



AUTO ALLIANCE

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**STATEMENT
OF THE
ALLIANCE OF AUTOMOBILE MANUFACTURERS**

**BEFORE THE:
ENERGY AND COMMERCE COMMITTEE
SUBCOMMITTEE ON ENVIRONMENT
U.S. HOUSE OF REPRESENTATIVES**

**HEARING TITLE:
“Sharing the Road: Policy
Implications of Electric and Conventional Vehicles in the Years Ahead”**

May 8, 2018

PRESENTED BY:

Mitch Bainwol
President and CEO

Introduction

On behalf of the 12 members of the Alliance of Automobile Manufacturers (Alliance), thank you for the opportunity to testify today on the policy implications of electric and conventional vehicles sharing the roads of the future. The Alliance is the leading advocacy group for the auto industry representing over 70 percent of new car and light trucks sales in the United States. The Alliance's diverse membership includes companies headquartered in the U.S., Europe and Asia -- the BMW Group, FCA US, Ford Motor Company, General Motors Company, Jaguar Land Rover, Mazda, Mercedes-Benz USA, Mitsubishi Motors, Porsche, Toyota, Volkswagen Group of America and Volvo Car Group.

By creating jobs, fueling innovation, building exports and advancing mobility, automakers are driving the American economy forward. Nationwide, more than seven million workers and their families depend on the auto industry. Each year, the industry generates \$500 billion in paychecks, and accounts for \$205 billion in tax revenues across the country. Historically, the auto industry has contributed between 3 - 3.5 percent to America's total gross domestic product. No other single industry is linked to so much of U.S. manufacturing or generates so much retail business and employment.

Automakers Offer Record-Breaking Choices in Fuel-efficient Vehicles Today

The auto industry has invested billions of dollars on powertrain R&D and that investment is paying off – automakers are providing customers with record-breaking choice in fuel-efficient vehicles. Today, more than 490 models are on sale that achieve at least 30 miles per gallon. Electric Vehicles (EVs), in particular, play an important role in achieving our energy and environment goals, both in the U.S. and around the world. It's important to

note that EVs and conventional vehicles share the road today. Frequently, I notice after several minutes of driving, that I have been driving next to an EV for most of my morning commute. Even the terms conventional and electric vehicle can be confusing since most vehicles today now contain some electrification. There is a whole spectrum of electrification from gasoline-powered vehicles with stop/ start, to 48-volt hybrids, full or “strong” hybrids, plug-in hybrids to battery electric and fuel cell electric vehicles. I should note that within the context of this hearing, I use the term “EVs” to capture only vehicles that plug into the wall or use hydrogen for fuel, namely plug-in hybrids, battery electric vehicles and fuel cell electric vehicles. As recently as 2012, there were less than five EV models available for sale. Today, there are 42 models of electric vehicles on sale, including 15 battery electric, 24 plug-in hybrid electric and 3 fuel cell electric models, with more in development. Consumers can now buy EVs of all different shapes and sizes — small cars, large cars, SUVs and minivans, in 2WD or AWD, with shorter and longer ranges, from economy vehicles to luxury models and everything in between. However, despite the record offering of such EV’s, only about one percent of all vehicles purchased last year were plug-in hybrids, battery electric or fuel cell vehicles.

Public Policy Driving Shift Towards Electrification

Despite the small share of the market today, the regulatory environment is undoubtedly pushing industry towards electrification. At the federal level, increasing Corporate Average Fuel Economy (CAFE) and vehicle greenhouse gas (GHG) emission standards will require an increasing shift towards EVs. While many have called into question the viability of the previous MY 2022-2025 vehicle CAFE/GHG standards, studies estimate that nearly every vehicle sold in the U.S. in MY 2025 would need to be a mild hybrid, or

alternatively the fleet will need to consist of greater than 30 percent strong hybrid-electric vehicles for compliance.¹

At the state level, California has unique authority to set standards that require automakers to invest heavily in fuel-efficient, advanced vehicle technologies. For example, Section 177 of the Clean Air Act grants California the ability to obtain a waiver to set their own vehicle emissions standards. Other states have the option to adopt either the federal emission standards or the California standards. Twelve other states have adopted the California emissions standards – representing roughly 40 percent of the U.S. market. Currently, California deems the EPA’s light-duty vehicle GHG program as in compliance with the California GHG standards through model year (MY) 2025 as long as they are “substantially similar.” This “deem to comply” provision enabled what is commonly referred to as “One National Program” – aligning the federal vehicle CAFE and GHG programs with the California GHG emissions program – effectively establishing one set of fuel efficiency standards.

Within the context of the Midterm Evaluation for MY 2022-2025 standards, automakers have urged the Trump Administration to find a solution that continues to: (1) increase fuel efficiency standards year-over-year and (2) incorporate California to ensure that “One National Program” is maintained. Otherwise, automakers may be forced to comply with a bifurcated regulatory system – one for California and the additional 12 states that follow their program and one for the other 37 states. Compounding matters, more states

¹ Pannone, G., Betz, B., Reale, M., and Thomas, J., *Decomposing Fuel Economy and Greenhouse Gas Regulatory Standards in the Energy Conversion Efficiency and Tractive Energy Domain*, SAE INT. J FUELS LUBR. 10(1):2017, doi:10.4271/2017-01-0897

could seek to be added as 177 States. The resulting regulatory nightmare would ultimately harm consumers by increasing vehicle costs and restricting consumer choice. California has an additional vehicle requirement, which nine other states follow and is commonly referred to as the Zero Emissions Vehicle (ZEV) mandate, which requires automakers to not only produce but *sell* ZEVs. By 2025, automakers will be compelled to sell enough ZEVs to reach up to approximately 15 percent of total new vehicles sales in each ZEV state, depending on the range of the ZEV. To give you a perspective of this challenge, ZEV sales currently constitute 5 percent of sales in California but ZEV sales in the other nine states that follow the ZEV mandate only amount to roughly one percent of sales so far in 2018. This is because the other ZEV states (primarily Northeast and Pacific Northwest states) are unlike California in several ways including terrain, weather, a lack of supporting infrastructure and fewer direct and indirect state ZEV incentives to spur consumer adoption.

