Exhibit 1

Portland General Electric Company
Legal Department

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Vice President and General Counsel

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Assistant General Counsel:
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February 15, 1980

Elizabeth S. Bowers, Esq., Chairman
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. Walter H. Jordan
881 West Outer Drive
Oak Ridge, TN 37830

Dr. William E. Martin
Senior Ecologist
Battelle Memorial Institute
Columbus, OH 43201

In the Matter of
PORTLAND GENERAL ELECTRIC COMPANY, ET AL.
(Pebble Springs Nuclear Plant, Units 1 & 2)
Docket Nos. 50-514 & 50-515

Dear Members of the Board:

For the information of the Licensing Board, the Regulatory Staff and the parties, we are enclosing a copy of Portland General Electric Company's (PGE) recent statement to the press concerning the Pebble Springs project. We have concluded that the Pebble Springs plant cannot be completed in time to meet energy requirements in the late 1980s. However, the project is not being abandoned.

It is PGE's intent to continue State and Federal licensing activities for Pebble Springs. At the December 19, 1979 ASLB conference in Portland, we proposed bifurcation of the proceeding into environmental and safety issues. We reiterate our earlier request for a hearing to close the record on site suitability issues as soon as reasonably possible and for the Board to issue a partial decision on these matters. A hearing date which had been tentatively set for May 15 of this year remains appropriate

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for this end. We would propose to resume the proceeding on safety and any other remaining issues as soon as the Nuclear Regulatory Commission Staff is ready to proceed.

Within the next several weeks, we will provide copies of the updated load forecasts and estimated resources of the Pebble Springs project participants.

Sincerely,

/s/ W. Hastings

Warren Hastings
Senior Assistant General Counsel

WH/DRS/4sa8A7
Enclosure

c: Mr. Lynn Frank
Alan S. Rosenthal, Esq.
Dr. Lawrence R. Quarles
Richard S. Salzman, Esq.
Richard M. Sandvik, Esq.
Mr. Lloyd K. Marbet
Frank Josselson, Esq.
Ms. Bernice Ireland
Kathleen H. Shea, Esq.
Bernard M. Bordenick, Esq.

February 7, 1980 10:00 a.m.
Robert H. Short, President
Portland General Electric Company

STATEMENT

Portland General Electric Company is continually reviewing its customers needs for electric energy and our generating resources from which we supply that energy. Our planning must be done years in advance because of the long periods of time required to license and construct generating facilities.

Our energy requirement forecasts show that our customers will need an additional 300,000 kilowatts of electrical energy in the late 1980's. This estimate is confirmed by independent forecasts conducted by the state of Oregon. We have relied upon the Pebble Springs nuclear plant to meet that requirement. We have now concluded that the Pebble Springs plant cannot be completed in time to meet the late 1980's energy requirements. We must turn to other alternatives.

Alternatives that are being seriously studied are the construction of a second coal plant at Boardman and a partnership in coal projects being considered by Washington Water Power. A coal plant could be licensed and constructed in sufficient time to meet our customers' requirements in the late 1980's. We are also evaluating the role that other options can play in meeting our energy requirements; for example, additional amounts of conservation would help. We are also evaluating a new hydroelectric facility, co-generation options, and other alternative resources. It may be several months before our plans are completed, but we would hope to have a much clearer picture in 60 days.

However, a decision has been made to reschedule the Pebble Springs project so that we may concentrate on projects necessary

to meet our energy requirements for the late 1980's. This does not mean that the Pebble Springs project is being abandoned -- it is not. We are merely rescheduling its role in meeting our energy demands for the 1990's. It will be studied an reviewed in the months ahead.

Merrill Lynch
Pierce
Fenner & Smith Inc

Institutional
Report

Securities Research Division

March 12, 1981

Exhibit 2

Utility Nuclear Power Plants — The Outlook For the 80's

Some improvement is taking place . . .

It may surprise you where

Doris A. Kelley
Industry Specialist
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Note: At the time of publication of this report, the NRC released word that Sourthern Company's Joseph M. Farley nuclear plant would receive a full power operating license.

Since our last report on the nation's investor-owned nuclear power plants plans for 16 nuclear power plants have been cancelled, and construction on many nuclear units has either ceased temporarily or lessened substantially. Nevertheless, four nuclear units that did not have low power or commercial operating licenses a year ago now have them. We estimate that four to eight nuclear units are nearing completion and could be in commercial operation by this time next year. In our opinion, several additional plant cancellations are likely by the end of 1981. About 18 units appear to us to be possible candidates for cancellations.

Clearly, either through cancellation or successful start-up, the investor owned electric power industry has begun to shed the nuclear construction load. The number of physical nuclear projects that are being built is decreasing. Changes in and reversals on major nuclear issues are the only certainties and the investment merits of various utility stocks will continue to be effected as a result. We do not believe that investors and utilities will return to nuclear power on the basis of a single occurence or at one time. Instead, we believe that individual utility companies will determine their own power needs and chart a corresponding course of action on nuclear power.

We believe that investors may be able to find profitable opportunities in a select group of utility shares whose nuclear involvement may have caused concern in the past. Some utilities have fundamentals that could change substantially in the intermediate term because of general changes in their nuclear power position. For some utilities, those changes could be spearheaded by expected favorable shifts in Federal regulation of nuclear power. Other utilities are completing long standing nuclear projects and may soon have a new asset in rate base. Still other utilities may, through cancellation of or deferral of nuclear plant contruction obtain flexibility, which could allow a company to wait until some of its energy needs could be determined with greater accuracy.

Nuclear Regulatory Commission
Some Changes

The Nuclear Regulatory Commission (NRC) should be composed of five members--currently it has four. President Reagan will be selecting the fifth member, who will automatically become the chairman of the Commission. A Reagan appointee is assumed to share the President's desire to continue development of nuclear power.

Specifically, we believe that the new chairman may seek to reduce the regulatory tangles that sometimes develop within the various divisions of the NRC. In addition, in the future the two-two split on issues is not likely to occur as it did sporadically in the past. Although we expect strict safety standards to continue to be the foundation for NRC actions, greater effort toward expediting day-to-day matters may improve Commission responsiveness to the industry's needs.

We believe that the "national mood" will determine nuclear power's long term status. In addition, we believe that the NRC's first action, under its new Reagan appointed chairman will be to determine the status of those plants nearing completion. Getting completed plants on line is a decisive move and would complement President Reagan's attitude toward other domestic issues.

If the NRC acts as we expect it to, then plants that are basically complete could have operating or low power licenses within the next several months. The following plants could receive such licenses:

Company	Nuclear Unit
Pacific Gas & Electric	Diablo Canyon #1 Diablo Canyon #2
Southern California Edison	San Onofre #2
Commonwealth Edison	La Salle #1
General Public Utilities (Metropolitan Edison)	Three Mile Island #1

The current uncertainties of the nuclear power industry make it better to be winding down rather than starting up a nuclear project.

If more favorable NRC regulatory procedures for eventual licensing of newly constructed plants are implemented, then, in our opinion, plants nearing completion in the near-to-intermediate term are in a good position. Plants that are currently at least 80-to-85% complete appeal to us because we assume that they could be completed in 17-to-19 months (maximum). Such plants could conceivably be in a rate base, producing power and earning revenue, by late 1983. Units that are more than 80-to-85% complete could be on stream sooner. Much of an investor's concern about nuclear plant investment focuses on the ever-lengthening time to build a plant (see Appendix) and to put it in rate base. By concentrating on utility companies with projects nearly complete the wait for a return can be projected with much greater accuracy. Indeed, where regulatory procedures permit, a company may be able to prefile a rate case that would include the new unit in its rate base. Such a filing might stipulate that when the unit becomes commercial, the rates in question would become effective automatically. Such filings might be particulary appropriate in states that do not allow use of a projected rate base or a future test year.

Following is a list of the utilities and the units fitting the above description:

Company	Nuclear Unit
Cincinnati G & E	Wm. H. Zimmer #1
Commonwealth Edison	La Salle #2
Long Island Lighting	Shoreham
Middle South Utilities	Grand Gulf #1 Waterford #3
South Carolina E & G	Virgil C. Summer #1
Texas Utilities	Comanche Peak #1

Cancellation--in the long run it may not be the best choice; however, for some utilities, it could be a valuable option.

We believe that the option to cancel a nuclear project is valuable to some utilities.

Obviously cancellation or a deferral is not a cure for most utility companies. In many instances, a decision to cancel could virtually eliminate a massive capital spending program. The benefits of lowering spending needs are evident. A utility that could derive the most benefit from a cancellation probably displays one or more of the following characteristics:

- able to identify an alternative means of meeting projected demand (in addition to changing to a coal-fired plant, some utilities may find a decline in projected demand means postponing construction for several years)
- has the dollar involvement in the cancelled unit at tolerable levels (which means that the probability of recoupment is reasonably high)
- has projects that are not yet under construction and are thus easily cancelled, or has projects that are less than 20% complete.

