

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
DAIRYLAND POWER COOPERATIVE) Docket No. 50-409
(La Crosse Boiling Water Reactor))

AFFIDAVIT OF SIDNEY E. FELD REGARDING
INTERVENORS' CONTENTION 22

My name is Sidney E. Feld. I am employed by the Nuclear Regulatory Commission in the Utility Finance Branch of the Division of Engineering. I prepared sections 8.2 and 8.3 (Need for Power discussion) of the Final Environmental Statement related to the operation of La Crosse Boiling Water Reactor (FES), April, 1980. My professional qualifications are attached to this affidavit. This affidavit was prepared by me.

The purpose of this affidavit is to present written testimony addressing Contention 22 admitted for litigation in this proceeding.

Contention 22 reads as follows:

CREC contends that DPC has not sufficiently promoted energy conservation programs to decrease electrical demand, such as flat rate structure, higher peak usage rates, and elimination of electrical usage promotion, which would eliminate the need for LACBWR, as the least cost-effective unit in the DPC system.

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Response

DPC and the distribution cooperatives comprising DPC are already actively involved in rate reform and the elimination of electrical usage promotion:

Rate Reform

The boards of each distribution cooperative are free to establish their own rates and rate structures with no regulation or controls imposed by state public utility commissions. The rates and rate structure are however subject to review by the Rural Electrification Administration (REA). REA's policy is to promote rate reform which results in the efficient use of electricity, but, to date, there is no requirement that the distribution cooperatives adopt these recommendations. Nevertheless, the distribution cooperatives comprising DPC already subscribe to a flat rate structure. The typical rate consists of a constant energy charge on each kwh consumed which is independent of the level of consumption. Thus small users and large users of electricity incur comparable unit costs. The rate also includes a fixed minimum monthly charge which covers the fixed costs of servicing a typical customer. Because this component of the rate is a fixed amount, it effectively reduces the unit cost per kwh as consumption increases. However, a minimum charge such as this is common throughout the industry, is supported by cost of service rate principles, and only impacts marginally on the overall flatness of the rate.

Furthermore, a survey of 23 of the 29 DPC distribution cooperatives shows that 15 of the 23, or about two-thirds, have already initiated off peak rates such that an energy charge differential is in effect between peak and off peak periods. Thus, to a large extent, the flat rate and higher peak usage rates are already in practice on the DPC system.

Elimination of Electrical Usage Promotion

DPC eliminated promotional advertising in 1971 and at present its advertising campaign is informational in nature and is principally directed at promoting load management and conservation.

In 1980, REA authorized a \$12 million loan guarantee to permit DPC to purchase a load control system. The system is designed to control electric water and space heat and will be available to customers of any member cooperative interested in participating. This, coupled with DPC's advertising program are indicative of DPC's efforts to eliminate electrical usage promotion.

Clarification of NRC's Need for Power Review in the FES

In the FES, the staff utilized an econometric forecasting model as an independent check on the reasonableness of the DPC load forecast. This model is designed to capture the effects of price induced conservation. Recently, model results were compared with actual results for a period of time extending beyond the estimation period to determine if the model was capturing the full conservation effect. This ex post forecasting was performed for 1975 and 1976 and confirms that, if anything, the model structure tends to understate

growth in electricity demand. For the State of Wisconsin, whose growth rate was used as a proxy for DPC, ex post forecasting errors in 1975 and 1976 approximated - 3.5% and - 3.7%, respectively. Although this is no assurance that future conservation savings will be adequately accounted for in the NRC model, the evidence to date suggests that the model is capturing the full effect of conservation.


