8-31-73

BEFORE THE UNITED STATES

ATOMIC ENERGY COMMISSION

In the Matter of	)	
	)	
Consolidated Edison Company of New York, Inc. (Indian Point Station, Unit No. 2)	)	Docket No. 50-247

AFFIDAVIT OF BERTRAM SCHWARTZ

BERTRAM SCHWARTZ, being duly sworn, deposes and says that:

1. I am Vice President - System Planning and Fuel Supply - of the Consolidated Edison Company of New York, Inc. ("Con Edison"), and have knowledge of the facts set forth in this affidavit.

2. This information is presented in support of "Applicant's Motion for Issuance of a License Authorizing Further Limited Operation", to which this affidavit is attached.

3. The Indian Point Unit No. 2 generating unit is currently licensed to operate at 50% thermal power, approximately 370 MWe (net), and is capable of increased operation to help meet the remaining 1973 power demand on the Con Edison System.

4. The Con Edison peak load for the month of October is estimated to be 7400 MW. To meet this demand, Con Edison planned to have an installed capacity of 9739 MW. Con Edison's planned installed capacity includes 240 MW from Con Edison's share of the Roseton No. 2 generating unit, a 600 MW fossil fired unit built by Central Hudson Gas and Electric Corporation

near Newburgh, New York. Recent information, however, indicates delays in the construction schedule, and it is likely that Roseton No. 2 will be delayed until late this year. Furthermore, Con Edison's planned installed capacity for October includes Indian Point Unit No. 2 at 99% of thermal power, approximately 860 MW_e (net).

In order to supplement its planned generating capacity, Con Edison is making firm purchases of 437 MW from outside sources during the month of October, 1973.

5. If all of the capacity resources were available as planned, including Indian Point Unit No. 2 operating at 860 MWe, and firm purchases, Con Edison's gross reserve margin in the month of October would be 2776 MW. Con Edison's annual peak historically has occurred during the period of June through September. Accordingly, during the remaining months of the year, it is essential that Con Edison schedule extensive maintenance on its system in order to reduce as much as possible the high level of forced outages and miscellaneous deratings. The scheduled maintenance at the time of the October peak is 1050 MW. The average derating of the electric system to provide capacity to the steam system in October 1972 was 300 MW. The average forced outages and miscellaneous deratings for the month of October 1972 were 1550 MW. The net reserve margin for the month of October after these average outages and deratings, therefore, will be -124 MW.

6. Based on Con Edison's experience of unscheduled unavailability of generating equipment, these reserve margins are inadequate to assure reliability of supply to Con Edison's customers. The deficiency in the net reserve margin as well as an additional 750 MW to cover Con Edison's Operating Reserve Obligation will have to be made up by any or all of the following:

- The difference between actual loads and the estimated peak.
- Supplementary or emergency purchases.
- Voltage reductions or other load reduction measures.

7. If Indian Point Unit No. 2 is not authorized to operate at 99% thermal power, the Con Edison net reserve margin in the month of October will be reduced to -614 MW. This assumes that the present interim operating license to operate Indian Point Unit No. 2 at 50% thermal output, 370 MW_e, will be extended past the September 30, 1973 expiration date. If the present 50% operating license is not extended, the Con Edison net reserve will be still further reduced by -984 MW for the month of October, 1973.

8. Con Edison plans to have an installed capacity for the months of November and December, 1973 of 10582 MW. This planned installed capacity includes, in addition to the capacity planned from Roseton No. 2, an additional 140 MW from

Con Edison's share of the Roseton No. 1 generating unit, a 600 MW fossil fired unit built by Central Hudson Gas and Electric Corporation, near Newburgh, New York. Con Edison is a joint owner of the Roseton units with a 40% share of their capacity. Roseton No. 1 is now scheduled for commercial operation at the reduced capacity of 350 MW by November 1973, and is further scheduled to be in full load operation by January 1974 (increasing Con Edison's share from 140 MW to 240 MW). Recent information indicates delays in the construction schedule, and it is likely that Roseton No. 1 will also be delayed until late this year. Again, the November and December levels of planned generating resources include the operation of Indian Point Unit No. 2 at 99% of thermal power, approximately 860 MW_e.

In order to supplement the planned generating capacity, Con Edison is making firm purchases of 489 MW from outside sources during the months of November and December, 1973.

9. The Con Edison peak loads for the months of November and December are estimated to be 6500 MW and 6700 MW, respectively. With all of the capacity resources available as planned, including Indian Point Unit No. 2 generating at 860 MWe and firm purchases, Con Edison's gross reserve margin in the months of November and December 1973 will be 4571 MW and 4371 MW, respectively. The scheduled maintenance for the months of November and December is 1275 MW. The average November and December 1972 derating of the electric system to provide capacity to the steam system was

325 MW. The average of forced outages and miscellaneous deratings during November and December 1972 was 2400 MW. The net reserve margins for the months of November and December after these average outages and deratings, therefore, will be 571 MW and 371 MW, respectively.

