



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

7

MAR 03 1982

MEMORANDUM FOR: Commissioner Ahearne  
FROM: William J. Dircks  
Executive Director for Operations  
SUBJECT: FEBRUARY 19, 1982 REQUEST FOR DATA

Attached is the information you requested in your February 19, 1982 memorandum and some additional information you requested by telephone on LWA's and 50.12 exemptions.

A handwritten signature in cursive script, appearing to read "W. Dircks".

William J. Dircks  
Executive Director for Operations

Attachment:  
As stated

cc: w/attachment  
Chairman Palladino  
Commissioner Gilinsky  
Commissioner Bradford  
Commissioner Roberts  
OGC  
OPE  
OPA

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- (1) a. Plants going into commercial operation (table includes all plants over 100 MWe generating commercial power and plants that are currently shutdown)

	<u>U.S.</u>		<u>Non-U.S.</u>	
	<u>No.</u>	<u>MWe*</u>	<u>No.</u>	<u>MWe*</u>
Up to 1970	7	2,900	34	8,200
Jan. 1970 - Dec. 1975	43	32,400	50	25,200
Jan. 1976 - Dec. 1980	18	15,600	63	48,600
Jan. 1981 - Nov. 1981	3	3,100	18	14,800

\*Rounded to nearest hundred; two DOE reactors are not included, Hanford N-Reactor and Shippingport.

Sources:

- U.S. - The Summary Information Report (NUREG-0871); Vol. 1, No. 1; January 1982.
- Licensed Operating Reactors (NUREG-0020); Vol. 5, No. 11; November 1981.
- Non-U.S. - Nuclear Engineering International; Vol. 26, No. 316; July 1981 supplement.
- Nuclear News; Vol. 25, No. 2; February 1982.

- (1) b. Plants beginning construction (table includes all docketed applications with over 100 MWe and plants that are currently shutdown, indefinitely deferred, or cancelled). Beginning construction is defined as breaking ground.

	U.S.*		Non-U.S.	
	No.	MWe**	No.	MWe**
Up to 1970	65	50,100	86	31,200
Jan. 1970 - Dec. 1975	61	62,600	115	87,200
Jan. 1976 - Dec. 1980	26	30,600	74	71,000
Jan. 1981 - Feb. 1982	0	0	11	10,600

\*Two DOE reactors are not included, Hanford N-Reactor and Shippingport.

\*\*Rounded to nearest hundred.

Sources:

U.S. - Regulatory Operations (Yellow Book); January 18, 1974; also various subsequent issues of Yellow Book including:

Nuclear Power Plants (NUREG-0030); Vol. 5, Nos. 1, 2, and 3; data as of September 30, 1981.

Nuclear Power Plants current data base information.

Licensed Operating Reactors (NUREG-0020); Vol. 5, No. 11; November 1981.

Non-U.S. - Nuclear Engineering International; Vol. 26, No. 316; July 1981 supplement.

Nuclear News; Vol. 25, No. 2; February 1982.

(1) c. Plants cancelled\* (table includes all docketed applications with over 100 MWe)

	Plants With CP's		Plants Under CP Review	
	No.	MWe	No.	MWe
Prior to FY 75	0	0	3	3,050
FY 75	2	2,300	3	3,480
FY 76	0	0	2	2,318
FY 77	2	1,764	2	2,413
FY 78	0	0	9	9,584
FY 79	1	1,150	10	10,980
FY 80	1	1,150	9	10,020
FY 81	5	4,937	5	5,980
FY 82 - Feb. 1982	6	6,556	5	6,140

\*Cancellation is defined as public announcement of cancellation or written notification to NRC.

Primary Source: The Summary Information Report (NUREG-0871); Vol. 1, No. 1; January 1982.

(1) c. Plants indefinitely deferred (table includes applicant estimates on all docketed applications with over 100 MWe)

	Plants With CP's		Plants Under CP Review	
	No.	MWe	No.	MWe
As of March 1, 1982	12	14,307	0	0

Source: Nuclear Power Plants (NUREG-0030); Vol. 5, Nos. 1, 2, and 3; data as of September 30, 1981.

Nuclear Power Plants current data base information.

Bevill schedule dated January 15, 1982.

(2) Staff's best estimate as to how many U.S. plants will get operating licenses between:

(a) now and end of 1982

10 plants

(b) in 1983

13 plants

(c) in 1984

11 plants

Source: The EDO's February 26, 1982 response to the Chairman's memorandum of February 2, 1982, regarding licensing schedules and enclosing a proposed insert for the Moffett hearing record.

