



**Public Service
of New Hampshire**

Cover Letter for
Exhibits 2-1 thru 2-38

PSNH Energy Park
780 North Commercial Street, Manchester, NH 03101

Public Service Company of New Hampshire
P.O. Box 330
Manchester, NH 03105-0330
(603) 669-4000
www.psnh.com

The Northeast Utilities System

June 7, 2010

Mrs. Susan Geiger
Orr & Reno PC
One Eagle Square, PO Box 3550
Concord, NH 03302-3550

Re: Docket No. DE 09-174 - Penacook Lower Falls Pricing

Dear Mrs. Geiger:

This letter provides the response to requests for the information listed below.

Response to BRIAR-01 Interrogatories dated 05/21/2010
BRIAR-001*, 002

Very truly yours,

A handwritten signature in dark ink, appearing to read "R. Labrecque".

Richard C. Labrecque
Mng, Supp Energy Services
Supplemental Energy Sources

cc: Service List

* Bulk material provided to NHPUC and requesting party only.

Service List
Docket DE 09-174

Mrs. Susan Geiger
Orr & Reno PC
One Eagle Square, PO Box 3550
Concord, NH 03302-3550

Mr. Steve Mullen
Assistant Director - Electric Division
State of New Hampshire
Public Utilities Commission
21 S. Fruit Street, Suite 10
Concord, NH 03301-2429

Atty. Matthew J. Fossum
Staff Attorney
State of New Hampshire
Public Utilities Commission
21 S. Fruit Street, Suite 10
Concord, NH 03301-2429

Atty. Robert A. Bersak
Assistant General Counsel
Public Service of New Hampshire
780 N. Commercial Street
Manchester, NH 03101

Ms. Jody M. Carmody
State of New Hampshire
Public Utilities Commission
21 S. Fruit Street, Suite 10
Concord, NH 03301-2429

Atty. Gerald M. Eaton
Senior Counsel
Public Service of New Hampshire
780 No. Commercial Street
Manchester, NH 03101

Mr. Stephen R. Hall
Manager
Public Service of New Hampshire
780 N. Commercial Street
Manchester, NH 03101

Mr. Richard C. Labrecque
Manager, Supp Energy Sources
Public Service of New Hampshire
780 N. Commercial Street
Manchester, NH 03101

Atty. Howard M. Moffett
Orr & Reno
1 Eagle Square
P. O. Box 3550
Concord, NH 03302-3550

Ms. K'LaRae Nolin
Admin Support
Public Service of New Hampshire
780 N. Commercial Street
Manchester, NH 03101

Ms. Melissa L. Price
Administrative Assistant
Public Service of New Hampshire
780 No Commercial Street
PO Box 330
Manchester, NH 03105

Public Service Company of New Hampshire
Docket No. DE 09-174

Data Request BRIAR-01
Dated: 05/21/2010
Q-BRIAR-001
Page 1 of 1

Witness: Richard C. Labrecque
Request from: Briar Hydro Associates

Question:

Please provide a copy of each document or other piece of evidence in PSNH's possession (whether authored by PSNH, New Hampshire Hydro Associates, or any other person or party) that in any way relates to, bears on, or reflects the intent of either or both contracting parties in negotiating the 1982 Contract.

Response:

Requested material is being provided in hard copy form.

* Bulk material provided to NHPUC and requesting party only.

Public Service Company of New Hampshire
Docket No. DE 09-174

Data Request BRIAR-01
Dated: 05/21/2010
Q-BRIAR-002
Page 1 of 1

Witness: Richard C. Labrecque
Request from: Briar Hydro Associates

Question:

To the extent not already provided in the answer to Data Request 1-1 above, please provide a copy of each document or other piece of evidence in PSNH's possession that supports Mr. Labrecque's interpretation of the Article 3 pricing provisions in the 1982 Contract, as contained in his pre-filed testimony, and in particular his suggestion that the pricing adjustments set forth in Article 3.A and Article 3.D.1 of the 1982 Contract should be read separately from the pricing adjustments set forth in Article 3.D.2 of the 1982 Contract.

Response:

All material was provided in response to Data Request 1-1.

To: MOCTIME 12:30 A.M. P.M.DATE 8-31-81

WHILE YOU WERE OUT

(NAME) Warren Mack

OF

TEL. No. 15-1-617-451-1103☐

TELEPHONED

☐

CALLED TO SEE YOU

☒

PLEASE CALL BACK

☐

WILL CALL AGAIN

LEFT FOLLOWING MESSAGE: _____

_____BY: R

PENNMCOOK

W & W/O GAP CREDIT

1.57 MW CAP CREDIT

FISH LADDERS @ 125 CFS IN 1987

1-4.2 MW UNIT ONLY

NO LADDERS = 15545 MWH / YEAR 1983-1986

WITH LADDERS FOR SALMON & SHAD = 14875 MWH / YR 1987 & BEYOND

✓ START 1/83

✓ 40 YR LIFE (IC THRU 2022)

COST OF ALTERNATE #1 TO PSNH (10¢ & 9¢)

1983-1986	1554.5 K
1987	1487.5 K
1988 → 2022	1338.75 K

CAP CREDIT @

\$130.57 / KW YR IN 199

1982	109.9 K
1984	18.3 K
1991 → 2015	205.6 K
2016 → 2022	1403.9 K

COST OF ALTERNATE #2 TO PSNH (AUG COST & BIE)

\$x10³

1983	74	1150.3	2003	98.5	1465.2
1984	80.2	1246.7	2004	105.5	1569.3
1985	84.4	1312	2005	113	1680.9
1986	85.7	1332.2	2006	121	1799.9
1987	83.2	1237.6	2007	129.5	1926.3
1988	85	1264.4	2008	138.5	2060.2
1989	87.6	1303.1	2009	148	2201.5
1990	88.6	1317.9	2010	158.5	2357.7
1991	96.8	1439.9	2011	169.5	2521.3
1992	103.8	1544	2012	181.5	2699.8
1993	103	1532.1	2013	194	2885.8
1994	114	1695.8	2014	207.5	3086.6
1995	117	1740.4	2015	222	3302.3
1996	123.3	1834.1	2016	237.5	3532.8
1997	109.6	1630.3	2017	254.5	3785.7
1998	111.8	1663	2018	272	4046
1999	113.3	1685.3	2019	291	4328.6
2000	104.7	1557.4	2020	311.5	4633.6
2001	103.2	1535.1	2021	333.5	4960.8
2002	101.2	1505.4	2022	356.5	5302.9

Warren Chock
617-451-1103
cannot go thru PBX

August 25, 1981

PENACOOK POWER PRICING PROPOSAL

Price:

The greater of the following:

1. 10.0 cents per KWH (1983 through 1987).
 9.0 cents per KWH (thereafter).
 Based upon 125% coverage of project cash expenses (O&M,
 principal payment, and interest expenses).

OR

2. The following schedule:

<u>Year</u>	<u>Price Formula</u>
1983	Equivalent cost of base-load oil fired generation (Oil)
1984	PSNH Avoided Fuel Cost (AFC) + 90% (Oil - AFC)
1985	AFC + 80% (Oil - AFC)
1986	AFC + 70% (Oil - AFC)
1987	AFC + 60% (Oil - AFC)
1988	AFC + 50% (Oil - AFC)
1989	AFC + 40% (Oil - AFC)
1990	AFC + 30% (Oil - AFC)
1991	AFC + 20% (Oil - AFC)
1992	AFC + 10% (Oil - AFC)
1993	AFC
1994	95% of AFC
1995	90% of AFC
1996	85% of AFC
1997	80% of AFC
1998	75% of AFC
1999	70% of AFC
2000	65% of AFC
2001	60% of AFC
2002	55% of AFC
2003 and on:	50% of AFC

my choice
but substituted
(price + last rate)

NOTED AUG 25 1981 H.J.E.



Term of Contract:

40 years.

Other Terms of Contract:

Essentially as per the Moore's Falls Project proposal to PSNH dated May 11, 1981, with the above term and power price revisions.

*all points of concern open for discussion
per Warren Rock 8/26/81 telephone conversation
with MDC R.*

PWH LATE 80 FORECAST

oil \$/BBL

buy price

\$/MWH

- 83	44	74
84	48.5	82
P.-	53	89
86	58.1	98
87	63.1	106
88	68.2	115
89	73.2	123
90	78.3	132
91	85.4	144
92	93	156

94% {

newer Del rate 10,500 BTU/KWH

6.34×10^6 BTU/PBL

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

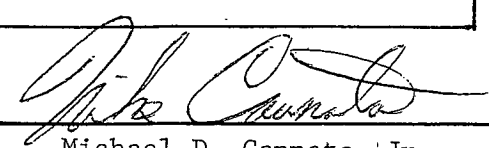
TELEPHONE CONVERSATION MEMORANDUM

CONVERSATION WITH: Warren Mack
OF (FIRM): Essex Development DATE: 8/31/81
AT (ADDRESS): _____ TIME: 1:00 p.m.
SUBJECT: Penacook Lower Falls ORIGINATED BY: WM

Warren called to see if any more information was required for the analysis. I responded no. He was curious as to what was being used for energy available etc. I told him that I was using numbers (close to theirs) which allowed for lost energy due to fish passage facilities.

He appeared quite anxious to get a preliminary scan of results. I indicated that the earliest might be the week of September 14 as HJE was on vacation next week and the analysis would not be done prior to that time.

SIGNED: _____


Michael D. Cannata, Jr.

cc: H. J. Ellis

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

TELEPHONE CONVERSATION MEMORANDUM

CONVERSATION WITH: Warren Mack

OF (FIRM): Essex Development DATE: August 31, 1981

AT (ADDRESS): _____ TIME: _____

SUBJECT: Pennacook Hydroelectric Project ORIGINATED BY: W. Mack

NOTED SEP 10 1981 JEL

Warren Mack called me this date to discuss the pricing proposal he submitted last week concerning their Pennacook Project. Mack was interested in whether we had yet analyzed it and wished to learn what our initial reaction was.

I advised him that we had looked at it and it looked as though it was a more attractive proposition than the Moore's Falls offer. I told him we were developing a somewhat different approach of our own that might produce results somewhat similar to those proposed by Essex Hydro. I further stated we would not be in a position to discuss the proposition more meaningfully until about the middle of September, but that if they intended to retain the other features of the Moore's Falls proposal we had no further interest.

Mack stated that they would be willing to eliminate the features we objected to in the Moore's Falls proposal and that he would submit a revised draft for our consideration during the week of September 6th. I suggested he send the revision to my attention and I would see that it got appropriate review by the time I returned on September 14th.

SIGNED: _____

H. J. Ellis

HJE:p

NOTED SEP 18 1981 R.V.P.

Exhibit 2-4



INTRA-COMPANY BUSINESS MEMO

Subject Economic Review of Essex Development Associates, Inc. Penacook Lower Falls
Hydroelectric Project per 8/25/81 Power Pricing Proposal

From M. D. Cannata, Jr. District

Date September 9, 1981

To H. J. Ellis

Reference

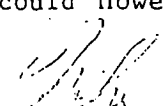
The Penacook Lower Falls Hydroelectric Redevelopment Proposal has been evaluated. Many of the assumptions utilized were a result of the review performed to assess the reasonableness of energy projections (my memo dated July 31, 1981). Study parameters were:

- a. Plant Size: 1-4.0 MW Unit
- b. Commercial Operation: 1/1/83
- c. Contract Term: 40 years
- d. Project Energy: 15,545 MWH 1983-1986 (w/o fish ladders)
14,875 MWH 1987-2022 (w/ fish ladders)
- e. Fish Ladder Operation: 125 CFS commencing in 1987
- f. Dependable Capacity: 1.57 MW
- g. Capacity Credit: \$70/KW year 1/83-2/84
\$130.57/KW year levelized 1991-2015
\$894.21/KW year levelized 2016-2022
- h. Project Energy Cost: Alternate #1 flat rate
Alternate #2 oil and avoided costs
(EDAI proposals, attached)
- i. Present Worth Factor: 13.54% and 15.56%
- j. Avoided Energy Worth: Per latest production simulation runs
(recent softness in oil prices neglected)

The attached table shows that both EDAI proposals:

- 1. Do not provide sufficient payback for the front end penalties incurred.
- 2. Are sensitive to the PSNH weighted cost of capital.
- 3. Would fluctuate in terms of financial viability due to changes in water conditions, fuel prices, load forecasts and in-service dates of future generation.

In short, my opinion is that both EDAI proposals are not financially attractive to PSNH. Modification to the proposals could however alter the economics considerably.

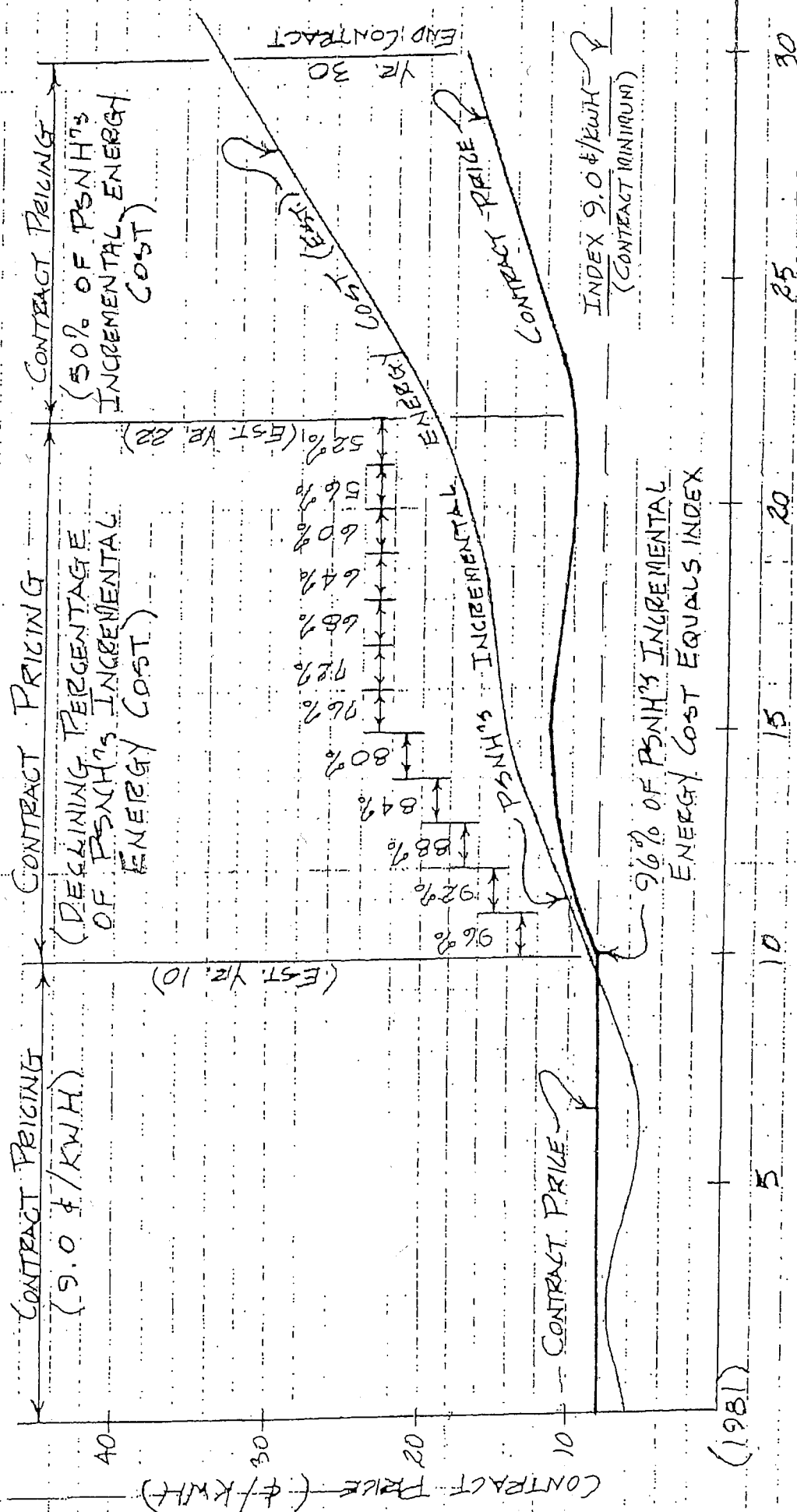

M. D. Cannata, Jr.

MDCJR:rtl
Attachment

ESSEX DEVELOPMENT ASSOCIATES INC.
PENACOOK-LOWER FALLS HYDROELECTRIC REDEVELOPMENT PROPOSAL

<u>Pricing Alternate</u>	<u>Present Worth Percent</u>	<u>Year Project Savings Greater Than Costs*</u>	<u>Project Breakeven Year</u>	<u>40 Year Benefit/Cost Ratio</u>	<u>40 Year Levelized Costs 1983 \$ ¢/KWH</u>	<u>40 Year Levelized Costs 1981 \$ ¢/KWH</u>
Alt. #1	13.54	1991	2010	1.10	9.61	7.45
Alt. #2	13.54	1991	2005	1.10	9.59	7.44
Alt. #1	15.56	1991	2019	1.01	9.67	7.24
Alt. #2	15.56	1991	2009	1.04	9.35	7.00

*Consistently



POLICY STATEMENT
CONTRACT PRICING PROVISIONS
LIMITED ELECTRICAL ENERGY PRODUCERS

Public Service Company of New Hampshire (PSNH) will pursue all viable new supplemental energy sources in order to reduce its dependence on foreign oil, delay construction of future baseload power plants for as long as possible, and provide the best possible service to its customers at the lowest reasonable cost. In this pursuit, PSNH will offer nonfossil fuel burning and hydroelectric Limited Electrical Energy Producers (LEEPS), located in PSNH or its "wholesale for resale" customers franchised areas, the following contract pricing and term provisions.

I. LEEPS Contract Provisions
for Nonfossil Fuel Burning & Hydroelectric LEEPS

In accordance with NHRSA 362-A: Limited Electrical Energy Producers Act (LEEPSA) and subsequent orders of the N.H. Public Utilities Commission (PUC), contract pricing as determined by the PUC, or other regulatory body having jurisdiction, is available. These rates are currently 8.2 cents per kilowatthour (KWH) for dependable capacity and 7.7 cents per KWH for all energy in excess of that generated by the dependable capacity (NH PUC Order No. 14280, June 18, 1980), to the extent discussed in the report accompanying Order No. 14280. These rates may change from time to time as determined by the PUC. LEEPSA Contracts will have a termination provision that may be exercised by either party upon twelve months, or less, written notice.

II. Fixed Rate - Future Escalating Contract
Provisions for Nonfossil Fuel Burning & Hydroelectric LEEPS

Contract pricing under the Fixed Rate - Future Escalating provisions will be as outlined below.

- A. An index price of 9.0 cents per KWH is established effective immediately and is the initial price to be paid under this Contract subject to the following provisions.

1. For the first 10 years of the contract, PSNH will retain 10 percent (0.9 cents per KWH) for all energy purchased. During the second 10 years of the Contract, PSNH will pay the LEEP an additional 0.9 cents per KWH, above the contract price, for purchased energy. The total of said additional payments, for any given year, shall not exceed one-tenth (1/10) of the total money retained by PSNH during the first 10 Contract years.
 2. At such time that 96 percent of PSNH's incremental energy cost¹ exceeds the index, the rate to be paid under this Contract will vary in accordance with the provisions of Paragraph B.
- B. All payments varying from the index will be determined as a percentage of PSNH's incremental energy cost. As soon as 96 percent of PSNH's incremental energy cost exceeds the index, the Contract price will be based on 96 percent of PSNH's incremental energy cost for a period of one year. For each subsequent year, the percentage of PSNH's incremental energy cost to be paid will be reduced by 4 percent (i.e., 96 percent, 92 percent, 88 percent, 84 percent, etc.) until the incremental energy cost is reduced only 2 percent to reach 50 percent of PSNH's incremental energy cost. At such time, the Contract Price will remain at the 50 percent rate for the remainder of the Contract term.

If the price paid for the previous year is less than the appropriate percentage of PSNH's incremental cost for the previous year, an adjustment will be made for all energy sold to PSNH during that year. The adjustment will consist of an additional payment for each KWH sold to PSNH during the previous year based on the difference between the price paid and the appropriate percentage of PSNH's incremental energy cost during

¹See attached definition of PSNH's Incremental Energy Cost

the previous year. The adjustment will be paid within one month after PSNH's incremental energy cost for the previous year has been determined.

If the price paid for the previous year is more than the appropriate percentage of PSNH's incremental cost for the previous year, an adjustment will be made for all energy sold to PSNH during that year. The adjustment will consist of a refund to PSNH for each KWH sold to PSNH during the previous year based on the difference between the price paid and the appropriate percentage of PSNH's incremental energy cost during the previous year. The refund will be made to PSNH by applying one-twelfth of the total amount as a reduction to each month's payment by PSNH during the current year. If for any month, no payment is due the LEEP, or the payment due is not equal to the refund, a payment to PSNH will be made by the LEEP so that the total recovery is achieved by PSNH by the end of said year.

The term of the Fixed Rate - Future Escalating Contract will be 30 years.

III. Optional Contract Provisions for Hydroelectric Energy Producers

PSNH may, at its discretion, offer hydroelectric energy producers contract provisions similar to those explained in Section II, but containing pricing above the 9.0 cents per KWH index for a certain number of years at the beginning of the Contract. Any payments above the index must be recovered by PSNH, in later Contract years, considering the present worth of money. Furthermore, all contracts offered under Sections II and III of this Policy Statement must be of equal value.

The attached exhibit illustrates the pricing provisions discussed under Section II.

These contract pricing provisions will be offered to all facilities qualifying under LEEPA including those facilities already under contract with PSNH who agree to sell their entire net output to PSNH.

November 5, 1981

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

DEFINITION OF INCREMENTAL ENERGY COST

Public Service's incremental energy cost, for any hour, is equivalent to the marginal cost of providing energy for that hour. The marginal cost, for any hour, is the energy cost of the most expensive unit of purchased energy supplying a portion of Public Service's load during that hour and includes all costs in the New England Power Exchange (NEPEX) bus rate cost for the incremental unit. The NEPEX bus rate costs are essentially the cost of fuel consumed. Public Service's incremental energy cost, as referred to in the "Policy Statement of Contract Pricing Provisions for Hydroelectric Energy Producers", is expressed as a yearly average and is calculated by averaging all 8,760 hourly incremental energy costs over the calendar year.

October 1, 1981

[illegible]

NOTE:	THE CONTRACT PRICE IS ADJUSTED	
	BY DEDUCTING 0.9¢/KWH FOR	
	THE FIRST 10 CONTRACT YEARS	
	AND ADDING 0.9¢/KWH FOR	
	THE SECOND 10 CONTRACT YEARS.	

96% OF PSNH'S INCREMENTAL ENERGY COST EQUALS INDEX.

CONTRACT YEARS

RYP 25 JUN. 82

(1984)

November 20, 1981

Mr. Richard A. Normand
New Hampshire Hydro Associates
3 Capitol Street
Concord, NH 03301

SUBJECT: Penacook Lower Falls Hydro
Concord - Boscawen, New Hampshire


Dear Mr. Normand:

Since our last meeting for discussion of purchase of electric energy from your Penacook Lower Falls Hydro, we have firmed up our policy regarding such purchases. A copy of a Policy Statement on contract pricing provisions for Limited Electrical Energy Producers as now approved, is enclosed. Also enclosed is a copy of a long-term contract incorporating the provisions of this policy.

This policy is somewhat more liberal in compensation for purchased energy than earlier discussions with you indicated that it might be. Recognizing that the development of new hydropower sources, even though highly desirable, is expensive; we are attempting to make our contract offering as helpful to developers as can be justified without forgetting our responsibilities to our customers.

Please review these documents and then give me a call. We would like to contract for the purchase of energy from your Penacook facility in the near future on a mutually beneficial basis.

Very truly yours,



John E. Lyons
Manager
Supplementary Energy Sources

JEL:bam
Enclosures

cc: D. N. Merrill
H. J. Ellis

Consider front-end loading of 10 ¢/kWh for first 8 contract years.

$$pwf'(17.75\%, 8) = \frac{1 - (1+i)^{-n}}{i} = \frac{1 - (1.1775)^{-8}}{0.1775} = 4.1093$$

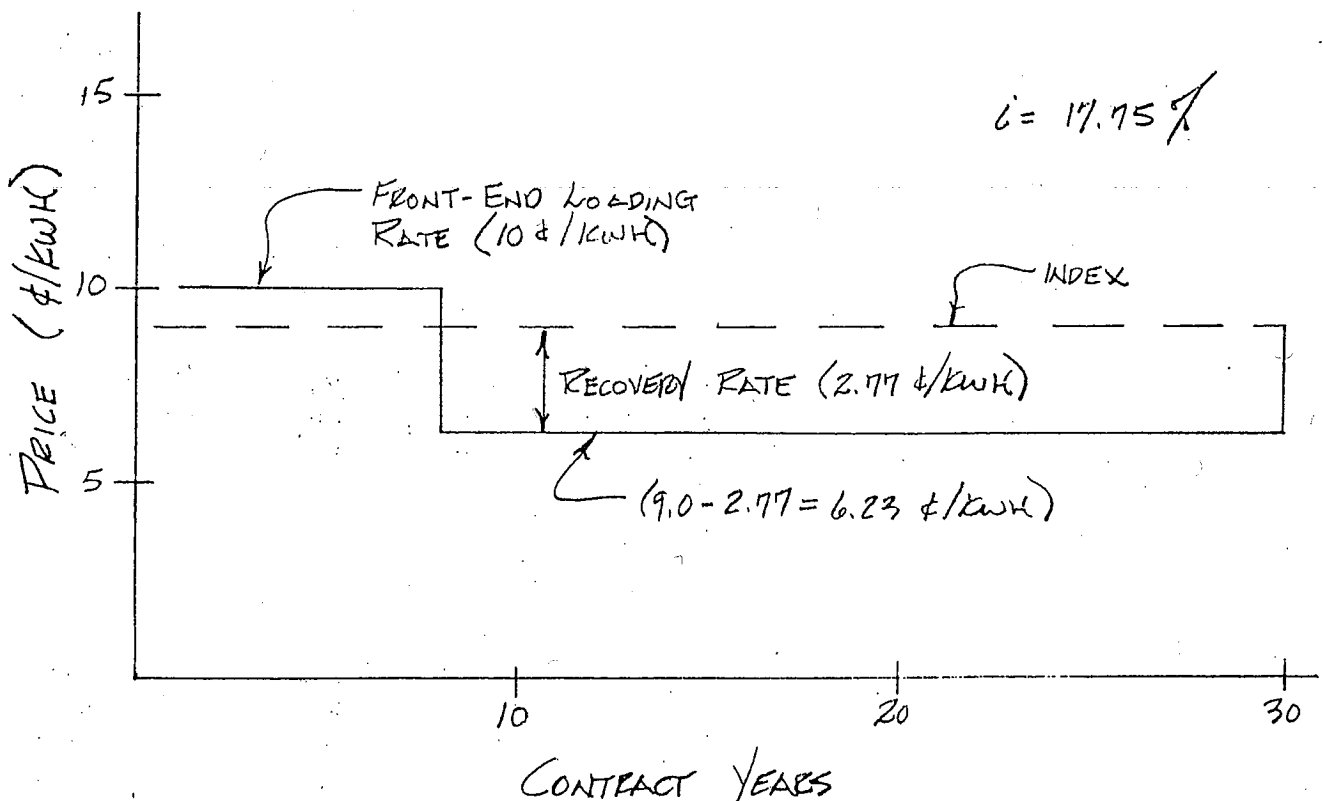
$$pwf'(17.75\%, 22) = \frac{1 - (1+i)^{-n}}{i} = \frac{1 - (1.1775)^{-22}}{0.1775} = 5.4790$$

$$pwf(17.75\%, 8) = (1+i)^{-n} = (1.1775)^{-8} = 0.2706$$

$$(10.0 - \text{index})(pwf' - 17.75\% - 8) = \gamma (pwf' - 17.75\% - 22)(pwf - 17.75\% - 8)$$

$$(10.0 - 9.0)(4.1093) = \gamma (5.4790)(0.2706)$$

$$\gamma = 2.77 \text{ ¢/kWh (RECOVERED RATE)}$$



PENACOOK LOWER FALLS
15 DEC. 81 RVP-2

YEAR	EST. PSNH [*] IEC	%	% x IEC	MINUS RECOVERED	CONTRACT ^{**} RATE
1982	5.77				10.00
83	7.27				10.00
84	5.94				10.00
85	6.56				10.00
86	5.53				10.00
87	4.72				10.00
88	5.30				10.00
89	6.42				10.00
1990	7.91		(index)	2.77	6.23
91	9.01		(index)		6.23
92	11.63	96	11.16		8.39
93	13.24	92	12.18		9.41
94	13.44	88	11.83		9.06
95	16.01	84	13.45		10.68
96	18.97	80	15.18		12.41
97	19.83	76	15.07		12.30
98	21.56	72	15.52		12.75
99	24.28	68	16.51		13.74
2000	27.16	64	17.38		14.61
01	30.11	60	18.07		15.30
02	33.39	56	18.70		15.93
03	37.01	52	19.25		16.48
04	41.04	50	20.52		17.75
05	45.50		22.75		19.98
06	49.99		25.00		22.23
07	54.92		27.46		24.69
08	60.34		30.17		27.40
09	66.30		33.15		30.38
2010	72.84		36.42		33.65
2011	79.31		39.66		36.89

FRONT-END LOADING

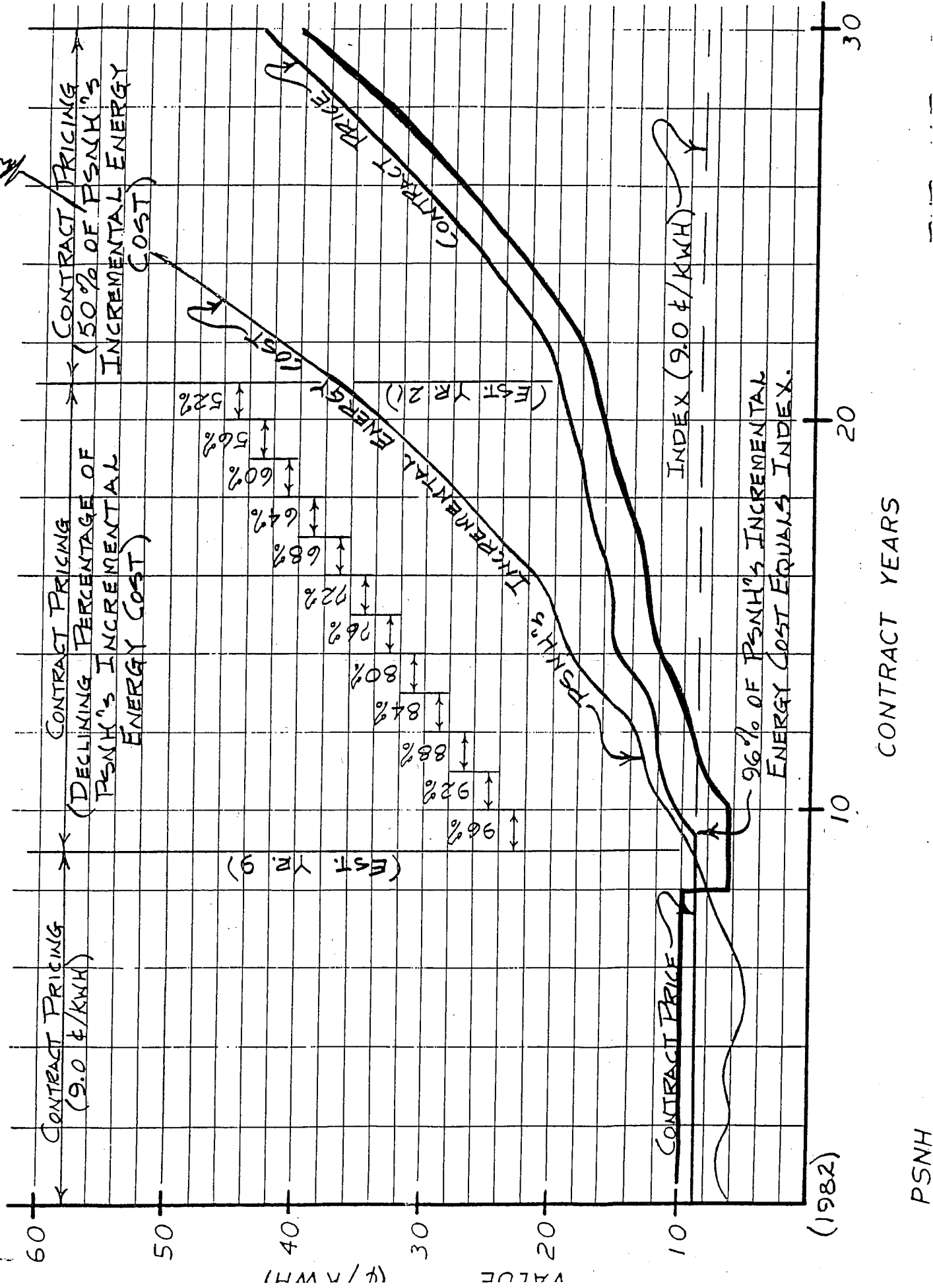
* ESTIMATED PSNH INCREMENTAL ENERGY COST (IEC).

** RATES BEYOND YEAR 1989 ARE ESTIMATED AND ARE NOT GUARANTEED BY PSNH.

EXHIBIT I

FIXED RATE - FUTURE ESCALATING CONTRACT

Penacook Lower Falls
15 Dec. 81 ZVP-3



RICHARD V. PERRON, P.E.
Engineer
Supplementary Energy Sources

PSNH PUBLIC SERVICE
Company of New Hampshire

1000 Elm St., Box 330
Manchester, N.H. 03105
(603) 669-4000

NOTED DEC 15 1981 R.V.P.