Company	Nuclear Unit	Comment
Illinois Power Co. *	Clinton #2 (NOT CANCELLED)	Dollar involvement very low, service area load growth moderate. Believe company is in position to cancel and would realize benefits from doing so.
Boston Edison Co. *	Pilgrim #2 (NOT CANCELLED)	Both NES & BSE experiencing decline in load growth rates. Each has a tolerable level of dollar involvement. BSE's fundamental position likely to be improved should project be cancelled.
Portland General Electric *	Pebble Spring #1 & 2 (NOT CANCELLED) Skagit #1 (NOT CANCELLED)	PGN appears to have some wait-and-see room in its reserve margin. Regional power legislation in place could aid company's eventual plans for future power generation. Much of dollar involvement could be transferred to new construction project.

* For a further description of these units, see nuclear plant tables in this report.

What about those nuclear projects that do not fall into any of the preceding catagories? A case-by-case appraisal must be made for each project. The only general measure that can be used for them, is consideration of the total cost of an alternative. If the alternative is not available as soon or sooner and at a cost lower than what remians to be spent on the unfinished unit, then the completion of the nuclear unit may be preferable. State regulation is of tremendous importance in such instances. Without regulatory commitment to the project's eventual completion, the cost and delay could exceed all projections.

We said earlier that we believe, that the "national mood" will contribute the most to the long-term status of nuclear power. The investment implications are anything but clear. It is possible that what the public wants and what is needed may not be the same.

We suggest, therefore, that a close monitoring of the "national mood" as well as selective use of those electric power shares whose characteristics may place them in a position of strength may help an investor weather uncertainties of investment in nuclear power.

NUCLEAR PLANT INFORMATION TABLES

The following tables should aid the utility investor in assessing a company's present or future nuclear position. The data are presented as a snapshot of conditions at a moment in time. Most of the column headings are self explanatory; explanations for the others follow. Dollars Invested and Cost Per KW are best used as minimum figures below which, costs will not fall. The data are as of September 30, 1980, unless year end data were available.

Under the column headed State and Operating Utility, we first list the state in which the plant is located and then the lead (operating) utility of the nuclear power plant(s). A lead utility generally has the responsibility for fuel procurement and is not necessarily the company with the largest percentage of ownership. If the lead utility is a subsidiary, we list the parent company below in parentheses. We do not include those nuclear power plants that are majority owned by public agencies.

The term Licensed Operable Nuclear Power Plant refers primarily to nuclear units that are capable of producing power and that have loaded fuel. A unit could be operable and have a license, but might not operate because of an NRC restriction. There are four such plants:

Indian Point #1	down since 1974	Consolidated Edison
Humboldt Bay	down since 1976	Pacific Gas & Electric
Three Mile Island #1	down since 1978	General Public Utilities
Three Mile Island #2	down since 1979	General Public Utilities

We note that at any time other operable units may be temporarily under NRC operating restrictions for various reasons or that a unit could be down at the behest of the operator. Those units are not included in the above list.

Years of Commercial Operation for the operating nuclear units represent the years in which the various state regulatory bodies accepted those units as used or useful for rate making.

We list percentage of ownership followed by the corresponding utility company's stock symbol in the column marked Company and Others Percent Ownership. In cases where ownership is shared with municipal power agencies, we list "muni" next to the indicated percentages. If owners include Co-operative Agencies, we list "co-op(s)" and, in a few cases, "Pow Auth" to show that a Power Authority has ownership in a unit.

Our Comments on Operating Nuclear Plants are intentionally general and speak about past unit performance. Because our crystal ball is no better than yours, any discussion of a unit's future availability will hinge only on whether or not there are "generic fixes" looming in a unit's future.

"Generic fixes," as we call them, are, in oversimplified terminology, repairs or alterations that must be made and that affect a number of nuclear power plants. These would be conditions that cannot be allowed to exist over the lifetime of the plants affected. The NRC calls them "Unresolved Safety Issues." In our opinion, only one generic fix has become common enough to mention: various steam generator problems including tube leaks, corrosion and denting. There are other problems such as turbine blade cracks (which also occur in fossil fuel plants) and seismic restraint requirements. We mentioned tubing problems because the amount of unit downtime required to make temporary or permanent repairs plus considerable check-and-test time can be worrisome to shareholders, and the cost could effect earnings modestly. We include a brief explanation of tube integrity problems in the Appendix. Generally, the cost of repairing steam generator tubing is capitalized, and replacement power costs are handled under a company's fuel adjustment clause, (if there is one) or by deferred fuel cost accounting.

The Nuclear Power Plant Planned or Under Construction column is self-explanatory. Some units listed are complete or will soon be completed. Completed plants cannot be classified as operable until at least a low power license is received and fuel is loaded.

Notations included in the column headed Permit:

C - NRC construction permit granted.

LWA - NRC has given limited work authorization for the unit, i.e. preparation of the construction site may commence

O - The constructing utility company has placed an order for a nuclear unit with a chosen reactor supplier.

The Planned Year of Completion is usually the company's scheduled year for completion of the plant. Dates for commercial operation of a unit can only be estimated because of current licensing uncertainties. Many of the dates have been deferred and more deferrals are likely. Estimates for periods beyond the late 1980's, have only limited use, given current regulatory uncertainties.

The column headed Comments for Plants Under Construction includes factual material, and our analysis of the unit's current or prospective status.

State and Operating Utility	Licensed Operable Nuclear Power Plant	Yr. of Commercial Operation	Company & Others % Ownership	Comment
ALABAMA Alabama Power Co. (Southern Company Subsidiary)	Joseph M. Farley #1 829 MW	1977	100%	This Westinghouse unit working well. Major Three Mile Island required modifications complete.
	Joseph M. Farley #2 829 MW		100%	Unit #2 received the second Low Power license to operate since TMI on 10/23/80. The unit is not expected to reach full power capability until early second half 1981.
ARIZONA Arizona Public Service Co.				
ARKANSAS Arkansas Power & Light Co. (A Middle South Subsidiary)	ANO #1 850 MW ANO #2 912 MW	1974 1980	100% 100%	Neither unit displays major generic problems. Operating records have been respectable. No major modifications expected at this time. Unit #2's offical year of operation is 1980 when the unit was accepted in rate base.
CALIFORNIA Pacific Gas & Electric Co.	Humboldt Bay 65 MW	1963	100%	This unit has been inactive since 1976 due to regulatory requirement for seismic improvements. To meet todays requirements could require more money than the unit has time to earn back. In light of the indefinite shutdown the California Public Utilities Commission removed this unit from rate base in 12/79.
Southern California Edison Co.	San Onofre #1 918 MW	1968	80% SCE 20% SDO	Unit down since April 1980 because of corrosion of tubes in the steam-generator Most recent estimate for its return to service is sometime during the second quarter 1981. Operating utilities have decided to eventually replace the tubing.
COLORADO Public Service Co. of Col.	Fort St. Vrain 330 MW	1979	100% PSR	This is the only high-temperature, gas-cooled reactor supplying commercial power in the nation. This prototype unit, built by General Atomic, has had many problems in its development. PSR obtained ownership of unit at 70% of design capacity in Jan. 1979; technical problems prevented increasing capacity. The primary builder has compensated PSR for the lost capacity. PSR continued efforts to bring unit up to designed level. NRC decision on unit's operations at 100% of design capacity expected in 1981.

Nuclear Power Plant Planned Or Under Construction	Permit	Est. Cost Per KW	Planned Yr. of Commercial Operation	Company & Others % Ownership	Dollars w/AFUDC Invested (Millions)	Comment
Palo Verde #1 1,270 MW	C	$1,888	1983	29.1% AZP	$852	Unit #1 is 74% complete and has much promise for meeting the 1983 or an early 1984 completion schedule. Units #2 and #3 may lag their schedules, for reasons beyond the companies control. We would add one year to each of those units' construction schedules.
				29.1 Co-op	852	
Palo Verde #2 1,270 MW	C	$1,888	1984	15.8 ELPA	354	
				10.2 PNM	229	
				15.8 SCE	366	
Palo Verde #3 1,270 MW	C	$1,888	1986			
Palo Verde #4 1,270 MW	O	N/M	1988	39.1% AZP	$ 1,800	Cancelled July 1979. Approximately $1.8 mm spent by AZP on units; nearly all of which was expensed in 19[illegible]. In a May 1980 rate order, the company was not allowed to pass these charges on to rate payers. Approx. cost to AZP shareholders was 5¢ p/s.
				4. ELPA	.180	
Palo Verde #5 1,270 MW	O	N/M	1990	32.3 SCE	1,800	
				5.2 SDO	.400	
				2.2 NVP	.100	
				17.2 muni(s)	.800	
Diablo Canyon #1 1,085 MW	C	$910	1981	100% PCG	$1,950	Diablo #1 is completed and #2 is approximately 98% complete. Intervenors have successfully delayed licensing efforts. At this point it appears as if many of the available opportunities for intervention have been exhausted and Licensing for the first unit could come later this year, or early 1982. We expect the second unit to follow swiftly.
Diablo Canyon #2 1,085 MW	C		1982	100% PCG		
San Onofre #2 1,100 MW	C	$1,490	1981	76.6% SCE 20% SDO 3.4% Muni(s)	$1,800 SCE 422 SDO 78 Muni(s)	Unit #2 is 96% complete at 10/80. We believe 1981 is a likely start up target.
San Onofre #3 1,100 MW	C	$1,490	1983	76.6% SCE 20% SDO 3.4% Muni(s)		Unit #3 was 68% complete at 10/80. We believe the targeted start-up schedule is likely to be met. Much of required permit gathering should be in place, because it shares same site as unit #2, therefore unit #3 may move smoothly through its licensing period.

