



**Public Service  
of New Hampshire**

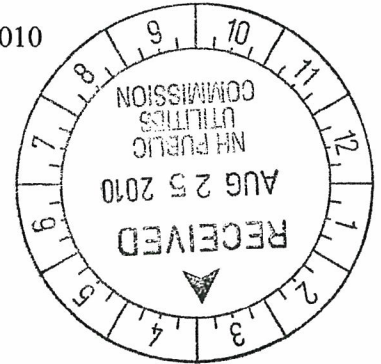
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The Northeast Utilities System

|                                |              |
|--------------------------------|--------------|
| <b>ORIGINAL</b>                |              |
| N.H.P.U.C. Case No.            | DE 09-174    |
| Exhibit No.                    | #4           |
| Witness                        | R. Labrecque |
| <b>DO NOT REMOVE FROM FILE</b> |              |

August 25, 2010



Debra A. Howland  
Executive Director and Secretary  
New Hampshire Public Utilities Commission  
21 South Fruit Street, Suite 10  
Concord, New Hampshire 03301-2429

Re: Petition for Declaratory Ruling Re: Penacook Lower Falls Pricing  
Docket No. DE 09-174

Dear Secretary Howland:

Enclosed please find an original and six copies of Rebuttal Testimony of Richard C. Labrecque in the above-captioned matter.

Copies of this letter and the enclosures have been provided electronically to the persons on the attached Service List pursuant to Puc § 203.011.

Very truly yours,  
  
Gerald M. Eaton  
Senior Counsel

Enclosures  
cc: Service List

Docket No. DE 09-174

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**State of New Hampshire**  
**before the**  
**New Hampshire Public Utilities Commission**

Public Service Company of New Hampshire  
Petition for Declaratory Ruling Re: Penacook Lower Falls Pricing  
Docket No. DE 09-174

**Rebuttal Testimony of Richard C. Labrecque**

1 **Q. Please state your name, position and business address.**

2 A. My name is Richard C. Labrecque. My business address is Public Service Company of  
3 New Hampshire ("PSNH"), Energy Park, 780 North Commercial Street, Manchester, New  
4 Hampshire. I am Supplemental Energy Sources Manager for PSNH.

5

6 **Q. What are your duties and responsibilities in your position of Supplemental Energy**  
7 **Sources Manager?**

8 A. My duties include the administration of interconnection agreements and purchase  
9 contracts with non-utility generators.

10

11 **Q. Have you previously testified before the Commission?**

12 A. Yes. I have testified on several occasions before the Commission.

13

14 **Q. What is the purpose of your testimony?**

15 A. The purpose of my testimony is to comment on the June 14, 2010 pre-filed testimony of  
16 Richard A. Norman. Specifically, I will address i) flaws in the arguments used by Mr. Norman,  
17 ii) the irrelevance to this proceeding of large sections of his testimony, and iii) his attempts to  
18 infer contract language that does not exist.

1 **Q. Please provide your summary of Mr. Norman's testimony.**

2 A. While Mr. Norman's testimony includes twenty-four pages of discussion, only a small  
3 portion of the discussion focuses on actual contract language that Mr. Norman believes to be  
4 supportive of his interpretation of the executed agreement. The remaining discussion i) involves  
5 speculation as to the intent of the negotiating parties in 1981 and 1982, ii) suggests that Briar  
6 Hydro was forced to execute a "take it or leave it" contract (page 22 at line 18), iii) attempts to  
7 comingle the adjustment of Article 3, Section D.2 with that of Article 3, Section A, and iv)  
8 provides a speculative history of the mathematical basis for the 5.47 cent adjustment to the price  
9 paid by PSNH. In general, my opinion is that Mr. Norman's substantive arguments can be very  
10 briefly described and that the remainder of his testimony is irrelevant and inadmissible given  
11 Article 10, the merger clause of the contract which reads:

12 Article 10. Prior Agreements Superseded

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

17

18 **Q. Other than Article 10, what are the critical terms of the contract that Mr. Norman**  
19 **disputes?**

20 A. Mr. Norman centers his dispute on the following contract language.

21 Article 3, Section A, which states, in relevant part:

22 For the first eight (8) years of the Contract, the Contract rate shall be 11.00 cents  
23 per KWH. This rate exceed the index price by 2.00 cents per KWH; and all  
24 payments made by PUBLIC SERVICE to SELLER which exceed the index price  
25 must be recovered by PUBLIC SERVICE, during the later Contract years, in

1           accordance with Section D.1., Article 3. This rate is subject to the adjustment  
2           provided under Section D.2., Article 3.

