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UC-51

Survey of United States Uranium Marketing Activity

May 1977

Energy Research & Development Administration
Division of Uranium Resources & Enrichment
Office of Assistant Director for Raw Materials

SURVEY OF UNITED STATES URANIUM MARKETING ACTIVITY

Introduction

As part of a continuing assessment of uranium supplies for operating and planned nuclear power plants in the United States, the Supply Evaluation Branch of the Division of Uranium Resources and Enrichment of the U. S. Energy Research and Development Administration (ERDA) has completed a survey of uranium marketing activities that took place in 1976. The Atomic Energy Commission (AEC) and its successor, ERDA, have published annual reports on domestic uranium marketing activities since 1968.

Information for the present survey was received from 70 utilities with nuclear reactor projects, 38 present or potential uranium producers, and 5 reactor manufacturers. These respondents represent virtually all principal companies involved in uranium marketing activities. A list of participants is presented in Attachment A.

The 1977 survey requested data on uranium purchase commitments, uranium imports and exports, reactor fuel arrangements and unfilled requirements, inventories of domestic and foreign uranium, and prices for existing contracts between domestic primary producers and domestic buyers. The report covers 207 nuclear power reactors in operation, under construction, or for which orders have been placed, having a total rated capacity of 203,000 megawatts electric (see reactor list in Attachment B).

Domestic Uranium Purchase Commitments

As shown in Table I, new contract commitments made in 1976 were 92,900 tons of U_3O_8. These new commitments were offset by a 9,500 ton reduction to January 1, 1976, commitments, primarily reflecting estimated deliveries under litigation. The net additional procurement of 83,400 tons is far greater than the previous high of 45,800 tons that occurred in 1973, and over 5 times the 16,200 tons procured in 1975. Of the 83,400 ton net additional procurement, almost half (47 percent) is scheduled to come from primary sources in which there is direct involvement by the purchasers.

TABLE I

DOMESTIC COMMERCIAL URANIUM DELIVERIES AND COMMITMENTS[1/]
AS OF
JANUARY 1, 1976 AND JANUARY 1, 1977

	Tons U_3O_8
Past Deliveries Plus Forward Commitments (1/1/76)	205,800
Changes During 1976	
Total New Purchases[2/]	92,900
Reductions to 1/1/76 Commitments[3/]	(9,500)
Net Change	83,400
Past Deliveries Plus Forward Commitments (1/1/77)	289,200
Deliveries:	
Prior to 1976	(80,000)
During 1976	(13,800)
Forward Commitments (1/1/77)	195,400

1/ Commitments between primary producers and users; transfers between producers or between buyers are not included.

2/ Includes planned production controlled by buyers.

3/ Includes reduction in estimated amounts of deliveries under litigation.

TABLE II

URANIUM DELIVERY COMMITMENTS
DOMESTIC PRIMARY SOURCES TO DOMESTIC BUYERS - TONS U_3O_8

Year of Delivery	Annual		Cumulative	
	As of 1/1/76	As of 1/1/77	As of 1/1/76	As of 1/1/77
1966-1975	---	---	80,000	80,000
1976	15,900	13,800	95,900	93,800
1977	13,800	15,900	109,700	109,700
1978	16,400	17,900	126,100	127,600
1979	16,500	18,400	142,600	146,000
1980	15,200	20,400	157,800	166,400
1981	11,800	19,000	169,600	185,400
1982	10,500	19,200	180,100	204,600
1983	8,300	15,000	188,400	219,600
1984	5,700	13,000	194,100	232,600
1985	4,300	11,500	198,400	244,100
1986	1,900	8,400	200,300	252,500
1987	1,400	7,200	201,700	259,700
1988	1,100	6,400	202,800	266,100
1989	1,100	6,400	203,900	272,500
1990	500	5,200	204,400	277,700
1991-1995	1,300	11,500	205,700	289,200

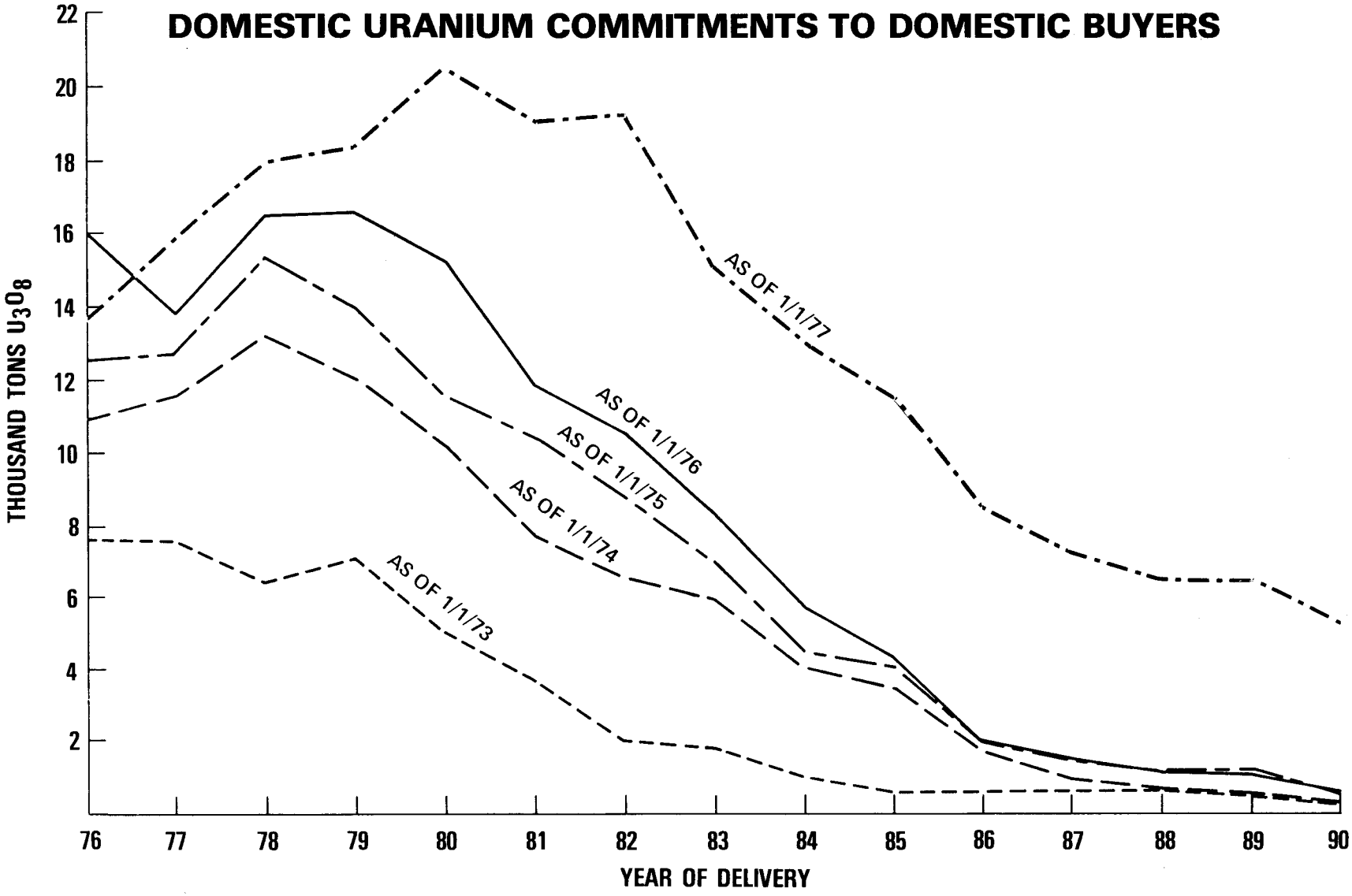
DOMESTIC URANIUM COMMITMENTS TO DOMESTIC BUYERS
THOUSAND TONS U_3O_8
22
20
18
16
14
12
10
8
6
4
2
AS OF 1/1/77
AS OF 1/1/76
AS OF 1/1/75
AS OF 1/1/74
AS OF 1/1/73
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
YEAR OF DELIVERY

Figure 1

Reported annual delivery commitments as of January 1, 1977, and January 1, 1976, are shown in Table II. Actual receipts reported for 1976 were 2,100 tons less than plans reported in the 1976 survey, following a pattern evidenced in previous years. New delivery commitments are higher in each year as compared to January 1, 1976, commitments, with the most significant change coming in the years from 1981 to 1995. The additions in this period are heavily influenced by the planned production from operations with buyer participation which represent an increasingly important method of obtaining long-term supplies. Figure 1 graphically compares annual delivery commitments reported by domestic producers and buyers as of January 1, 1973, 1974, 1975, 1976 and 1977.

It should be pointed out that a certain amount of U_3O_8 scheduled for delivery is currently under litigation, and the outcome of this litigation could result in revisions to the delivery schedules.

Uranium Prices

Table III shows the average contract prices for uranium to be delivered in the years 1976-1985 under contracts in existence as of January 1, 1977, and the data as of January 1, 1976. The prices shown are in year-of-delivery dollars as estimated by the buyers using their interpretations of contract provisions, including escalation. The price data reported cover almost 90 percent of those current domestic uranium commitments of the contract price type, thus providing a good sample of prices. Contract price commitments are those procurement contracts in which the prices can be determined directly by the terms and conditions of the contract, as distinguished from market price contracts.

Average prices reported in the 1977 survey exhibited a uniform and, in most cases, a substantial increase over the 1976-1985 period compared to those reported in the 1976 survey. The $16.10 price for 1976 deliveries increased from the $10.70 reported as of January 1976 due to additional spot purchases, settlement of market-price contracts, and upward price adjustments in old contracts.