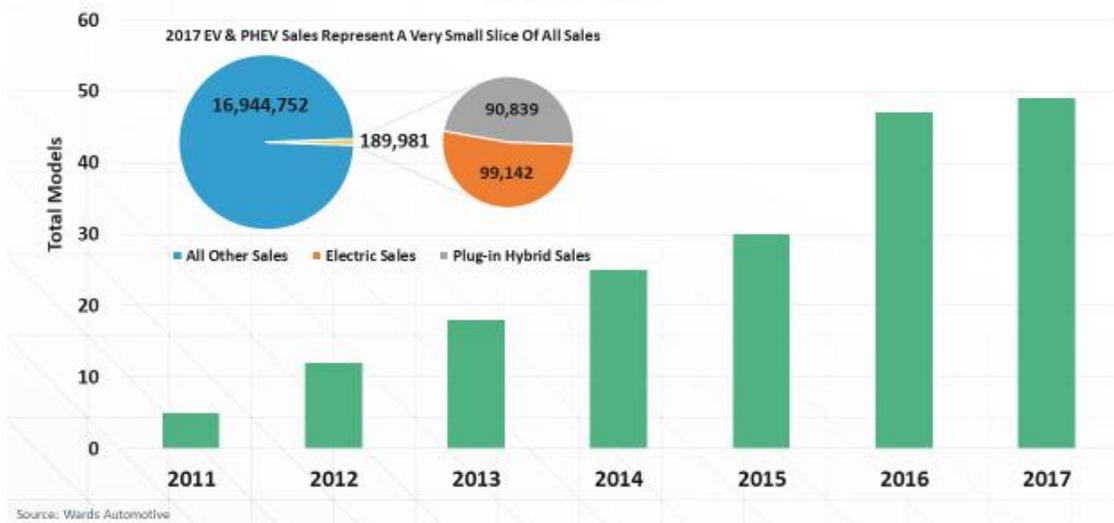
Automakers are also facing a movement globally to adopt electrification targets or ban conventional internal combustion engines all together. At least ten other countries have EV sales targets in place – including China, the world’s largest market for new cars. Countries like France, the United Kingdom and Norway have established timeframes to phase out the sale of new gasoline and diesel-powered vehicles. For example, Norway hopes to have all new passenger cars and vans sold by 2025 be ZEVs and France intends to end the sale of conventional vehicles by 2040. Here in the U.S., California is signaling interest in this trend. In fact, earlier this year, legislation was introduced in the California legislature that would ban gasoline-powered vehicles by 2040 in order to meet the state’s aggressive goals to reduce greenhouse gas emissions.

Vehicle Market and Consumer Adoption is Lagging Behind Policy Requirements

Yet, despite automakers offering record level incentives and choices in EV models, the aforementioned federal and state vehicle emissions requirements and global trends toward electrification, consumer demand for EVs is still significantly lagging.

Consumers are not embracing these alternative powertrains at the levels necessary to meet the aspirational goals of policymakers. Automakers have done extensive market research to learn more about consumers, and have found that consumers like the idea of helping the environment (38 percent) and not paying for gas (29 percent). However, significantly more people say they would buy an EV than actually do. While sales are rising, nationwide new vehicle sales of battery electric and plug-in hybrid electric autos were about 1 percent in 2017. This equates to less than 200,000 vehicles out of 17 million sold.

Total Electric And Plug-in Hybrid Vehicle Sales And Model Availability: 2011 - 2017

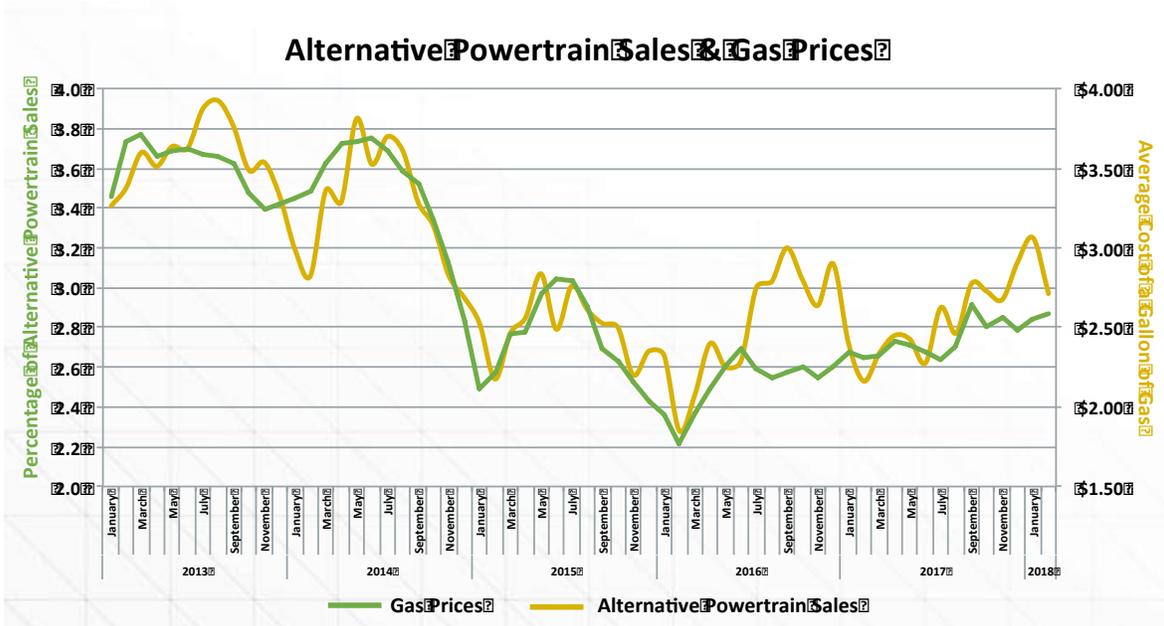


As Attachment 1 – shared with each of your offices in advance of today’s hearing – shows, the ZEV adoption in each of your states is illustrative of what consumers are buying, both in ZEV states and non-ZEV states.

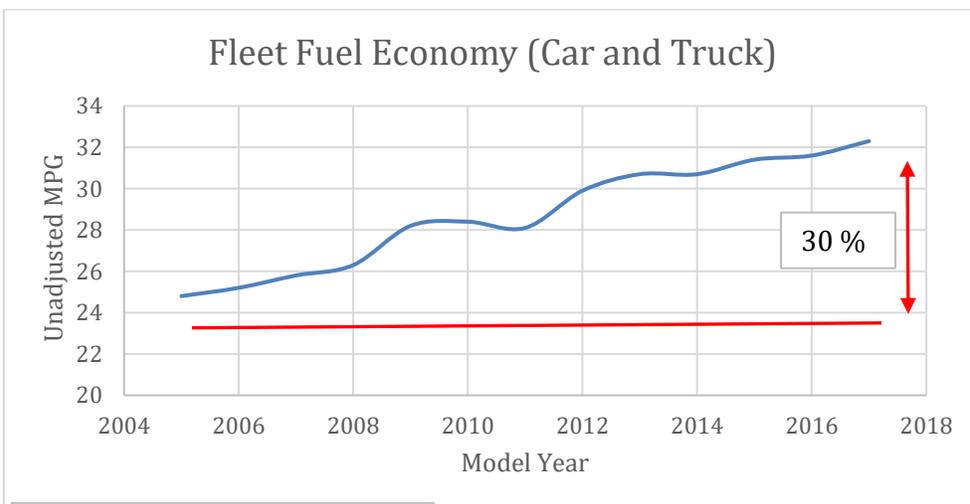
There are several factors influencing the consumer acceptance of EVs. Our consumer research has shown that a reticence to embrace electrification remains among car buyers. Whether it be cost, range anxiety, lack of necessary EV charging infrastructure or a lack of education surrounding the many benefits of EVs, many consumers are unaware or uncomfortable with this new technology.

