

April 25, 2014

Richard Corey
 Executive Officer
 California Air Resources Board
 Sacramento, California

Subject: Proposed First Update to the AB32 Scoping Plan and in-use vehicle efficiency

Dear Mr. Corey:

Thank you for the opportunity to provide comments on the Proposed First Update to the Climate Change Scoping Plan (Proposed Update). We suggest short revisions regarding two topics.

The first topic is low rolling resistance (LRR) passenger vehicle replacement tires. We appreciate CARB's acknowledgement in the Proposed Update of the near term greenhouse gas (GHG) benefits. We estimate that the statewide benefits include a reduction of least three million metric tons CO₂e annually and an Energy Solutions study commissioned by the South Coast AQMD shows avoided fuel cost benefits many times greater than costs. We recommend several short revisions to the Proposed Update regarding this topic, starting with adding a potential implementation strategy based on text in the Transportation Working Paper (p.24) (shown underlined):

p. 54: "Furthermore, commercially available technologies, such as low-rolling resistant tires for light-duty vehicles, can be utilized by both new and in-use vehicles in the near-term to achieve GHG emission reductions. In the short-term, improvements can be made to the efficiency of in-use vehicles including deployment of fuel efficient passenger vehicle replacement tires. Deployment could include limited incentives, followed by ratings and then standard setting to permanently shift the market."

Next, we recommend adding an action item to the "Key Recommended Actions for a Transportation System" Table:

p.64: "CARB will assess potential in-use vehicle efficiency opportunities including passenger vehicle replacement tires."

We also recommend, as noted in the attachment to our letter, clarifying that the original scoping plan included fuel efficient tires as part of Measure T-4.

Second, we recommend clarifying the plug-in electric vehicle off-peak charging recommendation in the table on page 64 to explicitly address renewables: "...plug-in vehicle charging rates that strongly encourage off-peak charging and managed charging to facilitate renewable energy uptake...".

We appreciate your consideration of our comments. Please contact me or have your staff contact me at epike@energy-solution.com or (510) 482-4420 x239 if you have any questions.

Sincerely,



Ed Pike, P.E.
 Senior Project Manager

Attachment

Suggested Text for AB32 Scoping Plan Update & Environmental Analysis

1) Proposed Scoping Plan Update and fuel efficient passenger vehicle tires implementation pathway.

We appreciate that CARB has acknowledged the near term greenhouse gas (GHG) benefits of low rolling resistance passenger vehicle replacement tires in the Proposed Update (p.54). We agree and estimate that fuel efficient replacement tires would achieve greenhouse gas (GHG) reductions of three or more million metric tons carbon dioxide equivalent (MMTCO₂e) per year when scaled up to the state-wide level (tailpipe and upstream GHG baseline emissions from vehicles with replacement tires are about 100 MMTCO₂e per year).

We have also found that drivers of every income level can participate directly in the benefits of AB32 with fuel savings averaging 4% when installing low rolling resistance replacement tires. Fuel savings would be several times higher than potential program costs as shown in Table 1 below based on our October 2013 research study for the South Coast AQMD. In addition, we found that fuel efficient replacement tires will achieve significant air quality benefits. Therefore, we recommend adding to the Proposed Update language (p.54, shown below without underline) the following language from the Transportation Working Paper (p.24, shown below underlined):

“Furthermore, commercially available technologies, such as low-rolling resistant tires for light-duty vehicles, can be utilized by both new and in-use vehicles in the near-term to achieve GHG emission reductions. In the short-term, improvements can be made to the efficiency of in-use vehicles including deployment of fuel efficient passenger vehicle replacement tires. Deployment could include limited incentives, followed by ratings and then standard setting to permanently shift the market.”

We also recommend adding an action item to the “Key Recommended Actions for a Transportation System” Table (p.64):

“CARB will assess potential in-use vehicle efficiency opportunities including passenger vehicle replacement tires

Table 1 Potential benefits and costs from a hypothetical limited South Coast AQMD demonstration¹

Potential Participation Rate	Program Costs at \$50/ Vehicle	Air Quality Benefits- Option A ²	Air Quality Benefits- Option B ²	Fuel savings at \$3.69 /gal
10%	\$8,801,000	\$8,819,100	\$22,251,600	\$50,011,000
20%	\$17,602,000	\$17,638,200	\$44,503,200	\$100,021,000

¹ “Passenger Vehicle Replacement Tire Study”. Prepared by: Energy Solutions. Prepared for: South Coast Air Quality Management District. October 2013.