N/M Not Meaningful

State and Operating Utility	Licensed Operable Nuclear Power Plant	Yr. of Commercial Operation	Company & Others $ Ownership	Comment
CONNECTICUT				
Northeast Utilities	Connecticut Yankee 575 MW	1968	44% NU 15 NES 9.5 UIL 9.5 BSE 22. Others	Relatively long record of reliable operation. No major modifications expected.
	Millstone #1 660 MW	1971	100% NU	Both units operating without major difficulties. Tubing problems slowed by remedial actions.
	Millstone #2 830 MW	1975	100% NU	
FLORIDA				
Florida Power Corp.	Crystal River #3 825 MW	1977	90% FDP 10 Co-op	Unit has evidenced some tube corrosion, however indications are that problem is manageable. The unscheduled outages experienced in 1980 not caused by any single recurring problem.
Florida Power & Light Co.	Turkey Point #3 693 MW	1972	100% FPL	Both units have substantial problems with steam generator tubing. So far company plans to replace tubes in unit #4 starting October 1981. Replacement for unit #3's tubing would follow in October 1982.
	Turkey Point #4 693 MW	1973	100% FPL	
	St. Lucie #1 802 MW	1976	100% FPL	General operating record has been good. Some corrosion was detected and efforts to lower the rate of corrosion appear to be successful.
GEORGIA				
Georgia Power Co. (Southern Co. Subsidiary)	Edwin I. Hatch #1 786 MW	1975	50% SO 50 Co-Ops	Indications are that unit availability has been average or better. No chronic problems to highlight for either unit.
	Edwin I. Hatch #2 790 MW	1979	50% SO 50 Co-Ops	
ILLINOIS				
Commonwealth Ed.	Dresden #1 207 MW	1960	100% CWE	Dresden Unit #1 shut down October 1978 for major equipment upgrading. Estimates are that this 20 year old unit may not return to service until 1985-86.
	Dresden #2 794 MW	1979	100 CWE	Dresden #2 and #3, Quad Cities #1 and #2 and both Zion units have undergone the planned NRC modifications, and normal operation expected.
	Dresden #3 794 MW	1971	100 CWE	
	Quad Cities #1 789 MW	1972	75 CWE 25 IEL	
	Quad Cities #2 789 MW	1972	75 CWE 25 IEL	
	Zion #1 1,040 MW	1973	100% CWE	
	Zion #2	1974	100% CWE	
Illinois Power Co.				

Nuclear Power Plant Planned Or Under Construction	Permit	Est. Cost Per KW	Planned Yr. of Commercial Operation	Company & Others % Ownership	Dollars w/AFUDC Invested (Millions)	Comment
Millstone #3 1,150 MW	C	$2,260	1986	65% NU 12.2% NES 3.9% PNH 3.7% UIL 4.0% BGE 2.5% CTP 8.7% munis. & Other	$ 481 112 29 30 30 19 64	Construction proceeds on schedule and projected year of completion appears possible assuming adequate financial resources. Work 34% complete. NU is offering 8.7% points of its share for sale.
St Lucie #2 842 MW	C	$1,372	1983	100% FPL	$ 610	The company has begun negotiations to sell approximately 21% of St. Lucie #2 to various co-ops and municipalities. Thus far the only signed agreement covers 6% of the unit, designated to go to the city of Orlando. Work is about 67% complete.
Alvin W. Vogtle #1 1,100 MW	C	$2,004	1985	50.7% SO 49.3 Co-ops	$ 388.5 330.5	Work proceeds on Vogtle #1 which is about 12% complete. We believe however, that the major thrust is toward the successful operation of Farley #2, which received a low power license in 1980, and therefore Vogtle #1 may lag the 1985 schedule. Vogtle #2 is #5 along, & in our opinion subject to possible deferral.
Alvin W. Vogtle #2 1,100 MW	C	$1,140	1987	50.7 SO 49.3 Co-ops	79.1 47.9	
La Salle #1 1,078 MW	C	$ 968	1982	100% CWE	$1,463	Construction for Unit #1 is 99% complete. Fuel load could be considered imminent. Commercial operation may come sooner than indicated. In our opinion, for the next 2 or so years a great deal of emphasis will be placed on both LaSalle units, since they are so close to completion. Following those units in order of completion we believe will be: Byron #1 (71% complete), Byron #2 (57% complete), Braidwood #1 (58% complete), Braidwood #2 (46% complete).
La Salle #2 1,078 MW	C	$ 968	1982	100% CWE		
Braidwood #1 1,120 MW	C	$1,165	1985	100% CWE	$ 986	
Braidwood #2	C	$1,165	1986	100% CWE		
Byron #1 1,120 MW	C	$1,081	1983	100% CWE	$1,200	
Byron #2 1,120 MW	C	$1,081	1984	100% CWE		
Carroll County #1 1,120 MW	O	N/M	1993	75% CWE 12.5% IEL 12.5% IPW	$ 20.4 -0- -0-	Carroll County units 1 & 2 which exist only on drawing boards have been placed on the back burner for the next 6 or so years. The company is not seeking construction permits and has considerable flexability and low dollar involvement, in our opinion. This could allow continued deferral or cancellation.
Carroll County #2 1,120 MW	O	N/M	1994			
Clinton #1 950 MW	C	$1,821	1984	80% IPC 20% Co-op	$1,045 261	Clinton #1 is 73% complete. Total cost estimate recently raised and completion schedule extended.
Clinton #2 950 MW	C	N/M	1988	100% IPC	-0-	Clinton #2 (less than 3% complete) is taking a back seat to #1. In our opinion cancellation is possible however currently the unit is on indefinite deferral.

State and Operating Utility	Licensed Operable Nuclear Power Plant	Yr. of Commercial Operation	Company & Others % Ownership	Comment
INDIANA Northern Indiana P.S.				
P.S. Indiana				
IOWA Iowa Electric Light & Power Co.	Duane Arnold 538 MW	1975	70% IEL 30 Co-ops	Unit performance has been satisfactory.
KANSAS Kansas G&E Co.				
LOUISIANA Gulf States Utilities				
Louisiana Power & Light Co. (Middle South Utilities Subsidiary)				
MAINE Central Maine Power	Maine Yankee 825 MW	1972	38% CTP 15 WES 47 others	This unit has had a good operating record. Continual upgrading has been performed.
MARYLAND Baltimore G&E	Calverts Cliffs #1 845 MW	1975	100% BGE	Performance has been good for both units. No major modifications required.
	Calverts Cliffs #2 845 MW	1977	100% BGE	
MASSACHUSETTS Boston Edison Co.	Pilgrim #1 655 MW	1972	100% BSE	Unit performance approaching the industry norm and no apparent difficulties of a major nature.

Nuclear Power Plant Planned Or Under Construction	Permit	Cost Per KW	Planned Yr. of Commercial Operation	Company & Others % Ownership	Dollars w/AFUDC Invested (Millions)	Comment
Bailly Nuclear #1 644 MW	C	$1,708	1989	100% NI	$ 199	Construction halted by NRC since September 1977, pending safety review of pile driving methods. Work is 0-to-5% complete. If construction is resumed, an extension of the permit to construct must be obtained. Intervenors have already lined up to protest. In our opinion the units future is in doubt.
Marble Hill #1 1,130 MW	C	$1,518	1986	83% PIN 17 Co-op	$ 743 PIN 152 co-op	In August 1979, the NRC ordered safety related construction work stopped. In May 1980, the NRC allowed a step-by-step resumption of this work. Unit #1 is 20% and unit #2 is about 6% complete. Estimate construction could return to full force by 1st Quarter 1981. 1980 appears to have been a year of major nuclear operations changes, effected by PIN, in an effort to satisfy NRC queries. In our opinion slippage in completion schedule for both units is likely.
Marble Hill #2 1,130 MW	C	$1,518	1987			
Wolf Creek #1 1,150 MW	C	$1,466	1984	41.5% KGE 41.5 KLT 17.0 Co-op	$ 419 406 169	Unit is 68% complete. Cost and completion schedules recently revised. Earlier negotiations to sell 17% to local co-ops have been hampered by regulatory stipulations that are not conducive to finalization of the original plan. Should the companies not be able to solve that problem, we believe the units completion schedule may have to be altered. An additional 9% points ownership is also up for sale.
River Bend #1 934 MW	C	$1,839	1984	70 GSU 30 Co-op(s)	$ 738 316	River Bend #1 believed to be no more than 25% complete. Construction work has not always proceeded at maximum levels due to various problems in the past. Regulation and financing difficulties account for our belief that this unit may not come close to the planned year of completion.
River Bend #2 934 MW	C	N/M	N/M	100% GSU	$ 70.5	Second unit on hold with very little work completed (less than 5%). In our opinion cancellation of 2nd unit may be an option under consideration. Expect decision in second half of 1981.
Waterford #3 1,165 MW	C	$1,280	1983	100% MSU	$1,396	Work is 81% complete. Completion schedule deferred by one year after construction slow down resulted from financing difficulties. Some anti-nuc activity may surface as operating license is sought. Nevertheless, the light can be seen at the end of the tunnel.
Pilgrim #2 1,150 MW	O	N/A	N/M	59% BSE 31 NES 10 (12 other utilities)	$ 180 42 91	Unit without construction permit. In our opinion cancellation is highly probable.

