



**Public Service  
of New Hampshire**

PSNH Energy Park  
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The Northeast Utilities System

June 15, 2007

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

Re: Petition of Briar Hydro Associates for Declaratory Judgment  
Docket No. DE 07-045



Dear Secretary Howland:

Enclosed please find the original and six copies of Public Service Company of New Hampshire's (PSNH) Memorandum in Opposition to Briar Hydro Associates' Petition for Declaratory Ruling Re:1982 Power Sales Agreement. The procedural schedule in this proceeding calls for responses due on June 29, 2007. Should Briar Hydro Associates, the Office of the Consumer Advocate or the Staff raise any new issues in their responsive filings which have not been raised in the Petition or treated in this Memorandum, PSNH may request permission from the Commission to address any new issues raised in those filings.

Copies were provided to the parties pursuant to the Commission's Rule Puc 203.11 (a).

Very truly yours,

Gerald M. Eaton  
Senior Counsel

Enclosures

cc: Service List

**STATE OF NEW HAMPSHIRE**  
**BEFORE THE PUBLIC UTILITY COMMISSION**  
Briar Hydro Associates' Petition for Declaratory Ruling  
Docket No. DE 07-045

**MEMORANDUM OF PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**

Public Service Company of New Hampshire ("PSNH") submits this Memorandum in Opposition to Briar Hydro Associates' Petition for Declaratory Ruling Re: 1982 Power Sales Agreement ("Petition"). The Petition claims that Briar Hydro Associates, as successor to the rights of New Hampshire Hydro Associates under the 1982 power sales agreement, is entitled to transitional payments in the Forward Capacity Market developed by Independent System Operator-New England ("ISO-NE"). PSNH denies that claim, as New Hampshire Hydro Associates sold the "entire generation output" from the hydro electric facility known as Penacook Lower Falls (the "Plant") to PSNH under the 1982 power sales agreement.

**I. Introduction**

This proceeding was initiated by a Petition for Declaratory Ruling filed by Briar Hydro Associates. Briar Hydro Associates ("Briar") acquired the interests of New Hampshire Hydro Associates ("NHHA") in the Penacook Lower Falls hydroelectric facility on the Contoocook River in the village of Penacook, New Hampshire. In 1982, PSNH and NHHA entered into a thirty year contract for the purchase and sale of the output from the Penacook Lower Falls facility ("the Contract"). PSNH and NHHA, later Briar, have each performed under the Contract without material dispute to this point.

On June 16, 2006, the Federal Energy Regulatory Commission ("FERC") issued an order accepting a Settlement Agreement among several settling parties in

New England. The Settlement Agreement creates a Forward Capacity Market to be supplied through a future Forward Capacity Auction. Until the Forward Capacity Auction is held to stimulate future generating capacity resources, existing capacity assets will receive transition payments. Briar believes that it should receive those transition payments because it claims sales of generating capacity to PSNH was never part of the Contract. PSNH disagrees with Briar for the reason set forth below.

## **II. The Contract Expressly Provides for the Sale of the “Entire Generation Output” of the Plant to PSNH**

In a nutshell, Briar claims that the Contract does not entitle PSNH to the generating capacity produced by the project, and that Briar has the ability to sell the plant’s capacity to someone else. The Contract clearly states otherwise.

The preamble of the Contract concisely resolves the issue at hand. The second recitation of the Contract’s preamble reads, “WHEREAS, SELLER [now Briar] desires to sell its entire generation output to PUBLIC SERVICE.” Similarly, the fifth recitation reads, “WHEREAS, SELLER is willing and able to sell its entire output to PUBLIC SERVICE for thirty years.”

The Contract clearly expresses the intent of the parties that for the considerations set forth therein, PSNH was purchasing the “entire generation output.” Even though there is no separate charge for capacity in the Contract, PSNH did not need to pay separately for capacity. The nine-cent per kilowatt hour rate PSNH offered in this long-term Contract included the purchase of capacity. As discussed below, the course of dealing between PSNH and the Seller (first NHHA, and now Briar) since the inception of the Contract has conformed to the premise that PSNH purchased both capacity and energy.

