

RELATED CORRESPONDENCE

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD
Before Administrative Judges:
Louis J. Carter, Chairman
Frederick J. Shon
Dr. Oscar H. Paris

DOCKETED
JAN 11 1982

82 JAN 11 AM 11:22

OFFICE OF THE
DOCKETING & SERVICE
BRANCH

-----X
: In the Matter of :
: :
: Docket Nos.
CONSOLIDATED EDISON COMPANY OF NEW YORK, :
INC. (Indian Point, Unit No. 2) : 50-247 SP
: 50-286 SP
POWER AUTHORITY OF THE STATE OF NEW YORK :
(Indian Point, Unit No. 3) : June 9, 1982
: :
-----X

LICENSEES' FIRST SET OF INTERROGATORIES AND
DOCUMENT REQUEST UNDER COMMISSION QUESTION 6

ATTORNEYS FILING THIS DOCUMENT:

Charles Morgan, Jr.
Joseph J. Levin, Jr.
MORGAN ASSOCIATES, CHARTERED
1899 L Street, N.W.
Washington, D.C. 20036
(202) 466-7000

Brent L. Brandenburg
CONSOLIDATED EDISON COMPANY
OF NEW YORK, INC.
4 Irving Place
New York, NY 10003
(212) 460-4600

DS03

TABLE OF CONTENTS

	<u>Page</u>
PRELIMINARY STATEMENT	1
DEFINITIONS	2
INSTRUCTIONS	5
INTERROGATORIES	7
LICENSEES' DOCUMENT REQUEST	30

PRELIMINARY STATEMENT

Pursuant to 10 CFR Part 2 and the Memorandum and Order (Formulating Contentions, Assigning Intervenors, and Setting Schedule) herein, dated April 23, 1982 (the "April 23, 1982 Order"), Consolidated Edison Company of New York, Inc. ("Con Edison"), licensee of Indian Point Station, Unit No. 2, and Power Authority of the State of New York ("Power Authority"), licensee of Indian point 3 Nuclear Power Plant (collectively the "licensees"), request that each of the intervenors specified below answer separately, fully, seriatim and on or before June 23, 1982, or, if this document has not been served upon you by personal delivery, on or before June 30, 1982,* under oath and otherwise in accordance with 10 CFR Part 2 and the April 23, 1982 Order, each of the following interrogatories.**

These interrogatories are directed to each of the following intervenors: Greater New York Council on Energy ("GNYCE"), West Branch Conservation Association ("WBCA"), and Parents Concerned About Indian Point ("Parents").

* Pursuant to 10 CFR §2.710 (as amended, 46 Fed. Reg. 58279 (Dec. 1, 1981)), parties served by Express Mail must answer interrogatories on or before .

** Pursuant to footnote 3 to the April 23, 1982 Order, the Board has held the litigation of certain psychological fear and stress issues in abeyance pending the issuance of an opinion by the Court of Appeals for the District of Columbia in PANE v. NRC and further administrative guidance. Accordingly, the licensees reserve the right to serve further interrogatories on that subject upon such resolution.

In its responses to these interrogatories, intervenor shall set forth the interrogatory as posed by the licensee, then set forth its response to the interrogatory.

With respect to each interrogatory, if a particular lead or contributing intervenor does not make a particular allegation, claim, or contention, and has not been assigned lead or contributing intervenor status with respect to such allegation, claim or contention by the orders of the Board herein, said intervenor should so state.

DEFINITIONS

A. "or" shall mean and/or.

B. "Document" shall mean any kind of written or graphic matter, however produced or reproduced, of any kind of description, whether sent or received or neither, including originals, copies and drafts and both sides thereof, and including, but not limited to: papers, books, correspondence, telegrams, cables, telex messages, memoranda, notes, notations, work papers, transcripts, minutes, reports and recordings of telephone or other conversations, or of interviews, or of conferences, or of other meetings (including, but not limited to, meetings of boards of directors or committees thereof), affidavits, statements, summaries, opinions, reports, studies, analyses, evaluations, contracts, agreements, journals, statistical records, desk calendars, appointment books, diaries, lists, tabulations, sound recordings, financial statements, computer printouts, data processing input and output,

assumptions, microfilms, all other records kept by electronic, photographic or mechanical means, and things similar to any of the foregoing however denominated by intervenors.

C. "Identify" or "state the identity," when referring to a document shall mean to state:

1. The generic nature of the document (e.g., letter, memorandum, telegram, etc.);
2. The date on which the document and each copy thereof was prepared;
3. The name of each author, addressor and addressee of the document;
4. The name of each past or present custodian of each copy of the document; and
5. A brief description of the contents of the document. (In lieu of such a description, you may append to your answer a true and complete copy of the document.)

D. "Identify," when referring to an oral communication, shall mean:

1. To state the date of such communications;
2. To identify each person participating therein and each person who was present;
3. To state what was said by each participant in the course of such communication, or, if not known as recalled, the substance;
4. To state whether there are any documents which set forth, summarize or refer to any portion of such oral communication; and
5. If such documents exist, to identify each such document and each person having custody of the document.

