

**U.S. House of Representatives**  
**Committee on Oversight and Government Reform**  
**Darrell Issa (CA-49), Chairman**  
**Jim Jordan (OH-04), Chairman of the Subcommittee on Regulatory Affairs, Stimulus**  
**Oversight & Government Spending**



**Government Motors: A Preliminary Report on the Effects of Bailouts and  
Politics on the Obama Administration's Ability to Protect American  
Consumers**

**STAFF REPORT**  
**U.S. HOUSE OF REPRESENTATIVES**  
**112<sup>th</sup> CONGRESS**  
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## **Executive Summary:**

The delayed public notification of serious safety concerns relating to the Chevy Volt raises significant concerns regarding the unnatural relationship between General Motors (GM), Chrysler and the Obama Administration. Rather than allowing GM and Chrysler to enter into a traditional bankruptcy process, the Obama Administration intervened and forced the companies to participate in a politically orchestrated process. The result was that GM and Chrysler emerged as quasi-private entities, partially owned by the United States government.

President Obama has used this unusual blurring of public and private sector boundaries to openly tout the results of this partnership as a top accomplishment of his Administration – creating a dynamic where the President is politically reliant on the success of GM and Chrysler. Moreover, in the case of GM, the Administration has offered substantial taxpayer funded subsidies to encourage production of the Volt, such as \$151.4 million in stimulus funds for a Michigan-based company that produces lithium-ion polymer battery cells for the Volt as well as \$105 million directly to GM. It has also extended a significant subsidy to encourage consumers to purchase the vehicle, offering buyers of the Volt a federal tax credit of up to \$7,500 per vehicle.

In the face of that political dependency, it is deeply troubling that public notification of the safety concerns related to the Volt was inexplicably delayed for six months – a period of time that also coincides with the negotiation over the 2017-2025 fuel economy standards. The necessity of a full explanation for NHTSA's silence concerning the Volt's safety risk has been compounded by its lack of cooperation with the Committee.

## Introduction:

In 2008, the domestic automobile industry was failing under the crushing burden of immense legacy costs caused by unrealistic commitments to retired workers, expensive union contracts, and the threat of economically crippling state fuel economy regulations. Reacting to these circumstances, the Obama Administration bypassed the opportunity to push General Motors (GM) and Chrysler into the traditional bankruptcy processes, and instead forced the companies through politically orchestrated bankruptcy procedures. GM and Chrysler emerged as quasi-private entities, partially owned by the United States government.<sup>1</sup> This unnatural relationship has blurred the lines between the public and private sector as President Obama touts the survival of General Motors as one of the top accomplishment of his Administration.<sup>2</sup> On a policy level, this relationship raises serious questions about whether or not the Administration is too heavily invested in the success of GM to be an effective regulator. Moreover, questions have been raised as to whether or not GM receives special deference from the Administration because of its status as a ward of the state. In the case of the Chevy Volt, it is well known that the Administration has heavily incentivized, through taxpayer subsidy, the production of the vehicle and touted it as the car of the future.<sup>3</sup> Accordingly, it is concerning that the Administration delayed public notification of serious safety concerns relating to the Chevy Volt for over six months, a time period that coincides with the negotiation over the Model Year 2017-2025 fuel economy standards.<sup>4</sup>

The necessity of a full explanation for NHTSA's silence concerning the Volt's safety risk has been compounded by its lack of cooperation with the Committee. On October 12, 2011, Administrator Strickland testified before the Subcommittee on Regulatory Affairs, Stimulus Oversight and Government Spending. When several members, including Chairman Jordan and Vice Chairman Buerkle, questioned the Administrator about safety concerns surrounding cars that could meet the new fuel economy standards, he failed to mention the Volt fires and NHTSA's ongoing investigation.<sup>5</sup> Upon learning of the vehicle fire through press reports, Chairman Issa, Chairman Jordan, and Rep. Kelly wrote to NHTSA Administrator Strickland on December 7, 2011, asking for answers about the Volt fires and NHTSA's investigation of the matter.<sup>6</sup> After failing to respond before a December 21, 2011 deadline, NHTSA promised to respond in full by January 6, 2012.<sup>7</sup> However, NHTSA once again failed to respond to the new

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<sup>1</sup> See *"The Lasting Implications of the General Motors Bailout": Hearing before Subcomm. on Regulatory Affairs, Stimulus Oversight and Gov't Spending of the H. Comm. on Oversight and Gov't Reform, 112th Cong.* (2011).

<sup>2</sup> Kerry Picket, *Axelrod ponders 'GM is Alive Bin Laden is Dead*, THE WASHINGTON TIMES (Nov. 1, 2011), available at <http://www.washingtontimes.com/blog/watercooler/2011/nov/1/picket-axelrod-ponders-gm-alive-osama-dead-campaig/> [hereinafter Picket].

<sup>3</sup> Press Release, White House, *Remarks by the President at a Backyard Discussion in Des Moines, Iowa*, (Sept. 29, 2010).

<sup>4</sup> Press Release, White House, *President Obama Announces Historic 54.5 mpg Fuel Efficiency Standard*, (July 29, 2011).

<sup>5</sup> See *"Running on Empty: How the Obama Administration's Green Energy Gamble Will Impact Small Businesses & Consumers": Hearing before the Subcomm. on Regulatory Affairs, Stimulus Oversight and Gov't Spending of the H. Comm. on Oversight and Gov't Reform, 112th Cong.* (2011) [hereinafter *Running on Empty*].

<sup>6</sup> Letter from Darrell Issa, Jim Jordan, and Mike Kelly, H. Comm. on Oversight and Gov't Reform, to David L. Strickland, Nat'l Highway Traffic Safety Admin. (Dec. 7, 2011).

