June 22, 2018

The Honorable Daniel P. Malloy
Governor of Connecticut
210 Capitol Avenue
Hartford, CT 06106

The Honorable Paul R. LePage
Governor of Maine
#1 State House Station
Augusta, ME 04333-0001

The Honorable Hogan
Governor of Maryland
100 State Circle
Annapolis, MD 21401-1925

The Honorable Charlie Baker
Governor of Massachusetts
Massachusetts State House
24 Beacon Street
Office of the Governor, Room 280
Boston, MA 02133

The Honorable Phil Murphy
Governor of New Jersey
Office of the Governor
PO Box 001
Trenton, NJ 08625

The Honorable Andrew M. Cuomo
Governor of New York State
NYS State Capitol Building
Albany, NY 12224

The Honorable Gina M. Raimondo
Governor of Rhode Island
82 Smith Street
Providence, RI 02903

The Honorable Phil Scott
Governor of Vermont
109 State Street, Pavilion
Montpelier, VT 05609

Dear Governors Malloy, LePage, Hogan, Baker, Murphy, Cuomo, Raimondo, Scott:

"Zero Emission Vehicles" continue to capture the imagination and resources of some states. Therefore, it was with great interest that we read the plea from the Auto Alliance to increase the already generous incentives and subsidies available in your states to spur the purchase and recharging of zero emission vehicles (ZEV). Contrary to the intent of the Auto Alliance's May 31st letter, we believe that the letter should serve as a cautionary tale of continuing to allocate resources to a technology that is consistently rejected in the marketplace by the vast majority of your constituents. The undersigned associations represent industries comprising the energy value chain helping fuel the transportation sector and drive our nation's economic growth and energy security.

Until recently, the ZEV mandate differed functionally across the states that follow California's Clean Air Act exemption. That mandate allowed the automobile manufacturers to focus early electric vehicle deployment in California and delay efforts in other ZEV states by applying a certain amount of ZEV credits for each automobile sale in California towards their quota in other states. This double-counting flexibility ended starting with model year 2018 (except for fuel cell vehicles), and this should provide incentive to the auto manufacturers to offer increasing numbers of electric vehicles for sale in ZEV states outside of California. While this flexibility was designed to give ZEV technology a helpful runway in California to ultimately gain commercial viability and consumer acceptance in other states, this has not happened. Therefore, the Alliance's letter should be a harbinger of the negative issues associated with government policies that attempt to override market forces and consumer choice.

California is a classic example of a technology-forcing regulatory environment with a history of aspirational targets and failed outcomes. The original California Low Emitting Vehicle rule adopted in the early 1990's required 10% EVs by 2003. This policy requirement significantly missed the mark. California had to adjust, modify and relax the program requirements several times (including a change to allow the certification of partial zero emission vehicles (PZEV). Yet today, after spending $449 million on vehicle rebates alone[1], California ZEVs only account for 4.8% of light-duty vehicle sales and about 1.2% of the cars on the road in the state.[2, 3] Significant subsidies are also offered by Massachusetts ($2,500) Maryland ($1,200) and NY ($1,100) in addition to the federal subsidy (up to $7,500), yet those states have only achieved ZEV sales of 1.3%, 1% and 1%, respectively.[4, 5]

Not only have electric vehicle tax credits failed to generate substantial increases in sales, they are demonstrably regressive in terms of consumer impact. According to a study by University of California Berkeley faculty, clean energy "tax expenditures have gone predominantly to higher-income Americans… The most extreme is the program aimed at electric vehicles, where we find that the top income quintile has received about 90% of all credits." Ironically, automobile manufacturers are essentially seeking subsidies for the purchase of their battery-powered cars by those who can most afford them while making greater investments in the more lucrative non-EV market. For example, an automobile manufacturer recently announced that it was discontinuing most of its North American car production in favor of trucks, SUV's and cross-overs. As you contemplate these calls for additional handouts, consider what other state services will be sacrificed. Schools, emergency response, road repairs, and public safety all compete for limited state funds. Which cuts do proponents recommend to increase payouts to mostly wealthy consumers who want to purchase EVs as a second or third car?

Regardless of existing subsidies and incentives, consumers still are not purchasing significant numbers of ZEVs. The lack of consumer response may be due to the concern that, according to recent studies, the cost of ownership of a battery electric vehicle (BEV) representative of current technology is between 50% and 400% more expensive than a conventional vehicle equipped with an internal combustion engine (ICEV).[6, 7] Or it could be that the consumer understands that a ZEV may be better described as "emissions displacement" vehicles. The "zero-emission" classification fails to acknowledge the energy required to build the vehicle and battery systems (above that needed for an ICEV), the energy source used to generate the electricity required to charge the vehicle, and the environmental cost of battery disposal.

