



SUPPLEMENTAL INFORMATION ADDED AFTER POSTING OF THE AGENDA ON DECEMBER 28, 2021

V.
RPAC

January 5, 2021

TO: Regional Planning Advisory Committee

FROM: Ahron Hakimi,
Executive Director

By: Rob Ball, Deputy Director/Planning Director 
Ben Raymond, Regional Transportation Planner

SUBJECT: RPAC ITEM V. SUPPLEMENTAL – 12/24/21 ARB FOLLOW-UP MEMO
UPDATE: SB 375 GREENHOUSE GAS EMISSION REDUCTION FROM
PASSENGER VEHICLES AND ADOPTION TIMELINE FOR THE 2022 RTP

DESCRIPTION:

On December 24, 2021 the California Air Resources Board (ARB) provided a follow-up memorandum with follow-up tasks for Kern COG staff to provide information on the Technical Methodology version 2.

DISCUSSION:

On December 21, 2021 Kern COG and the 7 other San Joaquin Valley COGs had a web conference call with ARB staff. ARB shared the results from Sacramento Area COG (SACOG) Southern California Association of Governments (SCAG). ARB also provided the attached follow-up memorandum on December 24, 2021. The memo highlights remaining actions for Kern COG to submit as part of the Kern COG Technical Methodology update version 3 by the end of January 2022. Kern COG staff does not anticipate any difficulties in providing the requested changes to the SCS technical methodology. Staff plans to provide a review copy with ARB's 9 requested changes to the RPAC at their February 2, 2022 meeting.

Attachments: A. 12/21/21 ARB Slide Sacramento/LA 3rd Cycle Determination/Recommendations
B. 12/24/21 ARB/KernCOG Memorandum on Technical Methodology Version 2

ACTION:

Information

Determination & Recommendations

- **SACOG Determination:**

- Accept with Significant Concerns Regarding Implementation

- **SACOG Recommendations:**

- Deprogram Capacity Expansion Projects and Prioritize Funding for Transportation Projects that Advance SCS Implementation and Goals
- Monitor Implementation of the Adopted Transportation Project List
- Accelerating Infill to Further SCS Implementation and Goals
- State and Regional Partnership on Pricing Pilot Options
- Provide All Trend Analysis Metrics
- Improve Modeling and Data
- Analyze Induced Travel Demand

- **SCAG Determination:**

- Accept with Significant Concerns Regarding Implementation

- **SCAG Recommendations:**

- Deprogram Capacity Expansion Projects and Prioritize Funding for Transportation Projects that Advance SCS Implementation and Goals
- Monitor Implementation of the Adopted SCS Strategies, Actions, and Transportation Project List
- Accelerating Infill to Further SCS Implementation and Goals
- State and Regional Partnership on Pricing Pilot Options
- Improve GHG Benefit Estimates for 2020 SCS New Strategies
- Provide All Trend Analysis Metrics
- Improve Modeling and Data
- Analyze Induced Travel Demand

CARB / KCOG Technical Methodology Coordination Call Follow-up

December 24, 2021

This document is the follow-up to the November 8, 2021 and November 17, 2021 calls between Kern Council of Governments (KCOG) staff Rob Ball, Ben Raymond, Becky Napier, and Linda Urata; Alex Marcucci of Trinity Consultants for part of the November 17 meeting; and California Air Resources Board (CARB) staff Lezlie Kimura, Nesamani Kalandiyur, Andrew King, and John Beutler.

This document lists each discussion item below in black, with numbers corresponding to the meeting agenda. A brief summary of discussion of each item is labeled "Discussion" and shown in green. Follow-up actions are labeled "Follow-up" and are shown in red. A section of *Additional Discussion* which was not on the meeting agenda is at the end of this document.

Summary of CARB Staff's Preliminary Review of Kern Council of Government's (Kern COG) letter and document titled *Technical Methodology to Estimate Greenhouse Gas Emission Reduction for Kern COG's 2022 RTP/SCS*

The discussion items below summarized CARB staff's remaining concerns with proposed SCS quantification methods in Kern COG's technical methodology (TM) Version 2, provided on October 12, 2021, as well as suggested remedies for discussion.

