July 16, 2011

Ms. Meri Miles
Air Pollution Specialist
California Air Resources Board
1001 I Street, P.O. Box 2815
Sacramento, CA 95812

RE: Comments to Proposed AB 118 Air Quality Improvement Program Funding Plan for Fiscal Year 2011-12

Dear Ms. Miles,

On behalf of Tesla Motors, Inc. (Tesla or the Company), I am pleased to have this opportunity to submit comments to the Proposed AB 118 Air Quality Improvement Program (AQIP) Funding Plan for Fiscal Year 2011-12. As the leading manufacturer in the development, production and sale of long range, highway capable electric vehicles (EVs), Tesla applauds California's and the Air Resources Board's (ARB) leadership in encouraging and supporting this green technology through incentives such as the Clean Vehicle Rebate Program (CVRP).

As outlined in greater detail below, the Company believes consumer facing incentive programs such as CVRP are vital to the development of a mature market for EVs. These advanced technology vehicles significantly reduce greenhouse gas emissions, reduce the United States' dependence on foreign oil and helps to bolster the economy of California through job creation and innovative technology development. At the same time, Tesla also recognizes the challenges faced by the state in the current fiscal climate. For this reason, Tesla not only supports the modifications proposed by ARB staff, but also suggests further incentives to bolster job creation in California – a goal that will speed the state's economic recovery and improve California's overall fiscal health.

I. Background

Tesla is the leading manufacturer of highway capable EVs and EV powertrains. As a California born company headquartered in Palo Alto, Tesla Motors has research and development, manufacturing and production facilities in Palo Alto, Menlo Park and Fremont, California. The Company also has eighteen store locations throughout the U.S., Canada, Europe and Asia with four locations in California. Our most recent store opening occurred in Park Meadows, Colorado. The Company and its revolutionary product, the Tesla Roadster, introduced in 2008, were instrumental in reviving interest in EV technology by proving that modern EVs could deliver performance, range and style in a completely emissions free vehicle.[1] In fact, the new generation of EVs already introduced or being introduced this year by manufacturers as diverse as Nissan, Mitsubishi, BMW, Renault and others can be credited to the ground broken by Tesla with the introduction of the Roadster and its then innovative use of lithium-ion based battery packs.

[1] See Newsweek article crediting Tesla Motors with reviving EV interest at General Motors: "Bob Lutz: The Man Who Revived the Electric Car" December 22, 2007 (available at http://www.newsweek.com/2007/12/22/bob-lutz-the-man-who-revived-the-electric-car.html).

II. The CVRP is Necessary to Support the Burgeoning EV Industry and Market

The EV industry is on the verge of reaching the economies of scale necessary to create an affordable product for consumers. However, in order to continue this trend and achieve this goal, the market still requires incentives such as provided by the CVRP to encourage purchases of EVs. This type of public/private investment has already assisted Tesla to grow rapidly with production of Roadster components, powertrains for Daimler and Toyota at the Palo Alto, California location, as well as supporting acquisition of the Fremont manufacturing facility. Other manufacturers have likewise benefited with CVRP encouraging early adopters to purchase EVs. Much remains to be done, however, and the EV market as a whole will require continued investment from both the private and public sector in order to encourage this developing new technology. Only now is the EV market moving from early adopters to the early majority – a class of purchasers that represent the first mass market purchasers of EVs. Encouraging the early majority at this critical juncture is the linchpin for success of a mass market for EVs. Moreover, the EV industry is growing rapidly, but it is still a fledgling industry. The California government can serve this growing industry by stimulating demand and compressing the time frame required for EVs to become a significant contributor to the economy, greenhouse gas reduction, and national security.