E. "Identify" or "state the identity", when referring to a person, shall mean to state:

1. The person's full name;
2. The name of his employer;
3. His position with such employer;
4. His business address and telephone number; and
5. His present or last known home address and telephone number.

Once a person has been identified in response to any interrogatory and provided no requested information concerning such person is different from that provided for in the earlier identification it shall be sufficient thereafter to identify such person by name only.

F. "Guidelines of the Nuclear Regulatory Commission" shall mean all rules and regulations codified in the Code of Federal Regulations, all NUREG's and regulatory guides issued by the Commission, and all conditions or provisions of both licensees' operating licenses.

G. The word "person" as used herein, shall refer both to individuals and to any other legal entity.

H. "You" or "your" means the intervenors to whom these interrogatories are directed and agents, servants, employees, officers, directors and attorneys of any of them and all other persons acting or purporting to act on behalf of any of them.

I. To "state the grounds" or to "identify the grounds" for an allegation, claim, or contention means to describe in detail the reasoning and facts and to provide all data and calculations, which you claim support the allegation, claim,

or contention, and to identify all relevant documents, and communications, and individual informants and to state the precise nature and source of your knowledge, information and belief that there is good ground to support such allegation, claim, or contention, and to specify any assumption on which the allegation, claim or contention is based. In the case of any assumption on which an allegation, claim, or contention is based, state the probability that such assumption will in fact occur, and the method of calculation of such probability. If any part of the grounds for an allegation, claim, or contention is a guideline of the NRC, cite said guideline with specificity. If a particular lead or contributing intervenor does not make a particular allegation, claim, or contention, said intervenor should so state.

INSTRUCTIONS

A. References to the singular shall be deemed to include the plural, and references to the plural shall be deemed to include the singular. The use of the past tense in a verb shall be deemed to include the present, and the use of the present tense shall be deemed to include the past. The use of any word in the masculine or feminine gender shall be deemed to include the other gender and the neuter, and when the sense so indicates, words of neuter gender shall be deemed to refer to any gender.

B. All interrogatories requesting identification of documents shall be deemed to refer to documents in the

possession of any intervenor that were sent, received, written or otherwise generated during the relevant period (unless otherwise specified), and any other documents referred to or relied upon in connection with the preparation of the contentions or your answers to these interrogatories, regardless of whether they are in your possession or control.

C. Should you claim a privilege (including, without limitation, the attorney-client or work product privilege) with respect to any part of any discussion, document or other communication concerning which information is requested by any of the following interrogatories, you should answer the interrogatories in the manner above indicated, except that you need not set forth a summary of the contents of the part deemed privileged, i.e., in the case of a document, you should supply items C(1)-C(4), above, and in the case of an oral communication, you should supply items D(1), D(2), D(4), and D(5). In addition to setting forth the above noted information concerning each such discussion, document or communication, you shall indicate that you claim privilege for such part and shall state the nature of the privilege claimed and the facts upon which such claim is based.

D. Identify all your witnesses, areas of their testimony, their qualifications, and all reports, studies, letters, graphs, and other documents they plan to use in support of their testimony. Where documents are lengthy and a witness only plans to use portions of it, provide the page numbers of these portions.

E. All terms should be defined, e.g., acceptance levels, massive. Measurable quantities should be provided for such terms, e.g., radiation exposure in man-rem.

INTERROGATORIES

Contention 6.1

1. State the grounds for the assertion that a consequence of the shutdown of Indian Point Units 2 and 3 would be an economic benefit to Rockland County. Identify the entity or entities who will receive the benefit.
2. Identify the people (and/or entities) within Rockland County who own stocks or bonds of the licensees and owners of Indian Point Units 2 and 3.
3. Identify who will pay for the benefits that are alleged to accrue to Rockland County. State the amount that each customer will pay annually.
4. Identify the environmental impacts of the increased generation of Orange & Rockland required to provide the alleged benefits.
5. Identify, any basis for asserting that any economic benefit to Rockland County, or its customers will not result, directly or indirectly, from customers elsewhere in the state, including Westchester County and New York City, paying higher rates for electricity.
6. State the grounds for the assertion that Orange and Rockland Utility has 300 mW of excess capacity. Demonstrate that this 300 mW will be dedicated to the use of those customers now benefiting from the electricity

presently generated by Indian Points 2 and 3. Provide documents from the Orange and Rockland Utility where they agree to dedicate this capacity to present Indian Point customers. State the period of time that this excess capacity will be dedicated. Provide the projected excess capacity for the Orange and Rockland Utility over the next (a) 15 and (b) 25 years.

