

DUKE POWER COMPANY

ELECTRIC CENTER, BOX 2178, CHARLOTTE, N. C. 28242

L. G. DAIL  
VICE PRESIDENT,  
DESIGN ENGINEERING

July 27, 1979

Mr. L. S. Rubenstein, Chief  
Light Water Reactors, Branch 4  
Division of Project Management  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Re: McGuire Nuclear Station, Units 1 & 2  
Catawba Nuclear Station, Units 1 & 2  
Cherokee Nuclear Station, Units 1 & 2  
Perkins Nuclear Station, Units 1, 2, & 3  
File Nos: MC-1444.00, CN-1444.00  
CK-1444.00, PK-1444.00

Dear Mr. Rubenstein:

In response to your request of July 6, 1979 for information concerning the potential impacts on NRC resource needs and priorities associated with our decision to delay the commercial operation of Cherokee Units 1 & 2 and to postpone financial commitments for Cherokee Unit 3 and Perkins Units 1, 2, & 3, we are providing the following data.

Our response is conditioned upon a July 18, 1979 decision and announcement of the earliest possible fuel loading dates for our Catawba and McGuire nuclear units. The amended schedules for these units are presented in our responses to the NRC's request.

REQUEST NO. 1

Confirmation that the June 18, 1979 press release represents Duke Power Company's current plans relative to the Cherokee and Perkins Nuclear Stations.

REPLY

The following table presents Duke's current schedule for units under construction:

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<u>Plant</u>	<u>Unit</u>	<u>Fuel Load</u>	<u>Commercial Operation</u>
McGuire	Unit 1	5-80*	8-80
	Unit 2	1-82*	4-82
Catawba	Unit 1	4-83*	7-83
	Unit 2	10-84*	1-85
Cherokee	Unit 1	7-86	1-87
	Unit 2	7-88	1-89

\* Earliest possible fuel dates are indicated.

For planning purposes, the following schedule will be used for units in service after 1989:

<u>Plant</u>	<u>Unit</u>	<u>Commercial Operation</u>
Bad Creek	Unit 1 & 2*	1-90
Bad Creek	Unit 3 & 4*	1-91
Cherokee	Unit 3	1-91 or 1-93
Perkins	Unit 1	1-91 or 1-93
	Unit 2	1-95
	Unit 3	1-97

\* Engineering and long lead time purchases will be continued on Bad Creek to retain an early operation date in 1987 for Units 1 & 2 and 1988 for Units 3 & 4.

#### REQUEST NO. 2

Confirmation that Duke Power Company's forecasted annual peak load growth during the 1982-1994 period is about 4.8 percent.

#### REPLY

Duke's summer peak load is projected to grow at a slightly faster rate than the winter peak, and this peak growth is expected at a compound annual rate of about 4.8 percent.

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REQUEST NO. 3

Duke Power Company's forecasted annual peak load growth during the 1979-1981 period.

REPLY

<u>Year</u>	<u>Annual Peak Load, MW</u>
1979	10,258
1980	10,744
1981	11,400

REQUEST NO. 4

A revised summary of load, capacity, and reserves, similar to the summary enclosed with your letter of January 9, 1978, except to show hypothetical latest dates of capacity additions to assure reserves of 20 percent or greater. Use 1978 actual peaks, the forecast of (3) above, the forecasts of (2) above for all years 1982 and beyond, and assume construction of Cherokee 3 after Cherokee 2 followed by Perkins 1, 2, and 3.

REPLY

Hypothetical Case 1 presented in the attached table lists the anticipated time of service for each Duke unit, now under construction or planned, while maintaining 20 percent reserves. The sequence of construction is as specified above.

REQUEST NO. 5

A repetition of (4) except to assume that Bad Creek becomes operable after Cherokee 2 becomes operable and before Cherokee 3 is postulated to become operable.

REPLY

Hypothetical Case 2 presented in the attached table lists the anticipated time of service for each Duke unit, now under construction or planned, while maintaining 20 percent reserves. The sequence of construction is as specified above.