3  
4 Article 3, Section D.1, which states:

5           Beginning in the ninth Contract year, and continuing for the term of the Contract,  
6           a recovery amount equal to 5.47 cents per KWH shall be deducted from the  
7           Contract rate. This deduction allows PUBLIC SERVICE to recover the  
8           payments made under Section A, Article 3, which exceed the index price.

9  
10 In his testimony, Mr. Norman also considers Article 3, Section D.2 to be relevant to this dispute.  
11 As addressed later in my rebuttal, I do not consider that Section D.2 has any bearing on this  
12 dispute.

13 Article 3, Section D.2 states:

14           For the first eight Contract years, the Contract rate shall be adjusted by  
15           subtracting from 1.00 cents per KWH from the rate. For the ninth through the  
16           twentieth Contract years, the Contract rate shall be adjusted by adding 0.67 cents  
17           per KWH to the rate. The total of said additional payments, for any given year,  
18           shall not exceed one-twelfth (1/12) of the money subtracted during the first eight  
19           Contract years

20  
21 **Q.     What are the substantive arguments presented by Mr. Norman to persuade the**  
22 **Commission that his interpretation of the contract language is proper?**

23 A.     I believe that Mr. Norman's entire argument is reflected in his testimony at page 9, lines  
24 5 through 9. His entire testimony and, in fact, much of the record in this proceeding, becomes  
25 irrelevant and superfluous if his reasoning on page 9, lines 5 through 9 is determined to be  
26 insupportable. His argument is to rely on the second sentence in Section D.1 of the contract:

1            “This deduction allows PSNH to recover payments made under Section A,  
2            Article 3, which exceeded the Index Price.”

3  
4    **Q.     Why is Mr. Norman’s argument so closely tied to the sentence noted above?**

5    A.     As stated on page 9 at line 6, Mr. Norman believes the “*intent* of the recovery”  
6    (*emphasis added*), as reflected in the noted sentence, is to allow PSNH to recover excess  
7    payments made under Section A. He further believes that this statement of “intent” should be  
8    interpreted to require that the 5.47 cent recovery adjustment be discontinued when the “payments  
9    made under Section A” have been repaid. Mr. Norman believes that statement of “intent” is  
10    controlling and overrides the preceding sentence which reads:

11            Beginning in the ninth Contract year, **and continuing for the term of the**  
12            **Contract**, a recovery amount equal to 5.47 cents per KWH shall be deducted  
13            from the Contract rate.

14    As noted by Mr. Norman on page 9, lines 1 – 3, PSNH considers the above sentence to be  
15    controlling. The emphasized phrase “**and continuing for the term of the Contract**” is a  
16    clear, concise, express, and unambiguous statement of contract, rather than a speculated  
17    statement of “intent”. Mr. Norman’s testimony has many pages attempting to further  
18    describe the supposed “intent” of the recovery amount. That notwithstanding, the  
19    sentence relied on by Mr. Norman as the basis of his argument is nothing more than an  
20    explanatory statement which serves no purpose in the month-to-month and year-to-year  
21    invoicing and administration of this power purchase contract, and which certainly does  
22    not change the express contractual provision requiring the recovery amount to continue  
23    for the term of the contract.

24  
25    **Q.     What other concerns do you have with Mr. Norman’s argument?**

1 A. My general concern is with Mr. Norman's attempt to infer contractual terms that do not  
2 exist, and to ignore the express and unambiguous term that is in the contract. I have two specific  
3 concerns related to how Mr. Norman would expect the proper administration of the contract to  
4 occur under his interpretation. These are i) the lack of a discount rate and ii) the fact that the  
5 contract does not address the situation in which there is a shortfall in recovery of excess payments  
6 prior to the normal termination of the contract. The absence of any discussion of these items  
7 undercuts Mr. Norman's opinion that the contract contemplated an end to the recovery amount  
8 deduction prior to the end of the contract term.

