ATTACHMENT 5

DUKE POWER COMPANY
POWER BUILDING
422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28201

A. C. THIES
SENIOR VICE PRESIDENT
PRODUCTION AND TRANSMISSION

P. O. BOX 2178

December 27, 1979

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

Re: Oconee Units 1, 2, and 3
Duke/VACAR Reserves
Docket Nos. 50-269, -270, -287

Dear Mr. Denton:

In your discussion with the Commission on December 12, 1979, they requested that you contact the Department of Energy concerning the effects of lessons learned (NUREG-0578) on reserve margins. In our phone conversation of December 20, 1979, you quoted VACAR-related numbers received from DOE. It appeared that DOE had utilized figures from the April, 1979 information reports, and assumed VACAR capability to be the total installed capability of all the member companies reduced only by the capability of Duke's Oconee Units 2 and 3 and VEPCO's Surry 1. These figures included McGuire 1 and North Anna 2 which are not in commercial operation and installed capability is not always available capability.

The latest available numbers obtained by phone from VACAR operating task force representatives on December 19, 1979 are shown in the attached tables.

Available capability represents installed capability reduced by scheduled maintenance outages and miscellaneous reductions. Duke has experienced over the last four years miscellaneous reductions in the output of its operating units that average 500 MW on a continuous basis. These are reductions due to problems with pulverizer mills, pumps, fans, fuel quality, feedwater heaters, turbine blades, etc. For the VACAR region as a whole, these same problems are expected to reduce capability by 1300 MW continuously. On the Duke system for the peak day of the last three winters, total outages including miscellaneous reductions have been as follows:

1979 - 2194 MW
1978 - 1694 MW
1977 - 3395 MW

Duke

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The attached tables show projected reserves for VACAR and Duke for the following situations: Table I - Duke modifies Unit 2 after Unit 1 returns to service and then modifies Unit 3 after Unit 2 returns to service; Table II - Duke modifies Unit 2 after Unit 1 returns to service and removes Unit 3 no later than March 31, 1980; Table III - Both Units 2 and 3 are taken out of service on February 15.

In my letter of December 17, 1979, I suggested a preferred schedule (Table I) which allowed for sequential shutdown, shortened the outages and did not put us into a severe power shortage situation. As a modification of our position, we may be able to accommodate a schedule allowing Unit 2 to be shut down after Unit 1 returns to service and requiring Unit 3 to be shut down no later than March 31, 1980, although this would require Units 2 and 3 to be out of service during April which would produce reserves of approximately 8%, would be very costly to our customers, and might require burning oil. We would prefer a schedule that would permit a May shutdown of Unit 3 after Unit 2 returns to service because of reserves, costs, inefficient use of manpower, and longer outage times.

It should be noted that there is some necessary hardware that is currently scheduled for delivery in late January, and the engineering packages should be ready for installation shortly thereafter.

Since the incremental improvement in safety from the two remaining modifications does not justify potentially serious disruption of the power supply in the Carolinas, we recommend that the Commission approve the shutdown of Unit 2 in February after Unit 1 returns to service with Unit 3 following Unit 2 in May as shown in Table I.

This letter provides the latest information available on the Duke and VACAR systems. If you need further information, please give me a call.

Very truly yours,

A. C. Thies

ACT/fhb
Attachments

bc: Mr. W. S. Lee
Mr. W. H. Owen
Mr. S. C. Griffith, Jr.
Mr. W. O. Parker, Jr.
Mr. H. B. Tucker, Jr.
Mr. K. S. Canady
Mr. N. A. Rutherford
Master File OS-801.01
Mr. R. L. Gill
Mr. K. R. Wilson
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Mr. J. Michael McGarry, III
Ms. A. S. Howard
Mr. P. H. Mann, Jr.
Mr. Y. W. Campbell
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Brownlee Ex Dir Secy
VACAR

TABLE I (PREFERRED SCHEDULE)

DUKE/VACAR RESERVES

Assuming: Oconee Unit 1 out through February 15
Oconee Unit 2 out February 15 through May 3
Oconee Unit 3 out May 3 through May 31

	Feb. 1980		Mar. 1980		Apr. 1980		May 1980	
	VACAR	DUKE	VACAR	DUKE	VACAR	DUKE	VACAR	DUKE
CAPACITY - April, 1979 Reports to DOE	37592	13502	37592	13502	37592	13502	37592	13502
Less: Capacity of Nuclear Units which are not in commercial operation	-2087	-1180	-2087	-1180	-2087	-1180	-2087	-1180
Capacity Retirements, Adjustments, etc.	-274	-274	-274	-274	-274	-274	-274	-274
Net Capacity Transactions	-300	+114	-300	+114	-300	+114	-300	+114
Winter 1979-1980 Capability	34931	12162	34931	12162	34931	12162	34931	12162
Scheduled Outages*	-3897	-954	-6541	-1180	-8643	-2113	-7466	-2328
Capability After Scheduled Outages	31034	11208	28390	10982	26288	10049	27465	9834
Miscellaneous Continuous Capacity Reductions**	-1300	-500	-1300	-500	-1300	-500	-1300	-500
AVAILABLE CAPABILITY	29734	10708	27090	10482	24988	9549	26165	9334
EXPECTED PEAK	25887	9679	23772	9162	20696	8044	21446	7940
RESERVES BEFORE FORCED UNIT OUTAGES MW	3847	1029	3318	1320	4292	1505	5579	1394
RESERVES %	14.9	10.6	14.0	14.4	20.7	18.7	26.0	17.6

