

U.S. Environmental Protection Agency

2011 GTAP Advisory Board Report

Use of GTAP in EPA analyses of climate legislation:

The U.S. Environmental Protection Agency (EPA) uses the ADAGE and IGEM CGE models in the analysis of major climate legislation. While IGEM is a single country model, ADAGE is built on the most recent GTAP data base and includes other countries/regions in addition to the U.S. ADAGE is developed and run by RTI International for the EPA.

Information on the ADAGE model is available at:

<http://www.rti.org/page.cfm?objectid=DDC06637-7973-4B0F-AC46B3C69E09ADA9>

Other models used by EPA which are based on GTAP data:

Other GTAP-based models that have been used in EPA climate analyses include: EPPA, GCAM, GFAM, GTM, G-Cubed, and Phoenix (formerly SGM).

For more information on models used for climate analysis by EPA see:

<http://www.epa.gov/climatechange/economics/modeling.html>

Research at EPA involving GTAP:

EPA's National Center for Environmental Economics (NCEE) is currently engaged in a project with Resources for the Future (RFF) to examine the competitiveness impacts of carbon dioxide pricing policies on manufacturing in the United States. Two models are being used in the project. An input-output model is used to examine the short-run impacts. A GTAP-based global CGE model (solved in GAMS) is used to examine the longer run. A recent output from this project is RFF Discussion Paper 10-47, "The Impact on U.S. Industries of Carbon Prices with Output-Based Rebates over Multiple Time Frames," December 2010.

In a separate project, NCEE's Trade and Environmental Assessment Model (TEAM) has been interfaced with the standard GTAP model. TEAM converts aggregate economic results from the GTAP model into changes in the U.S. for approximately 1,200 sectors, and reports environmental outcomes for nine pollutant categories covering 1,100 chemicals in water, air, agriculture, and hazardous waste. Model simulations have looked at the environmental effects of issues such as the worldwide removal of domestic subsidies and global trade liberalization.