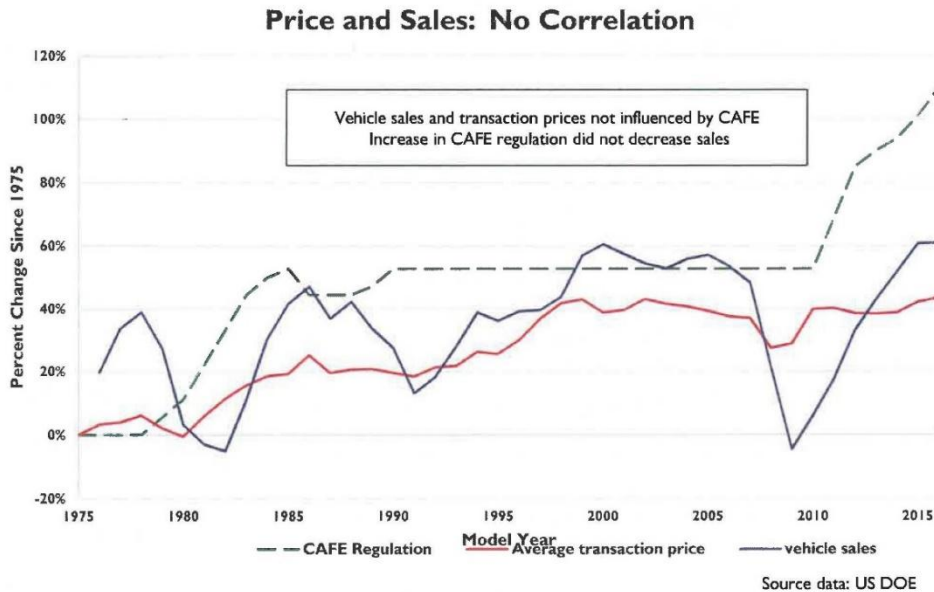
2. The LEV Standard is unlikely to change sales volume of new vehicles in Minnesota. New vehicle sales are primarily controlled by macroeconomic factors, so the LEV Standard is unlikely to affect sales.

New (and used) car sales are mostly influenced by macroeconomic factors, such as the state and nation's gross domestic product, employment rates, inflation, and oil and gasoline prices, and not by governmental regulation. Greenhouse gas (GHG) vehicle standards are unlikely to affect the number of new cars sold in Minnesota. Figure 1, below, which is based on data from the U.S. Department of Energy as presented by the Aluminum Association, shows the relationship over time between CAFE standards, the price of a new vehicles and the number of vehicles sold.⁷ As shown in this graph, an increase in vehicle price does *not* translate into lower sales. Periods of higher vehicle sales occur when prices are rising or flat, and such sales can decrease when prices drop. This means that car sales are primarily influenced by macroeconomic factors, not the price of the vehicles. Similarly, changes in miles per gallon (MPG) requirements do not show any relationship to the number of cars sold. There are multiple times when the MPG requirement climb steeply and new cars sales climb with it. There are periods when the MPG requirements are flat, and new car sales decline sharply. Likewise, regulations such as the LEV Standard are very unlikely to affect new vehicle sales in Minnesota.

Figure 1: Price and Sales: No Correlation

⁶ *Clean Car Roll-back: Estimated costs for American families if U.S. climate pollution and fuel economy standards are relaxed*, https://www.edf.org/sites/default/files/MJ_Bradley_Clean_Cars_rollback_report.pdf.

⁷ News Release, *Automotive Aluminum Industry Statement on Today's EPA Determination on Emissions Regs*, DRIVE ALUMINUM (Aug. 2, 2018), <https://www.drivealuminum.org/news-releases/automotive-aluminum-industry-statement-on-todays-epa-determination-on-emissions-regs/>.



3. If there is an effect, The LEV Standard is likely to increase the sales of new vehicles, because LEV vehicles have a lower total cost of ownership.