N. H. HYDRO ASSOCIATES
PENACOOK LOWER FALLS HYDRO
LONG-TERM CONTRACT
14 DEC. 81 RYP-1

Consider front-end loading of 10 ¢/kWh for first 8 contract years.

$$pwf' (17.75\%, 8) = \frac{1 - (1+i)^{-n}}{i} = \frac{1 - (1.1775)^{-8}}{0.1775} = 4.1093$$

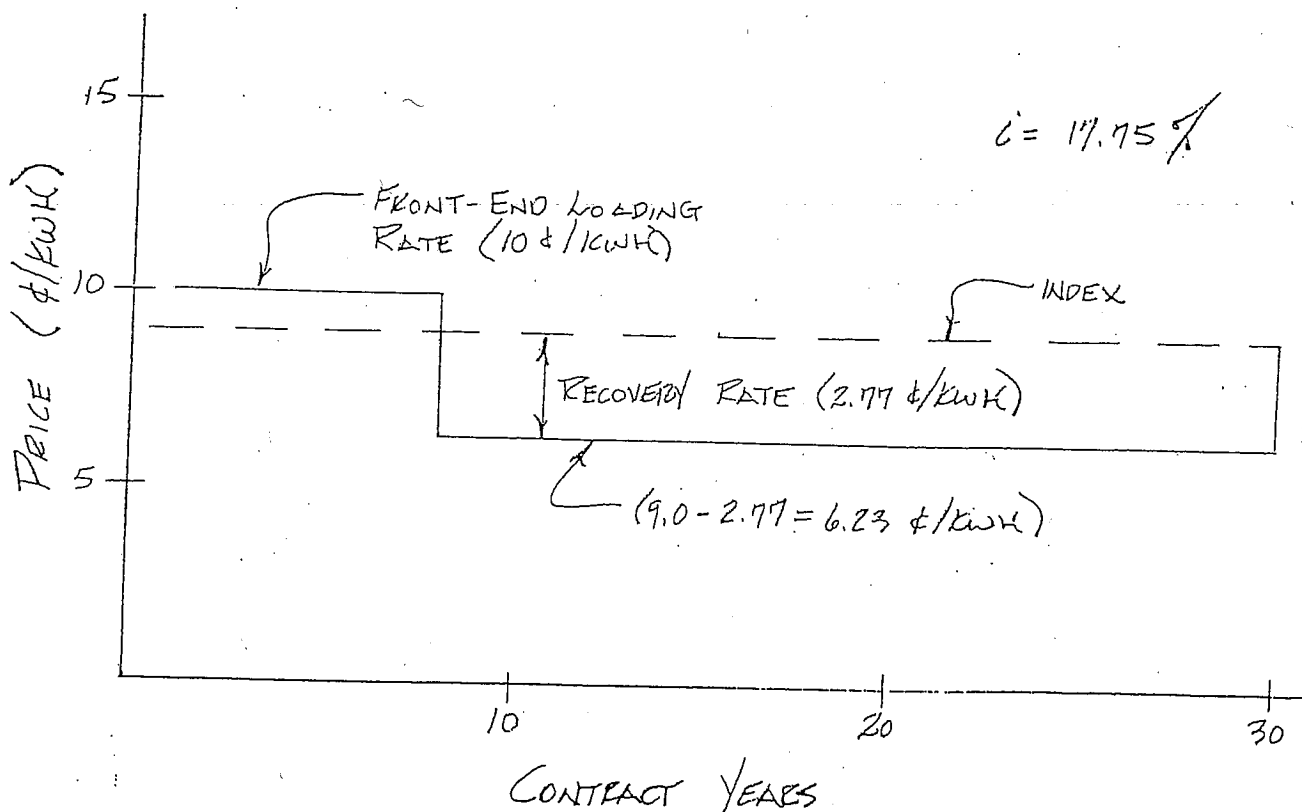
$$pwf' (17.75\%, 22) = \frac{1 - (1+i)^{-n}}{i} = \frac{1 - (1.1775)^{-22}}{0.1775} = 5.4790$$

$$pwf (17.75\%, 8) = (1+i)^{-n} = (1.1775)^{-8} = 0.2706$$

$$(10.0 - \text{index}) (pwf' - 17.75\% - 8) = \psi (pwf' - 17.75\% - 22) (pwf - 17.75\% - 8)$$

$$(10.0 - 9.0)(4.1093) = \psi (5.4790)(0.2706)$$

$$\psi = 2.77 \text{ ¢/kWh (RECOVERED RATE)}$$



NOTED DEC 15 1981 R.V.P. PENACOOK LOWER FALLS
15 DEC. 81 RVP-2

YEAR	EST. PSNH [*] IEC	%	% x IEC	MINUS RECOVERY	CONTRACT ^{**} RATE
1982	5.77				
83	7.27				10.00
84	5.94				10.00
85	6.56				10.00
86	5.53				10.00
87	4.72				10.00
88	5.30				10.00
89	6.42				10.00
1990	7.91		(index)	2.77	10.00
91	9.01		(index)		6.23
92	11.63	96	11.16		6.23
93	13.24	92	12.18		8.39
94	13.44	88	11.83		9.41
95	16.01	84	13.45		9.06
96	18.97	80	15.18		10.68
97	19.83	76	15.07		12.41
98	21.56	72	15.52		12.30
99	24.28	68	16.51		12.75
2000	27.16	64	17.38		13.74
01	30.11	60	18.07		14.61
02	33.39	56	18.70		15.30
03	37.01	52	19.25		15.93
04	41.04	50	20.52		16.48
05	45.50		22.75		17.75
06	49.99		25.00		19.98
07	54.92		27.46		22.23
08	60.34		30.17		24.69
09	66.30		33.15		27.40
2010	72.84		36.42		30.38
2011	79.31		39.66		33.65
					36.89

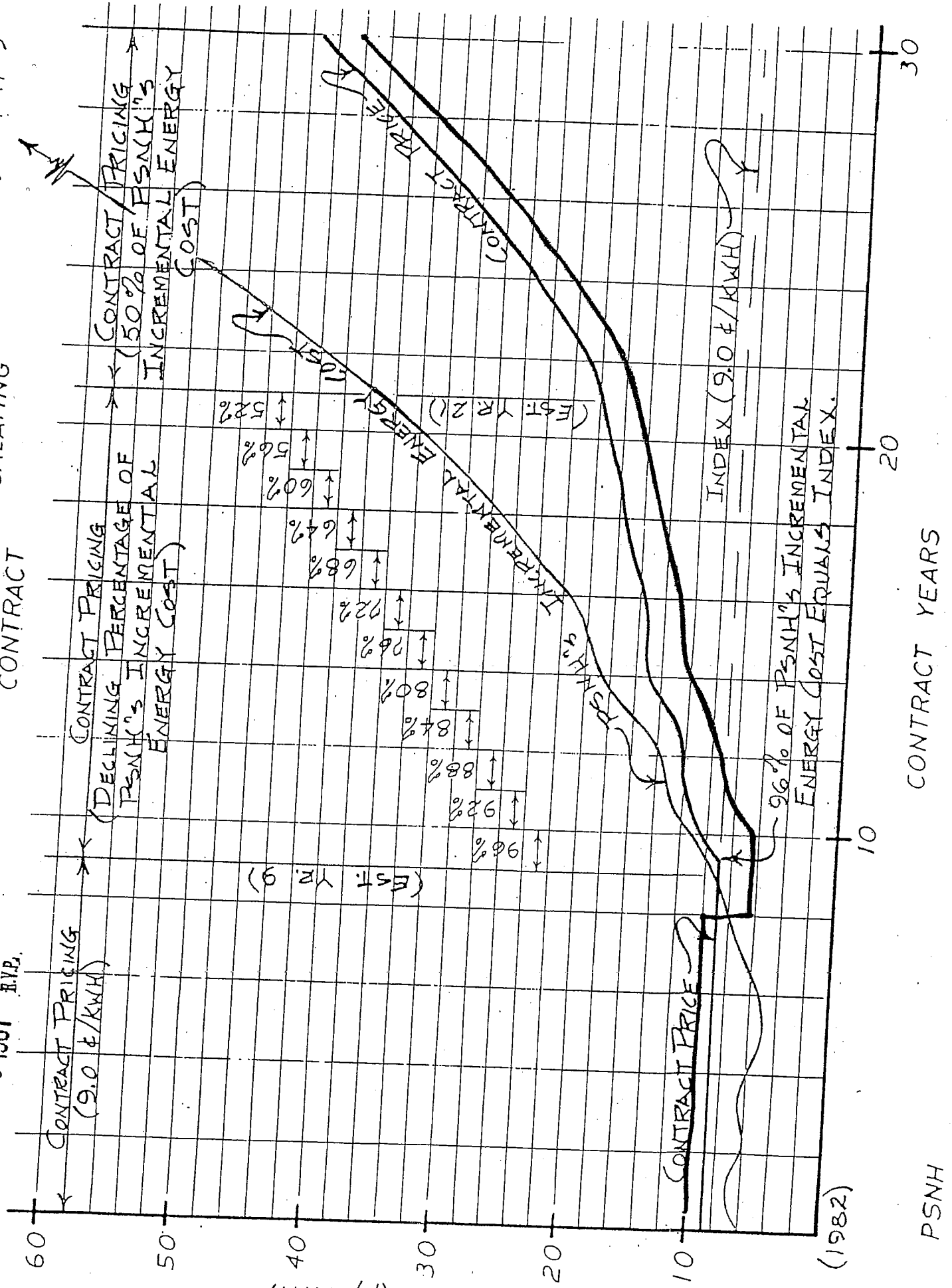
* ESTIMATED PSNH INCREMENTAL ENERGY COST (IEC).

** RATES BEYOND YEAR 1889 ARE ESTIMATED AND ARE NOT GUARANTEED BY PSNH.

Penacook Lower Falls
15 Dec. 81 RVP-3

FIXED RATE - FUTURE ESCALATING CONTRACT

NOTED DEC 15 1981 RVP.



NOTED DEC 22 1981 R.V.P.

December 21, 1981

Mr. Richard A. Normand
N.H. Hydro Associates
3 Capitol Street
Concord, NH 03301

Subject: Contract Negotiations - Penacook Lower Falls Hydro
Concord/Boscawen, New Hampshire

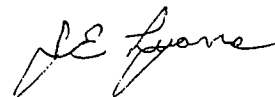
Dear Mr. Normand:

Attached are copies of worksheets showing our estimate of the average annual payments in cents/KWH, under the terms of a long-term contract as we have discussed. A payment of 10 cents/KWH will be made for the first eight contract years; thereafter, 2.77 cents/KWH will be deducted from payments so that PSNH can recover the front-end payments in excess of the index. It is estimated that payments will drop to 6.23 cents/KWH for years 1990 and 1991, will rise to exceed 9.0 cents/KWH by 1993, continue rising to exceed 10.5 cents/KWH by 1995, and will reach 36 cents/KWH by 2011. Please remember that these figures are estimated only and once our own costs exceed the 9.0 cents/KWH index, all contract prices will then be referenced to our actual costs.

Some contract provisions will have to be made to insure that our interests, and consequently, our customer's interests, are protected due to the front-end loading. We would be interested in any thoughts that you might have.

Please review this information and then give me a call. We are looking forward to purchasing the energy from your facility on a mutually beneficial basis.

Very truly yours,



John E. Lyons, P.E.
Manager

Supplementary Energy Sources

ams
Enclosures

cc: H. J. Ellis

NOTED DEC 15 1981 R.V.P.

N. H. HYDRO ASSOCIATES
PENACOOK LOWER FALLS HYDRO
LONG-TERM CONTRACT
14 DEC. 81 ZYP-1

Consider front-end loading of 10¢/kWh for first 8 contract years.

$$pwf'(17.75\%, 8) = \frac{1 - (1+i)^{-n}}{i} = \frac{1 - (1.1775)^{-8}}{0.1775} = 4.1093$$

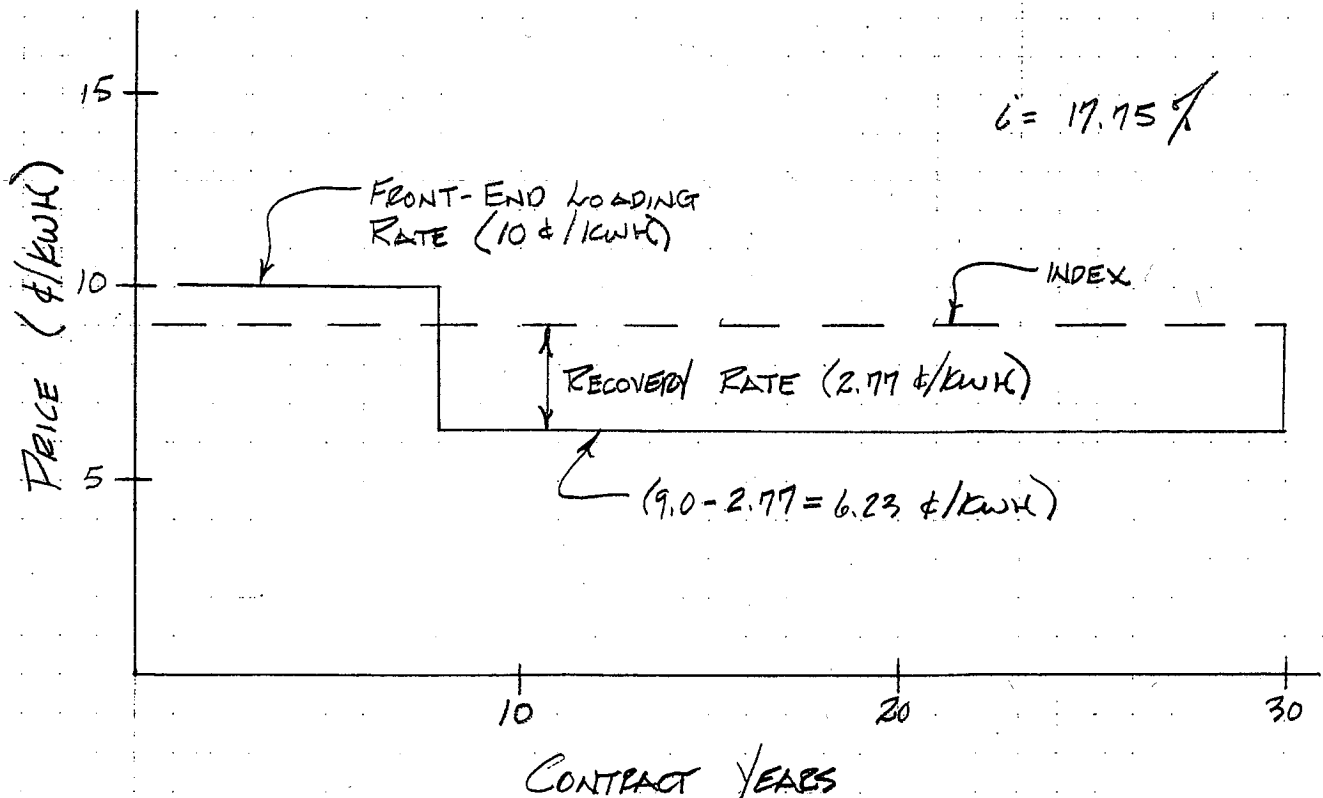
$$pwf'(17.75\%, 22) = \frac{1 - (1+i)^{-n}}{i} = \frac{1 - (1.1775)^{-22}}{0.1775} = 5.4790$$

$$pwf(17.75\%, 8) = (1+i)^{-n} = (1.1775)^{-8} = 0.2706$$

$$(10.0 - \text{index})(pwf' - 17.75\% - 8) = \gamma (pwf' - 17.75\% - 22)(pwf - 17.75\% - 8)$$

$$(10.0 - 9.0)(4.1093) = \gamma (5.4790)(0.2706)$$

$$\gamma = 2.77 \text{ ¢/kWh (RECOVERED RATE)}$$



NOTED DEC 15 1981 R.V.P. PENACOOK LOWER FALLS
15 DEC. 81 RVP-2

YEAR	EST. PSNH [*] IEC	%	% x IEC	MINUS RECOVERED	CONTRACT RATE ^{**}
1982	5.77				10.00
83	7.27				10.00
84	5.94				10.00
85	6.56				10.00
86	5.53				10.00
87	4.72				10.00
88	5.30				10.00
89	6.42				10.00
1990	7.91		(index)	2.77	6.23
91	9.01		(index)		6.23
92	11.63	96	11.16		8.39
93	13.24	92	12.18		9.41
94	13.44	88	11.83		9.06
95	16.01	84	13.45		10.68
96	18.97	80	15.18		12.41
97	19.83	76	15.07		12.30
98	21.56	72	15.52		12.75
99	24.28	68	16.51		13.74
2000	27.16	64	17.38		14.61
01	30.11	60	18.07		15.30
02	33.39	56	18.70		15.93
03	37.01	52	19.25		16.48
04	41.04	50	20.52		17.75
05	45.50		22.75		19.98
06	49.99		25.00		22.23
07	54.92		27.46		24.69
08	60.34		30.17		27.40
09	66.30		33.15		30.38
2010	72.84		36.42		33.65
2011	79.31		39.66		36.89

FRONT-END LOADING

* ESTIMATED PSNH INCREMENTAL ENERGY COST (IEC).

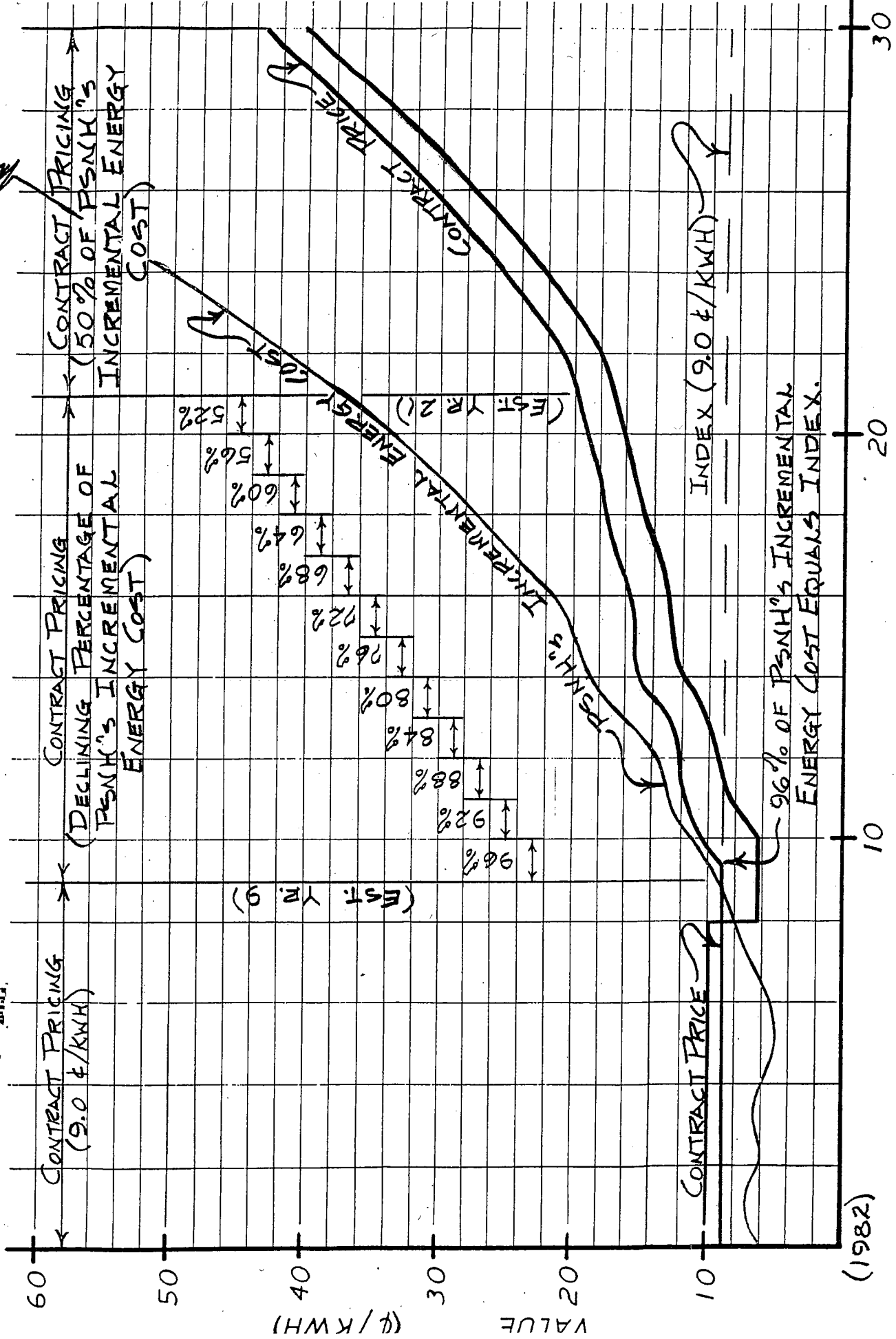
** RATES BEYOND YEAR 1989 ARE ESTIMATED AND ARE NOT GUARANTEED BY PSNH.

EXHIBIT I

FIXED RATE - FUTURE ESCALATING CONTRACT

NOTED DEC 15 1981 RVP.

Kenacook Lower Falls
15 DEC. 81 RVP-3



CONTRACT YEARS

PSNH

RVP 14 DEC. 81

PSNH PUBLIC SERVICE
Company of New Hampshire

December 21, 1981

Mr. Richard A. Normand
N.H. Hydro Associates
3 Capitol Street
Concord, NH 03301

Subject: Contract Negotiations - Penacook Lower Falls Hydro
Concord/Boscawen, New Hampshire

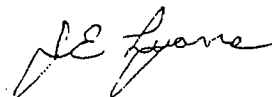
Dear Mr. Normand:

Attached are copies of worksheets showing our estimate of the average annual payments in cents/KWH, under the terms of a long-term contract as we have discussed. A payment of 10 cents/KWH will be made for the first eight contract years; thereafter, 2.77 cents/KWH will be deducted from payments so that PSNH can recover the front-end payments in excess of the index. It is estimated that payments will drop to 6.23 cents/KWH for years 1990 and 1991, will rise to exceed 9.0 cents/KWH by 1993, continue rising to exceed 10.5 cents/KWH by 1995, and will reach 36 cents/KWH by 2011. Please remember that these figures are estimated only and once our own costs exceed the 9.0 cents/KWH index, all contract prices will then be referenced to our actual costs.

Some contract provisions will have to be made to insure that our interests, and consequently, our customer's interests, are protected due to the front-end loading. We would be interested in any thoughts that you might have.

Please review this information and then give me a call. We are looking forward to purchasing the energy from your facility on a mutually beneficial basis.

Very truly yours,



John E. Lyons, P.E.
Manager

Supplementary Energy Sources

ams
Enclosures

cc: H. J. Ellis

DRAFT

ARTICLE 12. DEFAULT

Whereas the rate structure pursuant to Article 3 results in a purchase rate, during the initial years of the Contract term, substationally higher than PUBLIC SERVICE's avoided energy costs, and;

Whereas the rate structure pursuant to Article 3 results in a purchase rate, during the later years of the Contract term, lower than PUBLIC SERVICE's avoided energy cost in order to reimburse PUBLIC SERVICE for the higher rates paid during said initial years, and;

Whereas, in the event of a default by the SELLER, during the term of this Contract, PUBLIC SERVICE (including its customers and stockholders) will be damaged;

Now, therefore, PUBLIC SERVICE and SELLER agree that the Contract term is of the essence and, in the event of a default by the SELLER, PUBLIC SERVICE shall be entitled to such remedies for damages, from the SELLER, as described below.

If, during the term of this contract, the SELLER fails to operate its facilities for any reason other than discussed in Article 10 (Force Majeure), fails to sell its entire net output to PUBLIC SERVICE, is declared insolvent by a court of law or declares itself to be insolvent, the SELLER shall be deemed to be in default.

PUBLIC SERVICE, at its option, shall be entitled to either of the following two remedies for damages if the SELLER is deemed to be in default:

1. PUBLIC SERVICE shall have the right to recover all damages, as defined below, in cash; or
2. PUBLIC SERVICE shall have the right to purchase the SELLER's facilities for it's present value (the value upon the date of this Contract), less an amount equal to all damages, as defined below. For the purposes of this section, it is agreed between the parties that the present value of the SELLER's facilities is

_____ dollars (\$) _____).

The SELLER's facilities to be purchased by PUBLIC SERVICE shall include, but not be limited to, all real estate, personal property, leases, permits, licenses and all other rights necessary for PUBLIC SERVICE to operate the facility.

The damages under this section are defined to be the total of the following two components.

1. The first component of the damages represents the losses to PUBLIC SERVICE by paying a rate higher than its avoided cost, during the initial contract years, which was not recovered in later contract years. The amount of these damages is calculated

as the total of all payments made by PUBLIC SERVICE, up to the time of default, which exceeded PUBLIC SERVICE's avoided cost, less any of this amount that may have been recovered by PUBLIC SERVICE in accordance with the provisions of Article 3. The damages under this paragraph shall accrue interest at an annual rate equal to PUBLIC SERVICE's cost of capital at the time of default.

For the purpose of calculating the damages for default, PUBLIC SERVICE's avoided cost is defined to be the contract index price of 9.0 cents per KWH or PUBLIC SERVICE's incremental energy cost, as defined in Article 3, whichever is greatest.

2. The second component of the damages represents the losses to PUBLIC SERVICE by not continuing the more beneficial contract pricing provisions (rates below PUBLIC SERVICE's incremental energy cost) for the remainder of the contract term. The amount of these damages shall be estimated by PUBLIC SERVICE and are equal to the difference between the present worth (at the time of default) of PUBLIC SERVICE's levelized incremental energy cost, for the remainder of the contract, and the present worth (at the time of default) of the levelized contract pricing rate for the remainder of the contract; multiplied by the number of remaining contract years; multiplied by the estimated annual energy of the facility. The levelized incremental energy cost for the remainder of the contract, the levelized contract pricing rate for the remainder of the contract, and the annual energy of the facility shall be as reasonably estimated by PUBLIC SERVICE. All present worth computations shall be based on a percentage rate equal to PUBLIC SERVICE's cost of capital at the time of default.

Mathematically, the total damages can be expressed as follows.

$$\text{Total Damages} = (\text{Front End Loading} - \text{Recovery} + \text{Interest}) + (\text{IEC} - \text{Contract Rate}) (\text{No. Years}) (\text{KWH/Yr.})$$

where,

Front End Loading = Payments by PUBLIC SERVICE to SELLER exceeding PUBLIC SERVICE's avoided cost.

Recovery = Amount of Front End Loading recovered by PUBLIC SERVICE in accordance with Article 3.

Interest = Interest on total Front End Loading not recovered, at a rate equal to PUBLIC SERVICE's cost of capital at time of default.

IEC = The present worth of PUBLIC SERVICE's levelized incremental energy cost for the remaining contract years.

Contract Rate = The present worth of the levelized contract pricing rate for the remaining contract years.

No. Years = The number of remaining contract years after default.

KWH/Yr. = The estimated average annual energy produced by the facility.

R.V. Perron
January 21, 1982



NEW HAMPSHIRE HYDRO ASSOCIATES
THREE CAPITOL STREET
CONCORD, NEW HAMPSHIRE 03301
(603) 224-8333

December 29, 1981

Mr. John E. Lyons
Public Service Company
of New Hampshire
1000 Elm Street
P.O. Box 330
Manchester, NH 03105

NOTED JAN 4 1981 JEE

RE: Penacook Lower Falls Power Sales Agreement

Dear Mr. Lyons:

NHHA has reviewed your letter dated December 21, 1981, regarding the purchase of power from the Penacook Lower Falls Project (the "Project"). NHHA is in essential agreement with the methodology used in the analysis that you provided. The following clarifications, revisions and additions are offered for your consideration:

1. Discount Rate

The discount rate that has been used, 17.75%, may be applicable for analyzing payments made for power today, but will not be applicable during the term of our proposed contract. In order to accurately reflect changes in costs of capital, the discount rate should float. NHHA proposes that the discount rate to be used in determining the Recovery Rate be reviewed annually and adjusted to reflect accurately the current cost of capital. It is NHHA's understanding that there exists a methodology which is used annually to calculate PSNH's cost of capital as a part of the routine regulatory process. NHHA proposes that we consider using this method for determining the appropriate discount rate for each year of the contract.

2. Applicable Years for Recovery Rate Calculation

In calculating the Recovery Rate, as defined in your letter of December 21, 1981, the calculation should begin with the commencement of commercial operation of the Project. This is scheduled for May 1, 1983.

3. Term of 10 cent per kwh Floor Price

NHHA proposes that the 10¢ per kwh price for energy delivered from the Project be extended from 8 to 10 years. This 10 year term is required to assure adequate debt coverage.

On the basis of the above, NHHA has prepared a Calculation of the Recovery Rate and an Energy Price Projection, attached as Exhibits 1 and 2, respectively.

4. Credit for Capacity

The PSNH methodology for power pricing equitably recognizes the value of energy from LEEPS. However, it does not incorporate a means of recognizing any dependable capacity offered by a LEEP. NHHA recognizes that when Seabrook comes on-line it will take care of PSNH's projected need for additional capacity for the near term. However, load growth, plant retirements, etc. will at some point during the proposed term of the contract require PSNH to increase its power supply resources. At that time, the firm capacity of the Project will enable PSNH to avoid the expense of adding capacity. NHHA therefore proposes that the Project be given a capacity payment reflecting the expense that PSNH will avoid by having the Project as a generating resource. This capacity payment can be based upon 1) the firm capacity of the Project as determined using NEPOOL's "Uniform Rating and Periodic Audit of Generating Capacity," and 2) the then current payment for dependable capacity as determined by the Public Utilities Commission of New Hampshire. If there is no such rate in effect, then the then current NEPOOL capacity deficiency charge can be used.

Regarding contract provisions to assure that NHHA will operate the Project for the full term of the contract, several points are worth reviewing. First, NHHA is a New Hampshire limited partnership of which Essex Development Associates, Inc., a Delaware corporation, is general partner. As general partner, EDAI is responsible for fulfilling all of the obligations of NHHA. The Project is only one element of EDAI's hydroelectric program. PSNH can therefore look to an entity with assets and income other than this single Project. Second, NHHA will have in effect sufficient property insurance to assure that the dam and plant can be repaired in the event of fire, flood or other casualty. Finally, the Project structures and equipment are being designed and built and will be maintained to operate well beyond the thirty year life of the proposed contract. This is a reflection of the long-term commitment, EDAI and EG&G, Inc., the limited partner of NHHA, have to the hydroelectric industry.

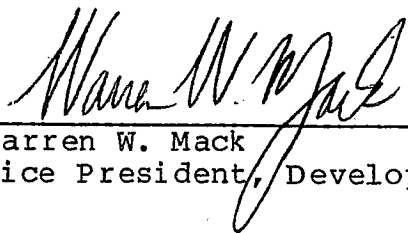
NHHA looks forward to discussing these changes at your earliest possible convenience. It would be most helpful if we could meet for this purpose during the week of January 3, 1982.

Sincerely,

NEW HAMPSHIRE HYDRO ASSOCIATES

By: ESSEX DEVELOPMENT ASSOCIATES, INC.,
General Partner

By:


Warren W. Mack
Vice President, Development

WWM/abt

Exhibit 1
Penacock Lower Falls Project
Calculation of Recovery Rate

Basis:

- 1) Discount Rate: 17.75% for each year, although it is proposed that this rate be adjusted annually to reflect current costs of capital.
- 2) Initial Price for Energy and Term: 10.0 cents per kwh for the initial 10 years of commercial operation; scheduled start-up is May 1, 1981.
- 3) Term of Contract: 30 years
- 4) Average Fixed Rate Future Escalating Contract Price: See Exhibit 2

Calculation:

- a) Present worth in 1983 of 1.0 cent per kwh premium in operating years 1983 through 1990:
 $1.0 \times \text{pwf}'(i=17.75, n=8) = 4.1093$
- b) Present worth in 1983 of 0.05 cents per kwh premium in operating year 1991:
 $0.05 \times \text{pwf}(i=17.75, n=9) = 0.0115$
- c) Present worth in 1983 of 1.61 cents per kwh discount in operating year 1992:
 $1.61 \times \text{pwf}(i=17.75, n=10) = (0.3142)$

$$\text{Recovery Rate} \times \text{pwf}'(i=17.75, n=20) \times \text{pwf}(i=17.75, n=10) = a + b + c$$

$$\text{Recovery Rate} = 3.60 \text{ cents per kwh}$$

12/28/81

Exhibit 2
Penacook Lower Falls Project
Energy Price Projection through 1994

<u>Operating Year</u>	<u>Aver. Fixed Rate (1) Future Escalating Contract Price</u>	<u>Less (2) Recovery Rate</u>	<u>Penacook (3) Lower Falls Contract Price</u>
1983	9.00 ¢ per kwh	--	10.00 ¢ per kwh
1984	9.00	--	10.00
1985	9.00	--	10.00
1986	9.00	--	10.00
1987	9.00	--	10.00
1988	9.00	--	10.00
1989	9.00	--	10.00
1990	9.00	--	10.00
1991	9.95	--	10.00
1992	11.61	--	10.00
1993	12.03	3.60	8.43
1994	12.54	3.60	8.94

- (1) This is based upon: 1) actual commercial operation of the Penacook Lower Falls Project beginning on May 1, 1983, as currently scheduled. (Therefore for operating year 1991, 8,651 MWH at 9.0¢ and 6,755 MWH at 11.16 for May through December, 1991 and January through April, 1992 respectively); and 2) estimates of PSNH IEC given in RVP-2; December 15, 1981 attached to John Lyons' letter dated December 21, 1981.
- (2) See Exhibit 1 for derivation of Recovery Rate.
- (3) Prices beyond 1992 are estimates subject to actual: 1) PSNH IEC and 2) PSNH cost of capital.

12/28/81

NEW HAMPSHIRE HYDRO ASSOCIATES
99 NORTH STATE STREET
CONCORD, N.H. 03301
(603) 224-8333

NOTED JAN 21 1982 R.V.P.

January 7, 1981

Mr. John E. Lyons
Public Service Company of New Hampshire
1000 Elm Street
Manchester, NH 02105

Re: Penacook Lower Falls Project Power Sales Agreement

Dear Mr. Lyons:

Enclosed please find a copy of proposed modifications and additions to Public Service's proposed power sales agreement that New Hampshire Hydro Associates offers for your consideration. Regarding the incremented energy cost (IEC) data that you provided with your letter of December 21, 1981, let me again assure you that NHHA clearly understands that these are only PSNH's current estimates, and that the actual IEC's will be those used in determining the price for power in the contract.

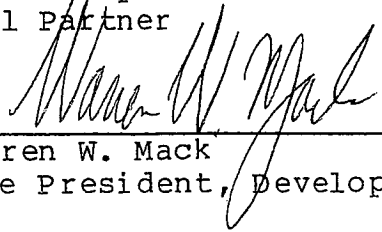
NHHA is currently drafting language concerning a "put" of the plant to PSNH should NHHA cease operations, and provisions for payments for capacity if and when the Penacook Project will enable PSNH to avoid adding capacity to their system.

NHHA looks forward to your expeditious response to the enclosed.

Sincerely,

NEW HAMPSHIRE HYDRO ASSOCIATES

By: Essex Development Associates, Inc.
General Partner

By: 
Warren W. Mack
Vice President, Development

WWM/hjd

Enclosures

LAWRENCE OFFICES
SIX ESSEX STREET, LAWRENCE, MA 01840 (617) 687-2312

CONTRACT FOR THE PURCHASE AND SALE
OF ELECTRIC ENERGY

CONTRACT, dated , 1982, by and between

New Hampshire Hydro Associates, a New Hampshire limited

partnership having its principal place of business in Concord,

New Hampshire

(hereinafter referred to as SELLER), and

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE, a New Hampshire corporation

having its principal place of business in Manchester, New Hampshire

(hereinafter referred to as PUBLIC SERVICE).

WHEREAS, SELLER is engaged in the business of ^{the} generation of electrical energy,

WHEREAS, SELLER desires to sell its entire generation output to PUBLIC SERVICE,

WHEREAS, PUBLIC SERVICE is engaged in the business of the generation, transmission, and distribution of electrical energy,

WHEREAS, PUBLIC SERVICE has determined it would be beneficial to secure a reliable supply of electrical energy for a period of not less than thirty years,

WHEREAS, SELLER ^{desires} is ~~willing and able~~ to sell its entire output to PUBLIC SERVICE for thirty years;

NOW, THEREFORE, in consideration of the mutual covenants and agreements hereinafter set forth, SELLER and PUBLIC SERVICE hereby agree as follows:

Article 1. Basic Agreement.

Subject to the terms, provisions, and conditions of this Contract, SELLER agrees to furnish and sell and PUBLIC SERVICE agrees to purchase and receive all of the electric energy produced by the SELLER

from its Penacook Lower Falls generating facility, located in the village of Penacook ^{located within the City of Concord and the Town of Boscawen,} New Hampshire.

Article 2. Availability & Delivery.

During the term hereof, SELLER shall operate its generating ^{facility} unit to the maximum extent reasonably possible under the circumstances and shall make available to PUBLIC SERVICE the entire net output ^{measured} in kilowatthours) from said ^{facility} unit when in operation.

Said generation ^{output} shall be delivered to PUBLIC SERVICE at the point of interconnection ^{to be mutually agreed upon} between the generating facility of SELLER and the _____ kilovolt electric system of PUBLIC SERVICE (hereinafter referred to as DELIVERY POINT).

Unless PUBLIC SERVICE converts its interconnecting circuit, all electric energy delivered to PUBLIC SERVICE through the DELIVERY POINT shall be _____ phase, sixty hertz current at _____ kilovolts.

Article 3. Price.

The price charged by SELLER to PUBLIC SERVICE for sales of electric energy under this Contract shall be determined as follows:

RIDER A

~~A. An index price of 9.0 cents per kilowatthour (KWH) is established for the Contract pricing and is the initial price to be paid under this Contract subject to the following provisions.~~

1. For the first 10 years of the Contract, PUBLIC SERVICE will retain 10 percent (0.9 cents per KWH) for all energy purchased. During the second 10 years of the Contract, PUBLIC SERVICE will pay the SELLER an additional 0.9 cents per KWH, above the contract price, for purchased energy. The total of said additional payments, for any given year, shall not exceed one-tenth (1/10) of the total money retained by PUBLIC SERVICE during the first ~~ten Contract years.~~

~~2. At such time that 96 percent of PUBLIC SERVICE's incremental energy cost exceeds the index, the rate to be paid under this Contract will increase in accordance with the provisions of Paragraph B.~~

B. All escalating payments in excess of the index will be determined as a percentage of PUBLIC SERVICE's incremental energy cost. As soon as 96 percent of PUBLIC SERVICE's incremental energy cost exceeds the index, the contract price will be based on 96 percent of PUBLIC SERVICE's incremental energy cost for a period of one year. For each subsequent year, the percentage of PUBLIC SERVICE's incremental energy cost to be paid will be reduced by 4 percent (i.e. 96 percent, 92 percent, 88 percent, 84 percent, etc.), until the incremental energy cost is reduced only 2 percent to reach 50 percent of PUBLIC SERVICE's incremental energy cost. At such time, the contract price will remain at the 50 percent rate for the remainder of the contract term.

PUBLIC SERVICE's incremental energy cost, for any hour, is equivalent to the marginal cost of providing energy for that hour. The marginal cost, for any hour, is the energy cost of the most expensive unit or purchased energy supplying a portion of PUBLIC SERVICE's load during that hour and includes all costs in the New England Power Exchange (NEPEX) bus rate cost for the incremental unit. The NEPEX bus rate costs are essentially the cost of fuel consumed. PUBLIC SERVICE's incremental energy cost, for the purposes of this Contract, will be expressed as a yearly average and will be calculated by averaging all 8,760 hourly incremental energy costs over the calendar year.

OK
as is
↓

~~If the price paid during any year is less than the appropriate percentage of PUBLIC SERVICE's incremental energy cost for that year, an adjustment will be made for all energy sold to PUBLIC SERVICE. The adjustment will consist of an additional payment for each KWH sold to PUBLIC SERVICE during said year based on the difference between the price paid and the appropriate percentage of PUBLIC SERVICE's incremental energy cost. The adjustment will be paid within one month after PUBLIC SERVICE's incremental energy cost for the previous year has been determined,~~
but in no event later than 60 days following the end of the year.

If the price paid during any year is more than the appropriate percentage of PUBLIC SERVICE's incremental energy cost for that year, an adjustment will be made for all energy sold to PUBLIC SERVICE. The adjustment will consist of a refund to PUBLIC SERVICE for each KWH sold during said year based on the difference between the price paid and the appropriate percentage of PUBLIC SERVICE's incremental energy cost. The refund will be made to PUBLIC SERVICE by applying one-twelfth of the total amount as a reduction to each month's payment by PUBLIC SERVICE during the current year. If for any month, no payment is due the SELLER, or the payment due is not equal to the refund, a payment to PUBLIC SERVICE will be made by SELLER so that the total recovery is achieved by PUBLIC SERVICE by the end of the current year.

Article 4. Metering.

The metering shall be configured so as to represent the generation delivered to PUBLIC SERVICE. The metering may be installed on the generation side of the transformer provided that transformer losses are *mutually agreeable* subtracted from the measured generation by a suitable method.

SELLER will install, own, and maintain all metering equipment as referenced in Article 5, to measure the flow of electrical energy from SELLER to PUBLIC SERVICE. If at any time, the meter is found to be in error by more than two percent fast or slow (+ or - 2%), SELLER shall cause such meter to be corrected and the meter readings for the period of inaccuracy shall be adjusted to correct such inaccuracy so far as the same can be reasonably ascertained, but no adjustment prior to the beginning of the preceding month shall be made except by agreement of the parties. All tests and calibrations shall be made in accordance with Section V-14 of the NHPUC Rules and Regulations Prescribing Standards for Electric Utilities in effect as of September 8, 1972, as amended.