9

10 **Q. Why is the lack of a discount rate a problem?**

11 A. To properly determine the date on which Mr. Norman's alleged full recovery of excess  
12 payments made during the initial eight (8) years of the contract has occurred, the contract analyst  
13 would require a discount rate. The contract contains no reference whatsoever to a discount rate.  
14 Mr. Norman's response to PSNH data request #5 agrees with this fact, but goes on to state that  
15 "the correspondence and memos exchanged between the parties during the negotiations  
16 established that we agreed on a discount rate of 17.62%". Mr. Norman's response requires a  
17 method of contract administration that incorporates matters outside of the contract, which is in  
18 clear violation of Article 10 of the contract (quoted above).

19

20 **Q. How does the contract address a situation in which full recovery of excess payments  
21 does not occur during the thirty (30) year term of the agreement?**

22 A. It does not. Mr. Norman's response to PSNH data request #7, which asked how PSNH's  
23 customers would be made whole in that situation, agrees with the fact that there is no contract  
24 language to address it, but goes on to state that "the recovery amount adjustment...was set so  
25 high that there was no danger of that outcome". Mr. Norman's response overlooks the potential  
26 situation in which the Penacook Lower Fall Hydro Project could have experienced poor

1 performance or even catastrophic failure during the latter years of the contract term, relative to  
2 performance during the initial years. Under these conditions, PSNH's customers would never  
3 receive full repayment of the excess payments made during the early years of the deal. The  
4 contract is silent on this condition. It is inconceivable that under these conditions, and absent  
5 clear contract language, Briar Hydro would be willing to refund to PSNH's customers the  
6 remaining balance of unrecovered excess payments. Mr. Norman is fully aware of this, and that  
7 is the likely reason that he avoided a direct answer to PSNH's question.

8

9 **Q. Does Mr. Norman comment on the conduct of the negotiations that resulted in the**  
10 **executed contract?**

11 A. Yes, many times. Mr. Norman attempts to depict PSNH as the "drafter" of the contract  
12 (page 17 at line 1, page 19 at line 10, page 22 at line 21). He also states that PSNH "controlled  
13 the negotiations" (page 21 at line 3). PSNH's negotiator is labeled as "inflexible" (page 19 at line  
14 4) and "very inflexible" (page 22 at line 12). Page 22 at line 17 states that "Their negotiator was  
15 unyielding on that point. In essence, Briar was presented with a "take it or leave it" situation."

16

17 **Q. Are these comments by Mr. Norman relevant or appropriate?**

18 A. They are neither. Given the language of Article 10 of the contract, prior discussions were  
19 superseded by the terms and conditions explicit in the executed contract. In addition, these  
20 comments must be considered in light of the fact that this is a commercial transaction (as  
21 opposed to a consumer transaction) entered into freely by the parties. Mr. Norman (on behalf of  
22 Essex Hydro) was not forced to execute the contract.

23

24 **Q. What comments does Mr. Norman make regarding his understanding of the**  
25 **contract terms and conditions that are in dispute?**



1 A. I will list a few comments. He states on page 17 at line 14 that PSNH “introduced a  
2 substantial inconsistency”. Page 18 at line 5 reads: “I did not understand the purpose of the  
3 adjustment when the Contract was being negotiated and do not, to this day, understand its  
4 purpose”. Page 22 at line 5 states: “The Contract contains internally inconsistent language and  
5 confusing pricing terms”. Mr. Norman refers to certain language as “inconsistent” and  
6 “confusing” on page 22 at line 20 and again on page 23 at line 9.

7

8 **Q. What is your opinion of these comments by Mr. Norman?**

9 A. They are irrelevant. Mr. Norman’s lack of comprehension of the terms and conditions of  
10 a contract that bears his signature should not be given any weight in this proceeding. In addition,  
11 I consider these comments, and those mentioned above regarding PSNH’s inflexibility, to be an  
12 attempt to evoke sympathy from the Commission and to paint Briar Hydro as a victim.  
13 Obviously, sympathy should have no bearing on contract interpretation. Also, it is my belief that  
14 Mr. Norman is a savvy and successful businessman, with substantial experience in the field of  
15 hydro electric generation and financing, who would not have executed a contract without a full  
16 understanding of the potential risks and rewards contained therein.