The LEV standards at issue in this rulemaking will lead to a lower total cost of ownership for trucks and cars. As noted in Section 1, existing emission and greenhouse gas standards will save an average of \$3,300 per vehicle, on net. These savings mean that consumers have more money in their pockets to purchase vehicles. If Minnesota does not adopt the LEV standard and the federal government rolls back its standards, it would cost Minnesota approximately \$10 billion in lost savings.⁸

MJ Bradley also evaluated cost savings for Minnesota families from the LEV standards. The group found that the average Minnesota family would save between \$159 and \$460 per year in fuel costs and between \$950 and \$2,770 during the time they own a model year 2025 vehicle, on average (depending on the price of fuel) and assuming typical driving patterns.⁹ Similarly, a Synapse Energy Economics report found that GHG standards such as the LEV standard reduced the cost of ownership, tending to increased sales.¹⁰

In sum, given the lower price and higher utility of new vehicles under the LEV Standard, if there is an effect, it would be to increase the sales of new light-duty vehicles. Studies

⁸ Chris Harto & Shannon Baker-Branstetter, *The Un-SAFE Rule Update*, Consumer Reports (November 2019), <https://advocacy.consumerreports.org/wp-content/uploads/2019/11/UnSAFE-Addendum-11.13.19.pdf>

⁹ *Clean Car Roll-back: Estimated costs for American families if U.S. climate pollution and fuel economy standards are relaxed*, https://www.edf.org/sites/default/files/MJ_Bradley_Clean_Cars_rollback_report.pdf at 9 (MN), 54 (assumptions).

¹⁰ *Cleaner Cars and Job Creation, Macroeconomic Impacts of Federal and State Vehicle Standards*, March 27, 2018, <http://webcache.googleusercontent.com/search?q=cache:http://www.synapse-energy.com/cleaner-cars-and-job-creation> (Cleaner Cars).

on the macroeconomic impact of GHG standards show that such impacts will be positive because fuel savings enable a shift in consumer spending to more productive parts of the economy when consumers use that money to consume local services, like eating out, or high value products like computers.¹¹ The direct and indirect benefits of a LEV rule are thus positive.

4. The LEV Standard will help lower income Minnesotans because it will increase the availability of used and new vehicles with a lower total cost of ownership.

Higher fuel efficiency in cars and trucks lowers annual fuel spending. While the price of other consumer goods has risen over the past two decades, vehicle prices in real terms have remained flat, even as passenger cars and trucks go farther on every gallon of gas (see figure 2).¹²

Figure 2. Average New Vehicle Transaction Price for Cars, Trucks, and the Combined Fleet



Consumer spending data shows that trends in new and used car pricing has benefited moderate-income households and that the LEV Standard will lead additional benefits for this cohort. This is consistent with the fact that Americans in the lowest income quintile spend 26% of their transportation budget on gasoline and motor oil, while those in the top quintile, which represent most new car buyers, spend just 16%. The average American spends about 21%.

¹¹ *Id.*

¹² Eric Junga, *Fuel economy is going up. Vehicle prices are holding steady*, American Council for an Energy-Efficient Economy, November 16, 2017, <http://aceee.org/blog/2017/11/fuel-economy-going-vehicle-prices-are>.

Low-income households spend more money fueling cars than buying them,¹³ and are particularly sensitive to gas prices. One recent study found “as a percent of income, savings on fuel are greatest for lower income households.”¹⁴ Increased availability of cars meeting LEV standards will help lower income families by reducing fuel costs.

The benefits of improved efficiency in new vehicles also make their way to the used car market, which accounts for 70 percent of vehicle sales annually, and an even higher percent among mid to lower income families. Lower-income households are more likely to buy a used car, and they benefit from the rapid depreciation of new car value. Buying a used vehicle compliant with LEV standards enables a used car buyer to enjoy the fuel savings at even a lower cost. Lower-income families spend a higher share of their income on fuel, and are more likely to purchase used vehicles.¹⁵ Those purchasers of those used cars meeting the LEV standards, in particular will enjoy the same stream of fuel savings as a new vehicle purchaser, but will pay only a fraction of the incremental cost for the cleaner, more fuel-efficient technology due to depreciation (the average new passenger vehicle depreciates by 60% within the first five years of its life).

