

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKETED

ATOMIC SAFETY AND LICENSING BOARD
Before Administrative Judges
James P. Gleason, Chair
Frederick J. Shon
Dr. Oscar H. Paris

'83 APR 13 AM 1:30

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In the Matter of: :
CONSOLIDATED EDISON COMPANY OF NEW YORK : Docket Nos.
INC. (Indian Point, Unit No. 2), :
POWER AUTHORITY OF THE STATE OF NEW YORK : 50-247 SP
(Indian Point, Unit No. 3) : 50-286 SP
: April 8, 1983
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Testimony Submitted on Behalf of
"New York City Council" Intervenors

By

Mr. David Schlissel and Mr. John Mavretich

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175 Fifth Avenue Suite 712
New York, New York 10010
(212) 673-2040
CRAIG KAPLAN,
SPECIAL COUNSEL

1 Q. Please state your names and business addresses.

2 A. My name is David A. Schlissel. My business address is 119 South
3 Lake Avenue, Albany, New York 12208.

4
5 My name is John J. Mavretich. My business address is Box 36,
6 Burroughs Drive, West Park, New York 12493.

7
8 Q. Mr. Schlissel, please summarize your educational background and
9 work experience.

10 A. I graduated from the Massachusetts Institute of Technology in
11 1968 with a Bachelor of Science Degree in Astronautical
12 Engineering. In June 1969, following a year in which I attended
13 Stanford University School of Engineering on a fellowship award
14 from the McDonnell Douglas Corporation, I received a Master of
15 Science Degree in Aeronautics and Astronautics, with a
16 speciality in trajectory analysis. In 1973, I received a Juris
17 Doctor degree from the Stanford University School of Law.

18
19 Following graduation from Law School, in June of 1973, I moved
20 to Atlanta, Georgia to become staff attorney for a private
21 ratemaking intervention organization. In December of 1975,
22 I moved again, to Albany, New York, to begin employment as a
23 Utility Intervenor Attorney with the New York State Consumer
24 Protection Board. Three and one-half years later, in July,
25 1979, I left the full-time employ of the Consumer Protection

1 Board to become a private consultant to other state agencies and
2 to community and consumer organizations.

3
4 Q. Yes. Since December, 1975, I have represented the Consumer
5 Protection Board and/or other intervenors in over 25 proceedings
6 before the Public Service Commission. The proceedings most
7 relevant to this proceeding were Cases 27123 and 27869, involving
8 the prudence of Consolidated Edison management actions which
9 caused or extended outages of the Indian Point #2 Nuclear Plant;
10 Cases 27113 and 27120, in which the economics of sales of shares
11 of the Roseton and Nine Mile Point 2 generating stations were
12 examined; Cases 27353 and 27744, electric rate increase
13 proceedings for Consolidated Edison; Case 28059, an investigation
14 of the comparative economics of completion of the Nine Mile
15 Point #2 nuclear unit versus other available alternatives. In
16 addition, I have recently testified in Public Service Commission
17 Case 28166, an investigation of the causes and resulting costs of
18 the January 25, 1982 accident at the R.E. Ginna Nuclear Plant,
19 near Rochester, New York.

20 Q. Mr. Mavretich, please summarize your educational background and
21 business experience.

22 A. I graduated from Fordham University in 1970 with a B.S. degree in
23 Psychology. In 1974, I enrolled at the State University College
24 at New Paltz, and have completed the course requirements for an
25 M.A. degree in Psychology. I have completed various courses in

1 testing, experimental design and statistical analysis on both the
2 undergraduate and graduate level. I have been actively involved
3 in New York State utility issues since 1975 and have testified on
4 behalf of, and represented the interests of, a variety of public
5 interest organizations, private businesses and government
6 officials.

7
8 I have testified before the New York State Public Service
9 Commission in the following cases: Case 27013 (Niagara Mohawk
10 et al - Transfer of Interests in NMP #2), Case 27032 (Central
11 Hudson G&E - Electric Rates), Case 27319 (NYPP - 1978 Long-Range
12 Electric Plan), Case 27461 (Central Hudson G&E - Electric Rates),
13 Case 27708 (Central Hudson G&E - Complaint of Beacon Terminal
14 Corporation), Case 27794 (SNUPPS - Ratemaking Treatment of
15 Extraordinary Property Loss), Case 27636 (Central Hudson G&E -
16 Rate Design), Case 27882 (New York State E&G - Electric Rates)
17 Case 27780 (Central Hudson G&E - Danskammer Outages), Case 28059 -
18 (Nine Mile Point #2 - Financial and Economic Implications),
19 Case 27826 (Central Hudson G&E - Electric Rates), Case 28105
20 (Central Hudson G&E - Electric Rates), Case 28211 (Con Edison -
21 Electric Rates), Case 28288 (Hurley Water Company - Water Rates),
22 Case 28264 (N.Y. Telephone Company - Rate Design) and Case 28166
23 (Rochester Gas and Electric - Ginna Outages).

24
25 Q. What is the purpose of this testimony?

1 Our testimony presents the conclusions of a study of the likely
2 rate consequences of a permanent shutdown of the Indian Point #2
3 and #3 nuclear facilities.
4

5 Q. Before discussing this study in detail, please address the
6 system reliability implications of the closing of the Indian
7 Point units.

8 A. The decommissioning of Indian Point units #2 and #3 would remove
9 some 1829 megawatts (MW) of generating capacity from the NYPP
10 system. Such a loss would not threaten the adequacy of NYPP
11 reserves through 1999, and probably through the balance of the
12 units' service lives, 2006 for Indian Point #2 and 2009 for
13 Indian Point #3.
14

15 To illustrate the effect on system reliability of permanently
16 shutting down the Indian Point units, we have compared the total
17 available capacity and the required capacity (peak load plus
18 reserve requirement) projections through year 1999, the terminal
19 year covered in the recent NYPP submission pursuant to Section
20 5-112 of the Energy Law.
21
22
23
24
25

1 Exhibit S/M-1 (____) is taken from the 1983 Report of the New
2 York State Power Pool. It presents the Power Pool's forecasts
3 of statewide peak loads and available generating capacity for
4 each of the winter and summer capability periods through 1999.

5
6 From Exhibit S/M-1 (____) it can be seen that the Power Pool
7 projects that the systemwide peak load in 1999 will be 26340
8 MW. To properly evaluate whether sufficient generating capacity
9 will be available to supply this peak load plus the required
10 18 percent reserve margin if the Indian Point units are not
11 available, it is necessary to adjust the Pool's estimate of
12 available capacity as follows:

- 13 * Reduce the available capacity figure by 1829 MW to
14 reflect the early retirement of Indian Point #2 and
15 #3;
- 16 * Reduce the available capacity figure by 1700 MW to
17 reflect existing uncertainty over the future of the
18 Power Authority's proposed Prattsville and Arthur
19 Kill Projects;
- 20 * Increase the available capacity figure by 1189 MW
21 to reflect the higher levels of small hydro,
22 cogeneration, solid waste and wind capacity additions
23 projected in the 1982 New York State Energy Master
24 Plan, adopted by the State of New York Energy Planning
25 Board on March 25, 1982.