17

18 **Q. On page 21 at line 18, Mr. Norman states his belief that Article 3, Section C of the**  
19 **contract is not relevant to this proceeding. Do you agree?**

20 A. Not entirely. Section C is relevant in the limited sense that I must refer to it to rebut the  
21 comments of Mr. Norman, outlined above, that paint Briar Hydro as a hapless victim.

22

23 **Q. Please summarize Section C.**

24 A. That section includes a provision that, should 96% of PSNH’s incremental energy cost  
25 ever exceed the index rate of 9.00 cents per KWH, the contract pricing would become indexed to  
26 PSNH’s incremental energy costs. During the period of these contract negotiations, PSNH was

1 forecasting incremental energy costs to escalate in a manner that, given the final contract terms in  
2 Section C., would have provided for a payment rate of 12.58 cents per KWH in the year 2000, a  
3 rate of 30.95 cents per KWH in the year 2010, and a rate of 41.53 cents per KWH in the final  
4 contract year (2013). This forecast was provided to Briar Hydro's predecessor via the March 19,  
5 1982 letter which is Attachment 2 to my pre-filed testimony in this proceeding. Briar Hydro may  
6 have placed a significant weight on the likelihood of PSNH's incremental energy costs escalating  
7 and, thus, reached a business decision that the overall contract terms, including the potential for  
8 rates as low as 3.53 cents per KWH, were acceptable because, at that time, the likelihood of the  
9 pricing dropping to today's level appeared to be very low. It was apparently a risk that Mr.  
10 Norman accepted in view of the extremely high upside potential of the contract.

11

12 **Q. Is there any evidence in the record that the forecasted incremental energy costs**  
13 **were considered by Briar Hydro as part of their evaluation of the proposed contract with**  
14 **PSNH?**

15 A. Yes. Briar Hydro included Exhibit 14.A.ii as part of their response to PSNH data request  
16 #14. Exhibit 14.A.ii is titled "Undated memorandum, "Market for Power" and attached exhibits  
17 dated 5/7/81 re PSNH long range capacity and avoided PSNH fuel costs". This exhibit is  
18 attached to this rebuttal testimony as Exhibit RCL-1.

19

20 **Q. Please summarize the contents of Exhibit RCL-1.**

21 A. The letter titled "Market for Power" has no addressee, is not signed, and is not dated.  
22 However, it appears to be a memo from Essex Hydro to potential or committed investors in one  
23 or more of their proposed hydro-electric projects. The memo provides a status of ongoing  
24 contract discussions with PSNH and also includes attachments showing estimated payments  
25 under the contract, based on estimates of PSNH's avoided fuel costs.

26

1 **Q. Are any other portions of Exhibit RCL-1 worth noting?**

2 A. Yes. The letter contains the following sentence: "If negotiations with Public Service do  
3 not proceed smoothly, other New Hampshire utilities will be approached". This contradicts Mr.  
4 Norman's representation that he was faced with a "take it or leave it" situation.

5

6 **Q. Does Mr. Norman's testimony contain other comments you wish to rebut?**

7 A. Yes. Page 20 at line 13 states that "The intent of the recovery adjustment was to recover  
8 front-end excess payments, not to enrich PSNH in the bargain." I will simply clarify that PSNH  
9 has not been enriched by this particular contract or any similar contract with independent power  
10 producers. PSNH is participating in this proceeding to protect the rights and economic interests of  
11 our customers. Should the Commission rule that Mr. Norman's interpretation of the contract is  
12 correct, PSNH's customers will be forced to fund the incremental revenues payable to Briar  
13 Hydro. Briar Hydro will be enriched in the bargain.