### **III. Under PURPA Briar May Not Separate Sales of Energy from Capacity**

Even if the terms of the Contract alone are not deemed conclusive evidence of PSNH's entitlement to the capacity produced by the Plant, the Contract does not exist in isolation; it is the manifestation of the underlying statutory and regulatory framework within which it was written. That legal foundation clearly demonstrates that Briar could not then, and cannot now, sell its energy to PSNH, and at the same time sell its capacity to ISO-NE and still maintain its exemption from FERC rate jurisdiction under the Federal Power Act.

Under the Federal Power Act, a transaction between a generator and an electric utility (a sale for resale) is normally subject to regulation by the FERC. 16 U.S.C. §§824 d and e. An exception to this rule was carved out for "qualifying facilities" by Congress in the Public Utility Regulatory Policies Act of 1978 (PURPA) 16 U.S.C. §824a-3. Generators falling within the definition of a "qualifying facility" could sell their output to the local electric utility under rates established by the state regulatory commission. The utilities were under an obligation to purchase any capacity and energy which was made available from the qualifying facility. 18 CFR §292.303(a) states:

*(a) Obligation to purchase from qualifying facilities.*

Each electric utility shall purchase, in accordance with § 292.304, any energy and capacity which is made available from a qualifying facility....

This federal regulation mandates that PSNH purchase any energy and capacity which is made available from a qualifying facility, such as the Plant. This provision is clearly inclusive – the purchase mandate applies to any energy and capacity. Contrary to Briar's position, PSNH could not, and did not, contract to buy only energy from the Plant.

Unlike subparagraph (a), 18 CFR §292.303, subparagraph (d) does in fact provide for the sale of energy or capacity from a QF to be sold separately - - but only if the electric utility which would otherwise be obligated to purchase the energy or capacity

from the QF desired to transmit (wheel) the energy or capacity to another electric utility. Specifically, subparagraph (d) of 18 CFR §292.303 reads:

*(d) Transmission to other electric utilities.*

If a qualifying facility agrees, an electric utility which would otherwise be obligated to purchase energy or capacity from such qualifying facility may transmit the energy or capacity to any other electric utility. Any electric utility to which such energy or capacity is transmitted shall purchase such energy or capacity under this subpart as if the qualifying facility were supplying energy or capacity directly to such electric utility. The rate for purchase by the electric utility to which such energy is transmitted shall be adjusted up or down to reflect line losses pursuant to § 292.304(e)(4) and shall not include any charges for transmission

This regulation gives the interconnecting electric utility, not the QF, the option of wheeling the energy or capacity output of a QF to another utility. As a result, the utility interconnected to the QF has the right of first refusal to purchase the output produced by the QF. There is no provision giving the QF the option to sell energy to the interconnecting utility while at the same time making sales of capacity to any entity other than the interconnecting utility, absent the consent of the interconnected utility<sup>1</sup>.

Any attempt to deviate from PURPA's regulatory scheme by the QF would remove the sale of generation from that QF from the PURPA exemption from FERC jurisdiction. The QF would then be required to comply with all Federal Power Act requirements for FERC regulation and approval of any such sales transaction. Briar has not made any such application to FERC for approval of its supposed deviation from the mandate of 18 CFR §292.303, nor would PSNH, as a party to the Contract, consent to such an action if it were to be proposed by Briar.

The state supreme court has twice read the state and federal laws, the Limited Electrical Energy Producers Act ("LEEPA") and PURPA, to be consistent. *Appeal of Granite State Electric*, 121 N.H. 787, 789 (1981); *Appeal of PSNH*, 130

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<sup>1</sup>). In this case Penacook Lower Falls facility was located in the service territory of Concord Electric Company, later Unitil Energy Systems, Inc., and the output was wheeled to PSNH under 18 CFR 292.303(d).

N.H. 285, 287 (1988)<sup>2</sup>. After the supreme court decision in *Appeal of Granite State Electric, supra*, the Commission stated the following:

The regulations of the Federal Energy Regulatory Commission (FERC) promulgated pursuant to PURPA § 210 provide in pertinent part:

Each electric utility shall purchase ... any energy and capacity which is made available from a qualifying facility ... 18 CFR § 292.303(a).

See also, PSNH Prefiled Testimony, Exh. 3, Attachment 2 at 12235.