<sup>7</sup> Email from Chan Lieu, Nat'l Highway Traffic Safety Admin., to David Brewer, H. Comm. on Oversight and Gov't Reform (Dec. 21, 2011).

deadline, providing the Committee with no response and no explanation for the delay. Moreover, NHTSA delayed the Committee's investigation of the safety concerns surrounding the Volt by failing to schedule a briefing with Committee staff as requested on December 7, 2011. Only after a second letter sent on January 10, 2012, reiterating the Committee's request for cooperation,<sup>8</sup> did the Committee finally receive an incomplete response to the narrative questions posed in the letter on January 12, 2012,<sup>9</sup> followed by a staff briefing on January 17, 2012. After six weeks of stonewalling, NHTSA provided the Committee with some documents on Thursday, January 19, 2012. In contrast to NHTSA's unresponsiveness, GM has cooperated with the Committee's investigation, providing two substantial document productions by January 20, 2012.

This preliminary staff report explores the evolving relationship between GM and the Federal government. The report provides insight into NHTSA's approach to the investigation of the Volt battery fires and explores the question of whether government ownership of the company or political considerations created an unacceptable conflict-of-interest.

## **I. Government Motors**

Like many sectors of the U.S. economy, the automotive manufacturing industry came under extreme hardship during the financial crisis of 2008. By late 2008, it was clear that General Motors and Chrysler would have to undergo substantial restructuring in order to remain solvent. After a failed attempt by the Bush Administration to pass legislation authorizing the use of Troubled Asset Relief Program ("TARP") funds for the automotive industry in December 2008, the Obama Administration entered into dialogues with General Motors and Chrysler about possible government assistance.<sup>10</sup> Ultimately, these discussions led to a \$50 billion taxpayer-funded bailout of GM via a unilateral decision by the Obama Administration to authorize the use of funds from TARP. This process involved a bailout-bankruptcy hybrid that resulted in Treasury owning "60.8% of the new company, with the rest of New GM held by the United Auto Workers (UAW) retiree health care trust fund, the government of Canada and Ontario provincial government, and holders of Old GM's bonds."<sup>11</sup>

Currently, taxpayers still own 26 percent of General Motors, after having received \$13.5 billion in exchange for 412 million shares of GM stock sold in GM's November 2010 initial public offering.<sup>12</sup> Taxpayers will only be made whole on their \$50 billion bailout if GM's stock price reaches \$52 per share.<sup>13</sup> This is unlikely to occur in the near future considering the stock price remained between \$19 and \$39 for all of 2011 and is currently at around \$24 per share.<sup>14</sup>

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<sup>8</sup> Letter from Darrell Issa, Chairman, H. Comm. on Oversight and Gov't Reform, to David L. Strickland, Administrator, Nat'l Highway Traffic Safety Admin. (Jan. 10, 2012).

<sup>9</sup> Letter from David L. Strickland, Administrator, Nat'l Highway Traffic Safety Admin., to Darrell Issa, Chairman, H. Comm. on Oversight and Gov't Reform, (Jan. 12, 2012) [hereinafter Strickland].

<sup>10</sup> Bill Canis and Baird Webel, Cong. Research Serv., R41978, THE ROLE OF TARP ASSISTANCE IN THE RESTRUCTURING OF GENERAL MOTORS (2011).

<sup>11</sup> *Id.*

<sup>12</sup> *Id.*

<sup>13</sup> *Id.*

<sup>14</sup> *Id.*

As is the case with bailouts, the government's stake in the automotive industry led to business decisions being dictated by political pressure, not market forces. Despite assurances by the Administration that it would not be involved in day-to-day decision making at the auto companies, this was a widespread occurrence. Documents turned over to the Committee on Oversight and Government Reform show the degree to which Administration officials were involved in operational decisions at GM. For instance, a May 2009 e-mail shows Treasury officials directing GM on how it should structure press releases, asking that references to the government's ownership of GM be moved, "taking it out of the lede."<sup>15</sup> Another e-mail shows a member of the Automotive Task Force telling GM to coordinate with the United Auto Workers ("UAW") about the pending termination of pension plans for which GM is responsible: "At a minimum this could get messy and the UAW should probably be brought into the loop."<sup>16</sup> The politicized nature of the bailout and the efficacy of the decisions made by the Obama Administration have created a situation in which the President's political prospects are tied to the success or failure of GM. One of President Obama's 2012 presidential campaign advisors quipped that the campaign's slogan should be: "GM is Alive; bin Laden is Dead."<sup>17</sup>

The Obama Administration has not been shy about expressing its enthusiasm for the Chevy Volt, a new electric car, heavily subsidized by the President's policies, which many hope will brand GM as a revitalized company with a bright future. Since January 2010, Obama Administration officials have made at least four public appearances at factories involved in the production of the Chevy Volt. When the first Chevy Volt electric battery came off the assembly line at a GM battery plant in Michigan, Secretary of Energy Steven Chu was present to publicly applaud the company.<sup>18</sup> Secretary of Labor Hilda Solis also visited a GM factory to observe the manufacturing of the Volt.<sup>19</sup> In addition to factory observations, President Obama test drove the Volt for a crowd at GM's Detroit-Hamtramck factory months before the Volt was released for retail purchase.<sup>20</sup> Thereafter, President Obama referred to the Volt as a "car of the future" and declared the Volt "drives really well."<sup>21</sup> Like in the case of Solyndra, the President has closely tied his reputation to the success of the Volt.

## II. Government Investment in the Electric Car

The Obama Administration touts EPA and NHTSA's recently proposed fuel economy standards for MY 2017-2025 as "one of the hallmark achievements" of his Administration:

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<sup>15</sup> E-mail from Jenni Engebretsen, U.S. Treasury Department, to Greg Martin, General Motors, and Jennifer Psaki, Brian Deese, and Amy Brundage, White House. May 29, 2009.

<sup>16</sup> E-mail from Matthew Feldman, U.S. Treasury Department, to Walter Borst, Rick Westenberg, Adil Mistry, Francis Jaworski, and Thomas Croskey, General Motors. June 30, 2009.

<sup>17</sup> Picket, *supra* note 2.

<sup>18</sup> Sec'y Steven Chu, The White House Blog, *An Electrifying Event* (Jan. 7, 2010), <http://www.whitehouse.gov/blog/2010/01/07/electrifying-event>.