7. State whether you have considered the December 19, 1980 agreement concerning the Hudson River Cooling Tower Case (Index No. C/II-WP-77-01) in asserting that Orange and Rockland Utility has 300 mW of excess capacity.
8. State the grounds for your assertion that Indian Point 2 has a 30% operating level. Define what is meant by "operating level." State the period of time for which this operating level was calculated.
9. State the percentage of the power generated by Orange and Rockland Utility which is fossil-fueled. List the type of fuel, sulfur content, and percentage of use of the asserted 300 mW of excess capacity.
10. In evaluating the alleged benefits to Rockland County from sale of replacement power in the event of an Indian Point shutdown, state the assumptions, if any, you have made concerning each of the following items: (a) power from increased Canadian imports over the 1981 levels, (b) the existence of the Prattsville and Arthur Kill projects, (c) the existence of the Shoreham and Nine Mile Two plants, (d)

cogeneration and refuse fired plants (e) conversion to coal burning of any Orange and Rockland plants, and (f) other conventional and unconventional sources of power not presently available to the New York Power Pool over the next 15 years.

11. Should one or more of the sources identified in response to Interrogatory Number 10 not be available for environmental, financial, licensing, political or other reasons, state what assumptions were made concerning the impact on the economic benefits to Rockland County you have claimed. If no such assumptions were made in your studies, so state.

Contention 6.2

12. Define what you mean by "physical environment."
13. State the grounds for the statement that the workers in the plant are exposed to unacceptable levels of radiation.
14. Identify environments or conditions that are used as reference points for the assertion in Interrogatory Number 13.
15. Identify and provide all documents that report on the impact of a nuclear plant on the physical environment of children.
16. With regard to the physical environment of adults and children, state how living near the Indian Point site compares with living near other industrial facilities (e.g., chemical plants, fiberglass factories). Identify the health effects associated with the routine operation of all of the above facilities. Identify all those effects that you regard as acceptable.

17. With regard to the physical environment of adults and children, identify and state how the health effects from living near the Indian Point site compare with the health effects of living near other power-generating facilities including, but not limited to, (a) coal-fired plants, (b) oil-fired plants, (c) hydroelectric stations, (d) windmills, (e) solar systems, (f) cogeneration plants, and (g) biomass conversion plants. Identify the health effects associated with the routine operation of all the above facilities. Identify all those effects that you regard as acceptable.
18. Compare the physical environment of children living in the vicinity of nuclear plants to that of children who do not live in the vicinity of a nuclear plant. Provide all documents which substantiate your answer.
19. State the grounds for the statement that "the workers are at risk of disease and genetic damage to their offspring". Provide all documents that substantiate your answer.
20. Define the age bracket that you associate with being considered a child.
21. Identify the differences in health effects from the years of the construction permit grant or reviews. Identify studies which have been done on the subject of the health effects of living near a nuclear plant. Identify such studies which have been done on the Indian Point site in particular.

Contention 6.3

22. Provide a scope of study and working papers or draft conclusions of the economic study to be performed by Energy Systems Research Group "ESRG".
23. Provide documents, draft or final, relied upon by ESRG.
24. Provide documents, draft or final, used as exhibits by ESRG.
25. Identify the personnel at ESRG who are working on the economic study, regardless of who will testify.
26. Identify witnesses from ESRG who will testify.
27. State whether a cost model was prepared by ESRG for the economic study. If so, state whether it is a previously unused or used model. If the model was previously used, identify where it was used and how it was changed for this study.
28. Provide all documents regarding the criticism of the economic analyses relied upon by the licencees, as referred to on page 3 of your March 29, 1982 submittal to the Board.
29. Provide copies of all correspondence concerning Indian Point over the last 5 years with (a) Congressional Research Services, (b) Union of Concerned Scientists, (c) Council on Economic Priorities, and (d) New York City, any office or agency.
30. Provide copies of all correspondence with anyone concerning refuse-to-energy or garbage-to-energy plants.
31. Identify and provide documents relating to the statement "Indeed, PASNY's counsel Mr. Frey is a strong advocate of cogeneration."
32. Define the term "New York's energy security." Provide documents to support the definition of this phrase.

33. State the meaning of the assertion that conservation and cogeneration are "proceeding apace" in New York. State the grounds for your answer. Identify any additional conservation and cogeneration projects which you believe the licensees can initiate. State the grounds for the expected cost of each project. State the expected savings. Provide documents that support your estimates.
34. State the quantity of conservation which is currently being achieved in New York. State the amount of conservation which has been achieved each year since 1970.
35. State the number of years that conservation of (a) electricity and (b) energy has been regarded as a significant alternative. State the number of years conservation will continue to be significant as a means to replace nuclear power.
36. State whether you are aware of the Public Service Commission's position regarding the potential for cogeneration in the Con Edison service area. State whether you agree or disagree with the PSC and state the grounds for your answer.
37. State the extent to which conservation is the result of rate increases.
38. Provide all documents which compare the savings from conservation and cogeneration with the savings from the continued operation of Indian Point. If no such documents exist, provide your calculations of these asserted savings.