Accordingly it is clear that an electric utility must purchase the entire output of a qualifying facility. . . . Since the above federal law can operate to preempt inconsistent state law, Federal Energy Regulatory Commission v Mississippi, supra, we must, where offered a choice, construe state law as being consistent with federal law. *Re: Small Power Producers and Co-Generators*, Docket No. DE 83-62, Fourth Supplemental Order No. 16,619, 68 NH PUC 531, 537 (1983).

Reading PURPA and LEEPA consistently together, the entire generation output, energy and capacity, was purchased by PSNH through the Contract with NHHA in 1982. The parties could not have done otherwise.

#### **IV. The NHHA Contract is Inextricably Linked to the Regulatory Framework of the Time**

PSNH and NHHA did not simply approach each other at arm's length to negotiate the Contract with a blank sheet of paper. If they had negotiated such a contract, it would have been a FERC-regulated contract as described above. The Contract is one of several long-term nine-cent contracts, all of which were formed within the context of regulation by the Commission of QF generators under PURPA. In relating the early history of this regulatory subject matter the Commission stated:

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<sup>2</sup> "In a rare instance of State and federal legislative coincidence, the New Hampshire Legislature and the United States Congress each enacted similar provisions in 1978 designed to diversify electrical power production through the encouragement of small power producers and cogenerators." 130 N.H. at 287.

“Following the passage of the LEEPA and PURPA legislation in 1978, the commission set rates and established interconnection standards, first for PSNH as the state's only generating utility and subsequently for the state's non-generating utilities. *These early orders determined short term buy back rates for energy and capacity* for all utilities, and offered non-generating utilities the option of either paying their generating suppliers' avoided cost or wheeling to their suppliers at no charge.

*Although the commission also encouraged utilities to negotiate long term purchase power agreements with developers, only PSNH responded, signing long term contracts primarily with small hydro-electric facilities.* Between 1978 and 1983, 57 facilities achieved commercial operation; they were predominantly run of the river hydro-electric (41), but also residential wind (1), wood/cogeneration (4) and photovoltaic (1).” *Re: Public Service Company of New Hampshire*, Docket No. DR 86-41, Order No. 19,052, 73 NH PUC 117, 123 (April 7, 1988) (Emphases added).

The 1982 Contract with NHHA was one of these contracts that the Commission had encouraged the utilities to negotiate. Each contract was part and parcel of the early history of the small power producer market – a market which the Commission clearly noted included the sale of *energy and capacity*.

#### **V. The Standard at the Time of the Contract Was a Cents Per Kilowatt-Hour Rate for Both Capacity and Energy.**

Before the Contract was negotiated, the Commission had established avoided cost rates for small power producers for energy *and* capacity. These rates had pricing terms that were consistent with the pricing terms of the NHHA Contract, i.e., both capacity *and* energy were incorporated into a single cents per kilowatt-hour rate. The Commission had established avoided cost rates under Docket No. DR 79-208 which required payments of 7.7 cents per kilowatt-hour to projects with no reliable capacity and 8.2 cents per kilowatt-hour to projects with reliable capacity. These rates were long-term because they could last for the life of the LEEPA or PURPA facility. *Re: Small Power Producers and Co-Generators*, Order No. 14,280, 65 NH PUC 291, 299 (June 18, 1980)<sup>3</sup>. The 30-year nine-cent contract

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<sup>3</sup> “Because of the commission's concern that alternative energy be developed as quickly as possible, coupled with our recognition that the advent of Seabrook places an entirely new variable into the avoided cost calculation, the commission finds that the rate set in this proceeding will be applicable

negotiated between PSNH and NHHA with the ability to front end load the rate had a higher price but was consistent with the Commission's standard 8.2 cents per kilowatt hour rate for capacity *and* energy that ran for the life of the facility.

The Rollinsford Manufacturing contract referred to in Briar Hydro's Petition contained these same prices ordered by the Commission to be paid for the entire output from Rollinsford's facility. PSNH did not negotiate separate capacity and energy charges with Rollinsford Manufacturing Company, but merely produced a contract that incorporated the long-term rates already established by the Commission. *See*, Attachment A. In 1982, NHHA executed a richer bargain with PSNH.