<sup>19</sup> Sec'y Hilda Solis, The White House Blog, *Going Further with America's Auto Industry* (Mar. 2, 2011), <http://www.whitehouse.gov/blog/2011/03/02/going-further-americas-auto-industry>.

<sup>20</sup> The White House, *Weekly Address: President Obama Hails Success of Restructuring of the Auto Industry* (July 31, 2010), <http://www.whitehouse.gov/photos-and-video/video/weekly-address-good-news-autos-obstruction-small-business#transcript>.

<sup>21</sup> See White House, *supra* note 4; see also Press Release, White House, *Remarks by the President in a Town Hall in Reno, Nevada*, (Apr. 21, 2011), <http://www.whitehouse.gov/the-press-office/2011/04/21/remarks-president-town-hall-reno-nevada>.

“something that will have a tangible impact on the environment, but also on our economy over the long term.”<sup>22</sup> These standards rely heavily on the commercial deployment of electric vehicle technology and provide manufacturers significant incentives to produce electric vehicles. As described in the joint proposed rulemaking, “After MY 2020, the only current vehicles that continue to meet the proposed footprint-based CO<sub>2</sub> targets (assuming improvements in air conditioning) are hybrid-electric, plug-in hybrid-electric (PHEVs), and fully electric vehicles (EVs).... Today’s Toyota Prius, Ford Fusion Hybrid, Chevrolet Volt, Nissan Leaf, Honda Civic Hybrid, and Hyundai Sonata Hybrid all meet or surpass the proposed footprint-based CO<sub>2</sub> targets through MY 2025.”<sup>23</sup> In order to encourage the production of these vehicles, the proposed rule offers manufacturers several large credits that provide incentives to produce electric cars. The most significant of these credits is an advanced technology credit (or the advanced technology “multiplier”) that would allow manufacturers to count vehicles more than once in CO<sub>2</sub> fleet average calculation.<sup>24</sup> This incentive would allow manufacturers to continue producing their more popular and more profitable cars (which have lower fuel economy ratings) while also giving them an incentive to produce electric cars, whether or not the market demands them. EPA describes this scheme as “temporary regulatory incentives for the commercialization of EVs, PHEVs, and FCVs....”<sup>25</sup>

The Obama Administration has also invested heavily in the development of new technology for electric cars: The American Recovery and Reinvestment Act of 2009 (ARRA) appropriated \$2.4 billion for domestic production of batteries and components for electric cars.<sup>26</sup> Of this, \$1.5 billion in grants were directed toward manufacturing the batteries<sup>27</sup> while the remaining \$900 million went to building new facilities or improving existing facilities to produce electric drive components.<sup>28</sup> This included \$151.4 million to Michigan-based Compact Power, Inc., for production of lithium-ion polymer battery cells for the GM Volt, \$105.9 million directly to GM for production of high-volume battery packs for the Volt, \$105 million to GM to construct facilities for electric drive systems, and \$89.3 million to Delphi Automotive Systems, a former division of GM, to expand manufacturing facilities for electric drive power components.<sup>29</sup> According to a new report by the non-partisan Mackinac Center, over \$2.99 billion – the equivalent of \$250,000 per Volt sold – of federal and state taxpayer money has been invested in the development and promotion of the Chevy Volt (as of December 2011).<sup>30</sup>

In addition to the subsidies and incentives going to auto and battery manufacturers, the Obama Administration has also made available tax credits to consumers in order to bring down

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<sup>22</sup> Press Release, White House, *Press Briefing by Principal Deputy Press Secretary Josh Earnest* (Aug. 24, 2011), <http://www.whitehouse.gov/the-press-office/2011/08/24/press-briefing-principal-deputy-press-secretary-josh-earnest-8242011>.

<sup>23</sup> 76 Fed. Reg. 74,854, 75,010 (Dec. 1, 2011).

<sup>24</sup> *Id.*

<sup>25</sup> *Id.*

<sup>26</sup> Bill Canis, Cong. Research Serv., R41709, BATTERY MANUFACTURING FOR HYBRID AND ELECTRIC VEHICLES: POLICY ISSUES (2011).

<sup>27</sup> *Id.*

<sup>28</sup> U.S. Dept. of Energy, Recovery Act Awards for Electric Drive Vehicle Battery and Component Manufacturing Initiative (Oct. 2011), [http://www1.eere.energy.gov/recovery/pdfs/battery\\_awardee\\_list.pdf](http://www1.eere.energy.gov/recovery/pdfs/battery_awardee_list.pdf).

<sup>29</sup> *Id.*

<sup>30</sup> E-mail from James Hohman, Mackinac Center for Public Policy, to Tyler Grimm, H. Comm. on Oversight and Gov’t Reform. (Jan. 6, 2012).

the price of EVs and stimulate sales. Buyers of the Volt will receive a federal tax credit of up to \$7,500 of per vehicle.<sup>31</sup> Many states also offer additional tax credits ranging from \$1,500 to \$6,000<sup>32</sup> and other states offer other incentives such as rebates or sales tax exemptions for electric car buyers.<sup>33</sup> There is some evidence that the tax credits are being used by auto dealers as well: a few dealers have bought Volts from other dealers, claimed the \$7,500 tax credit for the dealership, and resold the “used” car to a buyer (who wouldn’t be eligible for a tax credit).<sup>34</sup>

Accordingly, the Obama Administration has tied the political reputation of the President closely to the success of GM generally, and to the Chevy Volt specifically. Not only has the Administration offered substantial taxpayer funded subsidy to encourage the Volts production; it has also extended a significant subsidy to encourage consumers to purchase the vehicle; and the President has even offered the vehicle his personal endorsement.