TABLE III

COMPARISON OF PRICES IN 1/1/76 AND 1/1/77 SURVEYS

Year	January 1, 1977 Survey		January 1, 1976 Survey	
	Price Per Pound of U_3O_8 (Year-of-Delivery Dollars)	Percent of Contract Price Commitments for Which Prices Were Reported	Price Per Pound of U_3O_8 (Year-of-Delivery Dollars)	Percent of Contract Price Commitments For Which Prices Were Reported
1976	16.10	91	10.70	86
1977	15.00	81	11.10	77
1978	13.85	88	12.20	88
1979	14.95	84	13.05	84
1980	18.00	90	14.35	79
1981	22.75	91	15.80	84
1982	24.55	94	16.35	87
1983	22.30	94	16.05	88
1984	23.30	92	15.45	85
1985	23.60	90	15.90	67

Figure 2 compares the range of prices as reported in the January 1, 1976, and 1977 surveys. The large increase in the upper limits of the ranges of the 1977 over the 1976 survey reflects the higher prices paid for new procurement during 1976. The lower limits of the ranges, on the other hand, show little change between the two surveys, suggesting that new purchases at higher prices played a more important role in average price increases than did renegotiation of older contracts.

Figure 3 depicts in $5 increments the price distribution of contract price deliveries as reported in the January 1, 1977, survey. Those brackets representing 15 percent or more of any year's deliveries are shaded. Through 1980, the bulk of procurement with contract prices is at prices below $20 per pound, and the average prices for these years are also below $20.

Procurement Strategies

Table IV provides an annual distribution of delivery commitments by type of procurement—"contract price," "market price," and "other." A "contract price" procurement is one where the price (with appropriate escalation factors) is determined at the time the contract is entered into by the terms of the contract. A "market price" contract is one in which the price is determined principally by external factors, namely, the prevailing market price at or some time before the time of delivery, although it may contain a base or floor price. The "other" category refers primarily to procurement arrangements that do not take place in the open market, e.g., where the buyers are involved in uranium producing operations and have control of production. However, there are some minor types of arrangements other than contract price and market price ones that are also in this category.

The percentage of procurement under contract prices is high for the near term, but steadily declines from 1977 to 1985. The percentage for market price and other procurement increases over the period, with market price reaching a peak in 1981. Market price contracting was the major procurement approach during 1975. However, procurement using "other" methods, primarily direct involvement by utilities in U_3O_8 production, was the dominant form during 1976.

RANGE OF U_3O_8 PRICES REPORTED IN 1/1/76 AND 1/1/77 SURVEYS

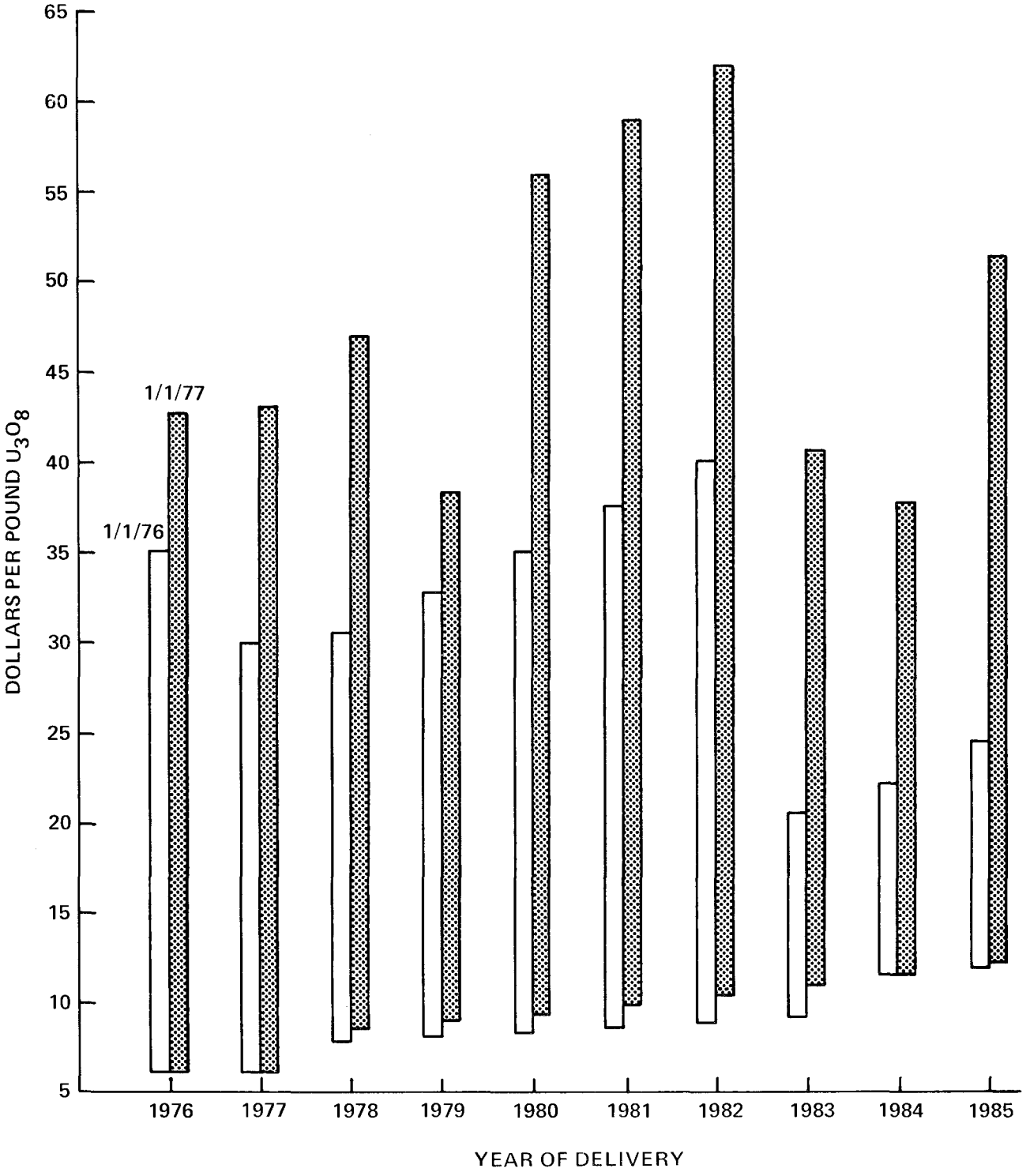

Figure 2

DISTRIBUTION OF REPORTED U_3O_8 PRICES, 1/1/77

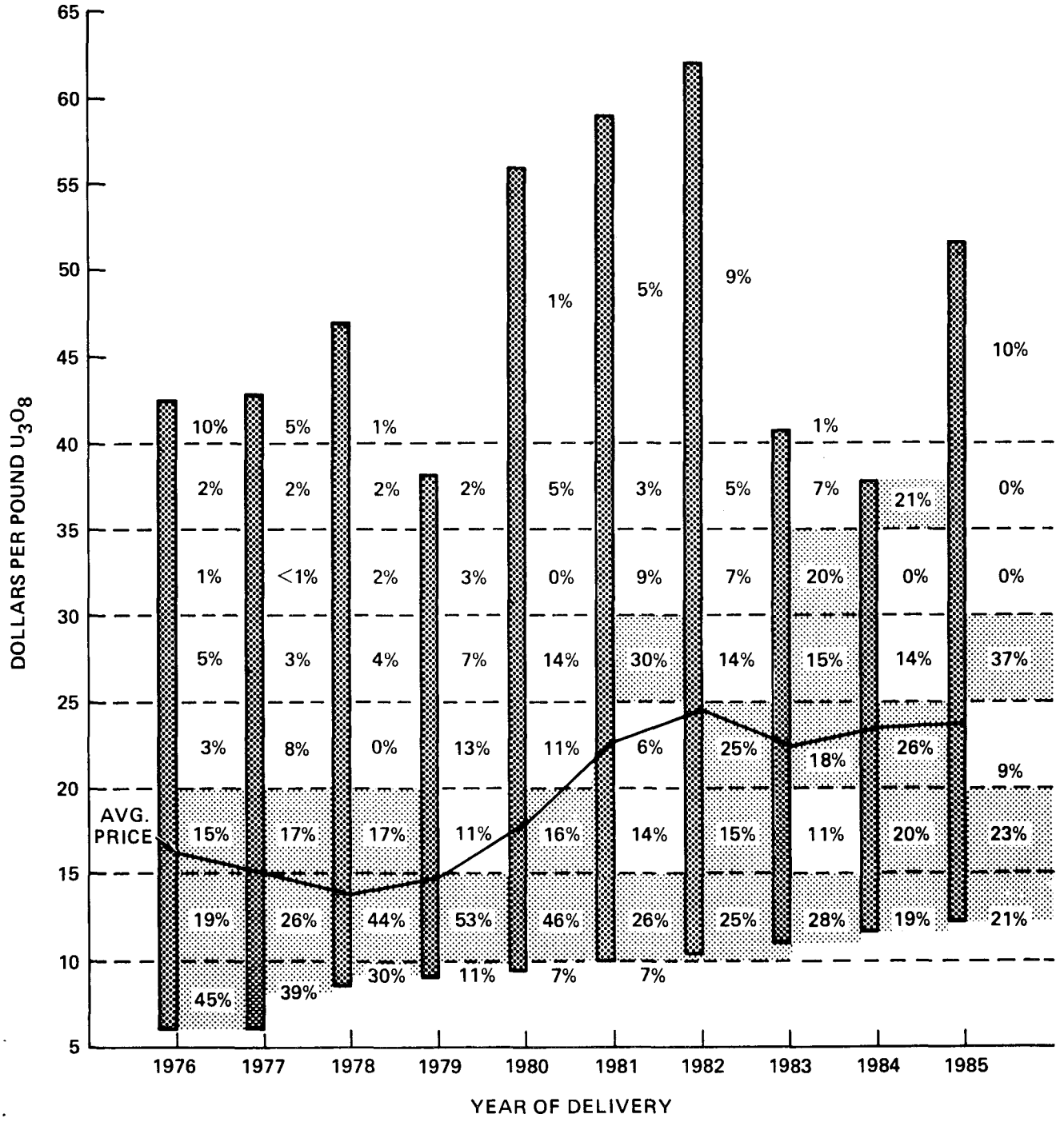

Figure 3

TABLE IV

TYPES OF PROCUREMENT
AS OF JANUARY 1, 1977

Year of Delivery	Percentage of Deliveries By Types of Procurement		
	Contract Price	Market Price	Other
1977	89	6	5
1978	84	9	7
1979	81	11	8
1980	73	15	12
1981	56	26	18
1982	49	23	28
1983	41	25	34
1984	40	22	38
1985	35	22	43
1977-1985	62	18	20

Uranium Raw Material Activities by Utilities

In an effort to ascertain the degree to which utilities are becoming directly involved in uranium raw material activities, the survey requested utilities to state whether or not they were participating in such activities. Of 68 utilities with reactors operating, under construction, or ordered, 25 or 37 percent indicated they were directly involved in uranium raw materials activities, and others stated that they planned to become involved.

