MEETING OF THE

TECHNICAL WORKING GROUP

Thursday, June 20, 2019
10:00 a.m. – 12:00 p.m.

SCAG OFFICES
900 Wilshire Blvd., Ste. 1700
Policy B
Los Angeles, CA 90017
(213) 236-1800

HOW TO PARTICIPATE IN MEETING
ON NEXT PAGE

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Los Angeles 90017  
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<th>Imperial County</th>
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San Bernardino, CA 92410  
Telephone: (909) 806-3556 | 1405 North Imperial Ave, Suite 1  
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Meeting ID: 142 774 637
### Technical Working Group
May 16, 2019

#### Attendees Los Angeles Office

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<tr>
<th>Name</th>
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<tr>
<td>Deborah Diep</td>
<td>Center for Demographic Research, California State University Fullerton</td>
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<td>Warren Whiteaker</td>
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#### Attendees Web Meeting/Teleconference

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<td>Mike Behen</td>
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<td>Martha Masters</td>
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<td>Jenny Chan</td>
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Technical Working Group
June 20, 2019
10:00 a.m. – 12:00 p.m.
SCAG Downtown Office – Policy Room B
900 Wilshire Blvd., 17th Floor
Los Angeles 90017

Agenda

Introductions

Receive and File
CALCOG Status Update re. Proposed SAFE Vehicle Rule

Discussion Items

1. Policy Committee Outlook
   - Sarah Jepson
2. SCAG Model Overview and Status Update
   - Hsi-Hwa Hu
3. Update to the Framework for Performance
   Measurement of Transportation System and Current
   (Base Year) System Performance Condition
   - Tarek Hatata
   - Attachment
4. Growth Forecast Principles
   - Jason Greenspan
5. Connect SoCal Aviation Element
   - Hiroshi Ishikawa
   - Attachment
6. Future Agenda Items
   - TWG

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Technical Working Group

Receive and File
Proposed SAFE Vehicles Rule Moves One Step Closer to Finalization

With submission to the federal Office of Management and Budget (OMB) in May 2019, the proposed SAFE Vehicles Rule moved one step closer to finalization. This is one of the last steps in the federal rule making process. OMB is the agency responsible for regulatory policy, including coordination and review of all significant Federal regulations by executive agencies. The OMB review averages approximately 90-days before final rule making; although, it is possible that the review move faster or slower than 90-days. Under this schedule, as previously stated by U.S. EPA Administrator Wheeler, the final SAFE Vehicles Rule is currently anticipated early Summer 2019.

17 Major Automakers Urge NHTSA/EPA & Governor Newsom to Find Middle Ground

Seventeen automakers sent a letter (attachment 1) to President Trump expressing the auto industry’s opposition to the proposed SAFE Vehicles Rule. The carmakers called on U.S. EPA and U.S. DOT to jointly promulgate a final rule that results in broad support, arguing it would provide stability and increased affordability by allowing the industry to proceed without fear of litigation – note, ARB is on record stating they will litigate the final rule. The letter urged President Trump to resume negotiations with the California Air Resources Board. A similar letter was sent to Governor Newsom as well.

The Trump administration rejected the automakers pleas. White House Deputy Press Secretary Judd Deere said Friday that ARB had failed to propose a “productive alternative” to the administration’s plan to ease requirements for tailpipe emissions and fuel economy standards. “We [the federal government] are moving forward to finalize a rule with the goal of promoting safer, cleaner, and more affordable vehicles,” Deere said in a statement.

Transportation California and California Laborers Join the Opposition

On June 12, 2019, Transportation California in coordination with 14 industries representing labor and trade organizations. Please see attached letter (attachment 2).

CALCOG Pens Letter to Secretary Chao and Administrator Wheeler

CALCOG on behalf of impacted regions statewide submitted the attached letter and project list (attachment 3) to highlight the proposed rule’s impacts on transportation throughout the state. As the letter states, the proposed SAFE Vehicles Rule, hampers the ability of California’s transportation agencies to deliver approximately 2,000 projects totaling more than $130 billion. These projects support a robust state economy and create important middle-class jobs. In addition, the proposed rule would interfere with California’s ability to deliver improved goods movement infrastructure that serves the entire nation. Other important goals—such as
congestion relief, transportation system reliability, public health, housing, environmental sustainability, and equity—also would be significantly compromised for as much as 93 percent of the state’s population.

**CARB Pens Transportation Impact Comment Letter**

In August 2018, ARB submitted 400 pages of comments on the proposed rulemaking. Although robust in nature, that submission include only a handful of pages documenting the transportation related impacts of the proposed rule. ARB has since submitted a supplemental comment letter focused primarily on the rules impacts to transportation project delivery. Please see attachment 4 for additional information.

**Joint House Subcommittee on Energy and Commerce and Subcommittee on Environment and Climate Change Hearing Set for June 20, 2019 at 10 a.m. EST (7:00 a.m. PST)**

The Subcommittee on Consumer Protection and Commerce and the Subcommittee on Environment and Climate Change of the Committee on Energy and Commerce will hold a joint hearing on Thursday, June 20, 2019, at 10 a.m. in the John D. Dingell Room, 2123 of the Rayburn House Office Building on the Trump Administration’s efforts to roll back Corporate Average Fuel Economy (CAFE) standards and carbon pollution regulations from light duty cars and trucks. The hearing is entitled, "Driving in Reverse: The Administration’s Rollback of Fuel Economy and Clean Car Standards."