### III. Consumer Demand for the Chevrolet Volt

The Administration has predicted widespread deployment of electric vehicles, like the Chevy Volt. However, real world sales call these optimistic projections into question. In his 2011 State of the Union address, President Obama announced his intention for the United States to “become the first country to have a million electric vehicles on the road by 2015.”<sup>35</sup> A February 2011 report from the Department of Energy reinforced these ambitions by projecting that there will be an ambitious supply of 1.222 million electric vehicles by 2015, including 505,000 Volts on the road.<sup>36</sup> Similarly, EPA’s proposed Greenhouse Gas rule for light duty vehicles projects 1.9 to 2.8 million cumulative electric vehicles (EVs), plug-in hybrid vehicles (PHEV), and fuel cell vehicle (FCVs) sales from 2017-2025. This estimate includes 1.3 to 2.0 million cumulative sales from 2022-2025 in order to justify the incentives described in section II of this report.<sup>37</sup> However, not every government report is as optimistic about the widespread penetration of the electric vehicle. For example, the U.S. Energy Information Administration projects automakers will only sell approximately 281,000 electric cars and light trucks between 2011 and 2015.<sup>38</sup> Similarly, GM’s sales target for 2012 is a more modest 45,000 Volts in the U.S. plus an additional 15,000 in Europe.<sup>39</sup>

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<sup>31</sup> This tax credit is good until the second quarter after the manufacturer has produced 200,000 eligible vehicles, at which point a phase out of the credit will begin. Internal Revenue Serv., *Qualified Vehicles Acquired after 12-31-2009*, <http://www.irs.gov/businesses/article/0,,id=219867,00.html> (last visited Jan. 19, 2012).

<sup>32</sup> State and Federal Incentives, PLUG IN AMERICA, <http://www.pluginamerica.org/why-plug-vehicles/state-federal-incentives> (last visited Jan. 19, 2012).

<sup>33</sup> *Id.*

<sup>34</sup> Tiffany Hsu, Chevy Volt dealers inflate prices, take tax credits, L.A. TIMES (June 3, 2011), *available at* <http://articles.latimes.com/2011/jun/03/business/la-fi-autos-volt-20110603>.

<sup>35</sup> Press Release, White House, *Remarks by the President in State of Union Address* (Jan. 25, 2011), <http://www.whitehouse.gov/the-press-office/2011/01/25/remarks-president-state-union-address>.

<sup>36</sup> U.S. Dep’t of Energy, *One Million Electric Vehicles by 2015*, Status Report (Feb. 2011).

<sup>37</sup> Fed. Reg., *supra* note 24.

<sup>38</sup> Ariel Schwartz, *Can the U.S. Put One Million Electric Vehicles on the Road by 2015?*, FAST COMPANY (Jan. 31, 2011), *available at* <http://www.fastcompany.com/1722701/can-the-us-put-one-million-electric-vehicles-on-the-road-by-2015>.

<sup>39</sup> Sharon Terlep, *Volt Sales Rise Despite Safety Investigation*, WALL ST. J. BLOGS (Jan. 4, 2012), <http://blogs.wsj.com/drivers-seat/2012/01/04/volt-sales-rise-despite-safety-probe/>.

Despite its optimistic projections, EPA correctly noted in its proposed rule that vehicle cost, fuel cost, and “consumer acceptance” are major near-term market barriers, which could prevent saturation of the American market with electric and other alternative fuel cars.<sup>40</sup> GM’s experience with the Volt in 2011 appears to prove EPA’s predictions of challenges with consumer acceptance to be accurate. General Motors sold 7,671 Chevy Volts in the United States in 2011, more than 23 percent short of GMs stated goal of selling 10,000 Volts in 2011.<sup>41</sup> Many of these sales, along with the fleet purchases, occurred in December 2011, providing a positive spin for GM in light of the negative issues surrounding the Volt fires. “The story that GM gave us that Volt sales were constrained by supply doesn’t hit the nail on the head. It was constrained by demand,” said Jeremy Anwyl, vice chairman of Edmunds.com, an automotive research website based in Santa Monica, California. “GM asked the dealers to sell the demonstration models but it didn’t seem to make a difference.”<sup>42</sup>

The majority of these cars were sold to households whose annual income is greater than \$100,000, to corporate owned fleets, and to the government. Deloitte’s early adopter profile for 2011-2020 predicts that most of the electric cars will be bought by young, very high-income individuals from households who already own more one or more vehicles.<sup>43</sup> Volt sales data for 2011 has demonstrated the accuracy of Deloitte’s predictions. According to data analyzed by Edmunds.com, the average annual income of Chevy Volt buyers is \$175,000<sup>44</sup> and over 50% of all electric car buyers have household incomes of \$100,000 or more per year.<sup>45</sup> Specifically, of the 5,221 Volts registered through October 2011, over 50 percent were sold to households with income of \$100,000 or more with over 30 percent of the total sales going to households with income of \$150,000 or more.<sup>46</sup> Less than 9.3 percent of Volts are purchased by households with income below \$50,000.<sup>47</sup>

GM and other manufacturers of EVs face significant hurdles as they try to convince more Americans to purchase these vehicles. According to analysis conducted by Deloitte, many potential car buyers cite that electric vehicles are “more expensive,” “have a limited range”, and they “don’t want a small car” as the top factors preventing them from purchasing electric cars.<sup>48</sup> Seventy percent of potential buyers surveyed state an electric vehicle would have to be able to

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<sup>40</sup> Fed. Reg., *supra* note 23.

<sup>41</sup> General Motors, Sales Reporting and Data Management, *GM U.S. Deliveries for December 2011 by Model* (2011), [http://media.gm.com/content/Pages/news/us/en/2012/Jan/gmsales/\\_jcr\\_content/rightpar/sectioncontainer/par/download/file.res/Deliveries%20December%202011.pdf](http://media.gm.com/content/Pages/news/us/en/2012/Jan/gmsales/_jcr_content/rightpar/sectioncontainer/par/download/file.res/Deliveries%20December%202011.pdf).

<sup>42</sup> David Welch, *GM’s Chevy Volt Misses 2011 U.S. Sales Goal as Safety Probed*, BLOOMBERG (Jan. 4, 2012), <http://www.bloomberg.com/news/2012-01-04/gm-s-chevy-volt-misses-2011-sales-target-as-safety-probe-goes-on.html>.

