UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
CONSUMERS POWER COMPANY	)	Docket Nos. 50-329
	)	50-330
(Midland Plant, Units 1 & 2)	)	

NRC STAFF TESTIMONY OF SIDNEY E. FELD ON COST OF REPLACEMENT POWER RESULTING FROM SUSPENSION

In 1971, Michigan manufacturers purchased fossil fuels for heating and power purposes equivalent to 149.3 billion kWhs of electricity. In the same year, these industries' direct use of electricity amounted to about 25.4 billion kWhs. Thus, approximately 14.5 percent of their energy needs were being met with electricity. This is slightly higher than the national average in 1971 of about 13.4.[38]

However, Michigan's dependence on fossil fuels is heavily biased toward that which is in shortest supply -- namely, natural gas. Seventy, point two billion kWh equivalent, or 47 percent of the energy used by Michigan manufacturers was produced with natural gas.[39] Thus, independent of economic growth in the state, there nevertheless does exist a vast potential source of increased demand by manufacturers in the MECS. This potential is somewhat on the order of three times the electricity demand by manufacturers in the state. For each billion cubic feet of natural gas replaced by electricity, the MECS would realize an increase in electricity sales of about .3 billion kWhs or an increase in their annual electric sales growth rate of about 0.5 percent (using 1975 as base). That is, if growth in 1976 is presently projected at 5 percent, with an additional one billion CF of conversions, it would be 5.5 percent. And one billion CF of natural gas represents only 0.4 percent of what manufacturers in Michigan used in 1971. Adding potential conversions from other fossil fuels and other customer groups would of course add further to the potential growth in electricity from substitution.

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[38] Derived from--U.S. Department of Commerce, Bureau of Census, 1972 Census of Manufacturers Fuels and Electric Energy Consumed, (Washington D.C.: Government Printing Office, July, 1973), Tables 1 and 4.

[39] Ibid., Table 4

F. S. Echols

ENVIRONMENTAL PROJECTS BRANCH NO. 2

DIVISION OF SITE SAFETY AND ENVIRONMENTAL ANALYSIS

U. S. NUCLEAR REGULATORY COMMISSION

I am employed as an Environmental Project Manager with the Division of Site Safety and Environmental Analysis, U. S. Nuclear Regulatory Commission, responsible for managing and coordinating the review of Applicant's environmental reports, analysis and evaluation of environmental impacts of nuclear power plant construction and operation and the preparation of NRC Environmental Statements in accordance with the Commission's regulation, 10 CFR Part 51, which implements the requirements of the National Environmental Policy Act of 1969. At present, I am the Environmental Project Manager for the Clinton, Hartsville, Vogtle, Barton, Harris, Surry, Arkansas and Midland Nuclear Stations.

I was awarded a Bachelor of Science degree in Nuclear Engineering in 1969 from the University of Florida. I received a Master of Business Administration degree in 1970 and a Doctor of Philosophy degree in Environmental Engineering in 1973, from the University of Florida.

While in the doctoral program majoring in Health Physics, I was employed to conduct a radiological field study of a Nuclear Power Plant. My doctoral research was conducted at the Oak Ridge National Laboratory, where I studied the differential chemoprotection of radioprotective drugs on normal and malignant tissues in various types of radiation fields.

From 1973,to 1974, I worked for an architectural engineering firm as an Environmental Project Engineer. I was responsible for the coordination and production of the Applicant's environmental reports and, in that two-year period, I completed reports for four utilities and also contributed to the PSAR effort on each with special attention to site suitability. During this period, I also taught evening courses in the Business Administration Department, Montgomery College.

In 1974, I accepted my present position as an Environmental Project Manager. I am a member of the American Nuclear Society, the Health Physics Society and the International Association for Pollution Control.

Construction activity for the next year will be in the immediate area of the reactor complex where land has already been completely altered and control procedures employed. Such activity includes concrete placement and earthwork, such as grading, excavation and backfilling. The environmental impacts due to construction expected during the next year are the normal traffic and noise associated with the project. Virtually all impacts to the environment as a result of construction have occurred. No significant adverse impacts upon the environment are expected to occur in the next year due to construction of the Midland Plant, Unit Nos. 1 and 2.

Environmental Review Schedule for Midland Plant, Units 1 and 2

The Staff believes that a ten month schedule, from November 1, 1976, will be required for the remanded environmental review of the Midland project. It should be noted that portions of the schedule are fixed by 10 CFR Part 51, e.g., 45 day comment period after CEQ Federal Register Notice is published, and a minimum of 30 days between issuance of FES and beginning of hearing. The projected review schedule is as follows:

November 1, 1976	Begin review
January 15, 1977	Issue DES
January 21, 1977	CEQ Federal Register Notice
March 7, 1977	End Comment Period
April 29, 1977	Issue FES
June 1, 1977	Hearing begins
August 1, 1977	Proposed Findings
September 1, 1977	ASLB Decision