For those interested, the hearing can be viewed here: [https://energycommerce.house.gov/committee-activity/hearings/hearing-on-driving-in-reverse-the-administration-s-rollback-of-fuel](https://energycommerce.house.gov/committee-activity/hearings/hearing-on-driving-in-reverse-the-administration-s-rollback-of-fuel)
June 6, 2019

The Honorable Donald J. Trump
President of the United States
The White House
1600 Pennsylvania Avenue, NW
Washington, D.C. 20500

Dear Mr. President:

Thank you for your efforts to support a vibrant and competitive auto industry in the United States by reopening the midterm evaluation for the CAFE and Greenhouse Gas rulemaking. Without question, market conditions have changed materially since 2011. Relative to expectations, fuel prices are far lower, consumers are buying more SUVs and pickups, and the adoption rate of alternative powertrain vehicles has been slower than anticipated. Thus, your decision to review and update future auto standards was the proper choice.

As you know from many conversations with us and others in the auto sector, the question of the right level of regulation is complex. What works best for consumers, communities, and the millions of U.S. employees that work in the auto industry is one national standard that is practical, achievable, and consistent across the 50 states. In addition, our customers expect continuous improvements in safety, efficiency, and capability. For these reasons, we support a unified standard that both achieves year-over-year improvements in fuel economy and facilitates the adoption of vehicles with alternative powertrains.

We strongly believe the best path to preserve good auto jobs and keep new vehicles affordable for more Americans is a final rule supported by all parties—including California. Such a final rule would provide the necessary structure and compliance tools to achieve annual fuel economy improvements midway between the existing standards and the preferred path outlined by your Administration last summer. The final rule would cover model years 2021-2026 and include flexibilities that promote advanced technology for the sake of long-term environmental gains and U.S. global competitiveness. We encourage both the federal government and California to resume discussions and to remain open to regulatory adjustments that provide the flexibility needed to meet future environmental goals and respond to consumer needs.

For our companies, a broadly supported final rule would provide regulatory certainty and enhance our ability to invest and innovate by avoiding an extended period of litigation and instability, which could prove as untenable as the current program. This would also preserve vehicle affordability and help advance our shared national interest in America’s manufacturing and innovation leadership.

Striking the proper balance will not be easy, but we know with your leadership it can happen. We are eager to work with you to advance this outcome and strengthen our economy and technological leadership.
Once again, thank you for all you have done for our industry and your commitment to maintain our country’s role as an automotive leader, bolster the U.S. economy, and support American workers and their families.

Sincerely,

Aston Martin Lagonda, Ltd.
BMW North America
Ford Motor Company
General Motors Company
Honda North America, Inc.
Hyundai Motor America
Jaguar Land Rover North America, LLC
Kia Motors America
Mazda North American Operations
Mercedes-Benz USA, LLC
Mitsubishi Motors North America, Inc.
Nissan North America, Inc.
Porsche Cars North America, Inc.
Subaru of America, Inc.
Toyota Motor North America, Inc.
Volkswagen Group of America
Volvo Car Corporation

CC: The Honorable Elaine L. Chao, Secretary of Transportation
The Honorable Andrew Wheeler, Administrator U.S. Environmental Protection Agency
The Honorable Lawrence Kudlow, Director National Economic Council
June 6, 2019

The Honorable Gavin Newsom
Governor
State of California
State Capitol
Sacramento, CA 95814

Dear Governor Newsom:

We are writing with a desire to resurrect discussions on light-duty vehicle greenhouse gas standards. We also have written President Trump.

California has a long-standing history of promoting automotive innovation and environmental leadership. Our companies collectively have a significant presence in your state, with headquarters, research and testing facilities, and distribution hubs, including port operations. For many years, we have collaborated with the Air Resources Board to produce cleaner and greener vehicles—including building the nation’s most robust plug-in and fuel cell electric vehicle market—and we share a commitment to continued reductions in greenhouse gas emissions.

As you know, both California and the federal government played an instrumental role in establishing the One National Program, which has produced significant greenhouse gas emission and criteria pollutant reductions.

It is our view that the best way to ensure continued success is a final rule supported by all parties—including California—that includes annual reductions in greenhouse gas emissions midway between the existing standards and the preferred path outlined in the recent Environmental Protection Agency proposal. The final rule would also include flexibilities that promote advanced technology for the sake of long-term environmental gains and U.S. global competitiveness. This solution will yield greater nationwide greenhouse gas emission reductions than a bifurcated system.

We urge both California and the federal government to resume discussions, because avoiding protracted litigation and uncertainty is good for all parties, including consumers, and for the environment. We know that reaching an agreement has been challenging, but the stakes are too high and the benefits too important to accept the status quo. Despite the status of discussions, we encourage both California and the federal government to remain open to regulatory adjustments that provide the flexibility needed to meet future environmental goals and respond to consumer needs. For our companies, a broadly supported final rule would provide regulatory certainty and enhance our ability to invest and innovate by avoiding an extended period of litigation and instability, which could prove as untenable as the current program.

Your leadership can help facilitate a resolution that achieves all of our collective goals.
We are committed to a common sense compromise and look forward to working with your team and the federal government to get this job done.