14

15 **Q. Are there other portions of Mr. Norman's testimony that you consider irrelevant?**

16 A. Yes. Starting on page 14, Mr. Norman devotes considerable effort to persuade the  
17 Commission that the 5.47 cent per KWH adjustment in the contract is not appropriate. On pages  
18 16 through 20, if I understand him correctly, Mr. Norman is stating that a 2.77 cent per KWH  
19 adjustment is appropriate, or perhaps more appropriate, than the 5.47 cent per KWH figure. On  
20 page 20 at line 22 he concludes that "I can find no evidence that contains mathematical  
21 calculations to support the adjustment of 5.47 cents per KWH". As my rebuttal, Article 3,  
22 Section D.1 of the contract that bears his signature is sufficient "evidence" that 5.47 cents is, in  
23 fact, the adjustment to which both parties to the deal agreed. Article 10 of the contract makes  
24 moot the entire discussion of "evidence" or any lack thereof. In addition, a document in Mr.  
25 Norman's possession, attached hereto as Exhibit RCL-1, clearly outlines the various adjustments  
26 that are the subject of this dispute, including the 5.47 cent adjustment.

1 **Q. What final portions of Mr. Norman's testimony would you care to rebut?**

2 A. Starting at the bottom of page 9, Mr. Norman presents arguments related to how one  
3 would determine exactly when recovery of excess payments had occurred. The primary  
4 disagreement between the parties in this regard, as noted at the top of page 10, is whether the  
5 excess payments in question amounted to 2.0 cents per KWH or 1.0 cents per KWH during the  
6 first eight (8) years of the contract.

7

8 **Q. Why is PSNH convinced that 2.0 cents is appropriate?**

9 A. First, let me stress that PSNH believes this entire discussion will be deemed moot by the  
10 proper reading of Section D.1 of the contract. Under the express terms of the contract, there is no  
11 need to determine the date on which alleged "full recovery of excess payments" has occurred.  
12 Per the contract, such "full recovery of excess payments" will not occur unless the recovery  
13 amount is continued to be applied for the full term of the contract. Only under Mr. Norman's  
14 interpretation of Section D.1 would such a calculation be necessary and the unanswered question  
15 of 2.0 cents versus 1.0 cents would have considerable bearing on the determination.

16

17 That said, PSNH believes there are two distinct pairs of pricing adjustments included in Article 3  
18 of the contract. The first pair involves Section A (which increases the contract rate by 2.0 cents  
19 per KWH during the first eight years) and Section D.1. (which reduces the rate by 5.47 cents per  
20 KWH "beginning with the ninth Contract year, and continuing for the term of the Contract...").

21 The second pair is entirely contained within Section D.2 which provides for a 1.0 cent per KWH  
22 rate decrease in the first eight (8) years and a 0.67 cent per KWH rate increase in the ninth  
23 through the twentieth contract years.

24

25 The adjustments in Section D.2 are separate and unrelated to those in Sections A and D.1.

26

1 **Q. Why is Mr. Norman convinced that 1.0 cents is appropriate?**

2 A. He believes that the adjustment in Section A includes the adjustment in Section D.2. The  
3 basis for his argument is that Section A includes the sentence “This rate is subject to the  
4 adjustment provided for under Section D.2.”. His argument is that the phrase “is subject to” has  
5 the effect of incorporating Section D.2 into Section A. My rebuttal is that “is subject to” serves  
6 only to clarify that both adjustments (Section A and Section D.2) act in a cumulative manner, i.e.  
7 they are additive and that neither one supersedes the other. To further rebut his argument, I will  
8 note that Section D.2 is a stand alone section. Section A could have been drafted to include the  
9 net effect of both adjustment, but it was not. One must assume that these adjustments were  
10 separated for a specific reason, because if there was no reason to do so, as Mr. Norman suggests,  
11 the contract would have been drafted to incorporate both adjustments into one net adjustment.  
12 Such a drafting would have made the contact simpler. Instead, the parties agreed on the more  
13 complex language in the contract. It is inconceivable that such complex language would be  
14 included if the simpler approach discussed by Mr. Norman was the correct interpretation.