<sup>43</sup> Deloitte Development LLC, *Gaining Traction: A Customer View of Electric Vehicle Mass Adoption in the U.S. Automotive Market* (2010), [http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/us\\_automotive\\_Gaining%20Traction%20FINAL\\_061710.pdf](http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/us_automotive_Gaining%20Traction%20FINAL_061710.pdf).

<sup>44</sup> Rep. Mike Kelly, *Pull plug on electric vehicle subsidies*, USA TODAY (Dec. 1, 2011).

<sup>45</sup> E-mail from Jeremy Anwyl, Edmunds.com, to Kristina Moore, H. Comm. on Oversight and Gov’t Reform (Jan. 5, 2012).

<sup>46</sup> *Id.*

<sup>47</sup> *Id.* (this number may be even smaller when Volts received as gifts are factored in).

<sup>48</sup> Deloitte, *supra* note 43.

travel 300 miles before they would consider purchasing one; no electric car currently available has a battery range of more than 160 miles and there is little or no increase in range expected through 2013 according to announced vehicle introductions.<sup>49</sup> A follow-up survey in October 2011 reports that most Americans will not consider purchasing electric cars at the prices, ranges, and charging times currently available because they are too expensive to purchase and maintain and are not practical as a primary or sole vehicle.<sup>50</sup> The ability to recharge the Volt battery is also a significant barrier. According to the Deloitte survey, 61 percent of consumers surveyed do not have access to home-charging capabilities and only 17 percent would be willing to spend eight hours charging their vehicle at home.<sup>51</sup>

In addition to the challenges GM must overcome to broaden the appeal of the Chevy Volt, there are also startling differences in regional interest in the vehicle. Volt sales have been concentrated in two regions of the United States: California and Michigan. Twenty-nine percent of Volts have been sold to buyers in California. Rep. Jackie Speier, a member of the House Committee on Oversight and Government Reform, described the increased interest in Volts in California at a recent hearing: “there is a waiting list in my district at my Chevrolet dealership of six months to get a Chevy Volt.”<sup>52</sup> Notably, a quarter of the total U.S. Chevy Volts sold have gone to buyers in Southern California.<sup>53</sup> An additional 14 percent of Volts were sold to buyers in Michigan. Many of the Volts sold in Michigan can be attributed to discounts offered to GM employees and their friends and family through the GM Family First program.<sup>54</sup> No other state is home to more than eight percent of the Volt owners.<sup>55</sup>

It appears that fleet sales and purchases by the Federal government have provided a boost to the Volt’s anemic 2011 sales numbers. Over nine percent of Volt sales so far are from fleet sales to corporate buyers and rental car companies.<sup>56</sup> Many of the fleet sales were to General Electric Co. (GE), who promised in 2010 to buy 25,000 electric vehicles by 2015.<sup>57</sup> Interestingly, GE manufactures the WattStation, a charging station used by cities, businesses, and consumers.<sup>58</sup> From 2010-2011 buyers could receive a tax credit up to \$2,000 or 30-50% of the cost of the WattStation.<sup>59</sup> While GM continuously blames supply for missing its sales targets, industry analysts believe given the current lack of demand for Volts, only strong fleet sales will allow GM to meet its lofty sales targets: “I think fleet customers will help but it is going to be

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<sup>49</sup> Deloitte Development LLC, *Unplugged: Electric Vehicle Realities Versus Consumer Expectations* (2011), [http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/us\\_auto\\_DTTGlobalAutoSurvey\\_ElectricVehicles\\_100411.pdf](http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/us_auto_DTTGlobalAutoSurvey_ElectricVehicles_100411.pdf).

<sup>50</sup> *Id.*

<sup>51</sup> Deloitte, *supra* note 43.

<sup>52</sup> *Running on Empty*, *supra* note 6 (statement of Rep. Jackie Speier (D-Calf. 12)) .

<sup>53</sup> M.G. Lord, *How Hollywood Sells the Electric Car*, THE HOLLYWOOD REPORTER (Aug. 5, 2011).

<sup>54</sup> General Motors, [https://www.gmfamilyfirst.com/GMVPP/content/media/pdf/employee\\_handout.pdf](https://www.gmfamilyfirst.com/GMVPP/content/media/pdf/employee_handout.pdf) (last visited Jan. 19, 2012).

<sup>55</sup> Anwyl, *supra* note 45.

<sup>56</sup> *Id.*

<sup>57</sup> Paul Glader and Michael Ramsey, *GE to buy 25,000 Electric Vehicles*, WALL STREET J. (Nov. 12, 2010).

<sup>58</sup> General Electric, *Meet the WattStation from GE: Commercial and Residential charging options for your electric vehicles*, <http://www.geindustrial.com/products/static/ecomagination-electric-vehicles/ge-wattstation.html> (last visited Jan. 19, 2012).

<sup>59</sup> General Electric, *Charging Ahead: Introducing the GE WattStation* (July 2010), <http://www.mass.gov/eea/docs/doer/clean-cities/ge-wattstation.pdf>.

tough to reach that 60,000 [sales target] mark without them” said Rebecca Lindland, an industry analyst with IHS Automotive.<sup>60</sup>

In addition, purchases from the federal government will likely bolster sales of the Volt and other electric vehicles. In response to a directive from the President, the General Services Administration (GSA) has launched a pilot program for electric vehicles with an initial purchase of 101 Volts (and 15 other electric cars) in May 2011.<sup>61</sup> The GSA program was launched as the first phase of compliance with President Obama’s memorandum requiring that by December 31, 2015, all light duty vehicles bought or leased by the federal government must be alternative fuel vehicles.<sup>62</sup>