39. Provide copies of the three studies referenced in your submittal of April 9, 1982.
40. State the capital costs of conservation investments which will pay back in 6 years. Identify the person or persons who will pay these capital costs. State the grounds for justifying the acceptability of the payback period of six years. State the effect a shorter impact period would have on your conservation estimates.
41. List existing cogeneration sites and owners in New York City including size, dates of installation and capital costs. Provide a list of potential cogeneration sites in New York City.
42. State the capital cost of 1,500 mW of gas-fired cogeneration capacity. State the grounds for your estimate. State the payback period for such cogeneration.
43. State the impact that natural gas decontrol will have on the operating cost of gas-fired cogeneration.
44. State your estimates of the long term gas quantities required for 1,500 mW of gas-fired cogeneration. State the grounds for your estimates.
45. State your estimates of long term natural gas supplies for the Con Edison service area. State the grounds for your estimates.
46. On page 5 of your April 9, 1982 submittal to the Board, you state that a mid-range case of a total 1,500 mW gas-fired cogeneration capacity is well below the level of economic saturation. State the reasons that there are so few new

- cogeneration facilities being installed. State the grounds for and provide documents to support your answer.
47. From your February 1981 report, The Potential for Cogeneration in New York City, state the energy impacts that 1,500 mW of cogeneration would have if you considered the Con Edison and Power Authority systems over the next fifteen years rather than the impact it would have on the system as is. State the grounds for your estimate.
48. State whether coal conversions, refuse burning and Canadian imports, slated for the primary purpose of displacing foreign oil, will be available to substitute for Indian Point energy. State the grounds for your answer.
49. Identify the environmental impacts of 1,500 mW of cogeneration to be located in the Con Edison Service Area. State the grounds for your answer. State whether the 1,500 mW will comply with the State Implementation Plan, the local Environmental Conservation Law, and other air quality regulations. Identify the environmental impacts and effects within the Con Edison service area of on-site cogeneration which you contend will occur within the remaining service life of Indian Point.
50. State all of the annual ownership and operating costs of the Big Six Towers cogeneration complex included in the calculation which yielded \$500,000 savings in the first year, including O&M expense, additional property taxes, amortization etc. State whether the Big Six Complex is 100% gas-fired. Provide the cost and saving figures for subsequent years.

51. State what the costs and savings of cogeneration at Big Six would be if gas were in parity with oil. Identify and provide all documents which support your answer.
52. State whether Big Six Towers has steam absorption air conditioning. If not, state the uses that the waste heat has besides domestic hot water during the non-space heating months. State the annual efficiency of the cogeneration complex during the first year. State the annual efficiency for succeeding years. Provide all figures that contribute toward efficiency calculations.
53. State the local and state tax impacts of substituting cogeneration and conservation for Indian Point power. State whether cogenerators are subject to the same types and levels of taxation as Con Edison. State the grounds for your answer and provide supporting documents.
54. State the amount of energy that should be held in reserve for local and/or national emergencies (e.g., war or political turmoil in OPEC countries). State any consideration given to backup service for cogeneration units. If none is given, state the reason.
55. State whether you considered the impact of early decommissioning on financing options, dividend policies, and construction programs for Con Edison and the Power Authority. If you failed to consider this proposition, state the reason for that failure.
56. State whether you considered the impact of early decommissioning on the financing of the Marcy South

- Project. If so, state the impact considered. If you failed to consider this proposition, state the reason for that failure.
57. State whether you considered the allocation of the Power Authority's debt service to its customers. If so, identify the customers to whom the debt service would be allocated. If you failed to consider this proposition, state the reason for that failure.
58. State whether you have considered the additional costs of temporary away-from-reactor spent fuel storage when you say that early decommissioning would decrease decommissioning costs. State the grounds for your estimate.
59. State whether you considered the additional costs of early decommissioning as a result of being one of the first large commercial reactors to undergo decommissioning, that is the additional costs due to lack of experience. If you considered additional costs, state the amount of these costs. If you failed to consider the additional costs, state the reasons for that failure.
60. Define the meaning of the term "acceptable" when you say that the economic consequences of a shutdown are "acceptable". State the dollar amount of an "acceptable" economic consequence of shutdown.
61. State whether the Brookhaven Lab Report, The Avoided Costs Associated with Cogeneration: A Case Study of Con Ed, compares the operating cost of cogeneration with the operating cost of Indian Point. Identify the page or pages which make the comparison.