In contrast, consumers purchased nearly 17 million ICEVs. ICEVs are the backbone of the U.S. transportation system, that is supported by 150,000 gasoline stations, 141 refineries, 212,000 miles of

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[1] Mitchel, Russ, LA Times, "Should California spend $3 billion to help people buy electric cars?", Aug 26, 2017, http://www.latimes.com/business/la-fi-hy-electric-vehicle-subsidies-20170828-htmlstory.html

[2] https://www.gov.ca.gov/2018/01/26/governor-brown-takes-action-to-increase-zero-emission-vehicles-fund-new-climate-investments/

[3] http://www.energy.ca.gov/almanac/transportation_data/summary.html

[4] Mitsubishi Outlander PHEV "Calculate your savings", https://www.mitsubishicars.com/outlander-phev/2018?cid=partner_web_link_zev_website_PHEV_MY18_prospecting_001#vehicle-hero-area

[5] Auto Alliance letters dated, May 31, 2018, to Governors Baker, Hogan and Cuomo

[6] A. Elgowainy, et al, Argonne National Laboratory, 2016, "Cradle-to-Grave Lifecycle Analysis of U.S. Light-Duty Vehicle-Fuel Pathways: A Greenhouse Gas Emissions and Economic Assessment of Current (2015) and Future (2025-2030) Technologies", https://greet.es.anl.gov/publication-c2g-2016-report

[7] John W. Brennan and Timothy E. Barder, Ph.D, "Battery Electric Vehicles vs. Internal Combustion Engine Vehicles," Arthur D. Little, 2016, http://www.ehcar.net/library/rapport/rapport201.pdf

liquid petroleum pipelines, and 1,283 terminals[8] that supply the U.S. its transportation fuels. This fuel supply chain annually distributes more than 140 billion gallons of gasoline and 60 billion gallons of diesel, jet fuel and home heating oil from refinery gates to consumers. The fuel infrastructure and the transportation sectors are highly integrated as consumers purchase roughly 17 million new light-duty vehicles annually in the U.S.[9] and sustain a total domestic fleet of approximately 250 million light-duty vehicles[10], which rely on petroleum fuel. Recent data shows that the average age of the vehicle fleet is increasing, which suggests that Americans are maintaining their vehicles longer,[11] underscoring the need to recognize the long-term implications of changes to transportation systems.

Refineries are not standing still. U.S. refineries are upgrading their operations to produce cleaner fuels and meet federal, state and local fuel standards. Operational and capital expenditures are aimed at improving the performance of the oil and gas industries' products, facilities, and operations. Upgrades, costing billions of dollars, include environmental expenditures for activities to protect our air and water, to decrease waste, and meet federal and state regulations and specifications. For example, environmental expenditures[12] in the refining sector between 1990 and 2016 reached $166.1 billion.

It is also important to note the substantial air quality benefits that have occurred as a result of the investments in cleaner fuels that have enabled lower vehicle emissions. According to the EPA, new cars, trucks, SUVs and heavy-duty trucks and buses run about 99 percent cleaner than models produced in 1970. This progress has helped reduce U.S. air pollution by 73 percent between 1970 and 2016, even as vehicle miles traveled nearly tripled and the economy grew by 253 percent.[13] Going forward, notable gains in air quality and fuel efficiency will continue as cleaner vehicles enabled by lower sulfur fuels penetrate the fleet, and with the introduction of new aerodynamic car designs, lighter vehicles constructed with new, safer materials, and increased engine efficiency. [14, 15, 16] For example, by 2025 ICEV efficiency could improve by 30%[17] and by 2050 "…the fuel economy of some of ICE vehicles could double…"[18]

The undersigned associations (see last page) support the adoption of policies that focus on the consumer, strengthen our energy security, improve our standard of living and protect our environment.

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[8] https://www.irs.gov/businesses/small-businesses-self-employed/terminal-control-number-tcn-terminal-locations-directory

[9] "17 million" is an estimate based on roughly 16.9 to 17.8 million new light-duty vehicles purchased annually in the U.S. https://ihsmarkit.com/research-analysis/US-light-vehicle-sales-rise.html

[10] U.S. Department of Transportation, Federal Highway Administration, Highway Statistics 2016, Table VM-1, December 2017

[11] IHS Automotive/R. L. Polk Annual Press Releases. Release November 22, 2016.