ZERO EMISSIONS VEHICLE STANDARD

1. The ZEV Standard will increase attractive consumer choices.

A Zero Emission Vehicle program in Minnesota would give consumers more choices by making electric vehicles easier to find and buy at local auto dealers. The program would ensure that at least 5 percent of auto sales in the state are electric vehicles by 2025. Currently, without a ZEV program, automakers and dealers are not making the full range of vehicle choices available to consumers. Only 57 percent of Minnesotans reported seeing advertisements for electric vehicles, compared to a national average of 67 percent. And only 36 percent of Minnesota car shoppers said they saw a plug-in electric vehicle available to buy the last time they were at an auto dealership, compared to a national average of 43 percent.¹⁶ The ZEV program would increase consumer choice by making it easier to bring a greater variety of electric vehicles to Minnesota, including pickup trucks, SUVs and crossovers.

As shown below, Consumer Reports’ testing and member survey data show that EVs often have superior acceleration and owner satisfaction than ICE vehicles in the same class. EVs also have quiet operation, and their low center of gravity supports superior handling.¹⁷ The graph below shows that in Consumer Reports tests, EVs are faster than

¹³ *More Mileage for Your Money: Fuel Economy Increases While Vehicle Prices Remain Stable*, March 15, 2017, <https://consumersunion.org/research/more-mileage-for-your-money-report/>

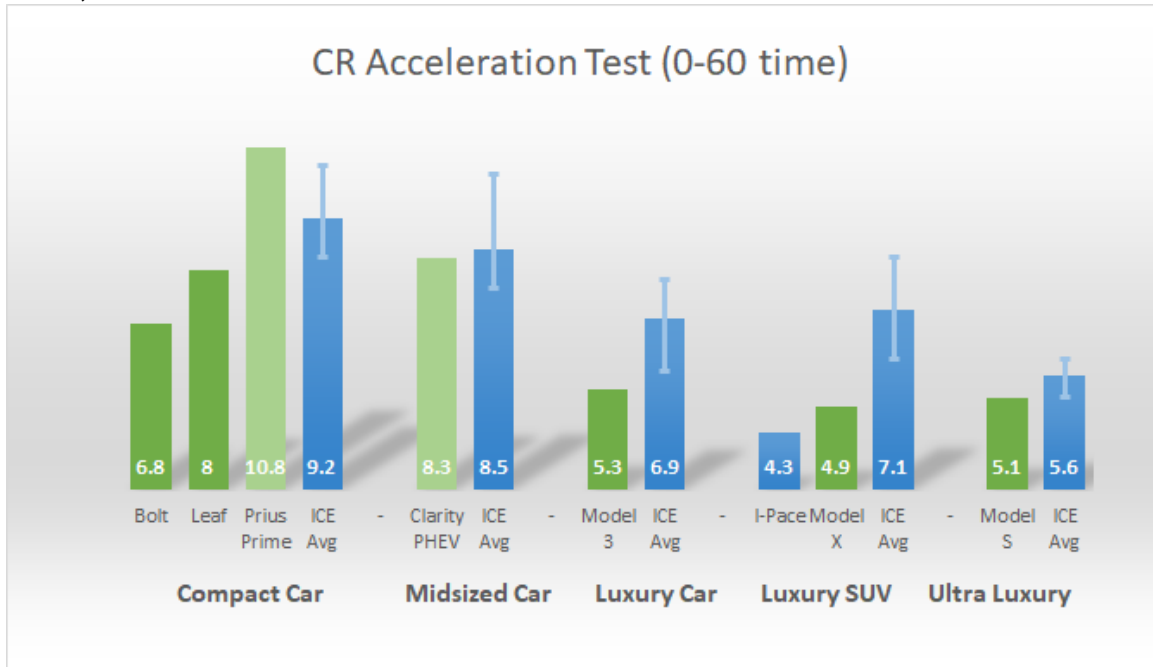
¹⁴ Greene, D. and J. Welch. 2016. *The Impact of Increased Fuel Economy for Light-Duty Vehicles on the Distribution of Income in the United States*. Report Prepared for Oak Ridge National Laboratory and the Energy Foundation. Available at: http://bakercenter.utk.edu/wp-content/uploads/2016/09/Equity-Impacts-of-Fuel-Economy-Report_final.pdf.

