



Planners Committee

Item #5

August 1, 2013

PECAS Integrated Land Use/Transportation Model—Project and Schedule

Issue: The PECAS integrated economic land use/transportation model is in development. Local agency staff have several options to participate in the project.

Discussion: SACOG is developing an integrated economic land use/transportation model for the SACOG region. The model platform chosen for this effort is PECAS, an acronym for Production, Exchange, Consumption, and Allocation System. PECAS (and other models of its kind) attempts to model the complicated interactions of the market demand for homes and commercial buildings, transportation infrastructure and services, and land development from the perspective of economics. This analysis capability will be extremely useful for transportation planning. It will be used in conjunction with the UrbanFootprint scenario model to help develop the MTP/SCS and other planning studies. Additionally, CTC Regional Transportation Plan Guidelines specified that MPOs like SACOG “should...build formal microeconomic land use models, as soon as is practical”, and further that “land use and activity-based models should be integrated into a single modeling system – integrated land use/transportation model. This modeling approach allows planners to study the economic interactions between land use and the transportation system”. Several MPOs around the state (SANDAG, MTC, SCAG, etc.), as well as in others around the nation, are actively developing similar model systems for their respective regions.

PECAS Project Schedule:

- Project initiation—March 2013
- Update of base year model data—Completed by July 2013
- Initial setup of model system— Completed by September 2013
- Calibration and testing of model system— Completed by May 2014
- Documentation and final deliverables— Completed by June 2014

Based on the schedule for this project, the SACOG PECAS development will be finished after the regional projections and growth allocations for the 2016 MTP/SCS are complete, and the first application of the model is likely to be an evaluation of the phasing of transportation projects.

SACOG staff has developed some options for local agency participation in this project, presented in order of increasing time and commitment. For each level of participation there will be analyses and reports to review followed by one or more meetings. It is assumed that the options are cumulative (i.e. that each option includes the options above it):

- Review of final deliverables--This option would require time to read and prepare comments on the draft report with a single meeting on the draft report.
- Testing and validation--This option would involve local agency staff attending a meeting to discuss various options for model testing with SACOG staff and the consultant, and one or two meetings to look at testing results in addition to the final report.
- Model calibration--Calibration is the most complicated and involved part of the model development. In addition to the reviews and meetings mentioned above there will be a meeting with SACOG and the consultants to review the calibration plan and two or three meetings to review calibration progress.

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