In response, automakers have stepped up to help increase consumer awareness of EVs. This March, in conjunction with the New York International Auto Show, automakers partnered with the Northeast States for Coordinated Air Use Management to launch the “Drive Change, Drive Electric” campaign. This initiative is designed to increase EV use throughout the Northeast states, which are also states that follow the CA ZEV mandate, and focus on the benefits of EVs and advancing consumer awareness, understanding, consideration and adoption of these vehicles in the region. Additionally, to help amplify this effort, the Alliance has launched a complimentary national media campaign, entitled “Buyers Wanted,” to highlight the various fuel-efficient models available for purchase at dealerships.

Low gas prices are also a factor impacting the sale of EVs. I’ve highlighted in previous testimony before the Energy and Commerce Committee the linear relationship between gas prices and the adoption of fuel-efficient technologies. When gas prices fall, the desire to pay more for a vehicle with higher fuel economy diminishes.



In many ways, automakers are also victims of our own success and have made tremendous progress making the internal combustion engine much more efficient across all vehicle segments, pursuant to existing CAFE and GHG standards. As a result, consumers in the market for a new vehicle will find conventional vehicles 30 percent more efficient than 12 years ago. The fuel-efficiency gains combined with low gas prices demonstrate that the internal combustion engine will remain the predominant powertrain for the near future.



Source: 2017 EPA Trends Report

Bridging the Policy & Market Divide

So when is the tipping point for EVs? To be honest, we don't know when the adoption rate of electric and other zero emission vehicles will begin to experience mainstream acceptance, but we do know policy can play an important role in achieving that goal. So, what can policymakers do in the meantime?

The industry has responded and yet consumers are not seeking EVs in the percentage necessary to mark a shift. Policymakers should pursue policies that make the purchase of EVs more attractive. For example, automakers support the continuation of the federal EV tax incentive (up to \$7,500 for qualifying vehicles). This tax credit helps narrow the price gap between EVs and conventional vehicles but its capped at 200,000 units per manufacturer before it begins to phase-out. Some automakers have indicated that they will hit the cap later this year.

Additional policies could include state financial incentives, HOV access, parking benefits and, of course, infrastructure to recharge (or fuel in the case of hydrogen). Such incentives are critical to the widespread adoption and deployment of EVs. Further, increased popularity of hybrid-electric vehicles can help bridge the gap between conventional vehicles and EV powertrains. But even now, hybrids and EVs combined only account for roughly 3 percent of the market. It's also worth noting that hybrid-electric vehicle sales do not count towards the ZEV mandate.

Given that EVs will continue to share the road with conventional vehicles for years to come, automakers continue to support increased year-over-year fuel-efficiency standards and are investing heavily in new technologies to improve fuel economy for our customers and the environment. Within the context of the Midterm Evaluation of MY 2022-2025,

we support standards that increase year over year that also are consistent with marketplace realities. This is critical since compliance with the standards is determined by what vehicles consumers purchase, not what automakers put in dealer showrooms. Requirements that reflect market realities could be combined with various flexibilities that provide incentives for EVs and/or other vehicle technologies that provide additional environmental benefits.

As I previously mentioned, we continue to urge the Administration to preserve “One National Program” that includes California and we also urge California to seek a compromise solution as well. This would ensure that the CA and federal programs remain aligned and the same vehicles can be sold in all 50 states. We believe this scenario would also provide greater environmental benefits than two separate programs. Ultimately, the continuation of “One National Program” is the best outcome for our industry, consumers, our employees and the environment.

Additionally, and of particular interest to the Subcommittee, is the role that higher octane can play in this debate. The Alliance has long supported a transition to higher-octane gasoline and the need for vehicles and fuels to be regulated as a system. Higher octane gasoline in the marketplace is a cost-effective means of incrementally improving fuel economy for the light-duty vehicle fleet (which currently translate into 4-5 percent year over year improvements). However, before any of those benefits could be realized, automakers must have adequate lead-time to design and develop vehicles optimized for a new fuel, and to cost-effectively certify them as compliant with regulatory emission limits.

It is important to stress that the availability of any new fuel should coincide with the availability of the vehicles in the marketplace designed for its use, to assure optimal environmental and vehicle performance and to provide certainty for producers, retailers, and consumers.

Conclusion

We appreciate the work this Subcommittee and Committee have been conducting on these important policy issues. As the future of transportation and transportation fuels continues to evolve, automakers pledge to be a constructive partner in the process.

Thank you for consideration of our views.

ATTACHMENT 1

RETAIL AND FLEET SALES IN NON-ZEV AND ZEV STATES: 2013 AND 2017 House Energy and Commerce Environment Subcommittee Members

NATIONAL	<u>2013 RETAIL AND FLEET SALES</u>				<u>2017 RETAIL AND FLEET SALES</u>			
	<u>NON-ZEV VEHICLES</u>		<u>ZEV VEHICLES</u>		<u>NON-ZEV VEHICLES</u>		<u>ZEV VEHICLES</u>	
	SALES	%	SALES	%	SALES	%	SALES	%
United States	14,886,131	99.40	89,343	0.60	16,620,605	98.87	190,043	1.13

ZEV STATES	<u>2013 RETAIL AND FLEET SALES</u>				<u>2017 RETAIL AND FLEET SALES</u>			
	<u>NON-ZEV VEHICLES</u>		<u>ZEV VEHICLES</u>		<u>NON-ZEV VEHICLES</u>		<u>ZEV VEHICLES</u>	
	SALES	%	SALES	%	SALES	%	SALES	%
CALIFORNIA	1,622,479	97.66	38,821	2.34	1,907,440	95.19	96,407	4.81
NEW JERSEY	525,641	99.56	2,340	0.44	568,887	99.13	5,011	0.87
NEW YORK	906,824	99.56	3,976	0.44	1,008,887	99.01	10,098	0.99
OREGON	141,232	98.59	2,016	1.41	181,079	97.84	3,990	2.16
SUBTOTAL	4,136,034	98.75	52,417	1.25	4,672,547.00	97.34	127,483	2.66

NON- ZEV STATES	<u>2013 RETAIL AND FLEET SALES</u>				<u>2017 RETAIL AND FLEET SALES</u>			
	<u>NON-ZEV VEHICLES</u>		<u>ZEV VEHICLES</u>		<u>NON-ZEV VEHICLES</u>		<u>ZEV VEHICLES</u>	
	SALES	%	SALES	%	SALES	%	SALES	%
COLORADO	237,310	99.40	1,441	0.60	283,270	98.55	4,169	1.45
GEORGIA	413,139	98.91	4,541	1.09	485,223	99.49	2,466	0.51