¹⁵ *More Mileage*, *supra*, note 12.

¹⁶ Union of Concerned Scientists & Consumer Reports, *Electric Vehicle Survey Findings and Methodology: Minnesota 3* (September 2019) [hereinafter “Minnesota EV Survey”]. <https://advocacy.consumerreports.org/wp-content/uploads/2019/09/Electric-Vehicle-Survey-Minnesota-1.pdf>

¹⁷ *Electric Cars 101: The Answer to All Your EV Questions*, *supra*.

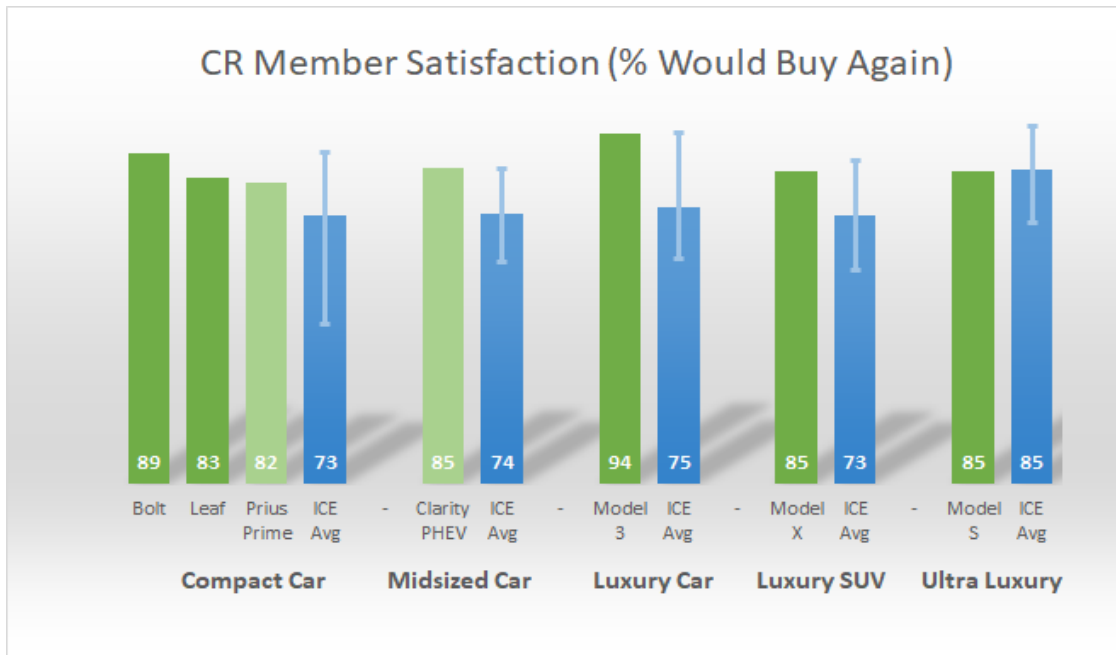
the average ICE vehicle in their vehicle class. Values in the graph are measured in seconds, so lower values indicate faster acceleration.



Source: Consumer Reports Test Data (June 2019)¹⁸

In Consumer Reports' member vehicle owner satisfaction survey, which includes over 500,000 responses, EVs had equivalent or higher owner satisfaction in every vehicle class for which responses were collected.

¹⁸ This figure was created using Consumer Reports data.



Source: Consumer Reports Member Owner Satisfaction Survey Results (February 2019)¹⁹

2. The ZEV Standard will reduce emissions.

A Zero Emission Vehicle program in Minnesota would increase EV sales and help reduce pollution by making electric vehicles easier to find and buy at local auto dealers. The transportation sector, dominated by petroleum, is tied for first as largest net source of greenhouse gas emissions in Minnesota.²⁰ EVs have lower greenhouse gas emissions than gasoline powered vehicles over their service life.²¹ EVs also produce no particulate or smog-causing tailpipe emissions, which are a significant contributing factor in causing asthma and other air pollution-related illnesses.²² Increasing ZEVs would decrease emissions from transportation, and even after considering increased emissions from the electric sector to power EVs, transportation electrification reduces economy-wide emissions. In fact, EVs in Minnesota have 62% lower greenhouse gas

¹⁹ This figure was created using Consumer Reports data.