(3) Staff's best estimate as to how many more cancellations (or indefinite deferrals) there will be of the plants in the U.S.

(a) Under construction

19 plants (see Attachment 1)

(b) Under review for CP

All plants under CP review except Clinch River. (5 Plants)

NOTE: MPA provided the answer to a similar question by Commissioner Gilinsky last year, copies of which were supplied to Commissioner Assistants. This answer has been updated. Please recognize that this kind of information is based on conjecture, newspaper articles, conversations with financial houses, and hearsay rather than any official announcement from the applicant.

ATTACHMENT 1 \*

UNDER CONSTRUCTION

<u>PLANT NAME</u>	<u>PERCENT COMPLETE</u>	<u>SCHEDULED COMPLETION DATE</u>
1. Cherokee 1	18%	N/S
2. Cherokee 2	0%	N/S
3. Cherokee 3	0%	N/S
4. Clinton 2	1%	N/S
5. Grand Gulf 2	22%	N/S
6. Harris 2	4%	6/88
7. Hartsville B-1	17%	N/S
8. Hartsville B-2	7%	N/S
9. Limerick 2	30%	4/87
10. Marble Hill 2	14%	6/87
11. Nine Mile Point 2	37%	3/86
12. North Anna 3	8%	4/89
13. Phipps Bend 1	29%	1/93
14. Phipps Bend 2	5%	N/S
15. River Bend 2	1%	N/S
16. Seabrook 2	9%	2/86
17. South Texas 2	18%	N/S
18. Vogtle 2	8%	3/88
19. Yellow Creek 2	3%	N/S

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N/S = Not Scheduled

\* Footnote added by Commissioner Ahearne: Please recognize that this kind of information is based on conjecture, newspaper articles, conversations with financial houses, and hearsay rather than any official announcement from the applicant.

(4) Estimate of U.S. Mwe generating capacity, nuclear and total for 1982, 1985, 1990, and 2000. (Staff's best estimate and DOE mid-range.)

	<u>STAFF BEST<sup>1/</sup></u> <u>ESTIMATE</u>	<u>DOE<sup>2/</sup></u> <u>MID-RANGE</u>
1982	59 GWe	59 GWe
1985	93 GWe	90 GWe
1990	114 GWe	121 GWe
2000	115 GWe	165 GWe

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<sup>1/</sup> Staff's best estimate derived from using answers to questions 2 and 3.

<sup>2/</sup> Source: Energy Information Administration (DOE), Short Term Energy Outlook dated February 1982.



GENERATING CAPACITY SUMMARY

	<u>NUMBER OF PLANTS</u>		<u>CUMULATIVE NUMBER OF PLANTS</u>	<u>CUMULATIVE TOTAL</u>
12-31-81	72	55,000 MWe		
End CY 1982	<u>4</u>	<u>4,202 MWe</u>		
			76	59,202 MWe
End CY 1983	11	11,776 MWe		
End CY 1984	15	16,147 MWe		
End CY 1985	<u>5</u>	<u>5,444 MWe</u>		
			107	93,367 MWe
1986 Thru 1990	18	20,777 MWe	125	114,144 MWe
1991 Thru 2000	1	1,205 MWe	126	115,343 MWe

As of December 31, 1981, 72 plants were licensed to operate (55 GWe) excluding 3 which have operating licenses but are shut down indefinitely (Three Mile Island 2, Humboldt Bay, and Dresden 1).

<u>1982<sup>1/</sup></u>	<u>DER (MWe)</u>
San Onofre 2	1,140
LaSalle 1	1,078
Summer 1	900
Diablo Canyon 1	<u>1,084</u>
(4 Plants)	4,202

<u>1983<sup>1/</sup></u>	<u>DER (MWe)</u>
Grand Gulf 1	1,250
Diablo Canyon 2	1,106
Susquehanna 1	1,052
LaSalle 2	1,078
Zimmer 1	810
San Onofre 3	1,140
Shoreham 1	849
St. Lucie 2	842
Palo Verde 1	1,304
Waterford 3	1,165
McGuire 2	<u>1,180</u>
(11 Plants)	11,776

<u>1984<sup>1/</sup></u>	<u>DER (MWe)</u>
Watts Bar 1	1,165
WNP-2	1,103
Fermi 2	1,093
Comanche Peak 1	1,150
Callaway 1	1,150
Clinton 1	950
Watts Bar 2	1,165
Byron 1	1,120
Susquehanna 2	1,052
Perry 1	1,205
Midland 2	818
Catawba 1	1,145
Bellefonte 1	1,235
Palo Verde 2	1,304
Midland 1	<u>492</u>
(15 Plants)	16,147

<sup>1/</sup>Includes six (6) months added to the estimated fuel loading date for power ascension to reach commercial operation.

