ENERGY SOLUTIONS

April 6, 2017

Mary D. Nichols
Chair, California Air Resources Board
Sacramento, CA

Subject: Proposed 2017 Climate Change Scoping Plan Update and Fuel Efficient Passenger Vehicle Replacement Tires

Dear Chair Nichols:

Thank you for the opportunity to provide comments on the proposed 2017 Climate Change Scoping Plan Update (Scoping Plan Update). Energy Solutions is a professional and engineering services firm whose mission is to create large-scale environmental impacts by providing market-based, cost-effective energy, carbon, and water management solutions to our utility, government and commercial customers. We strongly support the innovative and critical leadership from the Air Resources Board (ARB) in reducing greenhouse gas (GHG) emissions in California.

We recommend adding fuel-efficient passenger vehicle replacement tires to the list of transportation measures and to the Appendix F Environmental Analysis. Replacement tires offered on the market typically lead to a four percent increase in GHG and other emissions compared to tires fitted on new vehicles.[1] Using baseline emissions from CARB's EMFAC2014 model, fuel efficient replacement tires will reduce GHG by more than two million metric tons per year through 2030. This quantity of GHG is cumulatively equal to more than 15% of the proposed cumulative reductions from additional transportation measures, including refineries, through 2030.[2]

Fortunately, ARB has found that "fuel efficient passenger vehicle tires can be utilized by both new and in-use vehicles in the near-term to achieve GHG emission reductions. Deployment of fuel efficient vehicle tires for in-use vehicles could include limited incentives, followed by ratings and then standard setting to permanently shift the market" (May 2014 First Update to the Climate Change Scoping Plan).

We strongly agree. A study for the South Coast Air Quality Management District finds that disadvantaged communities where vehicles operating on replacement tires are more common will particularly benefit from air quality and economic benefits. Based on that study, drivers will save up to $1000 in fuel costs over the lifetime of their vehicle.[3]

We recommend the following addition to section IV.C of the proposed Scoping Plan Update:

> "Persistent market barriers such as the lack of customer information and standards have led to a significant efficiency gap between tires shipped with *new* light duty vehicles and tires

[1] http://energy-solution.com/wp-content/uploads/2015/01/Passenger-Vehicle-Replacement-Tire-Efficiency-Study.pdf. Research sponsored by the National Academy of Sciences, California Energy Commission, CARB, and California Environmental Protection Agency and US Environmental Protection Agency have confirmed this gap.
[2] The proposed plan calls for a 27 to 32 million metric ton per year reduction of carbon dioxide in the transportation sector (page 43). Baseline emissions in 2030 are projected at 78.9 million tons per year from EMFACT 2014 data downloaded March 22, 2017 for LDA, LDT1 and LDT2 categories. A 4% improvement in vehicles using replacement tires will achieve greater than two million metric tons per year of GHG through 2030. Total transportation cumulative GHG emissions of 122 million metric tons are shown in proposed Scoping Plan Update Figure II-2.
[3] https://energy-solution.com/wp-content/uploads/2016/06/Tires_Cutsheet.pdf. Savings will depend on fuel prices.

available in the *replacement* market. A study for South Coast AQMD estimates that a 4% average vehicle fuel efficiency improvement can be achieved through improved efficiency of replacement tires, resulting in very cost-effective air quality and GHG benefits and major consumer benefits.[4] This study is also consistent with research for ARB and CalEPA, an earlier study by the National Research Council, and research demonstrating the effectiveness of the European Union (EU) program in closing this gap.[5]

The resulting air quality and economic benefits are especially important for lower income and disadvantaged communities where older, higher emitting vehicles that use replacement tires are more prevalent. The prior 2014 Scoping Plan Update highlights policies such as incentives, consumer information and standards to overcome persistent market barriers to fuel efficient replacement tires and unlock these benefits.

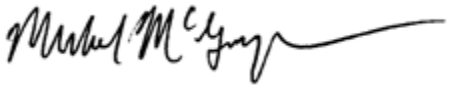
While the federal government has not implemented a program to improve the rolling resistance of light duty vehicle replacement tires, California has a timely opportunity to move forward and achieve the replacement tire efficiency goals in AB 844 (Nation, 2003).[6] California can leverage metrics and lessons learned in the EU, Japan and South Korea and collaborate with Canadian efforts to develop a tire efficiency program."

We also recommend the following addition to the Transportation Sustainability "On-going and proposed measures – vehicle technology" sub-section IV.C.3:

"Improve light duty vehicle fuel economy for passenger vehicles by 4% through policies that achieve fuel efficient replacement tires and achieve the goals of AB 844 (Nation 2003)."

We appreciate your consideration of our comments. Please feel free to contact Ed Pike of my staff or have your staff contact him at epike@energy-solution.com or (510) 482-4420 x 239 if you have any questions.

Sincerely,



Mike McGaraghan
Director
Energy Solutions

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[4] Pike, E. and S. Schneider. 2013. Passenger Vehicle Replacement Tire Efficiency Report. p.2

[5] Pannone, G. 2015. Technical Analysis of Vehicle Load Reduction Potential for Advanced Clean Cars. p. 41; NRC. 2006. Tires and Passenger Vehicle Fuel Economy: Informing Consumers, Improving Performance—Special Report 286. Washington, D.C.: The National Academies Press. Chapter 3.; Viegand Maagøe A/S. 2016. Final Report: Review study on the Regulation (EC) No 1222/2009 on the labelling of tyres. p.5. This study focuses on the EU labeling program. The EU has adopted both standards and a labelling program. In addition, ARB, U.S. EPA, and NHTSA predict that the rolling resistance of tires shipped with new vehicles will continue to improve significantly due to vehicle GHG and fuel economy standards through 2021, with even greater improvements through 2025. ARB, US EPA, NHTSA. 2016. Draft Technical Assessment Report: Midterm Evaluation of Light-Duty Vehicle Greenhous Gas Emission Standards and Corporate Average Fuel Economy Standards for Model Years 2022-2025.

[6] Pike. E. 2011. Opportunities to Improve Tire Energy Efficiency.