²⁰ Minnesota Pollution Control Agency, 2016 Sector Source of GHG Emissions and storage, <https://www.pca.state.mn.us/air/greenhouse-gas-emissions-data>

²¹ Shannon Baker-Branstetter & Chris Harto, How Clean are Electric Vehicles in Your State, Consumer Reports, September 12, 2019, <https://advocacy.consumerreports.org/research/how-clean-are-electric-vehicles-in-your-state/>

²² Marlene Cimons, Nexus Media, Cleantechnica, Car Exhaust is a Key Contributor to Asthma in Children, April 28, 2019, <https://cleantechnica.com/2019/04/28/car-exhaust-is-a-key-contributor-to-asthma-in-children/> and Press Release, Joe Koenig, 7-State Electric Vehicle Project Launches in Midwest, American Lung Association, February 9, 2017, https://www.lung.org/local-content/_content-items/about-us/media/press-releases/7-state-electric-vehicle.html

emissions than the average gasoline-powered vehicle in the state, based on Minnesota's energy mix.²³

3. Consumer demand for EVs is increasing.

EV sales have rapidly increased,²⁴ despite lower overall auto sales, limited EV availability²⁵ and model choices,²⁶ and tepid efforts by automakers and dealers to market them.²⁷ In Consumer Reports' national analysis of auto advertising, ads for EVs were 1% of the representative sample.²⁸ As mentioned above, Minnesotans are less likely to see EVs at an auto dealership or ads for EVs, according to Consumer Reports' recent state-representative survey.²⁹ Yet despite these access and exposure barriers, 59 percent of prospective car buyers in Minnesota have some interest in electric cars, trucks and SUVs.³⁰ Breaking this down, 30 percent would consider one within the next two years, and 3 percent say they are definitely planning on buying or leasing one in the next two years.³¹ Sixty-seven percent of Minnesotans think the state should offer incentives make it easier for consumers to purchase and charge electric vehicles.³²

4. EVs can save consumers money.

In addition to EVs' lower emissions and resulting public health benefits, EVs can also help lower total cost of ownership for consumers, putting more money in their pockets. While electric vehicles currently carry an upfront price premium, that premium is often offset by state and federal incentives. Moreover, that price premium is rapidly disappearing and cost parity with internal combustion engine (ICE) vehicles is projected

²³ Shannon Baker-Branstetter & Chris Harto, How Clean are Electric Vehicles in Your State, Consumer Reports, September 12, 2019, <https://advocacy.consumerreports.org/research/how-clean-are-electric-vehicles-in-your-state/>.

²⁴ EV sales increased 81% between 2017 and 2018 and so far, 2019 year-to-date sales are 20% higher than they were over the same period in June 2018. Steven Loveday, *Final Update: Monthly Plug-In EV Sales Scorecard: June 2019*, InsideEVs (July 3, 2019), <https://insideevs.com/news/357565/ev-sales-scorecard-june-2019/>.

²⁵ Kukkonen, Jukka, *Midwest EV Info List (October 2019), Models Available in MN*, PluginConnect, (October, 2019), <https://www.pluginconnect.com/mnpevmodels.html>

²⁶ *Electric Cars 101: The Answer to All Your EV Questions*, Consumer Reports (July 21, 2019), https://www.consumerreports.org/hybrids-evs/electric-cars-101-the-answers-to-all-your-ev-questions/#social_fb_comments.

²⁷ Gwen Arnold et al., Consumers Union, Analysis of Unique Ads in the United States in 2005, 2012, 2015 and 2017, at 6, 57 (2018), <https://advocacy.consumerreports.org/wp-content/uploads/2018/10/Final-Report-Auto-Ad-Content-Analysis-080318-1-1-1.pdf>.

²⁸ *Id.* at 6.