* Includes one Oconee Unit out in February, March, April and May.
** Reductions due to problems with pulverizer mills, pumps, fans, fuel quality, feedwater heaters, turbine blades, etc.

TABLE II

DUKE/VACAR RESERVES

Assuming: Oconee Unit 1 out through February 15
Oconee Unit 2 out February 15 through May 15
Oconee Unit 3 out April 1 through April 30

	Feb. 1980		Mar. 1980		Apr. 1980		May 1980	
	VACAR	DUKE	VACAR	DUKE	VACAR	DUKE	VACAR	DUKE
CAPACITY - April, 1979 Reports to DOE	37592	13502	37592	13502	37592	13502	37592	13502
Less: Capacity of Nuclear Units which will not be in commercial operation (N. Anna 2; McGuire 1)	-2087	-1180	-2087	-1180	-2087	-1180	-2087	-1180
Capacity Retirements, Adjustments, etc.	-274	-274	-274	-274	-274	-274	-274	-274
Net Capacity Transactions	-300	+114	-300	+114	-300	+114	-300	+114
Winter 1979-1980 Capability	34931	12162	34931	12162	34931	12162	34931	12162
Scheduled Outages*	-3897	-954	-6541	-1180	-9503	-2973	-7466	-2328
Capability After Scheduled Outages	31034	11208	28390	10982	25428	9189	27465	9834
Miscellaneous Continuous Capacity Reductions**	-1300	-500	-1300	-500	-1300	-500	-1300	-500
AVAILABLE CAPABILITY	29734	10708	27090	10482	24128	8689	26165	9334
EXPECTED PEAK	25887	9679	23772	9162	20696	8044	21446	7940
RESERVES BEFORE FORCED UNIT OUTAGES MW	3847	1029	3318	1320	3432	645	5579	1394
RESERVES %	14.9	10.6	14.0	14.4	16.6	8.0	26.0	17.6

* Includes one Oconee Unit out in February, March, and May; two Oconee Units out in April.
** Reductions due to problems with pulverizer mills, pumps, fans, fuel quality, feedwater heaters, turbine blades, etc.

TABLE III

DUKE/VACAR RESERVES

Assuming: Oconee Unit 1 out through February 15
Oconee Unit 2 out February 15 through May 15
Oconee Unit 3 out February 15 through March 15

	Feb. 1980		Mar. 1980		Apr. 1980		May 1980	
	VACAR	DUKE	VACAR	DUKE	VACAR	DUKE	VACAR	DUKE
CAPACITY - April, 1979 Reports to DOE	37592	13502	37592	13502	37592	13502	37592	13502
Less: Capacity of Nuclear Units which will not be in commercial operation (N. Anna 2; McGuire 1)	-2087	-1180	-2087	-1180	-2087	-1180	-2087	-1180
Capacity Retirements, Adjustments, etc.	-274	-274	-274	-274	-274	-274	-274	-274
Net Capacity Transactions	-300	+114	-300	+114	-300	+114	-300	+114
Winter 1979-1980 Capability	34931	12162	34931	12162	34931	12162	34931	12162
Scheduled Outages*	-4757	-1814	-7401	-2040	-8643	-2113	-7466	-2328
Capability After Scheduled Outages	30174	10348	27530	10122	26288	10049	27465	9834
Miscellaneous Continuous Capacity Reductions**	-1300	-500	-1300	-500	-1300	-500	-1300	-500
AVAILABLE CAPABILITY (Oconee 1 out) 28014 9982	28874	9848	26230	9622	24988	9549	26165	9334
EXPECTED PEAK	25887	9679	23772	9162	20696	8044	21446	7940
RESERVES BEFORE FORCED UNIT OUTAGES MW 2127 -691	2987	169	2458	460	4292	1505	5579	1394
RESERVES % 8.2 all three -(7.1)	11.5	1.8	10.3	5.0	20.7	18.7	26.0	17.6

* Includes two Oconee Units out in February and March; one Oconee Unit out in April and May.
** Reductions due to problems with pulverizer mills, pumps, fans, fuel quality, feedwater heaters, turbine blades, etc.