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REQUEST NO. 6

A description of the status of Cherokee Unit 3 construction and a clarification as to whether construction, including site preparation activities, will be stopped or just slowed down.

REPLY

Excavation of Cherokee Unit 3 is in progress and approximately 60 percent complete. Approximately 25 percent of the Condenser Cooling Water Piping has been installed. We will continue site preparation activities as follows:

- a) Unit 3 Powerhouse excavation and final foundation geological mapping,
- b) Cooling Tower yard earthwork,
- c) Erosion Control measures including drainage pipe, and
- d) Yard rail tracks and buried piping.

Construction activities will be rescheduled except for those listed above.

REQUEST NO. 7

Clarification as to whether any design effort, specifically for Cherokee 3 and Perkins 1, 2, and 3, will be continued.

REPLY

Design effort that is common to all six units will continue since the design is needed for Unit 1 at Cherokee. The design effort that is related to Cherokee Unit 3 only will be rescheduled except for the items noted in (6) above. Design effort related to Perkins Units 1, 2, and 3 will be scheduled to meet the "planned Commercial Operation" dates given in (1) above.

REQUEST NO. 8

An identification of site features and components, fully or partially fabricated, subject to your QA program and an identification of any special QA provisions that will be implemented as a result of your stated postponement of financial commitments for generating units beyond 1989.

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REPLY

There are no site features or components underway that require QA except for the design effort stated above. The postponement of Cherokee 3 and Perkins 1, 2, and 3 will require no special QA provisions to be implemented.

REQUEST NO. 9

An identification of continuing or additional measures to protect the environment relative to Cherokee 3 completed construction and any future activities.

REPLY

The environmental control measures and monitoring agreed to by Duke and the regulatory agencies in the various permits for station construction will be maintained. Assuming delays resulting in construction rescheduling on Unit 3 for an extended period of time, the affected land areas would be grassed and sediment collection ponds maintained. No additional or "special" problems are foreseen as a result of construction rescheduling. It might be noted that the "degree" or "quantity" of the environmental effects would be somewhat less during this period, but these effects would probably continue for a longer period due to extended construction time as a result of the work rescheduling. In any case, Duke sees no adverse environmental effects as a result of postponement of construction.

REQUEST NO. 10

Nominal estimates of annual costs, if any, of design effort (7), QA programs (8), environmental protection measures (9), and any other activities, such as storage, associated with the withdrawal of financial commitments for generating units beyond 1985

REPLY

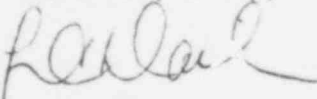
Nominal estimates of annual costs for design effort, QA programs, environmental protection measures, and other activities have not been made. As explained in our reply to (7) above, design work will be for one unit only, and is not directly applicable to Cherokee Unit 3 or Perkins Units 1, 2, and 3. At the same time, our response to (8) above indicates that there are no special QA provisions that will be implemented, and therefore no special annual costs. The environmental protection measures

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which may be necessary at Cherokee, as explained in our reply (9), would be low-cost maintenance items such as grass mowing and drainage ditch clearing. No estimates of these costs have been made. Because firm commitments have been made for only two of the six identical nuclear units as far as components and equipment are concerned, and because site work at Cherokee, as described in our reply (6), is approximately 60 percent complete, we do not anticipate any special activities which would generate annual costs associated with the rescheduling of generating units beyond 1989.

We believe this information provides the necessary engineering, quality assurance, environmental protection, and financial details associated with the rescheduling of our Perkins and Cherokee Nuclear Stations. If additional information is required, please advise us.