When the Commission later conducted its comprehensive review of rates paid to small power producers and co-generators in Docket DR 83-62, it abandoned the practice of incorporating both energy and capacity in a single per kilowatt-hour charge.<sup>4</sup> The long-term rate orders having separate capacity and energy payments were the result of Order No. 17,104 decided almost a year and a half after the

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as a minimum to all small power producers presently operating qualifying facilities and to all small power producers who activate qualifying facilities between the date of this order and the date of initial generation at Seabrook I, for the life of the qualifying facilities. In essence, those small power producers, with qualifying facilities either under PURPA or LEEPA, will be grandfathered to the rate set in this proceeding as a minimum if the qualifying facility begins generation prior to electrical generation at Seabrook I.

The rate grandfathered for the aforementioned qualifying producers is the staff proposal of 7.631 cents per kwh for energy and 8.131 cents per kwh [for energy and capacity] rounded upwards to 7.7 cents and 8.2 cents respectively to account for the conservative assumptions taken by staff and the unquantified externalities." 65 NH PUC 298-299

#### <sup>4</sup> B.5. Capacity Component of the Rate

[7] Although the magnitude of avoided capacity costs may be quite different depending upon the number of years to which the SPP is committed, several aspects of the capacity component of short and long-term rates are the same. The first is that the expression of the capacity values will remain in \$/KW/YR and *will no longer be translated into /KWH and added to the energy rate*. The Commission notes that the existing short term rate translated a capacity value of \$22 per KW year into a /KWH adder by spreading the \$/KW year value over the number of hours SPPs were assumed to operate during the year. The Commission assumed a 50% capacity factor, with the resulting capacity payment of 0.5/KWH (\$22 / .50/KWH = \$44/KWH)

Payment on a per kilowatt hour basis meant that to the extent that a SPP had a capacity factor greater (or less) than 50%, and operated more (or less) than 4380 hours, it was being overpaid (or underpaid) for its capacity value. Payment on a \$/KW/Yr basis will provide a more direct correlation between cost and rate components and facilitates administrative policies. Docket No. DE 83-62, Order No. 17,104, 61 PUR4th 132. 69 NHPUC Rep 352, 358 (July 5, 1984)

NHHA Contract was executed. The Commission then abandoned its standard practice of including capacity and energy in a single per kilowatt hour rate for future rate orders, but it did not abrogate those existing arrangements where compensation for energy and capacity had previously been included in the single cents per kilowatt-hour rate.

**VI. The Parties' Long-Term Course of Dealing Under the Contract Demonstrates that PSNH Has Always Claimed the Benefit of the Capacity**

PSNH, NHHA, and later Briar have consistently treated the capacity of the Plant as belonging to PSNH. Ever since the commercial operation of the hydroelectric unit, PSNH has claimed that Penacook Lower Falls represented 2.5 megawatts of consistent capacity for NEPOOL reporting purposes and satisfying a portion of PSNH's capability responsibility. *See*, Attachment B. As a load-holding entity, PSNH has always counted the Plant as an asset in meeting its capacity needs. Neither Briar nor NHHA before it have ever sold capacity from Penacook Lower Falls into the market, although there have been months when the NEPOOL capacity market or the ISO-NE Clearing price have been attractive. The owners of Penacook Lower Falls never sold capacity into the market because PSNH had purchased it from the beginning of the Contract. There is no separate payment for capacity because the price, expressed in a cents per kilowatt-hour rate, included compensation for capacity. As PSNH is the rightful purchaser of the Plant's capacity, any value for that capacity, including transitional payments under the Forward Capacity Market, rightfully should be paid to PSNH and flowed back to retail customers via the Commission's ratemaking process.

**VII. Negotiations Leading Up to the Contract Demonstrate that the Parties Had Considered the Value of Capacity from the Plant**

The issue of capacity value from the Plant is not one of recent vintage. During negotiations leading to the Contract, NHHA had raised the issue of payment for capacity value, as evidenced by its January 21, 1982 letter and attachments

thereto annexed to this Memorandum Attachment C. In this 1982 letter, NHHA proposed that the Contract should include a provision entitled “Compensation for Capacity.” This proposal would have required PSNH to make separate payments for capacity provided from the Plant if and when circumstances caused such capacity to have value for PSNH. PSNH did not accept that proposal, and the final Contract agreed to by NHHA does not provide for any separate compensation for capacity. As the matter of separate compensation for capacity was discussed and dismissed during contract negotiations, its resurrection now that such capacity does have a separate and distinct value does not change the terms of the final negotiated agreement.