Off-Model Strategies (agenda item 1)

Kern COG provided descriptions of methodologies for several off-model strategies it plans on including in its SCS. However, the methodology is not clear how each of these variables is used to estimate the GHG emissions from the respective strategies. Please provide a step-by-step emission calculation methodology, as well as a rationale for why the emissions reductions should be considered surplus/additional (e.g., going beyond existing State programs). CARB staff requests that Kern COG provide this information for each of the off-model strategies it describes in the TM.

Discussion: KCOG noted that the draft Technical Methodology is already longer than those of some other MPOs, and that their understanding was that CARB's intent is to step back from a focus on calculations. CARB staff clarified that since this is KCOG's first use of off-model strategies that there is likely to be more back and forth than is typical for other TMs. CARB staff explained the importance of understanding the planned method for quantifying each off-model strategy, concerns about more piecemeal discussions, and that the CARB technical staff (Nesamani and Andrew) are good resources for questions about off-model calculations. Trinity Consulting is developing a template for off-model strategies for the Valley MPOs which is heavily influenced by the CARB SCS Guidelines. CARB staff indicated that if Valley MPOs follow the template and include relevant sources, it would not be necessary to write a descriptive methodology in detail. (For details, see the "Additional Discussion" section)

Follow-up: KCOG indicated that they would revise several of their off-model strategies to follow the Trinity template and would follow up with CARB staff after some internal deliberations. From the December 21, 2021 meeting, CARB staff's understanding is that KCOG will complete a revised Technical Methodology and submit it for CARB staff review at the end of January 2022.

2. EV Charging Infrastructure

- a. CARB understands that Kern COG intends to include an EV charging infrastructure program as an off-model strategy. An EV charging infrastructure strategy may claim GHG reductions for increasing eVMT for Plug-in Hybrid Electric Vehicles (PHEV). Reductions from additional EV purchases would be outside the scope of this strategy. The reductions must also be surplus/additional with respect to the CARB's Advanced Clean Cars regulation. Please revise the methodology to be consistent with these guidelines.
- b. CARB understands that Kern COG plans on using the Alternative Fuel Life-cycle Environmental and Economic Transportation (AFLEET) tool to quantify emissions reductions from EV charging infrastructure. AFLEET is a lifecycle analysis tool that quantifies 'from well to wheels' GHG emissions reductions. Please articulate how you will limit GHG reductions to tailpipe emissions only.

Discussion: There was discussion of ideas for calculating eVMT and separating that from eVMT reductions resulting from State actions. KCOG staff indicated that they intend to limit reductions to increases in eVMT (i.e., they will not take credit for increases in EV sales). CARB staff suggested consulting Appendix E of the Final Sustainable Communities Strategy Program and Evaluation Guidelines. CARB staff suggests using a simple methodology of calculating how chargers will induce EV adoption, then calculating the GHG emissions reduction through EMFAC.

Follow-up: KCOG will discuss this methodology internally based on the discussion with CARB staff. A version should be submitted with the revised TM for CARB staff review.

3. Carpool/Vanpool

Kern COG names a number of rideshare/vanpool programs that it plans on including in its off-model strategy (CalVans, CommuteKern, Enterprise Vanpool, and 'other private sector vanpools as data is available'). Please provide the following:

- a. Separately describe the step-by-step calculations for quantifying GHG reductions for each of these programs.
- b. Articulate how you will avoid double-counting participation across each of these programs.
- c. Articulate how you will exclude GHG benefits from funding sources such as the AHSC Grant program.

Discussion: KCOG has not done calculations for carpools/vanpools yet. KCOG plans to use the number of riders to determine the VMT reduction and run that through EMFAC for both CalVans and Enterprise. There may also be some spillover benefits from Fastrac into LA County. CARB staff noted concerns about avoiding double counting, how to forecast growth, and concerns about taking credit for SCAG-funded programs. CARB staff noted that many Valley MPOs take credit for CalVans.