#### IV. NHTSA and the Chevrolet Volt

As part of its New Car Assessment Program, on May 12, 2011, NHTSA subjected a Volt to a side-pole impact crash test at MGA Research Corporation, a NHTSA crash-test contractor in Burlington, Wisconsin.<sup>63</sup> Because the test dummies fared well, NHTSA awarded the Volt a 5-star Crash Rating – the Agency’s highest rating.<sup>64</sup> Three weeks later, the Volt exploded, igniting a fire that destroyed three vehicles parked nearby at the MGA facility.<sup>65</sup> In his response to the Committee, Administrator Strickland states that NHTSA employees first learned of the fire on Monday, June 6, 2011.<sup>66</sup> NHTSA retained a fire investigation firm to determine the cause of the explosion, and on July 5, NHTSA was notified that the Volt was the source of the fire.<sup>67</sup> Subsequently, NHTSA deconstructed the Volt’s battery, and concluded that the crash test damaged the lithium-ion battery pack and that the damage caused the explosion.<sup>68</sup> Specifically, during the crash, the battery was subject to “battery intrusion by a ferrous instrument” – in plain terms, a piece of the car’s frame or chassis punctured the battery case – piercing the battery and causing a leak in the coolant system. Over the next three weeks the leaking coolant crystallized. When this crystallized coolant came into contact with the fuel cells, which remained in a powered state, the battery was subject to “thermal runaway” and exploded. The explosion was powerful: one of the Volt’s struts – a fairly heavy piece of the suspension – was found almost 80 feet away from the burned-out car.<sup>69</sup>

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<sup>60</sup> Tim Higgins, *GM’s Akerson Says He Will Align Volt Production to Sales Demand*, BLOOMBERG (Jan. 8, 2012), <http://www.bloomberg.com/news/2012-01-09/gm-s-akerson-says-he-will-align-volt-production-to-sales-demand.html>.

<sup>61</sup> Sara Merriam, Sahar Wali, and Jen Stutsman, U.S. GEN. SERVS. ADMIN., *Obama Administration Takes Major Step Toward Advanced Vehicles with New Fleet Management Practices and Launch of First Federal Electric Vehicle Pilot* (May 24, 2011), <http://www.gsa.gov/portal/content/281789>.

<sup>62</sup> Press Release, White House, Presidential Memorandum – Federal Fleet Performance (May 24, 2011).

<sup>63</sup> Nat’l Highway Traffic Safety Admin., Summary of NHTSA Action Number PE11037, *available at* [http://www-odi.nhtsa.dot.gov/defects/results.cfm?action\\_number=PE11037&SearchType=QuickSearch&summary](http://www-odi.nhtsa.dot.gov/defects/results.cfm?action_number=PE11037&SearchType=QuickSearch&summary) [hereinafter NHTSA]; H. Comm. on Oversight and Gov’t Reform Staff Briefing by NHTSA (Jan. 17, 2012).

<sup>64</sup> Nat’l Highway Traffic Safety Admin., Database of Vehicle Safety Ratings, *available at* <http://www.safercar.gov/Vehicle+Shoppers/5-Star+Safety+Ratings/2011-Newer+Vehicles/Vehicle-Detail?vehicleId=232>.

<sup>65</sup> NHTSA, *supra* note 63.

<sup>66</sup> Strickland, *supra* note 9.

<sup>67</sup> *Id.*

<sup>68</sup> *Id.*

<sup>69</sup> H. Comm. on Oversight and Gov’t Reform Staff Briefing by NHTSA (Jan. 17, 2012).

### *Timeline of NHTSA's Response*

Administrator Strickland asserts that after determining the Volt's battery pack was to blame, "NHTSA worked continuously to replicate the May crash test in order to understand the possible safety implications following a severe crash event."<sup>70</sup> However, the Administrator has so far failed to identify any actions taken by NHTSA to investigate the explosion between July 2011 and late September, when the Volt was subjected to a follow-up side pole impact test.

On November 11, 2011, *Bloomberg News* broke the story of the June fire.<sup>71</sup> A week later, after developing component-level testing procedures in conjunction with outside agencies, NHTSA conducted a series of simulated crash tests on Volt lithium-ion battery packs.<sup>72</sup> One battery pack began to emit smoke and sparks within a few hours of the test, and another caught fire on November 24, one week after being tested.<sup>73</sup> NHTSA opened its formal safety defect investigation of the post-crash fire risk in the Chevrolet Volt the next day – almost six months after the initial explosion occurred.<sup>74</sup> On December 6, 2011, Transportation Secretary Ray LaHood declared that the Chevy Volt is safe to drive even though NHTSA was still investigating fires caused by damage to the electric car's battery.<sup>75</sup>

Public statements by GM indicate the company was aware of the dangers of a damaged battery even before NHTSA's May 12 side impact test. After news of the June fire became public in November, GM spokesman Greg Martin insisted that GM had long since established a set of safety protocols to prevent a fire after the Volt's battery had been damaged. "The engineers tested the Volt's battery pack for more than 300,000 hours to come up with the procedures, which include discharge and disposal of the battery pack," he said.<sup>76</sup> Mr. Martin went so far as to claim that "had those protocols been followed after [the May 12<sup>th</sup> test], this incident would not have occurred."<sup>77</sup> Clarence Ditlow, executive director of the Center for Auto Safety, stated he was "surprised NHTSA didn't depower the battery after the first test in May, since it is standard procedure to drain fuel out of a conventional gasoline powered vehicle."<sup>78</sup>

### *GM's Remedy*

On January 5<sup>th</sup>, GM announced that all of the 8,000 Volts on the road and another 4,400 still in dealership inventory were eligible for free repairs to battery system.<sup>79</sup> By conducting these repairs under the aegis of what GM North America President Mark Reuss called a

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<sup>70</sup> Strickland, *supra* note 9.

<sup>71</sup> Jeff Green, David Welch, and Angela Greiling Keane, *Regulators probe lithium batteries after GM's Volt catches fire*, THE WASHINGTON POST (Nov. 12, 2011).

<sup>72</sup> Strickland, *supra* note 9.