15

16 **Q. Can you summarize your rebuttal?**

17 A. Mr. Norman is attempting to convince the Commission to infer contract language that  
18 simply does not exist in order to affect a significant windfall into the accounts of his investors. To  
19 do so, one would also have to incorporate terms that are not in the contract relating to the  
20 discount rate to be applied, and how the contract would deal with a situation where Mr. Norman’s  
21 “full recovery” failed to occur prior to the end of the contract term. Mr. Norman admits that such  
22 contract terms do not exist. He intimates that he was forced to accept the contract terms and that  
23 he did not comprehend what he was signing. Ultimately, he is asking the Commission to put  
24 money into his pocket at the expense of PSNH’s customers despite the absence of contract  
25 language that would provide for this payment. The Commission should accept the clear, concise,

1 express, and unambiguous contract language that states the recovery amount deduction continues  
2 “for the term of the contract” and avoid charging customers for the added benefit sought by Mr.  
3 Norman.

4

5 **Q. Does this conclude your testimony?**

6 **A. Yes.**

**Exhibit RCL-1**

Undated memorandum, "Market for Power" and attached exhibits dated 5/7/81 re PSNH long range capacity and avoided PSNH fuel costs

COAL PARK "A" DISK  
"PENACOOK"

MARKET FOR POWER

The project is located with the Public Service Company of New Hampshire service territory. From discussions with Public Service, it has been determined that they are interested in purchasing the power, and will seriously consider various power purchase arrangements (i.e., cost of service, avoided costs, or a hybrid). Presently, Essex is exploring different types of power sales contracts with Public Service for the Moore's Falls project. If an agreement is reached, it may prove to be advantageous to roll the output from Penacook into this agreement.

Public Service is presently both short on capacity and dependent upon oil. Exhibit \_\_\_ and \_\_\_ attached show a profile of their generation mix and projected loads and capacity additions between now and 1990. Public Service has a great deal riding on the timely completion of the two Seabrook units, for which they are the lead utility. When Seabrook 1 comes on-line, a 409 MW addition to Public Service capacity will result. This was recently rescheduled for 1984. Since its inception, this nuclear project has been plagued by scheduled shippage and cost overruns. Unit 2 at Seabrook, currently scheduled to go on-line in 1986, will significantly alter Public Service's marginal fuel costs.

Exhibit \_\_\_ gives a projection of what Public Service's marginal fuel costs will be during the 1980's. These costs are based upon the assumptions listed at the bottom of the Exhibit, and Seabrook 1 and 2 start-up dates of 1985 and 1987, respectively. Delay in these changes in the generating mix will result in higher interim incremental fuel costs. Two cost are listed for years 1987 and 1990. The higher number is predicted on Public Service selling an additional 200 MW of Seabrook 2 to other utilities. Public Service has indicated that this is under consideration. However, this sale has yet to be made final.



Currently, PURPA rates in New Hampshire are 7.7 and 8.2 cents per KWH for nonfirm and firm energy respectively. When these rates were set, they were higher than the then current avoided fuel costs in New Hampshire. It is expected that these rates will track Public Service's avoided fuel costs as a minimum. An additional premium for capacity may be available.

If negotiations with Public Service do not proceed smoothly, other New Hampshire utilities will be approached. These include Connecticut Valley Electric Co. (controlled by Central Vermont Public Service), Granite State Electric (controlled by NEES), Concord Electric Co. (an all requirements customer of Public Service), and the New Hampshire Electric Cooperative. Sales to utilities outside of New Hampshire are presently complicated by the pending state law prohibiting the export of hydropower.

EXHIBIT

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

Present Generating Mix

|                 |              |                       | Head Rate      | Capacity<br>Factor |
|-----------------|--------------|-----------------------|----------------|--------------------|
| Oil Base Load   |              |                       |                |                    |
| Newington       | 414          | MW                    | 11,047 BTU/KWH | 50%                |
| Schiller        | 157          | MW                    |                | 40%                |
|                 | <u>571</u>   | <u>MW</u>             |                |                    |
| Coal Base Load  |              |                       |                |                    |
| Merrimack       | 459          | MW                    | 10,300 BTU/KWH | 69%                |
|                 | <u>-100</u>  | <u>sales contract</u> |                |                    |
|                 | 359          | MW                    |                |                    |
| Oil/Gas Peaking |              |                       |                |                    |
| 7 Plants        | 155          | MW                    |                |                    |
| Hydro           |              |                       |                |                    |
| Amoskeog        | 16           | MW                    |                | 64%                |
| Smith           | 15           | MW                    |                | 67%                |
| Ayers In.       | 8.4          | MW                    |                | 60%                |
| Other           | 16.6         | MW                    |                | 60%                |
|                 | <u>56</u>    | <u>MW</u>             |                |                    |
|                 |              |                       | average        | 63%                |
| TOTAL CAPACITY  | <u>1,141</u> | <u>MW</u>             |                |                    |