Get a copy of
these Rules
and
Regulations

The meter shall be tested as prescribed in said Rules and Regulations.

In addition to the regular routine tests ^{prescribed in said Rules and Regulations}, SELLER shall cause

the meter to be tested at any time upon request of and in the presence of a representative of PUBLIC SERVICE. If such equipment proves accurate within two percent fast or slow (+ or - 2%), the expense of the test shall be borne by PUBLIC SERVICE.

PUBLIC SERVICE reserves the right to secure or seal the metering installation, to require SELLER to measure electrical energy sold to PUBLIC SERVICE on an hourly basis, and to require SELLER to notify PUBLIC SERVICE once each day of SELLER's generation in kilowatthours for each hour during the prior 24 hours.

which equipment shall be similar to that installed in generating facilities in the region which are similar to that of SELLER

Article 5. Interconnection & Protection Requirements.

The SELLER shall install all interconnection, protection, metering, and control equipment as specified in PUBLIC SERVICE's study of the SELLER's electric generating facility, which study is, or will be upon mutual consent of both parties, attached hereto as Attachment A, and

-6-
any other such equipment which may be ^{reasonably} necessary to ensure the safe and reliable operation of SELLER's generating unit ^{facility} in parallel with PUBLIC SERVICE's system. SELLER shall bear all costs associated with said equipment and its installation.

All said interconnection, protection, metering, and control equipment including, but not limited to, line extensions, transformers, meters, relays, breakers, and appurtenant equipment shall remain the sole property of SELLER.

SELLER shall have sole responsibility for the operation, maintenance, and repair of its generating unit, ^{facility} including the interconnection, protection, metering, and control equipment. SELLER shall maintain, repair, or replace said generating unit ^{facility} including said equipment whenever necessary for the safe and reliable operation of SELLER's electric generating facility in parallel with PUBLIC SERVICE's system. RIDER B

In addition to the above, upon the ^{commencement of the term} effective-date of this Contract, and every twelve months thereafter, the SELLER shall test, or cause to be tested, all protection devices including verification of calibration and tripping functions; and the SELLER shall notify PUBLIC SERVICE in writing that said tests have been conducted. SELLER shall ^{orally} notify PUBLIC SERVICE of any defect affecting the safety or reliability of said equipment not later than two hours after its discovery of the same. twenty-four

is 2 hours a reasonable time??

If either party reasonably determines that any portion of the protection system as required in Article 5, its operation or use thereof, will or may not perform its protective function, including but not limited to opening the interconnecting tie, SELLER shall open the interconnection between PUBLIC SERVICE's system and SELLER's facility.

SELLER shall notify PUBLIC SERVICE not more than two days after it has opened said interconnection. PUBLIC SERVICE shall not be obligated to purchase electrical energy from SELLER, and the interconnection shall remain open, until SELLER has satisfactorily cured said defect at no cost to PUBLIC SERVICE.

Article 6. Right of Access.

Upon ^{reasonable} prior written or oral notice to SELLER, PUBLIC SERVICE shall have the right to enter the property of SELLER at reasonable times and shall be provided access to SELLER's metering, protection, control, and interconnection equipment ^{for the purposes of inspection thereof.}

Article 7. Modifications.

If SELLER plans any ^{material} modifications to its electric generating facility, SELLER shall give PUBLIC SERVICE prior written notice of its intentions. In the event that PUBLIC SERVICE reasonably determines that said modifications would necessitate changes to the interconnection, protection, control, or metering equipment or would cause PUBLIC SERVICE to incur additional expenses associated therewith, the SELLER shall make such changes as reasonably required by PUBLIC SERVICE and reimburse PUBLIC SERVICE for said expenses before PUBLIC SERVICE is obligated to purchase any increased output.

If the PUBLIC SERVICE interconnecting circuit is converted to a higher voltage in the future, the SELLER shall be responsible for all interconnection changes necessitated by the conversion and shall bear all costs associated with said conversion.

Public Service shall give Seller ^{reasonable} notice of said conversion.

Article 8. Billing & Payment.

PUBLIC SERVICE shall read the meter, installed in accordance
no later than the close of business on the first business day following
with Article 4, ~~on or at~~ the end of each month, and PUBLIC SERVICE shall,
no later than the close of business on the second business day following the end of each month,
send the SELLER a form showing the month's beginning and ending meter
readings and total net kilowatthour generation.

SELLER shall then transmit to PUBLIC SERVICE a bill showing
the amount due, which amount will be determined by multiplying the rate
per kilowatthour specified in Article 3 times the number of kilowatthours
delivered to PUBLIC SERVICE since the prior reading of the meter, and
PUBLIC SERVICE will send to SELLER a payment for that amount within 20
days of receipt of SELLER's bill.

RIDER C

Article 9. Liability & Insurance.

- a. Each party will be responsible for its ^{own} facilities and the
operation thereof and will indemnify and save the other harm-
less from ^{and against} any and all loss by reason of property damage, ^{or}
bodily injury, including death resulting therefrom, suffered by
any person or persons including the parties hereto, employees
thereof or ^{third parties} ~~members of the public~~, (and all expenses in connec-
tion therewith, including attorney's fees), whether arising in
contract, warranty, tort (including negligence), strict
liability or otherwise, ^{caused by such party, its officers, employees, agents or directors, or} caused by or sustained on, ~~or alleged~~
~~to be caused by or sustained on~~ equipment or facilities, or

the operation or use thereof, owned or controlled by such
party, ^{unless caused by an act of negligence or willful misconduct of the other party or} ~~except that~~ each party shall be solely responsible for
and shall bear all costs of claims by its own employees or
contractors growing out of any workmen's compensation law.

RIDER C1

an officer,
employee, agent
or director of
the other
party.
Notwithstanding
the foregoing.

- b. SELLER hereby agrees to maintain in force and effect, for the duration of this Contract, Workmen's Compensation Insurance, as required by statute, and Comprehensive General Liability Insurance for bodily injury and property damage at minimum limits of \$1,000,000. Within sixty days of the effective date of this Contract, the SELLER agrees to provide PUBLIC SERVICE with a certificate of such insurance.
- c. In no event shall PUBLIC SERVICE be liable, whether in Contract, tort (including negligence), strict liability, warranty, or otherwise, for any special, indirect, incidental, or consequential loss or damage, including but not limited to cost of capital, cost of replacement power, loss of profits or revenues, or the loss of the use thereof. This provision, subsection c of Article 9, shall apply notwithstanding any other provision of this Contract.

d. RIDER E

Article 10. Force Majeure.

~~Neither~~ ^{Either} party shall not be considered to be in default hereunder and shall be excused from purchasing or selling electricity hereunder if and to the extent that it shall be prevented from doing so by ^{severe weather,} ~~storm,~~ flood, lightning, earthquake, explosion, equipment failure, civil disturbance, labor dispute, act of God or the public enemy, action of a court or public authority, withdrawal of facilities from operation for necessary maintenance and repair, or any ^{other} cause beyond the reasonable control of either party.

RIDER F

Article 11. Effective Date & Contract Term.

~~This Contract shall become effective between the parties as of the date hereof, provided that the metering, interconnection, and~~

RIDER G

~~protection equipment, as specified herein has been properly installed by~~
the SELLER. If said equipment has not been properly installed, this
Contract shall become effective between the parties as of the date of
proper installation of said equipment or as of the date SELLER begins
delivering energy to PUBLIC SERVICE, whichever occurs latest. As of the
effective date of this Contract, the Contract shall remain in full force
and effect for thirty (30) years.

In order for any modification to this Contract to be binding
upon the parties, said modifications must be in writing and signed by
both parties.

Article 12. Prior Agreements Superseded.

This Contract with Attachment A represents the entire agreement
between the parties hereto relating to the subject matter hereof, and
all previous agreements, discussion, communications, and correspondence
with respect to the said subject matter are superseded by the execution
of this Contract.

Article 13. Waiver of Terms or Conditions.

The failure of either party to enforce or insist upon compliance
with any of the terms or conditions of this Contract shall not constitute
a general waiver or relinquishment of any such terms or conditions, but
the same shall be and remain at all times in full force and effect.

Article 14. General.

This Contract shall be binding upon, and inure to the benefit
of the respective successors and assigns of the parties hereto, provided
that SELLER shall not assign this Contract except to an affiliated
company, without the prior written consent of PUBLIC SERVICE, which

company" shall include any partnership in which SELLER or one of SELLER's subsidiaries or affiliates is a general partner or any corporation in which SELLER or one of its subsidiaries or affiliates owns or controls more than 50 percent of the voting stock or otherwise has operating control. In the event of an assignment to an affiliate, SELLER shall notify PUBLIC SERVICE within five (5) days of the effective date of the assignment.

Rider H

Article 15. Arbitration RIDER I

Article 15. Applicable Law.

This Contract is made under the laws of The State of New Hampshire and the interpretation and performance hereof shall be in accordance with and controlled by the laws of that State.

Article 16. Mailing Addresses.

Rider J

The mailing addresses of the parties are as follows:

SELLER: New Hampshire Hydro Associates

99 North State Street

Concord, New Hampshire 03301

With a copy to:

Essex Development Associates, Inc.
110 Tremont Street
Boston, MA 02108
Attn: General Counsel

PUBLIC SERVICE: Public Service Company of New Hampshire
1000 Elm Street
P.O. Box 330
Manchester, New Hampshire 03105
Attn: Henry J. Ellis, Vice President

IN WITNESS WHEREOF, the parties have hereunto caused their names to be subscribed, as of the day and year first above written.

SELLER SHALL BE AND REMAIN

NEW HAMPSHIRE HYDRO ASSOCIATES

By: Essex Development Associates, Inc., General Partner

By:

Name:

Title:

(Witness)

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

By:

Henry J. Ellis, Vice President

(Witness)

RIDER A

Article 3. Price.

The price charged by SELLER to PUBLIC SERVICE for sales of electric energy under this Contract shall be determined as follows:

A. For the initial ten (10) years of the term of the Contract, commencing as described in Rider G, below, (operating years 1 through 10 of the facility operations) an index price of 10.0 cents per kilowatt hour (kwh) is established and is to be paid under this Contract.

B. For the subsequent twenty (20) years of the term of the Contract, (years 11 through 30 of the facility operations) the price paid will be the greater of:

(i) ^{9.0}~~10.0~~ cents per kwh less the Amortized Premium, or

(ii) The percentage of PUBLIC SERVICE'S incremental energy cost for the current year per Paragraph II B of PUBLIC SERVICE'S POLICY STATEMENT CONTRACT PRICING PROVISIONS, LIMITED ELECTRICAL ENERGY PRODUCERS, dated _____ (hereinafter referred to as PSNH Policy Statement) attached hereto as Attachment B. as if said paragraph had been in effect since the commencement of this Contract less the Amortized Premium.

For the purpose of this paragraph the following definitions shall be used:

Amortized Premium: a levelized number expressing the amount by which the index price paid pursuant to this contract during the initial ten (10) year term exceeds the index price paid pursuant to Paragraph II, Option II Fixed Rate-Future Escalating Contract, of PSNH Policy Statement (hereinafter referred to as Option II).

Amortized Premium Base: The sum of the Annual Premiums for the initial 10 years, each escalated at the applicable PUBLIC SERVICE Discount Rate to the end of year 10.

The Amortized Premium and Amortized Premium Base shall be calculated as follows:

$$\text{Amortized Premium} = \text{Amortized Premium Base} \times \frac{i(1+i)^n}{(1+i)^{n-1}}$$

Where $n = 20$

i = the current year PUBLIC SERVICE discount
rate

Amortized Premium Base = Annual premium Year 1
+ Annual premium Year 2
+ ...
+ Annual Premium Year 9
+ Annual Premium Year 10

Where:

Annual Premium Year 1 = $P \times (1 + i_1) \times (1 + i_2) \times \dots \times (1 + i_q) (1 + i_{10})$

Annual Premium Year 2 = $P \times (1 + i_2) \times (1 + i_3) \times \dots \times (1 + i_q) (1 + i_{10})$

.

.

.

Annual Premium Year 10 = $P (1 + i_{10})$

Where (1) P is 10.0 cents per kwh less price per Paragraph

II.B of PSNH Policy Statement

(2) i_n is the PUBLIC SERVICE discount rate applicable
for year n expressed as a decimal.

For the purposes of determining the Amortized Premium Base and the
Amortized Premium, the PUBLIC SERVICE Discount Rate shall be the sum of:

- (i) The percent of equity in PUBLIC SERVICE'S capital structure times
the allowed rate of return on equity for PUBLIC SERVICE, plus
- (ii) The percent of preferred stock in PUBLIC SERVICE'S capital
structure times the cost of preferred stock for PUBLIC SERVICE,
plus
- (iii) The percent of debt in PUBLIC SERVICE'S capital structure times
the cost of debt for PUBLIC SERVICE.

This Discount Rate shall be determined annually by PUBLIC SERVICE and
submitted together with appropriate backup documentation and calculations, to
SELLER.

Rider B

Public Service shall be solely responsible for arrangements for further transmission service from the Delivery Point.

Rider C

When all or part of any bill shall remain unpaid for more than twenty (20) days after the rendering thereof by Seller, interest at the rate of 1 1/2% per month shall accrue to Seller from and after the rendering of said bill and be payable to Seller on either (a) such unpaid amount, or (b) in the event the amount of the bill is disputed, the amount finally determined to be due and payable. In the event that PUBLIC SERVICE does not read the meter by the date prescribed above, Seller may submit, and Public Service shall accept and make payment for power on the basis of Seller's meter reading.

Rider C1

In the event indemnification as to any claim is sought pursuant to this Article, the party seeking indemnification shall, within ten (10) days after receiving notice of such claim, give the other party written notice of such claim and an opportunity to defend against such claim and shall cooperate with the other party in such defense.

Rider D

(other than amounts due and owing pursuant to this Contract for payment for output from Seller's generating facility)

Rider E

Notwithstanding anything to the contrary contained in this Contract, Seller shall not be responsible in tort or contract or otherwise to Public Service for damages of any description whatsoever, including but not limited to incidental, indirect or consequential damages, which may result from any interruption or failure of service or deficiency in quality of service unless such interruption or failure or deficiency is the result of negligent or willful default by Seller in rendering service hereunder. It is the intent of the provisions of this paragraph that Public Service shall assume the risks of interruption, failure or deficiency in quality or quantity of service caused by the hazards of business to the same extent as if Public Service were itself operating Seller's generating facility for the purpose of supplying itself with electricity.

Rider F

The party whose performance is affected shall promptly notify the other party in writing of any actual or potential delay and shall use all reasonable efforts and diligence to overcome, remove or remedy the cause in the shortest practicable time.

Rider G

This Contract shall become effective between the parties as of the date hereof and shall run for a term of thirty (30) years, such term to commence upon the latest to occur of the execution and delivery of this Contract, the proper installation by Seller of the metering, interconnection and protection equipment as specified herein or the Date of Substantial Completion, as such term is defined in the Construction Contract dated January, 1982 between Seller and Perini Corporation.

Rider H

Notwithstanding the foregoing, Public Service hereby understands, agrees and consents to the assignment by Seller of all the right, title and interest of Seller in and to this Contract to New England Merchants National Bank as security for Seller's obligations under a loan agreement to be entered into between Seller and said bank to finance the development, construction, rehabilitation and operation of Seller's generating facility and the notes under said loan agreement.

Rider I

All claims, disputes and other matters in question arising out of, or relating to, this Agreement or the breach thereof, shall be decided in Boston, Massachusetts in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then in effect unless the parties mutually agree otherwise. This agreement to arbitrate shall be specifically enforceable under the prevailing law. The award rendered by the arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

Rider J

Except as otherwise specifically provided, all notices required or permitted by this Contract shall be in writing and shall be deemed to have been duly given when delivered in hand or deposited in the mail, postage prepaid, registered mail addressed to the party to whom notice is being given at its address set forth below.

NEW HAMPSHIRE HYDRO ASSOCIATES
99 NORTH STATE STREET
CONCORD, N.H. 03301
(603) 224-8333

- No attachment of policy statement
- incorp. in the doc.
- drastic change of condition
(per Fikberg) - renegotiate

January 7, 1981

Mr. John E. Lyons
Public Service Company of New Hampshire
1000 Elm Street
Manchester, NH 02105

Re: Penacook Lower Falls Project Power Sales Agreement

Dear Mr. Lyons:

Enclosed please find a copy of proposed modifications and additions to Public Service's proposed power sales agreement that New Hampshire Hydro Associates offers for your consideration. Regarding the incremented energy cost (IEC) data that you provided with your letter of December 21, 1981, let me again assure you that NHHA clearly understands that these are only PSNH's current estimates, and that the actual IEC's will be those used in determining the price for power in the contract.

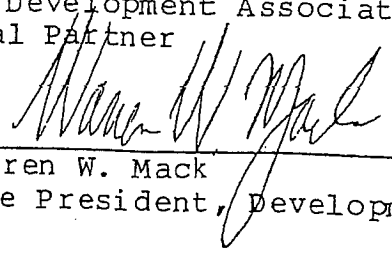
NHHA is currently drafting language concerning a "put" of the plant to PSNH should NHHA cease operations, and provisions for payments for capacity if and when the Penacook Project will enable PSNH to avoid adding capacity to their system.

NHHA looks forward to your expeditious response to the enclosed.

Sincerely,

NEW HAMPSHIRE HYDRO ASSOCIATES

By: Essex Development Associates, Inc.
General Partner

By: 
Warren W. Mack
Vice President, Development

WWM/hjd

Enclosures

LAWRENCE OFFICES
SIX ESSEX STREET, LAWRENCE, MA 01840 (617) 687-2312

Reply to: 110 Tremont Street, Boston, MA (617) 451-1103

CONTRACT FOR THE PURCHASE AND SALE
OF ELECTRIC ENERGY

CONTRACT, dated , 1982, by and between

New Hampshire Hydro Associates, a New Hampshire limited
partnership having its principal place of business in Concord,
New Hampshire (hereinafter referred to as SELLER), and

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE, a New Hampshire corporation
having its principal place of business in Manchester, New Hampshire
(hereinafter referred to as PUBLIC SERVICE).

WHEREAS, SELLER is engaged in the business of ^{the} generation of
electrical energy,

WHEREAS, SELLER desires to sell its entire generation output
to PUBLIC SERVICE,

WHEREAS, PUBLIC SERVICE is engaged in the business of the
generation, transmission, and distribution of electrical energy,

WHEREAS, PUBLIC SERVICE has determined it would be beneficial
to secure a reliable supply of electrical energy for a period of not
less than thirty years,

WHEREAS, SELLER is ^{desires} ~~willing and able~~ to sell its entire output
to PUBLIC SERVICE for thirty years;

NOW, THEREFORE, in consideration of the mutual covenants and
agreements hereinafter set forth, SELLER and PUBLIC SERVICE hereby agree
as follows:

Article 1. Basic Agreement.

Subject to the terms, provisions, and conditions of this
Contract, SELLER agrees to furnish and sell and PUBLIC SERVICE agrees to
purchase and receive all of the electric energy produced by the SELLER
from its Penacook Lower Falls generating facility, located in
the Village of Penacook ^{located within the City of Concord and the Town of Boscaawen,}
New Hampshire.

Article 2. Availability & Delivery.

During the term hereof, SELLER shall operate its generating ^{facility} ~~unit~~ to the maximum extent reasonably possible under the circumstances and shall make available to PUBLIC SERVICE the entire net output ^{measured} ~~in~~ kilowatthours) from said ^{facility} ~~unit~~ when in operation.

Said ^{output} ~~generation~~ shall be delivered to PUBLIC SERVICE at the point of interconnection ^{to be mutually agreed upon} ~~between~~ the generating facility of SELLER and the _____ kilovolt electric system of PUBLIC SERVICE (hereinafter referred to as DELIVERY POINT).

Unless PUBLIC SERVICE converts its interconnecting circuit, all electric energy delivered to PUBLIC SERVICE through the DELIVERY POINT shall be _____ phase, sixty hertz current at _____ kilovolts.

Article 3. Price.

The price charged by SELLER to PUBLIC SERVICE for sales of electric energy under this Contract shall be determined as follows:

RIDER A

~~A. An index price of 9.0 cents per kilowatthour (KWH) is established for the Contract pricing and is the initial price to be paid under this Contract subject to the following provisions.~~

1. For the first 10 years of the Contract, PUBLIC SERVICE will retain 10 percent (0.9 cents per KWH) for all energy purchased. During the second 10 years of the Contract, PUBLIC SERVICE will pay the SELLER an additional 0.9 cents per KWH, above the contract price, for purchased energy. The total of said additional payments, for any given year, shall not exceed one-tenth (1/10) of the total money retained by PUBLIC SERVICE during the first ~~ten Contract years.~~

2. ~~At such time that 96 percent of PUBLIC SERVICE's incremental energy cost exceeds the index, the rate to be paid under this Contract will increase in accordance with the provisions of Paragraph B.~~

B. All escalating payments in excess of the index will be determined as a percentage of PUBLIC SERVICE's incremental energy cost. As soon as 96 percent of PUBLIC SERVICE's incremental energy cost exceeds the index, the contract price will be based on 96 percent of PUBLIC SERVICE's incremental energy cost for a period of one year. For each subsequent year, the percentage of PUBLIC SERVICE's incremental energy cost to be paid will be reduced by 4 percent (i.e. 96 percent, 92 percent, 88 percent, 84 percent, etc.), until the incremental energy cost is reduced only 2 percent to reach 50 percent of PUBLIC SERVICE's incremental energy cost. At such time, the contract price will remain at the 50 percent rate for the remainder of the contract term.

PUBLIC SERVICE's incremental energy cost, for any hour, is equivalent to the marginal cost of providing energy for that hour. The marginal cost, for any hour, is the energy cost of the most expensive unit or purchased energy supplying a portion of PUBLIC SERVICE's load during that hour and includes all costs in the New England Power Exchange (NEPEX) bus rate cost for the incremental unit. The NEPEX bus rate costs are essentially the cost of fuel consumed. PUBLIC SERVICE's incremental energy cost, for the purposes of this Contract, will be expressed as a yearly average and will be calculated by averaging all 8,760 hourly incremental energy costs over the calendar year.

~~If the price paid during any year is less than the appropriate percentage of PUBLIC SERVICE's incremental energy cost for that year, an adjustment will be made for all energy sold to PUBLIC SERVICE. The adjustment will consist of an additional payment for each KWH sold to PUBLIC SERVICE during said year based on the difference between the price paid and the appropriate percentage of PUBLIC SERVICE's incremental energy cost. The adjustment will be paid within one month after PUBLIC SERVICE's incremental energy cost for the previous year has been determined.~~

~~If the price paid during any year is more than the appropriate percentage of PUBLIC SERVICE's incremental energy cost for that year, an adjustment will be made for all energy sold to PUBLIC SERVICE. The adjustment will consist of a refund to PUBLIC SERVICE for each KWH sold during said year based on the difference between the price paid and the appropriate percentage of PUBLIC SERVICE's incremental energy cost. The refund will be made to PUBLIC SERVICE by applying one-twelfth of the total amount as a reduction to each month's payment by PUBLIC SERVICE during the current year. If for any month, no payment is due the SELLER, or the payment due is not equal to the refund, a payment to PUBLIC SERVICE will be made by SELLER so that the total recovery is achieved by PUBLIC SERVICE by the end of the current year.~~

Article 4. Metering.

The metering shall be configured so as to represent the generation delivered to PUBLIC SERVICE. The metering may be installed on the generation side of the transformer provided that transformer losses are subtracted from the measured generation by a suitable method.

mutually agreeable

A

SELLER will install, own, and maintain all metering equipment as referenced in Article 5, to measure the flow of electrical energy from SELLER to PUBLIC SERVICE. If at any time, the meter is found to be in error by more than two percent fast or slow (+ or - 2%), SELLER shall cause such meter to be corrected and the meter readings for the period of inaccuracy shall be adjusted to correct such inaccuracy so far as the same can be reasonably ascertained, but no adjustment prior to the beginning of the preceding month shall be made except by agreement of the parties. All tests and calibrations shall be made in accordance

et a copy of these Rules and Regulations) with Section V-14 of the NHPUC Rules and Regulations Prescribing Standards for Electric Utilities in effect as of September 8, 1972, as amended.

The meter shall be tested as prescribed in said Rules and Regulations.

In addition to the regular routine tests, ^{prescribed in said Rules and Regulations,} SELLER shall cause the meter to be tested at any time upon request of and in the presence of a representative of PUBLIC SERVICE. If such equipment proves accurate within two percent fast or slow (+ or - 2%), the expense of the test shall be borne by PUBLIC SERVICE.

PUBLIC SERVICE reserves the right to secure or seal the metering installation, to require SELLER to measure electrical energy sold to PUBLIC SERVICE on an hourly basis, and to require SELLER to notify PUBLIC SERVICE once each day of SELLER's generation in kilowatthours for each hour during the prior 24 hours.

Article 5. Interconnection & Protection Requirements.

The SELLER shall install all interconnection, protection, metering, and control equipment as specified in PUBLIC SERVICE's study of the SELLER's electric generating facility, which study is, or will be upon mutual consent of both parties, attached hereto as Attachment A, and

which equipment shall be similar to that installed in generating facilities in the region which are similar to that of SELLER,

any other such equipment which may be ^{reasonably} necessary to ensure the safe and reliable operation of SELLER's generating ^{facility} ~~unit~~ in parallel with PUBLIC SERVICE's system. SELLER shall bear all costs associated with said equipment and its installation.

All said interconnection, protection, metering, and control equipment including, but not limited to, line extensions, transformers, meters, relays, breakers, and appurtenant equipment shall remain the sole property of SELLER.

SELLER shall have sole responsibility for the operation, maintenance, and repair of its generating ^{facility} ~~unit~~, including the interconnection, protection, metering, and control equipment. SELLER shall maintain, repair, or replace said generating ^{facility} ~~unit~~ including said equipment whenever necessary for the safe and reliable operation of SELLER's electric generating facility in parallel with PUBLIC SERVICE's system. RIDER B

In addition to the above, upon the ^{commencement of the term} ~~effective date~~ of this Contract, and every twelve months thereafter, the SELLER shall test, or cause to be tested, all protection devices including verification of calibration and tripping functions; and the SELLER shall notify PUBLIC SERVICE in writing that said tests have been conducted. SELLER shall ^{orally} notify PUBLIC SERVICE of any defect affecting the safety or reliability of said equipment not later than two hours after its discovery of the same.

If either party reasonably determines that any portion of the protection system as required in Article 5, its operation or use thereof, will or may not perform its protective function, including but not limited to opening the interconnecting tie, SELLER shall open the interconnection between PUBLIC SERVICE's system and SELLER's facility.

SELLER shall notify PUBLIC SERVICE not more than two days after it has opened said interconnection. PUBLIC SERVICE shall not be obligated to purchase electrical energy from SELLER, and the interconnection shall remain open, until SELLER has satisfactorily cured said defect at no cost to PUBLIC SERVICE.

Article 6. Right of Access.

Upon ^{reasonable} prior written or oral notice to SELLER, PUBLIC SERVICE shall have the right to enter the property of SELLER at reasonable times and shall be provided access to SELLER's metering, protection, control, and interconnection equipment *for the purposes of inspection thereof.*

Article 7. Modifications.

If SELLER plans any ^{material} modifications to its electric generating facility, SELLER shall give PUBLIC SERVICE prior written notice of its intentions. In the event that PUBLIC SERVICE reasonably determines that said modifications would necessitate changes to the interconnection, protection, control, or metering equipment or would cause PUBLIC SERVICE to incur additional expenses associated therewith, the SELLER shall make such changes as reasonably required by PUBLIC SERVICE and reimburse PUBLIC SERVICE for said expenses before PUBLIC SERVICE is obligated to purchase any increased output.

If the PUBLIC SERVICE interconnecting circuit is converted to a higher voltage in the future, the SELLER shall be responsible for all interconnection changes necessitated by the conversion and shall bear all costs associated with said conversion. *Public Service shall give SELLER reasonable notice of said conversion.*

Article 8. Billing & Payment.

PUBLIC SERVICE shall read the meter, installed in accordance with Article 4, ^{no later than the close of business on the first business day following} ~~on or at the end of each month~~, and PUBLIC SERVICE shall, ^{no later than the close of business on the second business day following the end of each month} send the SELLER a form showing the month's beginning and ending meter readings and total net kilowatthour generation.

SELLER shall then transmit to PUBLIC SERVICE a bill showing the amount due, which amount will be determined by multiplying the rate per kilowatthour specified in Article 3 times the number of kilowatthours delivered to PUBLIC SERVICE since the prior reading of the meter, and PUBLIC SERVICE will send to SELLER a payment for that amount within 20 days of receipt of SELLER's bill.

^ RIDER C

Article 9. Liability & Insurance.

- a. Each party will be responsible for its ^{own} facilities and the operation thereof and will indemnify and save the other harmless from any ^{and against} and all loss by reason of property damage, ^{or} bodily injury, including death resulting therefrom, suffered by any person or persons including the parties hereto, employees thereof or ^{third parties} ~~members of the public~~, (and all expenses in connection therewith, including attorney's fees), whether arising in contract, warranty, tort (including negligence), strict liability or otherwise, ^{caused by such party, its officers, employees, agents or directors, or} ~~caused by or sustained on, or alleged to be caused by or sustained on~~ equipment or facilities, or the operation or use thereof, owned or controlled by such party, ^{unless caused by an act of negligence or willful misconduct of the other party or} ~~except that~~ each party shall be solely responsible for an officer, employee, agent or director of the other party, and shall bear all costs of claims by its own employees or contractors growing out of any workmen's compensation law.

RIDER C1

Notwithstanding the foregoing,

- b. SELLER hereby agrees to maintain in force and effect, for the duration of this Contract, Workmen's Compensation Insurance, as required by statute, and Comprehensive General Liability Insurance for bodily injury and property damage at minimum limits of \$1,000,000. Within sixty days of the effective date of this Contract, the SELLER agrees to provide PUBLIC SERVICE with a certificate of such insurance.
- c. In no event shall PUBLIC SERVICE be liable, whether in contract, tort (including negligence), strict liability, warranty, or otherwise, for any special, indirect, incidental, or consequential loss or damage, including but not limited to cost of capital, cost of replacement power, loss of profits or revenues, or the loss of the use thereof. This provision, subsection c of Article 9, shall apply notwithstanding any other provision of this Contract.

d. RIDER E.

Article 10. Force Majeure.

~~Either~~ ^{Neither} party shall ~~not~~ be considered to be in default hereunder and shall be excused from purchasing or selling electricity hereunder if and to the extent that it shall be prevented from doing so by ^{severe weather,} ~~storm,~~ flood, lightning, earthquake, explosion, equipment failure, civil disturbance, labor dispute, act of God or the public enemy, action of a court or public authority, withdrawal of facilities from operation for necessary maintenance and repair, or any ^{other} cause beyond the reasonable control of either party. RIDER F.

Article 11. Effective Date & Contract Term.

~~This Contract shall become effective between the parties as of the date hereof, provided that the metering, interconnection, and~~

RIDER G.

~~protection equipment, as specified herein has been properly installed by the SELLER. If said equipment has not been properly installed, this Contract shall become effective between the parties as of the date of proper installation of said equipment or as of the date SELLER begins delivering energy to PUBLIC SERVICE, whichever occurs latest. As of the effective date of this Contract, the Contract shall remain in full force and effect for thirty (30) years.~~

In order for any modification to this Contract to be binding upon the parties, said modifications must be in writing and signed by both parties.

Article 12. Prior Agreements Superseded.

This Contract with Attachment A represents the entire agreement between the parties hereto relating to the subject matter hereof, and all previous agreements, discussion, communications, and correspondence with respect to the said subject matter are superseded by the execution of this Contract.

Article 13. Waiver of Terms or Conditions.

The failure of either party to enforce or insist upon compliance with any of the terms or conditions of this Contract shall not constitute a general waiver or relinquishment of any such terms or conditions, but the same shall be and remain at all times in full force and effect.

Article 14. General.

This Contract shall be binding upon, and inure to the benefit of the respective successors and assigns of the parties hereto, provided that SELLER shall not assign this Contract except to an affiliated company, without the prior written consent of PUBLIC SERVICE, which

company" shall include any partnership in which SELLER or one of SELLER's subsidiaries or affiliates is a general partner or any corporation in which SELLER or one of its subsidiaries or affiliates owns or controls more than 50 percent of the voting stock or otherwise has operating control. In the event of an assignment to an affiliate, SELLER shall notify PUBLIC SERVICE within five (5) days of the effective date of the assignment.

^ Rider H

Article 15. Arbitration *^ RIDER I*

Article 16. Applicable Law.

This Contract is made under the laws of The State of New Hampshire and the interpretation and performance hereof shall be in accordance with and controlled by the laws of that State.

Article 16. Mailing Addresses.

^ Rider J

The mailing addresses of the parties are as follows:

SELLER: New Hampshire Hydro Associates
99 North State Street
Concord, New Hampshire 03301
With a copy to:

Essex Development
Associates, Inc.
110 Tremont Street
Boston, MA 02108
Attn: General Counsel

Public Service: Public Service Company of New Hampshire
1000 Elm Street
P.O. Box 330
Manchester, New Hampshire 03105
Attn: Henry J. Ellis, Vice President

IN WITNESS WHEREOF, the parties have hereunto caused their names to be subscribed, as of the day and year first above written.

NEW HAMPSHIRE HYDRO ASSOCIATES

By: Essex Development Associates, Inc., General Partner

(Witness)

By:

Name:
Title:

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

(Witness)

By:

Henry J. Ellis, Vice President

RIDER A

Article 3. Price.

The price charged by SELLER to PUBLIC SERVICE for sales of electric energy under this Contract shall be determined as follows:

A. For the initial ten (10) years of the term of the Contract, commencing as described in Rider G, below, (operating years 1 through 10 of the facility operations) an index price of 10.0 cents per kilowatt hour (kwh) is established and is to be paid under this Contract.

B. For the subsequent twenty (20) years of the term of the Contract, (years 11 through 30 of the facility operations) the price paid will be the greater of:

- (i) 8.1 cents per kwh less the Amortized Premium, or
- (ii) The percentage of PUBLIC SERVICE'S incremental energy cost for the current year per Paragraph II B of PUBLIC SERVICE'S POLICY STATEMENT CONTRACT PRICING PROVISIONS, LIMITED ELECTRICAL ENERGY PRODUCERS, dated (hereinafter referred to as PSNH Policy Statement) attached hereto as Attachment B. as if said paragraph had been in effect since the commencement of this Contract less the Amortized Premium.

For the purpose of this paragraph the following definitions shall be used:

Amortized Premium: a levelized number expressing the amount by which the index price paid pursuant to this contract during the initial ten (10) year term exceeds the index price paid pursuant to Paragraph II, Option II Fixed Rate-Future Escalating Contract, of PSNH Policy Statement (hereinafter referred to as Option II).

Amortized Premium Base: The sum of the Annual Premiums for the initial 10 years, each escalated at the applicable PUBLIC SERVICE Discount Rate to the end of year 10.

The Amortized Premium and Amortized Premium Base shall be calculated as follows:

$$\text{Amortized Premium} = \text{Amortized Premium Base} \times \frac{i(1+i)^n}{(1+i)^{n-1}}$$

Where $n = 20$

i = the current year PUBLIC SERVICE discount
rate

$$\begin{aligned} \text{Amortized Premium Base} = & \text{Annual premium Year 1} \\ & + \text{Annual premium Year 2} \\ & + \dots \\ & + \text{Annual Premium Year 9} \\ & + \text{Annual Premium Year 10} \end{aligned}$$

Where:

$$\text{Annual Premium Year 1} = P \times (1 + i_1) \times (1 + i_2) \times \dots \times (1 + i_q) (1 + i_{10})$$

$$\text{Annual Premium Year 2} = P \times (1 + i_2) \times (1 + i_3) \times \dots \times (1 + i_q) (1 + i_{10})$$

$$\text{Annual Premium Year 10} = P (1 + i_{10})$$

Where (1) P is 10.0 cents per kwh less price per Paragraph
II.B of PSNH Policy Statement

(2) i_n is the PUBLIC SERVICE discount rate applicable
for year n expressed as a decimal.

For the purposes of determining the Amortized Premium Base and the
Amortized Premium, the PUBLIC SERVICE Discount Rate shall be the sum of:

- (i) The percent of equity in PUBLIC SERVICE'S capital structure times
the allowed rate of return on equity for PUBLIC SERVICE, plus
- (ii) The percent of preferred stock in PUBLIC SERVICE'S capital
structure times the cost of preferred stock for PUBLIC SERVICE,
plus
- (iii) The percent of debt in PUBLIC SERVICE'S capital structure times
the cost of debt for PUBLIC SERVICE.

This Discount Rate shall be determined annually by PUBLIC SERVICE and
submitted together with appropriate backup documentation and calculations, to
SELLER.

Rider B

Public Service shall be solely responsible for arrangements for further transmission service from the Delivery Point.

Rider C

When all or part of any bill shall remain unpaid for more than twenty (20) days after the rendering thereof by Seller, interest at the rate of 1 1/2% per month shall accrue to Seller from and after the rendering of said bill and be payable to Seller on either (a) such unpaid amount, or (b) in the event the amount of the bill is disputed, the amount finally determined to be due and payable. In the event that PUBLIC SERVICE does not read the meter by the date prescribed above, Seller may submit, and Public Service shall accept and make payment for power on the basis of Seller's meter reading.

Rider C1

In the event indemnification as to any claim is sought pursuant to this Article, the party seeking indemnification shall, within ten (10) days after receiving notice of such claim, give the other party written notice of such claim and an opportunity to defend against such claim and shall cooperate with the other party in such defense.