State and Operating Utility	Licensed Operable Nuclear Power Plant	Yr. of Commercial Operation	Company & Others % Ownership	Comment
MASSACHUSETTS				
Northeast Utilities				
New England Electric System	Yankee Rowe 175 MW	1961	30% NES 31.5 NU 9.5 BSE 9.5 CTP 7.0 PNH 12.5 Others	Yankee Rowe, is the nation's oldest operating commercial nuclear power plant. The availability over the units 21 years has been considerably higher than average. Over this time the unit has apparently remained in step with changing technology.
MICHIGAN				
Consumers Power Co.	Big Rock Point 63 MW	1963	100% CMS	Unit operations generally successful, currently down for refueling.
	Palisades 740 MW	1971	100% CMS	This unit was one of first to have steam generator tube problems, and was the first to try the resleeving method for retarding tube corrosion. That plus other remedies may account for favorable performance which lessens the need for tube replacement at this time.
Detroit Edison Co.				
Indiana & Michigan Elec. Co. (American Elec. Pow. Co. Subsidiary)	Donald C. Cook #1 1,054 MW	1975	100% AEP	Both units have generally operated uneventfully.
	Donald C. Cook #2 1,100 MW	1978	100% AEP	
MINNESOTA				
Northern States Power Co.	Monticello 545 MW	1971	100% NSP	All three units have average or better records of operation, and have no apparent operating difficulties
	Prairie Island #1 530 MW	1973	100% NSP	
	Prairie Island #2 530 MW	1974	100% NSP	
MISSISSIPPI				
Mississippi Power & Lt. Co. (Middle South Utilities Subsidiary)				
MISSOURI				
Union Electric Co.				
NEW HAMPSHIRE				
P.S. Co. New Hampshire				

Nuclear Power Plant Planned Or Under Construction	Permit	Est. Cost Per KW	Planned Yr. of Commercial Operation	Company & Others % Ownership	Dollars w/AFUDC Invested (Millions)	Comment
Montague #1 1,150 MW Montague #2 1,150 MW	O N O	N/M C N/M	N/M C N/M	75% MU 13 NES 12 Others 75% MU 13 NES 12 Others	D 29 MU 6 NES 5 Others	Both Units cancelled 12/80 primarily for service area load growth reasons. This timely decision means the invested dollars to be recovered are among the lowest in our survey. Formal request for recoupement yet to come. We expect reasonable treatment.
Midland #1 528 MW	C	$1,739	1984	100% CMS	$1,500	The twin Midland units are somewhat unique in their almost Siamese like contruction features. Both units are 58% complete. It is anticipated that the shared facilities will allow fuel load, pre-op-testing and perhaps eventual start-up to occur within a few months of each other. Maximum sharing of facilities is a key design feature. Completion schedule is agressive-slippage is possible.
Midland #2 806 MW	C	$1,739	1983	100% CMS		
Enrico Fermi #2 1,093 MW	C	$1,636	1983	80% DTE 20 Co-ops	$ 897 186	Construction 75% complete. Project continues to move forward. However, completion schedule termed optimistic given difficulty with obtaining various permits required during construction phase.
Greenwood #2 1,264 MW Greenwood #3 1,264 MW	O N O	N/M C N/M	N/M C N/M	100% DTE 100% DTE	D[1]	Units cancelled March 28, 1980. Expect that additional charges, to result from cancellation, will be relatively small. Recovery of invested dollars included in April 1980 rate filing. Co. seeks five year recovery period. Final decision expected April 1981. Michigan Commission has favorable record for handling similar request.
Grand Gulf #1 1,250 MW	C	$1,545	1982	87.5% MSU 12.5 Co-op	$1,873 MSU 210 Co-op	Work close to 90% complete for unit #1. The MSU efforts are primarily focused on Grand Gulf unit one therefore the second unit (23% complete) is taking a backseat to the MSU Waterford #3 unit in Louisiana (see preceeding page) which is 81% complete. Dispite MSU financial difficulties Grand Gulf #1 looks promising. Slippage for construction reasons not likely to push past early 83 for the Grand Gulf unit #1 in our opinion.
Grand Gulf #2 1,250 MW	C	$1,069	1986	87.5% MSU 12.5 Co-op	295 MSU 42 Co-op	
Callaway #1 1,150 MW	C	$1,371	1983	100% UEP	$ 926	Callaway #1 receiving all the attention as it is 70% complete and may come within a year of its completion schedule. The second unit is less than 1% complete and in our opinion a ripe candidate for indefinite deferral or cancellation.
Callaway #2 1,150 MW	C	$1,498	1988	100% UEP	$ 50	
Seabrook #1 1,194 MW	C	$1,583	1983	35% PNH(1) 7.5 UIL 10.0 NES 4.5 MU 15.5 ten others	$ 644 211 97 68 91	Construction continues, unit #1 is 40% and unit #2 is 7% complete. Additional pieces are being offered for sale by PNH, however we see no immediate takers. In our opinion, it is possible that work remaining could progress more smoothly than earlier as the units opponents come close to exhausting many of the formal intervenir processes. If so, only financial hurdles remain. Construction for Seabrook is managed by Yankee Atomic, the same concern that managed and continues to operate the four Yankee plants, which have impressive operating records.
Seabrook #2 1,194 MW	C		1985			

(1) PNH will be reducing its Seabrook ownership from 50% to 35% over a 13 month period beginning January 1981.

State and Operating Utility	Licensed Operable Nuclear Power Plant	Yr. of Commercial Operation	Company & Others % Ownership	Comment
NEW JERSEY				
Jersey Central Pow. & Lt. (General Public Utilities Subsidiary)	Oyster Creek 650 mw	1969	100% GPU	Oyster Creeks general availability has been good. Additional TMI modifications and refueling scheduled for spring 1981.
Public Service E&C	Salem #1 1,090 mw	1977	42½ PEG 42½ PE 7 ATE 7 DEW	During the last 3 months of 1980 various modifications and a refueling were performed at Salem. The units cumulative availability record is below average. However, the 1980 performance was well above industry norm and may signal that some problems have been remedied.
	Salem #2 1,115 mw	1981 (ML Est.)	42½ PEG 42½ PE 7 ATE 7 DEW	Unit received low power license April 1980. Fuel was loaded 9/80. Only hold-up on the full power license appears to be emergency preparedness plans required by NRC. The states of Delaware & New Jersey require assistance in developing theirs and the Co. may be called upon for that assistance.
NEW YORK				
Consolidated Edison	Indian Point #1 265 mw	1962	100% ED	Indian Point #1 was shut down late 1974 originally because of a need to upgrade its emergency core cooling system. Since then the expenditures that, would be needed to bring this unit into compliance with todays broader and changing safety regulations are considered prohibitive. Last estimates were that more than $300 million might be needed, however Con Ed believes it would only be economical to upgrade at less than $200 million. In February 1980, the company decided to decommission this unit (a process that would not begin until early in the 21st century). The unit was removed from rate base in May 1979. In a rate filing made April 1980 the company requests recoupment of some $43 million net invested in Indian Point #1 to be amortized over a 15 year period.
	Indian Point #2 873 mw	1973	100% ED	Indian Point #2 currently in cold shutdown as a result of piping corosion which led to a buildup of water at the base of the containment, in October 1980. Sump-pump failure contributed to the water buildup. Con Ed expects to spend $10 million to replace the piping. Currently the outage is expected to last until April (slippage we believe is possible). It is felt that the containment vessel did not suffer damage. Local authorities have alleged negligence on the part of ED. The NRC has levied punitive fines. In our opinion this unit is likely to cause problems of a political nature more than technical.
Long Island Lighting				
New York State E&G				
Niagara Mohawk	Nine Mile Point #1 620 MW	1969	100%	No major problems in unit's operating history.