1 With these adjustments, the total capacity available in the
2 summer of 1999 would be 31642 MW, sufficient to supply both
3 the projected peak load and the required 18 percent reserve.
4

5 It should be noted that the 1983 Power Pool peak load projections
6 for the year 1997 represent a 1560 MW reduction from the Pool's
7 1982 forecast for the same year. Similarly, the Pool's 1983
8 energy sales forecast for 1997 is lower than its 1982 forecast
9 by approximately 8,600,000 MWHrs. Given the history of annual
10 reductions by the Power Pool of its own earlier estimates
11 it is not unreasonable to expect that future projections will
12 be lower than those of 1983.
13

14 We would also note that the implementation of a vigorous program
15 of conservation and the use of renewable energy technologies
16 in New York State would lower future statewide peak loads
17 and energy sales and would further delay the need for any
18 additional centralized generating facilities on the Power Pool
19 system.
20

21 Q. Please describe your economic study.

22 A. To identify the likely cost consequences of the permanent
23 shutdown of the Indian Point #2 and #3 units as of the start of
24 1984, we have compared the production costs associated with the
25 continued operation of those facilities with the

1 production costs that would result from the generation of
2 replacement power at oil-fired stations each year until 2009, the
3 assumed completion of Indian Point #3's service life. These
4 alternative production costs have been computed in both
5 mixed current and present worth 1983 dollars.
6

7 We have also calculated the impact closing the Indian Point
8 units would have on the monthly bills of typical Consolidated
9 Edison customers in 1984, the first year that the plants would
10 be retired.
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Q. Please explain the key assumptions employed in your economic study.

A. We made assumptions regarding the following key economic variables:

- * Nuclear Capacity Factors
- * Nuclear Fuel Costs
- * Nuclear Non-fuel O&M Costs
- * Nuclear Service Lives
- * Sources of Replacement Power
- * Fossil Fuel Prices
- * Capital Additions
- * Recovery of Sunk Costs
- * Decommissioning Costs
- * Gross Revenue and Sales Taxes
- * Discount Rate

We will now discuss these various inputs.

NUCLEAR CAPACITY FACTORS

The annual capacity factors used in our economic analysis were 53.77 percent for Indian Point #2 and 48.08 percent for Indian Point #3. These capacity factors were derived by comparing the actual historical generation at each of the facilities with

1 the maximum potential generation that would have been produced if
2 each facility had operated at its reported maximum dependable
3 capacity 100 percent of the time. The calculations underlying
4 the derivation of these capacity factors are presented in
5 Exhibit (S/M-2____).

6
7 Although we have chosen to use the actual historical capacity
8 factors for Indian Point #2 and #3 in our analysis, it should be
9 noted that these capacity factors may overstate the output that
10 these facilities can reasonably be expected to achieve through the
11 remainder of their assumed useful lives. For example:

12
13 1) Both the Power Authority and Con Edison
14 have admitted that tube degradation might
15 force the replacement of steam generators
16 in one or both units. Although the
17 utilities are uncertain as to when this
18 replacement might occur, they have estimated
19 that it could require up to a year to complete
20 for each unit;

21
22 2) Indian Point #3 has been identified by the
23 staff of the U.S. Nuclear Regulatory
24 Commission as one of the operating nuclear
25 plants with potentially serious pressurized

1 thermal shock problems (embrittlement).
2 If the NRC decides that hardware or
3 operating procedure modifications are
4 warranted in order to mitigate reactor
5 vessel embrittlement, the facility's
6 output might be affected. Furthermore,
7 if the Commission ultimately decided that
8 Indian Point #3's reactor vessel must
9 undergo In-Situ Annealing, or be replaced,
10 a substantial maintenance outage would be
11 required to complete the necessary work.

- 12
13 3) As more operating nuclear plants "age",
14 new and currently unanticipated problems
15 can be expected to develop. Such
16 evolving new problems can be expected to
17 continue to require hardware modifications
18 or changes in operating procedures, either
19 of which could reduce the net generation of
20 the Indian Point units.

21
22 NUCLEAR FUEL COSTS

23
24 Estimates for nuclear fuel costs for Indian Point #2 and
25 #3 were taken directly from Consolidated Edison and Power

1 Authority forecasts provided in response to interrogatories of
2 the Greater New York Council on Energy. The actual fuel cost
3 estimates are shown in Exhibit (S/M-3____).

4
5 NUCLEAR NON-FUEL O&M COSTS

6
7 Nuclear non-fuel O&M cost projections for Indian Point #2
8 are based on that facility's actual historical levels of such
9 costs, as those levels were presented in Exhibit 1, Schedule 7,
10 page 2 of Con Edison's prefiled testimony in Case #28211
11 before the N.Y.S. Public Service Commission.

12
13 We used this historical data to determine a base 1984 non-
14 fuel O&M cost as follows: The actual costs from 1978, 1979, and
15 1980 (total O&M less fuel cost) were escalated from then current
16 dollars through 1981, by using the actual Gross National Product
17 deflators for those years. The resulting figures were then
18 averaged with the 1981 non-fuel O&M cost, the result being
19 1.073¢/KWHr. This amount was escalated to 1982 using the actual
20 GNP deflator for 1981 and to 1983 and 1984 using seven percent
21 per annum inflation rates. The resulting non-fuel O&M cost in
22 1984, 1.31¢/KWHr, was escalated at a seven percent per annum
23 rate throughout the anticipated service life of Indian Point #2.

24 Non-fuel O&M costs for Indian Point #3 were based on Exhibit
25 III on page A-24 of the Prospectus, dated November 17, 1981,

1 issued in connection with the sale of \$250,000,000 of General
2 Purpose Bonds, Series M, by PASNY. That exhibit, which presents
3 projected generation sources and operating expenses for the
4 Authority, shows that for 1982, the budgeted non-fuel O&M cost
5 for Indian Point #3 would be \$68,843,000., with an expected
6 generation of 4,453,000 MWHrs. Dividing the cost by the
7 expected generation computes to a 1.55¢/KWHr non-fuel O&M cost
8 for 1982. This figure was then escalated at a seven percent per
9 annum rate through the year 2009. The actual estimates so
10 developed are shown in Exhibit (S/M-3____).

11 12 NUCLEAR SERVICE LIVES

13
14 We have accepted the utilities' claim that the operating
15 lives for Indian Point #2 and #3 will extend through 2006 and
16 2009, respectively. We do so despite the fact that no operating
17 nuclear plant has achieved such a life span and despite evidence
18 to the contrary offered by Niagara Mohawk Power Corporation in its
19 request to the Public Service Commission to fully depreciate its
20 investment in the Nine Mile Point #1 nuclear plant five years
21 before the termination of its operating license. As company
22 witness John S. Ferguson noted, uncertainties surrounding nuclear
23 energy justify the use of the shorter period:
24
25

1 The recommended life of Nine Mile Point
2 Unit No. 1 is based on the remaining life
3 of the operating license. Recognizing the
4 regulatory pressures from the Nuclear
5 Regulatory Commission, relicensing should not
6 be assumed. If it should happen that it is
7 possible to relicense the plant, the capital
8 expenditures required would be of such a
9 magnitude that the unit, for depreciation
10 purposes, should be considered as being new at
11 that time. Therefore, the unit should be
12 fully depreciated, at the latest, by the end
13 of the term of the operating licesnse.
14 However, the uncertainties surrounding the
15 development of nuclear energy are well known
16 and justify use of a remaining life less than
17 that defined by the license. Use of a
18 remaining life less than defined by the operating
19 license is also justified by the fact that the
20 average service life applies to the dollars of
21 depreciable investment, not to the life span of
22 the generating unit. This is because property
23 retired before the end of the life span of the
24 unit will have had a shorter life span than the
25 unit itself and property that is added remains
useful only as long as the unit itself survives.
A remaining life five years less than the
termination date of the license was selected for
recognition of uncertainty and the flow of
depreciable plant dollars through the plant
accounting records. (Prepared Testimony of
John S. Ferguson, Case #28225, P. 27)

REPLACEMENT POWER

Based upon our estimates of the future capacity factors for the Indian Point units, premature retirement of the plants would create a need to replace 8,135,000 MWHrs of generation per year during the period 1984-2006, at which juncture Indian Point #2 can be expected to be retired, and 4,065,000 MWHrs per year during the period 2007-2009, at which juncture Indian Point #3 can be expected to be retired.