<u>1985<sup>1/</sup></u>	<u>DER (MWe)</u>
Wolf Creek 1	1,150
Seabrook 1	1,194
Limerick 1	1,065
Harris 1	915
Byron 2	<u>1,120</u>
(5 Plants)	5,444

<u>1986 Thru 1990<sup>1/</sup></u>	<u>DER (MWe)</u>
Bellefonte 2	1,235
River Bend 1	934
Comanche Peak 2	1,150
South Texas 1	1,250
Braidwood 1	1,120
Catawba 2	1,145
WNP 3	1,242
WNP 1	1,267
Palo Verde 3	1,304
Beaver Valley 2	859
Millstone 3	1,159
Braidwood 2	1,120
Hope Creek 1	1,067
Marble Hill 1	1,130
Vogtle 1	1,100
Perry 2	1,205
Yellow Creek 1	1,285
Hartsville A-1	<u>1,205</u>
(18 Plants)	20,777

<u>1991 Thru 2000<sup>1/</sup></u>	<u>DER (MWe)</u>
Hartsville A-2	<u>1,205</u>
(1 Plant)	1,205

<sup>1/</sup>Includes six (6) months added to the estimated fuel loading date for power ascension to reach commercial operation.

LWA'S ISSUED

<u>Facility</u>	<u>LWA 1's</u>	<u>LWA 2's</u>
Bellefonte 1 & 2	09/17/74	
Black Fox 1 & 2	07/26/78	
Braidwood 1 & 2	01/14/75	10/30/75
Byron 1 & 2	12/13/74	10/30/75
Callaway 1 & 2	08/14/75	
Catawba 1 & 2	05/16/74	
Cherokee 1-3	05/28/76	
Clinton 1 & 2	10/01/75	07/28/77
Comanche Peak 1 & 2	10/17/74	10/17/74
Davis Besse 2 & 3	12/31/75	09/13/78
Grand Gulf 1 & 2	05/03/74	
Hartsville 1-4	04/22/76	
Marble Hill 1 & 2	08/24/77	
Millstone 3	06/05/74	
Perry 1 & 2	10/21/74	
Phipps Bend 1 & 2	10/18/77	12/31/75
River Bend 1 & 2	09/05/75	10/18/77
South Texas 1 & 2	08/12/75	
St. Lucie 2	03/17/75	
Summit 1	08/07/75	
Surry 3 & 4	10/04/74	
Vogtle 1 & 2	05/28/74	
WNP 1 & 4	08/01/75	
WNP 3 & 5	04/08/77	
Waterford 3	05/14/74	
Wolf Creek 1	01/24/77	
Yellow Creek 1 & 2	02/09/78	

EXEMPTIONS ISSUED

Arkansas 2	07/15/71	Midland 1 & 2	07/30/70
Beaver Valley	01/12/70	McGuire 1 & 2	06/23/71
Brunswick 1 & 2	11/07/69	Monticello	03/09/67
Byron 1 & 2	01/14/74	North Anna 1 & 2	09/04/70
Calvert Cliffs 1 & 2	01/10/69	North Anna 3 & 4	07/ /72
Crystal River 3	05/08/68	Oconee 1	08/25/67
Davis Besse 1	09/10/70	Pilgrim	03/15/68
Diablo Canyon 2	11/07/69	Point Beach 1	02/07/67
Duane Arnold	03/11/70	Point Beach 2	02/09/68
Farley 1 & 2	04/12/71	River Bend 1	11/04/76
Fermi 2	10/15/70	Robinson 2	03/10/67
	04/19/71	Shearon Harris 1-4	01/14/74
Fitzpatrick	07/05/69	Surry 1 & 2	06/16/67
Ft. Calhoun 1	02/13/68	Three Mile Island 1	11/29/67
Hatch 1	07/07/69	Three Mile Island 2	06/27/69
Hatch 2	12/15/72	WNP 2	05/16/72
Indian Point 3	11/15/68	Watts Bar 1 & 2	12/22/72
Millstone 2	03/10/70	Zion 1 & 2	07/30/68
			11/15/68

Four facilities have received both LWA's and exemptions. These are:

<u>FACILITY</u>	<u>EXEMPTION</u>	<u>LWA-1</u>	<u>LWA-2</u>
Byron 1 & 2	01/14/74	12/13/74	10/30/75
River Bend 1 & 2	11/04/76	09/05/75	--

Only River Bend 1 & 2 received an exemption since the issuance of the first LWA (Grand Gulf 1 & 2: 05/03/74).