Nuclear Power Plant Planned Or Under Construction	Permit	Est. Cost Per KW	Planned Yr. of Commercial Operation	Company & Others % Ownership	Dollars w/AFUDC Invested (Millions)	Comment
Forked River #1 1,100 MW	C	N/M	N/M	100% GPU	$ 394	Unit cancelled Nov. 1980 in response to financial and regulatory uncertainties due to TMI. The company ceased accrual of AFUDC for this unit and included in a pending rate case is a request for recoupement of these invested dollars. We look for a final by second quarter.
Hope Creek #1 1,067 MW	C	$2,075	1986	95% PEG 5% ATE	$1,101 PEG 63.3 ATE	Some 24% of this project is complete. That figure reflects the status of required facilities that would be shared by both units. During the near to intermediate term, PEG's resources may be devoted to successful completion of Salem #2 (see previous page). Over the long term, we believe unit #1 of of Hope Creek will be completed with some slippage in the schedule. We are not optimistic on the future of Hope Creek #2.
Hope Creek #2 1,067 MW	C		1989	95% PEG 5 ATE		
Shoreham 854 MW	C	$2,683	1983	100% LIL	$1,530.0	Work about 85% complete. Schedule slipped by over 12 months but this somewhat small unit appears to have a good shot at a 1983 completion. We expect some slippage in the schedule due to rework for unit's containment vessel design.
Jamesport #1 1,150 MW	C	N/M	N/M	50% LIL 50 NGE	55 LIL 55 NGE	Jamesport 1&2 as nuclear units have been cancelled because New York State's Siting Board refused to issue site approval.
Jamesport #2 1,150 MW	C	N/M	N/M	50% LIL 50 NGE		
Wyoag #1 1,250 MW	O	N/M	N/M	50% NGE 50 LIL	$ 40 NGE 38 LIL	New York State's Siting Board dismissed the application for these units in October 1979. No alternatives were proposed. Despite efforts to appeal this action, we believe this project is permanently cancelled.
Wyoag #2 1,250 MW	O	N/M	N/M	50% NGE 50 LIL		
Nine Mile Point #2 1,080 MW	C	$2,222	1986	41% NMK 18 NGE 18 RGS 18 LIL 9 CMH	$ 390 182 180 196 97	Unit approximately 35% complete construction work-level reduced to 30% during this winter. The status of Nine Mile Point #2 is, we believe, a sensitive one. In our opinion nothing is a given and the plant's future could be altered in a number of ways. Some possibilites are: cancellation, coversion to coal, completion as planned or freeze the project and put on hold.

State and Operating Utility	Licensed Operable Nuclear Power Plant	Yr. of Commercial Operation	Company & Others % Ownership	Comment
NEW YORK (Cont.)				
Rochester G&E	Robert E. Ginna 470 MW	1970	100%	Successful operating record.
NORTH CAROLINA				
Carolina Power & Lt.	Brunswick #1 821 MW	1977	100%	Units have a generally uneventful operating record.
	Brunswick #2 821 MW	1975	100%	
Duke Power Co.	William McGuire #1 1,180 MW	1981	100%	McGuire #1 received a "zero" power license on January 23, 1981. Fuel has been loaded and preliminary testing started. A low power license is expected during the second quarter, and full power should be achieved this year.
OHIO				
Cincinnati G&E				
Cleveland Elec. Illum. CAPCO				
Toledo Edison CAPCO	Davis Besse #1 906 MW	1977	48.6% TED 51.4 CVX	Unit overall operating record is without major blemishes. However the 1980 year saw major modification made to the unit which resulted in an outage of seven months. Next refueling scheduled 1982.
Ohio Edison Co. CAPCO				

Nuclear Power Plant Planned Or Under Construction	Permit	Est. Cost Per KW	Planned Yr. of Commercial Operation	Company & Others % Ownership	Dollars w/AFUDC Invested (Millions)	Comment
Sterling 1,150 MW	C	N/M	N/M	28% RGS 33 ORU 22 NMK 17 CNH	$ 37.0 38.0 22.0 17.8	Sterling was cancelled Jan. 23, 1980, when the New York State Siting Board revoked an earlier certificate of approval. Regulatory consideration for recoupment of these expenses currently ongoing. Under study by the State regulators is also the possibilility of sharing some costs between rate payers and shareholders. The possibility of the latter could serve to limit investment appeal of utilities in the State of New York.
Shearon Harris #1 900 MW	C	$2,222	1985	100% CPL	$ 831	Unit #1 about 35% complete and Unit #2 less than 5% complete. No work yet on units #3 & #4. The company will aggressively pursue completion of the first two units however, spending for units 3 & 4 will stop for the next three years and a study is now underway to review their future. Our guess is that cancellation is likely.
Shearon Harris #2 900 MW	C	$1,412	1988	100% CPL	$ 215	
Shearon Harris #3 900 MW	C	$1,300	1994	100% CPL	$ 53	
Shearon Harris #4 900 MW	C	$1,300	1992	100% CPL	$ 87	
William McGuire #2 1,180 MW	C	$ 648	1982-83	100% DUK	$ 900	McGuire #2 is 90% complete and could receive an operating license somewhat quicker than McGuire #1 assuming many of the needed permits obtained by its sister unit will help shorten the process somewhat.
Thomas L. Perkins #1 1,280 MW	O	N/M	N/M	100% DUK		No construction permit, no materials commitment and virtually no dollars being spent. We consider the Perkins project a faint gleam in the eye. There is almost nothing to cancel and very little at risk.
Thomas L. Perkins #2 1,280 MW	O	N/M	N/M	100% DUK	$ 11 MTH	
Thomas L. Perkins #3 1,280 MW	O	N/M	N/M	100% DUK		
Wm. H. Zimmer #1 810 MW	C	$1,262	1982	40.3 CIN 28.5 AEP 31.5 DPL	$ 353 250 280	Unit was approximately 90-to-95% complete. However this does not reflect some rework that was required within the plant. Hard to say if this will cause completion slippage. Unit still considered a near to intermediate-term start-up possibility.
Perry #1 1,205 MW	C	$1,408	1984	31.1% CVI 13.7 DQU 35.2 OEC 20.0 TED	$ 197 99 (E) 271 159	Perry one 64% complete and unit two is 40% complete. Ownership changes effected between CVI & OEC. Now that the CAPCO companies have cancelled several projects the outlook for successful completion of both units appears stronger, however some slippage is possible.
Perry #2 1,205 MW	C	$1,820	1985	24.5 CVI 13.7 DQU 41.8 OEC 20.0 TED	180 91 (E) 249 144	
Davis Besse #2 906 MW	LWA	N/M	N/M	20% TED 24.5 CVI 13.7 DQU 41.8 OEC	$ 16 20 11 (E) 30	On January 23, 1980 the CAPCO Group cancelled these four units. Each CAPCO company will seek recoupment of dollars invested through inclusion in regular rate requests. Thus far CVI has received permission to amortize its expenditures over a 10 year period. An OEC rate decision just received also permits similar recoupment. TED has made a request and a final is due in April 1981. We expect all the remaining request in Ohio to receive the same treatment as CVI and OEC. DQU has filed a request in Pennsylvania and expects a decision in Feb. 1981. While the outcome for the recoupment issue is uncertain we note that the Administrative Law Judge for the Pa. P.U.C. recommends recoupment be allowed. In neither state will shareholders be allowed to earn a return on those dollars during the amortization period. It is not possible to determine the level of additional cancellation charges if any that may arise once all accounts are settled. Recoupment of additional monies would require another request.
Davis Besse #3 906 MW	LWA	N/M	N/M	20% TED 24.5 CVI 13.7 DQU 41.8 OEC	$ 8 10 6 (E) 15	
Erie #1 1,267 MW	O	N/M	N/M	41.8% OEC 20.0 TED 24.5 CVI 13.7 DQU	$ 40 OEC 22 TED 28 CVI 15 DQU (E)	
Erie #2 1,267 MW	O	N/M	N/M	41.8% OEC 20.0 TED 24.5 CVI 13.7 DQU		

E - Merrill Lynch estimate, data not available from the company.

State and Operating Utility	Licensed Operable Nuclear Power Plant	Yr. of Commercial Operation	Company & Other % Ownership	Comment
OKLAHOMA P.S. Oklahoma (Central & Southwest Subsidiary)				
OREGON Portland General Elec.	Trojan 1,130 MW	1976	67.5% PGN 30.0 MUNI 2.5 PPW	The Trojan nuclear unit has experienced improved availabil since 1978 when the unit began to experience prolonged dow for various reasons. The unit's resistance to earthquakes a major concern, and design modification have been initiat Expect the unit down in April 1981 for refueling and maintenance work. Some tube cracks evident, however probl does not appear to be spreading. Outlook for units performance, improving.
PENNSYLVANIA Department of Energy (Duquesne Light Co.)	Shippingport 60 MW	1958 unit was down for nuc refit & brought back in 1977	Nuc Parts DOE Generator DQU	This was a prototype unit whose output is available to DQU Original unit up in 1957; new core installed in 1977. This is a D.O.E. unit being run by Duquesne Light Co.
Duquesne Light Co. CAPCO	Beaver Valley #1 852 MW	1976	47.5% DQU 52.5% OEC	Unit was down most of 1980 (from 11/79 to 11/80) for vario NRC required modifications, refueling, and general mainten Unit availability has been below average. Latest work may enable some improvement.
Metropolitan Edison Co. (General Public Utilities Subsidiary)	Three Mile Island #1 800 MW	1974	100% GPU	TMI #1 currently under an NRC order restricting its operati Fuel is loaded. The request for the units return to servic will reach the NRC Commission in February 1981. While the proceeding may move slowly, in our opinion the prospects fo approval to restart are good; and we believe the unit could on line in 1981.
	NRC issued an order restricting the operation of both these units.			
	Three Mile Island #2 906 MW	1978	100% GPU	Three Mile Island #2 had the well publicized accident in Ma 1979. Status: Most of the plant has been decontaminated, t refers to the auxiliary building and the fuel handling buil The reactor building is the difficult task facing the compa To date there have been four manned entries into the reacto building. The purpose was mainly to tc make radiation surv visual damage assessments and photographic documentation. Ultimately, the building's interior and its equipment are t decontaminated and then the damaged fuel and reactor intern to be removed. The current target for when this could take place is August 1985, however, that date is considered optimistic. Today, the ball park estimate for decontaminat cost is $1 billion. Our guess at the units future...possib that much of the unit could become a source of replacement parts to the industry. The mark-up on the equipment could handsome considering it was originally purchased in the lat 1970's.
Pennsylvania Power & Light				