Such raw materials activities include exploration, ownership of reserves, mine development, production, etc. The extent to which utilities are engaged in these activities indicates increasing interest in use of alternative fuel procurement arrangements to the traditional, direct purchase approach.

Uranium Import Commitments

In 1976 domestic buyers purchased an additional 1,800 tons of foreign uranium, resulting in only minor changes in the foreign uranium delivery schedules as of January 1, 1976. Table V shows the annual delivery schedule for foreign uranium under contract to domestic buyers. Five countries will supply these imports, with almost 50 percent coming from Canada. Deliveries will be to 18 utilities and reactor manufacturers, of which only 5 have commitments of 1,000 tons or more. The forward delivery commitment, from 1977 through 1990, was 43,200 tons as of January 1, 1977, a 1,700-ton increase over the forward commitment last year for the same period.

Uranium Export Commitments

Delivery commitments by domestic uranium primary producers to foreign buyers increased 2,600 tons during 1976 (Table VI). Most of the increase related to deliveries after 1978, a reversal of the previous pattern of near-term export sales. The forward export commitment as of January 1, 1977, was 5,500 tons of U_3O_8.

Uranium Requirements for Nuclear Power

Table VII shows uranium requirements related to domestic ERDA toll enrichment contracts, assuming a 0.20 percent U-235 enrichment plant tails assay until October 1, 1980, 0.25 percent thereafter, and no recycle of plutonium or uranium. This schedule reflects the current assessment of deliveries under

TABLE V

FOREIGN URANIUM PROCUREMENT COMMITMENTS
BY DOMESTIC BUYERS

(Tons of U_3O_8)

As of January 1, 1977

Year of U_3O_8 Delivery	Annual	Cumulative
1975	1,100	1,100
1976	2,900	4,000
1977	4,000	8,000
1978	2,600	10,600
1979	3,300	13,900
1980	4,200	18,100
1981	4,300	22,400
1982	4,100	26,500
1983	4,100	30,600
1984	3,800	34,400
1985	3,500	37,900
1986	2,500	40,400
1987-1990	$<$ 1,800/yr.	47,200

TABLE VI

URANIUM SALES COMMITMENTS TO FOREIGN BUYERS
BY DOMESTIC PRODUCERS

Tons of U_3O_8

As of January 1, 1977

Year of Delivery	Annual	Cumulative
1966-1975	—	7,400
1976	600	8,000
1977	2,100	10,100
1978	900	11,000
1979	900	11,900
1980-1990	1,600	13,500

TABLE VII

URANIUM REQUIREMENTS[1/]

TONS U_3O_8

ERDA DOMESTIC TOLL

ENRICHMENT FEED CONTRACTS (208,000 MWe)

Year	Annual	Cumulative
1977	12,300	12,300
1978	19,800	32,100
1979	24,400	56,500
1980	28,600	85,100
1981	32,300	117,400
1982	36,100	153,500
1983	35,500	189,000
1984	41,300	230,300
1985	39,900	270,200
1986	41,200	311,400
1987	44,500	355,900
1988	43,400	399,300
1989	44,200	443,500
1990	45,100	488,600

1/ .20 percent tails to October 1, 1980, .25 percent thereafter; no recycle.

requirement-type contracts, and is a revision to previously published ERDA enrichment contract, uranium requirement estimates. It should be pointed out that the requirements related to the ERDA enrichment contracts are not identical to those for the reactors covered in the survey as some different reactors are involved.

Unfilled Requirements

Table VIII lists the sum of additional uranium requirements reported for reactors in the survey—considering buyers' inventories and domestic and foreign delivery commitments as of January 1, 1977, and comparable data as of January 1, 1976.

As a consequence of the substantial procurement that occurred in 1976, a change in tails assay assumptions, and slippages in reactor schedules, unfilled requirements for the 1977-1985 period decreased during 1976 from 146,500 tons to 78,400 tons U_3O_8, or 46 percent.

Table IX indicates the potential domestic market for domestic suppliers, assuming that the reported unfilled requirements are filled entirely by new contracts with domestic primary producers.

Inventories

Inventories continued to build in 1976 (Figure 4) and are likely to continue building over the next 2 years. Domestic buyers reported year-end 1976 inventories of 25,800 tons of domestic U_3O_8, 3,200 tons greater than the 22,600 tons of inventory reported as of January 1, 1976. Inventories of foreign uranium also increased, from 1,100 tons year-end 1975 to 3,500 year-end 1976.

Inventories held by domestic primary uranium producers as of January 1, 1977, totaled about 2,300 tons U_3O_8, a reduction of 1,000 tons from the 3,300 tons inventory at the beginning of the year (revised from 3,000 tons).

U_3O_8 Requirements and Delivery Commitments

Figure 5 compares delivery commitments from domestic primary producers, imports, and exports with the uranium requirements listed in Table VII. The figure depicts imports and domestic commitments in the year they are to be delivered, which is not necessarily the year they would be used to fill requirements.

TABLE VIII

UNFILLED URANIUM REQUIREMENTS[1/]
As Reported 1/1/76 and 1/1/77

Tons U_3O_8

As of 1/1/77		As of 1/1/76	
1977	1,000	1977	2,900
1978	1,400	1978	4,400
1979	3,500	1979	5,100
1980	5,100	1980	8,600
1981	7,300	1981	15,500
1982	11,200	1982	22,200
1983	14,800	1983	27,400
1984	15,900	1984	29,200
1985	18,200	1985	31,200
1986	22,800	1986	NA
1987	26,900	1987	NA
1988	27,400	1988	NA
1989	30,700	1989	NA
1990	30,400	1990	NA

1/ Assuming tails assays of:
0.20% tails to 10/1/80
0.25% tails thereafter.
Recycle - respondents' assumptions.

NA - Not available

TABLE IX

POTENTIAL DOMESTIC PRODUCERS' MARKET
AS OF 1/1/77

Tons U_3O_8

Calendar Year	1 Reported Unifilled Requirements	2 Committed Domestic Deliveries	3 Potential Domestic Deliveries 1 + 2
1977	1,000	15,900	16,900
1978	1,400	17,900	19,300
1979	3,500	18,400	21,900
1980	5,100	20,400	25,600
1981	7,300	19,000	26,300
1982	11,200	19,200	30,400
1983	14,800	15,000	29,800
1984	15,900	13,000	28,900
1985	18,200	11,500	29,700
1986	22,800	8,400	31,200
1987	26,900	7,200	34,100
1988	27,400	6,400	33,800
1989	30,700	6,400	37,100
1990	30,400	5,200	35,600