Sincerely,

Aston Martin Lagonda, Ltd.
BMW North America
Ford Motor Company
General Motors Company
Honda North America, Inc.
Hyundai Motor America
Jaguar Land Rover North America, LLC
Kia Motors America
Mazda North American Operations
Mercedes-Benz USA, LLC
Mitsubishi Motors North America, Inc.
Nissan North America, Inc.
Porsche Cars North America, Inc.
Subaru of America, Inc.
Toyota Motor North America, Inc.
Volkswagen Group of America
Volvo Car Corporation

CC:  Xavier Becerra, Attorney General, State of California
     Mary Nichols, Chair, California Air Resources Board
June 12, 2019

Honorable Members
California Congressional Delegation
Washington, D.C. 90510

Re: Significant Negative Impacts to Transportation Funding and Projects from the Proposed Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks

Dear Honorable Members,

The undersigned businesses and organizations, representing the transportation industry and workforce that builds, repairs and maintains California’s statewide transportation system, write to convey our significant concerns with the proposed rulemaking which would rollback national fuel-efficiency standards and result in a wide variety of disastrous impacts in California and across the nation. The proposed rulemaking would put nearly 2,000 transportation infrastructure improvement projects, totaling over $130 billion at risk of project delivery delays, or loss of funding in California and would have severe impacts on tens of thousands of well-paying construction jobs and the overall economy. If the rule were finalized in 2019, approximately $28 billion would be at risk in the first year alone. These impacts are in addition to the more obvious impacts such as increases in carbon dioxide and nitrogen oxides emissions from less fuel-efficient vehicles (15 million metric tons by 2030 and 763 million more tons per year by 2030, respectively) making our air dirtier and reducing quality of life in the Golden State.
Specifically, the U.S. Environmental Protection Agency (EPA) and the National Highway Traffic Safety Administration (NHTSA) have proposed the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks to amend existing Corporate Average Fuel Economy (CAFE) standards and establish new standards for model years 2021 through 2026. If finalized, by changing the fundamental assumptions of vehicle fuel-efficiency, the SAFE Rule would invalidate California’s air quality emissions model (known as EMFAC) which is used by the State to meet the Federal Highway Administration’s (FHWA) transportation planning requirements. Without a valid air quality conformity model, the State and regional transportation planning agencies in non-attainment areas would be unable to obtain federal approval or make modifications to specified transportation projects in the pipeline (see attached map for information on potentially impacted areas). While the State would endeavor to update the EMFAC model, the California process would take up to 12 months, and regions would also need another 1 to 2 years to complete air quality planning work necessary to obtain EPA approval before transportation projects could resume.

While we understand the proposed rule is purported to save Americans $500 billion a year in societal costs, we are very troubled that EPA and NHTSA failed to include an analysis of the impacts the proposed rule would have on transportation projects, on well-paying construction jobs, and on small and disadvantaged businesses. Our analysis shows that it would put $130 billion in transportation funding at-risk in California alone. FHWA reports that every billion invested in transportation infrastructure supports 13,000 jobs. Should the rule become final, tens of thousands of jobs will be impacted in California. Moreover, should fuel-efficiency of our passenger vehicles and light-duty trucks decrease, construction workers and the businesses that employ them will experience increased costs due to paying more at the pump. We are also very concerned that the SAFE Rule would also add increased pressure on California businesses to reduce GHG emissions and address climate change from other sources if vehicles become less fuel-efficient.

As you know, California recently evaluated various options for increasing state transportation funding in recognition of an identified $130 billion state and local funding shortfall just to repair and maintain our existing transportation infrastructure, let alone our capital needs to expand the existing multi-modal transportation network to accommodate mobility demands and economic and population growth. The dismal condition of our highways, roads, bridges, transit systems, and other essential components such as sidewalks and bike lanes that support a range of mobility options in the state was stifling the economy, costing nearly 40 million Americans to sit in traffic to get to and from school, work, shopping, medical care, recreational activities, and put the traveling public’s safety at-risk. The condition of our transportation infrastructure hampers national security, public safety, and the movement of goods, particularly from California’s ports of entry which serve the rest of the country. The result of that policy making effort – Senate Bill 1: The Road Repair and Accountability Act of 2017 – invests over $5 billion in state revenues annually to rebuild and make safer California’s transportation network and deliver more reliable mobility options. California voters went to the polls in November 2018 and confirmed that they support transportation tax increases when those funds are protected and dedicated to transportation and invested in every single community in the state. After years of sustained debate and negotiation, the proposed SAFE Rule puts all of this at-risk and runs counter to the will of California voters.

The Trump Administration and leaders of both parties in Congress have indicated that increased funding for infrastructure is a priority. Action to finalize the SAFE Rule as proposed in August 2018 would be entirely
inconsistent with statements of support for investing in the nation’s vital infrastructure. Therefore, the undersigned organizations and businesses are strongly opposed to the proposed rulemaking as currently drafted and implore the California Congressional Delegation to work together with the Trump Administration so that the impacts are fully understood and mitigated in the rulemaking. No further action should be taken until a solution that allows vital transportation infrastructure projects to move forward (a grace period of at minimum 24 months to allow states to update models prior to taking effect and/or support for the House Transportation Housing and Urban Development Appropriations bill) has been incorporated into any rulemaking.