Rider D

(other than amounts due and owing pursuant to this Contract for payment for output from Seller's generating facility)

Rider E

Notwithstanding anything to the contrary contained in this Contract, Seller shall not be responsible in tort or contract or otherwise to Public Service for damages of any description whatsoever, including but not limited to incidental, indirect or consequential damages, which may result from any interruption or failure of service or deficiency in quality of service unless such interruption or failure or deficiency is the result of negligent or willful default by Seller in rendering service hereunder. It is the intent of the provisions of this paragraph that Public Service shall assume the risks of interruption, failure or deficiency in quality or quantity of service caused by the hazards of business to the same extent as if Public Service were itself operating Seller's generating facility for the purpose of supplying itself with electricity.

Rider F

The party whose performance is affected shall promptly notify the other party in writing of any actual or potential delay and shall use all reasonable efforts and diligence to overcome, remove or remedy the cause in the shortest practicable time.

Rider G

This Contract shall become effective between the parties as of the date hereof and shall run for a term of thirty (30) years, such term to commence upon the latest to occur of the execution and delivery of this Contract, the proper installation by Seller of the metering, interconnection and protection equipment as specified herein or the Date of Substantial Completion, as such term is defined in the Construction Contract dated January, 1982 between Seller and Perini Corporation.

Rider H

Notwithstanding the foregoing, Public Service hereby understands, agrees and consents to the assignment by Seller of all the right, title and interest of Seller in and to this Contract to New England Merchants National Bank as security for Seller's obligations under a loan agreement to be entered into between Seller and said bank to finance the development, construction, rehabilitation and operation of Seller's generating facility and the notes under said loan agreement.

Rider I

All claims, disputes and other matters in question arising out of, or relating to, this Agreement or the breach thereof, shall be decided in Boston, Massachusetts in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then in effect unless the parties mutually agree otherwise. This agreement to arbitrate shall be specifically enforceable under the prevailing law. The award rendered by the arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

Rider J

Except as otherwise specifically provided, all notices required or permitted by this Contract shall be in writing and shall be deemed to have been duly given when delivered in hand or deposited in the mail, postage prepaid, registered mail addressed to the party to whom notice is being given at its address set forth below.

**CONTRACT FOR THE PURCHASE AND SALE
OF ELECTRIC ENERGY**

CONTRACT

*Wm MacK copy
As given to PSHW
1/7/82*

CONTRACT, dated _____, 1982, by and between

New Hampshire Hydro Associates, a New Hampshire limited

partnership having its principal place of business in Concord,

New Hampshire

(hereinafter referred to as SELLER), and

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE, a New Hampshire corporation

having its principal place of business in Manchester, New Hampshire

(hereinafter referred to as PUBLIC SERVICE).

WHEREAS, SELLER is engaged in the business of ^{the} generation of electrical energy,

WHEREAS, SELLER desires to sell its entire generation output to PUBLIC SERVICE,

WHEREAS, PUBLIC SERVICE is engaged in the business of the generation, transmission, and distribution of electrical energy,

WHEREAS, PUBLIC SERVICE has determined it would be beneficial to secure a reliable supply of electrical energy for a period of not less than thirty years,

WHEREAS, SELLER ^{desires} is willing and able to sell its entire output to PUBLIC SERVICE for thirty years;

NOW, THEREFORE, in consideration of the mutual covenants and agreements hereinafter set forth, SELLER and PUBLIC SERVICE hereby agree as follows:

Article 1. Basic Agreement.

Subject to the terms, provisions, and conditions of this Contract, SELLER agrees to furnish and sell and PUBLIC SERVICE agrees to purchase and receive all of the electric energy produced by the SELLER from its Penacook Lower Falls generating facility, located in the Village of Penacook ^{located within the City of Concord and the Town of Boscaawen,} New Hampshire.

*Section
rate of test
pur*

Article 2. Availability & Delivery.

During the term hereof, SELLER shall operate its generating unit ^{facility} to the maximum extent reasonably possible under the circumstances and shall make available to PUBLIC SERVICE the entire net output ^{measured} in kilowatthours) from said unit ^{facility} when in operation.

Said generation ^{output} shall be delivered to PUBLIC SERVICE at the point of interconnection ^{to be mutually agreed upon} between the generating facility of SELLER and the _____ kilovolt electric system of PUBLIC SERVICE (hereinafter referred to as DELIVERY POINT).

Unless PUBLIC SERVICE converts its interconnecting circuit, all electric energy delivered to PUBLIC SERVICE through the DELIVERY POINT shall be _____ phase, sixty hertz current at _____ kilovolts.

Article 3. Price.

The price charged by SELLER to PUBLIC SERVICE for sales of electric energy under this Contract shall be determined as follows:

RIDER A.

~~A. An index price of 9.0 cents per kilowatthour (KWH) is established for the Contract pricing and is the initial price to be paid under this Contract subject to the following provisions.~~

- ~~1. For the first 10 years of the Contract, PUBLIC SERVICE will retain 10 percent (0.9 cents per KWH) for all energy purchased. During the second 10 years of the Contract, PUBLIC SERVICE will pay the SELLER an additional 0.9 cents per KWH, above the contract price, for purchased energy. The total of said additional payments, for any given year, shall not exceed one-tenth (1/10) of the total money retained by PUBLIC SERVICE during the first ten Contract years.~~

2. ~~At such time that 96 percent of PUBLIC SERVICE's incremental energy cost exceeds the index, the rate to be paid under this Contract will increase in accordance with the provisions of Paragraph B.~~

B. All escalating payments in excess of the index will be determined as a percentage of PUBLIC SERVICE's incremental energy cost. As soon as 96 percent of PUBLIC SERVICE's incremental energy cost exceeds the index, the contract price will be based on 96 percent of PUBLIC SERVICE's incremental energy cost for a period of one year. For each subsequent year, the percentage of PUBLIC SERVICE's incremental energy cost to be paid will be reduced by 4 percent (i.e. 96 percent, 92 percent, 88 percent, 84 percent, etc.), until the incremental energy cost is reduced only 2 percent to reach 50 percent of PUBLIC SERVICE's incremental energy cost. At such time, the contract price will remain at the 50 percent rate for the remainder of the contract term.

PUBLIC SERVICE's incremental energy cost, for any hour, is equivalent to the marginal cost of providing energy for that hour. The marginal cost, for any hour, is the energy cost of the most expensive unit or purchased energy supplying a portion of PUBLIC SERVICE's load during that hour and includes all costs in the New England Power Exchange (NEPEX) bus rate cost for the incremental unit. The NEPEX bus rate costs are essentially the cost of fuel consumed. PUBLIC SERVICE's incremental energy cost, for the purposes of this Contract, will be expressed as a yearly average and will be calculated by averaging all 8,760 hourly incremental energy costs over the calendar year.

OK

~~If the price paid during any year is less than the appropriate~~
percentage of PUBLIC SERVICE's incremental energy cost for that year, an
adjustment will be made for all energy sold to PUBLIC SERVICE. The
adjustment will consist of an additional payment for each KWH sold to
PUBLIC SERVICE during said year based on the difference between the
price paid and the appropriate percentage of PUBLIC SERVICE's incremental
energy cost. The adjustment will be paid within one month after PUBLIC
SERVICE's incremental energy cost for the previous year has been determined,
but in no event later than 60 days following the end of the year.
If the price paid during any year is more than the appropriate
percentage of PUBLIC SERVICE's incremental energy cost for that year, an
adjustment will be made for all energy sold to PUBLIC SERVICE. The
adjustment will consist of a refund to PUBLIC SERVICE for each KWH sold
during said year based on the difference between the price paid and the
appropriate percentage of PUBLIC SERVICE's incremental energy cost. The
refund will be made to PUBLIC SERVICE by applying one-twelfth of the
total amount as a reduction to each month's payment by PUBLIC SERVICE
during the current year. If for any month, no payment is due the SELLER,
or the payment due is not equal to the refund, a payment to PUBLIC
SERVICE will be made by SELLER so that the total recovery is achieved by
PUBLIC SERVICE by the end of the current year.

Article 4. Metering.

*sent for line
law. P/D*
The metering shall be configured so as to represent the gener-
ation delivered to PUBLIC SERVICE *as measured at the Point of Delivery.* The metering may be installed on the
generation side of the transformer provided that transformer losses are
subtracted from the measured generation by a suitable method. *mutually agreeable*

SELLER will install, own, and maintain all metering equipment as referenced in Article 5, to measure the flow of electrical energy from SELLER to PUBLIC SERVICE. If at any time, the meter is found to be in error by more than two percent fast or slow (+ or - 2%), SELLER shall cause such meter to be corrected and the meter readings for the period of inaccuracy shall be adjusted to correct such inaccuracy so far as the same can be reasonably ascertained, but no adjustment prior to the beginning of the preceding month shall be made except by agreement of the parties. All tests and calibrations shall be made in accordance with Section V-14 of the NHPUC Rules and Regulations Prescribing Standards for Electric Utilities in effect as of September 8, 1972, as amended.

+ a copy of
these Rules
and
Regulations)

The meter shall be tested as prescribed in said Rules and Regulations.

In addition to the regular routine tests, ^{prescribed in said Rules and Regulations,} SELLER shall cause the meter to be tested at any time upon request of and in the presence of a representative of PUBLIC SERVICE. If such equipment proves accurate within two percent fast or slow (+ or - 2%), the expense of the test shall be borne by PUBLIC SERVICE.

PUBLIC SERVICE reserves the right to secure or seal the metering installation, to require SELLER to measure electrical energy sold to PUBLIC SERVICE on an hourly basis, and to require SELLER to notify PUBLIC SERVICE once each day of SELLER's generation in kilowatthours for each hour during the prior 24 hours.

taking into account
which equipment shall be similar to that
installed in generating facilities in the
region which are similar to that of Seller,

Article 5. Interconnection & Protection Requirements.

The SELLER shall install all interconnection, protection, metering, and control equipment ^{is reasonably} as specified in PUBLIC SERVICE's study of the SELLER's electric generating facility, ^{Such} which study is, or will be upon mutual consent of both parties, attached hereto as Attachment A, and

Concords requirements shouldn't be > P.S.'s
(they're an all-requirements customer)

any other such equipment which may be ^{reasonably} necessary to ensure the safe and reliable operation of SELLER's generating unit ^{facility} in parallel with PUBLIC SERVICE's system. SELLER shall bear all costs associated with said equipment and its installation.

All said interconnection, protection, metering, and control equipment including, but not limited to, line extensions, transformers, meters, relays, breakers, and appurtenant equipment shall remain the sole property of SELLER.

SELLER shall have sole responsibility for the operation, maintenance, and repair of its generating unit, ^{facility} including the interconnection, protection, metering, and control equipment. SELLER shall maintain, repair, or replace said generating unit ^{facility} including said equipment whenever necessary for the safe and reliable operation of SELLER's electric generating facility in parallel with PUBLIC SERVICE's system. RIDER B

In addition to the above, upon the ^{commencement of the term} effective date of this Contract, and every twelve months thereafter, the SELLER shall test, or cause to be tested, all protection devices including verification of calibration and tripping functions; and the SELLER shall notify PUBLIC SERVICE in writing that said tests have been conducted. SELLER shall ^{orally} notify PUBLIC SERVICE of any defect affecting the safety or reliability of said equipment not later than ~~two~~ ^{Twenty Four} hours after its discovery of the same.

2 hours a
reasonable
time??

If either party reasonably determines that any portion of the protection system as required in Article 5, its operation or use thereof, will or may not perform its protective function, including but not limited to opening the interconnecting tie, SELLER shall open the interconnection between PUBLIC SERVICE's system and SELLER's facility.

SELLER shall notify PUBLIC SERVICE not more than two days after it has opened said interconnection. PUBLIC SERVICE shall not be obligated to purchase electrical energy from SELLER, and the interconnection shall remain open, until SELLER has satisfactorily cured said defect at no cost to PUBLIC SERVICE.

Statement as to obligation of PS to maintain + keep in operation the lines to point of delivery *see letter B*
Article 6. Right of Access.

Upon ^{reasonable} prior written or oral notice to SELLER, PUBLIC SERVICE shall have the right to enter the property of SELLER at reasonable times and shall be provided access to SELLER's metering, protection, control, and interconnection equipment *for the purposes of inspection thereof.*

Article 7. Modifications.

If SELLER plans any ^{material} modifications to its electric generating facility, SELLER shall give PUBLIC SERVICE prior written notice of its intentions. In the event that PUBLIC SERVICE reasonably determines that said modifications would necessitate changes to the interconnection, protection, control, or metering equipment or would cause PUBLIC SERVICE to incur additional expenses associated therewith, the SELLER shall make such changes as reasonably required by PUBLIC SERVICE and reimburse PUBLIC SERVICE for said expenses before PUBLIC SERVICE is obligated to purchase any increased output.

If the PUBLIC SERVICE interconnecting circuit is converted to a higher voltage in the future, the SELLER shall be responsible for all interconnection changes necessitated by the conversion and shall bear all costs associated with said conversion. Public Service shall give Seller *reasonable notice of said conversion.*

Article 8. Billing & Payment.

PUBLIC SERVICE shall read the meter, installed in accordance
no later than the close of business on the first business day following
with Article 4, on or at the end of each month, and PUBLIC SERVICE shall,
no later than the close of business on the second business day following the end of each month,
send the SELLER a form showing the month's beginning and ending meter
readings and total net kilowatthour generation. *wife they read the meter*

SELLER shall then transmit to PUBLIC SERVICE a bill showing
the amount due, which amount will be determined by multiplying the rate
per kilowatthour specified in Article 3 times the number of kilowatthours
delivered to PUBLIC SERVICE since the prior reading of the meter, and
PUBLIC SERVICE will send to SELLER a payment for that amount within 20
days of receipt of SELLER's bill. *RIDER C*

Article 9. Liability & Insurance.

- a. Each party will be responsible for its ^{own} facilities and the
operation thereof and will indemnify and save the other harm-
less from ^{and against} any and all loss by reason of property damage, ^{or}
bodily injury, including death resulting therefrom, suffered by
any person or persons including the parties hereto, employees
thereof or ^{third parties} members of the public, (and all expenses in connec-
tion therewith, including attorney's fees), whether arising in
contract, warranty, tort (including negligence), strict
liability or otherwise, ^{caused by such party, its officers, employees, agents or directors, or} caused by or sustained on, ~~or alleged~~
~~to be caused by or sustained on~~ equipment or facilities, or

the operation or use thereof, owned or controlled by such
party, ^{unless caused by an act of negligence or willful misconduct of the other party or} except that each party shall be solely responsible for an officer,
and shall bear all costs of claims by its own employees or employee, agent
contractors growing out of any workmen's compensation law. ^{or director of} the other
party.

RIDER C1

*Notwithstanding
the foregoing,*

- b. SELLER hereby agrees to maintain in force and effect, for the duration of this Contract, Workmen's Compensation Insurance, as required by statute, and Comprehensive General Liability Insurance for bodily injury and property damage at minimum limits of \$1,000,000. Within sixty days of the effective date of this Contract, the SELLER agrees to provide PUBLIC SERVICE with a certificate of such insurance.
- c. In no event shall PUBLIC SERVICE be liable, whether in Contract, tort (including negligence), strict liability, warranty, or otherwise, for any special, indirect, incidental, or consequential loss or damage, including but not limited to cost of capital, cost of replacement power, loss of profits or revenues, or the loss of the use thereof. This provision, subsection c of Article 9, shall apply notwithstanding any other provision of this Contract.

RIDER D

d. RIDER E

Article 10. Force Majeure.

~~Neither~~
Either party shall not be considered to be in default hereunder and shall be excused from purchasing or selling electricity hereunder if and to the extent that it shall be prevented from doing so by ^{severe weather,} storm, flood, lightning, earthquake, explosion, equipment failure, civil disturbance, labor dispute, act of God or the public enemy, action of a court or public authority, withdrawal of facilities from operation for necessary maintenance and repair, or any ^{other} cause beyond the reasonable control of either party. RIDER F Nothing herein shall excuse PS from making timely payment of monies due hereunder.

Article 11: Effective Date & Contract Term.

~~This Contract shall become effective between the parties as of the date hereof, provided that the metering, interconnection, and~~

RIDER G

protection-equipment, as specified herein has been properly installed by the SELLER. If said equipment has not been properly installed, this Contract shall become effective between the parties as of the date of proper installation of said equipment or as of the date SELLER begins delivering energy to PUBLIC SERVICE, whichever occurs latest. As of the effective date of this Contract, the Contract shall remain in full force and effect for thirty-(30) years.

In order for any modification to this Contract to be binding upon the parties, said modifications must be in writing and signed by both parties.

Article 12. Prior Agreements Superseded.

This Contract with Attachment A represents the entire agreement between the parties hereto relating to the subject matter hereof, and all previous agreements, discussion, communications, and correspondence with respect to the said subject matter are superseded by the execution of this Contract.

Article 13. Waiver of Terms or Conditions.

The failure of either party to enforce or insist upon compliance with any of the terms or conditions of this Contract shall not constitute a general waiver or relinquishment of any such terms or conditions, but the same shall be and remain at all times in full force and effect.

Article 14. General.

This Contract shall be binding upon, and inure to the benefit of the respective successors and assigns of the parties hereto, provided that SELLER shall not assign this Contract except to an affiliated company, without the prior written consent of PUBLIC SERVICE, which

Article 15. Arbitration A RIDER I
Article 15. Applicable Law.

Article 16⁷. Mailing Addresses.

SELLER: New Hampshire Hydro Associates
99 North State Street
Concord, New Hampshire 03301
with a copy to:

Henry J. Ellis, Vice President

RIDER A

Article 3. Price.

The price charged by SELLER to PUBLIC SERVICE for sales of electric energy under this Contract shall be determined as follows:

A. For the initial ten (10) years of the term of the Contract, commencing as described in Rider G, below, (operating years 1 through 10 of the facility operations) an index price of 10.0 cents per kilowatt hour (kwh) is established and is to be paid under this Contract.

B. For the subsequent twenty (20) years of the term of the Contract, (years 11 through 30 of the facility operations) the price paid will be the greater of:

(i) ^{9.0}
~~10.0~~ cents per kwh less the Amortized Premium, or

(ii) The percentage of PUBLIC SERVICE'S incremental energy cost for the current year per Paragraph II B of PUBLIC SERVICE'S POLICY STATEMENT CONTRACT PRICING PROVISIONS, LIMITED ELECTRICAL ENERGY PRODUCERS, dated (hereinafter referred to as PSNH Policy Statement) attached hereto as Attachment B. as if said paragraph had been in effect since the commencement of this Contract less the Amortized Premium.

For the purpose of this paragraph the following definitions shall be used:

Amortized Premium: a levelized number expressing the amount by which the index price paid pursuant to this contract during the initial ten (10) year term exceeds the index price paid pursuant to Paragraph II, Option II Fixed Rate-Future Escalating Contract, of PSNH Policy Statement (hereinafter referred to as Option II).

Amortized Premium Base: The sum of the Annual Premiums for the initial 10 years, each escalated at the applicable PUBLIC SERVICE Discount Rate to the end of year 10.

The Amortized Premium and Amortized Premium Base shall be calculated as follows:

$$\text{Amortized Premium} = \text{Amortized Premium Base} \times \frac{i(1+i)^n}{(1+i)^{n-1}}$$

Where $n = 20$

i = the current year PUBLIC SERVICE discount
rate

$$\begin{aligned} \text{Amortized Premium Base} = & \text{Annual premium Year 1} \\ & + \text{Annual premium Year 2} \\ & + \dots \\ & + \text{Annual Premium Year 9} \\ & + \text{Annual Premium Year 10} \end{aligned}$$

Where:

$$\text{Annual Premium Year 1} = P \times (1 + i_1) \times (1 + i_2) \times \dots \times (1 + i_q) (1 + i_{10})$$

$$\text{Annual Premium Year 2} = P \times (1 + i_2) \times (1 + i_3) \times \dots \times (1 + i_q) (1 + i_{10})$$

$$\text{Annual Premium Year 10} = P (1 + i_{10})$$

Where (1) P is 10.0 cents per kwh less price per Paragraph II.B of PSNH Policy Statement

(2) i_n is the PUBLIC SERVICE discount rate applicable for year n expressed as a decimal.

For the purposes of determining the Amortized Premium Base and the Amortized Premium, the PUBLIC SERVICE Discount Rate shall be the sum of:

- (i) The percent of equity in PUBLIC SERVICE'S capital structure times the allowed rate of return on equity for PUBLIC SERVICE, plus
- (ii) The percent of preferred stock in PUBLIC SERVICE'S capital structure times the cost of preferred stock for PUBLIC SERVICE, plus
- (iii) The percent of debt in PUBLIC SERVICE'S capital structure times the cost of debt for PUBLIC SERVICE.

This Discount Rate shall be determined annually by PUBLIC SERVICE and submitted together with appropriate backup documentation and calculations, to SELLER.

Rider B ✓

Public Service shall ^{make and} be solely responsible for arrangements for ^{to its system} ~~the~~ further transmission service from the Delivery Point ^{our own intervening} and shall ^{systems, including but} ~~not limited to payment for~~ ^{use of electrical transmission} ~~facilities of others~~

Rider C

^{use its best efforts to keep such service in good working order so that it can receive the electric energy produced by Seller's generating facility.}

When all or part of any bill shall remain unpaid for more than twenty (20) days after the rendering thereof by Seller, interest at the rate of 1 1/2% per month shall accrue to Seller from and after the rendering of said bill and be payable to Seller on either (a) such unpaid amount, or (b) in the event the amount of the bill is disputed, the amount finally determined to be due and payable. In the event that PUBLIC SERVICE does not read the meter by the date prescribed above, Seller may submit, and Public Service shall accept and make payment for power on the basis of Seller's meter reading.

Subject to correction so as to only a question of meter. In dispute

If P-S in good faith disputes Seller's meter reading it shall at the time of payment give Seller written notice of such protest and specify the reasons upon which the protest is based.

Rider C1

In the event indemnification as to any claim is sought pursuant to this Article, the party seeking indemnification shall, within ten (10) days after receiving notice of such claim, give the other party written notice of such claim and an opportunity to defend against such claim and shall cooperate with the other party in such defense.

Rider D

(other than amounts due and owing pursuant to this Contract for payment for output from Seller's generating facility)

Rider E

*Redundant of
the measure?*

Notwithstanding anything to the contrary contained in this Contract, Seller shall not be responsible in tort or contract or otherwise to Public Service for damages of any description whatsoever, including but not limited to incidental, indirect or consequential damages, which may result from any interruption or failure of service or deficiency in quality of service unless such interruption or failure or deficiency is the result of negligent or willful default by Seller in rendering service hereunder. It is the ^{intent} interest of the provisions of this paragraph that Public Service shall assume the risks of interruption, failure or deficiency in quality or quantity of service caused by the hazards of business to the same extent as if Public Service were itself operating Seller's generating facility for the purpose of supplying itself with electricity.

Rider F

The party whose performance is affected shall promptly notify the other party in writing of any actual or potential delay and shall use all reasonable efforts and diligence to overcome, remove or remedy the cause in the shortest practicable time.

Rider G

This Contract shall become effective between the parties as of the date hereof and shall run for a term of thirty (30) years, such term to commence upon the latest to occur of the execution and delivery of this Contract, the proper installation by Seller of the metering, interconnection and protection equipment as specified herein or the Date of Substantial Completion, as such term is defined in the Construction Contract dated ~~January~~ ^{March} 1982 between Seller and Perini Corporation.

Rider H

Notwithstanding the foregoing, Public Service hereby understands, agrees and consents to the assignment by Seller of all the right, title and interest of Seller in and to this Contract to New England Merchants National Bank as security for Seller's obligations under a loan agreement to be entered into between Seller and said bank to finance the development, construction, rehabilitation and operation of Seller's generating facility and the notes under said loan agreement.

Rider I

All claims, disputes and other matters in question arising out of, or relating to, this Agreement or the breach thereof, shall be decided in Boston, Massachusetts in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then in effect unless the parties mutually agree otherwise. This agreement to arbitrate shall be specifically enforceable under the prevailing law. The award rendered by the arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

Rider J

Except as otherwise specifically provided, all notices required or permitted by this Contract shall be in writing and shall be deemed to have been duly given when delivered in hand or deposited in the mail, postage prepaid, registered mail addressed to the party to whom notice is being given at its address set forth below.

RIDER K

ARTICLE ____ . Abandonment

If, at any time during the eleventh to thirtieth years of the term of this Contract, Seller ceases operation, as defined below, of its generating facility, PUBLIC SERVICE may, at its option and upon ninety (90) days written notice to Seller and subject to the consent of the Federal Energy Regulatory Commission and Allied Leather Corporation and such other consents as would then be required, lease Seller's generating facility from Seller for the remainder of the term of this Contract at an annual rental charge equal to the annual depreciation allowance, as determined below. If and at such time as PUBLIC SERVICE exercises its option to lease, Seller and PUBLIC SERVICE shall enter into a lease containing the terms set forth in this Article ____ and such additional terms and conditions as the parties shall then mutually agree upon. If Seller and PUBLIC SERVICE are unable to reach agreement with respect to any of the terms of the lease, other than the terms provided for in this Article, the parties shall submit the terms which have not been agreed upon to binding arbitration in accordance with the rules of the American Arbitration Association then in effect and the decision of the arbitrator shall be final. As a part of said lease, PUBLIC SERVICE shall assume all of Seller's obligations relating to Seller's generating facility, including but not limited to leasehold and license payments, taxes, utility charges, insurance and operation, maintenance and repair expenses.

The Seller shall be deemed to have ceased operation of its generating facility if and only if:

- i. The generating facility has not generated any power for a period of twelve (12) successive months; and
- ii. Seller has not commenced necessary repairs or taken other appropriate action to permit resumption of power deliveries under this Contract.

The annual depreciation allowance for a given year of the lease shall be the depreciation expense that would have been charged on the books of the Seller for such year had the costs of acquisition and construction, as hereinafter defined, been depreciated over 30 years using the straight line method of depreciation and had subsequent capital expenditures, as hereinafter defined, been depreciated over the lesser of the remaining term of this Contract or the useful life of the asset using the straight line method of depreciation.

As used herein, "costs of acquisition and construction" shall mean all costs of determining the feasibility of, and acquiring, constructing, licensing, financing, carrying out and placing in operation Seller's generating facility paid or incurred by Seller prior to the commencement of the term of this Contract, and shall include but not be limited to funds required for preliminary survey, investigation and development costs, feasibility studies, engineering studies and services,

contractors' fees, permits, licenses and approvals, labor, materials, equipment, lands, rights of way, leases, franchises, easements and other interests in land and options therefor, utility services and supplies, payments to other public agencies, training and testing costs, insurance premiums, interest on construction financing and an allowance for a return on equity funds used for construction financing, fees and expenses, all federal, state and local taxes and payments in lieu of taxes legally required to be paid in connection with the acquisition and construction of the generating facility, legal and financing costs, administrative and general costs, all costs relating to injury and damage claims arising out of the acquisition and construction of the generating facility, and all other costs incurred by the Seller and properly allocable to the acquisition and construction of the generating facility and carrying out and placing the same in operation.

As used herein, subsequent capital expenditures shall mean all expenditures paid or incurred by Seller subsequent to the commencement of the term of this Contract and capitalized on the books of Seller.

Payment by PUBLIC SERVICE to Seller of the annual rental charge shall be made in equal quarterly amounts on or before the last day of March, June, September and December. In the event the term of the lease commences on a day other than the first day of a calendar quarter, such rental charge shall be pro rated

accordingly. Interest shall accrue to Seller at a rate of 1 1/2% per month from and after the due date on the amount of any payments not made within twenty days of the due date.

ARTICLE . Compensation for Capacity

If at any time during the term of this Contract, the existence and operation of Seller's generating facility enables PUBLIC SERVICE to defer additions to its sources of generating capacity, then PUBLIC SERVICE agrees to compensate Seller for the capacity contribution made by Seller's generating facility. Seller shall be entitled to such compensation upon the occurrence of one or more of the following events:

- a. PUBLIC SERVICE places into service new generating capacity (with the exception of the current construction program of PUBLIC SERVICE);
- b. PUBLIC SERVICE purchases an ownership interest in a power generating facility in service (with the exception of current contractual arrangements);
- c. PUBLIC SERVICE enters into a power purchase agreement for firm power in which a capacity charge is incurred (with the exception of current contractual arrangements); or

- d. PUBLIC SERVICE has a lower reserve margin than is required by New England Power Pool ("NEPOOL") under the New England Power Pool Agreement dated as of September 1, 1971, and incurs NEPOOL capacity deficiency charges

At such time as one or more of the above-described events occurs, PUBLIC SERVICE shall give Seller prompt written notice thereof and shall, commencing with the month next succeeding such event and continuing for the remaining term of this Contract, compensate Seller on the basis of the capacity contribution made by Seller's generating facility. The capacity of Seller's generating facility shall be determined by using the method outlined in the NEPOOL publication entitled, "Instructions for Periodic Capability Audit Tests of NEPOOL Generating Units," or, if such publication is not then in existence, whatever method of determining capacity contribution is commonly used at such time. The per kilowatt value of the capacity shall be established by determining the cost avoided by PUBLIC SERVICE. If the avoided cost is an increment of purchased or PUBLIC SERVICE-built generating capacity as described in a. or b. above, then the amount of compensation shall be equal to the annual avoided cost, i.e., the total capital cost of such capacity times the then current fixed charge rate of PUBLIC SERVICE.

Capacity payments by PUBLIC SERVICE to Seller shall be made in equal monthly installments on the same terms and conditions as the regular billing described in Article 8 above.

RIDER L

ARTICLE . TERMINATION

If at any time during the term of this Contract, PUBLIC SERVICE fails to make any payment in full when due and such failure is not cured within 90 days after written notice thereof shall have been given by Seller to PUBLIC SERVICE, then and in any such case Seller may terminate this Contract forthwith by delivering a written notice of termination to PUBLIC SERVICE. In the event of such termination, all continuing obligations of the parties shall cease forthwith, except the obligation of PUBLIC SERVICE and Seller to indemnify each other with respect to claims arising prior to such termination and the obligation of PUBLIC SERVICE to make full payment for power delivered by Seller to PUBLIC SERVICE through such date of termination.

ARTICLE . TEST POWER

PUBLIC SERVICE agrees to purchase all test power generated by Seller's generating facility prior to the commencement of the term of this Contract at the rate then in effect as established by the New Hampshire Public Utilities Commission for qualifying small power producers, provided that all metering, interconnection and protection equipment as specified herein has been properly installed by Seller.

NEW HAMPSHIRE HYDRO ASSOCIATES
99 NORTH STATE STREET
CONCORD, N.H. 03301
(603) 224-8333

NOTED JAN 22 1982 R.V.P.

NOTED JAN 20 1981 J.E.L.

January 21, 1982

Mr. John E. Lyons
Public Service Company of New Hampshire
1000 Elm Street
Manchester, NH 02105

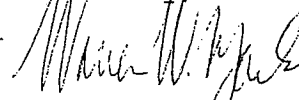
Re: Penacook Lower Falls Power Sales Agreement

Dear Mr. Lyons: *John*

Attached is a copy of Essex's proposed contract provisions for Abandonment and Credit for Capacity that we discussed. I have also included two additional amendments for your consideration covering Termination and Test Power.

Essex looks forward to concluding our negotiations as soon as can be arranged.

Sincerely,



Warren W. Mack
Vice President, Development

WWM/hjd

Attachment

Reply to: 110 Tremont Street, Boston, MA 02108

RIDER K

ARTICLE . Abandonment

If, at any time during the eleventh to thirtieth years of the term of this Contract, Seller ceases operation, as defined below, of its generating facility, PUBLIC SERVICE may, at its option and upon ninety (90) days written notice to Seller and subject to the consent of the Federal Energy Regulatory Commission and Allied Leather Corporation and such other consents as would then be required, lease Seller's generating facility from Seller for the remainder of the term of this Contract at an annual rental charge equal to the annual depreciation allowance, as determined below. If and at such time as PUBLIC SERVICE exercises its option to lease, Seller and PUBLIC SERVICE shall enter into a lease containing the terms set forth in this Article __ and such additional terms and conditions as the parties shall then mutually agree upon. If Seller and PUBLIC SERVICE are unable to reach agreement with respect to any of the terms of the lease, other than the terms provided for in this Article, the parties shall submit the terms which have not been agreed upon to binding arbitration in accordance with the rules of the American Arbitration Association then in effect and the decision of the arbitrator shall be final. As a part of said lease, PUBLIC SERVICE shall assume all of Seller's obligations relating to Seller's generating facility, including but not limited to leasehold and license payments, taxes, utility charges, insurance and operation, maintenance and repair expenses.

The Seller shall be deemed to have ceased operation of its generating facility if and only if:

- i. The generating facility has not generated any power for a period of twelve (12) successive months; and
- ii. Seller has not commenced necessary repairs or taken other appropriate action to permit resumption of power deliveries under this Contract.

The annual depreciation allowance for a given year of the lease shall be the depreciation expense that would have been charged on the books of the Seller for such year had the costs of acquisition and construction, as hereinafter defined, been depreciated over 30 years using the straight line method of depreciation and had subsequent capital expenditures, as hereinafter defined, been depreciated over the lesser of the remaining term of this Contract or the useful life of the asset using the straight line method of depreciation.

As used herein, "costs of acquisition and construction" shall mean all costs of determining the feasibility of, and acquiring, constructing, licensing, financing, carrying out and placing in operation Seller's generating facility paid or incurred by Seller prior to the commencement of the term of this Contract, and shall include but not be limited to funds required for preliminary survey, investigation and development costs, feasibility studies, engineering studies and services,

contractors' fees, permits, licenses and approvals, labor, materials, equipment, lands, rights of way, leases, franchises, easements and other interests in land and options therefor, utility services and supplies, payments to other public agencies, training and testing costs, insurance premiums, interest on construction financing and an allowance for a return on equity funds used for construction financing, fees and expenses, all federal, state and local taxes and payments in lieu of taxes legally required to be paid in connection with the acquisition and construction of the generating facility, legal and financing costs, administrative and general costs, all costs relating to injury and damage claims arising out of the acquisition and construction of the generating facility, and all other costs incurred by the Seller and properly allocable to the acquisition and construction of the generating facility and carrying out and placing the same in operation.

As used herein, subsequent capital expenditures shall mean all expenditures paid or incurred by Seller subsequent to the commencement of the term of this Contract and capitalized on the books of Seller.

Payment by PUBLIC SERVICE to Seller of the annual rental charge shall be made in equal quarterly amounts on or before the last day of March, June, September and December. In the event the term of the lease commences on a day other than the first day of a calendar quarter, such rental charge shall be pro rated

accordingly. Interest shall accrue to Seller at a rate of 1 1/2% per month from and after the due date on the amount of any payments not made within twenty days of the due date.

ARTICLE 7. Compensation for Capacity

If at any time during the term of this Contract, the existence and operation of Seller's generating facility enables PUBLIC SERVICE to defer additions to its sources of generating capacity, then PUBLIC SERVICE agrees to compensate Seller for the capacity contribution made by Seller's generating facility. Seller shall be entitled to such compensation upon the occurrence of one or more of the following events:

- a. PUBLIC SERVICE places into service new generating capacity (with the exception of the current construction program of PUBLIC SERVICE);
- b. PUBLIC SERVICE purchases an ownership interest in a power generating facility in service (with the exception of current contractual arrangements);
- c. PUBLIC SERVICE enters into a power purchase agreement for firm power in which a capacity charge is incurred (with the exception of current contractual arrangements); or

d. PUBLIC SERVICE has a lower reserve margin than is required by New England Power Pool ("NEPOOL") under the New England Power Pool Agreement dated as of September 1, 1971, and incurs NEPOOL capacity deficiency changes

At such time as one or more of the above-described events occurs, PUBLIC SERVICE shall give Seller prompt written notice thereof and shall, commencing with the month next succeeding such event and continuing for the remaining term of this Contract, compensate Seller on the basis of the capacity contribution made by Seller's generating facility. The capacity of Seller's generating facility shall be determined by using the method outlined in the NEPOOL publication entitled, "Instructions for Periodic Capability Audit Tests of NEPOOL Generating Units," or, if such publication is not then in existence, whatever method of determining capacity contribution is commonly used at such time. The per kilowatt value of the capacity shall be established by determining the cost avoided by PUBLIC SERVICE. If the avoided cost is an increment of purchased or PUBLIC SERVICE-built generating capacity as described in a. or b. above, then the amount of compensation shall be equal to the annual avoided cost, i.e., the total capital cost of such capacity times the then current fixed charge rate of PUBLIC SERVICE.

Capacity payments by PUBLIC SERVICE to Seller shall be made in equal monthly installments on the same terms and conditions as the regular billing described in Article 8 above.

RIDER L

ARTICLE . TERMINATION

If at any time during the term of this Contract, PUBLIC SERVICE fails to make any payment in full when due and such failure is not cured within 90 days after written notice thereof shall have been given by Seller to PUBLIC SERVICE, then and in any such case Seller may terminate this Contract forthwith by delivering a written notice of termination to PUBLIC SERVICE. In the event of such termination, all continuing obligations of the parties shall cease forthwith, except the obligation of PUBLIC SERVICE and Seller to indemnify each other with respect to claims arising prior to such termination and the obligation of PUBLIC SERVICE to make full payment for power delivered by Seller to PUBLIC SERVICE through such date of termination.

ARTICLE . TEST POWER

PUBLIC SERVICE agrees to purchase all test power generated by Seller's generating facility prior to the commencement of the term of this Contract at the rate then in effect as established by the New Hampshire Public Utilities Commission for qualifying small power producers, provided that all metering, interconnection and protection equipment as specified herein has been properly installed by Seller.



RECEIVED MAR 03 1982

March 2, 1982

Mr. Richard A. Normand
New Hampshire Hydro Associates
3 Capitol Street
Concord, NH 03301

Subject: Long-Term Contract Pricing Provisions
Penacook Lower Falls Hydro
Concord/Boscawen, New Hampshire

Dear Mr. Normand:

This is to confirm the meeting held this date concerning contract provisions for the electric energy Public Service Company of New Hampshire (PSNH) is proposing to purchase from your Penacook Lower Falls Hydro Project.