**VIII. Actions Following the Consummation of the Contract**  
**Demonstrate that the Parties Had Considered the Value of Capacity from the Plant as Part of the Rate**

Following the in-service date of the Plant, PSNH filed for capacity recognition with NEPOOL (predecessor to ISO-NE) and there was never any question from NHHA as to having a claim to the capacity value. *See*, Attachment B. PSNH sent a letter to NHHA on May 14, 1990 discussing the topic of a buyout of front-end loading, attached hereto as Attachment D. The letter contained a table of computations where the Marginal Value of Electricity was expressed in both energy and capacity (PSNH Marginal Energy and PSNH Short Term Capacity) with a column showing what the Plant would have been paid if purchases had been made at the Marginal Rate. PSNH has always acted as the owner of the capacity of the Plant under the Contract, and NHHA has never expressed a right of ownership to the capacity prior to its claim made in the correspondence attached to the Petition.

**IX. Commissioners’ Questions**

At the hearing held on May 23, 2007, the Commission raised a question concerning the impact of the FERC Order of June 16, 2006, which created the Forward Capacity Market (FCM). The Order is silent on the issue of whether

generators or Load Serving Entities (LSEs), such as PSNH, are entitled to capacity payments under the FCM. In a press release FERC did note, however, that the “FCM allows load-serving entities (LSEs) to self-supply through their own resources or contracted resources” to meet their capacity obligations. Release, p. 2. The LSE must acquire the capacity assets needed to meet its responsibilities under ISO-NE requirements, just as PSNH had to meet its capability responsibilities under the former NEPOOL framework. Since the date when the Plant went into service, PSNH always used the capacity of Penacook Lower Falls to meet its capacity responsibilities. The Contract at issue represents an “Existing Capacity Resource” under the ISO Market Rules in order to meet the Order’s goals of implementing a “market-type mechanism” to address the deficiencies created by Reliability Must Run agreements. 115 FERC ¶61,340, p. 3. It was suggested by the Settlement Parties in that proceeding that “transition payments serve as a bridge to the implementation of the FCM and as a means to help ensure that existing generators remain available until new resources can be built.” *Id.* at 11. The Plant is already contractually committed to supply PSNH with capacity and energy until the end of its thirty year contract period; therefore transition payments are unnecessary until that Contract expires. PSNH has paid for and consistently claimed this Existing Capacity Resource; therefore, PSNH is entitled to the transition payments similar to the capacity value it has claimed for two decades.

The second question from the Commission dealt with the breadth of an output contract once there appeared to be greater value than what was anticipated. The answer to this question would logically also involve the breadth of an output contract once there appeared to be lesser value than what was anticipated. The former situation posed by the Commission is that the Contract now held by Briar did not anticipate the higher value of the output of the Plant created by the new forward capacity market. The latter, corollary question involves the billions of dollars in above-market costs borne by PSNH’s retail customers caused by QF purchase obligations that had less value than what was originally anticipated.

In response to both these questions, PSNH responds that “a deal is a deal.” PSNH is bound either by the terms of a contract, or by the terms of a legally enforceable rate order issued by the Commission. Just as PSNH and its customers have continued obligations for above-market QF purchases, PSNH and those same customers enjoy the benefit (albeit of comparatively small monetary value) of the nine-cent hydro contract being “in the money.”

## **X. Conclusion**

For the reasons discussed in detail herein, PSNH urges the Commission to find that the Contract payments made by PSNH are compensation for the “entire generation output” of the Plant – be it energy, capacity, or any of the other ancillary services recognized by ISO-NE. The payments for any Forward Capacity Value rightfully belong to PSNH’s retail customers, who ultimately pay the costs of QF obligations and who ultimately receive the value provided under those obligations.

