



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

AUG 1 1980

MEMORANDUM FOR: Frank Young, Acting Assistant Director
Program Development
Office of State Programs

FROM: Daniel R. Muller, Assistant Director
Environmental Technology

SUBJECT: REVIEW OF FLORIDA TEN YEAR SITE PLANS - RE NEED
FOR POWER

The Utility Finance Branch has undertaken a cursory examination of the need for power discussion in the Ten Year Site Plans submitted by the Florida Electric Utilities. Specific attention was directed at the long range electrical energy forecasts prepared by the ten Florida electric utilities in recognition that the energy forecast is typically the most critical and most controversial element in the need for power determination. Their forecast of total sales to ultimate customers (GWH) result in an aggregate growth rate for Florida between 1976 and 1989 of 4.4% per annum. Comparable results by major consuming sector are: Residential 4.3%, Commercial 4.8%, and Industrial 4.3%.

The NRC requirement to perform a Need for Facility assessment has resulted in a major electricity demand forecasting effort at the Oak Ridge National Laboratory (ORNL). The work effort is focused on state level forecasts of electricity demand which offers high transfer potential to state Public Utility Commissions and state Energy Offices.

Major aspects of the research include the development of a state Level Electricity demand forecasting model (SLED), an econometric model for disaggregating state forecasts to the service area level, forecasts of peak load demand and load duration curves, and the quantification of non-price induced conservation effects.

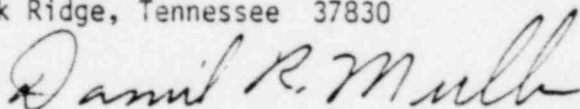
At the center of this research effort is a regional econometric forecasting model which forecasts state level electricity demand and electricity price through the year 2000. The model uses a system of simultaneous

equations and contains submodels for the residential, commercial, and industrial sectors. Structural parameters were estimated using state level data for 1955 through 1976. Explanatory variables incorporated in the model include population, number of customers by sector, real per capita income, the price of electricity and alternative energy sources, number of gas customers, and value added in the manufacturing sector. Assumptions on the future growth of fuel prices, which is a major determinant in the price of electricity, were varied to capture the uncertainty inherent in forecasting demand for electricity.

The results from this forecasting effort suggest that the Florida utilities in the aggregate are presenting a fair to conservative appraisal of the future growth potential for electrical energy sales in the state of Florida. The SLED model, under base case conditions, estimates an annual growth rate of 6.3% in electricity sales between 1976 and 1990. For the major consuming sectors, comparable growth rates are 6.5% for the residential sector, 7.6% for the commercial sector, and 3.4% for the industrial sector. It should be noted, that the Florida results reported here have not been adjusted to account for non-priced induced conservation effects.

We would recommend that if the State of Florida's Department of Community Affairs is interested in pursuing in greater detail the forecasting capabilities of the SLED model, they should contact:

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Daniel R. Muller, Assistant Director
Environmental Technology
Division of Engineering
Office of Nuclear Reactor Regulation

FROM: Corry Hutchinson Department of Community Affairs State of Florida	ACTION CONTROL	DATES	CONTROL NO. 09312
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Req review of Introduction to the 1979 reviews of the Ten-Year Site Plans (TYSP) and the 1980 TYSP			
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