We have evaluated the potential cost of replacement power under two scenarios concerning the source of the make-up energy:

- 1) In the first scenario, it is assumed that the energy is made up from oil-fired units with an average heat rate of 10,000 BTU/KWHr. Fifty percent of the total generation is fired by oil with a sulfur content of 0.3%, and the balance is fired by oil with a sulfur content of 2.8%.
- 2) In the second scenario, it is assumed that all of the energy is made up from units with an average heat rate of 10,500 BTU/KWH, and

1 which burn oil with a sulfur content of
2 0.3%.
3

4 In the first scenario, we are assuming that Con Edison
5 will be able to replace a significant portion of the lost Indian
6 Point generation by purchasing energy from NYPP, thus obviating
7 the need to replace the entire increment with generation fired
8 by 0.3% sulfur oil. We believe that this scenario is the more
9 likely of the two. We also priced out a scenario which assumed
10 that all of the lost generation was made up at in-city units
11 burning 0.3% oil, to test the effect that reliance on more
12 costly replacement fuel had on our projected outcome.
13

14 FOSSIL FUEL PRICES
15

16 The actual prices paid for oil by utilities in New York
17 State during the first two months of 1982 were used as a base
18 in projecting fossil fuel prices. To adequately reflect a
19 reasonable range of potential residual oil prices, in light of
20 recent events on the world oil markets, we developed two oil
21 price cases:
22

23 Case A - Assumes that the 15% decrease in
24 the stated price of crude oil
25 announced by OPEC would merely

1 eliminate the differential between
2 OPEC's earlier posted price and the
3 price paid for 0.3% and 2.8% sulfur
4 oil. In other words, the prices paid
5 for oil in 1983 would be the same as
6 the average price paid in 1982.

7
8 Case B - Assumes that the average prices for
9 various sulfur content residual oil
10 would decrease by 15% between 1982 and
11 1983, to reflect the price decrease
12 announced by OPEC in February, 1983.

13
14 For each oil price case, we have also assumed that after 1983,
15 all oil prices were escalated at seven percent per annum, the
16 overall rate of inflation.

17
18 Many observers argue that the price of crude oil may drop to
19 as little as \$20 per barrel. Any such drop would dramatically
20 affect the cost consequences of the early retirement of the
21 Indian Point units. In fact, a large enough drop in the price
22 of oil could make the cost of replacement power less than the
23 cost of continued operation of the facilities.
24
25

Q. What about the possibility that the long-term price of oil will increase at a rate above the general rate of inflation?

A. While the situation in the international oil market is extremely complicated, an analysis offered by Mr. Bruce Netschert, a vice-president of National Economic Research Associates, appears to us to provide a credible framework within which to assess the possibility that the real price of oil will increase by the end of this century. In a speech reported in the Monday, March 14, 1983 issue of The Energy Daily, Mr. Netschert evaluates the excess production capacity in the world oil industry and concludes that the price of oil will do no more than keep pace with inflation for the remainder of this century.

Q. What specific 1982 average oil prices did you use in your various cases?

A. For the low sulfur oil scenario, we used an average 1982 price of \$32.93 per barrel. This figure was computed by averaging the prices paid for low sulfur oil by utilities in New York State for January - October, 1982, as reported in the monthly Cost and Quality of Fuels for Electric Utility Plants, published by the Department of Energy. For the mixed sulfur scenario, we used an average of the mean 1982 price for 0.3% sulfur oil and 2.8% sulfur oil, from the same source.

1 The annual oil prices in \$/BTU are shown in the computations
2 presented on Schedule 6 of Exhibit (S/M-4____).

3
4 CAPITAL ADDITIONS

5
6 Both PASNY and Con Edison have projected that substantial
7 capital improvements, or additions, will be necessary at Indian
8 Point #2 and #3 through the remainder of this decade. In its
9 Prospectus dated November 17, 1981, the Power Authority states
10 that a number of major improvements may be required at both
11 Indian Point #3 and the Fitzpatrick unit. Improvements totalling
12 \$300 million for both plants are listed, with an additional
13 \$200 million earmarked for steam generator replacement (P. A-16 -
14 A-17) at Indian Point #3.

15
16 In its response to interrogatory number 2, submitted by the
17 Greater New York Council on Energy, the Power Authority lists
18 another \$112 million of capital expenditures for Indian Point
19 #3, but does not indicate whether those expenditures will be
20 required prior to or after January 1, 1984.

21
22 Con Edison, in its response to interrogatories #2 and #11,
23 submitted by the Greater New York Council on Energy, presents its
24 estimate that the following capital investments may be required
25 at Indian Point #2 in future years:

<u>YEAR</u>	<u>PROJECTED EXPENDITURES (\$000,000)</u>
1984	46.05
1985	23.37
1986	28.75

In addition to the expenditures noted above, the company acknowledges that it may be necessary to spend an additional \$40 million (in current dollars) for retubing of the condenser and steam generator and an additional \$130 million to replace the steam generators.

To illustrate the potential cost impact of these expenditures, we have assumed that the investments on Indian Point #2 and #3 would be completed by 1989 and would be recovered through a fixed charge rate of 20 percent for Con Edison and a capital recovery rate of 11.75 percent for PASNY. With such assumptions, the present worth in 1983 dollars associated with these capital improvements and additions is approximately \$500 million.

It must be further emphasized that the need to make further investments to maintain the plants in reasonable operating condition will grow more urgent as the plants age. Evidence in support of this conclusion was given by Alan Larson, a witness for the Rochester Gas and Electric Corporation in a recent rate proceeding before the New York State Public Service

1 Commission:

2
3
4 As this plant (R.E. Ginna) gets older,
5 it seems reasonable to assume that
6 maintenance costs will increase,
7 plant availability will decrease
8 and major capital replacements could
9 greatly increase future depreciation
expenses. (P. 10 of prefiled testimony
in Case #28313)

10
11 RECOVERY OF SUNK COSTS

12
13 We have assumed that the annual revenue requirement effects
14 of the recovery of the dollars invested in the Indian Point #2
15 and #3 units at the end of 1983 (our assumed date of retirement)
16 would be essentially equivalent to the annual revenue
17 requirement effects of the fixed charges associated with continued
18 operation. To the extent that the annual fixed charges would
19 exceed the annual revenue effects of recovery of the sunk costs,
20 an additonal element of conservatism has been introduced into
21 our analysis.

22
23 DECOMMISSIONING COSTS

24
25 We have assumed that the Indian Point #2 and #3 units are

1 decommissioned according to current schedules and that the charges
2 for decommissioning costs in Con Edison and PASNY rates
3 continue in effect despite the early retirement of the facilities
4 in January, 1984.
5

6 To the extent that additional costs must be incurred to
7 maintain the plants until decommissioning after 2006 and 2009,
8 our failure to consider such costs in our comparative analysis
9 is more than offset by the absence of any assumed impact from
10 capital additions or improvements.
11

12 GROSS REVENUE AND SALES TAX
13

14 In a report entitled "Study of Electric Production Cost
15 Impacts of A Shutdown of the Indian Point Nuclear Units". in
16 March of 1982, Con Edison's Generation Planning Department, stated
17 with regard to gross revenues and sales taxes:
18

19 Gross revenue and sales taxes paid on
20 electric bills by Con Edison's customers
21 are a function of the magnitude of their
22 electric bills. The revenue and sales taxes
23 are nominally 6.1 percent and 8.25 percent in
24 New York City, however, some of Con Edison's
25 customers are located in Westchester County or
may be exempt from some of these taxes. PASNY's
customers are not subject to either tax. A

1 composite tax for the Service Area of 6
2 percent was assumed.
3

4 We have made the same assumption in our economic analysis.
5

6 DISCOUNT RATE
7

8 We assumed an 11 percent discount rate to determine the
9 present worth, in 1983 dollars, of each of the scenarios examined.
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1 Q. Please state your conclusions.

2 A. The results of our study are presented on Schedule A of Exhibit
3 S/M-4 (____). This schedule demonstrates that a permanent
4 shutdown of Indian Point #2 and #3 as of January 1, 1984, will
5 result in between \$2.918 and \$4.729 billion of direct production
6 cost increases, depending on the replacement power and oil
7 price scenarios examined.