5/7/81

UTILITY - PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

Form A  
NH PUC

LONG RANGE PLANS FOR BULK POWER SUPPLY

*Merrimack Coal*

| Year | *System Capability | System Generation Additions | *** *System Purchases | *Sales to Other Systems | Capacity Retirements | * Total Capability | *Reserves | *** Range Of Load Forecasts |      |      |
|------|--------------------|-----------------------------|-----------------------|-------------------------|----------------------|--------------------|-----------|-----------------------------|------|------|
|      |                    |                             |                       |                         |                      |                    |           | 1                           | 2    | 3    |
| 1981 | 1262               | 6                           | 403                   | 100                     | 0                    | 1571               | 478 - 236 | 1093                        | 1214 | 1335 |
| 1982 | 1268               |                             | 267                   | 100                     | 0                    | 1435               | 288 - 34  | 1147                        | 1274 | 1401 |
| 1983 | 1268               | <i>Seabrook 1<br/>**409</i> | 185                   | 100                     | 13#                  | 1749               | 547 - 280 | 1202                        | 1335 | 1469 |
| 1984 | 1664               | 2                           | 125                   | 100                     | 0                    | 1691               | 448 - 172 | 1243                        | 1381 | 1519 |
| 1985 | 1666               | <i>Seabrook 2<br/>**407</i> | 163                   | 100                     | 0                    | 2136               | 831 - 541 | 1305                        | 1450 | 1595 |
| 1986 | 2073               |                             | 155                   | 100                     | 0                    | 2128               | 786 - 488 | 1342                        | 1491 | 1640 |
| 1987 | 2073               |                             | 195                   | 100                     | 0                    | 2168               | 762 - 450 | 1406                        | 1562 | 1718 |
| 1988 | 2073               |                             | 195                   | 100                     | 0                    | 2168               | 698 - 372 | 1470                        | 1633 | 1796 |
| 1989 | 2073               |                             | 215                   | 100                     | 0                    | 2188               | 650 - 308 | 1538                        | 1709 | 1880 |
| 1990 | 2073               |                             | 215                   | 100                     | 0                    | 2188               | 580 - 222 | 1608                        | 1787 | 1966 |
|      |                    |                             |                       |                         |                      |                    |           |                             |      |      |
|      |                    |                             |                       |                         |                      |                    |           |                             |      |      |
|      |                    |                             |                       |                         |                      |                    |           |                             |      |      |
|      |                    |                             |                       |                         |                      |                    |           |                             |      |      |

ALL FIGURES IN MEGAWATTS  
\*At time of system peak load

\*\*PSNH ownership only

\*\*\*Winter peak load forecast (1981=winter 1981-1982)

1. Low Estimate
2. Present Estimate
3. High Estimate

\*\*\*Includes Seabrook Buyback

#Schiller Coal Conversion (12 MW)

Note: The in service dates for Seabrook Station are under active consideration and may be altered in the near future.

*Reserve margin assuming 100% unit availability.*

Date Submitted: March 31, 1981

Signed By: /s/ Henry J. Ellis  
Henry J. Ellis  
Vice President

EXHIBIT \_\_\_\_\_

AVOIDED FUEL COST  
PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

| YEAR                              | OIL  | COAL       | AVOIDED FUEL COST \$/KWH |
|-----------------------------------|--|------------|--------------------------|
| 1983                              | 65% @ 8.43 (baseload)<br>35% @ 10.12 (peaking) |            | 9.02                     |
| Assume Seabrook 1 on-line in 1985 |  |            |                          |
| 1985                              | 65% @ 10.81<br>10% @ 12.97                     | 25% @ 3.31 | 9.15                     |
| Assume Seabrook 2 on-line in 1987 |  |            |                          |
| 1987                              | if sell more*<br>65% @ 13.87                   | 35% @ 4.08 | 10.44                    |
|                                   | if don't sell more<br>45% @ 13.87              | 55% @ 4.08 | 8.49                     |
| 1990                              | if sell more<br>75% @ 19.09                    | 25% @ 5.28 | 15.64                    |
|                                   | if don't sell more<br>57% @ 19.09              | 43% @ 5.28 | 13.15                    |