ILLINOIS	585,185	99.56	2,562	0.44	638,037	99.40	3,839	0.60
MICHIGAN	493,784	99.47	2,634	0.53	633,110	99.57	2,763	0.43
MISSISSIPPI	105,576	99.94	64	0.06	122,050	99.89	136	0.11
NORTH CAROLINA	388,431	99.70	1,168	0.30	445,060	99.54	2,077	0.46
NORTH DAKOTA	43,381	99.94	24	0.06	37,368	99.90	39	0.10
OHIO	550,655	99.81	1,061	0.19	598,044	99.65	2,109	0.35
SOUTH CAROLINA	194,137	99.85	297	0.15	223,326	99.75	569	0.25
TENNESSEE	250,265	99.69	789	0.31	249,277	99.68	794	0.32
TEXAS	1,403,461	99.80	2,832	0.20	1,514,472	99.64	5,459	0.36
WEST VIRGINIA	83,627	99.87	109	0.13	80,364	99.86	113	0.14
SUBTOTAL	10,750,097	99.66	36,926	0.34	11,948,058	99.48	62,560	0.52

Source: Compiled by the Auto Alliance from IHS Markit new registration data

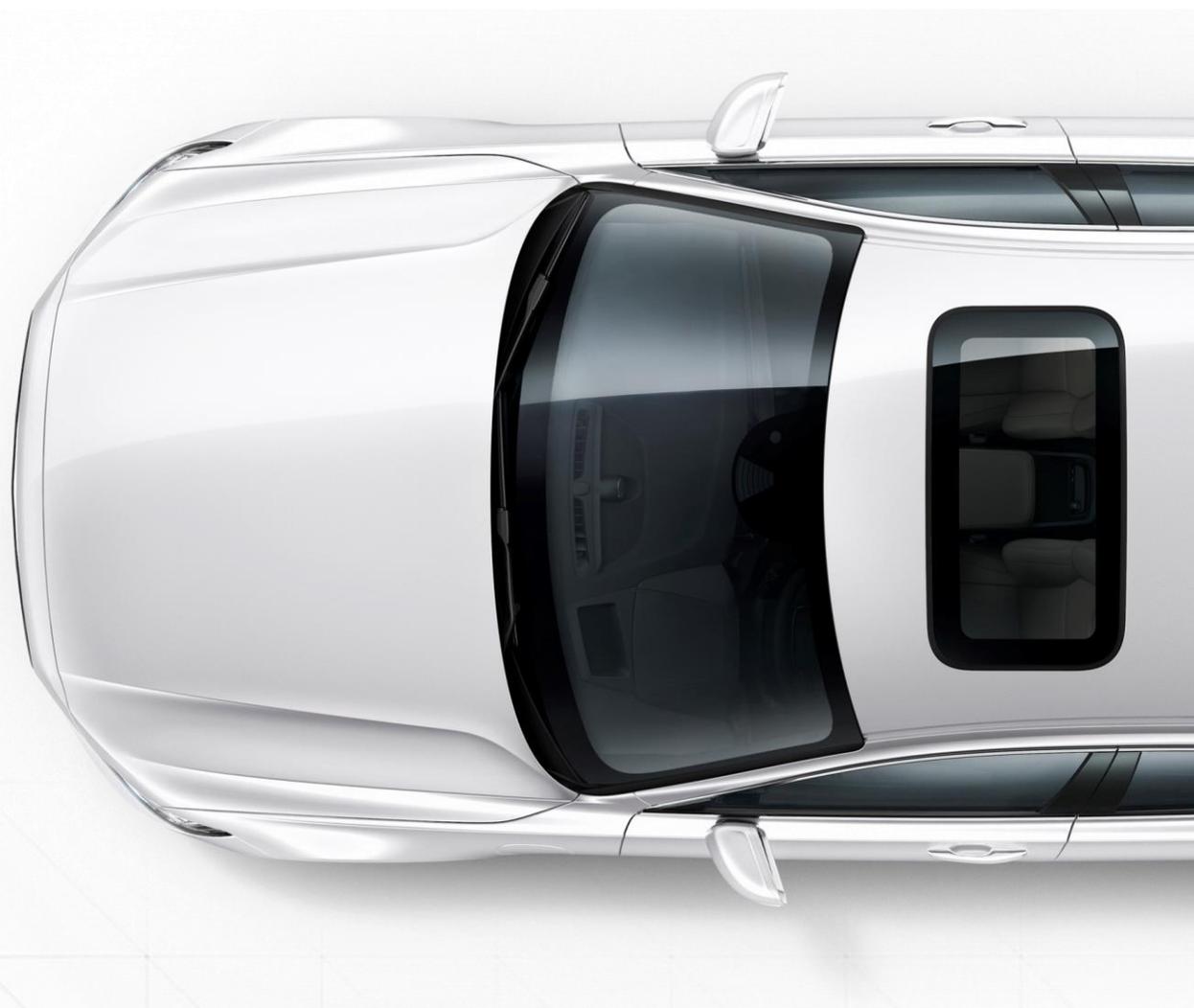
Sharing the Road:

Policy Implications of Electric and
Conventional Vehicles in
the Years Ahead

*House Energy and Commerce
Committee*

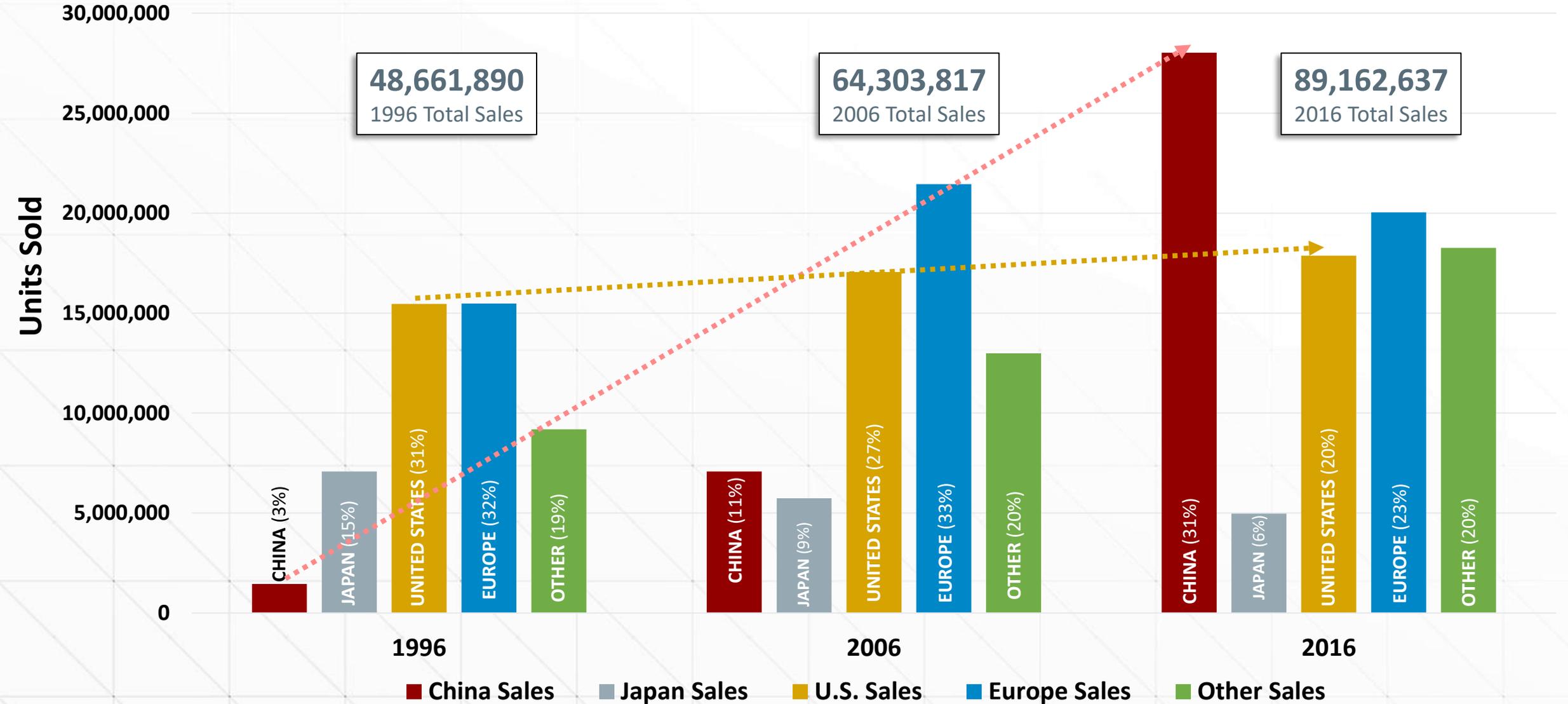
Subcommittee on Environment

MITCH BAINWOL, PRESIDENT & CEO, AUTO ALLIANCE



AUTO ALLIANCE
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World Vehicle Sales: Rapid Growth





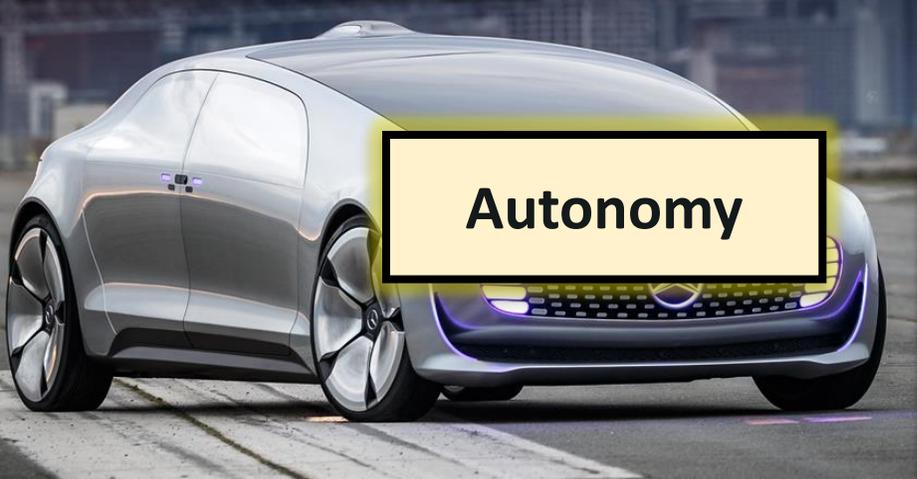
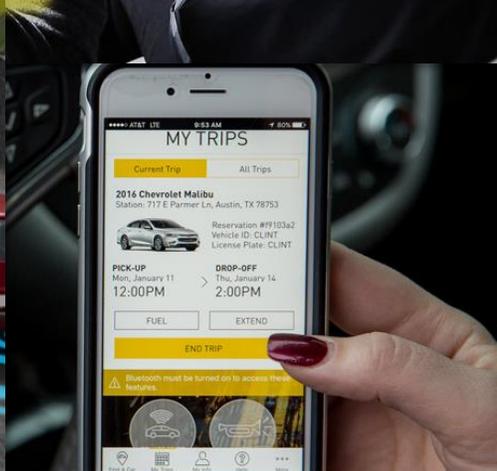
Electrification