Yours very truly,



L. C. Dail

LCD/DBB:sd  
Atts.

cc: W. L. Porter  
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DUKE POWER COMPANY  
1977-1994 PEAK AND CAPACITY GROWTH

Year	Peak Load (MW)	Current Projection		Hypothetical Case 1 <sup>2</sup>		Hypothetical Case 2 <sup>3</sup>	
		Addition (Retirement)	Forecast Reserves %	Addition (Retirement)	Forecast Reserves %	Addition (Retirement)	Forecast Reserves %
1977 S	9,339 <sup>1</sup>		33.3		33.3		33.3
W	9,690 <sup>1</sup>		28.4		28.4		28.4
1978 S	9,472 <sup>1</sup>	(Urquhart 4G) Lee 4C	31.5	(Urquhart 4G) Lee 4C	31.5	(Urquhart 4G) Lee 4C	31.5
W	9,844 <sup>1</sup>		26.5		26.5		26.5
S	10,258		21.4		21.4		21.4
W	10,440		19.3	McGuire 1	30.6	McGuire 1	30.6
1980 S	10,744		15.9		26.9		26.9
W	10,911	McGuire 1	24.9		24.9		24.8
1981 S	11,299	(21)	20.5	McGuire 2 (21)	30.9	McGuire 2 (21)	30.9
W	11,406		19.4		29.7		29.7
1982 S	11,826	McGuire 2	25.1		25.1		25.1
W	11,880		24.5		24.5		24.5
1983 S	12,388	(69)	18.8	Catawba 1 (69)	28.1	Catawba 1 (69)	28.1
W	12,380	Catawba 1 (258)	28.2		28.2		28.2
1984 S	12,972		20.3	(258)	20.3	(258)	20.3
W	12,903		21.0	Catawba 2 (236)	29.8	Catawba 2 (236)	29.8
1985 S	13,597	Catawba 2 (236)	21.5		21.5		21.5
W	13,441		22.9		22.9		22.9
1986 S	14,248	(93)	15.3	(93)	24.2	(93)	24.2
W	14,003		17.3	Cherokee 1	26.4	Cherokee 1	26.4
1987 S	14,935	Cherokee 1	18.5	Cherokee 2	27.1	Cherokee 2	27.1
W	14,589		21.4		30.1		30.1
1988 S	15,657		13.1		21.2		21.2
W	15,197		16.5		24.9		24.9

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1977-1994 PEAK AND CAPACITY GROWTH (Cont.)

Year	Peak Load (MW)	Current Projection		Hypothetical Case 1 <sup>2</sup>		Hypothetical Case 2 <sup>3</sup>	
		Addition (Retirement)	Forecast Reserves %	Addition (Retirement)	Forecast Reserves %	Addition (Retirement)	Forecast Reserves %
1989 S	16,410	Cherokee 2	15.7	Cherokee 3	23.5	Bad Creek 1, 2, 3, 4	21.8
W	15,832		19.9		28.0		26.2
1990 S	17,198	Bad Creek 1&2	13.3	Perkins 1	25.3	Cherokee 3	23.6
W	16,502		18.1		30.6		28.9
1991 S	18,030	Bad Creek 3&4 Perkins 1 or Cherokee 3	17.9	Perkins 2	26.6	Perkins 1	25.0
W	17,201		23.6		32.7		31.1
1992 S	18,890		12.6		20.8	Perkins 2	26.1
W	17,930		18.6		27.3		32.9
1993 S	19,810	Perkins 1 or Cherokee 3	13.8	Perkins 3	21.7		20.3
W	18,710		20.5		28.8		27.3
1994 S	20,766		8.6	Bad Creek 1, 2, 3, 4	20.9	Perkins 3	20.9

<sup>1</sup> Actual loads, not estimated.

<sup>2</sup> Hypothetical Case 1 assumes on-line dates chosen as needed to maintain 20% reserves; that Cherokee 3 will follow Cherokee 2 followed by Perkins 1, 2, and 3 as stated in NRC Request 4, letter dated 7/6/79.

<sup>3</sup> Hypothetical Case 2 assumes on-line dates chosen as needed to maintain 20% reserves; that Cherokee 2 will be followed by Bad Creek 1, 2, 3, 4 followed by Cherokee 3 and then Perkins 1, 2, 3 as stated in NRC Request 5, letter dated 7/6/79.

Note: 1) Unit must be scheduled for commercial operation 3 months prior to peak in order to be considered as dependable capacity for that peak.

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