Respectfully submitted,

Public Service Company of New Hampshire

June 15 2007  
Date

By:   
Gerald M. Eaton  
Senior Counsel  
780 North Commercial Street  
Post Office Box 330  
Manchester, New Hampshire 03105-0330  
(603) 634-2961

CERTIFICATE OF SERVICE

I hereby certify that, on the date written below, I caused the attached Memorandum in Opposition to Briar Hydro Associates' Petition for Declaratory Ruling Re: 1982 Power Sales Agreement to be served on the persons listed on the Service List pursuant to Puc §203.11(a).

June 15 2007  
Date

Gerald M. Eaton  
Gerald M. Eaton

ATTACHMENT A

September 17, 1980

Mr. Lawrence J. Keddy  
456 Colbourn Road  
Rye, New Hampshire 03870

Dear Mr. Keddy:

Enclosed is a fully executed copy of the contract for the sale of energy from your facility in South Berwick, Maine, together with two execution copies of the contract for your facility in Fryeburg, Maine.

As I believe you are aware, we have decided that the separate letter agreement sent to you earlier is unnecessary, based on the action taken by the New Hampshire Public Utilities Commission on our Motion for Rehearing in Docket No. DR 79-208.

Once we have your signed copy of the Swans Falls contract, we will submit both contracts to the New Hampshire Public Utilities Commission. In connection with that submission, it would be most helpful if you would provide us with an estimate of the number of kilowatthours you expect to sell to the Company during the fourth quarter of 1980 and each quarter of 1981.

Very truly yours,

Henry J. Ellis  
Vice President

HJE:LD  
Encl.

cc: J. E. Lyons  
P. Ayers  
W. A. Adams, Jr.  
bcc: C. H. Stetson  
R. S. Johnson

*Superseded by  
a rate order. #003*

AGREEMENT FOR THE PURCHASE AND SALE  
OF HYDROELECTRIC ENERGY

WARRUMS, J.L.  
HJ Ellis  
JELyons  
Payers  
CHStatson  
RSJohnson  
Legal Files-  
Original

AGREEMENT, dated August 21, 1980, by and between Rollinsford Manufacturing Co., Inc., a New Hampshire corporation having offices in Rye, New Hampshire, (hereinafter referred to as SELLER), and PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE, a New Hampshire corporation having its principal office in Manchester, New Hampshire (hereinafter referred to as PUBLIC SERVICE).

Article 1. Basic Agreement.

SELLER agrees to furnish and sell and PUBLIC SERVICE agrees to purchase and receive all of the electric energy produced by the hydroelectric generating facility owned and operated by SELLER in South Berwick, Maine, in accordance with the terms of this Agreement and in compliance with New Hampshire Public Utilities Commission (NHPUC) Order Nos. 13,938 and 14,133.

Article 2. Availability.

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

It is agreed that SELLER shall have sole responsibility for operation and maintenance of the hydroelectric generating facility, including any relays, locks, seals, breakers, and other control and protection apparatus that PUBLIC SERVICE may designate as being necessary for the operation of the facility in parallel with the system of PUBLIC

SERVICE, and that SELLER will maintain and operate said facility in accordance with good utility operating practices.

SELLER agrees to give PUBLIC SERVICE reasonable advance notice whenever the facility is about to begin operation and to immediately notify PUBLIC SERVICE whenever the plant is shutdown.

ARTICLE 3. Price.

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

- a. Until the completion, under the direction of the NHPUC, of an annual audit to determine the dependable capability in kilowatts (KW) of SELLER'S hydroelectric generating facility, the parties agree that the NHPUC will determine on a temporary basis the dependable capability of the unit. Based on that determination, SELLER shall charge 8.2 cents per kilowatthour (KWH) for each KW of dependable capability generated during an hour. For each KW generated during an hour in excess of that dependable capability, SELLER shall charge 7.7 cents per KWH.
  
- b. After completion of the annual audit, SELLER will charge 8.2 cents per KWH for each KW of dependable capacity as determined by the audit and 7.7 cents per KWH for each KW generated in excess of the dependable capacity.

The parties understand that the price to be charged by SELLER for sales of electric energy was established by the NHPUC and is subject to change from time to time. Whenever an order by a regulatory body having jurisdiction over this contract establishes a new price to be charged by

SELLER, the parties shall enter into a written amendment to this agreement incorporating the new pricing provision.

Article 4. Delivery and Metering.