III. The CVRP Will Help Achieve Tesla's Goal of Producing Affordable EVs

In the midst of the growing electric vehicle industry, Tesla is continuing its relentless drive towards improving EV technology and significantly lowering costs – twin goals that keep Tesla on the cutting edge of EV technology. Tesla's next vehicle, the Model S, will be released in mid-2012. The first ever EV to be designed from the ground up to take maximum advantage of the EV powertrain, Tesla will build the Model S at the recently acquired former NUMMI facility in Fremont, California. The price point for this vehicle will be less than $50,000.[2] The Model S is scheduled for production by mid-2012. Plans are already underway for a cross over utility vehicle based on the Model S – the Model X – to be introduced sometime after production on Model S completes ramp up and enters steady production. Use of the Model S platform to produce the Model X on a compressed timeframe is an excellent example of how Tesla is leveraging expenditures on one vehicle to allow the rapid development and market introduction of a new model. Tesla is also developing its third generation platform – the Gen III – a small four door sport coupe to be available as early as 2015. As with the Model S, the Gen III will serve as the platform for another series of EVs at an even lower price point than the Model S. Specifically, Tesla plans to produce the Gen III vehicle in quantities of 100,000 to 200,000 units per year with a price point in the $30,000 to $40,000 range. Continuation of the CVRP is a vital component of Tesla achieving this ambitious, but very achievable goal but continuing to stimulate and encourage demand at these early stages.

IV. The EV Industry is an American and Californian Job Engine

The EV industry is a strong force for job creation in America, and California in particular. In some cases, it has begun to restore jobs lost through the difficulties faced by legacy manufacturers. For example, in May of 2010, Tesla acquired the former NUMMI facility located in Fremont, California. This former General Motors/Toyota joint venture was forced to shut down production and lay off approximately 4,500 workers due to the downturn in the domestic auto industry and the

[2] Based MSRP will be $57,400. Less the $7,500 federal tax credit for EVs and final retail price will be $49,900.

economy as a whole. As the only remaining partner after GM's declaration of bankruptcy, Toyota had plans to permanently shut down and decommission the Fremont facility. Tesla purchased the facility and took ownership of Fremont in late 2010. Tesla is currently in the midst of hiring approximately 600 workers as it prepares to produce the Model S with training costs exceeding $1 million. Once the Model S production ramps up to the full 20,000 units/year, Tesla expects to hire approximately 600 additional workers in 2013 with similar training costs. With the Model X and the Gen III vehicle also planned, Tesla will be hiring additional workers as those vehicles move towards production somewhere in the 2015 timeframe. At full production capacity, the Tesla Fremont facility has the potential to generate thousands of jobs in the clean tech sector. This number does not include the nearly 800 employees currently employed at Tesla's Palo Alto headquarters where corporate, research and development, and powertrain manufacturing are currently housed.

Tesla's growth in the Bay area is illustrative of the growth of the EV job engine in California. For example, in order to hire and train the estimated 600 new workers needed this year alone for the Fremont facility, Tesla must identify qualified candidates and develop and implement training programs for these workers in the high-tech EV industry. Unlike the prior NUMMI operations, production of the Model S will involve the most sophisticated technology ever seen at the Fremont site. As a result, considerable "up-skilling" of the work force is required. While some aspects of assembly will mirror traditional internal combustion engine equipped vehicles, workers will need to be trained in the unique assembly requirements of EVs and EV powertrains. Moreover, because the Model S will be the first aluminum intensive vehicle built in North America with almost the entire body structure composed of stamped, extruded or cast aluminum, special training in working with this unique, lightweight metal will be needed.[3]

The value of these jobs goes beyond Tesla itself. Specifically, as EV production grows within California, there will be a growing demand for a local high-quality supply network. For example, Tesla also manufactures EV powertrains for other manufacturers. Daimler AG, a customer that purchases Tesla battery packs and chargers for the Smart EV, recently increased its orders for battery packs and chargers from 1,500 sets to 1,800 sets. Having completed the development of the battery pack and charger for the Mercedes-Benz A-Class sold in Europe, Tesla is now producing and delivering those packs and chargers to Daimler as well. Work also has been recently completed on the final specifications for the full powertrain system, including battery, power electronics, motor, gear box and software, to be installed in the 2012 Toyota RAV4 EV.

Nor is Tesla alone in developing electric vehicles and jobs in California, CODA Automotive, Fisker Automotive, Miles Electric Vehicles, Vantage Vehicle International, Electric Vehicles International and Zero Motorcycles are all California companies training California workers during a time when unemployment approaches 12% and the economy languishes for the average worker. Stimulating demand for the fledging market will encourage the types of investments for production resulting in job growth in the state.

[3] Currently, only two other automobile manufacturers utilize aluminum intense vehicle bodies similar to the Model S – Audi and Jaguar. Both of these manufacturers perform this assembly in Europe.