Respectfully,

/s/

Jon P. Preciado
Southern California District Council of Laborers

Jose Mejia
California State Council of Laborers

Augie Beltran
Northern California Carpenters Regional Council

Wes May
Southern California Contractors Association

Emily Cohen
United Contractors

Chad Wright
Laborers-Employers Cooperation and Education Trust

Michael Quigley
California Alliance for Jobs

John Hakel
Southern California Partnership for Jobs

Tim Cremins
International Union of Operating Engineers

Gary Hambly
California Construction and Industrial Materials Association

Russell Snyder
California Asphalt Pavement Association

Brad Diede
American Council of Engineering Companies

Peter Teteishi
Associated General Contractors

Kiana Valentine
Transportation California

Richard Lambros
Engineering Contractors’ Association
June 14, 2019

The Honorable Elaine L. Chao
United States Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

The Honorable Andrew Wheeler
Administrator
United States Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

RE: Significant concern regarding potential transportation impacts resulting from the Proposed NHTSA/U.S. EPA’s Safer Affordable Fuel Efficient (SAFE) Vehicles Rule for Model Years 2021-2026

Dear Secretary Chao and Administrator Wheeler:

CALCOG is an association of Councils of Governments (COGs), Congestion Management Agencies (CMAs) and Regional Transportation Planning Agencies (RTPAs) and includes all eighteen Metropolitan Planning Organizations (MPOs) that are responsible for the development and implementation of the regional transportation plan and transportation conformity. The California Air Resources Board previously provided comments on the environmental, public health, and equity concerns raised by the rule. This letter highlights potential transportation impacts identified since the close of the rulemaking comment period.

The proposed SAFE Vehicles Rule, which would roll back national fuel-efficiency standards, hampers the ability of California’s transportation agencies to deliver approximately 2,000 projects totaling more than $130 billion. These projects support a robust state economy and create important middle-class jobs. In addition, the proposed rule would interfere with California’s ability to deliver improved goods movement infrastructure that serves the entire nation. Other important goals—such as congestion relief, transportation system reliability, public health, housing, environmental sustainability, and equity—also would be significantly compromised for as much as 93 percent of the state’s population.

A list of potential projects affected by the Rule by Metropolitan Planning Organizations (MPOs) and rural non-attainment region is attached to this letter.
To prevent these impacts, we request U.S. DOT in coordination with U.S. EPA reconsider the proposed rule to account for impacts it would have on critical infrastructure project delivery. In particular, we ask that appropriate measures be taken to ensure that, consistent with the federal transportation conformity rule, current planning and programming documents and those under development using EMFAC2014 (California’s air quality emissions model), remain valid irrespective of the final rule.

How does the proposed rule impact non-attainment MPO and non-attainment rural areas’ ability to complete conformity determinations?

Finalization of the proposed rule invalidates California’s air quality emissions model (EMFAC2014), which is used to make transportation conformity determinations. As a result, non-attainment MPOs and rural areas would be required to wait for a new, federally-approved model before completing the required transportation conformity determination. This puts strict limitations on the completion of transportation projects throughout the state. We anticipate updating the air quality emissions model and associated air quality planning work may take three years to complete. In the meantime, it is important that existing programming and planning documents continue to be considered valid.

We estimate a minimum three-year transition period would be needed in order to avoid any project delays. If the final rule does not include a sufficient transition period, projects subject to transportation conformity, like the State Route (SR) 49 Widening project in Nevada county, SR 55 Congestion Relief Project from I-5 to SR 91 in Orange County, I-5/SR 91 Express Lanes Connector in Riverside County, San Bernardino’s West Valley Connector, and three projects in San Diego County, (1) Carlsbad Village Double Track in San Diego County, (2) Del Mar Bluffs Design and Installation of Bluff Stabilization Measures, and (3) Palomar Grade Separation (all currently in project delivery), will be unable to complete the NEPA process until a new emissions model is approved by U.S. EPA. For these projects, project delivery delays may occur immediately. In addition, without a transition period, adoption of regional transportation plans in the following areas would be at risk: San Diego Association of Governments (2020), Sacramento Area Council of Governments (2020), Southern California Association of Governments (2020), Butte County Association of Governments (2020), and the Metropolitan Transportation Commission (2021). For these MPO regions, the absence of a three-year transition period may force them to enter the 12-month lapse grace-period, putting strict limitations on the delivery of transportation projects within these regions.
**What types of action does the Rule affect?**

The proposed rule threatens the ability of 14\(^1\) of the state’s 18 MPOs and eight\(^2\) rural non-attainment counties’ to obtain federal approval for any of the following actions: (1) adoption of a new Regional Transportation Plan (RTP), (2) adoption of a new Federal State Transportation Improvement Program (FSTIP); (3) amendments to projects listed in the RTP or FSTIP not exempt from transportation conformity; and, (4) NEPA approval for projects not exempt from transportation conformity. California’s rural non-attainment areas may also face project delivery delays. Under federal law, each federal approval for the actions listed above requires a new transportation conformity determination.

A map of the impacted regions is included with this letter.

To prevent delays in the delivery of California’s transportation system that will be felt nationwide, we request U.S. DOT coordinate with U.S. EPA and the California Air Resources Board to reconsider the proposed rule. Should you have any questions please contact Tanisha Taylor. She can be reached by email at taylor@calcog.org.

Sincerely,

BILL HIGGINS
Executive Director

Attachments (2)

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1 Butte County Association of Governments; Fresno Council of Governments; Kern Council of Governments; Kings County Association of Governments; Madera County Transportation Commission; Merced County Association of Governments; Metropolitan Transportation Commission/Association of Bay Area Governments; Sacramento Area Council of Governments; San Diego Association of Governments; San Luis Obispo Council of Governments; Southern California Association of Governments; Stanislaus Council of Government; San Joaquin Council of Governments; Tulare County Association of Governments

2 Amador, Calaveras, Tuolumne, Mariposa, Mono, Tehama, Plumas, and Nevada
AREAS SUBJECT TO CONFORMITY REQUIREMENTS
Updated: 4/20/2016
CALIFORNIA
Metropolitan Planning Organizations (MPOs)
and
Regional Transportation Planning Agencies (RTPAs)

