

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of )

CONSOLIDATED EDISON COMPANY )

OF NEW YORK, INC. )

(Indian Point Station, )

Unit No. 2) )

Docket No. 50-247

(Extension of Interim  
Operation Period)

CON EDISON'S ADDITIONAL INFORMATION  
ON COOLING TOWER SYSTEM CAPITAL  
COST ESCALATION AND SYSTEM RESERVES  
IN RESPONSE TO THE BOARD'S REQUESTS

March 28, 1977

*ky*

8111110130 770328  
PDR ADOCK 05000247  
G PDR

The estimates of the capital cost of a natural draft wet cooling tower system at Indian Point Unit No. 2 for operation on 1 December 1980 and 1981 are \$96,000,000 and \$101,000,000, respectively. Tables 1 and 2 contain a summary of the cost of the cooling tower system for operation on 1 December 1980 and 1981, respectively. The Total Project Cost, which is the sum of the Total Direct Cost and certain indirect costs, required to be capitalized as part of the project capital cost, remains constant regardless of the installation date of the cooling system. The change in the Total Estimated Cost for these estimates is due solely to a change in the escalation for a one year delay in the installation of the tower.

The escalation component, in the estimate of the cost of a project to be built at a future time, accounts for the increase in construction costs and reflects the actual expenditures which will be incurred. The average annual rate of escalation after 1976 was estimated at 7.5%. The composite escalation factor, which accounts for escalation of costs from the date of the estimate to the completion of construction, for installation of the tower in December 1980 was 36.05%. The composite escalation factor for installation of cooling system in December 1981 was 7.5% higher, 43.55%. The Total Estimated Cost for installation in 1981 is proportional to the Total Estimated Cost for installation in 1980; the proportionality factor is 1.4355/1.3605.

$$\$96,000,000 \times \frac{1.4355}{1.3605} = \$101,000,000$$

TABLE 1

CAPITAL ESTIMATE SUMMARY

Indian Point Unit No. 2  
Natural Draft Cooling Tower  
Installed December 1980

Total Direct Cost	\$43,076,500
Engineering & Supervision (13%)	5,160,300
Administration & Supervision (35)	1,345,600
Payroll Taxes & Pensions (29%)	1,861,100
Allowance for Funds During Construction (17.03%)	8,760,800
Total Project Cost	60,204,300
Escalation (36.05%)	20,276,000
Contingency (20%)	15,519,000
Total Estimated Cost	\$96,000,000

TABLE 2

CAPITAL ESTIMATE SUMMARY

Indian Point Unit No. 2  
Natural Draft Cooling Tower  
Installed December 1981

Total Direct Cost	\$ 43,076,500
Engineering & Supervision (13%)	5,160,300
Administration & Supervision (3%)	1,345,600
Payroll Taxes & Pensions (29%)	1,861,100
Allowance for Funds During Construction (17.03%)	8,760,800
Total Project Cost	60,204,300
Escalation (43.55%)	24,495,100
Contingency (20%)	16,300,600
Total Estimated Cost	\$101,000,000

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.  
PROJECTED SYSTEM RESERVE PRIOR TO THE SUMMER  
AND  
ANNUAL DAYS OF SYSTEM WIDE VOLTAGE REDUCTION  
ATTRIBUTED TO GENERATION DEFICIENCIES

<u>YEAR</u>	<u>PROJECTED SYSTEM RESERVE PRIOR TO THE SUMMER (%) (1)</u>	<u>ANNUAL DAYS OF SYSTEM WIDE VOLTAGE REDUCTION ATTRIBUTED TO GENERATION DEFICIENCIES</u>
1964	14.8	3
1965	22.3	1
1966	15.6	2
1967	18.1	6
1968	20.1	3
1969	21.0	8
1970	18.3	15
1971	30.8	14
1972	26.2	5
1973	15.9	9
1974	17.0	3
1975	24.9	0
1976	34.0	0

(2)

(3) (4)

NOTES:

1. Projected system reserves for the years 1964 through 1971 are based on the annual FPC Power System Statements. Projected reserves from 1972 through 1976 are based on internal plans as of March of the indicated year or from 149-b Reports.
2. Total number of days per year of voltage reduction independent of cause. May not be system-wide.
3. Number of days per year of voltage reduction implemented on a system wide basis due to generation deficiencies.
4. The number of days of system wide voltage reductions initiated by NYPP are 1, 7, and 1 for the years 1972, 1973 and 1974 respectively.

TABLE 3