8
9 In order to translate these figures into a more meaningful form,
10 we have computed the impact closing the plants would have on the
11 monthly bill of a Consolidated Edison customer using 250 KWHrs
12 per month during the first year of the facilities' retirement,
13 1984.

14
15 * Under the more likely mixed sulfur oil scenario,
16 the customer's bill would increase by between
17 \$1.30 and \$1.75 per month, a 3 to 4 percent
18 increase, depending on the response of residual
19 oil prices to recent OPEC crude oil price cuts.

20
21 * Under the low sulfur oil scenario, the customer's
22 bill would increase by between \$1.38 and \$1.80 a
23 month, or 3.8 to 5.0 percent, also depending on
24 short term reactions of residual oil prices.
25

1 In closing, we would emphasize that our study has assumed that
2 the sole source of replacement power through the year 2009 would
3 be oil-fired generation. If a significant potential for
4 conservation and the use of renewable energy technologies exists
5 in New York State, including the service territories of
6 Consolidated Edison and the customers of the Power Authority,
7 as we believe it does, investments in these cost-effective
8 alternatives can reduce future system peak loads and energy sales
9 and minimize the economic burden imposed by the early retirement
10 of Indian Point #2 and #3.
11

12 Q. Does this conclude your testimony?

13 A. Yes.
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TABLE I
SUMMARY[illegible]TABLE 2
WILKINSON[illegible]

NUCLEAR CAPACITY FACTORSIndian Point 2

<u>Year</u>	<u>Maximum Potential Production (Mwhrs)</u>	<u>Actual Production (Mwhrs)</u>	<u>Capacity Factors (%)</u>
1974	7,568,640	3,324,048	43.92
1975	7,568,640	4,885,079	64.54
1976	7,568,640	2,267,654	29.96
1977	7,568,640	5,210,299	68.84
1978	7,568,640	4,369,315	57.73
1979	7,568,640	4,805,928	63.48
1980	7,568,640	4,266,232	56.37
1981	7,568,640	3,055,332	40.37
1982	<u>7,568,640</u>	<u>4,447,000</u>	<u>58.76</u>
Lifetime	68,117,760	36,629,887	53.77

Indian Point 3

<u>Year</u>	<u>Maximum Potential Production (MDC x 8760) (Mwhrs)</u>	<u>Actual Production (Mwhrs)</u>	<u>Capacity Factors (%)</u>
1976	2,598,048	1,845,945	71.05
1977	7,647,480	5,518,432	72.16
1978	8,453,400	5,547,431	65.62
1979	8,453,400	4,794,627	56.72
1980	8,453,400	3,070,723	36.33
1981	8,453,400	3,033,247	35.88
1982	<u>8,453,400</u>	<u>1,436,036</u>	<u>16.99</u>
Lifetime	52,512,528	25,246,441	48.08

INDIAN POINT 2
ANNUAL PRODUCTION COSTS

FUEL			ANNUAL PRODUCTION COSTS		NON-FUEL O&M		PRODUCTION COST
	Generation (1000 MWHrs)	Fuel Cost (10 ⁻³ \$/KWHr)	Total (\$x10 ⁶)	Generation (1000 MWHrs)	O&M Cost (10 ⁻² \$/KWHr)	Total (\$x10 ⁶)	TOTAL (\$x10 ⁶)
1984	4070	7.5	31	4070	1.31	53	84
1985	4070	7.5	31	4070	1.40	57	88
1986	4070	8.1	33	4070	1.49	61	94
1987	4070	8.4	34	4070	1.60	65	99
1988	4070	9.0	37	4070	1.71	70	107
1989	4070	9.7	39	4070	1.83	74	113
1990	4070	10.3	42	4070	1.96	80	122
1991	4070	11.1	45	4070	2.10	85	130
1992	4070	11.8	48	4070	2.24	91	139
1993	4070	12.7	52	4070	2.40	98	150
1994	4070	13.6	55	4070	2.57	105	160
1995	4070	14.5	59	4070	2.75	112	171
1996	4070	15.5	63	4070	2.94	120	183
1997	4070	16.6	68	4070	3.15	128	196
1998	4070	17.8	72	4070	3.37	137	209
1999	4070	19.0	77	4070	3.60	147	224
2000	4070	20.3	83	4070	3.85	157	240
2001	4070	21.8	89	4070	4.12	168	257
2002	4070	23.3	95	4070	4.41	179	274
2003	4070	24.9	101	4070	4.72	192	293
2004	4070	26.7	109	4070	5.05	206	315
2005	4070	28.5	116	4070	5.40	220	336
2006	4070	30.5	124	4070	5.78	235	359
2007							
2008							
2009							

INDIAN POINT 3
ANNUAL PRODUCTION COSTS

	FUEL			NON-FUEL O&M			PRODUCTION
	Generation (1000 MWHrs)	Fuel ₃ Cost (10 ⁻³ \$/KWHr)	Total ₆ (\$x10 ⁶)	Generation (1000 MWHrs)	O&M ₂ (10 ⁻² \$/KWHr)	Total ₆ (\$x10 ⁶)	COST TOTAL ₆ (\$x10 ⁶)
1984	4065	7.45	30	4065	1.77	72	102
1985	4065	8.05	32	4065	1.89	77	110
1986	4065	8.65	35	4065	2.03	83	118
1987	4065	9.30	38	4065	2.17	88	126
1988	4065	10.00	41	4065	2.32	94	135
1989	4065	10.75	44	4065	2.48	101	145
1990	4065	11.55	47	4065	2.66	108	155
1991	4065	12.36	50	4065	2.84	115	165
1992	4065	13.23	54	4065	3.04	124	178
1993	4065	14.15	58	4065	3.25	132	190
1994	4065	15.15	62	4065	3.48	141	203
1995	4065	16.13	66	4065	3.73	152	218
1996	4065	17.18	70	4065	3.99	162	232
1997	4065	18.29	74	4065	4.27	174	248
1998	4065	19.48	79	4065	4.56	185	264
1999	4065	20.75	84	4065	4.88	198	282
2000	4065	22.10	90	4065	5.23	213	303
2001	4065	23.54	96	4065	5.59	227	323
2002	4065	25.07	102	4065	5.98	243	345
2003	4065	26.70	109	4065	6.40	260	369
2004	4065	28.43	116	4065	6.85	278	394
2005	4065	30.28	123	4065	7.33	298	421
2006	4065	32.25	131	4065	7.84	319	450
2007	4065	34.34	140	4065	8.39	341	481
2008	4065	36.58	149	4065	8.98	365	514
2009	4065	38.95	158	4065	9.61	391	549

PRODUCTION COST INCREASES
IN PRESENT WORTH, 1983 DOLLARS

Mixed Sulfur Oil

(\$ x 10⁶)

Low Sulfur Oil

	<u>CASE A</u>	<u>CASE B</u>	<u>CASE A</u>	<u>CASE B</u>
1984	239	176	286	217
1985	231	171	277	210
1986	223	165	267	203
1987	216	159	258	196
1988	208	154	249	189
1989	200	149	240	182
1990	193	143	231	175
1991	187	138	223	170
1992	179	133	215	163
1993	173	129	207	157
1994	167	123	200	151
1995	160	118	192	146
1996	155	115	186	141
1997	149	110	179	136
1998	144	107	173	131
1999	139	103	167	127
2000	134	99	160	122
2001	129	96	155	118
2002	125	92	149	114
2003	121	89	144	110
2004	117	87	140	106
2005	112	83	134	102
2006	108	80	129	98
2007	48	34	58	43
2008	46	33	56	42
2009	45	32	54	40
TOTAL	\$3948 Million	\$2918 Million	\$4729 Million	\$3589 Million
	Source: Exhibit S/M- 4 Schedule B Page 1 of 4	Source: Exhibit S/M- 4 Schedule B Page 2 of 4	Source: Exhibit S/M- 4 Schedule B Page 3 of 4	Source: Exhibit S/M- 4 Schedule B Page 4 of 4