\* Assumes PSCO sells more of Seabrook 2 - now are planning sale and buyback a significant amount of capacity.

Fuel Price Assumptions:

Coal: 10,300 BTU/kwh (Merrimack); NEEP Coal assumptions 10% real inflation (general inflation 10% through 1987, 8% thereafter).

Oil: 11,050 BTU/kwh (Newington); NEEP April 10th memo 3% real growth, 20% price premium for peaking oil.

5/7/81

1983

CONTRACT PRICING PROVISIONS  
PENACOOK LOWER FALLS HYDRO

| <u>YEAR</u> | <u>PSNH<sup>1</sup><br/>IEC</u> | <u>%</u> | <u>% x IEC</u> | <u>FRONT-END<br/>RATE</u> | <u>ADJUST-<br/>MENT</u> | <u>RECOVERY</u> | <u>ESTIMATE<sup>2</sup><br/>PAYMENT</u> |
|-------------|---------------------------------|----------|----------------|---------------------------|-------------------------|-----------------|---|
| 1984        | 5.94                            |          |                |                           |                         |                 |   |
| 85          | 6.56                            |          |                | 11.00                     | -1.00                   |                 | 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          | ↓                         | ↓                       |                 | 10.00                                   |
| 93          | 13.24                           | 92       | 12.18          |                           | +0.67                   | -5.47           | 6.36                                    |
| 94          | 13.44                           | 88       | 11.83          |                           | ↓                       | ↓               | 7.38                                    |
| 95          | 16.01                           | 84       | 13.45          |                           | ↓                       | ↓               | 7.03                                    |
| 96          | 18.97                           | 80       | 15.18          |                           | ↓                       | ↓               | 8.65                                    |
| 97          | 19.83                           | 76       | 15.07          |                           | ↓                       | ↓               | 10.38                                   |
| 98          | 21.56                           | 72       | 15.52          |                           | ↓                       | ↓               | 10.27                                   |
| 99          | 24.28                           | 68       | 16.51          |                           | ↓                       | ↓               | 10.72                                   |
| 2000        | 27.16                           | 64       | 17.38          |                           | ↓                       | ↓               | 11.71                                   |
| 01          | 30.11                           | 60       | 18.07          |                           | ↓                       | ↓               | 12.58                                   |
| 02          | 33.39                           | 56       | 18.70          |                           | ↓                       | ↓               | 13.27                                   |
| 03          | 37.01                           | 52       | 19.25          |                           | ↓                       | ↓               | 13.90                                   |
| 04          | 41.04                           | 50       | 20.52          |                           | ↓                       | ↓               | 14.45                                   |
| 05          | 45.50                           |          | 22.75          |                           |                         |                 | 15.05                                   |
| 06          | 49.99                           |          | 25.00          |                           |                         |                 | 17.28                                   |
| 07          | 54.92                           |          | 27.46          |                           |                         |                 | 19.53                                   |
| 08          | 60.34                           |          | 30.17          |                           |                         |                 | 21.99                                   |
| 09          | 66.30                           |          | 33.15          |                           |                         |                 | 24.70                                   |
| 2010        | 72.84                           |          | 36.42          |                           |                         |                 | 27.68                                   |
| 11          | 79.31                           |          | 39.66          |                           |                         |                 | 30.95                                   |
| 12          | 86.34                           |          | 43.17          |                           |                         |                 | 34.19                                   |
| 13          | 93.99                           |          | 47.00          |                           |                         |                 | 37.70                                   |
|             |                                 |          |                |                           |                         |                 | 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 (AAR 1) 1982 R.V.P.