Appendix C, Exhibit 4

Demographic Data
Used to Develop Motor Vehicle Emissions Budgets for the Atlanta Attainment Demonstrations

ARC periodically revises its population and employment forecasts based on best available current information. Each revision is a two-step process. First, new region-level forecasts are produced. These then become region-level controls for census tract and traffic analysis zone (TAZ) forecasts.

The most current region-level control forecasts were completed in 2006. The accompanying table summarizes the new population and employment controls for the enlarged, 20-county study area.

ARC staff were assisted in the development of these forecasts by a Technical Advisory Committee of local experts on the Atlanta Regional Economy. Chair of the Committee was Donald Ratajczak, Professor Emeritus, Georgia State University, and former Chair of the GSU Economic Forecasting Center. The committee recommended the final forecasts for use by the Commission.

The second step in the forecasting process uses mathematical models to disaggregate the region-level control forecasts to the census tract and TAZ level. TAZs are subdivisions of census tracts.

The DRAM/EMPAL models used to disaggregate the regional controls are iterative over a 5-year time period. Starting with the 2000 base, each successive 5-year forecast becomes the base for the next. First, the Cube/TP+ model analyzes base year traffic patterns and produces accessibility measures within the 20-county forecast area. Then, the DRAM/EMPAL models use that accessibility measure plus information on base-year population, employment and land use distributions to develop tract-level forecasts of those variables five years in the future. A Zonal Allocation Procedure is then used to split each tract-level forecast into the TAZs. These TAZ forecasts then become the input used by the Cube/TP+ model to produce the accessibility measures that drive the next iteration.

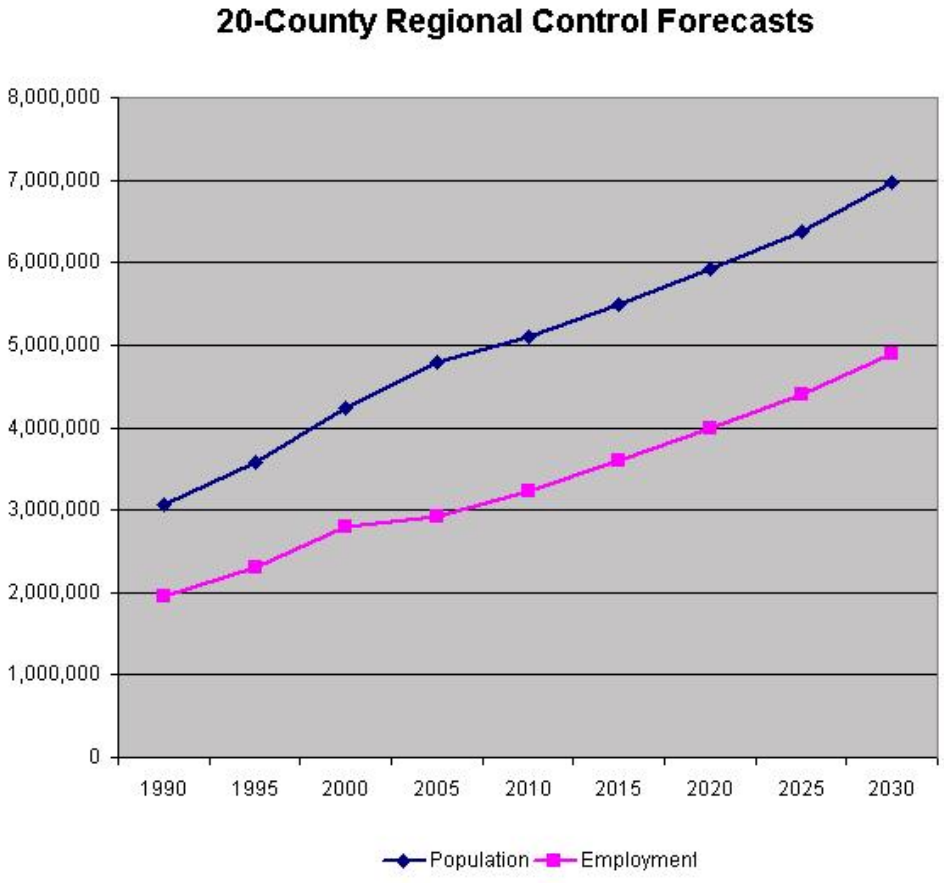
All these models are carefully calibrated based on the best and most current data available. Data used in the current effort include 2000 United States Census results, ARC estimates of employment by industry for tracts and TAZs, national forecasts of employment and population produced by Economy.Com, employment estimates and forecasts produced by the Georgia Department of Labor, results of ARC travel surveys including the SMARTRAQ household travel survey, transit on-board survey, Hartsfield air passenger survey, travel time studies, speed studies, and others. Highway projects and the schedule for their completion (primary inputs to the Cube/TP+ model) are developed as part of an extensive discussion between ARC staff, local planners, Georgia Department of Transportation and various federal agencies.

The expansion of the study-area from 13 to 20 counties required extensive effort to develop the modeling database for the 7 new counties. This expansion was expected, so in 2001 ARC produced year 2000 employment estimates by census tract for 12 nonmember counties in addition to those for its 10 member counties. Land-use data for the additional counties was produced using aerial photography taken in 2000. Population data for these counties were compiled from 2000 Census results. ARC's Cube/TP+ travel demand model was expanded to cover the new study area and was used to produce the year 2000 travel-cost estimates required to calibrate these models.

ARC also produced tract-level 2005 estimates of population and employment for the 20-county study area. These estimates supplemented the first iteration of the DRAM/EMPAL model. Development of the 2005 estimates and of the year 2000 calibration database for the non-member counties was coordinated with the affected county governments and the Regional Development Centers of which they are members.

Adjustments are made to the ARC forecasts to account for expected changes that would not be apparent from historical data. Some, like expected construction of a new highway or the restriction of development in a watershed area, are accounted for directly in the models. Others such as the completion of a major development project (Atlantic Station, for example) are incorporated as adjustments to the model output.

The forecasts were used as part of the Envision6 RTP/FY 2008-2013 TIP, adopted by the ARC Board on September 26, 2007.


20-County Regional Control Forecasts
8,000,000
7,000,000
6,000,000
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0
1990
1995
2000
2005
2010
2015
2020
2025
2030
Population
Employment

20-County Regional Control Forecasts

Year	Total Population	Total Employment
1990	3,054,230	1,954,801
1995	3,575,441	2,295,762
2000	4,228,400	2,800,657
2005	4,791,000	2,920,855
2010	5,095,900	3,231,882
2015	5,499,600	3,601,467
2020	5,923,800	3,986,191
2025	6,382,800	4,406,078
2030	6,972,200	4,887,617

Notes:

1. Population for 1990 and 2000 are U. S Census counts. Population for 1995 and 2005 are estimates produced by the Atlanta Regional Commission.
2. Employment for 1990, 1995 and 2000 are estimates by the U. S. Bureau of Economic Analysis.
3. The employment shown in this table will differ from that in the small area forecasts because this series includes proprietors. Small area data on proprietors is not available.