Exhibit S/M-4
Schedule A

PRODUCTION COST DIFFERENTIALS
MIXED SULFUR OIL
CASE A

	<u>Replacement Power Production Costs</u>	<u>Economy Sales Mark Up</u>	<u>Total Replacement Power Costs</u>	<u>Indian Point Production Costs</u>	<u>Production Cost Differential</u>	<u>Gross Revenue and Sales Taxes</u>	<u>TOTAL</u>
1984	409	27	436	186	250	15	265
1985	438	29	467	198	269	16	285
1986	469	31	500	212	288	17	305
1987	501	33	534	225	309	19	328
1988	536	36	572	242	330	20	350
1989	574	38	612	258	354	21	375
1990	614	41	655	277	378	23	401
1991	657	44	701	295	406	24	430
1992	703	47	750	317	433	26	459
1993	752	50	802	340	462	28	490
1994	805	54	859	363	496	30	526
1995	861	57	918	389	529	32	561
1996	922	61	983	415	568	34	602
1997	986	66	1052	444	608	36	644
1998	1055	70	1125	473	652	39	691
1999	1129	75	1204	506	698	42	740
2000	1208	80	1288	543	745	45	790
2001	1293	86	1379	580	799	48	847
2002	1383	92	1475	619	856	51	907
2003	1480	99	1579	662	917	55	972
2004	1583	105	1688	702	986	59	1045
2005	1695	113	1808	757	1051	63	1114
2006	1812	121	1933	809	1124	67	1191
2007	969	64	1033	481	552	33	585
2008	1037	69	1106	514	592	36	628
2009	1110	74	1184	549	635	38	673

Source:
Exhibit S/M-4
Schedule C
Page 1 of 4

Source:
Exhibit S/M-3

PRODUCTION COST DIFFERENTIALS
MIXED SULFUR OIL
CASE B

	<u>Replacement Power Production Costs</u>	<u>Economy Sales Mark Up</u>	<u>Total Replacement Power Cost</u>	<u>Indian Point Production Costs</u>	<u>Production Cost Differential</u>	<u>Gross Revenue and Sales Taxes</u>	<u>TOTAL</u>
1984	347	23	370	186	184	11	195
1985	372	25	397	198	199	12	211
1986	398	27	425	212	213	13	226
1987	425	28	453	225	228	14	242
1988	456	30	486	242	244	15	259
1989	487	33	520	258	262	16	278
1990	521	35	556	277	279	17	296
1991	558	37	595	295	300	18	318
1992	597	40	637	317	320	19	339
1993	642	43	685	340	345	21	366
1994	683	46	729	363	366	22	383
1995	731	49	780	389	391	23	414
1996	783	52	835	415	420	25	445
1997	837	56	893	444	449	27	476
1998	896	60	956	473	483	29	512
1999	959	64	1023	506	517	31	548
2000	1026	68	1094	543	551	33	584
2001	1097	73	1170	580	590	35	625
2002	1171	78	1249	619	630	38	668
2003	1257	84	1341	662	679	41	720
2004	1345	90	1435	702	733	44	777
2005	1439	96	1535	757	778	47	825
2006	1540	103	1643	809	834	50	884
2007	823	55	878	481	397	24	421
2008	881	59	940	514	426	26	452
2009	943	63	1006	549	457	27	484

Source:
Exhibit S/M-4
Schedule C
Page 2 of 4

Source:
Exhibit S/M-3

PRODUCTION COST DIFFERENTIALS
LOW SULFUR OIL
CASE A

	<u>Replacement Power Costs</u>	<u>Indian Point Production Costs</u>	<u>Productio Cost Differential 1</u>	<u>Gross Revenue and Sales Taxes</u>	<u>TOTAL</u>
1984	486	186	300	18	318
1985	520	198	322	19	341
1986	556	212	344	21	365
1987	595	225	370	22	392
1988	637	242	395	24	419
1989	682	258	424	25	449
1990	729	277	452	27	479
1991	780	295	485	29	514
1992	835	317	518	31	549
1993	894	340	554	33	587
1994	956	363	593	36	629
1995	1023	389	634	38	672
1996	1095	415	680	41	721
1997	1171	444	727	44	771
1998	1253	473	780	47	827
1999	1341	506	835	50	885
2000	1435	543	892	54	946
2001	1535	580	955	57	1012
2002	1643	619	1024	61	1085
2003	1758	662	1096	66	1162
2004	1881	702	1179	71	1250
2005	2012	757	1255	75	1330
2006	2153	809	1344	81	1425
2007	1152	481	671	40	711
2008	1232	514	718	43	761
2009	1318	549	769	46	815

Source:
Exhibit S/M-4
Schedule C
Page 3 of 4

Source:
Exhibit S/M-3

Exhibit S/M-4
Schedule B
Page 3 of 4

PRODUCTION COST DIFFERENTIALS
LOW SULFUR OIL
CASE B

	<u>Replacement Power Costs</u>	<u>Indian Point Production Costs</u>	<u>Production Cost Differential</u>	<u>Gross Revenue and Sales Taxes</u>	<u>TOTAL</u>
1984	413	186	227	14	241
1985	442	198	244	15	259
1986	473	212	261	16	277
1987	506	225	281	17	298
1988	542	242	300	18	318
1989	580	258	322	19	341
1990	620	277	343	21	364
1991	664	295	369	22	391
1992	710	317	393	24	417
1993	760	340	420	25	445
1994	813	363	450	27	477
1995	870	389	481	29	510
1996	931	415	516	31	547
1997	996	444	552	33	585
1998	1066	473	593	36	629
1999	1141	506	635	38	673
2000	1220	543	677	41	718
2001	1306	580	726	44	770
2002	1397	619	778	47	825
2003	1495	662	833	50	883
2004	1600	702	898	54	952
2005	1712	757	955	57	1012
2006	1832	809	1023	61	1084
2007	979	481	498	30	528
2008	1048	514	534	32	566
2009	1121	549	572	34	606

Source:
Exhibit S/M-4
Schedule C
Page 4 of 4

Source:
Exhibit S/M-3

REPLACEMENT POWER PRODUCTION COST
MIXED SULFUR OIL
CASE A

	<u>Generation</u> <u>(1000 MWHrs)</u>	<u>Fuel Cost</u> <u>(\$/MMBTU)</u>	<u>Heat Rate</u> <u>(BTU/KWHr)</u>	<u>TOTAL</u> <u>(\$x10⁶)</u>
1984	8135	5.03	10000	409
1985	8135	5.38	10000	438
1986	8135	5.76	10000	469
1987	8135	6.16	10000	501
1988	8135	6.59	10000	536
1989	8135	7.05	10000	574
1990	8135	7.55	10000	614
1991	8135	8.08	10000	657
1992	8135	8.64	10000	703
1993	8135	9.25	10000	752
1994	8135	9.89	10000	805
1995	8135	10.59	10000	861
1996	8135	11.33	10000	922
1997	8135	12.12	10000	986
1998	8135	12.97	10000	1055
1999	8135	13.88	10000	1129
2000	8135	14.85	10000	1208
2001	8135	15.89	10000	1293
2002	8135	17.00	10000	1383
2003	8135	18.19	10000	1480
2004	8135	19.46	10000	1583
2005	8135	20.83	10000	1695
2006	8135	22.28	10000	1812
2007	4065	23.84	10000	969
2008	4065	25.51	10000	1037
2009	4065	27.30	10000	1110