62. State the grounds for the proposition that if Indian Point where shut down, Con Edison's entire nuclear department would be terminated. State the amount of increase of unemployment in the Indian Point area after a shutdown.
63. Provide the outline you described on page 898 of the Transcript of the April 14, 1982 Pre-Hearing Conference.
64. Provide the data or studies which lead you to believe that conservation and cogeneration will occur at unprecedented levels within the next three years whether or not Indian Point is shut down. State separately the incremental amount of (a) cogeneration and (b) conservation that will occur if Indian Point is shut down versus if Indian Point is not shut down.
65. If conservation and cogeneration will be in place in the next three years regardless of the status of Indian Point, identify sources of replacement energy if Indian Point is closed. State the grounds for your answer.
66. State whether you considered the additional risks associated with transporting spent fuel to a temporary away-from-reactor storage facility when you stated that a shut-down of Indian Point would curtail all risks. State the grounds for your answer, and provide supporting documents.
67. Provide documents concerning the reduced levels of power that will be available due to reactor vessel embrittlement at Indian Point.
68. Describe in detail the methodology you plan to use to quantify the economic cost society pays if Indian Point

continues to operate using risk analysis and insurance experts. Identify the witnesses who will testify on this issue.

69. State the assumptions you made concerning the effects of permanent shutdown on the Metropolitan Transportation Authority. State the assumptions made on the share of Indian Point power received by the MTA.
70. State any assumptions you made concerning the relationship between an MTA fare increase and the number of riders.
71. State any assumptions you made concerning an MTA fare increase and its economic impacts on the New York metropolitan area.
72. State the assumed effect of a shutdown on employees of both licensees and on the unemployment levels of the New York metropolitan area in general. State any assumptions which you have made concerning the long-term effect that the shutdown would have on the employment levels and the cost of doing business in New York City.
73. State whether you considered that the cost of energy to consumers will increase during the construction and initial period of use of cogeneration projects and conservation measures.
74. State whether you considered that in the cogeneration rate case, Case No. 27574, the Administrative Law Judge stated that in the short run, the three to six years required to install 1,500 MW of cogeneration, remaining customers would not benefit since they would have to absorb greater

portions of fixed costs. State the grounds for your answer. If you failed to consider this statement, state the reason for that failure.

75. State whether the costs of interconnection equipment between cogenerators and the utility grid have been included in the capital costs of the 1500 mW of economically feasible cogeneration. If so, state the grounds and provide documents for your answer. If not, state the reason for the failure to include such costs.
76. State the grounds for the assumption of 85% efficiency and 85% capacity factor of cogeneration plants. State whether these plants will be sized to meet a) the heating requirements or b) the electrical requirements. Explain the difference in operating procedures for each sizing method. State your estimate of the capacity factor and efficiency for cogeneration systems in commercial and residential buildings with electric compression air conditioning.
77. State the difference between nuclear capacity factor and equivalent availability as you use them.
78. State whether you have assurances that there are 1,500 mW worth of customers in the Con Edison Service Area who are willing to take on the financial and technical risks associated with cogeneration. Identify the source of those assurances.
79. State the grounds for your estimate that 71% of Indian Point energy can be displaced by conservation (Reference: Page 3 of your April 9, 1982 submittal to the Board).

80. State how the asserted 71% energy conservation would be split between customers of Indian Point 2 and Indian Point 3. State whether all the energy to be saved by conservation is assumed to be from Indian Point 2. State the grounds for your answer.
81. State your estimates and the grounds for market penetration of conservation and cogeneration. State whether conservation estimates are based solely on the New York City Energy Office Study. Identify other grounds for your estimates on market penetration.
82. State whether you considered the institutional, legal, political and regulatory barriers which exist to the initiation of conservation measures which you believe can make up 71% of Indian Point energy. State those barriers. If you failed to consider these barriers, state the reason for that failure.
83. Based upon your statement on page 2 of your submittal to the Board on April 9, 1982, that 1/4 to 1/3 of New York's electricity is now supplied by Indian Point, state whether your estimate that 71% of the energy supplied by Indian Point would be displaced by conservation is based on the ability to supply 1/4 or 1/3. State the grounds for your answer.
84. State whether the \$550 million in conservation savings is the net value after capital, installation and maintenance cost. State the grounds for your answer.

85. State whether building energy codes and programs to improve commercial and industrial energy efficiency are being considered for new construction or for existing buildings. Identify the codes, programs and projects which were so considered.
86. State the level of conservation that can be attributed to Energy Law, Article 11 - State Energy Conservation Construction Code Act, which became effective on January 1, 1979.
87. State whether the impact of Indian Point can be evaluated without doing the analysis including Indian Point. State whether you have done the analysis with 1,500 mW of cogeneration and Indian Point available in the base case and compared that to fuel costs without the Indian Point units. If so, provide all your results. If not, state the reason for excluding this analysis. State whether you have done any sensitivity runs with higher or lower amounts of cogeneration. If so, provide your results. If not, state why not.
88. State the grounds for your statement that "ESRG Inc. is a firm widely recognized and accepted as a leader in the field of economic analysis." List the governmental agencies if any, that have adopted ESRG conclusions in any legal proceedings.
89. Identify any contested proceeding in which ESRG conclusions have been adopted.