BUYER INVENTORIES
DOMESTIC AND FOREIGN URANIUM

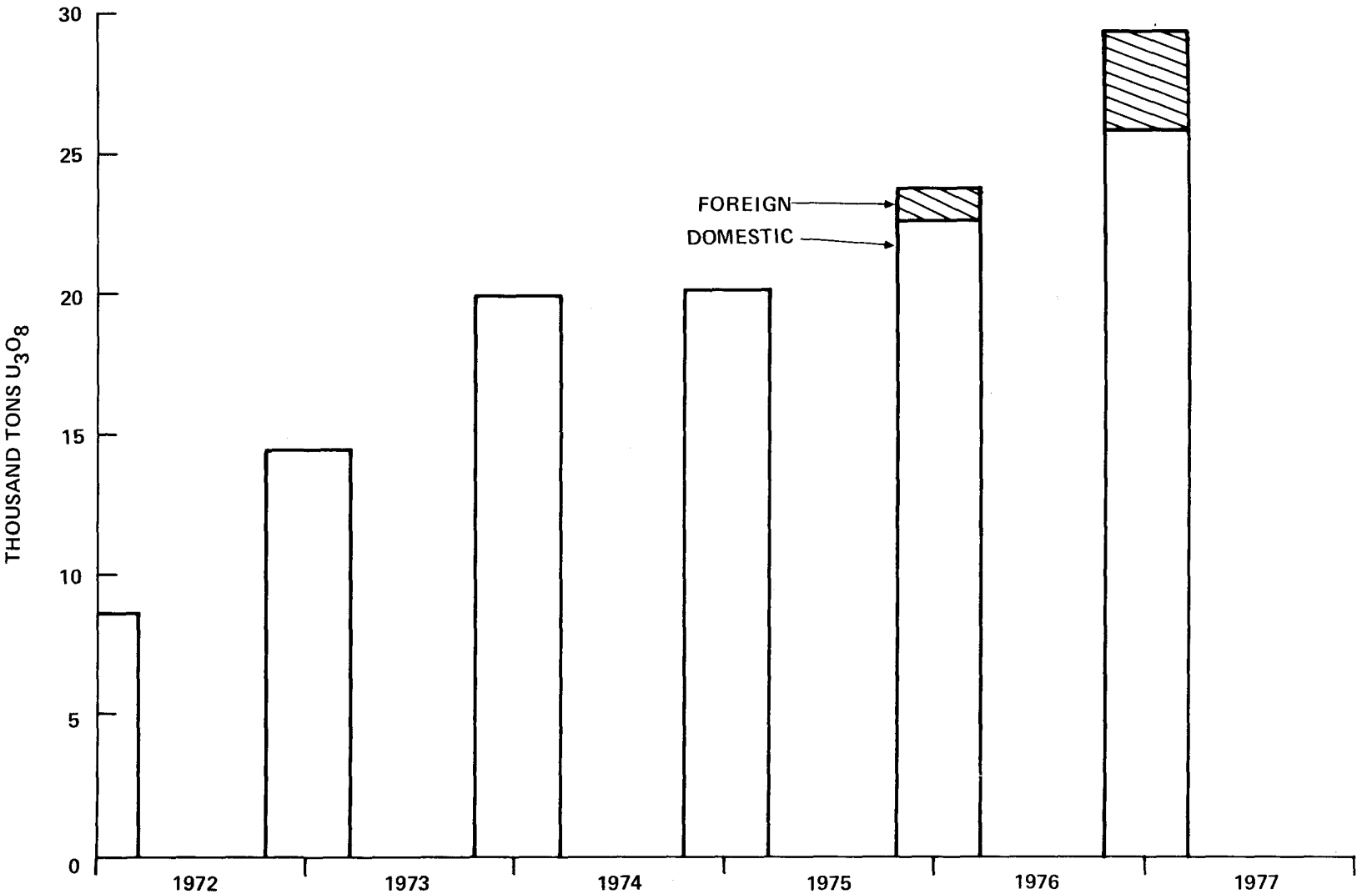

Figure 4

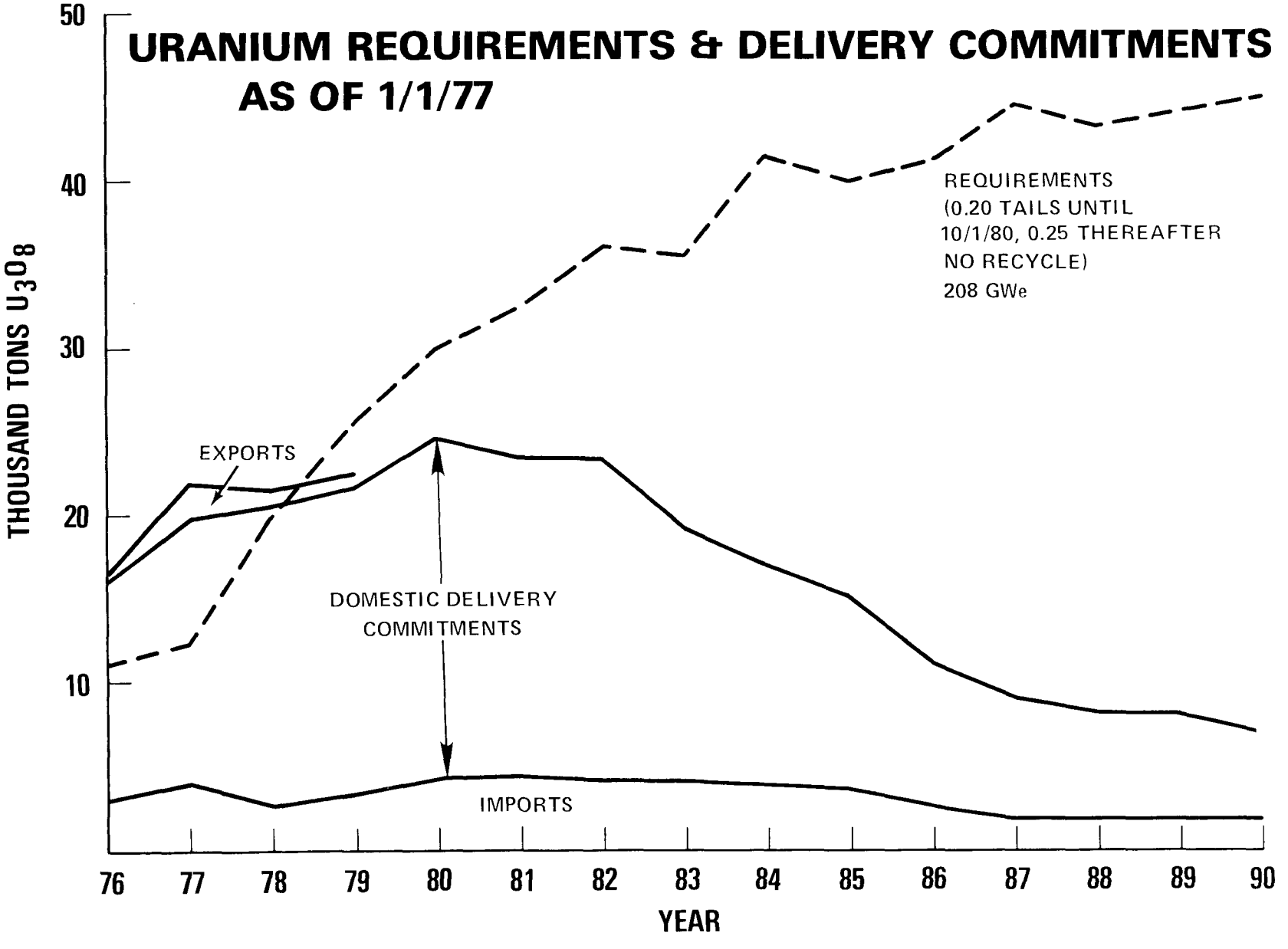
URANIUM REQUIREMENTS & DELIVERY COMMITMENTS
AS OF 1/1/77
THOUSAND TONS U_3O_8
50
40
30
20
10
REQUIREMENTS
(0.20 TAILS UNTIL
10/1/80, 0.25 THEREAFTER
NO RECYCLE)
208 GWe
EXPORTS
DOMESTIC DELIVERY
COMMITMENTS
IMPORTS
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
YEAR

Figure 5

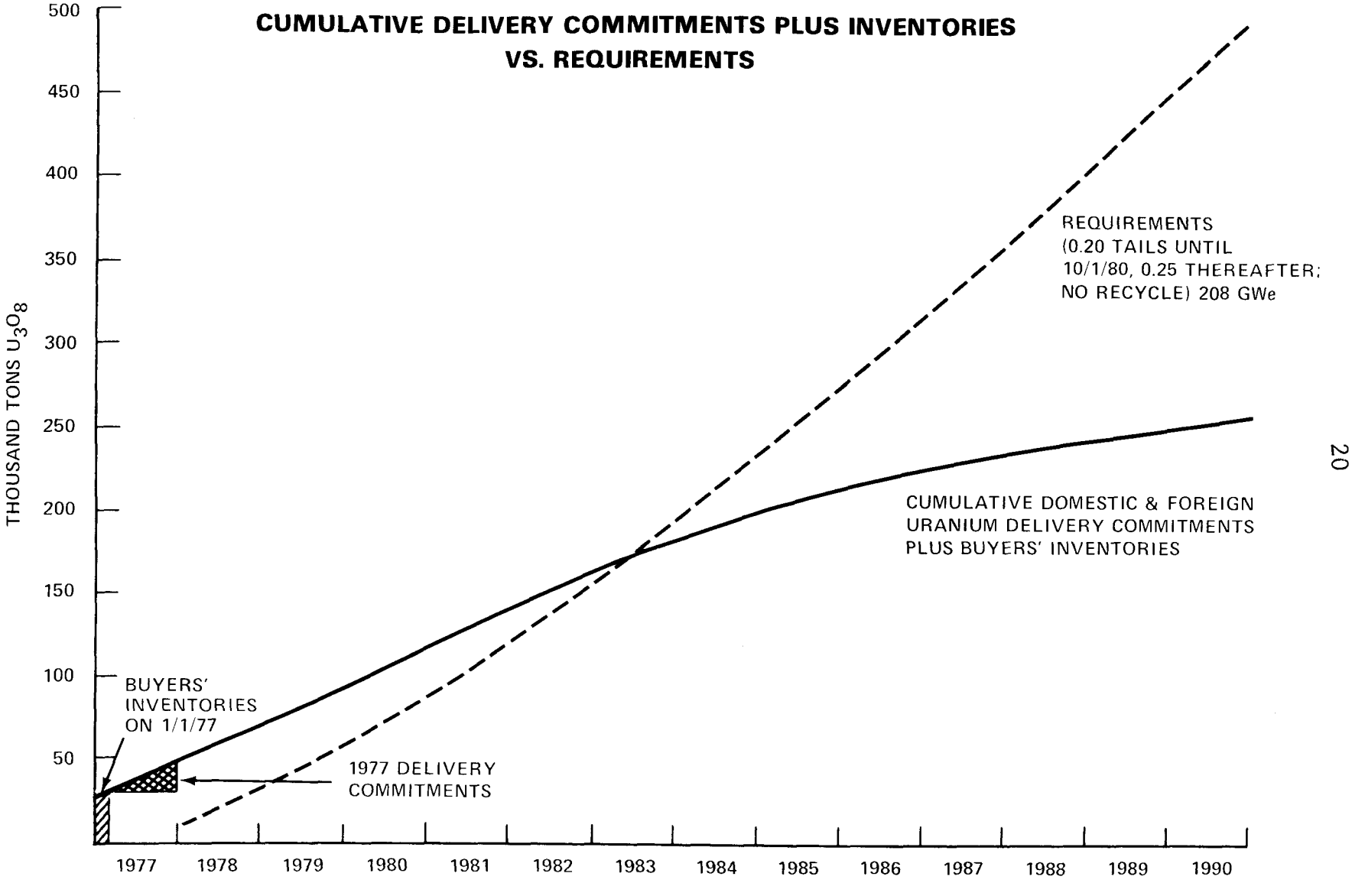
CUMULATIVE DELIVERY COMMITMENTS PLUS INVENTORIES
VS. REQUIREMENTS
THOUSAND TONS U_3O_8
500
450
400
350
300
250
200
150
100
50
REQUIREMENTS
(0.20 TAILS UNTIL
10/1/80, 0.25 THEREAFTER;
NO RECYCLE) 208 GWe
CUMULATIVE DOMESTIC & FOREIGN
URANIUM DELIVERY COMMITMENTS
PLUS BUYERS' INVENTORIES
BUYERS'
INVENTORIES
ON 1/1/77
1977 DELIVERY
COMMITMENTS
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990

Figure 6

On this basis, annual contracted deliveries will be in excess of annual requirements until some time in 1979; but, as previously noted, some individual companies have unfilled requirements before 1979.