REPLACEMENT POWER PRODUCTION COST
MIXED SULFUR OIL
CASE B

	<u>Generation</u> <u>(1000 MWHrs)</u>	<u>Fuel Cost</u> <u>(\$/MMBTU)</u>	<u>Heat Rate</u> <u>(BTU/KWHr)</u>	<u>TOTAL</u> <u>(\$x10⁶)</u>
1984	8135	4.27	10000	347
1985	8135	4.57	10000	372
1986	8135	4.89	10000	398
1987	8135	5.23	10000	425
1988	8135	5.60	10000	456
1989	8135	5.99	10000	487
1990	8135	6.40	10000	521
1991	8135	6.86	10000	558
1992	8135	7.34	10000	597
1993	8135	7.85	10000	642
1994	8135	8.40	10000	683
1995	8135	8.99	10000	731
1996	8135	9.62	10000	783
1997	8135	10.29	10000	837
1998	8135	11.02	10000	896
1999	8135	11.79	10000	959
2000	8135	12.61	10000	1026
2001	8135	13.49	10000	1097
2002	8135	14.39	10000	1171
2003	8135	15.45	10000	1257
2004	8135	16.53	10000	1345
2005	8135	17.69	10000	1439
2006	8135	18.93	10000	1540
2007	4065	20.25	10000	823
2008	4065	21.67	10000	881
2009	4065	23.19	10000	943

REPLACEMENT POWER PRODUCTION COST
LOW SULFUR OIL
CASE A

	<u>Generation</u> <u>(1000 MWHrs)</u>	<u>Fuel Cost</u> <u>(\$/MMBTU)</u>	<u>Heat Rate</u> <u>(BTU/KWHr)</u>	<u>TOTAL</u> <u>(\$x10⁶)</u>
1984	8135	5.69	10500	486
1985	8135	6.09	10500	520
1986	8135	6.52	10500	556
1987	8135	6.97	10500	595
1988	8135	7.46	10500	637
1989	8135	7.98	10500	682
1990	8135	8.54	10500	729
1991	8135	9.14	10500	780
1992	8135	9.78	10500	835
1993	8135	10.46	10500	894
1994	8135	11.20	10500	956
1995	8135	11.98	10500	1023
1996	8135	12.82	10500	1095
1997	8135	13.72	10500	1171
1998	8135	14.68	10500	1253
1999	8135	15.71	10500	1341
2000	8135	16.80	10500	1435
2001	8135	17.98	10500	1535
2002	8135	19.24	10500	1643
2003	8135	20.59	10500	1758
2004	8135	22.03	10500	1881
2005	8135	23.57	10500	2012
2006	8135	25.22	10500	2153
2007	4065	26.98	10500	1152
2008	4065	28.87	10500	1232
2009	4065	30.89	10500	1318

REPLACEMENT POWER PRODUCTION COST
LOW SULFUR OIL
CASE B

	<u>Generation</u> <u>(1000 MWHrs)</u>	<u>Fuel Cost</u> <u>(\$/MMBTU)</u>	<u>Heat Rate</u> <u>(BTU/KWHr)</u>	<u>TOTAL</u> <u>(\$x10⁶)</u>
1984	8135	4.84	10500	413
1985	8135	5.16	10500	442
1986	8135	5.54	10500	473
1987	8135	5.93	10500	506
1988	8135	6.34	10500	542
1989	8135	6.79	10500	580
1990	8135	7.26	10500	620
1991	8135	7.77	10500	664
1992	8135	8.31	10500	710
1993	8135	8.90	10500	760
1994	8135	9.52	10500	813
1995	8135	10.18	10500	870
1996	8135	10.90	10500	931
1997	8135	11.66	10500	996
1998	8135	12.48	10500	1066
1999	8135	13.35	10500	1141
2000	8135	14.28	10500	1220
2001	8135	15.28	10500	1306
2002	8135	16.35	10500	1397
2003	8135	17.50	10500	1495
2004	8135	18.72	10500	1600
2005	8135	20.03	10500	1712
2006	8135	21.44	10500	1832
2007	4065	22.94	10500	979
2008	4065	24.54	10500	1048
2009	4065	26.26	10500	1121

DAVID ALAN SCHLISSEL

119 South Lake Avenue
Albany, New York 12208
Telephone - (518) 434-3790

EDUCATION

STANFORD UNIVERSITY SCHOOL OF LAW (1969-70, 71-73), Palo Alto,
California
Juris Doctor

STANFORD UNIVERSITY SCHOOL OF ENGINEERING (1968-69)
Master of Science in Aeronautical Engineering

MASSACHUSETTS INSTITUTE OF TECHNOLOGY (1964-68), Cambridge,
Massachusetts
Bachelor of Science in Aeronautical Engineering

EMPLOYMENT HISTORY

September, 1979 - Present

Energy Consultant
119 South Lake Avenue
Albany, New York 12208

Projects have included:
Represented the New York State
Consumer Protection Board and a
coalition of elected officials,
public interest groups, labor
unions, and other organizations,
in a proceeding before the Public
Service Commission to investigate
the comparative economics of the
completion of the Nine Mile Point
2 nuclear plant.

Prepared a paper on "Energy
Policy and Jobs for the
Unemployed" for the American
Jewish Committee;

Drafted briefs for the Jewish
Association for Services for the
Aged in a recently completed Con
Edison rate increase proceeding
before the New York State Public
Service Commission;

Prepared a critique for the New
York State Consumer Protection
Board of the National Reliability
Study conducted by the U.S.
Department of Energy Pursuant to
PURPA;

Prepared and presented a two-day regulatory law and economics training program for the staff of the Office of Consumer Services of the Maine Attorney General and for invited representatives of consumer and environmental groups;

Undertook a five-day speaking tour through the State of Oregon in October, 1980, on behalf of the Oregon Campaign for Public Power;

Represented the Commission for Racial Justice of the United Church of Christ and New York City P.O.W.E.R. (People Outraged With Energy Rates) in a New York State Public Service Commission proceeding investigating the causes of the October, 1980 accident at the Indian Point 2 Nuclear Power Plant and determining who should pay, stockholders or consumers.

December, 1975 -
June, 1979

New York State Consumer
Protection Board
99 Washington Avenue, Albany, New
York 12210

Utility Intervenor
Attorney

Represented the Consumer Protection Board in proceedings before the Public Service Commission. Analyzed utility filings, prepared and conducted cross-examination, prepared and presented direct witnesses and wrote briefs. Also designed a community outreach and education project and administered a program of subgrant awards to consumer groups to fund their participation in regulatory proceedings.

Cases:

Case 27353

- Proceeding on Consolidated Edison of New York's request for a \$228 million electric rate increase. (1978-79)

Case 27137

- Proceeding to investigate the operation and legality of

- automatic fuel adjustment clauses. Co-author of petition to the Public Service Commission which initiated the proceeding. (1976-79)
- Case 80005 - Proceeding on the siting of a Nuclear Power Station at Sterling, near Oswego, New York. (1978-79)
- Case 27123 - Proceeding to investigate the causes of the prolonged 1976 refueling outage of Consolidated Edison's Indian Point No. 2 Nuclear Station. (1977-78)
- Case 26974 - Assisted the drafting of a petition to the Public Service Commission which initiated a proceeding to investigate the comparative economics of nuclear and coal generation of electricity. (1976)
- Case 26798 - Proceeding on electric utilities' proposal to establish Empire State Power Resources, Inc., ESPRI, a corporation to build, own and operate all new generation facilities in New York State. (1975-79)
- Case 27154 - 1977 Proceeding on electric utilities' long range plans.
- Case 27029 - Proceeding on the implementation of marginal cost based rates for Consolidated Edison's industrial, commercial and residential customers. (1977-78)
- Case 27013/
27120 - Proceeding to determine the propriety of Central Hudson Gas and Electric Corp.'s participation in the Nine Mile Point No. 2 Nuclear Station and its sale of a percentage ownership in the Roseton Oil-fired Station. (1977)
- Case 27065 - Proceeding on petition of gas utilities in New York Distributor Exploration Group to establish a surcharge on revenues to raise capital for investment in natural gas exploration ventures. (1976-77)
- Case 27032 - Proceeding on Central Hudson Gas and Electric Corp.'s request for a \$14 million electric and gas rate increase. (1976)
- Case 27461 - Proceeding on Central Hudson Gas and Electric Corp.'s request for

Case 27108

a \$23 million electric rate increase. (1979)
- Proceeding on Rochester Gas and Electric Corp.'s request for an \$18 million rate increase. (1977)

Special Projects:

Testified before the U.S. Federal Power Commission regarding the inclusion of Construction Works in Progress in utility rate bases. (1976)

Drafted a Petition on Consumers Rights for presentation to the Public Service Commission. (1976)

Designed and participated in a series of consumer training seminars entitled: How Consumers Can Participate in the Regulatory Process. (1978-79)

Author: Questions and Answers on Public Power, published by the Peoples Power Coalition of New York State. (1977)

April, 1975 -
July, 1975

Human Affairs Program
Cornell University
Ithaca, New York 14850

Consultant:

Developed materials for and participated in a series of community training seminars on utility and energy related subjects.