90. State the number of megawatts of gas-fired cogenerated electricity that are economically competitive against electricity at 6, 9, and 12¢ per kWh, respectively
91. State the number of megawatts of gas-fired cogenerated electricity that are economically competitive with the price of electricity from Con Edison's most expensive marginal plant. State the price of electricity from Con Edison's most expensive marginal plant.
92. State how cogeneration and conservation will mitigate the cost of replacement power. Provide all documents which show that cogeneration is feasible in the Con Edison service area. List all your assumed locations of the cogeneration facilities, as well as any agreements for the production of cogenerated power. Provide all documents regarding the anticipated impact of the cogeneration facilities on air quality and on noise levels.
93. State whether cogeneration will produce decreased utility costs to non-cogeneration customers. State the grounds for your answer.
94. State the impact the loss of customers to cogeneration will have on the Power Authority, in southeast New York and upstate New York, and on Con Edison. State the rates which would be charged for cogenerated electricity. Provide all documents on these topics. (See insert at bottom of page)*

* Identify the cogeneration measures and provide all documents, regarding the cost and feasibility of these measures.

95. State how the net costs of shutdown were estimated.
Provide all documents which contributed to the estimation of net costs.
96. State the amount of fuel costs which would be saved in New York City with a system including 1,500 mW of cogeneration and with the continued operation of Indian Point.
97. State the grounds for the statement that in the near future there will be less need for the Indian Point capacity because of the increase which is already well underway of conservation efforts and in electricity conservation in the New York City area. Compare residential electricity use in the New York City area to the average national residential use. Identify any documents which support your answer.
98. State the grounds for displacing any generation but the marginal generation with conservation and cogeneration.
99. State the effect that a shutdown of the Indian Point units will have on the marginal generation.
100. State whether you considered that the use of oil to generate electricity is associated with (a) risk to steady, constant supply, (b) risk of real price increases, and (c) environmental risks. List the risks you consider to be associated with using oil to generate electricity.
101. Assuming a savings of energy using conservation and energy generated by cogeneration, identify the economic benefit to customers in the Con Edison service territory from using conservation and cogeneration to replace electricity generated by plants fueled by:

- a. Oil
- b. Natural gas
- c. Coal
- d. Nuclear power.

102. State whether the cogenerated electricity can be used economically to displace any end uses that now use oil, for example, space heating with oil heat. If such displacement occurs, identify the market for this replacement electricity over the next 20 years.
103. State whether cogeneration will have any impact on Con Edison's steam supply. If so, state the presumed impacts and the grounds for the presumption. If there is no presumed impact, explain the reason therefor.
104. State whether you considered that there may be a loss of taxes in the event of a shift from Con Edison steam power to cogeneration.
105. State your projections for the increase in the price of natural gas over the next 20 years. State the grounds for your answer. Identify any documents that support your answer.
106. Identify the supply of natural gas for cogeneration and state whether it will come from a centralized system. Identify any documents that support your answer.
107. State whether consideration was given to using the heat given off at Indian Point for cogeneration. If you failed to consider the above, state the reason for that failure.

108. Provide all studies and projections of oil and coal costs underlying your allegation in contention 6.3. Provide all background to these studies which you relied on concerning security of oil supply from foreign sources, impact of an interruption of foreign oil supplies upon the net costs of shutdown you alleged in contention 6.3, and impact of an Indian Point shutdown upon oil costs and upon the cost savings you allege. If no such studies were made or relied upon, so state.
109. State whether you considered the general proposition that conservation is impractical among the (a) unemployed, (b) welfare recipients, and (c) persons earning less than the regional minimum standard income who constitute a large portion of the southeast New York load. If you failed to consider this proposition, state the reason for that failure.
110. List the specific operating expenses that you propose will be saved by a shutdown of Indian Point Units 2 and 3. Provide all supporting documents.
111. List the "vast political and social changes" which you assert would occur as a result of using other energy sources, such as hydro-power and coal conversion, rather than implementing cogeneration and conservation. State the grounds for your answer.
112. State the grounds for the statement in your April 9, 1982 submittal to the Board that "the powerful economic drive towards these more efficient systems which results from the

unsurpassed and rapidly escalating electric rates in New York will, within the next 5 years, mitigate the cost of the Con Edison system and render a shutdown of the Indian Point plants more feasible".

113. Identify and list any potential hydropower sites which would provide more than 5 mW of power to southeast New York. State the baseload or peaking power of each site. Identify the potential transmission route and state whether the route would fall inside the Adirondacks "Blue Line." State whether you advocate building inside the "Blue Line."
114. State whether you assumed that hydropower would be available to replace power provided by Indian Point. State separately the incremental amount of hydropower that will occur if Indian Point is shut down versus if Indian Point is not shut down. State the grounds for your assumption.
115. State whether you considered the terms under which Canadian hydropower becomes available. If so, state those terms. State whether you considered the transmission costs and limits and the feasibility of underwater crossings for Canadian hydropower. If so, state those considerations. Identify and provide any documents which support your answer.
116. State the cost of power currently delivered from small hydro projects to southeast New York. Identify any potential small hydro projects which would produce power for the New York City area (southeast New York). Identify and provide any documents which support your answer.