<sup>73</sup> *Id.*

<sup>74</sup> *Id.*

<sup>75</sup> The Associated Press, *LaHood: Chevy Volt is Safe Despite Battery Fires*, MLIVE.COM (Dec. 6, 2011), available at [http://www.mlive.com/auto/index.ssf/2011/12/lahood\\_chevy\\_volt\\_is\\_safe\\_desp.html](http://www.mlive.com/auto/index.ssf/2011/12/lahood_chevy_volt_is_safe_desp.html).

<sup>76</sup> Joan Lowry and Tom Krisher, *Electric car battery catches fire after crash test*, THE ASSOCIATED PRESS (Nov. 11, 2011).

<sup>77</sup> *Id.*

<sup>78</sup> Christina Rogers, *The Volt battery challenge*, AUTOMOTIVE NEWS (Dec. 5, 2011) [hereinafter Rogers].

<sup>79</sup> Tom Krisher and Dee-Ann Durbin, *GM to add more steel to Volt to protect battery*, THE ASSOCIATED PRESS (Jan. 5, 2012).

“voluntary customer satisfaction program,” GM avoided the federal monitoring that would have occurred under a recall conducted in cooperation with the NHTSA.<sup>80</sup> According to a January 5<sup>th</sup> press release:

NHTSA crashed a Chevy Volt retrofitted with GM’s newly designed steel reinforcement device in a side-pole impact test on December 22. The results of that crash showed no intrusion into the vehicle’s battery compartment ... the preliminary results of the crash test indicate the remedy proposed by General Motors today should address the issue of battery intrusion.<sup>81</sup>

NHTSA’s decision not to participate in the recall process stands in marked contrast to the responses of other safety regulatory agencies. For example, the Consumer Products Safety Commission (CPSC) has, to date, conducted thirty-nine unique recalls involving lithium-ion batteries that presented a safety risk. These recalls are often premised on just a few, or even only one, reported incident of overheating, and sometimes just the mere suspicion that overheating may occur.<sup>82</sup> The activism of the CPSC in dealing with the safety risks in lithium-ion batteries calls into question the impetus of NHTSA’s decision to both remain silent on Volt’s safety risk and to decline to participate in a formal recall plan.

#### *Is NHTSA Prepared to Regulate Lithium-Ion Battery Technology in Motor Vehicles?*

NHTSA’s handling of the Volt fire also reveals a broader, and more distressing, unfamiliarity with lithium-ion battery technology, which will necessarily become more widespread as a result of government mandates. It is unclear why NHTSA engineers failed to drain the battery of the vehicle used in the May 12 crash at the conclusion of the simulation. It appears NHTSA did not even contemplate a “delayed thermal heating and pressure release” – in layman’s terms, an explosion – as a result of the impact, as is evidenced by the fact that the vehicle was stored in close proximity to other vehicles at the facility in Wisconsin.<sup>83</sup> The overheating risk associated with lithium-ion batteries should not have taken NHTSA by surprise. Paul Denholm, a senior energy analyst at the National Renewable Energy Laboratory, explains that it has long been understood that storing so much energy in a small space like a lithium-ion battery “creates the risk of an uncontrolled energy release like a fire or explosion.”<sup>84</sup> This threat becomes especially pronounced when the battery is subject to abuse – as in a vehicle test crash.<sup>85</sup> NHTSA’s apparent ignorance of these safety risks is alarming given the growing prevalence of lithium-ion batteries on our nation’s roadways.

#### *NHTSA’s Six Month Silence*

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<sup>80</sup> *Id.*

<sup>81</sup> Press Release, Nat’l Highway Traffic Safety Admin., *Statement of NHTSA on GM’s Plan to Address Potential Fire Risk in Chevy Volts* (Jan. 5, 2012).

<sup>82</sup> Consumer Products Safety Commission, Database of Product Recalls, *available at* [www.saferproducts.gov](http://www.saferproducts.gov) (last visited Jan. 19, 2012).

<sup>83</sup> NHTSA, *supra* note 63.

<sup>84</sup> Umair Irfan, *The emerging risks and benefits of energy storage systems*, CLIMATEWIRE (Nov. 30, 2011).

<sup>85</sup> *Id.* (quoting statement of Joe Redfield, principal engineer at the Southwest Research Institute).

Moreover, the delayed notification of the public is also cause for concern. NHTSA's six month silence on the Volt's fire risks has baffled automotive safety advocates. Joan Claybrook, a former Administrator of NHTSA and well known auto-safety advocate, told the industry newspaper *Automotive News* that "not to tell [the public] anything for six months makes no sense to me. NHTSA could have put out a consumer alert and I think they should have done so."<sup>86</sup> She went on to say, "I believe they delayed it because of the fragility of sales."<sup>87</sup> Clearly, it would be inappropriate for NHTSA to take into account factors other than safety when determining public notification of a vehicle hazard.

In addition to not wishing to suppress vehicle sales, it is also possible that the ongoing negotiations between NHTSA, EPA, GM, and other manufacturers to agree on fuel economy standards for MY 2017 – 2025 incentivized NHTSA to remain silent on the issue. As noted earlier, the Chevy Volt has been touted as one of the few vehicles that could comply with the stringent standards. On May 21, 2010, the Obama Administration announced that it was beginning the rulemaking process for new fuel economy standards for MY 2017-2025.<sup>88</sup> According to internal documents obtained by the Committee, it appears that negotiations over the fuel economy standards began in earnest during the spring of 2011. The fire occurred on June 2, 2011.<sup>89</sup> NHTSA's investigation and response to that fire proceeded concurrently as the agency finalized negotiations on fuel economy and emissions regulation for model years 2017-2025. *Bloomberg News* broke the story of the Volt fires on November 11, 2011.<sup>90</sup> NHTSA and EPA formally proposed the joint rulemaking for fuel economy on November 16, 2011, and nine days after the joint proposal was official, on November 25, 2011, NHTSA officially addressed the questions raised by the Volt fire and announced a formal defect investigation.<sup>91</sup> Clearly, it would be inappropriate if NHTSA had stayed silent on the Volt battery's safety risks in exchange for GM's cooperation on the rulemaking.