The point of interconnection (the Delivery Point) between the hydroelectric generating facility of SELLER and the electric system of PUBLIC SERVICE is at the point of connection of the 4,160 volt electric system owned by PUBLIC SERVICE to the electric facilities owned by SELLER. SELLER shall be obligated to pay all costs of interconnecting with PUBLIC SERVICE. Once those costs are known, the parties shall agree on the manner for payment of interconnection costs by SELLER.

SELLER will deliver all hydroelectric energy to PUBLIC SERVICE in the form of three-phase, sixty hertz current at 4,160 volts at the Delivery Point. SELLER will install, own and maintain a meter and related facilities to measure the flow of electrical energy from SELLER to PUBLIC SERVICE on an hour-by-hour basis. Said meter will be tested in accordance with the New Hampshire Public Utilities Commission's "Rules and Regulations Prescribing Standards for Electric Utilities".

SELLER agrees to notify PUBLIC SERVICE once each day of its generation in kilowatthours during each hour of the prior 24 hours.

Article 5. Billing and Payment.

SELLER shall read the meter installed in accordance with Article 4 at or near the end of each month. SELLER will then bill PUBLIC SERVICE for the amount due and PUBLIC SERVICE will send to SELLER a payment for that

amount. PUBLIC SERVICE may read the meter at any time to verify the accuracy of the billings.

Article 6. Facilities.

SELLER shall install and maintain at its own expense such protective devices and equipment as PUBLIC SERVICE may deem necessary for the protection of the PUBLIC SERVICE electric system and personnel.

Article 7. Liability and Insurance.

- a. Each party will be responsible for its facilities and the operation thereof to the Delivery Point and will indemnify and save the other harmless from and against all costs and damage by reason of bodily injury, death or damage to property caused by, or sustained on, facilities 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.
- b. (i) Each party hereby agrees to maintain in force and effect for the duration of this agreement, such general property damage and liability insurance, including workmen's compensation, as the other party may reasonably require.  
(ii) Each party agrees to provide a certificate of such insurance to the other party upon reasonable demand; and  
(iii) Insurance coverage maintained in accordance with this agreement may not be terminated by a party without 30 days prior notice to the other party.

Article 8. Effective Date and Contract Term.

This Agreement shall become effective between the parties and the term hereof shall commence as of the date hereof and shall continue in full force and effect until terminated by PUBLIC SERVICE upon twelve months' advance notice for lawful cause. SELLER may terminate at any time upon written notice.

After lawful termination, both parties shall be discharged from all further obligation under the terms of this Agreement, excepting any liability which may have been incurred before the date of such lawful termination.

Article 9. Prior Agreements Superseded.

This Agreement 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 Agreement.

Article 10. 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 Agreement 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. Mailing Addresses.

The mailing addresses of the parties are as follows:

SELLER: Rollinsford Manufacturing Co., Inc.  
90 Colbourn Road  
P. O. Box 456  
Rye, New Hampshire 03870

PUBLIC SERVICE: Public Service Company of New Hampshire  
Post Office Box 330  
1000 Elm Street  
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.

ROLLINSFORD MANUFACTURING CO., INC.

Ann P. Booguis  
(Witness)

By Earle F. Keddy  
Earle F. Keddy, President

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

Russell A. White  
(Witness)

By Henry J. Ellis  
Henry J. Ellis  
Vice President



Public Service of New Hampshire

NOTED FEB 06 1984 R.S.J.

*File: Copy*

*a) Penacook Le  
Control*

*b) NX-3 DAT*

February 6, 1984

Mr. Ross McEacharn  
NEPEX  
174 Brush Hill Avenue  
West Springfield, MA 01089

Subject - Purchased Hydro, Penacook Lower Falls

Dear Ross:

Public Service Company of New Hampshire is adding to its hydro capacity 2.5 MW purchased hydro from New Hampshire Hydro Associates, Penacook Lower Falls Station. This addition will increase PSNH's hydro capacity from 65.5 to 68.0 MW.

Penacook Lower Falls will be audited in accordance with NEPEX Audit Procedures prior to the end of the 1983-84 winter audit period.

Enclosed are the following forms and support data.