Nuclear Power Plant Planned Or Under Construction	Permit	Est. Cost Per KW	Planned Yr. of Commercial Operation	Company & Others % Ownership	Dollars Invested w/AFUDC (Millions)	Comment
Black Fox #1 1,150 MW	LWA	N/H	1991	61% CSR 39 Co-ops	$ 163 CSR 104 Co-ops	Currently all work allowed under a "Limited Work Authorization" has been completed. Without a construction permit, no further work will be done. The company continues to aggressively favor this project and continues in their efforts to eventually build it. We believe CSR will, while waiting for the all clear on Black Fox, devote considerable attention to its interests in the more promising South Texas units (See State of Texas). The dollar exposure is likely to remain at current levels until permit status changes. Some materials commitments have been made.
Black Fox #2 1,150 MW	LWA	N/H	1993			
Pebble Spring #1 1,260 MW	O	N/H	N/H	87% PGN 29 PPW 20 PSD 4 Co-ops	$ 125 86 70 11.7	In the November elections--Oregonians passed a referendum that would prohibit the construction of new nuclear plants in their state. Technically speaking therefore Pebble Springs is a NUKE without a home. The utilities involved have many options the main ones being: - Explore possible alternative siting including Hanford, Washington - Consider permanent cancellation of the project or - Begin a court challenge of the Oregon referendum. In our opinion PGN, as operator of this unit, has capacity enough to allow for an orderly study of its alternatives. Should a new site be found it is possible that close to 97% of dollars spent on Pebble Springs could be transferred. This could virtually wipe out the dollar exposure. Pebble Springs looks as if it could quietly fade away.
Pebble Spring #2 1,260 MW	O	N/H	N/H			
Beaver Valley #2 852 MW	C	Not Available	1986	13.7% DQU 41.9 OEC 24.0 CVI 20.0% TED	$ 108 (E) 352 178 188	Beaver Valley #2 about 80% complete. Financing problems, reduced construction levels, and lower load growth forecast may continue to cause slippage in unit's completion schedule.
Susquehanna #1 1,050 MW	C	$1,828	1982	90% PPL 10 co-op	$1,723 PPL 191 Co-op	Construction proceeds towards scheduled year of completion. Units are 87% and 55% complete respectively. The Co. has announced concern that NRC delays may cause slippage in units completion.
Susquehanna #2 1,050 MW	C		1983	90% PPL 10 co-op		

State and Operating Utility	Licensed Operable Nuclear Power Plant	Yr. of Commercial Operation	Company & Others % Ownership	Comment
PENNSYLVANIA (Con't) Philadelphia Elec.	Peach Bottom #2 1,065 MW	1974	43% PE 43 PEC 7 ATE 7 DEW	Availability good for both Peach Bottom #2 & #3. The modifications, required since TMI have been made with minimal disruptions to plant operations.
	Peach Bottom #3 1,065 MW	1974	43% PE 43 PEC 7 ATE 7 DEW	
RHODE ISLAND New England Electric System				
SOUTH CAROLINA Carolina Power & Light	H.B. Robinson #2 700 MW	1971	100%	The Robinson unit has displayed a respectable operating record.
Duke Power Co.	Oconee #1 887 MW	1973	100%	Operating history for all three Oconee units has been average. The NRC required modifications plus some tube sleeving were performed in succession for each of these sister units during 1980.
	Oconee #2 887 MW	1974	100%	
	Oconee #3 887 MW	1974	100%	
South Carolina E&G				
TEXAS Houston Lighting & Power Co. (Houston Industries Subsidiary)				

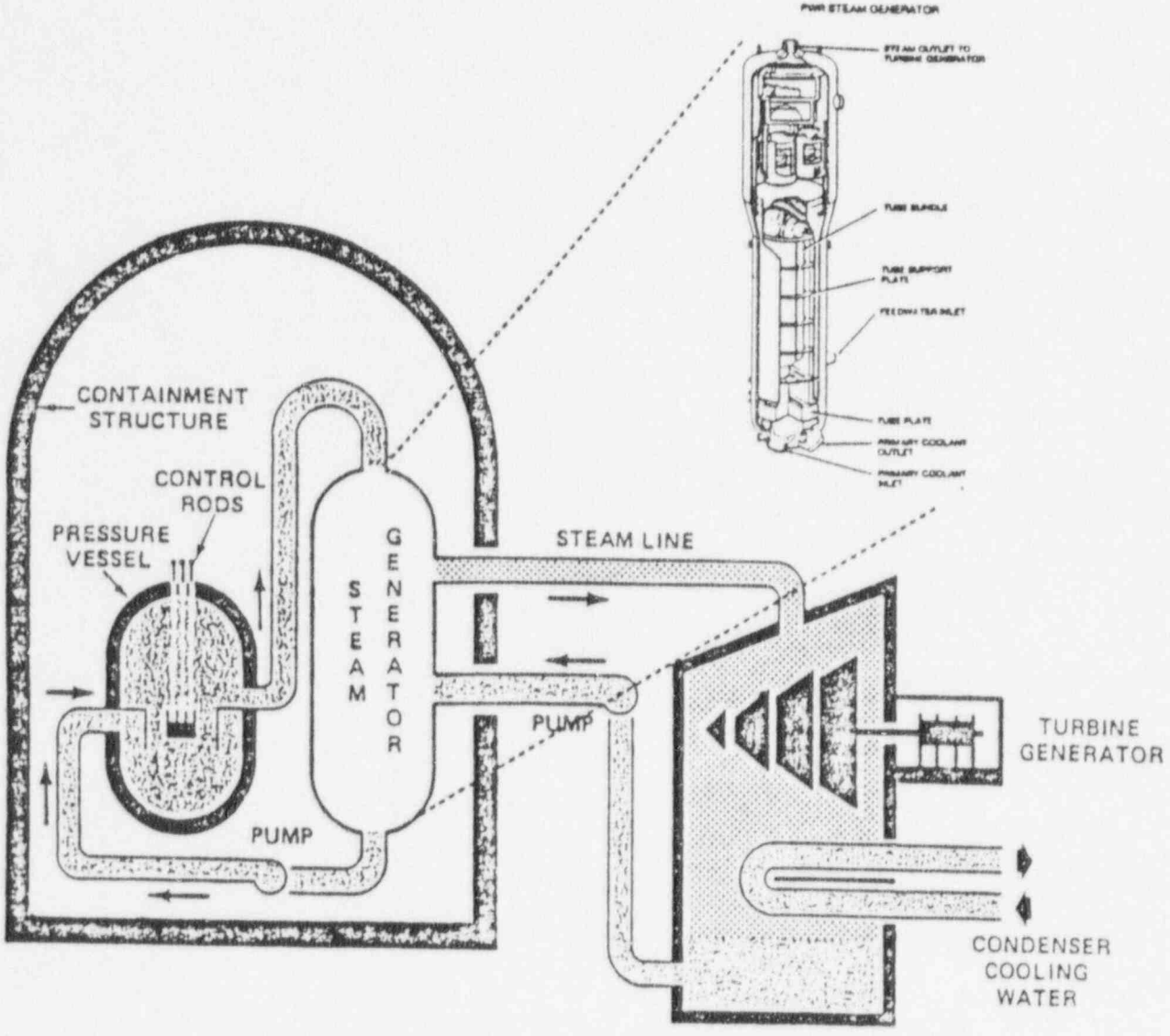
Nuclear Power Plant Planned Or Under Construction	Permit	Est. Cost Per KW	Planned Yr. of Commercial Operation	Company & Others % Ownership	Dollars w/AFUDC Invested (Millions)	Comment
Limerick #1 1,065 MW	C	$1,800	1985	100% PE	$1,600.	Limerick #1 is 60% complete and unit #2 is 28% complete according to NRC data. As construction continues, expect many issues to be raised including, the general economic viability of building the units, the availability and source for cooling water and population density versus plant location. In our opinion Limerick #2 could experience slippage in its completion schedule.
Limerick #2 1,065 MW	C	$1,800	1987	100% PE		
MEP #1 MEP #2	D D	N/H N/H	N/H N/H	78% NES 22 others	$ 31 $ 8	Units cancelled 12/17/79. NES now recovering its investment over five years beginning 1980. The unamortized portions were not permitted in rate base.
Catawba #1 1,145 MW	C	$1,200	1984	25% DUK 75 Co-ops	$ 440 DUK 1,320 Muni(s) & Co-op	Catawba #1 is 78% complete and #2 is 18% complete. The sale of 75 percent interest in unit #1 was effected 2/6/81, and we have adjusted "Dollars Invested" to reflect this sale. No construction problems evident, and only unit #2 concerns us relative to its optimistic completion schedule. We believe company efforts in the near term will be directed toward other DUK nuclear units (McGuire #1, & #2 see North Carolina). By year-end or early 1982 DUK expects to have sold its remaining 25% interest in Catawba Unit #2 to a group of muni(s). (DUK will still be the builder however.)
Catawba #2 1,145 MW	C	$1,200	1985	25% DUK 75 muni(s)		
Cherokee #1 1,280 MW	C	N/H	N/H	100% DUK		The Cherokee units #1 through #3 are not aggressively being pursued. #1 is 15% complete and #2 has hadminimal work begun. Both scheduled years for construction have been pushed back substantially. We hold little hope for units planned for the 1990's
Cherokee #2 1,280 MW	C	N/H	N/H	100% DUK	$ 440	
Cherokee #3 1,280 MW	C	N/H	N/H	100% DUK	$ -0-	On February 24, 1981 DUK announced the indefinite deferral of all three Cherokee nuclear units. The primary reason given was the financing difficulties associated with the projects continued construction. While this announcement is not a cancellation, our opinion, all three units face this possibility. Some work was done on and major materials commitments were made for units #1 & #2. Some contractual obligations are also outstanding. Unit #3 has virtually no dollars invested, nor materials committed and no work was started.
Virgil C. Summer #1 900 MW	C	$1,187	1982	66.6% SCG 33.3 Pwr. Auth.	$ 559 27A	The Summer unit is 97% complete and assuming no more than general wrap-up problems the unit could load fuel in Nov. or Dec. 1981, and be on line, in 1982. This will be SCG's last major generating addition until the end of this decade.
Allen Creek #1 1,150 MW	D	$1,550	1989	100% HOU	$ 380	This unit is on drawing board. Area's load growth could support building of a plant, however the company is considering changing this unit from nuclear to coal.
South Texas Proj. #1 1,250 MW	C	$1,080	1984	30.8% HOU 44.0 muni(s) 25.2 CSR	$ 582 HOU 388.8 muni(s) 436 CSR	So. Texas unit #1 is 59% complete and unit #2 is 22% complete. Construction work in 1980 was voluntarily suspended so that irregularities in some work previously performed could be evaluated. During this suspension the NRC found additional problems and fined HOU its maximum penalty. Work is gradually being resumed. Expectations are that work will be at maximum level by year end. Some completion slippage in both units appears likely.
South Texas Proj. #2 1,250 MW	C		1986	30.8% HOU 44.0 muni(s) 25.2 CSR		