The pricing provisions proposed by PSNH are as follows:

1. The contract rate for the first eight (8) contract years will be 11.00 cents per kilowatthour ($\text{\$/KWH}$). This front-end loading rate may, if necessitated by your financing experience, be extended for an additional one or two years. This 11.00 $\text{\$/KWH}$ rate exceeds PSNH's contract index price by 2.00 $\text{\$/KWH}$.
2. All payments above the 9.00 $\text{\$/KWH}$ index, during the first eight contract years, must be recovered by PSNH during the balance of the contract considering the present worth of money. Present worth computations will be based on PSNH weighted cost of capital (common equity, preferred equity, and long term debt), which is presently estimated at 17.75 percent.
3. From the ninth through the thirtieth contract years, the rate will be the index of 9.00 $\text{\$/KWH}$ minus the amount necessary for PSNH to recover the earlier payments in excess of the index. The contract rates during this period may escalate as discussed below.
4. All escalating payments in excess of the index will be determined as a percentage of PSNH's incremental energy cost, as discussed in our Policy Statement dated November 5, 1981 (copy attached).

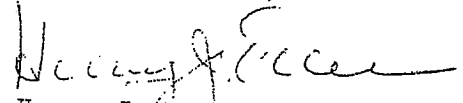
Mr. Richard A. Normand

March 2, 1982

5. The contract rates for the first twenty contract years are subject to the following adjustment. For the first eight contract years, 1.00¢/KWH will be retained by PSNH from the contract rate; for the next twelve years, 2/3¢/KWH will be added to the contract rate. The total of said additional payments, for any given year, shall not exceed one-twelfth (1/12) of the total money deducted during the first eight contract years.
6. All other provisions of our Policy Statement prevail.
7. If recovery by PSNH of any rates paid in excess of our actual avoided cost is denied by the N.H. Public Utilities Commission, contract rates during the final 22 contract years will be reduced accordingly, considering the present worth of money, in order to compensate PSNH for the losses.

We will prepare a draft contract for your review during the next few weeks.

Very truly yours,



Henry J. Ellis
Vice President

ams
Enclosure

cc: D. N. Merrill
J. E. Lyons

March 2, 1982

Exhibit 2-17

Mr. Richard A. Normand
N.H. Hydro Associates
3 Capitol Street
Concord, NH 03301

Subject: Long-Term Contract Pricing Provisions
Penacook Lower Falls Hydro
Concord/Boscawen, New Hampshire

Dear Mr. Normand:

~~This letter summarizes the contract pricing provisions as discussed and agreed upon during our meeting today.~~

1. The contract rate for the first eight (8) contract ^{experience} years will be 11.00 cents per Kilowatthour ($\text{\$/kWh}$). This front-end loading rate may, if necessitated by your financing terms, be extended for an additional one or two years. This 11.00 $\text{\$/kWh}$ rate exceeds PSNH's contract index price by 2.00 $\text{\$/kWh}$.

^{using}
ⁱⁿ
^{and}
^{the}
^{effect} 2. All payments above the 9.00 $\text{\$/kWh}$ index, during the first eight contract years, must be recovered by PSNH ~~in later contract years~~ considering the present worth of money. Present worth computations will be based on PSNH's weighted cost of capital (common equity, preferred equity and long term debt), which is presently estimated at 17.75%.

3. From the ninth through the ~~twentieth~~^{thirtieth} contract years, the rate will be the index of 9.00 ¢/kWh minus the amount necessary for PSNH to recover the ^{earlier} payments in excess of the index. The contract rates during this period may escalate as discussed below.

4. All escalating payments in excess of the index will be determined as a percentage of PSNH's incremental energy cost, as discussed in our Policy Statement dated November 5, 1981 (copy attached).

5. The contract rates for the first twenty contract years are subject to the following "incentive adjustment." For the first eight contract years, 1.00 ¢/kWh will be deducted from the contract rate; for the next twelve years, $\frac{2}{3}$ ¢/kWh will be added to the contract rate. The total of said additional payments, for any given year, shall not exceed one-twelfth ($\frac{1}{12}$) of the total money deducted during the first eight contract years.

~~6. From the twenty-first through the thirtieth contract years, the contract pricing will be based on PSNH's incremental energy cost as discussed in our Policy Statement.~~

6. All other provisions of our policy statement prevail.

* Retained by PSNH

1. IF recovery of any rates paid in excess of ^{our} ~~the~~ $\frac{\text{actual}}{\text{avoided cost}}$ ~~9.00¢/kwh index~~ is denied by the N.H. Public Utilities Commission, contract rates during the final 22 contract years will be reduced accordingly, considering the present worth of money, in order to compensate PSNH for the losses.

We will prepare a draft contract for your review during the next few weeks.

Very truly yours,

Encl
28

Henry J. Ellis
Vice President

C.C. D.N. Merrill
J. E. Lyas

PENACOOK LOWER FALLS
CONTRACT PRICING PROVISIONS
EVP 2 MAR 82

YEAR	PSNH IEC	%	% X IEC	FRONT-END RATE	INCENTIVE ADJUSTMENT	RECOVERY	CONTRACT RATE
1984	5.94			11.00	-1.00		10.00
85	6.56						10.00
86	5.53						10.00
87	4.72						10.00
88	5.30						10.00
89	6.42						10.00
1990	7.91						10.00
91	9.01						10.00
92	11.63						10.00
93	13.24						6.29
94	13.44						7.31
95	16.01						6.96
96	18.97						8.58
97	19.83						10.31
98	21.56						10.20
99	24.28						10.65
2000	27.16						11.64
01	30.11						12.51
02	33.39						13.20
03	37.01						13.88
04	41.04						14.38
05	45.50						14.98
06	49.99						17.21
07	54.92						17.46
08	60.34						21.92
09	66.30						24.63
2010	72.54						27.61
11	79.31						30.88
12	86.34						34.12
2013	93.99						37.63
							41.46

96
92
88
84
80
76
72
68
64
60
56
52
50

11.16
12.18
11.83
13.45
15.18
15.07
15.52
16.51
17.38
18.07
18.70
19.25
20.52
22.75
25.00
27.46
30.17
33.15
36.42
39.66
43.17
47.00

N.H. HYDEO ASSOCIATES
PENACOOK LOWER FALLS
LONG-TERM CONTRACT
2 MAR 82 RVP

Consider front-end loading of 11.00 \$/KWH for the first 8 contract years, with recovery over the remaining 22 contract years.

$$pwf'(17.75\%, 8) = \frac{1 - (1.1775)^{-8}}{0.1775} = 4.1093 \text{ (uniform series)}$$

$$pwf'(17.75\%, 22) = \frac{1 - (1.1775)^{-22}}{0.1775} = 5.4790 \text{ (uniform series)}$$

$$pwf(17.75\%, 8) = (1.1775)^{-8} = 0.2706 \text{ (single payment)}$$

$$(11.00 - \text{index})(pwf' - 17.75\% - 8) = \gamma (pwf' - 17.75\% - 22)(pwf - 17.75\% - 8)$$

$$(11.00 - 9.00)(4.1093) = \gamma (5.4790)(0.2706)$$

$$(2.00)(4.1093) = \gamma (1.4826)$$

$$\gamma = 5.54 \text{ $/KWH (RECOVERY AMOUNT)}$$

NORMAND
WHITMAN
LAURENCE

- ✓ 1. 11¢ per kWh for 8 yrs
- ✓ 2. Retain 1¢/kWh for 8 yrs
- ✓ 3. Starting year 9
 - ✓ a. Pay 9¢ minus PA Reduction @ 17.5%
 - ✓ b. Pay back .66¢/kWh to meet 1/12 of lost revenue/year
- ✓ 4. Other provisions of the policy prevail, incl. index remaining @ .09
- ✓ 5. PVC provision

if a loss payment recovery in rate denied by PVC, reduction for lost rate recovery collected during 22 yrs ^{remaining} by reducing payments further
6. PSNH would prepare contract for final review by N.H. Regs during next few weeks



NOTED MAR 05 1982 R.V.P.

March 5, 1982

Mr. Warren W. Mack
Vice President, Development
New Hampshire Hydro Associates
99 North State Street
Concord, NH 03301

Subject: Long-Term Contract Pricing Provisions
Penacook Lower Falls Hydro
Concord/Boscawen, New Hampshire

Dear Mr. Mack:

In reference to our letter to Mr. Normand, dated March 2, 1982, and our telephone conversation today, attached are our estimated payments under the negotiated contract.

We are in the process of preparing a draft contract for your review.

Very truly yours,

A handwritten signature in dark ink, appearing to read "J. E. Lyons". The signature is fluid and cursive, with a large initial "J" and "L".

J. E. Lyons, P.E.
Manager

Supplementary Energy Sources

JEL/dfb

cc: D. N. Merrill
H. J. Ellis
D. R. Sklar

CONTRACT PRICING PROVISIONS
PENACOOK LOWER FALLS HYDRO

YEAR	PSNH ¹ IEC	%	% x IEC	FRONT-END RATE	ADJUST- MENT	RECOVERY	ESTIMATED ² PAYMENT
1984	5.94			11.00	-1.00		10.00
85	6.56						10.00
86	5.53						10.00
87	4.72						10.00
88	5.30						10.00
89	6.42						10.00
1990	7.91						10.00
91	9.01						10.00
92	11.63	96	11.16		+0.67	-5.54	6.29
93	13.24	92	12.18				7.31
94	13.44	88	11.83				6.96
95	16.01	84	13.45				8.58
96	18.97	80	15.18				10.31
97	19.83	76	15.07				10.20
98	21.56	72	15.52				10.65
99	24.28	68	16.51				11.64
2000	27.16	64	17.38				12.51
01	30.11	60	18.07				13.20
02	33.39	56	18.70				13.83
03	37.01	52	19.25				14.38
04	41.04	50	20.52				14.98
05	45.50		22.75				17.21
06	49.99		25.00				19.46
07	54.92		27.46				21.92
08	60.34		30.17				24.63
09	66.30		33.15				27.61
2010	72.84		36.42				30.88
11	79.31		39.66				34.12
12	86.34		43.17				37.63
13	93.99		47.00				41.46

1 Estimated PSNH "Incremental Energy Cost."

2 These rates are based on PSNH estimates. The rates shown for years 1992 thru 2013 are not guaranteed by PSNH.

~~PENACOOK LOWER FALLS~~
~~CONTRACT PRICING PROVISIONS~~
~~EXP 2 MAR 82~~

~~PENACOOK LOWER FALLS HYDRO~~
~~CONTRACT PRICING PROVISIONS~~

~~ESTIMATED~~
~~PAYMENTS~~
~~CONTRACT RATE~~

~~RECOVERY~~
~~ADJUSTMENT~~

YEAR	PSNH IEC	%	% x IEC	FRONT-END RATE	INCREASING ADJUSTMENT	RECOVERY	CONTRACT RATE
1984	5.94			11.00	-1.00		10.00
85	6.56						10.00
86	5.53						10.00
87	4.72						10.00
88	5.30						10.00
89	6.42						10.00
90	7.91						10.00
91	9.01						10.00
92	11.63						10.00
93	13.24						10.00
94	13.44						10.00
95	16.01						10.00
96	18.97						10.00
97	19.83						10.00
98	21.56						10.00
99	24.28						10.00
2000	27.16						10.00
01	30.11						6.29
02	33.39						7.31
03	37.01						6.96
04	41.04						8.58
05	45.50						10.31
06	49.99						10.20
07	54.92						10.65
08	60.34						11.64
09	66.30						12.51
2010	72.84						13.20
11	79.31						13.83
12	86.34						14.38
2013	93.99						14.98
							17.21
							19.46
							21.92
							24.63
							27.61
							30.88
							34.12
							37.63
							41.46

16.16
 12.18
 11.83
 13.45
 15.18
 15.07
 15.52
 16.51
 17.38
 18.07
 18.70
 19.25
 20.52
 22.75
 25.00
 27.46
 30.17
 33.15
 36.42
 39.66
 43.17
 47.00

17.75%

96
 92
 88
 84
 80
 76
 72
 68
 64
 60
 56
 52
 50

1 ESTIMATED PSNH INCREMENTAL ENERGY COST.
 2 THESE RATES ARE BASED ON PSNH ESTIMATES. THE RATES SHOWN FOR YEARS 1992 THRU 2013

Consider front-end loading of 11.00 \$/KWH for the first 8 contract years, with recovery over the remaining 22 contract years.

$$pwf'(17.75\%, 8) = \frac{1 - (1.1775)^{-8}}{0.1775} = 4.1093 \text{ (uniform series)}$$

$$pwf'(17.75\%, 22) = \frac{1 - (1.1775)^{-22}}{0.1775} = 5.4790 \text{ (uniform series)}$$

$$pwf(17.75\%, 8) = (1.1775)^{-8} = 0.2706 \text{ (single payment)}$$

$$(11.00 - \text{index})(pwf' - 17.75\% - 8) = \chi (pwf' - 17.75\% - 22) (pwf - 17.75\% - 8)$$

$$(11.00 - 9.00)(4.1093) = \chi (5.4790)(0.2706)$$

$$(2.00)(4.1093) = \chi (1.4826)$$

$$\chi = 5.54 \text{ \$ / KWH (RECOVERY AMOUNT)}$$

#055

Exhibit 2-21

PSNH **PUBLIC SERVICE**
Company of New Hampshire

NOTED MAR 10 1982 RVP.

March 19, 1982

FILE COPY

Mr. Richard A. Norman
New Hampshire Hydro Associates
99 North State Street
Concord, NH 03301

Subject: Contract for the Purchase and Sale of Electric Energy
Penacook Lower Falls Hydro

Dear Mr. Norman:

Enclosed are two copies of the subject contract. If you find the contract terms acceptable, please date, sign and return both copies. We will then execute the contract and return one copy to you.

Also enclosed is a revised schedule of estimated contract payments. The recovery amount was recalculated to be 5.47 cents per KWH, based on an interest rate of 17.61%.

Very truly yours,

J. E. Lyons, P.E.
Manager
Supplementary Energy Sources

JEL/dfb

Enclosure

cc: H. J. Ellis
D. R. Sklar

CONTRACT PRICING PROVISIONS
PENACOOK LOWER FALLS HYDRO

YEAR	PSNH ¹ IEC	%	% x IEC	FRONT-END RATE	ADJUST- MENT	RECOVERY	ESTIMATED ² PAYMENT
1984	5.94			11.00	-1.00		10.00
85	6.56						10.00
86	5.53						10.00
87	4.72						10.00
88	5.30						10.00
89	6.42						10.00
1990	7.91						10.00
91	9.01						10.00
92	11.63	96	11.16				6.36
93	13.24	92	12.18				7.38
94	13.44	88	11.83				7.03
95	16.01	84	13.45				8.65
96	18.97	80	15.18				10.38
97	19.83	76	15.07				10.27
98	21.56	72	15.52				10.72
99	24.28	68	16.51				11.71
2000	27.16	64	17.38				12.58
01	30.11	60	18.07				13.27
02	33.39	56	18.70				13.90
03	37.01	52	19.25				14.45
04	41.04	50	20.52				15.05
05	45.50		22.75				17.28
06	49.99		25.00				19.53
07	54.92		27.46				21.99
08	60.34		30.17				24.70
09	66.30		33.15				27.68
2010	72.84		36.42				30.95
11	79.31		39.66				34.19
12	86.34		43.17				37.70
13	93.99		47.00				41.53

1 Estimated PSNH "Incremental Energy Cost."

2 These rates are based on PSNH estimates. The rates shown for years 1992 thru 2013 are not guaranteed by PSNH.

NOTED MAR 10 1982 RVP.

3/19/82

CONTRACT FOR THE PURCHASE AND SALE
OF ELECTRIC ENERGY

CONTRACT, dated _____, 1982, by and between NEW HAMPSHIRE HYDRO ASSOCIATES, a New Hampshire Limited Partnership, with its principal office in Concord, New Hampshire (hereinafter referred to as SELLER), and PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE, a New Hampshire corporation having its principal place of business in Manchester, New Hampshire (hereinafter referred to as PUBLIC SERVICE).

WHEREAS, SELLER is engaged in the business of generation of electrical energy,

WHEREAS, SELLER desires to sell its entire generation output to PUBLIC SERVICE,

WHEREAS, PUBLIC SERVICE is engaged in the business of the generation, transmission, and distribution of electrical energy,

WHEREAS, PUBLIC SERVICE has determined it would be beneficial to secure a reliable supply of electrical energy for a period of not less than thirty years,

WHEREAS, SELLER is willing and able to sell its entire output to PUBLIC SERVICE for thirty years;

NOW, THEREFORE, in consideration of the mutual covenants and agreements hereinafter set forth, SELLER and PUBLIC SERVICE hereby agree as follows:

Article 1. Basic Agreement.

Subject to the terms, provisions, and conditions of this Contract, SELLER agrees to furnish and sell and PUBLIC SERVICE agrees to purchase and receive all of the electric energy produced by the Penacook Lower Falls hydroelectric generating facility owned and operated by SELLER located in Penacook-Boscawen, New Hampshire on the Contoocook River. Since SELLER and PUBLIC SERVICE are interconnected through the system of the Concord Electric

* Company, PUBLIC SERVICE's obligation to purchase energy hereunder is conditioned upon SELLER obtaining the right to transmit power through the Concord Electric Company system to PUBLIC SERVICE and SELLER shall pay the cost, if any, of such transmission.

PS shld
be respons
for
wholesale

The point of delivery from the Concord Electric Company to PUBLIC SERVICE shall be the Garvins Substation metering point located in Bow, New Hampshire.

Article 2. Availability.

During the term hereof, SELLER shall endeavor to operate its generating unit to the maximum extent reasonably possible under the circumstances and shall make available to PUBLIC SERVICE the entire net output in kilowatthours from said unit when in operation.

It is agreed that SELLER shall have sole responsibility for operation and maintenance of its generating unit, including any relays, locks, seals, breakers, and other control and protection apparatus that are necessary, or which Concord Electric Company may designate as being necessary, for the operation of SELLER's generating unit in parallel with the system of Concord Electric Company and that SELLER will maintain said generating unit in good operating order and repair without cost to PUBLIC SERVICE.

Article 3. Price.

The price charged by SELLER to PUBLIC SERVICE for sales of electric energy under this Contract shall be based on an index price of 9.00 cents per kilowatthour (KWH) and shall be determined as follows.

- A. For the first eight (8) years of the Contract, the Contract rate shall be 11.00 cents per KWH. This rate exceeds the index price by 2.00 cents per KWH; and all payments made by PUBLIC SERVICE to SELLER which exceed the index price must be recovered by PUBLIC SERVICE, during later Contract years, in accordance with Section D.1., Article 3. This rate is subject to the adjustment provided for under Section D.2., Article 3.

PS's respons. ?
they shld be respons. to
accept the price.
Nothing states that they
purchase
all
output

③ PS's resp. from 11/0
on.

① obligation to purchase
entire net output
② obligation to keep its sys in
working order so it can
purchase the electricity

- B. If, at the end of the eighth Contract year, 96 percent of PUBLIC SERVICE's incremental energy costs does not exceed the index price, the Contract rate shall be the index price of 9.00 cents per KWH.

This rate is also subject to the adjustment provided for under Section D.2., Article 3.

- C. At such time ^{after the end of eighth Contract year} that 96 percent of PUBLIC SERVICE's incremental energy cost exceeds the index, the rate to be paid under this contract will vary in accordance with the following provisions, subject to the provisions of Section D, Article 3.

As soon as 96 percent of PUBLIC SERVICE's incremental energy cost exceeds the index, the contract rate will be based on 96 percent of PUBLIC SERVICE's incremental energy cost for a period of one year. For each subsequent year, the percentage of PUBLIC SERVICE's incremental energy cost to be paid will be reduced by 4 percent (i.e. 96 percent, 92 percent, 88 percent, 84 percent, etc.), until the incremental energy cost is reduced only 2 percent to reach 50 percent of PUBLIC SERVICE's incremental energy cost. At such time, the contract rate will remain at the 50 percent rate for the remainder of the contract term.

PUBLIC SERVICE's incremental energy cost, for any hour, is equivalent to the marginal cost of providing energy for that hour. The marginal cost, for any hour, is the energy cost of the most expensive unit or purchased energy supplying a portion of PUBLIC SERVICE's load during that hour and includes all costs in the New England Power Exchange (NEPEX) bus rate cost for the incremental unit. The NEPEX bus rate costs are essentially the cost of fuel consumed. PUBLIC SERVICE's incremental energy cost, for the purposes of this Contract, will be expressed as a yearly average and will be calculated by averaging all 8,760 hourly incremental energy costs over the calendar year.

#2

year = Contract year

If the rate during any year is less than the appropriate percentage of PUBLIC SERVICE's incremental energy cost for that year, an adjustment will be made for all energy sold to PUBLIC SERVICE. The adjustment will consist of an additional payment for each KWH sold to PUBLIC SERVICE during said year based on the difference between the price paid and the appropriate percentage of PUBLIC SERVICE's incremental energy cost. The adjustment will be paid within one month after PUBLIC SERVICE's incremental energy cost for the previous year has been determined.

which did
take forever.

If the rate during any year is more than the appropriate percentage of PUBLIC SERVICE's incremental energy cost for that year, an adjustment will be made for all energy sold to PUBLIC SERVICE. The adjustment will consist of a refund to PUBLIC SERVICE for each KWH sold during said year based on the difference between the price paid and the appropriate percentage of PUBLIC SERVICE's incremental energy cost. The refund will be made to PUBLIC SERVICE by applying one-twelfth of the total amount as a reduction to each month's payment by PUBLIC SERVICE during the current year. If for any month, no payment is due the SELLER, or the payment due is not equal to the refund, a payment to PUBLIC SERVICE will be made by SELLER so that the total recovery is achieved by PUBLIC SERVICE by the end of the current year.

D. The Contract rates described in Sections A, B and C, Article 3, are subject to the following provisions, in order to determine the Contract price to be charged by SELLER to PUBLIC SERVICE for sales of electric energy under this Contract.

1. Beginning with the ninth Contract year, and continuing for the term of the Contract, a recovery amount equal to 5.47 cents per KWH shall be deducted from the Contract rate. This deduction allows PUBLIC SERVICE to recover the payments made under Section A, Article 3, which exceeded the index price.
2. For the first eight Contract years, the Contract rate shall be adjusted by subtracting 1.00 cents per KWH from the rate. For the ninth through the twentieth Contract years, the Contract rate shall be adjusted by adding 0.67 cents per KWH to the rate. The

should be floating

no interest

or whatever it takes
to get it back

Can't go back
into 8th yr.

#3

must necessarily be paid back w/in 12 yrs. balance at end of 20th yr

total of said additional payments, for any given year, shall not exceed one-twelfth (1/12) of the money subtracted during the first eight Contract years.

it will be our transformer

Article 4. Metering.

1/12th cap removed after 20 years

The metering shall be configured so as to represent the generation delivered to PUBLIC SERVICE. The metering may be installed on the generation side of the transformer provided that transformer losses are subtracted from the measured generation by a suitable method. In whose determination: mutually agreed upon

SELLER will install, own, and maintain all metering equipment as specified in PUBLIC SERVICE's study of the SELLER's electric generating facility, which study is, or will be upon mutual consent of both parties, attached hereto as Attachment A. SELLER shall bear all costs associated with said equipment and its installation.

If at any time, the metering equipment is found to be in error by more than two percent fast or slow (+ or -2%), SELLER shall cause such metering equipment to be corrected and the meter readings for the period of inaccuracy shall be adjusted to correct such inaccuracy so far as the same can be reasonably ascertained, but no adjustment prior to the beginning of the preceding month shall be made except by agreement of the parties. All tests and calibrations shall be made in accordance with Section V-14 of the NHPUC Rules and Regulations Prescribing Standards for Electric Utilities in effect as of September 8, 1972, as amended. The meter shall be tested as prescribed in said Rules and Regulations.

what are these? must they be in PS's presence?

In addition to the regular routine tests, SELLER shall cause the metering equipment to be tested at any time upon request of and in the presence of a representative of PUBLIC SERVICE. If such equipment proves accurate within two percent fast or slow (+ or -2%), the expense of the test shall be borne by PUBLIC SERVICE.

it must be located on our premises if in Bow. it will be

The SELLER shall allow PUBLIC SERVICE reasonable access to the meter located on the SELLER's premises. PUBLIC SERVICE reserves the right to secure or seal the metering installation, to require SELLER to measure electrical energy sold to PUBLIC SERVICE on an hour-by-hour basis, and to require SELLER to notify PUBLIC SERVICE once each day of SELLER's generation in kilowatthours for each hour during the prior 24 hours.

Article 5. Modifications.

V. Inad

If SELLER plans any modifications to its electric generating facility, SELLER shall give PUBLIC SERVICE prior written notice of its intentions. In the event that PUBLIC SERVICE reasonably determines that said modifications would necessitate changes to the metering equipment or would cause PUBLIC SERVICE to incur additional expenses associated therewith, the SELLER shall make such changes as reasonably required by PUBLIC SERVICE and reimburse PUBLIC SERVICE for said expenses before PUBLIC SERVICE is obligated to purchase any increased output.

If the PUBLIC SERVICE interconnecting circuit is converted to a higher voltage in the future, the SELLER shall be responsible for all metering changes necessitated by the conversion and shall bear all costs associated with said conversion.

Will this cause a shutdown? will notice of conversion enable us to avoid shutdown?

Article 6. Billing & Payment.

4 w/ discussion

PUBLIC SERVICE shall read the meter, installed in accordance with

what if they don't read?

Article 4, on or at the end of each month, and PUBLIC SERVICE shall send the SELLER a form showing the month's beginning and ending meter readings and total net kilowatthour generation.

or send form promptly

might be prior month's

to running become

SELLER shall then transmit to PUBLIC SERVICE a bill showing the amount due, which amount will be determined by multiplying the rate per kilowatthour specified in Article 3 times the number of kilowatthours delivered to PUBLIC SERVICE since the prior reading of the meter, and PUBLIC SERVICE will send to SELLER a payment for that amount within 20 days of receipt of SELLER's bill.

if they not pay

it will have go certified

Article 7. Liability & Insurance.

- a. Each party will be responsible for its facilities and the operation thereof and will indemnify and save the other harmless from any and all loss by reason of property damage, bodily injury, including death resulting therefrom suffered by any person or persons including the parties hereto, employees thereof or members of the public, (and all expenses in connection therewith, including attorney's fees) whether arising in contract, warranty, tort (including negligence), strict liability or otherwise, caused by or sustained on, or alleged to be

but (c) takes it all away

? even if not our fault?

we want notice
when they're
going to seek
indemnification

caused by or sustained on, equipment or facilities, or the operation or use thereof, owned or controlled by such party, except that each party shall be solely responsible for and shall bear all costs of claims by its own employees or contractors growing out of any workmen's compensation law. SELLER shall indemnify and save PUBLIC SERVICE harmless against any and all liability for claims, costs, losses, expenses and damages, including bodily injury and death, sustained by Concord Electric Company, its employees or agents, arising out of SELLER's performance of this Contract.

b. SELLER hereby agrees to maintain in force and effect, for the duration of this Contract, Workmen's Compensation Insurance, as required by statute, and Comprehensive General Liability Insurance for bodily injury and property damage at minimum limits of three million dollars (\$3,000,000). Within sixty days of the effective date of this Contract, the SELLER agrees to provide PUBLIC SERVICE with a certificate of such insurance.

c. In no event shall PUBLIC SERVICE be liable, whether in Contract, tort (including negligence), strict liability, warranty, or otherwise, for any special, indirect, incidental, or consequential loss or damage, including but not limited to cost of capital, cost of replacement power, loss of profits or revenues or the loss of the use thereof.

This provision, subsection c of Article 7, shall apply notwithstanding any other provision of this Contract.

so if they shut us down
no liability except cost
of repair, if any

Article 8. Force Majeure.

Either party shall not be considered to be in default hereunder and shall be excused from purchasing or selling electricity hereunder if and to the extent that it shall be prevented from doing so by storm, flood, lightning, earthquake, explosion, equipment failure, civil disturbance, labor dispute, act of God or the public enemy, action of a court or public authority, withdrawal of facilities from operation for necessary maintenance and repair, or any cause beyond the reasonable control of either party.

not apply
against
due
payment
of

if he notice of
act of force majeure

meaning PSCO
not required to
purchase our output

#5

Article 9. Effective Date & Contract Term.

This Contract shall become effective between the parties as of the date hereof, provided that the metering equipment, as specified by PUBLIC SERVICE in accordance with the conditions set forth in Section 4 of this Contract, has been installed by SELLER.

If said equipment has not been properly installed, this Contract shall become effective between the parties as of the date of proper installation of said equipment or as of the date SELLER begins delivering energy to PUBLIC SERVICE, whichever occurs latest. As of the effective date of this Contract, the Contract shall remain in full force and effect for thirty (30) years.

In order for any modification to this Contract to be binding upon the parties, said modifications must be in writing and signed by both parties.

Article 10. Prior Agreements Superseded.

This Contract with Attachment A represents the entire agreement between the parties hereto relating to the subject matter hereof, and all previous agreements, discussion, communications, and correspondence with respect to the said subject matter are superseded by the execution of this Contract.

Article 11. Waiver of Terms or Conditions.

The failure of either party to enforce or insist upon compliance with any of the terms or conditions of this Contract shall not constitute a general waiver or relinquishment of any such terms or conditions, but the same shall be and remain at all times in full force and effect.

Article 12. General.

This Contract shall be binding upon, and inure to the benefit of the respective successors and assigns of the parties hereto, provided that SELLER shall not assign this Contract except to an affiliated company, without the prior written consent of PUBLIC SERVICE, which consent shall not be unreasonably withheld. The term "affiliated company" shall include any partnership in which SELLER or one of SELLER's subsidiaries or affiliates is a general partner or any corporation in which SELLER or one of its subsidiaries or affiliates owns or controls more than 50 percent of the voting stock or otherwise has operating control. In the event of an assignment to an affiliate, SELLER shall notify PUBLIC SERVICE within five (5) days of the effective date of the assignment.

It shld be effective upon execution. Term to commence as described herein. Except don't want to deliver 9 test power

? as determined by whom?

about NBS?

Article 13. Applicable Law.

This Contract is made under the laws of The State of New Hampshire and the interpretation and performance hereof shall be in accordance with and controlled by the laws of that State.

Article 14. Mailing Addresses.

*when are deemed
notices given?*

The mailing addresses of the parties are as follows:

SELLER: New Hampshire Hydro Associates

99 North State Street

Concord, New Hampshire 03301

Attn: Richard A. Norman, ~~Partner~~

*copy to ZDA
110 Tremont
Boston
attn: Gen'l
Counsel*

PUBLIC SERVICE: Public Service Company of New Hampshire

1000 Elm Street

P.O. Box 330

Manchester, New Hampshire 03105

Attn: Henry J. Ellis, Vice President

IN WITNESS WHEREOF, the parties have hereunto caused their names to be subscribed, as of the day and year first above written.

NEW HAMPSHIRE HYDRO ASSOCIATES

By ESSEX DEVELOPMENT ASSOCIATES *WMA*

A General Partner

(Witness)

By: _____

Name: Richard A. Norman

Title: ~~Partner~~ *Vice President*

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

(Witness)

By: _____

Henry J. Ellis, Vice President

① Test power?
② Termination

NEW HAMPSHIRE HYDRO ASSOCIATES
99 NORTH STATE STREET
CONCORD, N.H. 03301
(603) 224-8333

March 26, 1982

Mr. Henry J. Ellis
Vice President
Public Service Company
of New Hampshire
100 Elm Street
P.O. Box 330
Manchester, NH 03105

FILE 6571
055
MET WITH WARREN MACK 3/26/82.
HE KEPT COPIES OF CONTRACT
REFERENCED IN THIS LTR.
GAVE HIM REVISED CONTRACT
FOR REVIEW.

Dear Mr. Ellis:

Enclosed are two copies of the Contract for Purchase and Sale of Electric Energy executed by New Hampshire Hydro Associates (NHHA). Kindly date and execute both copies of the Contract and return one copy to us.

Mr. Warren Mack of Essex Development Associates, Inc. has had discussions with Public Service staff regarding clarification of certain language in the attached contracts. Based upon these discussions it is understood that the following clarifications represent the mutual understanding of NHHA and Public Service:

1. The Contract rate of 11.00 cents per KWH shall be in effect for the initial 8 Contract years regardless of the relationship between Public Service's incremental energy cost and the index price. This point of clarification arises from the possible interpretation that Clause C of Article 3 may override Clause A of Article 3.

Furthermore, should NHHA elect to extend the 11 cents per KWH Contract rate to the ninth and/or tenth Contract year, as is provided for in the last paragraph of Article 3, the 11.00 cent per KWH Contract rate shall be used, regardless of the relationship between Public Service's incremental energy cost and the index price.

2. Wherever the word "year" is used in the Contract, it shall mean calendar year, except when specifically preceded by the word "Contract". Each Contract year shall be the 12 month period commencing with the effective date of the Contract. Therefore, Contract year 1 will be the 12 month period beginning with the effective date of the Contract; Contract year 2 shall be the subsequent 12 month period, etc..

While NHHA would prefer to have the language of the Contract modified to make the above clarifications, it is understood that Public Service prefers to leave the wording unchanged in order to simplify administration of contracts with small power producers. Given Public Service's preference, in lieu of

LAWRENCE OFFICES
SIX ESSEX STREET, LAWRENCE, MA 01840 (617) 687-2312

NOTED MAR 29 1982 R.V.P.

See 4/30/82 Memo to D. Sklar
for copy of signed contract.

~~VOID~~
3/26/80

COPY GIVEN TO
TOM TARPEY

W/REVISED ARTICLE
3 TO INCLUDE OPTION
OF EXTENDING FRONT
END LOADING PERIOD

NOTED MAR 23 1982 R.V.P.
5:15

ADD TO ARTICLE 3

Penacook Lower Falls
23 Mar. 82 RVP

SELLER shall have the option, if ^{proven necessary} ~~necessitated~~ by its financing experience, to extend the pricing under Section A, Article 3 through the ninth or tenth Contract year. If said pricing is extended through the ninth Contract year, the recovery amount under Section D.1., Article 3 shall be 6.84 cents per KWH and the recovery shall begin with the tenth Contract year; if said pricing is extended through the tenth Contract year, the recovery amount shall be 8.46 cents per KWH beginning with the eleventh Contract year.

Reviewed by HJE 23 Mar. 82.

BALANCE ON 1-2/3 & ADJUSTMENT?

Comment by HJE

Station Service from Concord Elec.

Not through 80r connection

No RP relay.

See Bob Evans

N. H. HYDRO ASSOCIATES
PENACOOK LOWER FALLS
17 MAR 82 RVP

Recompute Recovery Amount using 17.61%.

FRONT end loading of 11.00 ¢/kWH for 8 years.

$$pwf'(17.61\%, 8) = \frac{1 - (1.1761)^{-8}}{0.1761} = 4.1273 \text{ (Uniform Series)}$$

$$pwf'(17.61\%, 22) = \frac{1 - (1.1761)^{-22}}{0.1761} = 5.5185 \text{ (Uniform Series)}$$

$$pwf(17.61\%, 8) = (1.1761)^{-8} = 0.2732 \text{ (Single Payment)}$$

$$(11.00 - \text{index})(pwf' - 17.61 - 8) = \gamma (pwf' - 17.61 - 22)(pwf - 17.61 - 8)$$

$$(11.00 - 9.00)(4.1273) = \gamma (5.5185)(0.2732)$$

$$8.2546 = \gamma 1.5077$$

$$\gamma = \frac{8.2546}{1.5077} = 5.47 \text{ ¢/kWH (Recovery Amount)}$$

5.4756

Round to 5.48

$$(1.9)(4.1273) = \gamma (5.5185)(0.2732)$$

$$7.8419 = \gamma 1.5077$$

$$\gamma = 5.20 \checkmark$$

Revised
NOTED MAR 25 1982 RVP

✓ SMA (3-26-82)

✓ SMA (5-25-82)

RECOVERY AMOUNT (11.00 \$/KWH FOR 9 YRS.)

$$pwf'(17.61\% - 9) = \frac{1 - (1.1761)^{-9}}{0.1761} = 4.3596$$

$$pwf'(17.61\% - 21) = \frac{1 - (1.1761)^{-21}}{0.1761} = 5.4903$$

$$pwf(17.61\% - 9) = (1.1761)^{-9} = 0.2323$$

$$(11.00 - 9.00)(4.3596) = \gamma (5.4903)(0.2323)$$

$$8.7192 = \gamma (1.2754)$$

$$\gamma = 6.84 \text{ $/KWH}$$

$$(1.90)(4.3596) = \gamma (1.2754)$$

$$8.2832 = \gamma (1.2754)$$

$$\gamma = 6.49$$

Revised

RECOVERY AMOUNT (11.00 \$/KWH FOR 10 YRS.)

NOTED MAR 26 1982 EYP.

$$pwf'(17.61\% - 10) = \frac{1 - (1.1761)^{-10}}{0.1761} = 4.5571$$

$$pwf'(17.61\% - 20) = \frac{1 - (1.1761)^{-20}}{0.1761} = 5.4571$$

$$pwf(17.61\% - 10) = (1.1761)^{-10} = 0.1975$$

$$(11.00 - 9.00)(4.5571) = \gamma (5.4571)(0.1975)$$

$$9.1142 = \gamma (1.0778)$$

$$\gamma = 8.46 \text{ $/KWH}$$

$$(1.9)(4.5571) = \gamma (1.0778)$$

$$8.6585 = \gamma (1.0778)$$

$$\gamma = 8.03$$

Revised

NOTED MAR 26 1982 EYP.

