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 FACIL: 50-270 Oconee Nuclear Station, Unit 2, Duke Power Co.  
 50-287 Oconee Nuclear Station, Unit 3, Duke Power Co.  
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DOCKET #  
 05000270  
 05000287

SUBJECT: Comments on NRC requirement that util demonstrate availability or power supply problems or face shutdown. Simultaneous outage of facilities would create serious generating capacity shortage within util.

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MAA

January 22, 1980

Mr. Harold R. Denton  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Re: Duke Power Company's Oconee Nuclear Station

Dear Mr. Denton:

The National Electric Reliability Council (NERC)\* assessed the impact of the Nuclear Regulatory Commission (NRC) required shutdown of certain operating nuclear generating units on the RELIABILITY and ADEQUACY\*\* of bulk power supply in their respective regions of the country. NERC concluded that the simultaneous shutdown of multiple nuclear units within certain electrical areas could create critical bulk power supply problems. NERC communicated the results of this assessment to the Department of Energy's (DOE) Economic Regulatory Administration (ERA).

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\* The National Electric Reliability Council (NERC) was formed in 1968 with the stated purpose: "...further to augment the RELIABILITY and ADEQUACY of bulk power supply in the electric utility systems of North America." It consists of nine Regional Reliability Councils and encompasses essentially all of the power systems of the United States and the Canadian systems in Ontario, British Columbia, Manitoba, and New Brunswick.

\*\*RELIABILITY and ADEQUACY are two separate but interdependent aspects relating to the bulk power supply system of the electric utility industry in North America. RELIABILITY involves the security of the interconnected transmission network and the avoidance of uncontrolled cascading trippouts which may result in widespread power outages. ADEQUACY refers to having sufficient generating capacity to be able at all times to meet the aggregate electric peak loads of all customers and supply all their electric energy requirements.

NATIONAL ELECTRIC RELIABILITY COUNCIL  
Terhune Road, Research Park  
Princeton, NJ 08540  
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NERC understands that as a result of communications on this matter between DOE/EBA and NRC, the two Oconee units in South Carolina, part of the Virginia-Carolinas (VACAR) subregion of the Southeastern Electric Reliability Council (SERC), must demonstrate either equipment unavailability or power supply reliability/adequacy problems, or face shutdown by February 15, 1980. It is with respect to the power supply reliability/adequacy issue that NERC would like to offer the following comments for your consideration:

1. Fundamentally, the adequacy of electric bulk power supply depends on the existence of an amount of available generating capacity (reserves) over and above expected electric peak demand requirements. Without an adequate reserve margin, systems are forced to seek emergency assistance from adjoining systems. If sufficient generation support and the transmission necessary to deliver it are not available, mandatory demand curtailments--e.g., rotating blackouts--may become necessary. In the November 15, 1979 report of the National Electric Reliability Council on Assessment of the Overall Adequacy of the Bulk Power Supply Systems (Winter of 1979/80) we indicated that:

"The VACAR Subregion is anticipating lower-than-desirable reserves during the winter period due to the unavailability of nuclear capacity that was originally scheduled for operation during this period. . . . To mitigate any adverse conditions resulting from the unavailability of this capacity, power transfers from neighboring regions will be utilized, to the extent possible."

2. When relatively large blocks of generating capacity are removed from service in a particular area, a disproportionate stress is placed on the bulk power system as large amounts of emergency replacement power is purchased or imported from neighboring systems. Such emergency power purchases increase loadings on the bulk power transmission network, and detract from its capability to support other emergency situations, which is a fundamental reason for the existence of the interconnected network. Almost daily the network is called upon to support the sudden loss of generating units without collapse or cascading trippouts. Therefore, the simultaneous outage of a number of large generating units in any given area causes greater stresses on the network, risks the collapse of an area, and widespread outages to customers.

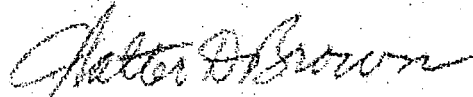
In summary, the simultaneous outage of the Oconee units would create a serious shortage of generating capacity within Duke Power Company and make it heavily dependent on neighboring systems to maintain reliability. Furthermore, in view of the reserve situation within the VACAR subregion, the availability of sufficient emergency support is questionable at best, and the simultaneous outages of the Oconee units in addition to the unavailability of other nuclear

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generating capacity originally scheduled for operation during this period, puts in jeopardy the reliability of the bulk power supply system in that portion of the U.S.

If you or your staff have any questions regarding these comments or would like to pursue any of them further, we would be happy to discuss them with you.

Very truly yours,



Walter D. Brown  
Executive Vice President

cc: R. E. Weiner, DOE/ERA  
W. R. Brownlee  
W. L. Proffitt

Note: Confirming letter to follow