[12] http://www.api.org/~/media/Files/Publications/Environmental-Expenditures-2018.pdf

[13] US Environmental Protection Agency, "National Air Quality: Status and Trends of Key Air Pollutants" https://www.epa.gov/air-trends

[14] A. Elgowainy, , "Cradle-to-Grave…"

[15] Massachusetts Institute of Technology, "On the Road Toward 2050: Potential for Substantial Reduction in Light-Duty Vehicle Energy Use and Greenhouse Gas Emissions," 2015 http://web.mit.edu/sloan-auto-lab/research/beforeh2/files/On-the-Road-toward-2050.pdf

[16] US Environmental Protection Agency,2014, "Final Rule for Control of Air Pollution from Motor Vehicles: Tier 3 Motor Vehicle Emission and Fuel Standards," https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-control-air-pollution-motor-vehicles-tier-3

[17] A. Elgowainy, "Cradle to Grave…"

[18] Massachusetts Institute of Technology, "*Road Towards 2050:…"*

Transportation policies should acknowledge that consumers are purchasing internal combustion engine vehicles today, and those vehicles are staying on the road longer[19] and are going further on a gallon of gasoline. Transportation policies that conflict with the will of the consumer and attempt to force changes in behavior should be considered with caution as they may impose undue costs on consumers and taxpayers with diminishing environmental benefits and unintended consequences.

We encourage you to evaluate and prioritize the full range of automotive technologies and fuels available for cost-effectively meeting the states' energy and environmental objectives. While your state desires to expedite deployment and widespread adoption of "zero-emission" and near-zero emission vehicles and engines, we encourage you to examine whether allowing your citizens to choose their mode of transportation (such as using newer vehicles with today's clean fuels) offers equal or more beneficial approaches to achieving your state's energy and environmental goals.

If you have any questions or would like to further discuss these issues, please contact the undersigned associations.

Sincerely,

NACS

SIGMA
AMERICA'S LEADING FUEL MARKETERS

energy API

PMAA

AFPM
American
Fuel & Petrochemical
Manufacturers

REPRESENTING AMERICA'S TRAVEL PLAZAS AND TRUCKSTOPS
NATSO

[19] IHS Automotive/R. L. Polk Annual Press Releases. Release *November 22, 2016*

About AFPM
The American Fuel & Petrochemical Manufacturers ("AFPM") is a national trade association whose members comprise virtually all U.S. refining and petrochemical manufacturing capacity. For more information, please contact Derrick Morgan, Senior Vice President, Federal and Regulatory Affairs at DMorgan@afpm.org, or 202-844-5473.

About API
The American Petroleum Institute is the only national trade association representing all facets of the oil and natural gas industry, which supports 10.3 million U.S. jobs and nearly 8 percent of the U.S. economy. API's more than 625 members include large integrated companies, as well as exploration and production, refining, marketing, pipeline, and marine businesses, and service and supply firms. They provide most of the nation's energy and are backed by a growing grassroots movement of more than 45 million Americans. For more information, please contact Frank Macchiarola, Group Director, Downstream at MacchiarolaF@api.org or 202-682-8167.

About NACS
NACS is an international trade association representing the convenience store industry with more than 2,100 retailer and 1,750 supplier companies as members, the majority of whom are based in the United States. For more information, please contact Paige Anderson, Director of Government Relations, at panderson@convenience.org or 703-684-3600.

About NATSO
NATSO currently represents approximately 2,500 travel centers and truckstops nationwide, comprised of more than 1,500 chain locations and hundreds of independent locations. For more information, please contact David Fialkov, Vice President of Government Affairs; Counsel, at dfialkov@natso.com or 703-739-8501.

About PMAA
PMAA member associations represent wholesalers and retailers of gasoline, diesel, heating oil, lubricants and renewable fuels. Additionally, these companies supply motor fuels to 40,000 independently owned retail outlets and heating oil to seven million homes and businesses. They sell their product under either their own private brand or the trademark of their supplier. The majority of PMAA marketers are small businesses serving homes, farms, business and industry. When Small Business Administration guidelines are applied to the PMAA membership, the majority of marketers fall within SBA jurisdiction. For more information, please contact Rob Underwood, President, at 703-351-8000 or runderwood@omaa.org.

About SIGMA
SIGMA represents a diverse membership of approximately 260 independent chain retailers and marketers of motor fuel. For more information, please contact Tim Columbus, SIGMA Counsel, tcolumbus@steptoe.com or 202-429-6222.