✓ SMA(3-26-82)

✓ SMA(3-23-82)

CONTRACT FOR THE PURCHASE AND SALE
OF ELECTRIC ENERGY

CONTRACT, dated _____, 1982, by and between NEW HAMPSHIRE HYDRO ASSOCIATES, a New Hampshire Limited Partnership, with its principal office in Concord, New Hampshire (hereinafter referred to as SELLER), and PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE, a New Hampshire corporation having its principal place of business in Manchester, New Hampshire (hereinafter referred to as PUBLIC SERVICE).

WHEREAS, SELLER is engaged in the business of generation of electrical energy,

WHEREAS, SELLER desires to sell its entire generation output to PUBLIC SERVICE,

WHEREAS, PUBLIC SERVICE is engaged in the business of the generation, transmission, and distribution of electrical energy,

WHEREAS, PUBLIC SERVICE has determined it would be beneficial to secure a reliable supply of electrical energy for a period of not less than thirty years,

WHEREAS, SELLER is willing and able to sell its entire output to PUBLIC SERVICE for thirty years;

NOW, THEREFORE, in consideration of the mutual covenants and agreements hereinafter set forth, SELLER and PUBLIC SERVICE hereby agree as follows:

Article 1. Basic Agreement.

Subject to the terms, provisions, and conditions of this Contract, SELLER agrees to furnish and sell and PUBLIC SERVICE agrees to purchase and receive all of the electric energy produced by the Penacook Lower Falls hydroelectric generating facility owned and operated by SELLER located in Penacook-Boscawen, New Hampshire on the Contoocook River. Since SELLER and PUBLIC SERVICE are interconnected through the system of the Concord Electric Company, PUBLIC SERVICE's obligation to purchase energy hereunder is conditioned upon SELLER obtaining the right to transmit power through the Concord Electric Company system to PUBLIC SERVICE and SELLER shall pay the cost, if any, of such transmission.

The point of delivery from the Concord Electric Company to PUBLIC SERVICE shall be the Garvins Substation metering point located in Bow, New Hampshire.

Article 2. Availability.

During the term hereof, SELLER shall endeavor to operate its generating unit to the maximum extent reasonably possible under the circumstances and shall make available to PUBLIC SERVICE the entire net output in kilowatthours from said unit when in operation.

It is agreed that SELLER shall have sole responsibility for operation and maintenance of its generating unit, including any relays, locks, seals, breakers, and other control and protection apparatus that are necessary, or which Concord Electric Company may designate as being necessary, for the operation of SELLER's generating unit in parallel with the system of Concord Electric Company and that SELLER will maintain said generating unit in good operating order and repair without cost to PUBLIC SERVICE.

*See 4/30/82 Memo to D. Sklar
for final version of signed
contract.*

Article 3. Price.

The price charged by SELLER to PUBLIC SERVICE for sales of electric energy under this Contract shall be based on an index price of 9.00 cents per kilowatthour (KWH) and shall be determined as follows.

- A. For the first eight (8) years of the Contract, the Contract rate shall be 11.00 cents per KWH. This rate exceeds the index price by 2.00 cents per KWH; and all payments made by PUBLIC SERVICE to SELLER which exceed the index price must be recovered by PUBLIC SERVICE, during later Contract years, in accordance with Section D.1., Article 3. This rate is subject to the adjustment provided for under Section D.2., Article 3.
- B. If, at the end of the eighth Contract year, 96 percent of PUBLIC SERVICE's incremental energy costs does not exceed the index price, the Contract rate shall be the index price of 9.00 cents per KWH. This rate is also subject to the adjustment provided for under Section D.2., Article 3.

NEW HAMPSHIRE HYDRO ASSOCIATES
99 NORTH STATE STREET
CONCORD, N.H. 03301
(603) 224-8333

April 1, 1982

Mr. Henry J. Ellis
Vice President
Public Service Company
of New Hampshire
100 Elm Street
P.O. Box 330
Manchester, NH 03105

Dear Mr. Ellis:

Enclosed are two copies of the Contract for Purchase and Sale of Electric Energy executed by New Hampshire Hydro Associates (NHHA). Kindly date and execute both copies of the Contract and return one copy to us.

Mr. Warren Mack of Essex Development Associates, Inc. has had discussions with Public Service staff regarding clarification of certain language in the attached contract. Based upon these discussions it is understood that the Contract rate of 10.00 cents per KWH shall be in effect for the initial 8 Contract years regardless of the relationship between Public Service's incremental energy cost and the index price. This point of clarification arises from the possible interpretation that Clause C of Article 3 may override Clause A of Article 3. Furthermore, should NHHA elect to extend the 10 cents per KWH Contract rate to the ninth and/or tenth Contract year, as is provided for in the last paragraph of Article 3, the 10.00 cent per KWH Contract rate shall be used, regardless of the relationship between Public Service's incremental energy cost and the index price.

While NHHA would prefer to have the language of the Contract modified to make the above clarifications, it is understood that Public Service prefers to leave the wording unchanged in order to simplify administration of contracts with small power producers. Given Public Service's preference, in lieu of changing the Contract, NHHA requests that you sign and return a copy of this letter.

LAWRENCE OFFICES
SIX ESSEX STREET, LAWRENCE, MA 01840 (617) 687-2312

It is also our understanding that Public Service, Concord Electric Company and NHHA will forthwith enter into an agreement with respect to Concord Electric's agreement to wheel the energy generated by NHHA over Concord Electric's transmission lines to Public Service's Garvins Falls substation.

On behalf of myself and my NHHA associates I'd like to thank you, Dave Merrill, John Lyons, and Dick Perrin for the extra effort that was required to reach agreement on this contract. NHHA looks forward to a mutually satisfactory startup and operation of the Penacook project.

Sincerely,

NEW HAMPSHIRE HYDRO ASSOCIATES

By: Essex Development Associates
Its: General Partner

Richard A. Norman
By: Richard A Norman
Partner

Accepted and agreed to:

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

By: _____
Henry J. Ellis, Vice President

CONTRACT FOR THE PURCHASE AND SALE
OF ELECTRIC ENERGY

CONTRACT, dated _____, 1982, by and between NEW HAMPSHIRE HYDRO ASSOCIATES, a New Hampshire Limited Partnership, with its principal office in Concord, New Hampshire (hereinafter referred to as SELLER), and PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE, a New Hampshire corporation having its principal place of business in Manchester, New Hampshire (hereinafter referred to as PUBLIC SERVICE).

WHEREAS, SELLER is engaged in the business of generation of electrical energy,

WHEREAS, SELLER desires to sell its entire generation output to PUBLIC SERVICE,

WHEREAS, PUBLIC SERVICE is engaged in the business of the generation, transmission, and distribution of electrical energy,

WHEREAS, PUBLIC SERVICE has determined it would be beneficial to secure a reliable supply of electrical energy for a period of not less than thirty years,

WHEREAS, SELLER is willing and able to sell its entire output to PUBLIC SERVICE for thirty years;

NOW, THEREFORE, in consideration of the mutual covenants and agreements hereinafter set forth, SELLER and PUBLIC SERVICE hereby agree as follows:

Article 1. Basic Agreement.

Subject to the terms, provisions, and conditions of this Contract, SELLER agrees to furnish and sell and PUBLIC SERVICE agrees to purchase and receive all of the electric energy produced by the Penacook Lower Falls hydroelectric generating facility owned and operated by SELLER located in Penacook-Boscawen, New Hampshire on the Contoocook River. Since SELLER and PUBLIC SERVICE are interconnected through the system of the Concord Electric Company, PUBLIC SERVICE's obligation to purchase energy hereunder is conditioned upon SELLER obtaining the right to transmit power through the Concord Electric Company system to PUBLIC SERVICE and SELLER shall pay the cost, if any, of such transmission.

The point of delivery from the Concord Electric Company to PUBLIC SERVICE shall be the Garvins Substation metering point located in Bow, New Hampshire.

Article 2. Availability.

During the term hereof, SELLER shall endeavor to operate its generating unit to the maximum extent reasonably possible under the circumstances and shall make available to PUBLIC SERVICE the entire net output in kilowatthours from said unit when in operation.

It is agreed that SELLER shall have sole responsibility for operation and maintenance of its generating unit, including any relays, locks, seals, breakers, and other control and protection apparatus that are necessary, or which Concord Electric Company may designate as being necessary, for the operation of SELLER's generating unit in parallel with the system of Concord Electric Company and that SELLER will maintain said generating unit in good operating order and repair without cost to PUBLIC SERVICE.

Article 3. Price.

The price charged by SELLER to PUBLIC SERVICE for sales of electric energy under this Contract shall be based on an index price of 8.10 cents per kilowatthour (KWH) and shall be determined as follows.

- A. For the first eight (8) years of the Contract, the Contract price shall be 10.00 cents per KWH. This price exceeds the index price by 1.90 cents per KWH; and all payments made by PUBLIC SERVICE to SELLER which exceed the index price must be recovered by PUBLIC SERVICE, during later Contract years, in accordance with Section D.1., Article 3.
- B. If, at the end of the eighth Contract year, 96 percent of PUBLIC SERVICE's incremental energy costs does not exceed the index price, the Contract rate shall be the index price of 8.10 cents per KWH. This rate is subject to the adjustments provided for under Section D, Article 3.

- C. At such time that 96 percent of PUBLIC SERVICE's incremental energy cost exceeds the index, the rate to be paid under this contract will vary in accordance with the following provisions, subject to the provisions of Section D, Article 3.

As soon as 96 percent of PUBLIC SERVICE's incremental energy cost exceeds the index, the contract rate will be based on 96 percent of PUBLIC SERVICE's incremental energy cost for a period of one year. For each subsequent year, the percentage of PUBLIC SERVICE's incremental energy cost to be paid will be reduced by 4 percent (i.e. 96 percent, 92 percent, 88 percent, 84 percent, etc.), until the incremental energy cost is reduced only 2 percent to reach 50 percent of PUBLIC SERVICE's incremental energy cost. At such time, the contract rate will remain at the 50 percent rate for the remainder of the contract term.

PUBLIC SERVICE's incremental energy cost, for any hour, is equivalent to the marginal cost of providing energy for that hour. The marginal cost, for any hour, is the energy cost of the most expensive unit or purchased energy supplying a portion of PUBLIC SERVICE's load during that hour and includes all costs in the New England Power Exchange (NEPEX) bus rate cost for the incremental unit. The NEPEX bus rate costs are essentially the cost of fuel consumed. PUBLIC SERVICE's incremental energy cost, for the purposes of this Contract, will be expressed as a yearly average and will be calculated by averaging all 8,760 hourly incremental energy costs over the calendar year.

If the rate during any year is less than the appropriate percentage of PUBLIC SERVICE's incremental energy cost for that year, an adjustment will be made for all energy sold to PUBLIC SERVICE. The adjustment will consist of an additional payment for each KWH sold to PUBLIC SERVICE during said year based on the difference between the price paid and the appropriate percentage of PUBLIC SERVICE's incremental energy cost. The adjustment will be paid within one month after PUBLIC SERVICE's incremental energy cost for the previous year has been determined.

If the rate during any year is more than the appropriate percentage of PUBLIC SERVICE's incremental energy cost for that year, an adjustment will be made for all energy sold to PUBLIC SERVICE. The adjustment will consist of a refund to PUBLIC SERVICE for each KWH sold during said year based on the difference between the price paid and the appropriate percentage of PUBLIC SERVICE's incremental energy cost. The refund will be made to PUBLIC SERVICE by applying one-twelfth of the total amount as a reduction to each month's payment by PUBLIC SERVICE during the current year. If for any month, no payment is due the SELLER, or the payment due is not equal to the refund, a payment to PUBLIC SERVICE will be made by SELLER so that the total recovery is achieved by PUBLIC SERVICE by the end of the current year.

- D. The Contract rates described in Sections B and C, Article 3, are subject to the following provisions, as applicable, in order to determine the Contract price to be charged by SELLER to PUBLIC SERVICE for sales of electric energy under this Contract.
1. Beginning with the ninth Contract year, and continuing for the term of the Contract, a recovery amount equal to 5.20 cents per KWH shall be deducted from the Contract rate. This deduction allows PUBLIC SERVICE to recover the payments made under Section A, Article 3, which exceeded the index price.
 2. For the ninth through the twentieth Contract years, the Contract rate shall be adjusted by adding 0.67 cents per KWH to the rate.

SELLER shall have the option, if proven necessary by its financing experience, to extend the pricing under Section A, Article 3 through the ninth or tenth Contract year. If said pricing is extended through the ninth Contract year, the recovery amount under Section D.1., Article 3 shall be 6.49 cents per KWH and the recovery shall begin with the tenth Contract year; if said pricing is extended through the tenth Contract year, the recovery amount shall be 8.03 cents per KWH beginning with the eleventh Contract year.

Article 4. Metering.

The metering shall be configured so as to represent the generation delivered to PUBLIC SERVICE. The metering may be installed on the generation side of the transformer provided that transformer losses are subtracted from the measured generation by a suitable method.

SELLER will install, own, and maintain all metering equipment as specified in PUBLIC SERVICE's study of the SELLER's electric generating facility, which study is, or will be upon mutual consent of both parties, attached hereto as Attachment A. SELLER shall bear all costs associated with said equipment and its installation.

If at any time, the metering equipment is found to be in error by more than two percent fast or slow (+ or -2%), SELLER shall cause such metering equipment to be corrected and the meter readings for the period of inaccuracy shall be adjusted to correct such inaccuracy so far as the same can be reasonably ascertained, but no adjustment prior to the beginning of the preceding month shall be made except by agreement of the parties. All tests and calibrations shall be made in accordance with Section V-14 of the NHPUC Rules and Regulations Prescribing Standards for Electric Utilities in effect as of September 8, 1972, as amended. The meter shall be tested as prescribed in said Rules and Regulations.

In addition to the regular routine tests, SELLER shall cause the metering equipment to be tested at any time upon request of and in the presence of a representative of PUBLIC SERVICE. If such equipment proves accurate within two percent fast or slow (+ or -2%), the expense of the test shall be borne by PUBLIC SERVICE.

The SELLER shall allow PUBLIC SERVICE reasonable access to the meter located on the SELLER's premises. PUBLIC SERVICE reserves the right to secure or seal the metering installation, to require SELLER to measure electrical energy sold to PUBLIC SERVICE on an hour-by-hour basis, and to require SELLER to notify PUBLIC SERVICE once each day of SELLER's generation in kilowatthours for each hour during the prior 24 hours.

Article 5. Modifications.

If SELLER plans any modifications to its electric generating facility, SELLER shall give PUBLIC SERVICE prior written notice of its intentions. In the event that PUBLIC SERVICE reasonably determines that said modifications would necessitate changes to the metering equipment or would cause PUBLIC SERVICE to incur additional expenses associated therewith, the SELLER shall make such changes as reasonably required by PUBLIC SERVICE and reimburse PUBLIC SERVICE for said expenses before PUBLIC SERVICE is obligated to purchase any increased output.

If the PUBLIC SERVICE interconnecting circuit is converted to a higher voltage in the future, the SELLER shall be responsible for all metering changes necessitated by the conversion and shall bear all costs associated with said conversion.

Article 6. Billing & Payment.

PUBLIC SERVICE shall read the meter, installed in accordance with Article 4, on or at the end of each month, and PUBLIC SERVICE shall send the SELLER a form showing the month's beginning and ending meter readings and total net kilowatthour generation.

SELLER shall then transmit to PUBLIC SERVICE a bill showing the amount due, which amount will be determined by multiplying the rate per kilowatthour specified in Article 3 times the number of kilowatthours delivered to PUBLIC SERVICE since the prior reading of the meter, and PUBLIC SERVICE will send to SELLER a payment for that amount within 20 days of receipt of SELLER's bill.

Article 7. Liability & Insurance.

- a. Each party will be responsible for its facilities and the operation thereof and will indemnify and save the other harmless from any and all loss by reason of property damage, bodily injury, including death resulting therefrom suffered by any person or persons including the parties hereto, employees thereof or members of the public, (and all expenses in connection therewith, including attorney's fees) whether arising in contract, warranty, tort (including negligence), strict liability or otherwise, caused by or sustained on, or alleged to be

caused by or sustained on, equipment or facilities, or the operation or use thereof, owned or controlled by such party, except that each party shall be solely responsible for and shall bear all costs of claims by its own employees or contractors growing out of any workmen's compensation law. SELLER shall indemnify and save PUBLIC SERVICE harmless against any and all liability for claims, costs, losses, expenses and damages, including bodily injury and death, sustained by Concord Electric Company, its employees or agents, arising out of SELLER's performance of this Contract.

- b. SELLER hereby agrees to maintain in force and effect, for the duration of this Contract, Workmen's Compensation Insurance, as required by statute, and Comprehensive General Liability Insurance for bodily injury and property damage at minimum limits of three million dollars (\$3,000,000). Within sixty days of the effective date of this Contract, the SELLER agrees to provide PUBLIC SERVICE with a certificate of such insurance.
- c. In no event shall PUBLIC SERVICE be liable, whether in Contract, tort (including negligence), strict liability, warranty, or otherwise, for any special, indirect, incidental, or consequential loss or damage, including but not limited to cost of capital, cost of replacement power, loss of profits or revenues or the loss of the use thereof. This provision, subsection c of Article 7, shall apply notwithstanding any other provision of this Contract.

Article 8. Force Majeure.

Either party shall not be considered to be in default hereunder and shall be excused from purchasing or selling electricity hereunder if and to the extent that it shall be prevented from doing so by storm, flood, lightning, earthquake, explosion, equipment failure, civil disturbance, labor dispute, act of God or the public enemy, action of a court or public authority, withdrawal of facilities from operation for necessary maintenance and repair, or any cause beyond the reasonable control of either party.

Article 9. Effective Date & Contract Term.

This Contract shall become effective between the parties as of the date hereof, provided that the metering equipment, as specified by PUBLIC SERVICE in accordance with the conditions set forth in Section 4 of this Contract, has been installed by SELLER.

If said equipment has not been properly installed, this Contract shall become effective between the parties as of the date of proper installation of said equipment or as of the date SELLER begins delivering energy to PUBLIC SERVICE, whichever occurs latest. As of the effective date of this Contract, the Contract shall remain in full force and effect for thirty (30) years.

In order for any modification to this Contract to be binding upon the parties, said modifications must be in writing and signed by both parties.

Article 10. Prior Agreements Superseded.

This Contract with Attachment A represents the entire agreement between the parties hereto relating to the subject matter hereof, and all previous agreements, discussion, communications, and correspondence with respect to the said subject matter are superseded by the execution of this Contract.

Article 11. Waiver of Terms or Conditions.

The failure of either party to enforce or insist upon compliance with any of the terms or conditions of this Contract shall not constitute a general waiver or relinquishment of any such terms or conditions, but the same shall be and remain at all times in full force and effect.

Article 12. General.

This Contract shall be binding upon, and inure to the benefit of the respective successors and assigns of the parties hereto, provided that SELLER shall not assign this Contract except to an affiliated company, without the prior written consent of PUBLIC SERVICE, which consent shall not be unreasonably withheld. The term "affiliated company" shall include any partnership in which SELLER or one of SELLER's subsidiaries or affiliates is a general partner or any corporation in which SELLER or one of its subsidiaries or affiliates owns or controls more than 50 percent of the voting stock or otherwise has operating control. In the event of an assignment to an affiliate, SELLER shall notify PUBLIC SERVICE within five (5) days of the effective date of the assignment.

Article 13. Applicable Law.

This Contract is made under the laws of The State of New Hampshire and the interpretation and performance hereof shall be in accordance with and controlled by the laws of that State.

Article 14. Mailing Addresses.

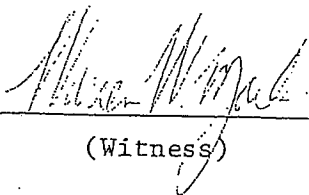
The mailing addresses of the parties are as follows:

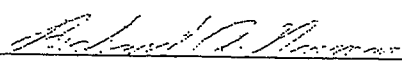
SELLER: New Hampshire Hydro Associates
99 North State Street
Concord, New Hampshire 03301
Attn: Richard A. Norman, Partner

PUBLIC SERVICE: Public Service Company of New Hampshire
1000 Elm Street
P.O. Box 330
Manchester, New Hampshire 03105
Attn: Henry J. Ellis, Vice President


IN WITNESS WHEREOF, the parties have hereunto caused their names to be subscribed, as of the day and year first above written.

NEW HAMPSHIRE HYDRO ASSOCIATES
By ESSEX DEVELOPMENT ASSOCIATES,
A General Partner


(Witness)

By: 
Name: Richard A. Norman
Title: Partner

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE


(Witness)

By: _____
Henry J. Ellis, Vice President

NEW HAMPSHIRE HYDRO ASSOCIATES
99 NORTH STATE STREET
CONCORD, N.H. 03301
(603) 224-8333

NOTED APR 13 1982 R.V.P.

April 1, 1982

Mr. Henry J. Ellis
Vice President
Public Service Company
of New Hampshire
100 Elm Street
P.O. Box 330
Manchester, NH 03105

Dear Mr. Ellis:

Enclosed are two copies of the Contract for Purchase and Sale of Electric Energy executed by New Hampshire Hydro Associates (NHHA). Kindly date and execute both copies of the Contract and return one copy to us.

Mr. Warren Mack of Essex Development Associates, Inc. has had discussions with Public Service staff regarding clarification of certain language in the attached contract. Based upon these discussions it is understood that the Contract rate of 10.00 cents per KWH shall be in effect for the initial 8 Contract years regardless of the relationship between Public Service's incremental energy cost and the index price. This point of clarification arises from the possible interpretation that Clause C of Article 3 may override Clause A of Article 3. Furthermore, should NHHA elect to extend the 10 cents per KWH Contract rate to the ninth and/or tenth Contract year, as is provided for in the last paragraph of Article 3, the 10.00 cent per KWH Contract rate shall be used, regardless of the relationship between Public Service's incremental energy cost and the index price.

While NHHA would prefer to have the language of the Contract modified to make the above clarifications, it is understood that Public Service prefers to leave the wording unchanged in order to simplify administration of contracts with small power producers. Given Public Service's preference, in lieu of changing the Contract, NHHA requests that you sign and return a copy of this letter.

It is also our understanding that Public Service, Concord Electric Company and NHHA will forthwith enter into an agreement with respect to Concord Electric's agreement to wheel the energy generated by NHHA over Concord Electric's transmission lines to Public Service's Garvins Falls substation.

On behalf of myself and my NHHA associates I'd like to thank you, Dave Merrill, John Lyons, and Dick Perrin for the extra effort that was required to reach agreement on this contract. NHHA looks forward to a mutually satisfactory startup and operation of the Penacook project.

Sincerely,

NEW HAMPSHIRE HYDRO ASSOCIATES

By: Essex Development Associates
Its: General Partner

Richard A. Norman
By: Richard A Norman
Partner

Accepted and agreed to:

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

By: Henry J. Ellis, Vice President

CONTRACT FOR THE PURCHASE AND SALE
OF ELECTRIC ENERGY

Julie,
4/13/82 Mark-up
with PSNH changes.

CONTRACT, dated _____, 1982, by and between NEW HAMPSHIRE HYDRO ASSOCIATES, a New Hampshire Limited Partnership, with its principal office in Concord, New Hampshire (hereinafter referred to as SELLER), and PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE, a New Hampshire corporation having its principal place of business in Manchester, New Hampshire (hereinafter referred to as PUBLIC SERVICE).

WHEREAS, SELLER is engaged in the business of generation of electrical energy,

WHEREAS, SELLER desires to sell its entire generation output to PUBLIC SERVICE,

WHEREAS, PUBLIC SERVICE is engaged in the business of the generation, transmission, and distribution of electrical energy,

WHEREAS, PUBLIC SERVICE has determined it would be beneficial to secure a reliable supply of electrical energy for a period of not less than thirty years,

WHEREAS, SELLER is willing and able to sell its entire output to PUBLIC SERVICE for thirty years;

NOW, THEREFORE, in consideration of the mutual covenants and agreements hereinafter set forth, SELLER and PUBLIC SERVICE hereby agree as follows:

Article 1. Basic Agreement.

Subject to the terms, provisions, and conditions of this Contract, SELLER agrees to furnish and sell and PUBLIC SERVICE agrees to purchase and receive all of the electric energy produced by the Penacook Lower Falls hydroelectric generating facility owned and operated by SELLER located in Penacook-Boscawen, New Hampshire on the Contoocook River. Since SELLER and PUBLIC SERVICE are interconnected through the system of the Concord Electric Company, PUBLIC SERVICE's obligation to purchase energy hereunder is conditioned upon SELLER obtaining the right to transmit power through the Concord Electric Company system to PUBLIC SERVICE and SELLER shall pay the cost, if any, of such transmission.

The point of delivery from the Concord Electric Company to PUBLIC SERVICE shall be the Garvins Substation metering point located in Bow, New Hampshire.

Article 2. Availability.

During the term hereof, SELLER shall endeavor to operate its generating unit to the maximum extent reasonably possible under the circumstances and shall make available to PUBLIC SERVICE the entire net output in kilowatthours from said unit when in operation.

It is agreed that SELLER shall have sole responsibility for operation and maintenance of its generating unit, including any relays, locks, seals, breakers, and other control and protection apparatus that are necessary, or which Concord Electric Company may designate as being necessary, for the operation of SELLER's generating unit in parallel with the system of Concord Electric Company and that SELLER will maintain said generating unit in good operating order and repair without cost to PUBLIC SERVICE.

Article 3. Price.

The price charged by SELLER to PUBLIC SERVICE for sales of electric energy under this Contract shall be based on an index price of 8.10 cents per kilowatthour (KWH) and shall be determined as follows. ←

- A. For the first eight (8) years of the Contract, the Contract price shall be ^{11.0}10.00 cents per KWH. This price exceeds the index price ← by 1.90 cents per KWH; and all payments made by PUBLIC SERVICE to SELLER which exceed the index price must be recovered by PUBLIC SERVICE, during later Contract years, in accordance with Section

- D.1., Article 3. *The provision of Section C Article 3 shall not override the provisions of this paragraph* ←
B. If, at the end of the eighth Contract year, 96 percent of PUBLIC SERVICE's incremental energy costs ^{has} does not exceed ^{STET} the index price, ~~the contract rate shall be the index price of 8.10~~ 9.10 cents per KWH. ←
This rate is subject to the adjustments provided for under Section D, Article 3.

5ET
C. At such time that 96 percent of PUBLIC SERVICE's incremental energy cost exceeds ~~the index~~ ^{9.0¢ per kWh}, the rate to be paid under this contract will vary in accordance with the following provisions, subject to the provisions of Section D, Article 3.

STET
As soon as 96 percent of PUBLIC SERVICE's incremental energy cost exceeds ~~the index~~ ^{9.0¢ per kWh}, the contract rate will be based on 96 percent of PUBLIC SERVICE's incremental energy cost for a period of one year. For each subsequent year, the percentage of PUBLIC SERVICE's incremental energy cost to be paid will be reduced by 4 percent (i.e. 96 percent, 92 percent, 88 percent, 84 percent, etc.), until the incremental energy cost is reduced only 2 percent to reach 50 percent of PUBLIC SERVICE's incremental energy cost. At such time, the contract rate will remain at the 50 percent rate for the remainder of the contract term.

PUBLIC SERVICE's incremental energy cost, for any hour, is equivalent to the marginal cost of providing energy for that hour. The marginal cost, for any hour, is the energy cost of the most expensive unit or purchased energy supplying a portion of PUBLIC SERVICE's load during that hour and includes all costs in the New England Power Exchange (NEPEX) bus rate cost for the incremental unit. The NEPEX bus rate costs are essentially the cost of fuel consumed. PUBLIC SERVICE's incremental energy cost, for the purposes of this Contract, will be expressed as a yearly average and will be calculated by averaging all 8,760 hourly incremental energy costs over the calendar year.

If the rate during any year is less than the appropriate percentage of PUBLIC SERVICE's incremental energy cost for that year, an adjustment will be made for all energy sold to PUBLIC SERVICE. The adjustment will consist of an additional payment for each KWH sold to PUBLIC SERVICE during said year based on the difference between the price paid and the appropriate percentage of PUBLIC SERVICE's incremental energy cost. The adjustment will be paid within one month after PUBLIC SERVICE's incremental energy cost for the previous year has been determined.

If the rate during any year is more than the appropriate percentage of PUBLIC SERVICE's incremental energy cost for that year, an adjustment will be made for all energy sold to PUBLIC SERVICE. The adjustment will consist of a refund to PUBLIC SERVICE for each KWH sold during said year based on the difference between the price paid and the appropriate percentage of PUBLIC SERVICE's incremental energy cost. The refund will be made to PUBLIC SERVICE by applying one-twelfth of the total amount as a reduction to each month's payment by PUBLIC SERVICE during the current year. If for any month, no payment is due the SELLER, or the payment due is not equal to the refund, a payment to PUBLIC SERVICE will be made by SELLER so that the total recovery is achieved by PUBLIC SERVICE by the end of the current year.

D. The Contract rates described in Sections B and C, Article 3, are subject to the following provisions, as applicable, in order to determine the Contract price to be charged by SELLER to PUBLIC SERVICE for sales of electric energy under this Contract..

1. Beginning with the ninth Contract year, and continuing for the term of the Contract, a recovery amount equal to 5.20 cents per KWH shall be deducted from the Contract rate. This deduction

allows PUBLIC SERVICE to recover the payments made under Section A, Article 3, which exceeded the index price.

2. For the ninth through the twentieth Contract ^{STET} years, the Contract rate shall be adjusted by adding ^{1.0} 0.69 cents per KWH to the rate.

For the 1st contract year 1.0
in the year in excess of one twelfth of the total energy generated by Seller's facility during the first contract years.
This adjustment, for any given year, shall not apply to any energy generated by Seller's facility during the first contract years.
SELLER shall have the option, if proven necessary by its financing

~~experience~~ to extend the pricing under Section A, Article 3 through the ninth or tenth Contract year. If said pricing is extended through the ninth Contract year, the recovery amount under Section D.1., Article 3 shall be 6.49 cents per KWH and the recovery shall begin with the tenth Contract year; if said pricing is extended through the tenth Contract year, the recovery amount shall be 8.03 cents per KWH beginning with the eleventh Contract year.

{ If proven necessary to Public Service by Seller and/or the project lenders, for amortization of the first cost of Seller's facility, Public Service shall grant Seller the option

Article 4. Metering.

The metering shall be configured so as to represent the generation delivered to PUBLIC SERVICE. The metering may be installed on the generation side of the transformer provided that transformer losses are subtracted from the measured generation by a suitable method.

SELLER will install, own, and maintain all metering equipment as specified in PUBLIC SERVICE's study of the SELLER's electric generating facility, which study is, or will be upon mutual consent of both parties, attached hereto as Attachment A. SELLER shall bear all costs associated with said equipment and its installation.

If at any time, the metering equipment is found to be in error by more than two percent fast or slow (+ or -2%), SELLER shall cause such metering equipment to be corrected and the meter readings for the period of inaccuracy shall be adjusted to correct such inaccuracy so far as the same can be reasonably ascertained, but no adjustment prior to the beginning of the preceding month shall be made except by agreement of the parties. All tests and calibrations shall be made in accordance with Section V-14 of the NHPUC Rules and Regulations Prescribing Standards for Electric Utilities in effect as of September 8, 1972, as amended. The meter shall be tested as prescribed in said Rules and Regulations.

In addition to the regular routine tests, SELLER shall cause the metering equipment to be tested at any time upon request of and in the presence of a representative of PUBLIC SERVICE. If such equipment proves accurate within two percent fast or slow (+ or -2%), the expense of the test shall be borne by PUBLIC SERVICE.

The SELLER shall allow PUBLIC SERVICE reasonable access to the meter located on the SELLER's premises. PUBLIC SERVICE reserves the right to secure or seal the metering installation, to require SELLER to measure electrical energy sold to PUBLIC SERVICE on an hour-by-hour basis, and to require SELLER to notify PUBLIC SERVICE once each day of SELLER's generation in kilowatthours for each hour during the prior 24 hours.

Article 5. Modifications.

If SELLER plans any modifications to its electric generating facility, SELLER shall give PUBLIC SERVICE prior written notice of its intentions. In the event that PUBLIC SERVICE reasonably determines that said modifications would necessitate changes to the metering equipment or would cause PUBLIC SERVICE to incur additional expenses associated therewith, the SELLER shall make such changes as reasonably required by PUBLIC SERVICE and reimburse PUBLIC SERVICE for said expenses before PUBLIC SERVICE is obligated to purchase any increased output.

If the PUBLIC SERVICE interconnecting circuit is converted to a higher voltage in the future, the SELLER shall be responsible for all metering changes necessitated by the conversion and shall bear all costs associated with said conversion.

Article 6. Billing & Payment.

PUBLIC SERVICE shall read the meter, installed in accordance with Article 4, on or at the end of each month, and PUBLIC SERVICE shall send the SELLER a form showing the month's beginning and ending meter readings and total net kilowatthour generation.

SELLER shall then transmit to PUBLIC SERVICE a bill showing the amount due, which amount will be determined by multiplying the rate per kilowatthour specified in Article 3 times the number of kilowatthours delivered to PUBLIC SERVICE since the prior reading of the meter, and PUBLIC SERVICE will send to SELLER a payment for that amount within 20 days of receipt of SELLER's bill.

Article 7. Liability & Insurance.

- a. Each party will be responsible for its facilities and the operation thereof and will indemnify and save the other harmless from any and all loss by reason of property damage, bodily injury, including death resulting therefrom suffered by any person or persons including the parties hereto, employees thereof or members of the public, (and all expenses in connection therewith, including attorney's fees) whether arising in contract, warranty, tort (including negligence), strict liability or otherwise, caused by or sustained on, or alleged to be

caused by or sustained on, equipment or facilities, or the operation or use thereof, owned or controlled by such party, except that each party shall be solely responsible for and shall bear all costs of claims by its own employees or contractors growing out of any workmen's compensation law. SELLER shall indemnify and save PUBLIC SERVICE harmless against any and all liability for claims, costs, losses, expenses and damages, including bodily injury and death, sustained by Concord Electric Company, its employees or agents, arising out of SELLER's performance of this Contract.

- b. SELLER hereby agrees to maintain in force and effect, for the duration of this Contract, Workmen's Compensation Insurance, as required by statute, and Comprehensive General Liability Insurance for bodily injury and property damage at minimum limits of three million dollars (\$3,000,000). Within sixty days of the effective date of this Contract, the SELLER agrees to provide PUBLIC SERVICE with a certificate of such insurance.
- c. In no event shall PUBLIC SERVICE be liable, whether in Contract, tort (including negligence), strict liability, warranty, or otherwise, for any special, indirect, incidental, or consequential loss or damage, including but not limited to cost of capital, cost of replacement power, loss of profits or revenues or the loss of the use thereof. This provision, subsection c of Article 7, shall apply notwithstanding any other provision of this Contract.

Article 8. Force Majeure.

Either party shall not be considered to be in default hereunder and shall be excused from purchasing or selling electricity hereunder if and to the extent that it shall be prevented from doing so by storm, flood, lightning, earthquake, explosion, equipment failure, civil disturbance, labor dispute, act of God or the public enemy, action of a court or public authority, withdrawal of facilities from operation for necessary maintenance and repair, or any cause beyond the reasonable control of either party.

Article 9. Effective Date & Contract Term.

This Contract shall become effective between the parties as of the date hereof, provided that the metering equipment, as specified by PUBLIC SERVICE in accordance with the conditions set forth in Section 4 of this Contract, has been installed by SELLER.

If said equipment has not been properly installed, this Contract shall become effective between the parties as of the date of proper installation of said equipment or as of the date SELLER begins delivering energy to PUBLIC SERVICE, whichever occurs latest. As of the effective date of this Contract, the Contract shall remain in full force and effect for thirty (30) years.

In order for any modification to this Contract to be binding upon the parties, said modifications must be in writing and signed by both parties.

Article 10. Prior Agreements Superseded.

This Contract with Attachment A represents the entire agreement between the parties hereto relating to the subject matter hereof, and all previous agreements, discussion, communications, and correspondence with respect to the said subject matter are superseded by the execution of this Contract.

Article 11. Waiver of Terms or Conditions.

The failure of either party to enforce or insist upon compliance with any of the terms or conditions of this Contract shall not constitute a general waiver or relinquishment of any such terms or conditions, but the same shall be and remain at all times in full force and effect.

Article 12. General.

This Contract shall be binding upon, and inure to the benefit of the respective successors and assigns of the parties hereto, provided that SELLER shall not assign this Contract except to an affiliated company, without the prior written consent of PUBLIC SERVICE, which consent shall not be unreasonably withheld. The term "affiliated company" shall include any partnership in which SELLER or one of SELLER's subsidiaries or affiliates is a general partner or any corporation in which SELLER or one of its subsidiaries or affiliates owns or controls more than 50 percent of the voting stock or otherwise has operating control. In the event of an assignment to an affiliate, SELLER shall notify PUBLIC SERVICE within five (5) days of the effective date of the assignment.

Article 13. Applicable Law.

This Contract is made under the laws of The State of New Hampshire and the interpretation and performance hereof shall be in accordance with and controlled by the laws of that State.

Article 14. Mailing Addresses.

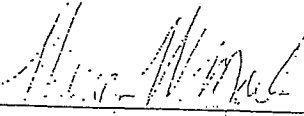
The mailing addresses of the parties are as follows:

SELLER: New Hampshire Hydro Associates
99 North State Street.
Concord, New Hampshire 03301
Attn: Richard A. Norman, Partner

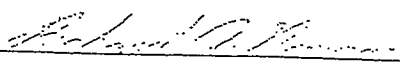
PUBLIC SERVICE: Public Service Company of New Hampshire
1000 Elm Street
P.O. Box 330
Manchester, New Hampshire 03105
Attn: Henry J. Ellis, Vice President

IN WITNESS WHEREOF, the parties have hereunto caused their names to be subscribed, as of the day and year first above written.