² Air quality benefits valuations depend on the value for CO₂ taken from the Interagency Working Group report; and the criteria pollutant valuation methodology for different California air quality programs.

Attachment Suggested Text for AB32 Scoping Plan Update & Environmental Analysis

2) Environmental Analysis Attachment F of Proposed Update

We recommend revising Attachment 3: Prior Environmental Analysis (Attachment 3 p.5 and p.370 of the PDF document) to note that measure T-4 of the original scoping plan includes fuel efficient tires: “(T-4) Vehicle Efficiency Measures (tire inflation, use of low friction oils, cool paints and fuel efficient passenger vehicle replacement tires).”

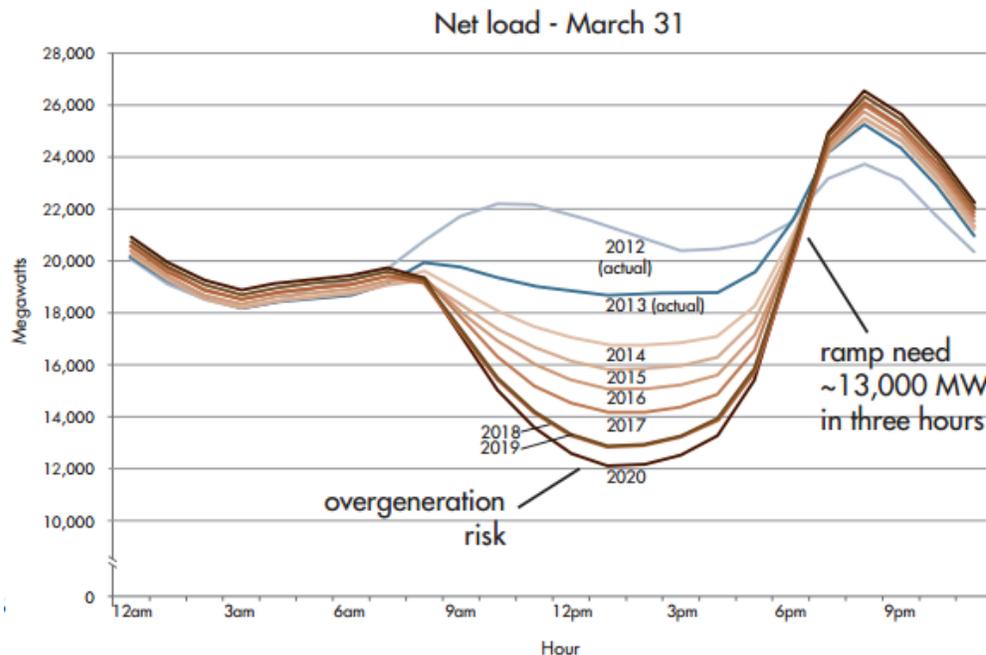
3) Linking Plug-in Electric Vehicles With Renewable Energy

We recommend the following revision to the PEV charging recommendation on p.64 of the Scoping Plan Update (underlined text is proposed new language):

“...plug-in vehicle charging rates that strongly encourage off-peak charging and managed charging to facilitate renewable energy uptake”.

An Electricity Journal article by NRDC, Energy Solutions and BMW (*Plugging Vehicles into Clean Energy*, vol 26 pp. 72-80) identifies PEV Managed Charging as a strategy to facilitate renewables uptake. We suggest clarifying the proposed language regarding off-peak charging to explicitly address facilitating renewables uptake, which can help to address future overgeneration risks when more electricity is supplied than is needed to satisfy real-time electricity requirements. This is a potential concern as renewable resources increase in California, as shown by Figure 1.

Figure 1: The “duck curve” shows steep ramping needs and overgeneration risk as more renewable resources are available during the middle of the day (Source: CAISO³)



³ http://www.caiso.com/Documents/FlexibleResourcesHelpRenewables_FastFacts.pdf