**RTPAs within MPOs**
**MPO Areas**
**Non-MPO Rural RTPA Areas**

1. AMBAG includes SCCRITC, TAMC, and SBCOG. All retain RTFA status.
2. MTC covers a nine county region.
3. SACOG is the RTPA for Sacramento, Sutter, Yolo, and Yuba Counties. It is the MPO for the federally designated ozone non-attainment area in Sacramento, Yolo, Yuba, Sutter, Placer, and El Dorado Counties. Placer and El Dorado Counties retain RTFA status up to the crest of the Sierras.
4. SCAG covers a six county region. Five of which are County Transportation Commissions: LACMTA, OCTA, RCTC, SBTC, and VCTC.
June 17, 2019

Mr. Christopher Lieske  
U.S. Environmental Protection Agency  
EPA Docket Center (EPA/DC)  
EPA West, Room B102  
1301 Constitution Avenue NW  
Washington, D.C. 20460

Mr. James Tamm  
National Highway Traffic Safety Administration  
U.S. Department of Transportation  
West Building, Ground Floor, Room. W12–140  
1200 New Jersey Avenue, SE  
Washington, D.C. 20590


RE: Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years  
2021-2026 Passenger Cars and Light Trucks – Transportation Conformity  
Implications

Dear Mr. Lieske and Mr. Tamm:

I am writing to ensure that you are aware of the potentially serious consequences if  
the “Safer Affordable Fuel-Efficient” (SAFE) rule is finalized, including its provisions  
purporting to preempt California’s long-standing zero emission vehicle programs. The  
United States Environmental Protection Agency (U.S. EPA) and the National Highway  
Traffic Safety Administration (NHTSA) have indicated they may finalize the rule this  
summer. That would have serious implications for public health and for transportation  
infrastructure projects. The rule results in dirtier cars, for years to come; this means  
that transportation projects that increase use of these cars may often result in greater  
emissions – and so be in conflict with state and federal air quality goals. These  
conflicts (referred to as “conformity” issues) may disrupt transportation funding, with  
large negative consequences for jobs and local governments, as well as undermining  
California’s air quality plans.
Although the California Air Resources Board (CARB) identified many of these issues in its prior comments on the proposed rule, the initial comment period was inadequately short, and many critical analyses were not provided to the public. From continued analysis after the close of the comment period, we have identified additional impacts of the rule and thus are submitting this supplemental comment that is “of central relevance to the rule making” (42 U.S.C. § 7607(d)(4)(B)(i)) to supplement the record. These issues relate to how SAFE finalization will destabilize key transportation and public health planning activities.

Transportation emissions are the lion’s share of air pollution in California. This means that transportation projects can have substantial effects on air pollution because they can change how much people drive. In general, the dirtier cars are, the more air pollution certain transportation projects can emit over time. Because these projects last for decades, estimating these project-related emissions is important to ensuring air quality plans stay on track.

Accordingly, the federal Clean Air Act links transportation planning and public health through the transportation conformity program, which is intended to ensure that federally funded transportation projects conform to state implementation plans to attain air quality standards. (See 42 U.S.C. § 7506). As you know, these determinations must be based upon “the latest emission estimation model available” (40 C.F.R. § 93.111(a)) and reflect the “most recent planning assumptions in force at the time the conformity analysis begins” (40 C.F.R. § 93.110(a)).

Transportation conformity and state implementation plan (SIP) development in California depend upon a growing share of zero emission vehicles (ZEVs) in the vehicle fleet. This is because, as CARB discussed in its initial comments at length, ZEVs provide meaningful reductions in criteria pollutants, beyond Low Emission Vehicle (LEV) standards, which should be accounted for in emissions and transportation planning. These benefits grow over time as the ZEV regulation (including likely future amendments to that regulation) supports greater ZEV penetration and commercialization in the California fleet; indeed, accelerating commercialization of ZEV technology in both light- and heavy-duty sectors is critical to meeting federal and state air quality mandates and climate goals.

Transportation conformity analyses also are rooted in the growing share of ZEVs within the fleet; without increased ZEV penetration, transportation projects may have greater

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air pollution impacts than currently modeled. Therefore, the California EMIsMissions FACtor (EMFAC) model reflects CARB’s Advanced Clean Car (ACC) regulation including the Zero-Emission Vehicle (ZEV) mandate.

U.S. EPA and NHTSA’s proposal to preempt CARB’s GHG and ZEV regulations jeopardizes attainment of the SIP and conformity for critical transportation projects. This proposal would call into question whether projects and plans set to be implemented can remain in conformity going forward. ² Certainly, SAFE finalization would call into question how projects may demonstrate conformity because conformity determinations may no longer reflect the latest planning assumptions with regard to ZEV vehicles.

Emissions from transportation dominate California’s air pollution mix, so addressing these emissions without the current ZEV rules will raise long-lasting challenges to conformity and SIP planning. Because transportation projects can last decades, marked changes in ZEV penetration rates resulting from SAFE may result in very different emissions impacts from these projects than forecasted earlier in the planning process, especially in later years when ZEV penetration was projected to further increase. Put simply, a highway project that increases vehicle use might be consistent with air quality needs if cars are getting commensurately cleaner; but if cars are no longer moving towards zero emissions, the project will be substantially dirtier, and potentially inconsistent with the air quality plan.

Necessary model updates and SIP revisions alone are complex, and may take years to complete, and transportation projects and air quality planning will be disrupted in the interim. In the longer term, the substantive challenge of addressing increased emissions will be hard to meet. These major consequences threaten to imperil critical infrastructure planning and air quality planning efforts.