Figure 6 compares the cumulative U. S. supply position, including domestic and foreign inventories and delivery commitments, with the cumulative ERDA enrichment contract feed requirements given in Table VII. Cumulative requirements equal cumulative supply in 1983 indicating that if there were free movement of inventories, the current level of procurement would be adequate to meet demands until this time. After 1983 the gap between cumulative requirements and cumulative supply widens. By the end of 1985, an additional 58,000 tons will be needed to be procured on an industry-wide basis. By 1990 the gap increases to 233,000 tons.

Reactor Fuel Coverage

Forward fuel supply arrangements for the 207 nuclear power reactors are summarized in Table X according to the status of the reactor. If the operating license had been granted, the plant was considered operating; if the construction permit had been issued, the plant was considered under construction; and, if the nuclear stream system supply contract had been awarded, the plant was considered ordered. The status of each reactor is as listed in the ERDA report entitled "U. S. Central Station Nuclear Electric Generating Units: Significant Milestones" (ERDA 77-30/1).

More than half the operating reactors have arrangements made for the uranium needed up to the 8th reload. For reactors under construction, fewer than half have arranged for more than 5 reloads. For ordered reactors, arrangements have been made for first cores for over half of the reactors, but a smaller percentage for reloads. Fuel arrangements for reloads show an increase from last year, when 21 percent of the next 12 forward reloads for reactors in the survey were covered, compared to 36 percent this year.

The percentage of generating capacity for which first cores and reloads have been covered by various sources of supply is shown in Table XI. Uranium has been arranged for first cores of those reactors which are under construction or on order sufficient to cover 71 percent of their rated megawatt capacity, an increase of 10 percent over last year. About two-thirds of the uranium supply for these first cores will be provided by purchases from primary producers or from production controlled

TABLE X

FORWARD URANIUM SUPPLY ARRANGEMENTS
FOR REACTORS

	Number of Reactors					
	Operating (63)		Under Construction (69)		Ordered (75)	
	Arranged For	None	Arranged For	None	Arranged For	None
First Core	--	--	59	10	41	34
Reloads						
One	62	1	52	17	31	44
Two	58	5	45	24	23	52
Three	56	7	43	26	12	63
Four	49	14	38	31	10	65
Five	43	20	35	34	6	69
Six	40	23	29	40	4	71
Seven	32	31	24	45	2	73
Eight	25	38	22	47	2	73
Nine	23	40	22	47	2	73
Ten	23	40	20	49	2	73
Eleven	22	41	14	55	2	73
Twelve	17	46	11	58	2	73

TABLE XI

FORWARD URANIUM SUPPLY ARRANGEMENTS FOR FIRST CORES AND RELOADS BY SOURCES

Type of Uranium Supply Arrangements	Percentage of Generating Capacity Covered												
	First Cores[1/]	Reloads											
		1	2	3	4	5	6	7	8	9	10	11	12
a) Direct purchase of U_3O_8 from primary producers or production controlled by buyers.	46	48	42	39	34	31	26	23	20	18	17	13	12
b) Purchase of uranium from reactor manufacturer, agent, and ERDA lease.	15	13	10	7	6	3	3	2	1	1	-	-	-
c) Imports of uranium	10	5	5	3	4	5	4	3	3	4	5	5	3
Total uranium supply arranged for.	71	66	57	49	44	39	33	28	24	23	22	18	15
No uranium supply arrangements.	29	34	43	51	56	61	67	72	76	77	78	82	85

1/ For reactors under construction and ordered.

by buyers; about one-fifth by purchases from reactor manufacturers, agents, and lease of fuel from ERDA; and, the balance from uranium imports. A major change in arrangements since last year is the increased reliance on purchases from domestic primary producers and controlled domestic production relative to the other categories.

Table XII tabulates and Figure 7 illustrates the type of fuel supply arrangements for all reactors on an annual basis through 1990. The nuclear generating capacity scheduled to be in commercial operation, as listed in ERDA 77-30/1, is shown with the amount of this capacity covered, based on information supplied in the survey. Total fuel arrangements reach a peak in 1986, when almost 100,000 MWe of generating capacity are covered.

Summary

Substantial progress was made in 1976 in contracting for uranium to meet projected domestic requirements. At the same time, projected demands were reduced during 1976 easing the procurement need. Progress in procurement is a consequence of higher prices, the addition of new producers to the marketplace and improvement in the ability of established producers to offer additional material, aggressive utility buying efforts, and direct involvement of buyers in raw materials operations. U. S. buyers continue to concentrate on U. S. sources for their U_3O_8 supply.

During 1976, average uranium prices increased substantially for 1976-1977 and 1980-1985 deliveries, but only minor changes in average prices were noted for deliveries in 1978 and 1979. Average delivery prices remain well below prices for new procurement and are likely to remain so for some time. The trend towards direct buyer involvement in uranium operations as a means of filling uranium needs accelerated sharply during the year, with almost half of the new procurement in 1976 attributable to estimated production from properties controlled by utilities.

TABLE XII

URANIUM SUPPLY ARRANGEMENTS FOR REACTORS BY SOURCE

End of Calendar Year	Scheduled Nuclear Generating Capacity, MWe	Capacity With Uranium Arranged For, MWe: Domestic Uranium: Direct Purchase from Primary Producer and Production Controlled by Buyers	Domestic Uranium: Purchase from Manufacturer, Agent, or ERDA Lease	Domestic Uranium: Subtotal	Foreign Uranium	No Fuel Arrangements (MWe)
1976	40,000	26,100	13,900	40,000	---	---
1977	48,400	29,000	19,100	48,100	---	300
1978	55,600	36,400	16,500	52,900	600	2,100
1979	64,100	40,900	15,100	56,000	3,500	4,600
1980	76,600	46,300	18,000	64,300	4,300	8,000
1981	92,600	56,100	13,000	69,100	6,100	17,400
1982	105,600	62,500	12,000	74,500	7,100	24,000
1983	123,900	68,400	11,100	79,500	12,800	31,600
1984	145,900	70,200	10,300	80,500	13,400	52,000
1985	158,400	78,500	7,500	86,000	10,800	61,600
1986	172,000	77,800	6,800	84,600	13,700	73,700
1987	179,000	63,300	6,000	69,300	14,800	94,900
1988	182,400	52,700	5,400	58,100	12,700	111,600
1989	186,900	35,400	2,200	37,600	11,800	137,500
1990	190,200	27,800	1,100	28,900	12,900	148,400