Furthermore, the data base employed by the NRC in this case may be biased such that the NRC forecast range is understating the future growth potential on the DPC system. The NRC has approximated growth on the DPC system as being equal to growth projections for the State of Wisconsin. This choice reflects the fact that presently Wisconsin's share of DPC's energy requirements is about 65%. The staff's inability to capture the strong rural composition of the service area relative to the State of Wisconsin was recognized as an inherent weakness in this forecasting approach. In actuality, the rural regions of the U. S. have consistently experienced faster growth in electricity demand than the nation as a whole. Between 1965 and 1979 the electricity sales of all rural cooperatives grew at an average annual rate of 9.2% vs. 5.7% for all electricity suppliers. Similarly, in Wisconsin, between 1965 and 1978, the rural cooperatives growth rate averaged 7.3% per year whereas growth for the entire state averaged 4.6% per year. Thus, based on historic experience, one would expect growth on the DPC system to continue to exceed growth for the State of Wisconsin as a whole.

For these reasons, I believe the FES presents a fair, if not conservative, appraisal of the likely need for the La Crosse unit.

Energy conservation measures are, of course, viewed as an important factor in reducing the need for electricity. However, as indicated above, the NRC model explicitly considers price induced conservation and, given the significant increase in energy costs since 1973, provides, in my opinion, the most effective and operable method of accounting for energy conservation.

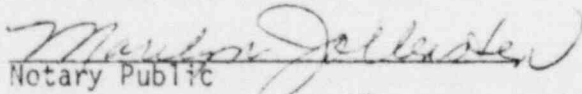
It is therefore my judgment that the measures outlined in CREC Contention 22 would not eliminate the need for the LaCrosse Boiling Water Reactor.

I have read the foregoing affidavit and swear that it is true and correct to the best of my knowledge and belief.



Sidney E. Feld

Subscribed and sworn to before me
this 16th day of May, 1980.



Notary Public

My Commission expires: July 1, 1982

PROFESSIONAL QUALIFICATIONS

SIDNEY E. FELD

U. S. NUCLEAR REGULATORY COMMISSION

I am Sidney Feld, Regional-Environmental Economist with the Utility Finance Branch, Division of Engineering of the Regulatory Staff of the Commission. I served with the Staff from July, 1973 to August, 1974, and rejoined the Staff in October, 1975. I am responsible for reviewing and analyzing Applicants' environmental reports and preparing cost-benefit sections for the Regulatory Staff's Environmental Statements. Over the last several years I have devoted most of my attention to Need for Power Analyses, and I was the principal author of the Staff's Standard Review Plan on Need for Facility. I have prepared testimony on need for power and conservation of energy issues for the hearings on Alvin W. Vogtle Nuclear Power Plant, the Shearon Harris Nuclear Power Plant, the Wolf Creek Generating Station, Midland Plant, and the Pilgrim Nuclear Generating Station Unit 2.

I received a B.B.A. Degree in Economics from the City College of New York in 1967, an M.A. Degree in Economics from the University of Rhode Island in 1969, and a Ph.D. Degree in Resource Economics from the same university in 1973. My graduate degree in resource economics focused on the application of economic theory to public resources. Areas of study included: simulation of market economic solutions; consideration of social implications such as environmental impacts; and the application of decision tools such as cost-benefit analysis.

From September, 1974 through August, 1975, I was an Assistant Professor of Resource Economics at the University of New Hampshire at Durham, New Hampshire. In this capacity, I taught courses in Resource Economics and Statistics. I also served as co-investigator on a Sea Grant research project to examine economic activity in the New Hampshire Coastal Zone.

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CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF MOTION FOR SUMMARY DISPOSITION" in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class, or, as indicated by an asterisk, through deposit in the Nuclear Regulatory Commission's internal mail system, this 6th day of June, 1980:

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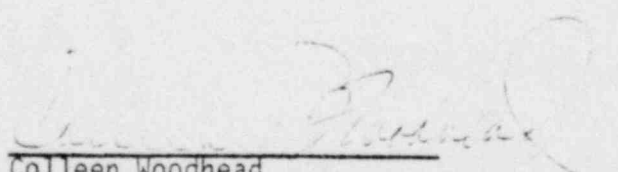
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