Follow-up: A version should be submitted with the revised TM for CARB staff review.

4. Employer-based Trip Reduction Program (Rule 9410)

CARB understands that Kern COG plans on modeling GHG reductions from San Joaquin Valley Air Pollution Control District Rule 9410. In the TM, Kern COG articulates how it will estimate the number of employees in the region that will work for employers subject to Rule 9410. Please provide a step-by-step calculation methodology for reducing GHG emissions and all data sources. Please provide details on how KCOG is planning to forecast the number of employees subject to Rule 9410, the average number of trips, and VMT reduced.

Discussion: CARB staff asked for greater explanation of the forecasting method and how it relates to VMT reductions. KCOG has not done this calculation yet. CARB staff recommended consulting the corresponding section of [Appendix E of the Final Sustainable Communities Strategy Program and Evaluation Guidelines](#). KCOG asked if there is a 9410 example. Trinity Consulting later indicated that they would include Rule 9410 in their off-model strategy template.

Follow-up: *It was discussed that CARB staff would send a Rule 9410 calculation example to KCOG. However, given that Trinity Consultants is planning to include Rule 9410 in their off-model strategy template and is anticipated to align with CARB's latest SCS Guidelines, CARB staff suggests that KCOG first consult the Trinity Consultants template rather than a historical example. A version of this strategy calculation should be submitted with the revised TM for CARB staff review.*

5. Telecommute

CARB understands that Kern COG plans on estimating future telecommute participation rates based on a county-wide survey. VMT reductions will be calculated based on the average home-based work trip length and GHG associated with those VMT reductions will be based on EMFAC. Please articulate how Kern COG will account for Rebound Effects (e.g., commuters may be encouraged to live further away from workplaces in the long-term; it may induce additional non-commute trips such as lunch or personal errands). For discussion on this topic, see CARB [Final Sustainable Communities Strategy Program and Evaluation Guidelines, Appendix E](#), at pg. 70-71.

Discussion: *KCOG discussed alternative methods for calculating GHG emissions reduction, based on either a change in the travel model or an off-model calculation using EMFAC. CARB staff noted that some MPOs are using each of those methods.*

CARB staff asked about consideration of the "rebound effect." KCOG is planning to model calculations after those of FCOG and may consult Appendix E of the Final Sustainable Communities Strategy Program and Evaluation Guidelines.

Follow-up: *A version should be submitted with the revised TM for CARB staff review.*

6. Pedestrian Infrastructure Improvements; Transportation System Management (TSM)/Intelligent Transportation Systems (ITS)

Kern COG plans on estimating GHG reductions from pedestrian improvements and TSM/ITS using *Moving Cooler*. The proposed simplified method of using *Moving Cooler* may not accurately estimate GHG reductions. For example, given the many TSM/ITS-related approaches to improve overall transportation system efficiency, *Moving Cooler* may not accurately capture Kern COG's specific TSM/ITS strategies. Please provide step-by-step calculation methods and key assumptions for all off-model strategies in the Technical Methodology. CARB staff recommends Kern COG refer to [Appendix E of the SCS Evaluation Guidelines](#) to develop the quantification method for these strategies.

Discussion: *CARB staff noted that Moving Cooler is getting out of date and more applicable to urban areas. Some guidance from Appendix E of the Final Sustainable Communities Strategy Program and Evaluation Guidelines could be applicable. KCOG*

noted that they work with signalization to smooth traffic flow and that their model shows emissions benefit from free-flowing traffic. [Note: The Trinity template will have a pedestrian infrastructure improvement example.]

Follow-up: *A version should be submitted with the revised TM for CARB staff review.*

7. Accessory Dwelling Units (ADUs)

Table 3 of the TM states that ADUs will be a newly quantified strategy included in the traffic model. Please provide additional details about how this strategy will be modeled.