117. State whether the following consideration was made: as the space heating requirements in the New York metropolitan area become reduced by implementing conservation measures, there will be less demand for the heat generated by your proposed cogeneration facilities. State the grounds for your analysis with special attention to the proposition above. If you did not take this into account, please state the reason for this. State the combination of conservation and cogeneration which results in the minimum heating cost for the consumer.
118. State whether you considered that heat from solar energy systems may be a competitor to your cogeneration heating. Provide your analysis of the contribution of solar heat to the energy needs of facilities that you propose for cogeneration. If you did not take this into account, state the reason.
119. Describe the systems used to dispose of waste heat from cogeneration facilities when this heat is not needed (e.g., in the summer). State the grounds for your answer. State how your analysis accounts for the cost of these systems. If you did not account for this cost, please state the reason.
120. State whether you contend that there are any feasible future circumstances under which Indian Point would be available but would not be "baseloaded," that is, not operated at all available times to meet load demands. If so, state the circumstances in which Indian Point would not

be baseloaded. State whether baseloading of Indian Point would vary according to various levels of available and implemented coal conversions, cogeneration, conservation and/or importation of hydropower. Identify sources of replacement energy for all future circumstances where you contend that Indian Point might not be baseloaded. State the grounds for your answer.

121. Identify:

(a) each person whom you expect to call as a witness at the evidentiary hearings relating to Commission Question 6 (including, without limitation, each such person's full name, present address, present employment or other professional affiliation, and qualifications) and annex a copy of said person's resume and list all his publications;

(b) the subject matter and Board contention and underlying intervenor contention on which the witness is expected to testify;

(c) the substance of the facts and opinions to which the witness is expected to testify and a summary of the grounds for each opinion;

(d) each document (including, without limitation, each treatise, book bulletin, accounting interpretation, regulation, report, article, or other literature or writing) upon which the witness has based his testimony, or will so rely at the hearing, or will otherwise refer to in support of his testimony;

(e) any relationship between the witness and any intervenor or party herein; and

(f) any proceeding in which the witness has previously testified and the transcript pages of such testimony (you should annex the transcript pages to your response).

122. Identify all communications, written or oral, with federal, state, county, or local government officials, upon which you rely in responding to any interrogatories.

123. Identify and provide all contracts and communications, written or oral, with consultants, contractors, employees or others upon whose testimony, written or oral, you rely in responding to any interrogatories.

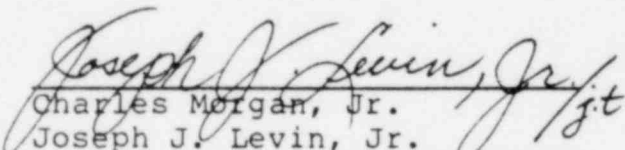
LICENSEES' DOCUMENT REQUEST

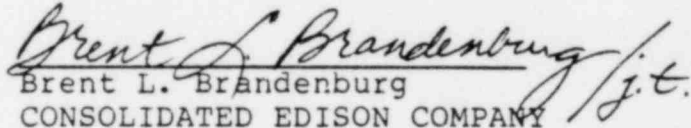
Licensees request that the intervenors produce and permit the licensees to inspect and copy, pursuant to 10 CFR §2.741, each and every document identified in response to any interrogatories set forth above.

Each document so produced shall have affixed to it a legend stating the interrogatory or interrogatories (and subparagraph or subparagraphs thereof) to which it relates.

It is requested that the aforesaid production be made on June 30, 1982, at 10:00 a.m., at the offices of the Power Authority of the State of New York, 10 Columbus Circle, 19th Floor, New York, New York.

Respectfully submitted,


Charles Morgan, Jr.
Joseph J. Levin, Jr.
MORGAN ASSOCIATES, CHARTERED
1899 L Street, N.W.
Washington, D.C. 20036
(202) 466-7000


Brent L. Brandenburg
CONSOLIDATED EDISON COMPANY
OF NEW YORK, INC.
4 Irving Place
New York, NY 10003
(212) 460-4600

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:
Louis J. Carter, Chairman
Frederick J. Shon
Dr. Oscar H. Paris

-----X
In the Matter of : Docket Nos.

CONSOLIDATED EDISON COMPANY OF NEW YORK, : 50-247 SP
INC. (Indian Point, Unit No. 2) : 50-286 SP
POWER AUTHORITY OF THE STATE OF NEW YORK :
(Indian Point, Unit No. 3) : June 9, 1982
-----X

CERTIFICATE OF SERVICE

I hereby certify that copies of LICENSEES' FIRST SET OF INTERROGATORIES AND DOCUMENT REQUEST UNDER COMMISSION QUESTION 6 in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class, this 9th day of June, 1982.