## V. NHTSA and Regulatory Competence

Cars powered by lithium ion batteries are not inherently less safe to drive than those powered by gasoline engines. However, both the government and the private sector's knowledge of how to cope with the risks posed by traditional automotive technology have grown with the evolution and consumer acceptance of the vehicles. Lithium-ion batteries clearly implicate different risks than combustion engines and these risks are not well understood. In light of NHTSA's recent experience with the Volt fires, and its failure to drain the battery after a significant collision, it is evident that the technology is not well understood by the federal agency responsible for enforcing vehicle safety mandates. However, government mandates and incentives are seeking to put more of these vehicles on the road at an exponential pace. In addition to the Chevrolet Volt, lithium-ion batteries power the Nissan Leaf, the Tesla Roadster,

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<sup>86</sup> Rogers, *supra* note 78.

<sup>87</sup> *Id.*

<sup>88</sup> Press Release, White House, *Presidential Memorandum Regarding Fuel Efficiency Standards* (May 21, 2010).

<sup>89</sup> NHTSA, *supra* note 63.

<sup>90</sup> Jeff Green, David Welch, and Angela Greiling Keane, *GM Volt Fire After Crash Said to Prompt Lithium-Battery Probe*, BLOOMBERG NEWS (Nov. 12, 2012), available at <http://www.bloomberg.com/news/2011-11-11/gm-volt-battery-fire-is-said-to-prompt-u-s-probe-into-electric-car-safety.html>.

<sup>91</sup> Press Release, Nat'l Highway and Traffic Safety Admin., *Statement of NHTSA on Formal Safety Defect Investigation of Post-Crash Fire Risk in Chevy Volts* (Nov. 25, 2011), available at <http://www.nhtsa.gov/PR/Volt>.

and the Fisker Karma. The risk of such powerful batteries overheating or catching fire calls into question what – if anything – NHTSA is doing to promote the standardization and adoption of safety protocols for this potent battery technology. Standardized protocols are particularly necessary for first-responders to accidents; the lack of such protocols requires first responders to learn numerous idiosyncratic safety procedures dependent upon the particular make or model of electric vehicle.

It does not appear that NHTSA has developed a protocol for responding to severe crashes involving electric vehicles. It is also unclear whether or not GM's plan for responding to accidents involving the Volt will be sufficient. Since the Volt fire in June 2011, GM developed its current plan to send trained response teams to accidents, upon notification by GM's OnStar system of air bag deployment.<sup>92</sup> However, with both GM and the Administration projecting the sales of Volts and other electric cars to dramatically increase by 2015,<sup>93</sup> it is unclear whether or not this "spot treatment" will continue to be adequate or even possible.

The demonstrated safety risks attendant to the use of lithium-ion technology demand that NHTSA approach its regulatory responsibilities – particularly with regards to the post-accident response – with due diligence and full competence. However, the experience of the Volt safety assessment reveals that NHTSA concluded standardized safety protocols for lithium-ion technology were unnecessary before it even had conducted the requisite crash-test research. In fact, this appears to be yet another example of a "decide first, research later" approach endemic to NHTSA. Such a policy was explicitly conceded by Secretary LaHood in a letter to Senator Mark Pryor, admitting that NHTSA had moved forward with CAFE standards for MY 2017-2025, despite the fact that key studies necessary to evaluate the safety performance of certain advanced technology have not been completed.<sup>94</sup>

The seriousness of the post-accident response cannot be overstated: Mary Barra, GM's Senior Vice President for Global Product Development, stated "[w]hen electrical energy is left in a battery after a severe crash, it can be similar to leaving gasoline in a leaking fuel tank after severe damage."<sup>95</sup> The Volt vehicle fire has shined a light on the lack of knowledge and relative unpreparedness of NHTSA to respond to risks associated with lithium-ion battery technology in vehicles. This in turn begs the question of whether the government is inappropriately pushing the wide-spread deployment of these vehicles before the associated risks are understood and managed appropriately.

## **Conclusion**

At a Committee hearing in February 2010, focused on NHTSA's handling of the Toyota "Sticky Gas Pedal" investigation, Secretary LaHood pledged "when it comes to safety, there will be no compromises. There will be no cozy relationships. There will be no sweetheart deals.

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<sup>92</sup> Tom Krisher, *Coolant leak likely cause of Volt fires*, THE ASSOCIATED PRESS (Dec. 7, 2011).

<sup>93</sup> See Section III for more detail.

<sup>94</sup> Letter from the Honorable Ray LaHood, Sec'y of Transportation, to the Honorable Mark Pryor, U.S. Senator (May 16, 2011) (on file with author).

<sup>95</sup> Statement of Mary Barra, Senior Vice President for Global Product Development, in General Motors Conference Call Advisory (Nov. 28, 2011).

You have my commitment on that. Not under my watch.”<sup>96</sup> It remains to be seen whether the Obama Administration has provided GM special treatment in responding to the Volt fire in June, 2011. NHTSA’s true motivations for delaying public notice of the Volt fire investigation and its obstruction of this Committee’s investigation are not currently known. However, it is clear that the Administration has tremendous incentives to protect the political investment it has made in the company and the vehicle. The President has made the survival of GM a central campaign issue, he has personally endorsed the Volt, and his Administration has touted the vehicle as one of the few cars currently produced that can satisfy its proposed fuel economy regulations. Accordingly, the American people have a right to know the exact nature of the relationship between GM and the Administration and the implications this relationship has for public safety.

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<sup>96</sup> “*Toyota Gas Pedals: Is the Public at Risk?*”: Hearing before the H. Comm. on Oversight and Gov’t Reform, 111th Cong. (2010) (question and answer with Sec’y Ray LaHood).

## **About the Committee**

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The Committee on Oversight and Government Reform is the main investigative committee in the U.S. House of Representatives. It has authority to investigate the subjects within the Committee's legislative jurisdiction as well as "any matter" within the jurisdiction of the other standing House Committees. The Committee's mandate is to investigate and expose waste, fraud and abuse.

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