NEW HAMPSHIRE HYDRO ASSOCIATES
By ESSEX DEVELOPMENT ASSOCIATES,
A General Partner



(Witness)

By: 

Name: Richard A. Norman
Title: Partner

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

(Witness)

By: _____
Henry J. Ellis, Vice President

NOTED APR 13 1982 R.V.P.

NOTED APR 14 1982 JEL
OK

JOHN,

Attached is a revised contract for Penacook Lower Falls. The changes have been high-lighted. I discussed these changes with W. Mack today and he appeared to have no objections. I told him the changes were subject to management review this Thursday.

If everything is O.K., I'll prepare a transmittal letter. I think Warren will want to pick-up the contract Thurs.

Dick

REVISED

NOTED, APR 16 1982 R.V.P.

-2-

The point of delivery from the Concord Electric Company to PUBLIC SERVICE shall be the Garvins Substation metering point located in Bow, New Hampshire.

Article 2. Availability.

During the term hereof, SELLER shall endeavor to operate its generating unit to the maximum extent reasonably possible under the circumstances and shall make available to PUBLIC SERVICE the entire net output in kilowatthours from said unit when in operation.

It is agreed that SELLER shall have sole responsibility for operation and maintenance of its generating unit, including any relays, locks, seals, breakers, and other control and protection apparatus that are necessary, or which Concord Electric Company may designate as being necessary, for the operation of SELLER's generating unit in parallel with the system of Concord Electric Company and that SELLER will maintain said generating unit in good operating order and repair without cost to PUBLIC SERVICE.

Article 3. Price.

The price charged by SELLER to PUBLIC SERVICE for sales of electric energy under this Contract shall be based on an index price of 8.10 cents per kilowatthour (KWH) and shall be determined as follows.

- A. For the first eight (8) years of the Contract, the Contract price shall be 10.00 cents per KWH. This price exceeds the index price by 1.90 cents per KWH; and all payments made by PUBLIC SERVICE to SELLER which exceed the index price must be recovered by PUBLIC SERVICE, during later Contract years, in accordance with Section D.1., Article 3. The provisions of Section C, Article 3, shall not override the provisions of this paragraph.
- B. If, during the first eight Contract years, 96 percent of PUBLIC SERVICE's incremental energy costs has not exceeded 9.00 cents per KWH, the Contract rate shall be the index price of 8.10 cents per KWH. This rate is subject to the adjustments provided for under Section D, Article 3.

- C. At such time that 96 percent of PUBLIC SERVICE's incremental energy cost exceeds 9.00 cents per KWH, the rate to be paid under this contract will vary in accordance with the following provisions, subject to the provisions of Section D, Article 3.

As soon as 96 percent of PUBLIC SERVICE's incremental energy cost exceeds 9.00 cents per KWH, the contract rate will be based on 96 percent of PUBLIC SERVICE's incremental energy cost for a period of one year. For each subsequent year, the percentage of PUBLIC SERVICE's incremental energy cost to be paid will be reduced by 4 percent (i.e. 96 percent, 92 percent, 88 percent, 84 percent, etc.), until the incremental energy cost is reduced only 2 percent to reach 50 percent of PUBLIC SERVICE's incremental energy cost. At such time, the contract rate will remain at the 50 percent rate for the remainder of the contract term.

PUBLIC SERVICE's incremental energy cost, for any hour, is equivalent to the marginal cost of providing energy for that hour. The marginal cost, for any hour, is the energy cost of the most expensive unit or purchased energy supplying a portion of PUBLIC SERVICE's load during that hour and includes all costs in the New England Power Exchange (NEPEX) bus rate cost for the incremental unit. The NEPEX bus rate costs are essentially the cost of fuel consumed. PUBLIC SERVICE's incremental energy cost, for the purposes of this Contract, will be expressed as a yearly average and will be calculated by averaging all 8,760 hourly incremental energy costs over the calendar year.

If the rate during any year is less than the appropriate percentage of PUBLIC SERVICE's incremental energy cost for that year, an adjustment will be made for all energy sold to PUBLIC SERVICE. The adjustment will consist of an additional payment for each KWH sold to PUBLIC SERVICE during said year based on the difference between the price paid and the appropriate percentage of PUBLIC SERVICE's incremental energy cost. The adjustment will be paid within one month after PUBLIC SERVICE's incremental energy cost for the previous year has been determined.

If the rate during any year is more than the appropriate percentage of PUBLIC SERVICE's incremental energy cost for that year, an adjustment will be made for all energy sold to PUBLIC SERVICE. The adjustment will consist of a refund to PUBLIC SERVICE for each KWH sold during said year based on the difference between the price paid and the appropriate percentage of PUBLIC SERVICE's incremental energy cost. The refund will be made to PUBLIC SERVICE by applying one-twelfth of the total amount as a reduction to each month's payment by PUBLIC SERVICE during the current year. If for any month, no payment is due the SELLER, or the payment due is not equal to the refund, a payment to PUBLIC SERVICE will be made by SELLER so that the total recovery is achieved by PUBLIC SERVICE by the end of the current year.

D. The Contract rates described in Sections B and C, Article 3, are subject to the following provisions, as applicable, in order to determine the Contract price to be charged by SELLER to PUBLIC SERVICE for sales of electric energy under this Contract.

1. Beginning with the ninth Contract year, and continuing for the term of the Contract, a recovery amount equal to 5.20 cents per KWH shall be deducted from the Contract rate. This deduction allows PUBLIC SERVICE to recover the payments made under Section A, Article 3, which exceeded the index price.
2. For the ninth through the twentieth Contract years, the Contract rate shall be adjusted by adding 1.00 cents per KWH to the rate. This adjustment, for any given year, shall not apply to any energy generated during that year in excess of one-twelfth (1/12) of the total energy generated by SELLER's facility during the first eight Contract years.

If proven necessary to PUBLIC SERVICE by SELLER and/or the project lenders, for amortization of the first cost of SELLER's facilities, PUBLIC SERVICE shall grant SELLER the option to extend the pricing under Section A, Article 3 through the ninth or tenth Contract year. If said pricing is extended through the ninth Contract year, the recovery amount under Section D.1., Article 3 shall be 6.49 cents per KWH and the recovery shall begin with the tenth Contract year; if said pricing is extended through the tenth Contract year, the recovery amount shall be 8.03 cents per KWH beginning with the eleventh Contract year.

NEW HAMPSHIRE HYDRO ASSOCIATES
99 NORTH STATE STREET
CONCORD, N.H. 03301
(603) 224-8333

April 16, 1982

Mr. Henry Ellis
Public Service Company of New Hampshire
P.O. Box 330
1000 Elm Street
Manchester, NH 03105

Dear Mr. Ellis:

The purpose of this letter is to describe a scenario that could lead to New Hampshire Hydro Associates (NHHA) being required to extend the ten-cent price floor into the ninth and possibly tenth contract years. Let me again emphasize that in NHHA's judgment this is an improbable event.

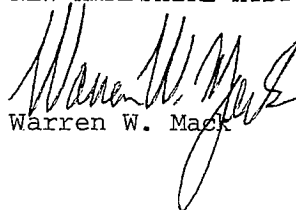
The financing plan for NHHA includes a loan from a commercial bank that is to be fully repaid during the first eight contract years. Project cash flows are sufficient to service this loan with a comfortable margin for contingencies. However, if a prolonged, severe drought occurs during this period, it is possible that NHHA will be unable to repay the loan in full. Therefore to protect against this unlikely occurrence, bankers seek the assurance given by the ability to extend the floor price until their loan is repaid in full. Two additional years should suffice for this purpose. Even if such a drought does occur, the power prices that are projected without the extension of the ten-cent price, should be sufficient to satisfy the bank's requirements. However, given that the incremental fuel cost in future years is a variable, the bankers seek some price certainty, therefore the option to extend the price floor.

NHHA does not wish to trigger this option. Based upon the projections of future incremental fuel costs and reasonable variations thereof, it is not in NHHA's economic interest to extend the floor price period.

I trust that this answers your inquiry.

Sincerely,

NEW HAMPSHIRE HYDRO ASSOCIATES


Warren W. Mack

WWM/jgb

LAWRENCE OFFICES
SIX ESSEX STREET, LAWRENCE, MA 01840 (617) 687-2312

On April 28, 1982, Public Service Company of New Hampshire (PSNH) and New Hampshire Hydro Associates (NHHA) entered into a contract whereby PSNH will purchase the entire net output of NHHA's Penacook Lower Falls hydroelectric generating facility. This facility, located on the Contoocook River in Penacook-Boscawen, New Hampshire, will have an installed capacity of 4,000 kilowatts and will generate enough energy to serve over 2,000 of PSNH's residential customers.

PSNH views this contract as a milestone in its attempt to reduce dependence on foreign oil; provide safe, reliable, high quality service to customers at the lowest reasonable cost; and delay additional base load capacity investment as long as possible after the completion of Seabrook. PSNH is presently contracted with 20 hydro developers, the total installed capacity being 12,690 kilowatts. The Penacook Lower Falls Project, alone, accounts for approximately 30% of both the capacity and annual energy from all contracted hydro developers.

The contract between PSNH and NHHA is unique in that it is the only contract, to date, in which PSNH agrees to pay an initial rate substantially higher than its avoided cost in order to assist NHHA with their project financing. In return, NHHA will sell energy to PSNH, during later contract years, at a ^{compensating} reduced rate. It is estimated that the pricing terms of this 30-year contract will save PSNH customers almost \$2,000,000 over the contract term.

PSNH views the Penacook Lower Falls Project as being of real value to the people of New Hampshire because of its size, which makes central dispatching under PSNH control an attractive possibility; it involves new construction and equipment which will make the facility a reliable energy source for years to come; and, most importantly, New Hampshire Hydro Associates is recognized as an entity that has made long-term commitments to the hydroelectric industry.

R.V. Perron
June 3, 1982

NOTED AUG 27 1982 **M.D.C.**
JR.**PSNH PUBLIC SERVICE**
Company of New Hampshire

INTRA-COMPANY BUSINESS MEMO

Subject 30-Year Levelized Contract Value,
Penacock Lower Falls Hydro

From R. V. Perron District Date August 27, 1982

To D. R. Sklar cc: H. J. Ellis Reference
J. E. Lyons
G. M. McKenney

Attached are the following exhibits.

Exhibit 1: Computation of levelized value, Penacock Lower Falls Contract.


Exhibit 2: Computation of levelized value, PSNH Long-Term Contract (no front-end loading).

Exhibit 3: Table illustrating the contract pricing provisions and estimated payments of the Penacock Lower Falls Contract.

Exhibit 4: Computation of "Recovery Amount" for Penacock Lower Falls Contract.

Exhibits 1 and 2 show that the 30-year levelized value of the Penacock Lower Falls Contract (front-end loaded) and our Long-Term Contract (not front-end loaded) are the same, both 10.22 cents per KWH. This is consistent with our policy of offering all limited electrical energy producers contracts of equal value.

Please notice that the attached computations are based on estimated incremental energy costs that were in effect last March, not our current estimates. This has no effect on illustrating that all our Long-Term Contracts are of equal value.



R. V. Perron

RVP/dfb

Enclosures

LEVELIZED CONTRACT VALUE
PENACOOK LOWER FALLS
27 AUG. 82 RYPERON

YEAR	EST. PAYMENT	PW\$	PRESENT WORTH
1984	10.00	8503	8.5030
85	10.00	7230	7.2300
86	10.00	6147	6.1470
87	10.00	5227	5.2270
88	10.00	4444	4.4440
89	10.00	3779	3.7790
1990	10.00	3213	3.2130
91	10.00	2732	2.7320
92	6.36	2323	1.4774
93	7.38	1975	1.4576
94	7.03	1679	1.1803
95	8.65	1428	1.2352
96	10.38	1214	1.2601
97	10.27	1032	1.0599
98	10.72	0878	0.9412
99	11.71	0746	0.8736
2000	12.58	0635	0.7988
01	13.27	0540	0.7166
02	13.90	0459	0.6380
03	14.45	0390	0.5636
04	15.05	0332	0.4997
05	17.28	0282	0.4873
06	19.53	0240	0.4687
07	21.99	0204	0.4486
08	24.70	0173	0.4273
09	27.68	0147	0.4069
2010	30.95	0125	0.3869
11	34.19	0107	0.3658
12	37.70	0091	0.3431
2013	41.53	0077	0.3198

57.6314

$$P \cdot \frac{1 - (1+i)^{-n}}{i} = 57.6314$$

$$i = 17.61\%, n = 30$$

$$5.63485 P = 57.6314$$

$$P = 10.22$$

10.22 \$/kW.H.

30-YR. LEVELIZED

PSNH LONG-TERM CONTRACT
 LEVELIZED WORTH OF CONTRACT
 17 MAR. 82 RVP

YEAR	EST. CONTRACT PAYMENT	n	PWF	PRESENT WORTH
1984	8.10	1	0.8503	6.8874
85	8.10	2	0.7230	5.8563
86	8.10	3	0.6147	4.9791
87	8.10	4	0.5227	4.2339
88	8.10	5	0.4444	3.5996
89	8.10	6	0.3779	3.0610
1990	8.10	7	0.3213	2.6025
91	8.10	8	0.2732	2.2129
92	10.26	9	0.2323	2.3834
93	11.28	10	0.1975	2.2278
94	12.73	11	0.1679	2.1374
95	14.35	12	0.1428	2.0492
96	16.08	13	0.1214	1.9521
97	15.97	14	0.1032	1.6481
98	16.42	15	0.0878	1.4417
99	17.41	16	0.0746	1.2988
2000	18.28	17	0.0635	1.1608
01	18.97	18	0.0540	1.0244
02	19.60	19	0.0459	0.8996
03	20.15	20	0.0390	0.7859
04	20.52	21	0.0332	0.6813
05	22.75	22	0.0282	0.6416
06	25.00	23	0.0240	0.6000
07	27.46	24	0.0204	0.5602
08	30.17	25	0.0173	0.5219
09	33.15	26	0.0147	0.4873
2010	36.42	27	0.0125	0.4553
11	39.66	28	0.0107	0.4244
12	43.17	29	0.0091	0.3928
2013	47.00	30	0.0077	0.3619

57.5686

$$P \cdot \frac{1 - (1+i)^{-n}}{i} = 57.5686$$

$$P = \frac{(57.5686)(0.1761)}{1 - (1.1761)^{-30}}$$

$$P = 10.22 \text{ \$/KWH}$$

10.22 \\$/KWH
 FOR 30 YRS.

CONTRACT PRICING PROVISIONS
PENACOOK LOWER FALLS HYDRO

YEAR	PSNH ¹ IEC	%	% x IEC	FRONT-END RATE	ADJUST- MENT	RECOVERY	ESTIMATED ² PAYMENT
1984	5.94			11.00	-1.00		10.00
85	6.56						10.00
86	5.53						10.00
87	4.72						10.00
88	5.30						10.00
89	6.42						10.00
1990	7.91						10.00
91	9.01						10.00
92	11.63	96	11.16		+0.67	-5.47	6.36
93	13.24	92	12.18				7.38
94	13.44	88	11.83				7.03
95	16.01	84	13.45				8.65
96	18.97	80	15.18				10.38
97	19.83	76	15.07				10.27
98	21.56	72	15.52				10.72
99	24.28	68	16.51				11.71
2000	27.16	64	17.38				12.58
01	30.11	60	18.07				13.27
02	33.39	56	18.70				13.90
03	37.01	52	19.25				14.45
04	41.04	50	20.52				15.05
05	45.50		22.75				17.28
06	49.99		25.00				19.53
07	54.92		27.46				21.99
08	60.34		30.17				24.70
09	66.30		33.15				27.68
2010	72.84		36.42				30.95
11	79.31		39.66				34.19
12	86.34		43.17				37.70
13	93.99		47.00				41.53

1 Estimated PSNH "Incremental Energy Cost."

2 These rates are based on PSNH estimates. The rates shown for years 1992 thru 2013 are not guaranteed by PSNH.

NOTED MAR 19 1982 R.V.P.

PENACONK LOWER FALLS
RECOVERY AMOUNT
17 MAR. 82 RYP

FRONT END LOADING OF 11.00 ¢/KWH FOR 8 YRS.

$$i = 17.61\%$$

$$pwf'(17.61\%, 8) = \frac{1 - (1.1761)^{-8}}{0.1761} = 4.1273 \quad (\text{Uniform Series})$$

$$pwf'(17.61\%, 22) = \frac{1 - (1.1761)^{-22}}{0.1761} = 5.5185 \quad (\text{Uniform Series})$$

$$pwf(17.61\%, 8) = (1.1761)^{-8} = 0.2732 \quad (\text{Single Payment})$$

$$(11.00 - \text{index}) (4.1273) = \psi (5.5185) (0.2732)$$

$$(11.00 - 9.00) (4.1273) = \psi (5.5185) (0.2732)$$

$$\psi = 5.47 \text{ ¢/KWH}$$

RECOVERY AMOUNT

5.47 ¢/KWH

EXHIBIT 4



Public Service of New Hampshire

August 8, 1983

Mr. Warren W. Mack
New Hampshire Hydro Associates
99 North State Street
Concord, New Hampshire 03301

Dear Mr. Mack:

This letter will set forth a procedure for billing Public Service Company of New Hampshire for energy generated at Penacook Lower Falls generating facility.

PSNH's Manchester office will read your meter on the last working day of the month and will send you a form showing the month's beginning and ending meter readings and total net kilowatt-hour generation. Please bill the Company on your letterhead for this amount of energy. You should send your bill to my attention (address below) for processing. The Company will mail you a check within twenty days of receiving your bill.

Please call me if you have any questions. My number here in Manchester is 669-4000, extension 2315.

Sincerely,

Mary L. Swist
Mary L. Swist
Assoc. Applications
Analyst

cc: R. Perron

Mary L. Swist
Public Service Company of New Hampshire
1000 Elm Street
P.O. Box 330
Manchester, New Hampshire 03105

MLS/csb
16:234



Exhibit 2-33

~~RVP~~
SMA
File

FILE COPY

Public Service of New Hampshire

NOTED DEC 13 1983 JEL

December 9, 1983

Ms. Sarah Voll
Coordinator of Alternate Energy
State of New Hampshire
Public Utilities Commission
8 Old Suncook Road, Building #1
Concord, NH 03301

Re: Certificate of Commencement of Power Sale Contract
New Hampshire Hydro Associates

Dear Ms. Voll:

For your information, the Company has executed a Certificate of Commencement of Power Sale Contract between Public Service Company of New Hampshire and New Hampshire Hydro Associates for the sale of energy produced by same.

Very truly yours,

Catherine E. Shively

Catherine E. Shively
Counsel

Public Service Company of New Hampshire

CES:lak

Encl.

bcc: H.J. Ellis (w/o encls)
J.E. Lyons
G.M. McKenney
Legal Files (w/orig. encls)

CONTRACT START
DATE = 9/26/83



Public Service of New Hampshire

October 24, 1983

Ms. Julie Meck Hamlin, General Counsel
New Hampshire Hydro Associates
99 North State Street
Concord, NH 03301

Subject: Certificate of Commencement of Power Sale Contract

Dear Ms. Hamlin:

Enclosed are four copies of the subject certificate. Mr. Ellis has initialed the two changes: 1) the date of commencement, which should be September 26 instead of September 6; and 2) the deletion of the reference to Amendment No. 1 of the Credit Agreement which has not yet been executed.

By copy of this letter, we are asking our Law Department to file our original of the certificate and to notify the N.H. Public Utilities Commission that this contract is now in effect.

Very truly yours,

John E. Lyons, P.E.
Director
Supplemental Energy Sources

JEL/dfd

Enclosure

cc: H. J. Ellis
C. E. Shively (w/original)
R. S. Johnson
D. K. MacDonald (Concord Elec.)

bcc: F. W. Bishop	R. E. Evans
J. M. Daly	T. P. Meissner
F. H. Hebert	M. T. Smith
A. L. Spaulding	M. L. Swist
P. A. Magoun	

CERTIFICATE OF COMMENCEMENT OF POWER SALE CONTRACT

The undersigned do hereby certify with respect to the power sale contract between New Hampshire Hydro Associates, a New Hampshire limited partnership ("NHHA"), and Public Service Company of New Hampshire, a New Hampshire corporation (the "Company"), dated April 28, 1982 (the "Power Sale Contract"), that NHHA began delivering energy to the Company on September 26, 1983 and, therefore, that as of said date the Power Sale Contract became effective and the term thereof commenced. The undersigned do hereby further certify that the Power Sale Contract has not been amended or modified and is in full force and effect as of the date hereof. HCE

This Certificate is delivered in connection with the Credit Agreement dated as of July 30, 1982 between New Hampshire Hydro Associates and Bankers Trust Company, ~~as amended by Amendment No. 1 dated as of August 1, 1983.~~ HCE

IN WITNESS WHEREOF, the undersigned have caused this instrument to be executed as of the 26th day of September, 1983.

PUBLIC SERVICE COMPANY OF
NEW HAMPSHIRE

(seal)

By: Henry J. Ellis

NEW HAMPSHIRE HYDRO ASSOCIATES

By: Essex Development Associates
Its General Partner

By: Richard A. Norman



Public Service of New Hampshire

May 14, 1990

Mr. Tom Tarpey, President
Essex Hydro Associates
114 State Street 5th Floor
Boston, MA 02109

Subject: Penacook Lower (SESD #055)
Front-End Loading Computation

Dear Tom:

Enclosed as you requested are the front-end loading computations for the Penacook Lower Hydro Project based on an annual interest rate of 17.61%. As we discussed earlier, after you have a chance to review the information, we should get together with Bob Winship to work out the changes, including any front-end loading buyout, that may be necessary for both 9 cent contracts.

Currently PSNH is in the midst of a transition period due to the pending merger-acquisition by Northeast Utilities, and the policies and responsibilities of the combined companies are yet to be clearly defined. This situation will probably effect how quickly we can make any contract changes for your project.

If you have any questions regarding this information, please feel free to contact me at extension 2314.

Sincerely,

A handwritten signature in dark ink, appearing to read "S. B. Wicker, Jr.", is written over the typed name.

S. B. Wicker, Jr.
Manager
Supplemental Energy Sources

GSS/pjb

PROJECT SPECIFIC CALCULATION OF FRONT END LOADINGS
FOR ENERGY & CAPACITY PURCHASES FROM SPP'S

6SS 05/28/90 VFELO55

SITE NAME: Penacook Lower Falls
PSNH #1055

CONTRACT TYPE/DATE: L-T 82/04/28
RATE DOCKET:
FIRST L-T PAYMENT: 83/09
REMARKS:

CURRENT INSTALLED CAP(KW): 4000
ON LINE DATE: 83/09/26
EARLIER INSTALLED CAP(KW): 0
ON LINE DATE:
CURRENT PUC DEP CAP(KW): 0
EFFECTIVE DATE:
EARLIER PUC DEP CAP(KW): 0
EFFECTIVE DATE:

PRELIMINARY
ISSUE DATE 5/14/90

SHA: 90/05/05

ANNUAL INTEREST: 17.6100
MONTHLY INTEREST: 1.3609

YEAR/MONTH	INSTALLED PUC CAPACITY (KW)	PEAK REDUCTION FACTOR	AVOIDED COST MARGINAL (C/KWH)	AVOIDED COST RATES (CAP) (\$/KWH-YR)	ACTUAL PAYMENT (\$)	ACTUAL GENERATION (KWH)	NON-LEVEL EXCESS PAYMENT (\$/s)	NON-LEVEL EXCESS BALANCE (\$/s)	PREVIOUS EXCESS BALANCE (\$/s)	PAYMENT INTEREST (\$/s)	CUMULATIVE EXCESS (\$/s w/interest)	PSNH SHORT TERM MARGINAL RATE (\$/KWH)	PSNH PAYMENT IF EXCESS (\$/s no interest)	ANNUAL PLANT FACTOR
82/01/31	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.79	0.00	0.00
82/02/28	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.45	0.00	0.00
82/03/31	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.77	0.00	0.00
82/04/30	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.76	0.00	0.00
82/05/31	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.33	0.00	0.00
82/06/30	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.70	0.00	0.00
82/07/31	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.18	0.00	0.00
82/08/31	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.35	0.00	0.00
82/09/30	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.30	0.00	0.00
82/10/31	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.68	0.00	0.00
82/11/30	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.58	0.00	0.00
82/12/31	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.71	0.00	0.00
83/01/31	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.75	0.00	0.00
83/02/28	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.07	0.00	0.00
83/03/31	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.17	0.00	0.00
83/04/30	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.32	0.00	0.00
83/05/31	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.45	0.00	0.00
83/06/30	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.33	0.00	0.00
83/07/31	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.32	0.00	0.00
83/08/31	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.17	0.00	0.00
83/09/30	4000	0	8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.88	0.00	0.00
83/10/31	4000	0	8.00	0.00	4200.00	4200.00	840.00	0.00	0.00	0.00	0.00	7.74	0.00	0.00
83/11/30	4000	0	8.00	0.00	1652000.00	1652000.00	3304.00	0.00	0.00	0.00	0.00	8.05	0.00	0.00
83/12/31	4000	0	8.00	0.00	2432500.00	2432500.00	3369.43	0.00	0.00	0.00	0.00	5.44	0.00	0.00
84/01/31	4000	0	8.00	0.00	1725500.00	1725500.00	3391.43	0.00	0.00	0.00	0.00	6.07	0.00	0.00
84/02/29	4000	0	8.00	0.00	2040500.00	2040500.00	11864.21	0.00	0.00	0.00	0.00	6.48	0.00	0.00
84/03/31	4000	0	8.00	0.00	2394000.00	2394000.00	1614.57	0.00	0.00	0.00	0.00	6.44	0.00	0.00
84/04/30	4000	0	8.00	0.00	3108000.00	3108000.00	21138.71	0.00	0.00	0.00	0.00	5.81	0.00	0.00
84/05/31	4000	0	8.00	0.00	3129000.00	3129000.00	276172.04	0.00	0.00	0.00	0.00	5.63	0.00	0.00
84/06/30	4000	0	8.00	0.00	2292500.00	2292500.00	342510.40	0.00	0.00	0.00	0.00	7.87	0.00	0.00
84/07/31	4000	0	8.00	0.00	1522500.00	1522500.00	393021.54	0.00	0.00	0.00	0.00	5.61	0.00	0.00
84/08/31	4000	0	8.00	0.00	252000.00	252000.00	42820.08	0.00	0.00	0.00	0.00	5.91	0.00	0.00
84/09/30	4000	0	8.00	0.00	262500.00	262500.00	439695.78	0.00	0.00	0.00	0.00	6.94	0.00	0.00
84/10/31	4000	0	8.00	0.00	322000.00	322000.00	450929.50	0.00	0.00	0.00	0.00	6.66	0.00	0.00
84/11/30	4000	0	8.00	0.00	661500.00	661500.00	463506.09	0.00	0.00	0.00	0.00	5.67	0.00	0.00
84/12/31	4000	0	8.00	0.00	976500.00	976500.00	483043.83	0.00	0.00	0.00	0.00	5.84	0.00	0.00
85/01/31	4000	0	8.00	0.00	542500.00	542500.00	509147.46	0.00	0.00	0.00	0.00	7.75	0.00	0.00
85/02/29	4000	0	8.00	0.00	1302000.00	1302000.00	52626.32	0.00	0.00	0.00	0.00	7.25	0.00	0.00
85/03/31	4000	0	8.00	0.00	2541000.00	2541000.00	56037.13	0.00	0.00	0.00	0.00	5.52	0.00	0.00
85/04/30	4000	0	8.00	0.00	2275000.00	2275000.00	618579.90	0.00	0.00	0.00	0.00	5.72	0.00	0.00
85/05/31	4000	0	8.00	0.00	1228500.00	1228500.00	672498.01	0.00	0.00	0.00	0.00	4.77	0.00	0.00
85/06/30	4000	0	8.00	0.00	381500.00	381500.00	706219.87	0.00	0.00	0.00	0.00	5.15	0.00	0.00
85/07/31	4000	0	8.00	0.00	315000.00	315000.00	73460.64	0.00	0.00	0.00	0.00	4.88	0.00	0.00
85/08/31	4000	0	8.00	0.00	133000.00	133000.00	739606.05	0.00	0.00	0.00	0.00	4.86	0.00	0.00
85/09/30	4000	0	8.00	0.00	896000.00	896000.00	752331.16	0.00	0.00	0.00	0.00	4.49	0.00	0.00

35/10/31	4000	0	0	8.00	0.00	1382500	1382500	1060000	276500	780489.46	10621.49	818760.95	5.11	36.00	70585.06	67664.94	47.35
85/11/30	4000	0	0	8.00	0.00	2219000	2219000	1775200	443800	818760.95	11142.32	876283.27	5.89	36.00	130700.81	91192.19	75.99
85/12/31	4000	0	0	8.00	0.00	2271500	2271500	1817200	454300	874283.27	11897.91	931611.18	7.21	36.00	163711.89	63436.11	77.79
86/01/31	4000	0	0	8.00	0.00	1336500	1336500	1229200	307300	931611.18	12678.07	975019.25	5.78	36.00	88830.48	64219.52	52.82
86/02/28	4000	0	0	8.00	0.00	2331000	2331000	1864800	466200	975019.25	13268.80	1034908.05	4.68	36.00	108995.52	124104.48	79.83
86/03/31	4000	0	0	8.00	0.00	2401000	2401000	1920800	480200	1034908.05	14083.81	1097011.86	3.99	36.00	95801.46	144298.54	82.23
86/04/30	4000	0	0	8.00	0.00	2775500	2775500	2220400	555100	1097011.86	14928.97	1167450.83	4.16	36.00	115476.27	162973.73	95.05
86/05/31	4000	0	0	8.00	0.00	1382500	1382500	1106000	276500	1167450.83	15887.56	1210988.40	4.76	36.00	65831.95	72418.07	47.35
86/06/30	4000	0	0	8.00	0.00	2089500	2089500	1671600	417900	1210988.40	16480.05	1269258.45	3.28	36.00	68631.61	140318.39	71.56
86/07/31	4000	0	0	8.00	0.00	1221500	1221500	977200	244300	1269258.45	17273.63	1310961.48	3.18	36.00	38901.35	83248.65	41.83
86/08/31	4000	0	0	8.00	0.00	2040500	2040500	1632400	408100	1310961.48	17840.56	1349612.04	3.04	36.00	62063.95	141986.05	69.88
86/09/30	4000	0	0	8.00	0.00	395500	395500	316400	79100	1369612.04	18638.72	1396160.76	5.77	36.00	22817.38	16732.62	13.54
86/10/31	4000	0	0	8.00	0.00	822500	822500	658000	164500	1396160.76	19000.61	1431610.77	2.72	36.00	23566.60	59893.40	28.17
86/11/30	4000	0	0	8.00	0.00	1515000	1515000	1212000	303500	1431610.77	19482.44	1481443.21	2.99	36.00	45320.20	106229.80	51.88
86/12/31	4000	0	0	8.00	0.00	3430000	3430000	2764000	666000	1481443.21	20160.60	1570203.82	3.43	36.00	117538.21	225461.79	117.47
87/01/31	4000	0	0	8.00	0.00	1799000	1799000	1439600	359800	1570203.82	21368.52	1627552.34	3.88	36.00	69853.46	110046.54	61.61
87/02/28	4000	0	0	8.00	0.00	1074500	1074500	859600	214900	1627552.34	22148.97	1671191.30	4.59	36.00	49307.14	58142.86	36.80
87/03/31	4000	0	0	8.00	0.00	1998500	1998500	1598800	399700	1671191.30	22742.84	1733904.14	3.56	36.00	71224.35	128625.61	88.44
87/04/30	4000	0	0	8.00	0.00	2800000	2800000	2240000	560000	1733904.14	23596.28	1813500.42	4.07	36.00	113870.19	166129.81	95.89
87/05/31	4000	0	0	8.00	0.00	2166500	2166500	1733200	433300	1813500.42	24679.49	1881509.91	3.99	47.00	86340.39	130309.61	74.20
87/06/30	4000	0	0	8.00	0.00	1361500	1361500	1089200	272300	1881509.91	25605.61	1934344.92	4.83	47.00	65796.63	70353.37	66.63
87/07/31	4000	0	0	8.00	0.00	1617000	1617000	1293600	323400	1934344.92	26324.63	1993008.95	6.07	47.00	55815.23	95886.77	55.38
87/08/31	4000	0	0	8.00	0.00	140000	140000	112000	28000	1993008.95	27122.38	2022931.35	3.79	47.00	5307.10	3892.90	4.79
87/09/30	4000	0	0	8.00	0.00	1064000	1064000	851200	212800	2022931.35	27529.58	2071740.91	3.91	47.00	41582.90	64817.10	36.44
87/10/31	4000	0	0	8.00	0.00	1431500	1431500	1145200	286300	2071740.91	28193.82	2128564.73	4.62	47.00	56110.10	77009.90	69.02
87/11/30	4000	0	0	8.00	0.00	1704500	1704500	1363600	340900	2128564.73	28967.12	2191621.85	6.99	47.00	93112.46	83537.54	58.37
87/12/31	4000	0	0	8.00	0.00	2107000	2107000	1685600	421400	2191621.85	29825.25	2263587.10	4.70	47.00	91706.44	104293.56	67.12
88/01/31	4000	0	0	8.00	0.00	1071000	1071000	856800	214200	2263587.10	30804.61	2315811.71	5.70	47.00	51041.65	46058.36	36.68
88/02/29	4000	0	0	8.00	0.00	1960000	1960000	1560000	392000	2315811.71	31515.32	2386527.03	4.68	47.00	91706.44	104293.56	67.12
88/03/31	4000	0	0	8.00	0.00	2135000	2135000	1700000	427000	2386527.03	32477.67	2461704.70	4.39	47.00	93747.85	119752.15	73.12
88/04/30	4000	0	0	8.00	0.00	2555000	2555000	2046000	511000	2461704.70	33652.65	254167.49	3.33	47.00	83450.37	172049.63	87.50
88/05/31	4000	0	0	8.00	0.00	3160500	3160500	2524000	632100	2546305.44	34652.65	264167.49	3.33	47.00	105335.17	210714.83	108.24
88/06/30	4000	0	0	8.00	0.00	1109500	1109500	887600	221900	2644167.49	35983.83	270341.33	4.31	47.00	25206.08	41983.92	23.01
88/07/31	4000	0	0	8.00	0.00	672000	672000	537600	134400	2754866.83	37490.31	2805797.15	3.75	47.00	26151.89	79898.11	36.32
88/08/31	4000	0	0	8.00	0.00	1060500	1060500	848400	212100	2805797.15	38183.41	2865190.56	4.47	47.00	25206.08	41983.92	23.01
88/09/30	4000	0	0	8.00	0.00	619500	619500	495600	123900	2865190.56	38991.68	2918572.25	3.41	75.00	95595.35	184750.65	96.01
88/10/31	4000	0	0	8.00	0.00	2803500	2803500	2242800	560700	2916572.25	39960.92	3012333.17	4.00	75.00	64400.00	96600.00	55.14
88/11/30	4000	0	0	8.00	0.00	1610000	1610000	1288000	322000	3012333.17	40994.11	3085527.28	4.31	75.00	52782.66	50117.34	35.24
89/01/31	4000	0	0	8.00	0.00	1029000	1029000	823000	206000	3085527.28	41990.19	3148097.47	4.33	75.00	46407.27	47042.73	32.00
89/02/28	4000	0	0	8.00	0.00	934500	934500	747600	186900	3148097.47	42841.70	3209629.17	4.97	75.00	68111.02	84138.98	52.14
89/03/31	4000	0	0	8.00	0.00	1522500	1522500	1218000	304500	3209629.17	43679.67	3283758.23	4.47	75.00	108798.11	184151.89	100.33
89/04/30	4000	0	0	8.00	0.00	2929500	2929500	2343600	585900	3283758.23	44687.87	3387036.10	3.71	75.00	34477.55	221072.45	164.64
89/05/31	4000	0	0	8.00	0.00	3055500	3055500	2444000	611100	3387036.10	46093.35	3494259.46	2.76	75.00	86251.43	181298.57	85.46
89/06/30	4000	0	0	8.00	0.00	2495500	2495500	1996400	499100	3494259.46	47552.26	3591701.71	2.73	75.00	27378.10	78521.90	36.20
89/07/31	4000	0	0	8.00	0.00	1057000	1057000	845600	211400	3591701.71	48878.60	3661720.31	2.59	75.00	25764.66	75735.34	34.76
89/08/31	4000	0	0	8.00	0.00	1015000	1015000	812000	203000	3661720.31	49831.46	3731851.78	2.54	75.00	15302.63	41647.37	19.30
89/09/30	4000	0	0	8.00	0.00	563500	563500	450800	112700	3731851.78	50785.87	3793907.64	2.72	75.00	5502.63	110668.69	56.70
89/10/31	4000	0	0	8.00	0.00	1635500	1635500	1324400	311100	3793907.64	51630.37	3878648.01	3.32	75.00	51130.98	184969.02	101.64
89/11/30	4000	0	0	8.00	0.00	2968000	2968000	2374000	593600	3878648.01	52783.58	3940791.59	3.77	75.00	95141.53	31208.45	43.27
89/12/31	4000	0	0	8.00	0.00	1263500	1263500	1010800	252700	3940791.59	54309.72	4070371.31	7.53	75.00	119651.70	39248.30	54.42
90/01/31	4000	0	0	8.00	0.00	1589000	1589000	1271200	317800	4070371.31	55592.70	4157544.00	7.53	75.00	179677.55	59022.45	81.63
90/02/28	4000	0	0	8.00	0.00	2383500	2383500	1906800	478200	4157544.00	57999.75	4261943.01	7.53	75.00	213675.50	70024.50	97.09
90/03/31	4000	0	0	8.00	0.00	2835000	2835000	2268000	567000	4261943.01	59560.67	4366203.43	7.53	75.00	0.00	0.00	0.00
90/04/30	4000	0	0	8.00	0.00	0	0	0	0	4366203.43	61192.79	4452747.44	7.53	75.00	0.00	0.00	0.00
90/05/31	4000	0	0	8.00	0.00	0	0	0	0	4452747.44	62349.44	453792.99	7.53	75.00	0.00	0.00	0.00
90/06/30	4000	0	0	8.00	0.00	0	0	0	0	4496574.65	63725.55	4619792.99	7.53	75.00	0.00	0.00	0.00
90/07/31	4000	0	0	8.00	0.00	0	0	0	0	4619792.99	64862.63	4682662.63	7.53	75.00	0.00	0.00	0.00
90/08/31	4000	0	0	8.00	0.00	0	0	0	0	4682662.63	63725.22	4746387.85	7.53	75.00	0.00	0.00	0.00
90/09/30	4000	0	0	8.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0.00

62.62

54.98

55.78

58.47

TOTALS: 126,346,000

12,634,800 10,107,680 2,527,120

CUMULATIVE TOTAL: 4,746,388

5,515,565 6,438,355

AVG PF: 52.10

PSNH

FILE COPY

SEA - JWC - [initials]

NOTED SEP 14 1990 S.B.W.

