

## ECONOMIC PROJECTION METHODOLOGY

The projections of economic and demographic variables for the state of Alaska and the South Central region presented in this report were generated using the Institute of Social and Economic Research (ISER) MAP Econometric Modeling System. This modeling system combines an economic module, a demographic module, a fiscal module, a regionalization module, and a housing stock module.

The model is driven by an ECONOMIC DEVELOPMENT SCENARIO which is a consistent set of assumptions about levels of future basic industry activity within the state, national variables, and state fiscal policy variables. A complete listing of the assumptions for the BASE CASE scenario used to generate the BASE CASE projection is contained in an appendix.

The scenario elements were developed by the author with the assistance of an informal committee composed of representatives of the utilities participating in this study. The author proposed the elements to be included in the BASE CASE and the committee reviewed each scenario.

Although the choice of assumptions to include within a scenario is rarely unanimous, there was broad general agreement among participants on the composition of the scenario.

Many of the scenario elements involve a large degree of judgment about future domestic and international political events that are beyond the realm of economics. It is in these elements that the informal committee provided the most assistance in the formulation of the scenarios.

There are numerous combinations of scenario elements which, when combined into an ECONOMIC DEVELOPMENT SCENARIO, will yield a particular population projection for South Central Alaska. An earlier study by the author which also used the MAP Econometric Modeling System has demonstrated the range of possible population outcomes for a large number of combinations of scenario elements (*Economic and Demographic Projections for the Alaska Railbelt: 1988-2010*, ISER, 1988).

The scenario elements for basic sector economic activity are a collection of both project-specific assumptions and generic industry assumptions. A typical project-specific element is the construction and operation of a gold mine at Fort Knox near Fairbanks while a typical generic element is the assumption of employment growth in the mining industry from projects not currently identified. In recognition of the fact that myopia prevents the identification of all potential projects that may occur over the next 30 years, there has been a conscious effort in the creation of the scenarios to account for this bias through the inclusion of the generic elements. These generic elements have been developed to be as consistent as possible with historical patterns of industrial activity.

One of the most critical assumptions in each development scenario is the price of oil since this affects both the level of petroleum industry activity in the state and the level of public revenues. Petroleum revenues are important to the economy since the state of Alaska currently receives about 85 percent of its general fund revenues from petroleum taxes and royalties, and state government spending in Alaska is considerably above the national average. Consequently, state spending has a disproportionately large influence on the private economy.

Petroleum revenues are projected to decline over time, and a set of assumptions regarding state and local government responses to address this significant loss of revenue is formalized in a FISCAL SCENARIO. The main elements of a FISCAL SCENARIO are policies controlling the level of state and local government spending in the face of reductions in revenues, determination of state and local government wage rates, re-imposition of a state personal income tax, and the use of earnings of the Permanent Fund including reduction of the Permanent Fund dividend.

Actual state policies to deal with the shortfall of petroleum revenues as well as the timing of their imposition are difficult to project.

However independent analyses support the conclusion that some set of policy changes similar to those reflected in the FISCAL SCENARIO will be necessary in the near future to balance the state budget as petroleum revenues decline. Of course neither the author nor the sponsoring utilities are advocating the particular sets of policies reflected in the FISCAL SCENARIO.