December, 1973 -
April, 1975

Georgia Power Project
P.O. Box 1856, Atlanta, Georgia
30303

Staff Attorney:

Represented the Georgia Power Project in state and federal administrative proceedings and court litigation. Also administered community outreach and education programs.

Cases and Special Projects:

Georgia Public Service Commission proceeding on Georgia Power Company's request for a \$304 million electric rate increase.

An appeal to the Fulton County Superior Court challenging the legality of a number of Public Service Commission decisions authorizing higher rates for the Georgia Power Company.

An appeal to the Georgia Supreme Court on the standing of residential consumers to challenge the legality of electric rate increases granted by the Public Service Commission.

A suit in Federal District Court to establish consumers' rights to adequate notice and a fair hearing prior to the termination of utility services.

A suit in Federal District Court to challenge the Public Service Commission's granting of an emergency \$35 million electric rate increase to the Georgia Power Company.

A Federal Power Commission proceeding on a pumped-storage hydro project in Northwestern Georgia.

A Securities and Exchange Commission proceeding on the propriety of the Georgia Power Company's issuance of \$250 million of short-term debt. The Georgia Power Project was the first consumer group in 33 years to request such a proceeding under the Public Utilities Holding Company Act of 1935.

Testified before the Federal Energy Administration regarding the proposed Project Independence Energy Plan.

Private Practice in Atlanta Georgia.

Labor, criminal and domestic relations cases.

July, 1973 -
November, 1973

Legal Assistant and
Attorney:

TEACHING EXPERIENCE

December, 1973 - Present

Guest lecturer on Utility Economics at classes at Northeastern University, California State University at San Jose and DeKalb County (Georgia) Junior College.

Spring 1970

Freshman Seminar at Stanford University on Contemporary Economics Issues.

Summer 1968

High School level algebra and trigonometry classes at the College of the Virgin Isles, St. Thomas, V.I.

BAR ADMISSIONS

State of New York
State of Georgia

Federal Court Admissions:

United States District Court for the Northern District of Georgia.
United States Court of Appeals for the District of Columbia Circuit.

JOHN JOSEPH MAVRETICH
Box 36, Burroughs Drive
West Park, New York 12493
(914) 384-6760

EDUCATION

Fordham University, Bronx, New York
9/66 - 6/70 - B.S. Psychology

S.U.N.Y., New Paltz, New York
24 Credits Toward M.A. Psychology

EMPLOYMENT

Honorable Maurice D. Hinchey, Chairman
Committee On Environmental Conservation
N.Y. State Assembly, Albany, New York
March, 1981 - Present

Research Assistant responsible for drafting and reviewing all energy-related legislation and representing Mr. Hinchey in energy-related proceedings before State regulatory bodies. On behalf of Mr. Hinchey, I have prepared cross-examination, interrogatories, testimony, briefs and other legal documents in the regulatory proceedings before the N.Y. State Public Service Commission listed in Attachment A.

Independent Consulting Services
January, 1980 - Present

Since January, 1980, I have provided independent consulting services on energy-related matters to private, governmental and non-profit organizations. These services have included the appearances before State regulatory bodies listed in Attachment B.

Mid-Hudson Nuclear Opponents, Inc.
New Paltz, New York
August, 1975 - January, 1980

MHNO, Inc. was a 2,500 member, non-profit, educational corporation, formed in 1975, to explore, and advocate for, alternatives to the proliferation of major electric generating complexes in the Hudson Valley. In July of 1977, I assumed the position of Executive Director.

As Executive Director of MHNO, Inc., I was responsible for executing and/or coordinating multi-faceted regulatory, legal, legislative and educational programs, and administering a budget of approximately \$25,000. per year.

On behalf of MHNO, Inc. I prepared cross-examination, interrogatories, testimony, briefs and other legal documents in the regulatory proceedings before the N.Y. State Public Service Commission listed in Attachment C.

On behalf of MHNO, Inc., I was responsible for identifying, retaining and supervising various consulting firms and attorneys who represented the organization's interests in the power plant licensing proceedings, litigation and administrative actions listed in Attachment D.

School Of Continuing Education
S.U.N.Y., New Paltz, New York
1976 - 1977

Taught two semesters of undergraduate Social Psychology. One semester at a correctional facility for males in Wallkill, New York; one semester at a correctional facility for females in Bedford Hills, New York.

Mr. Derek St. John
Kingston, New York
October, 1974 - June, 1977

Restoration carpentry in an 18th century frame house. The house was completely gutted, restored to its original state, and is now a registered national historic landmark. Personally responsible for approximately 75% of the interior carpentry and painting.

St. Cabrini Home
West Park, New York
March, 1973 - July, 1974

Child-care worker in a unit for severely disturbed adolescent males.

United States Army
July, 1970 - July, 1972

Drafted in July, 1972. Trained as a field medic. Assigned to the Mental Hygiene Consultation Service, 3rd Armored Division, Frankfurt, FRG. Served as Social Work/Clinical Psychology Specialist, responsible for the 10,000 servicemen and dependents stationed in the Town of Friedberg. Duties included psychiatric intake, psychological testing, counselling and crisis intervention. In addition, I taught two semesters of undergraduate Introductory Psychology to military personnel and dependents.

OTHER PERTINENT ACTIVITIES

°Member, State Review Panel, U.S. Department of Energy Appropriate Technology Small Grants Program.

°Member, Advisory Committee to the Electric Utility Training School, New York State Consumer Protection Board.

°Selected as a participant in workshops sponsored by the N.Y. State Public Service Commission, and conducted by the Economic and Environmental Studies Center of The Institute On Man And Science, Rensselaerville, N.Y., for the purpose of reviewing the "Statewide Site Selection Guide" developed by the New York Power Pool.

°Field Work Supervisor, Vassar College, Poughkeepsie, New York. Supervised students pursuing independent course work on energy and utility issues.

°Member, Planning Committee; "Toward An Informed Energy Policy For The Mid-Hudson Region": a year-long series of community seminars sponsored by Bard College, Annandale, N.Y. and funded by a grant from the National Science Foundation.

APPEARANCES ON BEHALF OF ASSET BLWMAN MAURICE D. HINCHEY

PROCEEDING

PSC Case #27794 - Rochester Gas and Electric et al. Determination of the accounting treatment and rate-making principles applicable to the extraordinary property loss arising from regulatory rejection of Sterling Nuclear Unit No. 1.

PSC Case #27626 - Central Hudson Gas and Electric Corporation - Electric Rates.

PSC Case #27882 - New York State Electric and Gas Corporation - Electric Rates.

PSC Case #27780 - Central Hudson Gas and Electric Corporation - Inquiry into forced outages of units #3 and #4 of the Danskammer generating station.

PSC Case #28059 - Inquiry into the financial and economic cost implications of constructing Nine Mile Point Unit #2 Nuclear Station.

