

Summary Minutes of the
U.S. Environmental Protection Agency (EPA)
Second Generation Model (SGM) Advisory Panel
Public Meeting
December 9, 2005

Committee Members: Dr. Larry Goulder, SGM Advisory Panel Chair
Dr. Carol Dahl
Dr. Dallas Burtraw
Dr. Glenn Harrison
Dr. Michael Hanemann
Dr. James Opaluch
Dr. William Pizer
Dr. Adam Rose
Dr. Jim Shortle
Dr. Ian Sue Wing

Date and Time: 1:00pm – 3:00pm, December 9, 2005

Purpose: The purpose of this meeting was to discuss the revised documentation of the Second Generation Model (see “revised documentation” posted at <http://www.epa.gov/air/sgm-sab.html>). .

SAB Staff: Dr. Holly Stallworth, Designated Federal Officer

Other EPA Staff: Dr. Michael Shelby, Dr. Allen Fawcett

Other: Ron Sands, Antoinette Brenkert, Hugh Pitcher and Jay Edmonds (all of Pacific Northwest National Laboratory)

Meeting Summary

The discussion followed the issues and general timing as presented in the meeting agenda (Attachment A).

FRIDAY, DECEMBER 9, 2005

Opening of Public Meeting

Dr. Stallworth opened the meeting with a reminder of the requirements of the Federal Advisory Committee Act. Dr. Goulder thanked and complimented the EPA representatives and their modelers who worked on the revised documentation submitted to the SGM Advisory Panel in October of 2005. Dr. Goulder expressed gratitude for the recent improvements to the model's documentation. Dr. Goulder also expressed the hope that the Panel's end product would be a "self contained" final report. To get to that end product, each team will need to meld its updated recommendations with prior comments. Dr. Goulder proposed that sub-teams submit their melded and updated language by the 2nd week of January after which time Dr. Goulder would do some editing and polishing to finalize the document, hopefully by the middle of February 2006.

Each team leader was asked to speak about their recommendations on each part of the model as shown in the comments posted as a "Compilation of Comments" at http://www.epa.gov/sab/panels/sgm_adv_panel.htm. Each of the issues below will be discussed in the order presented in the above-linked "Compilation of Comments."

In addressing the issue of the revised model-structure documentation (Section I.A), the Chair asked whether there had been testing of Walras' law. The SGM team responded that the Walras law test had been implemented for quite some time.

In addressing the issue of improved documentation of data and parameters (Section I.B), one member expressed gratitude for the improvements and recommended the addition of baseline values.

In addressing the issue of improving data (Section II), a member reiterated that the GTAP database allows one to see the differences between models and to identify the source of those differences. This member emphasized that the main problem is lack of global consistency in SGM's data. Another member voiced a similar concern about whether SGM is global CGE model or whether it is a set of linked regional/country models. If the SGM is used only as the latter, some of the modelers' choices made more sense. The suggestion was made that there might be a tradeoff between consistency (across countries) and getting the most recent data within a country.

On the issue of updating the dataset (Section III.A), a member stressed the goal is achieving a global consistency, an issue not addressed in the SGM team's paper on China comparing SGM to GTAP.

On the issue of backcasting and model simulations (Section III.B), panelists did not have any new comments to offer because the revised documentation did not speak to this issue. One member emphasized the use of standard errors (which could be derived from the same sources as elasticities) for doing any kind of Monte Carlo run. Another

member mentioned that although sensitivity analysis logically comes first, backcasting or testing model specification was still highly desirable and that the modelers need to have a plan for moving in that direction.

On the issue of household utility and welfare (Section III.D), a recommendation was made to follow the state-of-the-art by using multiple representative consumers. In response, one member said the major issue is whether the aggregation problem and whether disaggregation within countries was necessary for EPA's purposes. All agreed on the need for some welfare measure like compensating variation or equivalent variation. Members discussed the issues associated with assuming a representative consumer, and different opinions were offered on whether distributional effects were of interest to EPA. The suggestion was made that the Panel propose that as a first step, the representative household model should allow for a welfare measure, e.g. EV. As a second step, the Panel ask that the EPA consider refining the representative household model so that it is more consistent with aggregation conditions described in Section III.D of the Draft Advisory. Finally, it was suggested that, for some policy applications, the use of a disaggregated structure might be needed. Panelists offered details on how to optimize over 50 years using representative consumers from 3 income groups.

On the subject of trade (Section III.C), members voiced support for recommending the Armington specification to incorporate endogenous global trading.

On the subject of production functions (Section III.E), it was noted that the Panel's recommendation (for nested CES functions) had not changed much in response to the revised documentation. The question of empirical testing for the best functional form of production function was discussed. Finally, the suggestion was made to canvass the literature for information on the types of functional forms that ensure global regularity.

On the subject of other greenhouse gases (Section III.F), one member expressed gratitude that non-CO2 emissions had been endogenized, but recommended a closer look at the data sources for non-CO2 used in SGM.

On the subject of sector-specific policies (Section III.G), a member suggested that the agriculture and forestry sector could be incorporated through the nested production function. In response, the SGM team offered details on other activities (e.g. the development of the Forestry and Agriculture Sector Optimization Model or FASOM) that will feed into SGM. A discussion ensued about the political feasibility of sequestration vis-à-vis emissions reductions. In addition, the SGM team offered details on electricity modeling efforts that were not yet incorporated into SGM. A suggestion was made that the Panel endorse the careful use of outputs from FASOM model linked into SGM.

On the subject of clarifying the Every Thing Else Sector (ETE, Appendix A), one member expressed gratitude for tremendous improvements in the documentation and explanation of this sector.

The Chair concluded the teleconference with a discussion of next steps. Panelists could expect a memo asking teams to put together a melded document that combined “old” with “new” recommendations. Assuming these melded revisions are received by mid-January 2006, the Chair will work to get out a revised Draft Advisory. The Designated Federal Officer provided further information on the process of finalizing a SAB report to the EPA Administrator.

Respectfully Submitted:

/Signed/ Holly Stallworth

Certified as True:

/Signed/ Larry Goulder

Chair

NOTE AND DISCLAIMER: The minutes of this public meeting reflect diverse ideas and suggestions offered by the Panel members during the course of deliberations within the meeting. Such ideas, suggestions, and deliberations do not necessarily reflect definitive consensus advice from the panel members. The reader is cautioned to not rely on the minutes to represent final, approved, consensus advice and recommendations offered to the Agency. Such advice and recommendations may be found in the final advisories, letters or reports prepared and transmitted to the EPA Administrator following the public meetings.