V. The CVRP Should Incentivize Californian Job Creation and Technology Improvements

In these difficult economic times, Tesla believes that the CVRP could further serve the state by also incentivizing Californian job creation. As ARB moves into the 2011-2012 fiscal year, we are cognizant of the budget issues facing this program. In fact, the CVRP ran short of funds during the current fiscal year 2010-2011. As a result, staff has had to make a number of modifications to the proposed funding for FY 2011-2012. Tesla has participated in discussions with staff and generally supports the modifications made under the current proposal. We also support the establishment of a waiting list that ensures that as new sources of funding are available, eligible participants are not overlooked. That said, we also believe that one of the core purposes of the CVRP was to ensure that not only did research, development and deployment of alternative fuels and vehicles occur in California, but that the vehicles were actually produced in California, in order to improve the state's economy through job growth. As stated in AB 118,

> Research, development, and commercialization of alternative fuels and vehicle technologies in California have the potential to strengthen California's economy by attracting and retaining clean technology businesses, stimulating high-quality job growth, and helping to reduce the state's vulnerability to petroleum price volatility. Research, development, demonstration, and deployment of alternative and renewable fuels and vehicle technologies will also result in new skill and occupational demands across California industries.

See AB 118 Section 1(g) (emphasis added). As a result, Tesla proposes that ARB consider layering additional incentives in the CVRP funding proposal for FY 2011-2012 to encourage purchase of vehicles provided by California manufacturers and actually produced in California by California workers. Such incentives may include a set aside for production of EVs in California scheduled for release in the latter half of the 2011/2012 fiscal year. ARB may also wish to consider a premium for such vehicles above the current proposal or, correspondingly, a lower value for vehicles not manufactured in the state. Both of these measures further the goals of AB 118 by encouraging the deployment of zero-emission vehicles and signaling to California entities bringing jobs to the state that they are on the right track. Such amendments are fully in keeping with not only the spirit of AB 118, but the very terms of the law itself. Specifically, section 44272 of the amended California Health & Safety Code provides as follows:

> The commission shall provide preferences to those projects that maximize the goals of the Alternative and Renewable Fuel and Vehicle Technology Program created by Section 44272, based on the following criteria, as appropriate:
> . . .
> (7) The project provides economic benefits for California by promoting California-based technology firms, jobs and businesses.

Cal Code of Health & Safety § 44272(b)(7). Accordingly, the concept of a set aside for later in the fiscal year and/or tiered rebates to purchasers of vehicles depending on whether they are produced in California versus outside California is both appropriate and supported by law.

Tesla's operation is an excellent example of how this program and these modifications could further benefit the state. As a California based company, Tesla has invested significantly in making California the focal point of EV innovation. Since its founding in 2003, Tesla has shifted battery and motor production, and the associated jobs, from their original overseas locations in Taiwan and Thailand to California. Tesla manufactures the Tesla Roadster and EV powertrain components in California and has plans for further investment in California-based production. In determining how to apply additional incentives to California companies, the ARB could define such entities as those having a "substantial presence" in California defined through location of corporate headquarters in the state, production facilities where vehicles are actually produced in state, or some other appropriate metric that demonstrates a commitment to California beyond merely siting dealerships, design studios, or satellite R&D facilities in the state.

Tesla is an excellent example of a home-grown California corporation that continues to invest heavily in the state. In addition to the investment commitments noted earlier in these comments, Tesla also continues to review the potential to consolidate additional manufacturing operations into the state, including co-locating suppliers at the Fremont site from locations out of state. While Model S production will take up only a fraction of the 5.5 million square feet of manufacturing space at Fremont, Tesla Motors has plans to expand operations in that space leading to more California jobs. Our goal is to be eventually producing several hundred thousand EVs across a variety of platforms leading to thousands of high tech jobs in California. By prioritizing the incentives for California-made EVs from California companies, the ARB will simulate demand for California built vehicles and affirm Tesla's current investments. The ARB's program will also encourage additional in-state investment by the Company through incentives that prioritize California built EVs. Having California demonstrate this commitment to its home state companies through the CVRP will not only encourage those companies to continue operations in-state, but increase expansion in state as well.