PSC Case #28026 - Inquiry into the ability of the Central Hudson Gas and Electric Corporation to continue as a participant in Nine Mile Point #2.

PSC Case #28105 - Central Hudson Gas and Electric Corporation - Electric Rates.

PSC Case #28211 - Consolidated Edison Company of New York, Inc. - Electric rates.

PSC Case #28288 - Hurley Water Company - Water rates.

PSC Case #28264 - New York Telephone Company - Rates.

ISSUES ADDRESSED

- Prudence of management decisions of Central Hudson Gas and Electric Corporation.

- Electric sales for resale.
- Construction program.
- Advertising expense.
- Production maintenance expense.
- Land held for future use.

- Construction program.
- Advertising expense.

- Prudence of management actions during events leading to forced outages.

- Cost effectiveness of continuing construction.

- Cost effectiveness of continued participation in NMP #2.

- Electric sales for resale.
- Advertising expense.
- Land held for future use.

- Land held for future use.

- Rate of return.
- Operating company expense.

- Rate design: Locality Mileage Charges.

APPEARANCES PURSUANT TO INDEPENDENT CONSULTING AGREEMENTS

PROCEEDING

PSC Case #27708 - In the matter of the complaint of Beacon Terminal Corporation against the Central Hudson Gas and Electric Corporation.

PSC Case #27636 - Central Hudson Gas and Electric Corporation - Electric rate design.

PSC Case #27574 - Consolidated Edison Company of New York, Inc. - Rates for service provided to customers with on-site generation.

PSC Case #28266 - Rochester Gas and Electric Corporation - Inquiry into the causes of tube rupture in the "B" steam generator of the Robert E. Ginna nuclear plant.

In the matter of the application of Orange and Rockland Utilities for the conversion of the Lovett Steam Electric Generating Units 4 and 5 from Oil-Fired to Coal-Fired Generation.
(Before the N.Y.S. Department of Environmental Conservation)

OTHER

Contract negotiations between the City of Poughkeepsie, N.Y. and the Central Hudson Gas and Electric Corporation.

ISSUES ADDRESSED

- Discriminatory practices against a self-generating commercial customer.

- Just and reasonable rates for customers installing "qualifying facilities" pursuant to the Public Utilities Policy Act of 1978.

- "

- Adequacy of Quality Assurance and Quality Control programs.

- Unit heat rates.

- Street lighting contract.

APPEARANCES ON BEHALF OF MID-HUDSON NUCLEAR OPPONENTS, INC.

PROCEEDING

PSC Case #27032 - Central Hudson
Gas and Electric Corporation -
Electric rates.

PSC Case #27013 - Niagara Mohawk
Power Corporation et al. -
Transfer of interests in the Nine Mile
Point #2 Nuclear unit.

PSC Case #27319 - New York Power Pool -
Long-range electric plan.

PSC Case #25784 - Proceeding on motion
of the Commission as to the accounting
and rate treatment for land acquired in
anticipation of construction.

PSC Case #27461 - Central Hudson Gas and
Electric Corporation - Electric rates.

ISSUES ADDRESSED

- Electric load growth projections.
- Ratemaking treatment of excess generating capacity.
- Construction program.

- Electric load growth projections.
- Generation expansion plans.

- Electric load growth projections.

- Land held for future use.
- Site selection.

- Electric load growth projections.
- Ratemaking treatment of excess generating capacity.
- Advertising expense.
- Land held for future use.
- Electric sales for resale.
- Operation of Home Insulation program.
- Heat pump promotional practices.

ACTIONS SUPERVISED ON BEHALF OF MID-HUDSON NUCLEAR OPPONENTS, INC.

- 1) PSC Case #80006; NRC Docket #50-549 - Power Authority of the State of New York - Greene County Nuclear Plant (see Testimony of Dr. Stephen Bernow, Energy Systems Research Group, Inc., dated 3/2/79).
- 2) Mid-Hudson Nuclear Opponents, Inc. , et al. v. Consolidated Edison Company of New York, Inc. State Supreme Courts of Dutchess and Columbia Counties; Index #1977/4753.
- 3) Mid-Hudson Nuclear Opponents, Inc., Congressman Hamilton Fish, Jr., Assemblyman Maurice D. Hinchey, Assemblyman C.D. Lane, Town of Clermont, Town of Livingston, Town of Gallatin, Town of Germantown, et al. v. Consolidated Edison Company of New York, Inc. State Supreme Courts of Dutchess and Columbia Counties; Index #1978/2826.
- 4) Consolidated Edison Company of New York, Inc. v. Town of Red Hook et al., State Supreme Court of Dutchess County; Index #1978/2670.
- 5) PSC Case #27507 - Complaint of Mid-Hudson Nuclear Opponents, Inc. et al. against the Consolidated Edison Company of New York, Inc.
- 6) 1979 New York State Energy Master Planning and Long-Range Electric And Gas System Planning Proceeding (see Testimony of Energy Systems Research Group, Inc. on behalf of Sierra Club et al., dated 9/4/79).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

'83 APR 13 AM 1:30

In the Matter of)
)
CONSOLIDATED EDISON COMPANY)
OF NEW YORK (Indian Point, Unit 2))
)
POWER AUTHORITY OF THE STATE OF)
NEW YORK (Indian Point, Unit 3))

Docket Nos. 50-247-SP
50-286-SP

CERTIFICATE OF SERVICE

I hereby certify that copies of "Testimony Submitted on Behalf of 'New York City Council' Intervenors" of David Schlissel and John Mavretich in the above captioned proceeding have been served on the following by deposit in the United States Mail, first class, this 8th day of April 1983.

James P. Gleason
Administrative Judge
513 Gilmour Drive
Silver Springs, Maryland 20901

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.
Stephen L. Baum, 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

Jonathan D. Feinberg
New York State Public Service
Commission
Three Empire State Plaza
Albany, New York 12223

Melvin Goldberg, Staff Attorney
Joan Holt, Project Director
New York Public Interest Research
Group, Inc.
9 Murray Street
New York, N.Y. 10007

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
Laurie Vetere
Westchester County
148 Martine Avenue
White Plains, New York 10601

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

Ruthanne G. Miller, Esq.
Atomic Safety and Licensing Board
Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555 *

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

Joan Miles
Indian Point Coordinator
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

Richard M. Hartzman, Esq.
Lorna Salzman
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 Safe 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 *

Geoffrey Cobb Ryan
Conservation Commission,
Chair, Director
NYC Audubon Society
71 W. 23 St. Suite 1828
New York, New York 10010

Ruthanne G. Miller, Esq.
Atomic Safety & Licensing
Board Panel
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Janice Moore, Esq.
Counsel for Nuclear Regula-
tory Commission Staff
Office of Nuclear Regulatory
Commission
Washington, D.C. 20555

Donald Davidoff
Director Radiological Emergency
Preparedness Group
Empire State Plaza
Tower Building, Rm. 1750
Albany, New York 12237

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

Spence W. Perry
Office of General Counsel
Federal Emergency Management Agency
500 C. Street Southwest
Washington, D.C. 20472

David B. Duboff -
Westchester Peoples' Action Coalition
255 Grove St.
White Plains, NY 10601

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

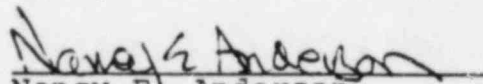
Leonard Bickwit, Esq.
General Counsel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Ms Amanda Potterfield, Esq.
Johnston & George, Attys. at Law
528 Iowa Avenue
Iowa City, Iowa 52240

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

Stewart M. Glass
Regional Counsel
Room 1349
Federal Emergency Management Agency
26 Federal Plaza
New York, N.Y. 10278

Steven C. Sholly
Union of Concerned Scientists
1346 Connecticut Ave. N.W.
Washington, D.C. 20036


Nancy E. Anderson