Sharing



Profound Transition In Mobility



Autonomy



Connectivity





UK to ban most hybrid cars, including Prius, from 2040

Peter Campbell and Jim Pickard
Published 12:24 PM ET Fri, 4 May 2018



The Mercury News

Proposed bill would ban new gas, diesel-powered cars in California by 2040

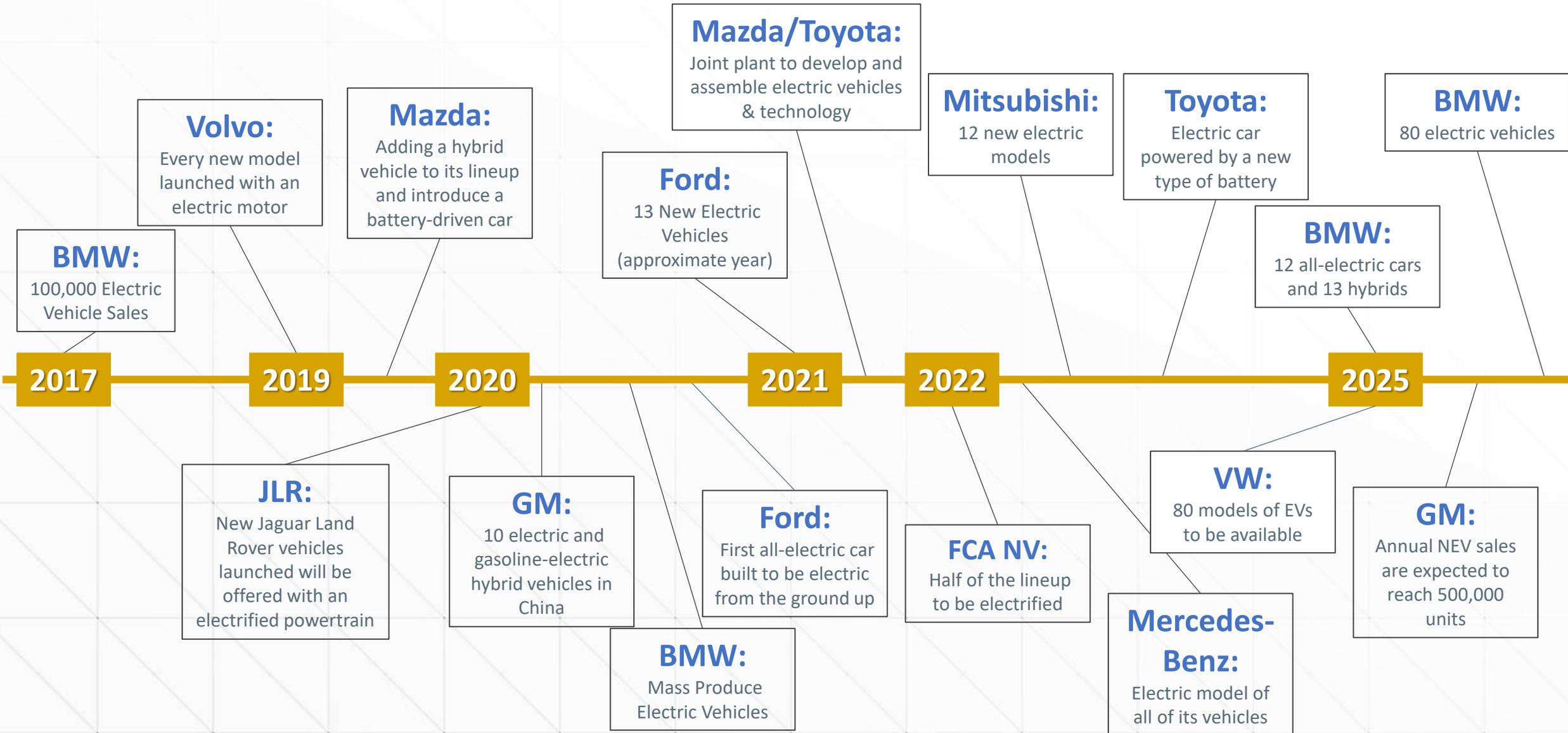


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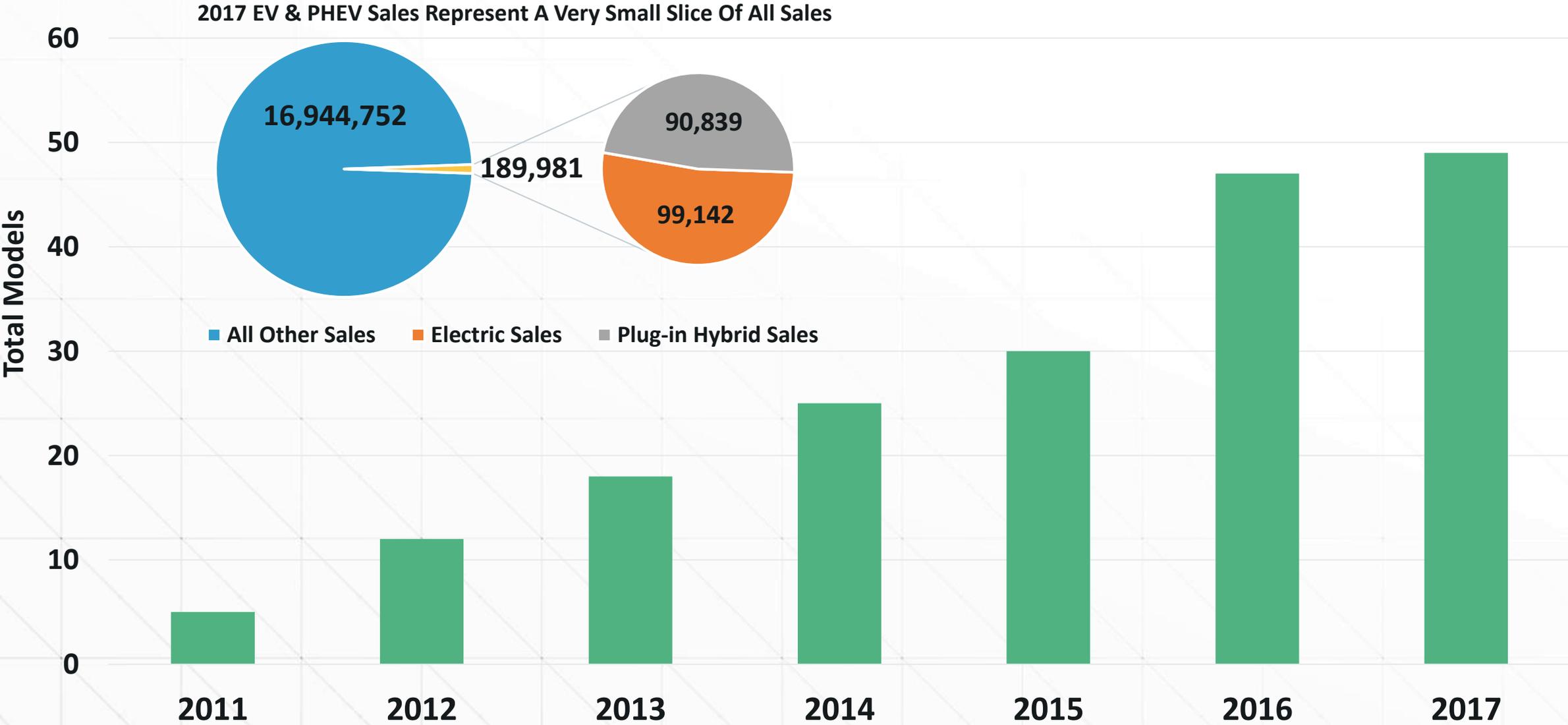
A car is plugged in at an electric vehicle charging station on Santa Clara Street across from City Hall in San Jose, Calif., on Friday, Jan. 23, 2015. (Gary Reyes/Bay Area News Group)