VI. EVs Reduce Greenhouse Gas Emissions, Reduce Petroleum Dependence, Increase National Security and Support the Economy

Finally, we note the important policy considerations of the effort to put more and more efficient EVs on the roads. By shifting the transportation sector to electricity, the United States can significantly reduce greenhouse gases. In fact, the U.S. has committed to reducing emissions of greenhouse gases by 28% by 2020. Displacing traditional ICEs with EVs can assist significantly in meeting this goal. EVs such as the Tesla Roadster, the Model S, as well as future Tesla models, generate zero greenhouse gases. Thanks to the over 1,500 all electric Roadsters in 31 countries on the roads today, Tesla customers have accumulated more than 11 million pure EV miles displacing the need to utilize nearly 25,000 barrels of oil. Even when taking into consideration the source of the electricity stored on the vehicles, the greenhouse gas emissions profile of EVs is lower than their ICE counterparts. A study by the Natural Resources Defense Council (NRDC) and the Electric Power Research Institute (EPRI) demonstrated that on a well-to-wheels comparison, use of plug-in hybrid electric vehicles (PHEVs) would result in reductions of anywhere from 3.4 to 10.3 billion metric tons of greenhouse gases from 2010 to 2050 depending on the penetration level of PHEVs.[4] With EVs that utilize no gasoline whatsoever, this reduction should even be higher. With the impacts of climate change caused by excessive greenhouse gases being recorded and felt already in

[4] See NRDC/EPRI study entitled: *Environmental Assessment of Plug-In Hybrid Electric Vehicles* (2007)

the state of California, switching away from traditional ICE equipped vehicles is an imperative. California's leadership in this area can certainly help facilitate this transition.

In addition to the environmental benefits, there are other compelling justifications for moving away from oil dependent modes of transportation. Currently, over 66% of the oil consumed in the United States is imported – primarily from countries less-than-friendly to the U.S. Up to 95% of the oil consumed in the U.S. is used in the transportation sector.[5] As a result, reducing our dependence on foreign oil is a matter of economic and national security. By being dependent on foreign sources of oil from volatile regions of the world, the U.S. must spend more and more of its military budget on assisting in stabilizing these regions of the world resulting in larger expenditures by the federal government. Such spending can and does contribute to the national deficit. More importantly, this puts America's young men and women serving in the military in harm's way to feed this dependence.

The recent spike in oil prices highlights the economic vulnerability of America to foreign sources of oil. For example, OPEC has forecasted revenues of over $1 trillion dollars for 2011, which represents a *32.5%* increase since 2010.[6] For comparison, this is approximately 1.6% of global GDP in 2010. With a trade deficit of nearly $500 billion for 2010, eliminating our dependence of foreign oil could cut that deficit nearly in half.[7] These economic benefits are in addition to the large number of jobs created by moving to clean technology vehicles like Tesla EVs. Accordingly, not only would the United States achieve environmental benefits for a transition to EV transportation, but economic and security benefits as well.

VII. Conclusion

As the largest manufacturer of EVs in California and with a commitment to continue to invest and grow in the state, Tesla hopes its perspective is valuable to the ARB in its consideration of funding choices. We believe that the prudent application of the CVRP can help California support the creation of some of the largest clean tech manufacturing employers in America and provide significant benefits to the state through job creation, vendor purchases, supplier contracts and other opportunities. Tesla believes that the ARB should continue to fulfill the goal of AB 118 by setting the bar higher and higher and striking a competitive response from other manufacturers. In doing so, California built EVs will help reduce greenhouse gas emissions and reduce the United States' dependence on foreign oil. In sum, we appreciate the ARB's support of the burgeoning EV industry, and look forward to continuing to work with the state on the CVRP.

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[5] Values of oil imported to the United States and transportation use were obtained from the United States Department of Energy's Energy Information Agency available at: http://www.eia.doe.gov/pub/oil_gas/petroleum/analysis_publications/oil_market_basics/demand_text.htm.

[6] OPEC eyes record revenues above $1,000 bn. See http://www.ft.com/intl/cms/s/0/21d53c84-971a-11e0-9c9d-00144feab49a.html?ftcamp=rss#axzz1Qpw2zb1s (June 15, 2011).

[7] See http://www.oilandgaschronicle.com/the-untold-story-of-the-us-trade-deficit-rising-exports (February 17, 2011).

Tesla Motors again thanks California and the ARB for this opportunity to submit these comments in support of the Proposed AB 118 Air Quality Improvement Program Funding Plan for Fiscal Year 2011-12. If you have any questions or comments regarding this submission, please feel free to contact me (202.549.9819 or james@teslamotors.com).

Sincerely,

James C. Chen, Director of Policy and
Associate General Counsel for Regulatory Affairs