This problem will potentially undermine transportation planning as well, including many billions of dollars of projects now in the pipeline, because they may not be able to demonstrate conformity. Projects intended to move freight, improve connectivity, and get people to work may well be disrupted if they can no longer demonstrate they

² We note that the conformity model used elsewhere in the country, MOVES, may face similar issues. Unlike EMFAC, which models emissions based on aggregated emissions over drive cycles, MOVES uses Vehicle Specific Power (power per unit mass, or vehicle specific power - VSP) to model criteria emissions where VSP is a function of vehicle aerodynamics, road grade and road load. For example, under MOVES assumptions, higher VSP results in higher emissions. The SAFE rule, which would eliminate the gradual increase in fuel efficiency requirements, will result in vehicles requiring more power to operate which in turn will contribute to higher GHG and possibly criteria emissions. As a result, it might be necessary for U.S. EPA to revisit the MOVES model if the SAFE rule is adopted.
are consistent with air quality needs. This rule will therefore also put substantial pressure on attainment of air quality standards, and likely require revisions to the California SIP, including new measures, if ZEV-related reductions are not assured.  

Placing this burden upon the states is in conflict with the Clean Air Act's cooperative federalism framework (see 42 U.S.C. § 7401) and further demonstrates the irrationality of the SAFE proposal. The Regulatory Impact Analysis for SAFE did not consider these impacts; nor did the National Environmental Policy Act (NEPA) documents despite the environmental impacts of changes to major transportation projects; and the agencies did not conduct a federalism consultation with the states per Executive Order 13132 to consider the impacts of affecting critical state/federal transportation projects. All these matters were required to be addressed; instead, the agencies failed to incorporate these issues into their proposal or to seek comment upon them.

SAFE should, therefore, not be finalized. It is arbitrary and inappropriate for the federal agencies to, on the one hand, mandate that the states work hard to attain air quality goals, and to model transportation impacts on those goals based on the latest planning assumptions and, with the other hand, undermine the tools necessary to make progress towards those goals by weakening critical public health protections.  

You may contact Mr. Kurt Karperos, Deputy Executive Officer, California Air Resources Board, at (916) 322-2739 or kurt.karperos@arb.ca.gov to discuss any of these issues.

Sincerely,

Richard W. Corey
Executive Officer
California Air Resources Board

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3 Accurate modelling is critical to the adequacy of Clean Air Act plans and conformity determinations (See, e.g., Association of Irritated Residents v. U.S. E.P.A. (9th Cir. 2012) 686 F.3d 668, 677).

4 U.S. EPA is proposing many rulemakings which are collectively undermining air quality planning and attainment. CARB has opposed these ill-founded efforts, but their collective impacts, if finalized, will further amplify the damage done by SAFE to the conformity and SIP processes. See, e.g., Comments of the California Air Resources Board on the Advance Notice of Proposed Rulemaking, "Increasing Consistency and Transparency in Considering Costs and Benefits in the Rulemaking Process"; Docket No. EPA—HQ—OA-2018-0107; Comments of the California Air Resources Board Responding to The United States Environmental Protection Agency Request for Comment on Standards of Performance for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced-Air Furnaces: Proposed Amendments, Docket No. EPA-HQ-OAR-2018-0195.
Technical Working Group

Agenda Item 3
2020 RTP/SCS Performance Measures

June 20, 2019
Los Angeles, California
Today, we will …

- Establish the purpose of performance measurement
- Discuss general approach to developing performance measures
- Present transportation-specific performance measures that relate to the 2020 SCAG RTP/SCS
- Answer your questions
The purpose of performance measurement

- All plans have goals they aim to achieve

- Performance measures should communicate the degree to which goals are achieved to decision makers and stakeholders:
  - “What you cannot measure, you cannot manage and improve”

- Therefore, policy goals need to be represented by quantifiable performance measures

- Measures often do not “exactly” reflect goals – sometimes multiple measures may be needed

- To the extent possible, performance measures should not change much so that we can monitor trends over time

- For the plan, performance measures for the 2040 horizon year will compare the 2040 performance to the 2016 (Base Year) performance based primarily on the transportation model.
2020 RTP/SCS Goals

<table>
<thead>
<tr>
<th>1. Encourage regional economic prosperity and global competitiveness.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Improve mobility, accessibility, reliability, and travel safety for people and goods.</td>
</tr>
<tr>
<td>3. Enhance the preservation, security, and resilience of the regional transportation system.</td>
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<td>4. Increase person and goods throughput and travel choices within the transportation system.</td>
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<tr>
<td>5. Reduce greenhouse gas emissions and improve air quality.</td>
</tr>
<tr>
<td>7. Adapt to a changing climate and support an integrated regional development pattern and transportation network.</td>
</tr>
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<td>8. Leverage new transportation technologies and data-driven solutions that result in more efficient travel.</td>
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<td>9. Encourage development of diverse housing types in areas well supported by multiple transportation options.</td>
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## Transportation-Specific Goals

<table>
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The 2016 RTP/SCS had one or more performance measures for all transportation-specific goals