Automakers Responding to Policy



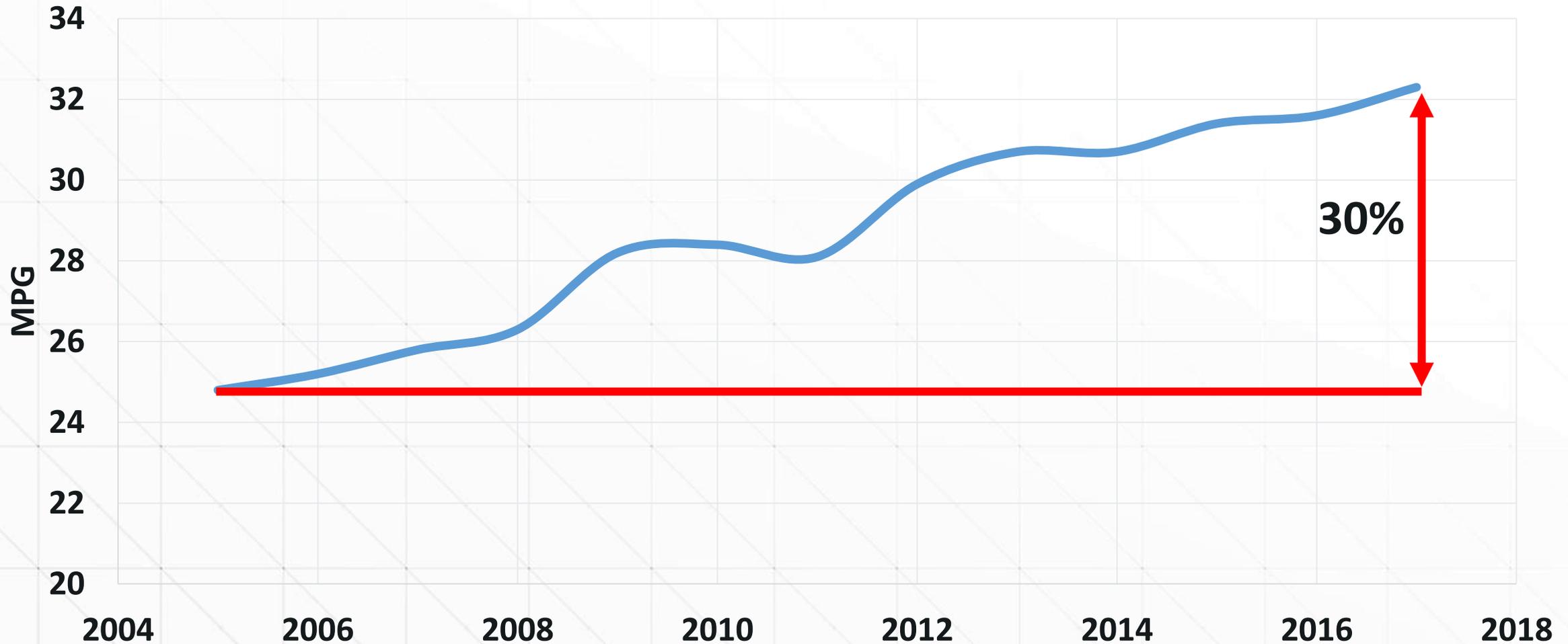
Many More EV/Hybrid Models But Sales Modest



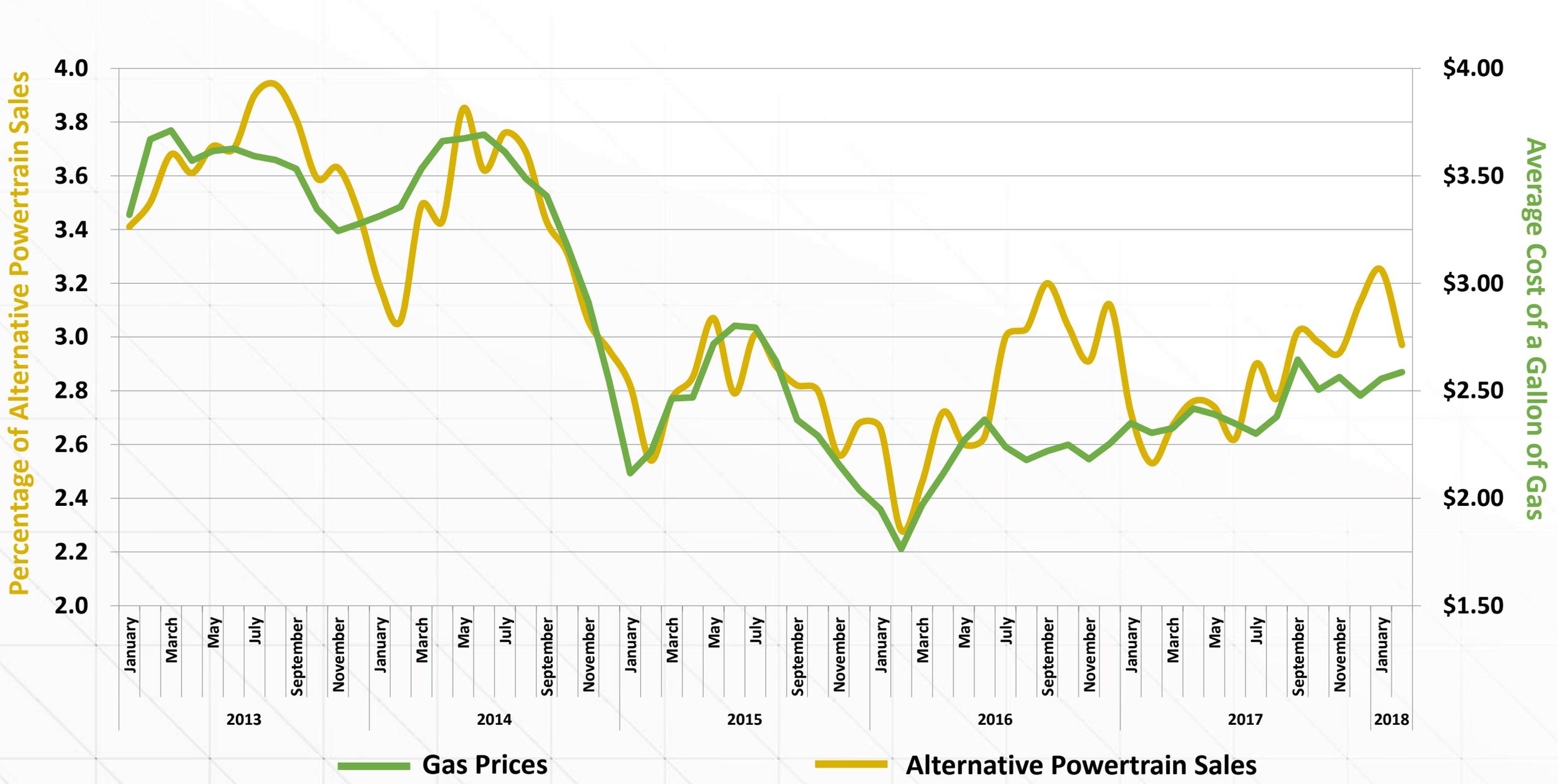
Source: Wards Automotive

Consumers Enjoying Fuel Economy Gains (New Cars & Trucks)