Louis J. Carter, Esq., Chairman
Administrative Judge
Atomic Safety and Licensing Board
7300 City Line Avenue
Philadelphia, PA 19151-2291

Dr. Oscar H. Paris
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. Frederick J. Shon
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Brent L. Brandenburg, Esq.
Assistant General Counsel
Consolidated Edison
Co. of New York, Inc.
4 Irving Place
New York, N.Y. 10003

Mayor George V. Begany
Village of Buchanan
236 Tate Avenue
Buchanan, N.Y. 10511

Paul F. Colarulli, Esq.
Joseph J. Levin, Jr. Esq.
Pamela S. Horowitz, Esq.
Charles Morgan, Jr., Esq.
Morgan Associates, Chartered
1899 L Street, N.W.
Washington, D.C. 20036

Charles M. Pratt, Esq.
Thomas R. Frey, Esq.
Power Authority of the
State of New York
10 Columbus Circle
New York, N.Y. 10019

Ellyn R. Weiss, Esq.
William S. Jordan, III, Esq.
Harmon & Weiss
1725 I Street, N.W., Suite 506
Washington, D.C. 20006

Joan Holt, Project Director
Indian Point Project
New York Public Interest
Research Group
9 Murray Street
New York, N.Y. 10038

John Gilroy, Westchester Coordinator
Indian Point Project
New York Public Interest
Research Group
240 Central Avenue
White Plains, N.Y. 10606

Jeffrey M. Blum, Esq.
New York University Law School
423 Vanderbilt Hall
40 Washington Square South
New York, N.Y. 10012

Charles J. Maikish, Esq.
Litigation Division
The Port Authority of
New York and New Jersey
One World Trade Center
New York, N.Y. 10048

Ezra I. Bialik, Esq.
Steve Leipsiz, Esq.
Environmental Protection Bureau
New York State Attorney
General's Office
Two World Trade Center
New York, N.Y. 10047

Alfred B. Del Bello
Westchester County Executive
Westchester County
148 Martine Avenue
White Plains, NY 10601

Andrew S. Roffe, Esq.
New York State Assembly
Albany, N.Y. 12248

Renee Schwartz, Esq.
Botein, Hays, Sklar & Herzberg
Attorneys for Metropolitan
Transportation Authority
200 Park Avenue
New York, N.Y. 10166

Honorable Ruth Messinger
Member of the Council of the
City of New York
District #4
City Hall
New York, N.Y. 10007

Stanley B. Klimberg
General Counsel
New York State Energy Office
2 Rockefeller State Plaza
Albany, N.Y. 12223

Marc L. Parris, Esq.
Eric Thorsen, Esq.
County Attorney, County of Rockland
11 New Hempstead Road
New City, N.Y. 10956

Geoffrey Cobb Ryan
Conservation Committee
Chairman, Director
New York City Audubon Society
71 West 23rd Street, Suite 1828
New York, N.Y. 10010

Greater New York Council on **
Energy
c/o Dean R. Corren, Director
New York University
26 Stuyvesant Street
New York, N.Y. 10003

Honorable Richard L. Brodsky
Member of the County Legislature
Westchester County
County Office Building
White Plains, N.Y. 10601

Pat Posner, Spokesperson*
Parents Concerned About
Indian Point
P.O. Box 125
Croton-on-Hudson, N.Y. 10520

Charles A. Scheiner,
Co-Chairperson
Westchester People's Action
Coalition, Inc.
P.O. Box 488
White Plains, N.Y. 10602

Lorna Salzman
Mid-Atlantic Representative
Friends of the Earth, Inc.
208 West 13th Street
New York, N.Y. 10011

Alan Latman, Esq.
44 Sunset Drive
Croton-on-Hudson, N.Y. 10520

Zipporah S. Fleisher*
West Branch Conservation
Association
443 Buena Vista Road
New City, N.Y. 10956

Judith Kessler, Coordinator
Rockland Citizens for Safety Energy
300 New Hempstead Road
New City, N.Y. 10956

David H. Pikus, Esq.
Richard F. Czaja, Esq.
330 Madison Avenue
New York, N.Y. 10017

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

Atomic Safety and Licensing Appeal
Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Docketing and Service Section
Office of the Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

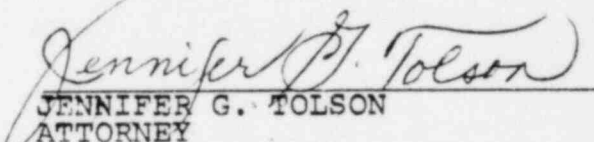
Ms. Amanda Potterfield, Esq.
P.O. Box 384
Village Station
New York, N.Y. 10014

Renee Schwartz, Esq.
Paul Chessin, Esq.
Laurens R. Schwartz, Esq.
Margaret Oppel, Esq.
Botein, Hays, Sklar & Herzberg
200 Park Avenue
New York, N.Y. 10166

Alan S. Rosenthal, Esq., Chairman
Atomic Safety and Licensing
Appeal Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. Samuel J. Chilk
Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Leonard Bickwit, Esq.
General Counsel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555


JENNIFER G. TOLSON
ATTORNEY

*Service effected by Express Mail.
**Hand Delivered