<table>
<thead>
<tr>
<th>2016 RTP/SCS Performance Measure (Plan and on-going system monitoring measures)</th>
<th>2. Improve mobility, accessibility, reliability, and travel safety for people and goods.</th>
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</thead>
<tbody>
<tr>
<td>Criteria pollutant and greenhouse gas emissions</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Mode Share</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transit trips per capita</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Person delay per capita</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Person hours of delay by facility type (mixed flow, HOV, arterials)</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Truck delay by facility type (highways, arterials)</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Travel time distribution for transit, SOV, and HOV modes for work and non-work trips</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highway non-recurrent delay for mixed flow and HOV lanes</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
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</tr>
</thead>
<tbody>
<tr>
<td>Mode share for work trips</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Travel time to work</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Lost lane miles for highways and percent seat miles utilized for transit</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Variability of travel time for automobiles</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Variability of travel time for trucks</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Collision rates by severity and by mode</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>State Highway System pavement condition</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Local roads pavement condition</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>
Examples from the 2016 RTP/SCS - Mobility Comparing Base Year, Baseline, and Plan

**FIGURE 3** Daily Person-Hours of Delay by Facility Type (in Thousands)

**FIGURE 4** Daily Per Capita Person Delay By County (Minutes)
Examples from the 2016 RTP/SCS - Accessibility Comparing Base Year, Baseline, and Plan

**FIGURE 6** Percentage of PM Peak Period Home-Based Work Trips within 45 Minutes

- **Transit:**
  - 2012 Base Year: 24%
  - 2040 Baseline: 22%
  - 2040 Plan: 26%

- **High-Occupancy Vehicle (HOV):**
  - 2012 Base Year: 73%
  - 2040 Baseline: 72%
  - 2040 Plan: 79%

- **Single-Occupancy Vehicle (SOV):**
  - 2012 Base Year: 82%
  - 2040 Baseline: 82%
  - 2040 Plan: 89%
Examples from the 2016 RTP/SCS - Preservation
Future conditions depend on expenditures
Senate Bill 1 will help significantly

**FIGURE 7 Pavement Condition: State Highway System (2013)**

- Imperial: 5% Major, 6% Minor, 3% Poor Ride
- Los Angeles: 9% Major, 4% Minor, 2% Poor Ride
- Orange: 5% Major, 7% Minor, 1% Poor Ride
- Riverside: 6% Major, 5% Minor, 7% Poor Ride
- San Bernardino: 4% Major, 6% Minor, 4% Poor Ride
- Ventura: 8% Major, 7% Minor, 5% Poor Ride
- SCAG Region: 7% Major, 5% Minor, 5% Poor Ride
## Preliminary Results for 2016 Base Year
### Auto Daily Delays

<table>
<thead>
<tr>
<th>County</th>
<th>Fwy/Exp</th>
<th>HOV</th>
<th>Arterial</th>
<th>Truck Lane</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imperial</td>
<td>26,053</td>
<td>-</td>
<td>4,472</td>
<td>-</td>
<td>2,897</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>762,524</td>
<td>21,268</td>
<td>779,879</td>
<td>-</td>
<td>69,210</td>
</tr>
<tr>
<td>Orange</td>
<td>199,432</td>
<td>7,164</td>
<td>148,671</td>
<td>-</td>
<td>4,119</td>
</tr>
<tr>
<td>Riverside</td>
<td>57,620</td>
<td>1,288</td>
<td>32,331</td>
<td>-</td>
<td>17,029</td>
</tr>
<tr>
<td>San Bernardino</td>
<td>54,266</td>
<td>1,020</td>
<td>55,440</td>
<td>-</td>
<td>9,410</td>
</tr>
<tr>
<td>Ventura</td>
<td>25,140</td>
<td>1</td>
<td>21,328</td>
<td>-</td>
<td>3,768</td>
</tr>
</tbody>
</table>
Preliminary Results for 2016 Base Year
Auto PM Peak Delays … more than 50 percent of daily delay in most cases
Next Steps …

- Compute other 2016 Base Year and all of 2040 Baseline performance using the SCAG transportation model

- Define Plan components to include in model (already under way)

- Compare draft Plan performance to both baseline and base year and identify plan benefits

- Compute a benefit cost ratio of benefits (translated to dollars) by plan costs.
Technical Working Group

**Agenda Item 6**
The Aviation Element of the RTP/SCS
The SCAG Aviation Program

Hiroshi John Ishikawa, Ph.D.
Transportation Planning–Aviation Program
June 20, 2019

www.scag.ca.gov
Today’s Meeting

- Overview of SCAG region aviation system
- MPOs and regional aviation systems planning
- The aviation element of the SCAG RTP/SCS
- Passenger activity in the SCAG region and around the world
- Air cargo activity and trends
- Aviation forecasts
- Next Steps
SCAG Region’s Airport System

Busiest aviation system in the United States
- Seven commercial airports
- Over 30 reliever and general aviation airports
- Over 110 million annual passengers in 2017
- Six of the commercial airports were ranked among the top 100 for passengers departures
- Over 3 million tons of cargo in 2017
- Five of the commercial airports were ranked among the top 100 for cargo
Our Airports are Assets

- Combined, the seven SCAG Region Commercial Airports serve:
  - 300,000 passengers a day
  - Over 80 passenger airlines serve 200 nonstop destinations to almost 50 countries
  - Have 1,200 daily departures
  - Over 30 cargo carriers serve over 100 cargo destinations.
MPOs and Aviation Systems Planning

- As a metropolitan planning organization (MPO), SCAG is a surface transportation planning agency.
- The cargo and passenger activity at the airports have a direct impact on the region’s surface transportation system.
- Demand for air travel is not constrained to jurisdictional boundaries, thus airports are regional in nature.
- State law (CA Government Code Section 65081.1) requires that regions that contain a primary air carrier airport (at least 10,000 annual scheduled passenger boardings) include airport ground access improvement projects within the MPO RTP/SCS.
MPOs and Regional Aviation Systems Planning