²⁹ "Minnesota EV Survey". <https://advocacy.consumerreports.org/wp-content/uploads/2019/09/Electric-Vehicle-Survey-Minnesota-1.pdf>

³⁰ Union of Concerned Scientists & Consumer Reports, Electric Vehicle Survey Findings and Methodology: Minnesota 3 (September 2019) [hereinafter "Minnesota EV Survey"]. <https://advocacy.consumerreports.org/wp-content/uploads/2019/09/Electric-Vehicle-Survey-Minnesota-1.pdf>

³¹ *Id.*

³² *Id.*

to occur in the 2024 to 2028 timeframe, at which time the economics are extraordinary.³³

EV operating costs for fuel and maintenance can result in overall savings even today,³⁴ and certainly by the time a rule goes into effect for model year 2025.³⁵ For example, in Minnesota, the average cost to charge an EV is nearly half (52 percent) the cost to fuel an average internal combustion engine (ICE) vehicle.³⁶ Compared to the average ICE vehicle, annual fuel savings can be about \$1,000 each year for an EV, and even compared to a very efficient internal combustion engine vehicle, EV drivers could save about \$500 per year.³⁷ Due to fewer and simpler components, EV maintenance is also often cheaper than it is for ICE vehicles.³⁸ The premium for EVs has been decreasing and is likely to continue to drop due to falling battery prices, greater competition, and economies of scale.³⁹ These lower operating cost benefits accrue even more to moderate and lower-income families as more affordable ZEV vehicles become available on both the new and used vehicle markets.

Conclusion

For the reasons outlined above, Consumer Reports supports Minnesota's adoption of the Low Emissions Vehicle Standard and the Zero Emissions Vehicle Standard. Thank you for your consideration of these important consumer programs.

Sincerely,

Alfred Artis
Policy Analyst
Consumer Reports

³³ Nic Lutsey & Michael Nicholas, Int'l Council on Clean Transp., Update on Electric Vehicle Costs in the United States through 2030, at 11 (2019), https://theicct.org/sites/default/files/publications/EV_cost_2020_2030_20190401.pdf.

³⁴ Kate Palmer et al., Total Cost of Ownership and Market Share for Hybrid and Electric Vehicles in the UK, US and Japan, January 1, 2018, <https://www.sciencedirect.com/science/article/abs/pii/S030626191731526X?via%3Dihub>

³⁵ *Saving on Fuel and Vehicle Costs*, U.S. Dep't of Energy, Office of Energy Efficiency & Renewable Energy, <https://www.energy.gov/eere/electricvehicles/saving-fuel-and-vehicle-costs> (last visited July 28, 2019); *see also* Lutsey & Nicholas, *supra*, at 5 fig.6 (showing total cost of ownership being lower for some BEV vehicles by MY2022, without even considering tax credits).

³⁶ *Saving on Fuel and Vehicle Costs*, U.S. Dep't of Energy, Office of Energy Efficiency & Renewable Energy, <https://www.energy.gov/eere/electricvehicles/saving-fuel-and-vehicle-costs> (last visited December 4, 2019), cost of regular gasoline: \$2.42, cost of electric gallon: \$1.28; *see also* Lutsey & Nicholas, *supra*, at 5 fig.6 (showing total cost of ownership being lower for some BEV vehicles by MY2022, without even considering tax credits)

³⁷ This value reflects Consumer Reports' comparison of a battery electric vehicle to a 40 mpg vehicle on www.fueleconomy.gov using 12,000 miles per year and average fuel and electricity prices from DOE's "eGallon" tool.

³⁸ *Hybrid/EV Buying Guide*, Consumer Reports, <https://www.consumerreports.org/cro/cars/hybrids-evs/buying-guide/index.htm> (July 11, 2019)

³⁹ *Electric Vehicle Outlook 2019*, BloombergNEF, available at <https://about.bnef.com/electric-vehicle-outlook/#toc-viewreport> (last visited July 28, 2019). For a more recent estimate, see Lutsey & Nicholas, *supra*, at 3 (showing dramatic declines in battery costs to 2030 using a range of projections).

Attachments:

- Consumer Reports' and Union of Concerned Scientists' Minnesota Electric Vehicle [Survey](#)
- Consumer Reports' Electric Cars 101 [Article](#)
- Consumer Reports' Electric Vehicle [Fact Sheet](#)
- Consumer Reports' Un-SAFE Rule Study [Update](#)
- Consumer Reports' LEV ZEV [Petition](#) and Signatures