FUEL SUPPLY ARRANGEMENTS FOR NUCLEAR POWER PLANTS

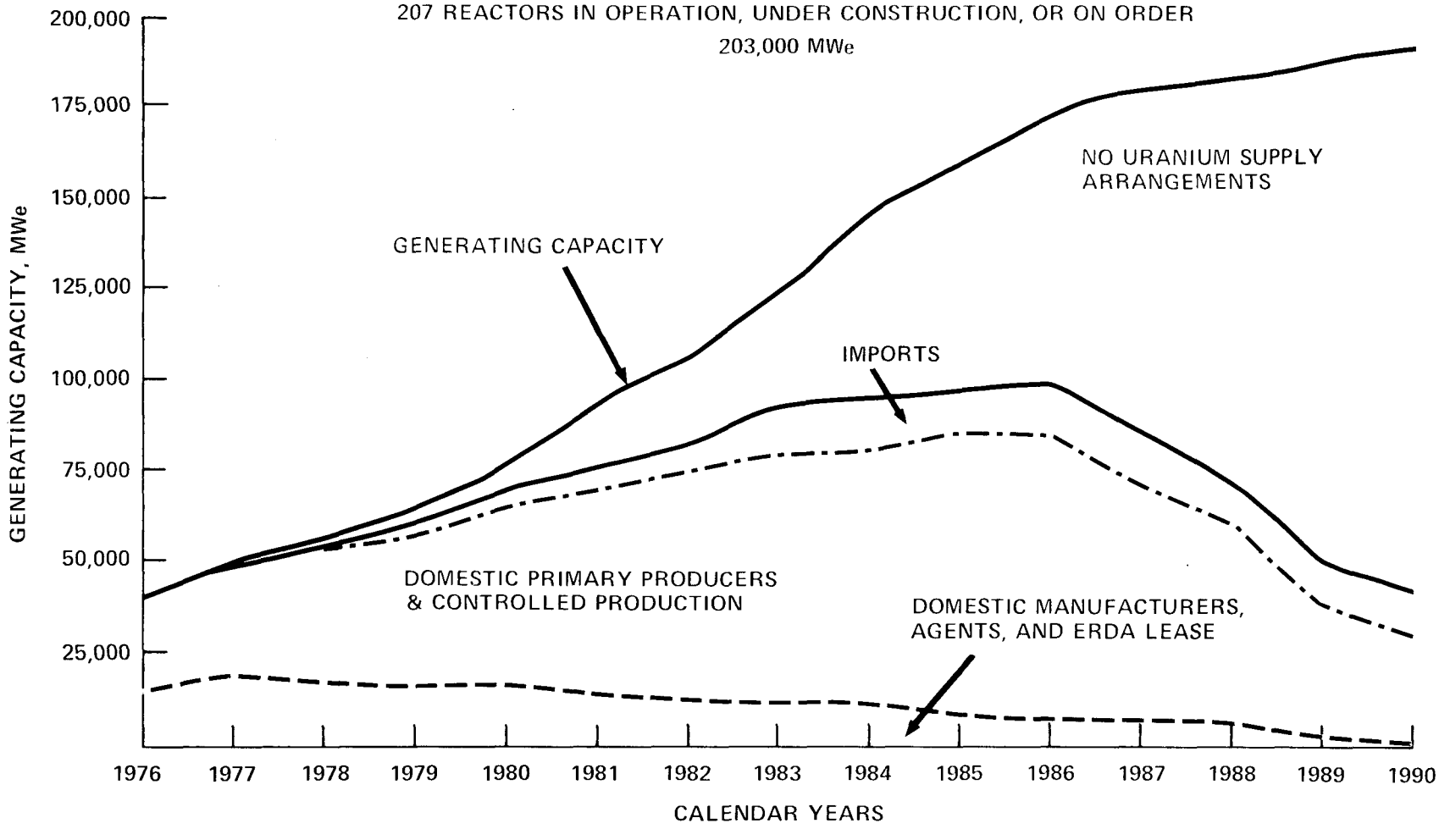

Figure 7

ATTACHMENT A

COMPANIES INCLUDED IN THE 1977 ERDA SURVEY
OF NUCLEAR INDUSTRY FUEL SUPPLY ARRANGEMENTS

Utilities

Alabama Power Company
American Electric Power Service Corporation
Arizona Public Service Company
Arkansas Power & Light Company
Baltimore Gas and Electric Company
Boston Edison Company
Carolina Power & Light Company
Central Maine Power Company
Central Power & Light Company
Cincinnati Gas & Electric Company
Cleveland Electric Illuminating Company
Commonwealth Edison Company
Consolidated Edison Company of New York, Inc.
Consumers Power Company
Detroit Edison Company
Duke Power Company
Duquesne Light Company
Florida Power Corporation
Florida Power & Light Company
General Public Utility Corporation
Georgia Power Company
Gulf States Utilities Company
Houston Lighting & Power Company
Illinois Power Company
Iowa Electric Light and Power Company
Iowa Power & Light Company
Jacksonville Electric Authority
Kansas Gas & Electric Company
Long Island Lighting Company
Department of Water and Power of the City of Los Angeles
Louisiana Power & Light Company
Maine Yankee Atomic Power Company
Mississippi Power & Light Company
Narragansett Electric Company
Nebraska Public Power District
New England Power Company
Niagara Mohawk Power Corporation
Northeast Utilities Service Company
Northern Indiana Public Service Company
Northern States Power Company
Ohio Edison Company

ATTACHMENT A (continued)

Utilities (continued)

Omaha Public Power District
Pacific Gas and Electric Company
Pennsylvania Power & Light Company
Philadelphia Electric Company
Portland General Electric Company
Potomac Electric Power Company
Power Authority of the State of New York
Public Service Company of Colorado
Public Service Electric and Gas Company
Public Service Company of Indiana
Public Service Company of New Hampshire
Public Service Company of Oklahoma
Puerto Rico Water Resources Authority
Puget Sound Power & Light Company
Rochester Gas and Electric Corporation
Sacramento Municipal Utility District
San Diego Gas and Electric Company
Southern California Edison Company
South Carolina Electric & Gas Company
Tenneseee Valley Authority
Texas Utilities Services, Inc.
Toledo Edison Company
Union Electric Company
Vermont Yankee Nuclear Power Corporation
Virginia Electric and Power Company
Washington Public Power Supply System
Wisconsin Electric Power Company
Wisconsin Public Service Corporation
Yankee Atomic Electric Company

Reactor Manufacturers

Babcock & Wilcox Company
Combustion Engineering, Inc.
General Atomic Company
General Electric Company
Westinghouse Electric Corporation

Uranium Producing Companies

Anaconda Company
Atlantic Richfield Company
Atlas Corporation
Chevron Oil Company
Cleveland Cliffs Iron Company
Continental Oil Company
Cotter Corporation

ATTACHMENT A (continued)

Uranium Producing Companies (continued)

Bokum Resources
Dawn Mining Company
Exxon Nuclear Company, Inc.
Federal-American Partners
Freeport Minerals Company
Gardinier, Inc.
Getty Oil Company
Gulf Energy and Minerals Company
Homestake Mining Company
Houston Natural Gas
Inexco Oil Company
Intercontinental Energy Corporation
Kerr-McGee Corporation
Lucky Mc Uranium
Minerals Exploration Company
Minerals Recovery Corporation
Mobil Oil Corporation
New Mexico and Arizona Land Company
Nuclear Dynamics
Phillips Petroleum Company
Pioneer Nuclear, Inc.
Ranchers Exploration and Development Corporation
Reserve Oil and Minerals Corporation
Rio Algom Mines Limited
Rocky Mountain Energy Company
Sohio Petroleum Company
Solution Engineering
U. S. Steel
Union Carbide Corporation
United Nuclear Corporation
Western Nuclear, Inc.

ATTACHMENT B
REACTORS INCLUDED IN SURVEY

SITE	PLANT NAME	CAPACITY (Net Kilowatts)	UTILITY	COMMERCIAL OPERATION
ALABAMA				
Decatur	Browns Ferry Nuclear Power Plant: Unit 1	1,065,000	Tennessee Valley Authority	1974
Decatur	Browns Ferry Nuclear Power Plant: Unit 2	1,065,000	Tennessee Valley Authority	1975
Decatur	Browns Ferry Nuclear Power Plant: Unit 3	1,065,000	Tennessee Valley Authority	1977
Dothan	Joseph M. Farley Nuclear Plant: Unit 1	829,000	Alabama Power Co.	1977
Dothan	Joseph M. Farley Nuclear Plant: Unit 2	829,000	Alabama Power Co.	1979
Clanton	Alan R. Barton Nuclear Plant: Unit 1	1,159,000	Alabama Power Co.	Indef.
Clanton	Alan R. Barton Nuclear Plant: Unit 2	1,159,000	Alabama Power Co.	Indef.
Scottsboro	Bellefonte Nuclear Plant: Unit 1	1,213,000	Tennessee Valley Authority	1980
Scottsboro	Bellefonte Nuclear Plant: Unit 2	1,213,000	Tennessee Valley Authority	1981
ARIZONA				
Wintersburg	Palo Verde Nuclear Generation Station: Unit 1	1,237,700	Arizona Public Service	1982
Wintersburg	Palo Verde Nuclear Generating Station: Unit 2	1,237,700	Arizona Public Service	1984
Wintersburg	Palo Verde Nuclear Generating Station: Unit 3	1,237,700	Arizona Public Service	1986
ARKANSAS				
Russellville	Arkansas Nuclear One: Unit 1	850,000	Arkansas Power & Light Co.	1974
Russellville	Arkansas Nuclear One: Unit 2	912,000	Arkansas Power & Light Co.	1978
CALIFORNIA				
Eureka	Humboldt Bay Power Plant: Unit 3	65,000	Pacific Gas and Electric Co.	1963
San Clemente	San Onofre Nuclear Generating Station: Unit 1	450,000	So. Calif. Ed. & San Diego Gas & El. Co.	1968
San Clemente	San Onofre Nuclear Generating Station: Unit 2	1,100,000	So. Calif. Ed. & San Diego Gas & El. Co.	1981
San Clemente	San Onofre Nuclear Generating Station: Unit 3	1,100,000	So. Calif. Ed. & San Diego Gas & El. Co.	1983
Diablo Canyon	Diablo Canyon Nuclear Power Plant: Unit 1	1,084,000	Pacific Gas and Electric Co.	1977
Diablo Canyon	Diablo Canyon Nuclear Power Plant: Unit 2	1,106,000	Pacific Gas and Electric Co.	1977
Clay Station	Rancho Seco Nuclear Generating Station	913,000	Sacramento Municipal Utility District	1975
*	–	1,200,000	Pacific Gas & Electric Co.	Indef.
*	–	1,200,000	Pacific Gas & Electric Co.	Indef.
Blythe	Sundesert Nuclear Plant: Unit 1	974,000	San Diego Gas & Electric Co.	1984
Blythe	Sundesert Nuclear Plant: Unit 2	974,000	San Diego Gas & Electric Co.	1986
COLORADO				
Platteville	Ft. St. Vrain Nuclear Generating Station	330,000	Public Service Co. of Colorado	1977
CONNECTICUT				
Haddam Neck	Haddam Neck Plant	575,000	Conn. Yankee Atomic Power Co.	1968
Waterford	Millstone Nuclear Power Station: Unit 1	690,000	Northeast Nuclear Energy Co.	1971
Waterford	Millstone Nuclear Power Station: Unit 2	828,000	Northeast Nuclear Energy Co.	1975
Waterford	Millstone Nuclear Power Station: Unit 3	1,156,000	Northeast Nuclear Energy Co.	1982
FLORIDA				
Florida City	Turkey Point Station: Unit 3	745,000	Florida Power & Light Co.	1972
Florida City	Turkey Point Station: Unit 4	745,000	Florida Power & Light Co.	1973
Red Level	Crystal River Plant: Unit 3	825,000	Florida Power Corp.	1977
Ft. Pierce	St. Lucie Plant: Unit 1	810,000	Florida Power & Light Co.	1976
Ft. Pierce	St. Lucie Plant: Unit 2	810,000	Florida Power & Light Co.	1982
GEORGIA				
Baxley	Edwin I. Hatch Nuclear Plant: Unit 1	786,000	Georgia Power Co.	1975
Baxley	Edwin I. Hatch Nuclear Plant: Unit 2	795,000	Georgia Power Co.	1979
Waynesboro	Alvin W. Vogtle, Jr. Plant: Unit 1	1,113,000	Georgia Power Co.	1983
Waynesboro	Alvin W. Vogtle, Jr. Plant: Unit 2	1,113,000	Georgia Power Co.	1984
ILLINOIS				
Morris	Dresden Nuclear Power Station: Unit 1	200,000	Commonwealth Edison Co.	1960
Morris	Dresden Nuclear Power Station: Unit 2	809,000	Commonwealth Edison Co.	1970
Morris	Dresden Nuclear Power Station: Unit 3	809,000	Commonwealth Edison Co.	1971
Zion	Zion Nuclear Plant: Unit 1	1,050,000	Commonwealth Edison Co.	1973
Zion	Zion Nuclear Plant: Unit 2	1,050,000	Commonwealth Edison Co.	1974
Cordova	Quad-Cities Station: Unit 1	809,000	Comm. Ed. Co.-Ia.-Ill. Gas & Elec. Co.	1972
Cordova	Quad-Cities Station: Unit 2	809,000	Comm. Ed. Co.-Ia.-Ill. Gas & Elec. Co.	1972
Seneca	LaSalle County Nuclear Station: Unit 1	1,078,000	Commonwealth Edison Co.	1979
Seneca	LaSalle County Nuclear Station: Unit 2	1,078,000	Commonwealth Edison Co.	1979
Bryon	Byron Station: Unit 1	1,120,000	Commonwealth Edison Co.	1980
Bryon	Byron Station: Unit 2	1,120,000	Commonwealth Edison Co.	1982
Braidwood	Braidwood: Unit 1	1,120,000	Commonwealth Edison Co.	1981
Braidwood	Braidwood: Unit 2	1,120,000	Commonwealth Edison Co.	1982
Clinton	Clinton Nuclear Power Plant : Unit 1	933,400	Illinois Power Co.	1981
Clinton	Clinton Nuclear Power Plant : Unit 2	933,400	Illinois Power Co.	1984
INDIANA				
Westchester	Bailly Generating Station	645,300	Northern Indiana Public Service Co.	1982
Madison	Marble Hill Nuclear Power Station: Unit 1	1,130,000	Public Service Indiana	1982
Madison	Marble Hill Nuclear Power Station: Unit 2	1,130,000	Public Service Indiana	1984
IOWA				
Palo	Duane Arnold Energy Center: Unit 1	538,000	Iowa Electric Light and Power Co.	1975
Vandalia	Central Iowa	1,200,000	Iowa Power & Light Co.	1985
KANSAS				
Burlington	Wolf Creek Generation Station: Unit 1	1,150,000	Kansas Gas & Electric–Kansas City P & L	1982
LOUISIANA				
Taft	Waterford Generating Station: Unit 3	1,113,000	Louisiana Power & Light Co.	1981
St. Francisville	River Bend Station: Unit 1	934,000	Gulf States Utilities Co.	1981
St. Francisville	River Bend Station: Unit 2	934,000	Gulf States Utilities Co.	1983
MAINE				
Wiscasset	Maine Yankee Atomic Power Plant	790,000	Maine Yankee Atomic Power Co.	1972