- Federal law encourages MPOs to consult with officials responsible for other types of planning activities that are affected by transportation in the area, including airport operations [23 U.S. Code Section 134 (g)(3)(A)]
- Beyond maintaining the list of ground access projects in the RTP/SCS and the consultative relationship with airport officials, SCAG has no regulatory, planning, or operational authority over the region’s airports
- Furthermore, beyond maintaining the list of ground access projects, MPOs have leeway in terms of regional aviation systems planning and the aviation element of an RTP/SCS
Key Components of Aviation Element of SCAG RTP

- Description of Airports (commercial and GA) in the region
- **Demand Forecast (passenger and cargo)**
- Airport ground access improvements
- Economic benefits of our regional airports
Regional Plan Data Sources

2020–2045 RTP/SCS utilized multiple data sources

- Airport activity reports and economic impact studies
- Passenger surveys
- GDP, airfare, and demographic forecasts
- Academic and government reports and websites
- Data and information provided by the Aviation Technical Advisory Committee (ATAC)
Aviation Technical Advisory Committee (ATAC)

What is the ATAC?

- Members include planners, analysts, and technical experts representing airport operators, County Transportation Commissions (CTC), and other stakeholders
- ATAC provides technical expertise/input to the SCAG Aviation Program, including data/information for the Aviation Component of the RTP/SCS
- ATAC provides a space for collaboration and information sharing amongst airport operators and key stakeholders
- ATAC does not make, advocate for, or take positions on specific policy or political positions
Passenger Activity in the SCAG Region

- Regional air passenger travel has increased at an annual growth rate of 1.3% a year, from 88.5 MAP in 2000 to 110.17 MAP in 2017.
- However, the overall growth rate from 2000 to 2017 factors in depressions caused by 9/11 and the housing recession of 2006.
- From 2009 onward, air travel in the region has experienced steady growth, hitting its peak from 2012 to 2017, at an annual growth rate of 5.12% per year.
Based on a comparison with other regions, the SCAG Region:

- Is one of the more active for passenger travel at 110.17 MAP (only the NY/NJ region was higher in our comparison).
- Moreover, from 2012 to 2017, the SCAG region was one of the fastest growing regions at 5.12% annual growth (only the Bay Area was higher).
- Growth in air passenger travel was a consistent trend in all major regions.

<table>
<thead>
<tr>
<th>Region</th>
<th>2017 Passenger Total (in millions)</th>
<th>Annual Growth Rate (2012 to 2017)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCAG</td>
<td>110.17</td>
<td>5.12%</td>
</tr>
<tr>
<td>New York/ New Jersey</td>
<td>132.69</td>
<td>3.94%</td>
</tr>
<tr>
<td>WMCOG</td>
<td>73.19</td>
<td>2.43%</td>
</tr>
<tr>
<td>Chicago</td>
<td>95.93</td>
<td>1.95%</td>
</tr>
<tr>
<td>Bay Area</td>
<td>81.38</td>
<td>5.33%</td>
</tr>
<tr>
<td>Atlanta</td>
<td>103.9</td>
<td>1.71%</td>
</tr>
</tbody>
</table>
Air Cargo Activity In the SCAG Region

- Although the overall annual growth rate for air cargo (in tons) appeared relatively flat from 2000 (2.87 million tons) to 2017 (3.14 million tons), at an annual growth rate of 0.52%, air cargo activity was also volatile during that time period.
- Cargo activity was impacted by 9/11 and the housing recession.
- However, after dipping down to a low of 2.15 million tons in 2009, from 2012 (2.51 million tons) to 2017 (3.14 million tons), cargo experienced rapid growth at an annual rate of 4.6%.
Key Elements of an Aviation Forecast

Air passenger forecasts, including the FAA Terminal Area Forecast (TAF) and AECOM for the 2016 RTP/SCS, use the same core methodology.

- Dependent/Response variable: Passengers (e.g. ticket data, arrivals and departures)
- Independent/Regressor variables: Airfare, economy (e.g. GDP, personal income), and other variables (e.g. population, route, travel distance).
- The regression is normally a logarithmic (i.e. log–log) regression due in part to the coefficients being interpreted as elasticities

\[
\log(\text{Passenger}_{i-j,t}) = \beta_0 + \beta_1 \log(\text{Fare}_{i-j,t}) + \beta_2 \log(\text{Route}_{i-j,t}) + \beta_3 \log(\text{Distance}_{i-j}) \\
+ \beta_4 \log(\text{Income Origin}_{it}) + \beta_5 \log(\text{Income Dest}_{jt}) + a_{i-j} + u_{i-j,t}(1)
\]
SCAG’s Role in Aviation System Planning

- Develop and update a Regional Transportation Plan/Sustainability Communities Strategy (RTP/SCS)
- Integrate Airport Ground Access Improvement needs into the RTP/SCS
- Develop/update Regional Aviation Demand Forecast to inform Airport Ground Transportation Improvement needs
- Work with the airport authorities and transportation agencies to implement airport access improvements
- Provide a forum for coordinating regional airport issues
Next Steps

- Continue working with the region’s airports and transportation agencies
- Quarterly ATAC meetings
- Secure funding (e.g. FAA Airport Improvement Program)
- Aviation and surface transportation research projects (e.g. passenger surveys, airline surveys)
- Explore new aviation and transportation related initiatives and technologies (e.g. Uber Elevate, rail access to airports)
Thank you!
Mahalo nui loa!
Gracias!

Hiroshi John Ishikawa, Ph.D.
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213-236-1838
www.scag.ca.gov