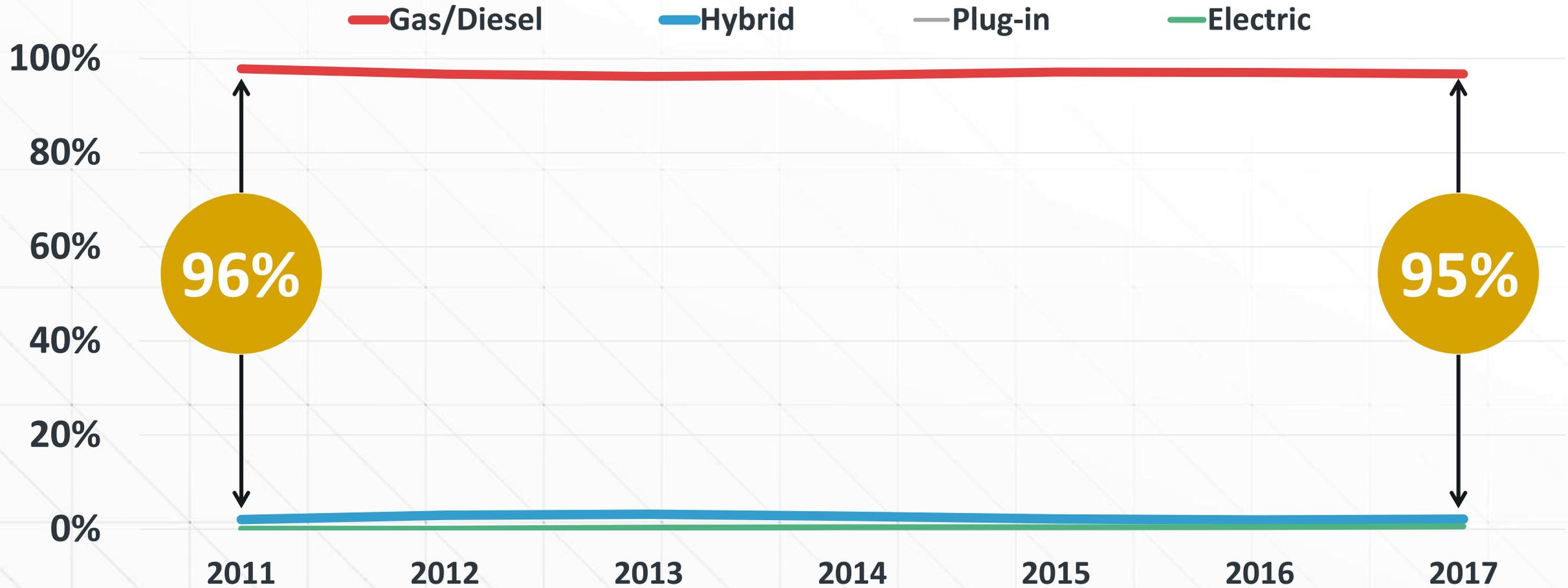
Unadjusted Combined Fleet MPG



Swimming Together: Alternative Powertrain Sales & Gas Prices



Powertrain Share of Total Sales Essentially Static

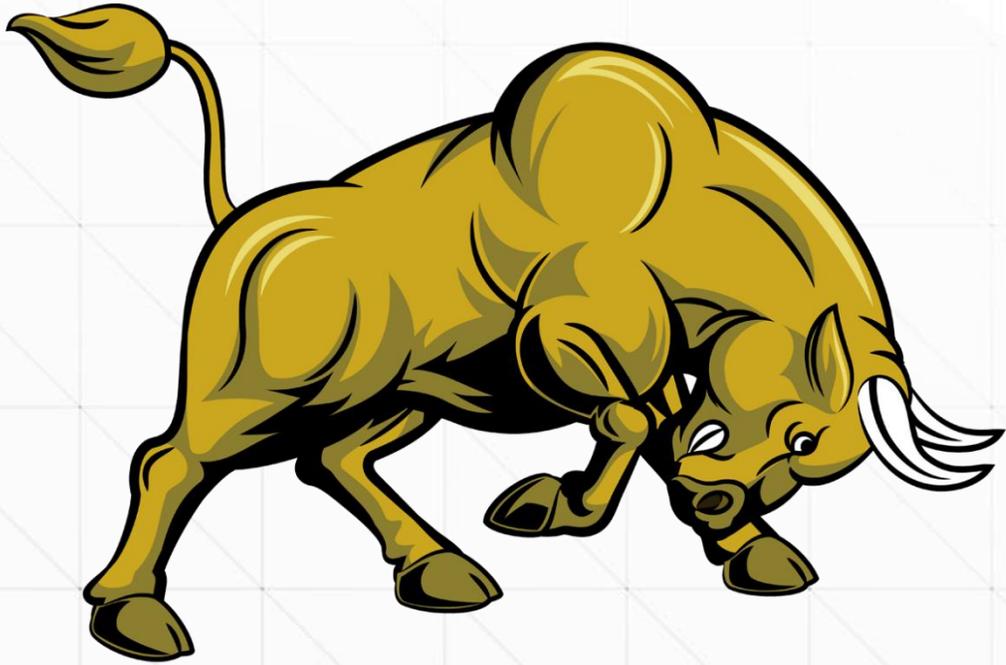


RETAIL AND FLEET SALES IN NON-ZEV AND ZEV STATES: 2013 AND 2017

House Energy and Commerce Subcommittee Members

	<u>2013 RETAIL AND FLEET SALES</u>		<u>2017 RETAIL AND FLEET SALES</u>	
NATIONAL	NON-ZEV VEHICLES (%)	ZEV VEHICLES (%)	NON-ZEV VEHICLES (%)	ZEV VEHICLES (%)
United States	99.40	0.60	98.87	1.13
	<u>2013 RETAIL AND FLEET SALES</u>		<u>2017 RETAIL AND FLEET SALES</u>	
ZEV STATES	NON-ZEV VEHICLES (%)	ZEV VEHICLES (%)	NON-ZEV VEHICLES (%)	ZEV VEHICLES (%)
CALIFORNIA	97.66	2.34	95.19	4.81
NEW JERSEY	99.56	0.44	99.13	0.87
NEW YORK	99.56	0.44	99.01	0.99
OREGON	98.59	1.41	97.84	2.16
SUBTOTAL	98.75	1.25	97.34	2.66
	<u>2013 RETAIL AND FLEET SALES</u>		<u>2017 RETAIL AND FLEET SALES</u>	
NON- ZEV STATES	NON-ZEV VEHICLES (%)	ZEV VEHICLES (%)	NON-ZEV VEHICLES (%)	ZEV VEHICLES (%)
COLORADO	99.40	0.60	98.55	1.45
GEORGIA	98.91	1.09	99.49	0.51
ILLINOIS	99.56	0.44	99.40	0.60
MICHIGAN	99.47	0.53	99.57	0.43
MISSISSIPPI	99.94	0.06	99.89	0.11
N. CAROLINA	99.70	0.30	99.54	0.46
N. DAKOTA	99.94	0.06	99.90	0.10
OHIO	99.81	0.19	99.65	0.35
S. CAROLINA	99.85	0.15	99.75	0.25
TENNESSEE	99.69	0.31	99.68	0.32
TEXAS	99.80	0.20	99.64	0.36
W. VIRGINIA	99.87	0.13	99.86	0.14
SUBTOTAL	99.66	0.34	99.48	0.52

Green and Infrastructure Policy Collide



Roads and Bridges



GHG