ATTACHMENT B
REACTORS INCLUDED IN SURVEY (CONTINUED)

SITE	PLANT NAME	CAPACITY (Net Kilowatts)	UTILITY	COMMERCIAL OPERATION
MARYLAND				
Lusby	Calvert Cliffs Nuclear Power Plant: Unit 1	845,000	Baltimore Gas and Electric Co.	1975
Lusby	Calvert Cliffs Nuclear Power Plant: Unit 2	845,000	Baltimore Gas and Electric Co.	1977
Douglas Point	Douglas Point Project Nuclear Gen. Station: Unit 1	1,146,000	Potomac Electric Power Co.	1985
Douglas Point	Douglas Point Project Nuclear Gen. Station: Unit 2	1,146,000	Potomac Electric Power Co.	1987
MASSACHUSETTS				
Rowe	Yankee Nuclear Power Station	175,000	Yankee Atomic Electric Co.	1961
Plymouth	Pilgrim Station: Unit 1	655,000	Boston Edison Co.	1972
Plymouth	Pilgrim Station: Unit 2	1,180,000	Boston Edison Co.	1984
Montague	Montague: Unit 1	1,150,000	Northeast Utilities	1986
Montague	Montague: Unit 2	1,150,000	Northeast Utilities	1988
MICHIGAN				
Big Rock Point	Big Rock Point Nuclear Plant	72,000	Consumers Power Co.	1965
South Haven	Palisades Nuclear Power Station	821,000	Consumers Power Co.	1971
Newport	Enrico Fermi Atomic Power Plant: Unit 2	1,093,000	Detroit Edison Co.	1980
Bridgman	Donald C. Cook Plant: Unit 1	1,080,000	Indiana & Michigan Electric Co.	1975
Bridgman	Donald C. Cook Plant: Unit 2	1,060,000	Indiana & Michigan Electric Co.	1978
Midland	Midland Nuclear Power Plant: Unit 1	460,000	Consumers Power Co.	1982
Midland	Midland Nuclear Power Plant: Unit 2	811,000	Consumers Power Co.	1981
St. Clair County	Greenwood: Unit 2	1,200,000	Detroit Edison Co.	1984
St. Clair County	Greenwood: Unit 3	1,200,000	Detroit Edison Co.	1986
MINNESOTA				
Monticello	Monticello Nuclear Generating Plant	545,000	Northern States Power Co.	1971
Red Wing	Prairie Island Nuclear Generating Plant: Unit 1	530,000	Northern States Power Co.	1973
Red Wing	Prairie Island Nuclear Generating Plant: Unit 2	530,000	Northern States Power Co.	1974
MISSOURI				
Fulton	Callaway Plant: Unit 1	1,120,000	Union Electric Co.	1981
Fulton	Callaway Plant: Unit 2	1,120,000	Union Electric Co.	1983
MISSISSIPPI				
Port Gibson	Grand Gulf Nuclear Station: Unit 1	1,250,000	Mississippi Power & Light Co.	1980
Port Gibson	Grand Gulf Nuclear Station: Unit 2	1,250,000	Mississippi Power & Light Co.	1983
NEBRASKA				
Fort Calhoun	Ft. Calhoun Station: Unit 1	457,000	Omaha Public Power District	1973
Fort Calhoun	Ft. Calhoun Station: Unit 2	1,136,000	Omaha Public Power District	1983
Brownville	Cooper Nuclear Station	778,000	Nebraska Public Power District and Iowa Power and Light Co.	1974
NEW HAMPSHIRE				
Seabrook	Seabrook Nuclear Station: Unit 1	1,200,000	Public Service of N.H.	1981
Seabrook	Seabrook Nuclear Station: Unit 2	1,200,000	Public Service of N.H.	1983
NEW JERSEY				
Forked River	Oyster Creek Nuclear Power Plant: Unit 1	650,000	Jersey Central Power & Light Co.	1969
Forked River	Forked River Generating Station: Unit 1	1,070,000	Jersey Central Power & Light Co.	1982
Salem	Salem Nuclear Generating Station: Unit 1	1,090,000	Public Service Electric and Gas, N.J.	1976
Salem	Salem Nuclear Generating Station: Unit 2	1,115,000	Public Service Electric and Gas, N.J.	1979
Salem	Hope Creek Generating Station: Unit 1	1,067,000	Public Service Electric and Gas, N.J.	1984
Salem	Hope Creek Generating Station: Unit 2	1,067,000	Public Service Electric and Gas, N.J.	1986
Little Egg Inlet	Atlantic Generating Station: Unit 1	1,150,000	Public Service Electric and Gas, N.J.	1985
Little Egg Inlet	Atlantic Generating Station: Unit 2	1,150,000	Public Service Electric and Gas, N.J.	1987
*	1990 Unit	1,150,000	Public Service Electric and Gas, N.J.	1990
*	1992 Unit	1,150,000	Public Service Electric and Gas, N.J.	1992
NEW YORK				
Indian Point	Indian Point Station: Unit 1	265,000	Consolidated Edison Co.	1962
Indian Point	Indian Point Station: Unit 2	873,000	Consolidated Edison Co.	1973
Indian Point	Indian Point Station: Unit 3	965,000	Power Authority of State of N.Y.	1976
Scriba	Nine Mile Point Nuclear Station: Unit 1	610,000	Niagara Mohawk Power Co.	1969
Scriba	Nine Mile Point Nuclear Station: Unit 2	1,099,800	Niagara Mohawk Power Co.	1982
Ontario	R.E.Ginna Nuclear Power Plant: Unit 1	490,000	Rochester Gas & Electric Co.	1970
Brookhaven	Shoreham Nuclear Power Station	819,000	Long Island Lighting Co.	1979
Scriba	James A. FitzPatrick Nuclear Power Plant	821,000	Power Authority of State of N.Y.	1975
Cementon	Greene County Nuclear Power Plant	1,191,000	Power Authority of State of N.Y.	1984
Jamesport	Jamesport 1	1,150,000	Long Island Lighting Co.	1983
Jamesport	Jamesport 2	1,150,000	Long Island Lighting Co.	1985
Oswego	Sterling Nuclear: Unit 1	1,150,000	Rochester Gas & Electric Co.	1984
NORTH CAROLINA				
Southport	Brunswick Steam Electric Plant: Unit 1	821,000	Carolina Power and Light Co.	1977
Southport	Brunswick Steam Electric Plant: Unit 2	821,000	Carolina Power and Light Co.	1975
Cowans Ford Dam	Wm. B. McGuire Nuclear Station: Unit 1	1,180,000	Duke Power Co.	1979
Cowans Ford Dam	Wm. B. McGuire Nuclear Station: Unit 2	1,180,000	Duke Power Co.	1980
Bonsal	Shearon Harris Plant: Unit 1	900,000	Carolina Power & Light Co.	1984
Bonsal	Shearon Harris Plant: Unit 2	900,000	Carolina Power & Light Co.	1986
Bonsal	Shearon Harris Plant: Unit 3	900,000	Carolina Power & Light Co.	1990
Bonsal	Shearon Harris Plant: Unit 4	900,000	Carolina Power & Light Co.	1988
Davie County	Perkins Nuclear Station: Unit 1	1,280,000	Duke Power Co.	1985
Davie County	Perkins Nuclear Station: Unit 2	1,280,000	Duke Power Co.	1987
Davie County	Perkins Nuclear Station: Unit 3	1,280,000	Duke Power Co.	1990
*	_	1,150,000	Carolina Power & Light Co.	1987
*	_	1,150,000	Carolina Power & Light Co.	1989
*	_	1,150,000	Carolina Power & Light Co.	Indef.