10. Based on Con Edison's experience of unscheduled unavailability of generating equipment, the net reserve margins for November and December 1973 are inadequate to assure reliability of supply to Con Edison's customers. These net reserves are not even sufficient to provide for Con Edison's Operating Reserve Obligation, which is about 750 MW of additional capacity. Should Con Edison actually experience its estimated peak loads, the deficiency will have to be replaced by supplementary or emergency purchase, if they are available, and by voltage reductions, or other load reduction measures, if the additional purchases are not available.

11. If Indian Point Unit No. 2 is not authorized to operate at 99% thermal power, the Con Edison net reserve margin in the months of November and December will be reduced to 81 MW and -119 MW, respectively. This assumes that the current 50% operating license for Indian Point Unit No. 2, 370 MW_e, will be extended past the September 30, 1973 expiration date. If the 50% interim license is not extended, then the Con Edison net reserve margin without Indian Point Unit No. 2 will be further reduced to -289 MW for the month of November 1973 and -489 MW for the month of December, 1973.

12. Notwithstanding the availability of substantial amounts of short-time purchase capacity during the first half of the summer load period, when power demand was high due to warm weather, Con Edison was required to reduce voltage to its customers on three days, including one day at 8% - the last load reduction step on the Con Edison System before disconnection of blocks of customer load. Dependence on the continued availability of large amounts of supplementary and emergency purchases to improve the extremely low net reserve margins without Indian Point Unit No. 2 would invite additional power supply emergencies. There can be no assurance that short-time purchase capacity will continue to be available when and to the extent required to avoid still additional incidents of voltage reduction. Accordingly, operation of Indian Point Unit No. 2 at 99% thermal power output, 860 MW_e, is an achievable alternative to enhance greatly Con Edison's ability to supply power to its customers.

13. During the summer, Con Edison had available 142 MW of supplementary purchase from PASNY on a standby basis and had the option to purchase up to 87 MW of supplementary purchase from Long Sault, Inc. on a week-to-week basis. The PASNY purchase will not be available for the remainder of the year. Although the Long Sault purchase remains available through the end of the year, Con Edison cannot purchase it due to transmission limitations outside the Con Edison System. As a result, both these supplementary purchase options are

unavailable to Con Edison for the months of October, November and December of 1973, thus substantially reducing Con Edison's ability to obtain large amounts of short-time purchases when they are needed.

14. If a 99% of thermal power, 860 MW_e, operating license is not authorized and the present 50% of thermal power, 370 MW_e, operating license is not extended, then the out-of-pocket cost to replace 99% of the capacity and energy of Indian Point Unit No. 2 will be approximately $1,000,000 per week, which otherwise would be saved if Indian Point Unit No. 2 were authorized to operate at 99% power.

If Indian Point Unit No. 2 is not authorized to operate at 99% of thermal power through December of 1973, but the authorization to operate at 50% of thermal power, 370 MW_e, is extended to the end of the year, then the out-of-pocket cost to replace that portion of the capacity and energy of Indian Point Unit No. 2 will be approximately $550,000 per week, which otherwise would be saved if Indian Point Unit No. 2 were in operation at 99% power.

Most of these substantial financial costs will be paid directly by Con Edison's customers through the fuel rider in Con Edison's electric rate schedule.

15. There would also be a negative effect on the environment and on fuel resource conservation from not operating Indian Point Unit No. 2. If the plant is not

authorized to operate at 99% of thermal output, 860 MW_e, Con Edison will have to make greater use of its fossil fueled plants. This will not serve to improve the air quality of New York City, and will also increase Con Edison's use of fuel oil at a time when supplies of such oil are very low.

If a 99% of thermal power, 860 MW_e, operating license is not authorized, and the present 50% of thermal power, 370 MW_e, operating license is not extended to the end of the year, then there will be an increase in Con Edison's usage of residual fuel oil of approximately 4,550,000 gallons per week and an increase in Con Edison's usage of distillate fuel oils of approximately 4,200,000 gallons per week.

If Indian Point Unit No. 2 is not authorized to operate at 99% thermal output, 860 MW_e, through December of 1973, but the authorization to operate at 50% of thermal power, 370 MW_e, is extended to the end of the year, then there will be an increase in Con Edison's usage of residual fuel oil of approximately 2,625,000 gallons per week and an increase in Con Edison's usage of distillate fuel oils of approximately 2,350,000 gallons per week.

These increases in fuel usage would be saved if Con Edison were authorized to operate Indian Point Unit No. 2 at 99% thermal output, 860 MW_e. Furthermore, any increase in Con Edison's usage of distillate fuel oils cannot serve to

improve the availability of home heating oil which is predicted to be in seriously short supply for this winter season.

BERTRAM SCHWARTZ
Vice President
Consolidated Edison Company
of New York, Inc.

Subscribed and sworn to before me
this 31st day of August, 1973.

Notary Public

WILLIAM R. MILLER
Notary Public, State of New York
Qualified in Queens County
No. 41-7955310
Term Expires March 30, 1974