State and Operating Utility	Licensed Operable Nuclear Power Plant	Yr. of Commercial Operation	Company & Others % Ownership	Comment
TEXAS (Con't) Texas Utilities Co.				
VERMONT Central Vermont P.S. Corp.	Vermont Yankee 514 MW	1972	31.3% CPUB 20.0 NES 17.9 GPWR 12.0 MU 4.0 CTP 4.0 PNH 10.8 co-ops + others	This smaller unit continues to record average availability.
VIRGINIA Virginia Electric & Power Co.	Surry #1 822 MW	1972	100%	Unit down 9/80 for replacement of its steam generator and some turbine blades. Estimated return to service 9/81. Unit refueling to be done simultaneously.
In the past the overall availability record for ALL VEPCO nuclear units has been below average in part because of generic defects in the units. Major changes in operations personnel, including the highest levels, have occurred. Many aggressive steps have been taken toward changing the past image of having "bad luck" in nuclear unit performance. In our opinion this portends a greater likelihood for improved unit performance in the future.				
	Surry #2 822 MW	1973	100%	Steam generator replaced as well as r fueling and other modifications made during a 17 month outage ended 8/80. Availability has been poor because of the need for this work.
	North Anna #1 907 MW	1978	100%	Two year old unit has an good availability record. No major work called for.
	North Anna #2 907 MW	1980	100%	Construction of this unit was complet July 1979. As a result of the accident at TMI, the operating licens was delayed. On August 20, 1980 this unit received the first full power license granted by the NRC since its self imposed moratorium in respond t the TMI #2 accident. Unit currently full power and performs satisfactory
WASHINGTON Puget Sound Power & Light				
WISCONSIN Wisconsin Electric Co.	Point Beach #1 497 MW	1970	100%	The steam generator tubing in Point Beach #1 will be re-sleeved (Est. co $11 million) instead of replaced (Es cost $48.5 million). As back-up, WP will purchase replacement generators should re-sleeving not work. In an effort to slow tube corrosion, the unit is limited to 80% of full power This repair work is to be done betwe 10/81 and 1/82.
	Point Beach #2 497 MW	1972	100%	Point Beach #2 appears to have had t tube corrosion arrested, and there a no current plans for major tube repa Apparently early detection and chang in water chemistry helped considerab
Wisconsin Public Service	Kewaunee 535 MW	1974	41.2% WPS 41.0 WPL 17.8 MDSN	Kewaunee continues to operate at a level of availability that is higher than average.

Nuclear Power Plant Planned Or Under Construction	Permit	Est. Cost Per KW	Planned Yr. of Commercial Operation	Company & Others % Ownership	Dollars w/AFUDC Invested (Millions)	Comment
Comanche Peak #1 1,150 MW	C	$ 972	1982	85.7% TXU 8.1 co-ops 6.2 muni(s)	$1,193 TXU 199 Others	Comanche unit #1 is 86% complete and unit #2 is 50% complete. Construction proceeding normally. NRC modifications not expected to cause construction delays. We believe an upward revision in cost estimate is likely.
Comanche Peak #2 1,150 MW	C	972	1984	85.7% TXU 8.1 co-ops 6.2 muni(s)		
North Anna #3 907 MW	C	$2,398	1989	100% VEL	$ 400	North Anna #3 is 7% complete and in a November 1980 announcement, VEL announced plans to complete it by 1989. Currently construction work and dollar expenditures are not at maximum levels. Dollars earmarked for this unit in 1981 total about $56 million. Plans are that 1983 will be the year maximum construction will begin.
North Anna #4 907 MW	CANCELLED	N/M	N/M	100% VEL	D[165]	North Anna #4 was cancelled November 1980 in response to projected load requirements. Company plans to file in April 1981 for recoupment of its investment over a ten year period. We may hear from regulators by September 1981.
Skagit #1 1,288 MW	O	N/M	N/M	80% PSD 30% PGN 20% PPW 10% WWP	$ 137 104 71 39	Location for this two unit project not known now that resident opposition to original site is being honored. The dollars spent so far have been for engineering, legal and hardware procurement, and appear to be transferrable to a great extent. Efforts to obtain a construction permit will not be made until a new site is secured. Shareholders exposure termed minimal for project dollars.
Skagit #2 1,288 MW	O	N/M	N/M			
Haven #1 900 MW	CANCELLED	N/M	N/M	62.5% WPC 18.4 WPS 19.1 WPL	D[1] 30.8 5.7 6.1	Cancelled by three constructing utilities February 29, 1980. Regulatory authorities allowed the companies to expense their portion of the $36.9 mm spent on Haven over a three year period. During that period the unamortized balance can be included in rate base. Medium sized coal plants or conservation will be substituted in the 1990's. In 8/78 the Public Service Commission of Wisconsin issued an order prohibiting construction of a second unit at the Haven site, until uncertainties regarding nuclear waste storage and disposal can be dealt with. The dollars invested are currently being recovered over a 3 year amortization period beginning in 1980.
Haven #2 900 MW	CANCELLED	N/M	N/M		D	

PWR Steam Generator Tube Integrity

In pressurized water reactors, the primary coolant water which is radioactive extracts heat by circulating through the reactor core and is kept under pressure sufficient enough to prevent boiling. This high-pressure water passes through tubes around which a secondary coolant (also water, but not radioactive) is circulating under somewhat lower pressure. This secondary water system boils and produces steam and drives the turbine generators. The assembly in which the heat transfer takes place is the Steam Generator. The tubes within it are an integral part of the primary coolant boundary keeping the radioactive primary coolant away from the environment.



Pressurized Water Reactor (PWR) Cooling Cycles.

Note: Radioactivity in a primary coolant system is not that high — should be considered low level.

AVERAGE DURATION FOR NUCLEAR POWER PLANT CONSTRUCTION

The duration for nuclear power plants construction is def'ned as the elapsed time from actual ground breaking until the plant is considered ready for fuel loading. This does not include an average duration of six (6) months for power ascension to commercial operations.

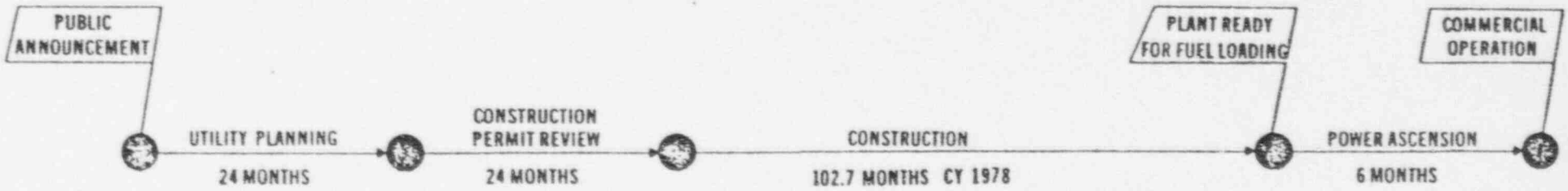


Exhibit 3

THE OREGONIAN, FRIDAY, MAY 8, 1981

PGE denies killing power plant plans

By STEVE JENNING
of The Oregonian staff

Portland General Electric Co. officials said Thursday they are not shelving plans for their long-delayed Pebble Springs nuclear power plant despite recent reports that it would not be cost effective.