ATTACHMENT B
REACTORS INCLUDED IN SURVEY (CONTINUED)

SITE	PLANT NAME	CAPACITY (Net Kilowatts)	UTILITY	COMMERCIAL OPERATION
OHIO				
Berlin Heights	Erie: Unit 1	1,260,000	Ohio Edison Co.	1984
Berlin Heights	Erie: Unit 2	1,260,000	Ohio Edison Co.	1986
Oak Harbor	Davis-Besse Nuclear Power Station: Unit 1	906,000	Toledo Edison-Cleveland El. Illum. Co.	1977
Oak Harbor	Davis-Besse Nuclear Power Station: Unit 2	906,000	Toledo Edison-Cleveland El. Illum. Co.	1983
Oak Harbor	Davis-Besse Nuclear Power Station: Unit 3	906,000	Toledo Edison-Cleveland El. Illum. Co.	1985
Perry	Perry Nuclear Power Plant: Unit 1	1,205,000	Cleveland Electric Illuminating Co.	1981
Perry	Perry Nuclear Power Plant: Unit 2	1,205,000	Cleveland Electric Illuminating Co.	1983
Moscow	Wm. H. Zimmer Nuclear Power Station: Unit 1	810,000	Cincinnati Gas & Electric Co.	1979
Moscow	Wm. H. Zimmer Nuclear Power Station: Unit 2	1,170,000	Cincinnati Gas & Electric Co.	1987
OKLAHOMA				
Inola	Black Fox Nuclear Station: Unit 1	1,150,000	Public Service of Oklahoma	1983
Inola	Black Fox Nuclear Station: Unit 2	1,150,000	Public Service of Oklahoma	1985
OREGON				
Prescott	Trojan Nuclear Plant: Unit 1	1,130,000	Portland General Electric Co.	1975
Arlington	Pebble Springs Nuclear Plant: Unit 1	1,260,000	Portland General Electric Co.	1985
Arlington	Pebble Springs Nuclear Plant: Unit 2	1,260,000	Portland General Electric Co.	1988
PENNSYLVANIA				
Peach Bottom	Peach Bottom Atomic Power Station: Unit 2	1,065,000	Philadelphia Electric Co.	1974
Peach Bottom	Peach Bottom Atomic Power Station: Unit 3	1,065,000	Philadelphia Electric Co.	1974
Pottstown	Limerick Generating Station: Unit 1	1,065,000	Philadelphia Electric Co.	1983
Pottstown	Limerick Generating Station: Unit 2	1,065,000	Philadelphia Electric Co.	1985
Shippingport	Beaver Valley Power Station: Unit 1	852,000	Duquesne Light Co.-Ohio Edison Co.	1976
Shippingport	Beaver Valley Power Station: Unit 2	852,000	Duquesne Light Co.-Ohio Edison Co.	1982
Middletown	Three Mile Island Nuclear Station: Unit 1	792,000	Metropolitan Edison Co.	1974
Middletown	Three Mile Island Nuclear Station: Unit 2	906,000	Jersey Central Power & Light Co.	1978
Berwick	Susquehanna Steam Electric Station: Unit 1	1,050,000	Pennsylvania Power and Light	1980
Berwick	Susquehanna Steam Electric Station: Unit 2	1,050,000	Pennsylvania Power and Light	1982
RHODE ISLAND				
Charlestown	New England Power (NEP): Unit 1	1,150,000	New England Power Co.	1984
Charlestown	New England Power (NEP): Unit 2	1,150,000	New England Power Co.	1986
SOUTH CAROLINA				
Hartsville	H. B. Robinson S.E. Plant: Unit 2	707,000	Carolina Power & Light Co.	1971
Seneca	Oconee Nuclear Station: Unit 1	986,000	Duke Power Co.	1973
Seneca	Oconee Nuclear Station: Unit 2	986,000	Duke Power Co.	1974
Seneca	Oconee Nuclear Station: Unit 3	986,000	Duke Power Co.	1974
Broad River	Virgil C. Summer Nuclear Station: Unit 1	900,000	South Carolina Electric & Gas Co.	1979
Lake Wylie	Catawba Nuclear Station: Unit 1	1,153,000	Duke Power Co.	1981
Lake Wylie	Catawba Nuclear Station: Unit 2	1,153,000	Duke Power Co.	1983
Cherokee County	Cherokee Nuclear Station: Unit 1	1,280,000	Duke Power Co.	1984
Cherokee County	Cherokee Nuclear Station: Unit 2	1,280,000	Duke Power Co.	1986
Cherokee County	Cherokee Nuclear Station: Unit 3	1,280,000	Duke Power Co.	1983
TENNESSEE				
Daisy	Sequoyah Nuclear Power Plant: Unit 1	1,148,000	Tennessee Valley Authority	1978
Daisy	Sequoyah Nuclear Power Plant: Unit 2	1,148,000	Tennessee Valley Authority	1979
Spring City	Watts Bar Nuclear Plant: Unit 1	1,177,000	Tennessee Valley Authority	1979
Spring City	Watts Bar Nuclear Plant: Unit 2	1,177,000	Tennessee Valley Authority	1980
Hartsville	A, Unit 1	1,233,000	Tennessee Valley Authority	1983
Hartsville	A, Unit 2	1,233,000	Tennessee Valley Authority	1983
Hartsville	B, Unit 1	1,233,000	Tennessee Valley Authority	1984
Hartsville	B, Unit 2	1,233,000	Tennessee Valley Authority	1984
TEXAS				
Glen Rose	Commanche Peak Steam Electric Station: Unit 1	1,150,000	Texas Utilities Services Inc.	1980
Glen Rose	Commanche Peak Steam Electric Station: Unit 2	1,150,000	Texas Utilities Services Inc.	1982
Jasper	Blue Hills: Unit 1	918,000	Gulf States Utilities	1989
Jasper	Blue Hills: Unit 2	918,000	Gulf States Utilities	1991
Wallis	Allens Creek: Unit 1	1,150,000	Houston Lighting & Power Co.	1985
Matagorda County	South Texas: Unit 1	1,250,000	Central Power & Lt.-Houston Lt. & Power	1980
Matagorda County	South Texas: Unit 2	1,250,000	Central Power & Lt.-Houston Lt. & Power	1982
VERMONT				
Vernon	Vermont Yankee Generating Station	514,000	Vermont Yankee Nuclear Power Corp.	1972
VIRGINIA				
Gravel Neck	Surry Power Station: Unit 1	822,000	Virginia Electric & Power Company	1972
Gravel Neck	Surry Power Station: Unit 2	822,000	Virginia Electric & Power Company	1973
Mineral	North Anna Power Station: Unit 1	898,000	Virginia Electric & Power Company	1977
Mineral	North Anna Power Station: Unit 2	898,000	Virginia Electric & Power Company	1978
Mineral	North Anna Power Station: Unit 3	907,000	Virginia Electric & Power Company	1981
Mineral	North Anna Power Station: Unit 4	907,000	Virginia Electric & Power Company	1981
WASHINGTON				
Richland	WPPSS No. 1	1,218,000	Washington Public Power Supply System	1981
Richland	WPPSS No. 2	1,100,000	Washington Public Power Supply System	1980
Satsop	WPPSS No. 3	1,242,000	Washington Public Power Supply System	1983
Richland	WPPSS No. 4	1,218,000	Washington Public Power Supply System	1983
Satsop	WPPSS No. 5	1,242,000	Washington Public Power Supply System	1984
Sedro Woolley	Skagit Nuclear Project: Unit 1	1,277,000	Puget Sound Power & Light	1983
Sedro Woolley	Skagit Nuclear Project: Unit 2	1,277,000	Puget Sound Power & Light	1986

ATTACHMENT B
REACTORS INCLUDED IN SURVEY (CONTINUED)

SITE	PLANT NAME	CAPACITY (Net Kilowatts)	UTILITY	COMMERCIAL OPERATION
WISCONSIN				
La Crosse	Genoa Nuclear Generating Station	50,000	Dairyland Power Cooperative	1969
Two Creeks	Point Beach Nuclear Plant: Unit 1	497,000	Wisconsin Michigan Power Co.	1970
Two Creeks	Point Beach Nuclear Plant: Unit 2	497,000	Wisconsin Michigan Power Co.	1973
Carlton	Kewaunee Nuclear Power Plant: Unit 1	560,000	Wisconsin Public Service Corp.	1974
Ft. Aktinson	Koshkonong Nuclear Plant: Unit 1	900,000	Wisconsin Electric Power Co.	1985
Ft. Atkinson	Koshkonong Nuclear Plant: Unit 2	900,000	Wisconsin Electric Power Co.	1986
Durand	Tyrone Energy Park: Unit 1	1,150,000	Northern States Power Co.	1984
PUERTO RICO				
Arecibo	North Coast Power Plant	583,000	Puerto Rico Water Resources Authority	Indef.
*	–	1,233,000	Tennessee Valley Authority	1984
*	–	1,300,000	Tennessee Valley Authority	1985
*	–	1,233,000	Tennessee Valley Authority	1985
*	–	1,300,000	Tennessee Valley Authority	1986

* Site not selected.