Discussion: *KCOG said the number of expected ADUs will be calculated off-model, and the resulting number will be fed into the traffic demand model.*

Follow-up: *A version should be submitted with the revised TM for CARB staff review.*

8. Low/Zero Emission Vehicle Acquisition

CARB staff understands that Kern COG plans on including conversion of transit vehicles from fossil fuels to low- and zero-emissions technology as an off-model strategy. MPOs may include transit frequency or ridership improvements as off-model strategies. These types of strategies generally achieve GHG reductions by decreasing private automobile trips and increasing bus, subway, or train ridership. GHG reductions strictly limited to transit fleet technology conversion are outside the scope of SB 375. Please rearticulate the goal and methodology of this strategy to adhere to these guidelines.

Discussion: *CARB staff noted that GHG reductions due to changes in fleet technology would not typically be claimed as a GHG emissions reduction in an SCS. KCOG said that these are small transit agencies whose systems are not modeled, and this would be a small GHG emissions reduction. KCOG might not use this strategy.*

In a later written follow-up, CARB staff noted that this strategy would most likely not count for SB 375 GHG reductions.

Follow-up: *No follow-up is needed.*

Induced Travel

9. CARB previously requested that Kern COG provide detail on how it captures the effects of long-run induced demand in its travel model. In response, Kern COG revised the TM to include additional description of its model input validation. They also

provided a general description of the process for selecting transportation projects. CARB requests Kern COG provide additional detail, specifically:

- a. The selection criteria used for roadway expansion projects (e.g., cost, VMT inducement).
- b. The variables provided in the 'feedback loop' between the travel model and land use model (e.g., location of households, jobs, accessibility metrics, congestion level) and the time periods between iterations.

As part of the SCS submittal, CARB asks that Kern COG provide information about the changes in residential, employment, development location choices, and accessibility measures from one iteration of the feedback loop to another at the sub-regional level.

Discussion: KCOG explained the method used to account for induced travel. The feedback loop is made manually. Land use change is determined based on the level of attraction calculated for the model's grid cells. The schedule for constructing projects is based on KCOG's estimate of available funding. The VMT is calculated based on a set of final 2035 scenarios of different densities.

Follow-up: A changed or updated version should be submitted with the revised TM for CARB staff review.

Incremental Progress

10. CARB previously asked that Kern COG provide detail on how it will conduct the Incremental Progress Analysis. The TM specifies that Kern COG will use a modeling approach, conducted by a single or series of sensitivity runs with and without the changes in exogenous variables. They note that some strategies will be analysis with both on and off-model sensitivity runs. CARB requests that Kern COG provide additional detail on its Incremental Progress Analysis, specifically:

- a. The step-by-step process for conducting the analysis (especially how land use and socioeconomic characteristics will be normalized between SCS2 and SCS3),
- b. Any new factors, assumptions, or strategies that will be included.

Discussion: This was not discussed in the November meetings.

Follow-up: The Incremental Progress analysis was discussed in the December 21, 2021 meeting, but please contact CARB staff if you would like to discuss this analysis specifically for KCOG. A changed or updated version should be submitted with the revised TM for CARB staff review.

Auto Operating Costs

11. Kern COG provided the auto operating cost (AOC) value for 2035. However, it did not provide how AOC was calculated, the types of fuels included, and data sources for fuel efficiency and cost. CARB requests that Kern COG provide these details on AOC.

Discussion: CARB staff will be meeting with Alex Marcucci and with Fresno separately to discuss auto operating costs.

Follow-up: Kern COG is planning to coordinate with Fresno's treatment of auto operating costs. A changed or updated version should be submitted with the revised TM for CARB staff review.

Additional Discussion

Discussion: Alex Marcucci of Trinity Consultants has developed a spreadsheet using methodological information from [Appendix E of the Final Sustainable Communities Strategy Program and Evaluation Guidelines](#). This spreadsheet tool is intended to be something that various MPOs could use for their off-model calculations. CARB staff notes that the TM submittal does not require in-depth written explanation as long as things like a spreadsheet make clear the calculation methods. CARB staff also needs to know how the MPO intends to set the input values.