PGE officials made the announcement in response to a letter from the U.S. Atomic Safety and Licensing Board, the agency that issues permits for nuclear power plant construction.

Elizabeth Bowers, the board's chairwoman, told PGE to explain its intention after publication of an analysis by Merrill Lynch Pierce Fenner & Smith Inc., which said the company would save money by abandoning its plans to build the twin-reactor plant in North-Central Oregon.

The board's April 28 order to PGE was made public by nuclear power opponent Lloyd Marbet, an intervenor in the licensing hearings before the board.

PGE and its partners already have invested about $250 million in legal and engineering work, land, equipment and other costs in its eight-year battle to gain licensing for Pebble Springs.

"We've got time — we don't have to make a decision immediately," said Bill Babcock, a PGE public information officer. "Our official position is that we see no reason why we can't get the (Atomic Safety and Licensing Board) to finish the last phase of the licensing procedure."

Another PGE spokesman said "98 percent" of the licensing procedure had been completed, and that the company was committed to finishing the remaining "2 percent."

A recent Merrill Lynch report listed 13 proposed nuclear plants as candidates for cancellation, saying PGE could benefit from dropping Pebble Springs, one of the 18.

"When the (Atomic Safety and Licensing Board) saw this story, they just wanted to know what's going on," said Clare Miles, a U.S. Nuclear Regulatory Commission spokeswoman, when queried by The Associated Press. "The study may have led them to believe PGE has plans to cancel. I just think the board wants to get an explanation."

Steve Olson, an account executive with Merrill Lynch in Portland, said the firm's researchers found that Pebble Springs construction costs "have become prohibitive."

"Compared to hydro and other generation methods, it (nuclear power) is an awfully expensive way to make electricity," Olson said. "Pebble Springs does indeed look like it's going to be shelved. We've heard rumors that PGE is trying to sell the reactor."

Among the equipment PGE already had bought for the plant was the first of its two reactors. Babcock said PGE "probably would like to sell the reactor," but the market for U.S.-made reactors was not good.

Olson reiterated what has become a common complaint by PGE executives, that the cost of licensing procedures — not construction costs — has severely limited nuclear power plant development.

A ballot measure passed by Oregon voters last Nov. 4 bans construction in Oregon of any new nuclear plants unless the voters approve beforehand. Babcock acknowledged that the ballot measure would jeopardize construction of Pebble Springs even if federal licensing were granted.

Olson said PGE's investment in Pebble Springs may be a justification for "continuing with the licensing process.

"They've got a lot of the groundwork laid," Olson said.

Babcock declined comment on the Merrill Lynch report, saying PGE analysts had not yet reviewed it.

No date has been set for the next licensing hearing, although Babcock said he expected a session to be scheduled before the end of summer.

Exhibit 4

PGE must decide on go-ahead for N-plant licensing procedures

By JOHN HAYES
Statesman-Journal Reporter

Portland General Electric Co. has been ordered by the Atomic Safety and Licensing Board to explain whether it still wishes to proceed with licensing hearings for the Pebble Springs nuclear power plants.

Board chairwoman Elizabeth Bowers, in an April 28 order, told PGE to explain its intentions following publication of a Wall Street analysis showing that PGE could benefit by abandoning the proposal for two nuclear plants at Arlington in north central Oregon.

The board's order was made public Wednesday by Lloyd Marbet, an intervenor in the federal licensing hearings before the board, part of the Nuclear Regulatory Commission.

PGE officials said the utility has no plans to cancel or relocate the Pebble Sprngs project and wishes to proceed with the federal hearings even though construction of the plant is now banned under Oregon law.

The Pebble Springs project, started by PGE in 1973, sparked one of the longest-running regulatory proceedings in Oregon history. Construction of the plants, originally planned for operation in 1980, is now illegal because of a referendum passed by Oregon voters last November.

In her order, Bowers cited the findings of a study by the Securities Research Division of Merrill Lynch Pierce Fenner & Smith Inc. which lists 18 proposed nuclear plants as candidates for cancelation and explains how PGE could benefit from dropping the Pebble Springs licensing proceedings.

The report, first published in Nucleonics Week, says PGE "appears to have some wait-and-see room" in its generating capacity, and it mentions the Oregon anti-nuclear referendum.

Merrill Lynch believes PGE has sufficient capacity to allow for an "orderly study of alternatives," whether these be selection of a new site, a court challenge of the referendum or permanent cancelation, said the study. With a new site, PGE probably could transfer about 97 percent of the money already spent, it said.

PGE and the other utility partners in the Pebble Springs project already have spent about $250 million on licensing hearings, acquisition of a 10,000-acre site, engineering design and purchase of a Babcock & Wilcox reactor and other equipment.

The nuclear project was granted a state license in 1975, but the license was overturned by the Oregon Supreme Court in a case brought by Marbet in 1977. Since then, the plants have been in legal limbo because of state moratorium laws and the latest anti-nuclear referendum.

Bowers could not be reached Wednesday for comment about the board's order to PGE, but Claire Miles, an NRC press aide, said, "When the board saw this story, they just wanted to know what's going on. The study may have led them to believe PGE has some plans to cancel. I just think the board wants to get an explanation."

PGE denied Wednesday it is ready to abandon the Pebble Springs project. "That's Merrill Lynch's opinion, not ours," said Bruce Landrey, spokesman for the utility.

"They're correct, we've got some wait-and-see room, and we are looking at alternatives. But we've gone 98 percent of the way through this regulatory process during the last eight years and we should go the last 2 percent," he said.

Landrey acknowledged that Oregon law would prohibit construction of the plants, but he said PGE is interested in finishing the portion of the NRC proceedings to gain a ruling that the Arlington site is suitable for construction of a nuclear plant.

The Oregon referendum may prohibit construction now, said Landrey, "but it doesn't mean we can't do it in a few years." Landrey said PGE officially has the first Pebble Springs plant scheduled for operation in the early 1990s.

Exhibit 5

Portland General Electric Company

[illegible]

September 30, 1980

Pebble Springs Nuclear Plant
Dockets 50-514
50-515

Honorable John F. Ahearne, Chairman
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Dr. Ahearne:

The purpose of this letter is to express Portland General Electric Company's desire to proceed with construction licensing of the Pebble Springs Nuclear Plant. We have been unable to co[illegible]ince your Staff to commit the necessary resources to move ahead with our application in even the most limited fashion.

The Pebble Springs licensing proceeding has been ongoing for over six years. Prior to the accident at Three Mile Island (TMI), NRC Staff review and hearings before the Atomic Safety and Licensing Board were moving towards completion. Since the TMI accident, further safety review and licensing proceedings have been in abeyance pending the formulation of a licensing policy by the NRC to appropriately reflect the lessons learned from the accident for pending Construction Permit applications. Although NUREG-0718 is a step in this direction, it appears to us that Commission approval of a complete policy statement for Construction Permit applications may be months away. Pending completion of this policy statement, we believe a partial initial decision on environmental and site suitability issues could now be entered where the hearing record is complete. We also believe several other environmental and site suitability issues are amenable to resolution in the near-term and we seek to complete and close the record on these issues. Moving forward towards completion of these latter category of issues involves a limited commitment of staff resources. These issues are:

a. Alternative sites. The NRC Staff has completed their alternative site review and issued it in the form of a Final Supplement to the Final Environmental Statement in April of 1980. This review needs to be addressed in hearings.

b. Environmental effects of the uranium fuel cycle, including coal vs. nuclear health effects. Although the record was substantially complete in 1978, it may be in need of further updating.

c. Appendix I to 10 CFR Part 50. NRC Staff analysis has been completed and only needs to be considered in future hearings to complete the record.

d. Accident Considerations under NEPA. In accordance with the Commission's Statement of Interim Policy dated June 13, 1980, an NRC Staff determination is needed to ascertain if any "special circumstances" exist for Pebble Springs that would warrant reconsideration of accidents at the Construction Permit stage of review.

We appreciate the manpower difficulties the NRC is experiencing and recognize that greater priority should be properly afforded to near-term Operating License applicants. Consistent with this situation, we have endeavored to close out only those environmental and site suitability issues currently pending in our proceeding which do not induce a significant commitment of staff resources and which would not fall within the purview of the Commission's TMI licensing policy for Construction Permit applications. We believe this is a reasonable, efficient and prudent course to pursue. However, your Staff has been unwilling to provide even the most minimum of resources necessary to support the completion of hearings on the foregoing matters.

I respectfully request that you ask your Staff to give due consideration to the Pebble Springs application and to provide the support needed to go forward with final stages of hearings on the remaining environmental and site suitability matters identified herein.

Sincerely,

/s/ W. J. Lindblad

W. J. Lindblad
Vice President
Engineering-Construction

WJL/DRS/41m10A6

c: Mr. Lynn Frank, Director
State of Oregon
Department of Energy

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Lloyd K. Marbet

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
PORTLAND GENERAL ELECTRIC COMPANY, et al.	)	Docket Nos. 50-514 50-515
	)	
(Pebble Springs Nuclear Plant, Units 1 and 2)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of Applicants' Response to Board's Order of April 28, 1981 have been served on the following by deposit in the United States mail, first class, this 14th day of May, 1981.

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