File 055

Public Service of New Hampshire

September 14, 1990

Mr. Harry Wolf
Essex Hydro Associates
114 State Street, 5th Floor
Boston, MA 02109

RE: Penacook Lower Falls

Dear Mr. Wolf:

Enclosed is a Front End Loading spreadsheet (and Lotus disc)
for Penacook Lower Falls.

After you have reviewed the data, please give me a call so we
can discuss this further.

Sincerely,

S. B. Wicker

S. B. Wicker, Jr.
Manager
Supplemental Energy Sources

SBW/pjb

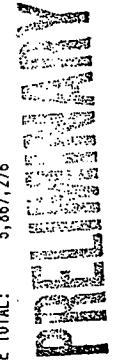
Enclosure

cc: SESD File 055

CONTRACT TYPE/DATE: L-T 82/04/28										EFFECTIVE DATE: 83/09										ANNUAL INTEREST: 17.6200													
RATE DOCKET: FIRST L-T PAYMENT: 83/09										EFFECTIVE DATE: 83/09										MONTHLY INTEREST: 1.3616													
PSNH #: 055										REMARKS:																							
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Year/ Month	INSTALLED PUC CAPACITY (KW)	REDUCTION CAPACITY (KW)	PEAK FACTOR	AVOIDED COST RATES (ALL) - Contract (C/KWH)	AVOIDED COST RATES (CAP) Contract (\$'s/KW-YR)	ACTUAL - GENERATION (KWH)	ACTUAL PAYMENT (\$'s)	ACTUAL PAYMENT IF NON LEVEL EXCESS PAYMENT (\$'s)	ACTUAL EXCESS BALANCE (\$'s)	INTEREST ON PREV BALANCE (\$'s)	CUMULATIVE EXCESS BALANCE (\$'s w/interest)	PSNH MARGINAL ENERGY* (C/KWH)	PSNH SHORT TERM CAP COST (\$'S/KW-YR)	PAYMENT IF EXCESS MARGINAL RATE (\$'s)	EXCESS PAYMENT AT PLANT FACTOR (\$'s no interest)		
83/07/31	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	83/07/31	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.32	36.00	0.00	0.00	83/07/31	
83/08/31	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	83/08/31	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.17	36.00	0.00	0.00	83/08/31	
83/09/30	4000	0	0	8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	83/09/30	4000	0	0	8.00	0.00	0	4200.00	3360.00	840.00	0.00	0.00	840.00	36.00	36.00	0.00	0.00	83/09/30
83/10/31	4000	0	0	8.00	0.00	42000	42000.00	3360.00	840.00	840.00	11.44	33891.44	8.05	36.00	3252.17	83/10/31	4000	0	0	8.00	0.00	0	4200.00	3360.00	840.00	0.00	0.00	840.00	36.00	36.00	3252.17	947.84	83/10/31
83/11/30	4000	0	0	8.00	0.00	1652000	1652000.00	132160.00	33040.00	840.00	11.44	33891.44	5.44	36.00	13060.46	83/11/30	4000	0	0	8.00	0.00	0	1652000	132160.00	33040.00	0.00	0.00	33891.44	36.00	36.00	133060.46	32139.54	83/11/30
83/12/31	4000	0	0	8.00	0.00	2432500	2432500.00	194600.00	48650.00	33891.44	461.46	83002.90	6.07	36.00	104801.56	83/12/31	4000	0	0	8.00	0.00	0	2432500	194600.00	48650.00	0.00	0.00	83002.90	36.00	36.00	132394.10	110855.90	83/12/31
84/01/31	4000	0	0	8.00	0.00	1725500	1725500.00	138040.00	34510.00	83002.90	118643.06	1615.44	6.48	36.00	67748.44	84/01/31	4000	0	0	8.00	0.00	0	1725500	138040.00	34510.00	0.00	0.00	83002.90	36.00	36.00	104801.56	67748.44	84/01/31
84/02/29	4000	0	0	8.00	0.00	2040500	2040500.00	163240.00	40810.00	118643.06	2193.10	211141.60	6.44	36.00	71727.15	84/02/29	4000	0	0	8.00	0.00	0	2040500	163240.00	40810.00	0.00	0.00	118643.06	36.00	36.00	132322.85	71727.15	84/02/29
84/03/31	4000	0	0	8.00	0.00	2394000	2394000.00	191520.00	47880.00	161068.50	276176.49	342516.89	5.81	36.00	85149.07	84/03/31	4000	0	0	8.00	0.00	0	2394000	191520.00	47880.00	0.00	0.00	211141.60	36.00	36.00	154250.93	85149.07	84/03/31
84/04/30	4000	0	0	8.00	0.00	3108000	3108000.00	248640.00	62160.00	211141.60	2874.89	276176.49	5.61	36.00	106.44	84/04/30	4000	0	0	8.00	0.00	0	3108000	248640.00	62160.00	0.00	0.00	276176.49	36.00	36.00	180484.20	130315.80	84/04/30
84/05/31	4000	0	0	8.00	0.00	3129000	3129000.00	250320.00	62580.00	276176.49	3760.40	342516.89	5.63	36.00	107.16	84/05/31	4000	0	0	8.00	0.00	0	3129000	250320.00	62580.00	0.00	0.00	342516.89	36.00	36.00	176041.76	136858.24	84/05/31
84/06/30	4000	0	0	8.00	0.00	2292500	2292500.00	183400.00	45850.00	342516.89	4663.69	393030.58	7.87	36.00	78.51	84/06/30	4000	0	0	8.00	0.00	0	2292500	183400.00	45850.00	0.00	0.00	393030.58	36.00	36.00	180525.55	48724.45	84/06/30
84/07/31	4000	0	0	8.00	0.00	1522500	1522500.00	121800.00	30450.00	393030.58	5351.48	428832.06	5.61	36.00	52.14	84/07/31	4000	0	0	8.00	0.00	0	1522500	121800.00	30450.00	0.00	0.00	428832.06	36.00	36.00	85369.89	66880.11	84/07/31
84/08/31	4000	0	0	8.00	0.00	252000	252000.00	20160.00	5040.00	439711.01	571	439711.01	6.94	36.00	8.63	84/08/31	4000	0	0	8.00	0.00	0	252000	20160.00	5040.00	0.00	0.00	439711.01	36.00	36.00	14384.54	10815.46	84/08/31
84/09/30	4000	0	0	8.00	0.00	262500	262500.00	21000.00	5250.00	439711.01	5987.08	450948.09	6.94	36.00	8.99	84/09/30	4000	0	0	8.00	0.00	0	262500	21000.00	5250.00	0.00	0.00	439711.01	36.00	36.00	18216.01	8033.99	84/09/30
84/10/31	4000	0	0	8.00	0.00	322000	322000.00	25760.00	6440.00	450948.09	6140.08	463528.17	6.66	36.00	11.03	84/10/31	4000	0	0	8.00	0.00	0	322000	25760.00	6440.00	0.00	0.00	450948.09	36.00	36.00	21442.61	10757.39	84/10/31
84/11/30	4000	0	0	8.00	0.00	661500	661500.00	52920.00	13230.00	463528.17	6311.37	483069.55	5.67	36.00	33.44	84/11/30	4000	0	0	8.00	0.00	0	661500	52920.00	13230.00	0.00	0.00	483069.55	36.00	36.00	37488.15	28661.85	84/11/30
84/12/31	4000	0	0	8.00	0.00	976500	976500.00	78120.00	19530.00	483069.55	6577.45	509176.99	7.75	36.00	18.58	84/12/31	4000	0	0	8.00	0.00	0	976500	78120.00	19530.00	0.00	0.00	509176.99	36.00	36.00	57032.06	40617.96	84/12/31
85/01/31	4000	0	0	8.00	0.00	542500	542500.00	43400.00	10850.00	509176.99	6932.92	526959.91	7.25	36.00	44.59	85/01/31	4000	0	0	8.00	0.00	0	542500	43400.00	10850.00	0.00	0.00	526959.91	36.00	36.00	42053.66	12196.34	85/01/31
85/02/29	4000	0	0	8.00	0.00	1302000	1302000.00	104160.00	26040.00	526959.91	7175.05	560174.97	7.25	36.00	44.59	85/02/29	4000	0	0	8.00	0.00	0	1302000	104160.00	26040.00	0.00	0.00	560174.97	36.00	36.00	94436.11	35763.89	85/02/29
85/03/31	4000	0	0	8.00	0.00	2541000	2541000.00	203280.00	50820.00	560174.97	7627.31	618622.28	5.52	36.00	87.02	85/03/31	4000	0	0	8.00	0.00	0	2541000	203280.00	50820.00	0.00	0.00	618622.28	36.00	36.00	140365.54	113734.46	85/03/31
85/04/30	4000	0	0	8.00	0.00	2275000	2275000.00	182000.00	45500.00	618622.28	8423.12	672545.40	5.72	36.00	87.02	85/04/30	4000	0	0	8.00	0.00	0	2275000	182000.00	45500.00	0.00	0.00	618622.28	36.00	36.00	130076.94	97423.06	85/04/30
85/05/31	4000	0	0	8.00	0.00	1228500	1228500.00	98280.00	24570.00	672545.40	9157.34	706272.74	4.77	36.00	77.91	85/05/31	4000	0	0	8.00	0.00	0	1228500	98280.00	24570.00	0.00	0.00	706272.74	36.00	36.00	58641.68	64208.32	85/05/31
85/06/30	4000	0	0	8.00	0.00	381500	381500.00	30520.00	7630.00	706272.74	9616.57	723519.30	5.15	36.00	13.07	85/06/30	4000	0	0	8.00	0.00	0	381500	30520.00	7630.00	0.00	0.00	723519.30	36.00	36.00	19641.07	18508.93	85/06/30
85/07/31	4000	0	0	8.00	0.00	315000	315000.00	25200.00	6300.00	723519.30	9851.39	739670.70	4.88	36.00	10.79	85/07/31	4000	0	0	8.00	0.00	0	315000	25200.00	6300.00	0.00	0.00	739670.70	36.00	36.00	15366.85	16133.15	85/07/31
85/08/31	4000	0	0	8.00	0.00	133000	133000.00	10640.00	2660.00	739670.70	10071.31	752402.01	4.86	36.00	4.55	85/08/31	4000	0	0	8.00	0.00	0	133000	10640.00	2660.00	0.00	0.00	752402.01	36.00	36.00	6468.69	6831.31	85/08/31
85/09/30	4000	0	0	8.00	0.00	896000	896000.00	71680.00	17920.00	752402.01	10244.66	780566.67	4.49	36.00	30.68	85/09/30	4000	0	0	8.00	0.00	0	896000	71680.00	17920.00	0.00	0.00	780566.67	36.00	36.00	40273.81	49326.19	85/09/30
85/10/31	4000	0	0	8.00	0.00	1382500	1382500.00	110600.00	27650.00	780566.67	10628.15	818844.82	5.11	36.00	47.35	85/10/31	4000	0	0	8.00	0.00	0	1382500	110600.00	27650.00	0.00	0.00	818844.82	36.00	36.00	70585.06	67664.94	85/10/31
85/11/30	4000	0	0	8.00	0.00	2219000	2219000.00	177520.00	44380.00	818844.82	11149.34	874374.16	5.89	36.00	75.99	85/11/30	4000	0	0	8.00	0.00	0	2219000	177520.00	44380.00	0.00	0.00	874374.16	36.00	36.00	130707.81	91192.19	85/11/30
85/12/31	4000	0	0	8.00	0.00	2271500	2271500.00	181720.00	45430.00	874374.16	11905.43	931709.58	7.21	36.00	77.79	85/12/31	4000	0	0	8.00	0.00	0	2271500	181720.00	45430.00	0.00	0.00	931709.58	36.00	36.00	163711.89	63438.11	85/12/31
86/01/31	4000	0	0	8.00	0.00	1536500	1536500.00	122920.00	30730.00	931709.58	12686.10	975125.69	4.78	36.00	82.83	86/01/31	4000	0	0	8.00	0.00	0	1536500	122920.00	30730.00	0.00	0.00	975125.69	36.00	36.00	88830.48	64819.52	86/01/31
86/02/28	4000	0	0	8.00	0.00	2331000	2331000.00	186480.00	46620.00	975125.69	13277.25	1035022.94	3.99	36.00	79.83	86/02/28	4000	0	0	8.00	0.00	0	2331000	186480.00	46620.00	0.00	0.00	1035022.94	36.00	36.00	1		

87/05/31	4000	0	0	8.00	0.00	2166500	2166500	173320.00	43330.00	1813790.15	24696.46	1881816.61	3.99	47.00	86340.39	130309.61	74.20	87/05/31
87/06/30	4000	0	0	8.00	0.00	1361500	1361500	108920.00	27230.00	1881816.61	25622.70	1934669.31	4.83	47.00	65796.63	70353.37	46.63	87/06/30
87/07/31	4000	0	0	8.00	0.00	1617000	1617000	129360.00	32340.00	1934669.31	26342.34	1993351.65	4.07	47.00	65813.23	95886.77	55.38	87/07/31
87/08/31	4000	0	0	8.00	0.00	140000	140000	11200.00	2800.00	1993351.65	27141.35	2023293.00	3.79	47.00	5307.10	8692.90	4.79	87/08/31
87/09/30	4000	0	0	8.00	0.00	1064000	1064000	85120.00	21280.00	2023293.00	27549.03	2072122.04	3.91	47.00	41582.90	64817.10	36.44	87/09/30
87/10/31	4000	0	0	8.00	0.00	1431500	1431500	114520.00	28630.00	2072122.04	28213.89	2128965.92	4.62	47.00	66140.10	77009.90	49.02	87/10/31
87/11/30	4000	0	0	8.00	0.00	1704500	1704500	136360.00	34090.00	2128965.92	28987.87	2192043.79	4.99	47.00	85112.46	85337.54	58.37	87/11/30
87/12/31	4000	0	0	8.00	0.00	2107000	2107000	168560.00	42140.00	2192043.79	29846.74	2264030.53	4.70	47.00	98957.20	117142.80	72.16	87/12/31
88/01/31	4000	0	0	8.00	0.00	1071000	1071000	85680.00	21420.00	2264030.53	30826.90	2316277.43	5.70	47.00	91706.44	104293.56	67.12	88/01/31
88/02/29	4000	0	0	8.00	0.00	1960000	1960000	156800.00	39200.00	2316277.43	31538.29	2387015.72	4.68	47.00	91706.44	104293.56	67.12	88/02/29
88/03/31	4000	0	0	8.00	0.00	2135000	2135000	170800.00	42700.00	2387015.72	32501.46	2462217.18	4.39	47.00	93747.85	119752.15	73.12	88/03/31
88/04/30	4000	0	0	8.00	0.00	2555000	2555000	204400.00	51100.00	2462217.18	33525.40	2546842.58	3.27	47.00	83450.37	172049.63	87.50	88/04/30
88/05/31	4000	0	0	8.00	0.00	3160500	3160500	252840.00	63210.00	2546842.58	34677.65	2644730.24	3.33	47.00	105335.17	210714.83	108.24	88/05/31
88/06/30	4000	0	0	8.00	0.00	1109500	1109500	88760.00	22190.00	2644730.24	36010.49	2702930.72	4.31	47.00	47773.10	63176.90	38.00	88/06/30
88/07/31	4000	0	0	8.00	0.00	787500	787500	63000.00	15750.00	2702930.72	36802.94	2755483.66	3.25	47.00	25623.48	53126.52	26.97	88/07/31
88/08/31	4000	0	0	8.00	0.00	672000	672000	53760.00	13440.00	2755483.66	37518.50	2806442.16	3.75	47.00	25206.08	41993.92	23.01	88/08/31
88/09/30	4000	0	0	8.00	0.00	1060500	1060500	84840.00	21210.00	2806442.16	38212.35	2865864.51	2.47	47.00	26151.89	79898.11	36.32	88/09/30
88/10/31	4000	0	0	8.00	0.00	619500	619500	49560.00	12390.00	2865864.51	39021.44	2917275.95	3.41	47.00	21116.30	40833.70	21.22	88/10/31
88/11/30	4000	0	0	8.00	0.00	2803500	2803500	224280.00	56070.00	2917275.95	39721.45	3013067.40	3.41	75.00	95599.35	184730.65	96.01	88/11/30
88/12/31	4000	0	0	8.00	0.00	1610000	1610000	128800.00	32200.00	3013067.40	41025.74	3086293.14	4.00	75.00	64600.00	96000.00	55.14	88/12/31
89/01/31	4000	0	0	8.00	0.00	1029000	1029000	82320.00	20580.00	3086293.14	42022.78	3148895.92	5.13	75.00	52782.66	50117.34	35.24	89/01/31
89/02/28	4000	0	0	8.00	0.00	934500	934500	74760.00	18690.00	3148895.92	42875.18	3210461.09	4.97	75.00	46607.27	47042.73	32.00	89/02/28
89/03/31	4000	0	0	8.00	0.00	1522500	1522500	121800.00	30450.00	3210461.09	43713.44	3284624.54	4.47	75.00	68111.02	84138.98	52.14	89/03/31
89/04/30	4000	0	0	8.00	0.00	2929500	2929500	234360.00	58590.00	3284624.54	44723.25	3387937.79	3.71	75.00	108798.11	184151.89	100.33	89/04/30
89/05/31	4000	0	0	8.00	0.00	3055500	3055500	244440.00	61110.00	3387937.79	46129.95	3495177.74	2.76	75.00	84477.55	221072.45	104.64	89/05/31
89/06/30	4000	0	0	8.00	0.00	2495500	2495500	199640.00	49910.00	3495177.74	47590.13	3592677.87	2.73	75.00	68251.43	181298.57	85.46	89/06/30
89/07/31	4000	0	0	8.00	0.00	1057000	1057000	84560.00	21140.00	3592677.87	48917.68	3662735.55	2.59	75.00	27378.10	78321.90	36.20	89/07/31
89/08/31	4000	0	0	8.00	0.00	1015000	1015000	81200.00	20300.00	3662735.55	49871.58	3739907.12	2.54	75.00	25764.66	75735.34	34.76	89/08/31
89/09/30	4000	0	0	8.00	0.00	1655500	1655500	132440.00	33110.00	3739907.12	51672.55	3879786.72	2.72	75.00	15302.63	41047.37	19.30	89/09/30
89/10/31	4000	0	0	8.00	0.00	2968000	2968000	237440.00	59360.00	379786.72	52826.94	3991973.66	3.77	75.00	54881.31	110668.69	56.70	89/10/31
89/11/30	4000	0	0	8.00	0.00	1263500	1263500	107080.00	25270.00	3991973.66	54354.47	4071598.13	7.53	75.00	95141.55	31208.45	63.27	89/11/30
90/01/31	4000	0	0	8.00	0.00	1589000	1589000	127120.00	31780.00	4071598.13	55638.63	4158816.76	7.53	75.00	119651.70	39248.30	54.42	90/01/31
90/02/28	4000	0	0	8.00	0.00	2383500	2383500	190680.00	47670.00	4158816.76	56626.20	4263112.96	7.53	75.00	179477.55	58872.45	81.63	90/02/28
90/03/31	4000	0	0	8.00	0.00	2835000	2835000	226800.00	56700.00	4263112.96	58046.29	4377859.25	7.53	75.00	213475.50	70024.50	97.09	90/03/31
90/04/30	4000	0	0	8.00	0.00	3153500	3153500	252280.00	63070.00	4377859.25	59608.67	4500537.91	7.53	75.00	237458.55	77891.45	108.00	90/04/30
90/05/31	4000	0	0	8.00	0.00	2996000	2996000	239680.00	59920.00	4500537.91	61279.05	4621736.96	7.53	75.00	225598.80	74001.20	102.60	90/05/31
90/06/30	4000	0	0	8.00	0.00	1662500	1662500	133000.00	33250.00	4621736.96	62929.29	4717916.25	7.53	75.00	125186.25	41063.75	56.93	90/06/30
90/07/31	4000	0	0	8.00	0.00	392000	392000	31360.00	7840.00	4717916.25	64238.86	4789995.11	7.53	75.00	29517.60	9682.40	13.42	90/07/31
90/08/31	4000	0	0	8.00	0.00	0	0	0.00	0.00	4789995.11	65220.28	4855215.40	7.53	75.00	0.00	0.00	0.00	90/08/31
90/09/30	4000	0	0	8.00	0.00	0	0	0.00	0.00	4855215.40	66108.32	4921323.71	7.53	75.00	0.00	0.00	0.00	90/09/30
90/10/31	4000	0	0	8.00	0.00	0	0	0.00	0.00	4921323.71	67008.44	4988332.16	7.53	75.00	0.00	0.00	0.00	90/10/31
90/11/31	4000	0	0	8.00	0.00	0	0	0.00	0.00	4988332.16	67920.83	5056252.98	7.53	75.00	0.00	0.00	0.00	90/11/31
90/12/30	4000	0	0	8.00	0.00	0	0	0.00	0.00	5056252.98	68845.63	5125098.62	7.53	75.00	0.00	0.00	0.00	90/12/30
91/01/31	4000	0	0	8.00	0.00	0	0	0.00	0.00	5125098.62	69783.03	5194881.65	7.53	75.00	0.00	0.00	0.00	91/01/31
91/02/28	4000	0	0	8.00	0.00	0	0	0.00	0.00	5194881.65	70733.19	5265614.84	7.53	75.00	0.00	0.00	0.00	91/02/28
91/03/31	4000	0	0	8.00	0.00	0	0	0.00	0.00	5265614.84	71696.29	5337311.13	7.53	75.00	0.00	0.00	0.00	91/03/31
91/04/30	4000	0	0	8.00	0.00	0	0	0.00	0.00	5337311.13	72672.50	5409983.64	7.53	75.00	0.00	0.00	0.00	91/04/30
91/05/31	4000	0	0	8.00	0.00	0	0	0.00	0.00	5409983.64	73662.01	5483645.65	7.53	75.00	0.00	0.00	0.00	91/05/31
91/06/30	4000	0	0	8.00	0.00	0	0	0.00	0.00	5483645.65	74664.99	5558310.63	7.53	75.00	0.00	0.00	0.00	91/06/30
91/07/31	4000	0	0	8.00	0.00	0	0	0.00	0.00	5558310.63	75681.62	5633992.25	7.53	75.00	0.00	0.00	0.00	91/07/31
91/08/31	4000	0	0	8.00	0.00	0	0	0.00	0.00	5633992.25	76712.10	5710704.35	7.53	75.00	0.00	0.00	0.00	91/08/31
91/09/30	4000	0	0	8.00	0.00	0	0	0.00	0.00	5710704.35	77756.60	5788460.95	7.53	75.00	0.00	0.00	0.00	91/09/30
91/10/30	4000	0	0	8.00	0.00	0	0	0.00	0.00	5788460.95	78815.33	5867276.28	7.53	75.00	0.00	0.00	0.00	91/10/30

TOTALS: 134,550,000
AVE C/KMH: 10.00
CUMULATIVE TOTAL: 2,691,050
6,645,911 6,809,139



FILE COPY

#055

7/8/92 Cc. to M. SWIST

I N T E R O F F I C E M E M O R A N D U M

+-----+
| P U B L I C S E R V I C E |
| o f |
| N E W H A M P S H I R E |
+-----+

Date: 03-Oct-1991 08:26am EST
From: Carl N. Vogel
VOGEL
Dept:
Tel No: 2311

TO: See Below

Subject: Penacook Rate Correction

The rate paid after 18,516,000 KWH of energy is delivered will be 3.53 c/KWH, not 3.57 as reported yesterday.

The September bill from Penacook Lower Hydro (#055) will be the final bill at which they receive 10 c/KWH for energy sold to PSNH.

Effective with the October 1991 bill the new rate will become:

4.20 c/kwh for the first 18,516,000 KWH sold in a contract year.

3.53 c/KWH for energy over 18,516,000 KWH sold in the contract year.

The contract year begins with the October bill and runs through the following September bill.

This rate will remain in effect for the next 12 years (through September 2003) unless the avoided cost exceeds 9 c/KWH. A new set of rates will be established at that time.

Distribution:

TO: LESLIE PETERSON	(PETERSON LESLIE)
CC: S. B. Wicker, Jr.	(WICKER)
CC: MARY SWIST	(SWIST)
CC: Joseph J. Staszowski	(STASZOWSKI)
CC: Please forward to Jim Ward	(KISSEP AT A1 AT OAVAX1)
CC: SESD File #055	(PAPER MAIL)

FILE COPY

I N T E R O F F I C E M E M O R A N D U M

P U B L I C S E R V I C E
o f
N E W H A M P S H I R E

Date: 15-Jul-1992 02:34pm EST
From: Carl N. Vogel
VOGEL
Dept:
Tel No: 2311

TO: LESLIE PETERSON

(PETERSON LESLIE)

CC: THOMAS GETZ

(GETZ)

CC: S. B. Wicker, Jr. / SESD File #055

(WICKER)

Subject: Penacook Lower Hydro (#055) Price Adjustment

VIA PAPER MAIL
=====

al

The following explanation is in reference to the Contract between Penacook Lower Hydro and PSNH, Article 3. section D. 2.:

PSNH withheld ~~24~~ cent for each kwh purchased from Penacook Lower over the first 8 years of the contract. During that time PSNH purchased 148,868,500 KWH (see attachment) and therefore withheld \$1,488,685.

During years 9 - 20 PSNH will add .67 cents per KWH, with the total of the additional payments for any given year not to exceed 1/12 of the money subtracted during the first 8 years.

1/12 of \$1,488,685 = \$124,057.08, The maximum additional annual payment.

\$124,057.08 / \$.0067 per KWH = 18,515,982 KWH, The amount of KWH eligible to receive the additional .67 cents per KWH annually before the maximum amount is exceeded.

Rounded to the nearest significant value logged on a meter reading, the KWH limit of 18,515,982 KWH is rounded to 18,516,000 KWH.

FILE 0377

1ST 8 years of Penacook Lower Generation

CNV 10/2/91

NO: 055 NAME: Penacook LOWER FALLS 4000 KW

YEAR	JAN(KWH)	FEB(KWH)	MAR(KWH)	APR(KWH)	MAY(KWH)	JUN(KWH)	JUL(KWH)	AUG(KWH)	SEP(KWH)	OCT(KWH)	NOV(KWH)	DEC(KWH)	TOTAL(KWH)
1983	0	0	0	0	0	0	0	0	0	42000	1652000	2432500	4,126,500
1984	1725500	2040500	2394000	3108000	3129000	2292500	1522500	252000	262500	322000	661500	976500	18,686,500
1985	542500	1302000	2541000	2275000	1228500	381500	315000	133000	896000	1382500	2219000	2271500	15,487,500
1986	1536500	2331000	2401000	2775500	1382500	2089500	1221500	2040500	395500	822500	1515000	3430000	21,941,000
1987	1799000	1074500	1998500	2800000	2166500	1361500	1617000	140000	1064000	1431500	1704500	2107000	19,264,000
1988	1071000	1960000	2135000	2555000	3160500	1109500	787500	672000	1060500	619500	2803500	1610000	19,544,000
1989	1029000	934500	1522500	2929500	3055500	2495500	1057000	1015000	563500	1655500	2968000	1263500	20,489,000
1990	1589000	2383500	2835000	3153500	2996000	1662500	392000	3500	0	0	0	0	15,015,000
1991	1228500	2019500	2849000	3031000	2282000	833000	154000	973000	945000	0	0	0	14,315,000
TOTL	10521000	14045500	18676000	22627500	19400500	12225500	7066500	5229000	5187000	6275500	13523500	14091000	148,868,500

YEAR	JAN(\$)	FEB(\$)	MAR(\$)	APR(\$)	MAY(\$)	JUN(\$)	JUL(\$)	AUG(\$)	SEP(\$)	OCT(\$)	NOV(\$)	DEC(\$)	TOTAL(\$)
1983	0	0	0	0	0	0	0	0	0	4200	165200	243250	412,650
1984	172550	204050	239400	310800	312900	229250	152250	25200	26250	32200	66150	97650	1,868,650
1985	54250	130200	254100	227500	122850	38150	31500	13300	89600	138250	221900	227150	1,548,750
1986	153650	233100	240100	277550	138250	208950	122150	204050	39550	82250	151500	343000	2,194,100
1987	179900	107450	199850	280000	216650	136150	161700	14000	106400	143150	170450	210700	1,926,400
1988	107100	196000	213500	255500	316050	110950	78750	67200	106050	61950	280350	161000	1,954,400
1989	102900	93450	152250	292950	305550	249550	105700	101500	56350	165550	296800	126350	2,048,900
1990	158900	238350	283500	315350	299600	166250	39200	350	0	0	0	0	1,501,500
1991	122850	201950	284900	303100	228200	83300	15400	97300	94500	0	0	0	1,431,500

14,886,850

FORM 50-107 (11-72)

OF 1 PAGE

REPORT

SCHEDULE

PAGE NO.

SUBJECT

SCHEDULE NO.

LINE NO.

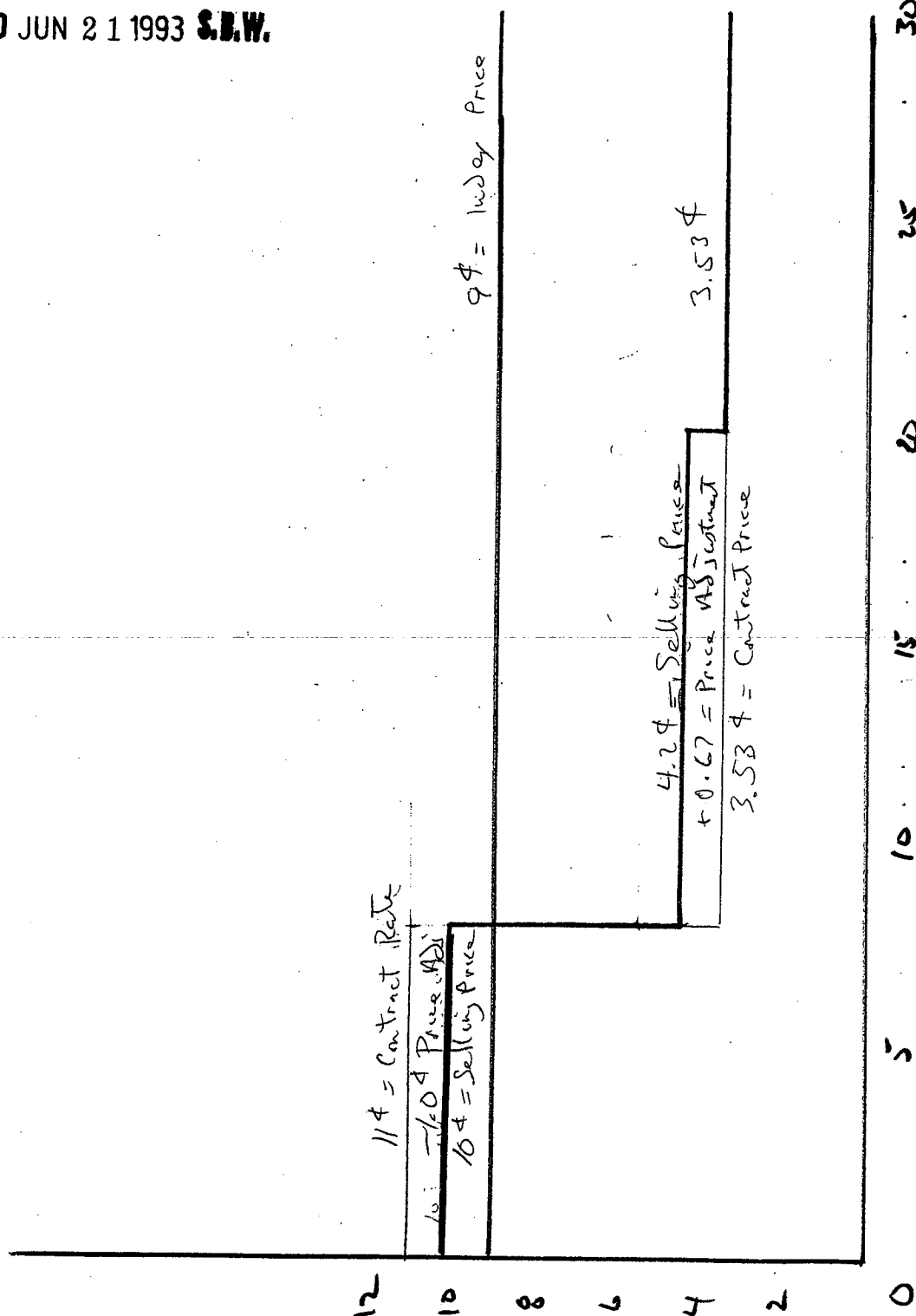
PREPARED BY

CHECKED BY

REVIEWED

COLUMN

NOTED JUN 21 1993 S.B.W.



March 2, 1982

Mr. Richard A. Normand
New Hampshire Hydro Associates
3 Capitol Street
Concord, NH 03301

Subject: Long-Term Contract Pricing Provisions
Penacook Lower Falls Hydro
Concord/Boscawen, New Hampshire

Dear Mr. Normand:

This is to confirm the meeting held this date concerning contract provisions for the electric energy Public Service Company of New Hampshire (PSNH) is proposing to purchase from your Penacook Lower Falls Hydro Project.

The pricing provisions proposed by PSNH are as follows:

1. The contract rate for the first eight (8) contract years will be 11.00 cents per kilowatthour ($\text{\$/KWH}$). This front-end loading rate may, if necessitated by your financing experience, be extended for an additional one or two years. This 11.00 $\text{\$/KWH}$ rate exceeds PSNH's contract index price by 2.00 $\text{\$/KWH}$.
2. All payments above the 9.00 $\text{\$/KWH}$ index, during the first eight contract years, must be recovered by PSNH during the balance of the contract considering the present worth of money. Present worth computations will be based on PSNH weighted cost of capital (common equity, preferred equity, and long term debt), which is presently estimated at 17.75 percent.
3. From the ninth through the thirtieth contract years, the rate will be the index of 9.00 $\text{\$/KWH}$ minus the amount necessary for PSNH to recover the earlier payments in excess of the index. The contract rates during this period may escalate as discussed below.
4. All escalating payments in excess of the index will be determined as a percentage of PSNH's incremental energy cost, as discussed in our Policy Statement dated November 5, 1981 (copy attached).

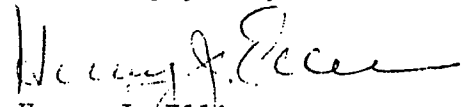
Mr. Richard A. Normand

March 2, 1982

5. The contract rates for the first twenty contract years are subject to the following adjustment. For the first eight contract years, 1.00¢/KWH will be retained by PSNH from the contract rate; for the next twelve years, 2/3¢/KWH will be added to the contract rate. The total of said additional payments, for any given year, shall not exceed one-twelfth (1/12) of the total money deducted during the first eight contract years.
6. All other provisions of our Policy Statement prevail.
7. If recovery by PSNH of any rates paid in excess of our actual avoided cost is denied by the N.H. Public Utilities Commission, contract rates during the final 22 contract years will be reduced accordingly, considering the present worth of money, in order to compensate PSNH for the losses.

We will prepare a draft contract for your review during the next few weeks.

Very truly yours,



Henry J. Ellis
Vice President

ams

Enclosure

cc: D. N. Merrill
J. E. Lyons

CONTRACT PRICING PROVISIONS
PENACOOK LOWER FALLS HYDRO

YEAR	PSNH ¹ IEC	%	% x IEC	FRONT-END RATE	ADJUST- MENT	RECOVERY	ESTIMATED ² PAYMENT
1984	5.94			11.00	-1.00		10.00
85	6.56						10.00
86	5.53						10.00
87	4.72						10.00
88	5.30						10.00
89	6.42						10.00
1990	7.91						10.00
91	9.01						10.00
92	11.63	96	11.16				6.36
93	13.24	92	12.18				7.38
94	13.44	88	11.83				7.03
95	16.01	84	13.45				8.65
96	18.97	80	15.18				10.38
97	19.83	76	15.07				10.27
98	21.56	72	15.52				10.72
99	24.28	68	16.51				11.71
2000	27.16	64	17.38				12.58
01	30.11	60	18.07				13.27
02	33.39	56	18.70				13.90
03	37.01	52	19.25				14.45
04	41.04	50	20.52				15.05
05	45.50		22.75				17.28
06	49.99		25.00				19.53
07	54.92		27.46				21.99
08	60.34		30.17				24.70
09	66.30		33.15				27.68
2010	72.84		36.42				30.95
11	79.31		39.66				34.19
12	86.34		43.17				37.70
13	93.99		47.00				41.53
						-5.47	

1 Estimated PSNH "Incremental Energy Cost."

2 These rates are based on PSNH estimates. The rates shown for years 1992 thru 2013 are not guaranteed by PSNH.

NOTED MAR 10 1982 RVP.