NX-3 - Notice of change in NEPOOL Claimed Capability.  
NX-12C - Hydro Station Data.  
Station Log - Support Data.

Sincerely yours,

A handwritten signature in cursive script that reads "Herb S. Slattum".

Herbert S. Slattum

Enclosures

cc: E. J. Glofka - NEPEX  
W. A. Harvey - PSNH  
R. S. Johnson - PSNH

HSS/csb  
20:52

NOTICE OF CHANGE IN NEPOOL CLAIMED CAPABILITY

Company Public Service of New Hampshire  
Station Penacook Lower Falls - Purchased Hydro  
Unit \_\_\_\_\_

1. NEW UNIT

Date of Commercial Operation February 1, 1984

Claimed Capability For Public Service Company of New Hampshire

<u>Normal</u>	<u>Summer</u>	<u>Maximum</u>	<u>Normal</u>	<u>Winter</u>	<u>Maximum</u>
<u>2.5 MW</u>		<u>2.5 MW</u>	<u>2.5 MW</u>		<u>2.5 MW</u>
Nameplate Rating		<u>4,000</u>	KW		
		<u>OR</u>			
		<u>4,444</u>	<u>KVA</u> and <u>.9</u>		<u>Power Factor</u>

2. RETIREMENT

Effective Date of Retirement \_\_\_\_\_

Nameplate Rating \_\_\_\_\_ KW  
or  
\_\_\_\_\_ KVA and \_\_\_\_\_ Power Factor

3. RERATING

Effective Date of Rerating \_\_\_\_\_

Claimed Capability

<u>Normal</u>	<u>Summer</u>	<u>Maximum</u>	<u>Normal</u>	<u>Winter</u>	<u>Maximum</u>
OLD _____ MW		_____ MW	OLD _____ MW		_____ MW
NEW _____ MW		_____ MW	NEW _____ MW		_____ MW

4. COMMENTS

Capability of this unit added to PSNH capability as purchased hydro effective February 1, 1984. Penacook Lower Falls station is located on the Contoocook River in the towns of Boscawen - Penacook, New Hampshire

Date This Form Submitted January 30, 1984

By (Signed) Herbert S. Slattum

SEND COPIES OF THIS FORM TO THE FOLLOWING:

Ross McEacharn - New England Power Exchange  
174 Brush Hill Avenue, West Springfield, Massachusetts 01089

E. J. Glofka - New England Power Exchange  
174 Brush Hill Avenue, West Springfield, Massachusetts 01089

Hydro Station Data

<u>NEW HAMPSHIRE</u> <u>Satellite</u>	<u>PSNH</u> <u>Company</u>	<u>(PURCHASED HYDRO)</u> <u>PENACOOK LOWER FALLS</u> <u>Plant</u>			
	<u>Summer</u>		<u>Winter</u>		<u>Unit No.</u>
1. Low Limit	<u>.3</u> MW Net		<u>.3</u> MW Net		<u>1 Unit</u>
2. Low Regulation Limit	<u>NA</u> MW NET		<u>NA</u> MW Net		<u>NA</u>
3. Normal Net Capability	<u>2.5</u> MW Net		<u>2.5</u> MW Net		
4. Maximum Net Capability	<u>2.5</u> MW Net		<u>2.5</u> MW Net		
5. Response Rates		<u>Manual Control</u>	<u>NA</u>		<u>MW/Min.</u>
		<u>Automatic Control</u>	<u>NA</u>		<u>MW/Min.</u>

UNIT IS POND CONTROLLED

6. Nonsynchronized Reserve Capacity	<u>10-min.</u>	<u>NA</u> MW	<u>30-Min.</u>	<u>NA</u> MW
7. Capable of Motoring		<u>Yes</u>	<u>NA</u>	<u>NO</u> <u>X</u>

8. Reactive Capability - MVAR RANGES

<u>Mode of Operation</u>	<u>Net MW</u>	<u>Max. MVARs</u>	<u>Min. MVARs</u>	<u>Max. MVARs</u>
		<u>Lagging</u>	<u>Lagging</u>	<u>Leading</u>
Min Load Gen.	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
Half Load Gen.	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
Three-quarter Load Gen.	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
Full Load Gen.	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
Motoring		<u>NA</u>	<u>NA</u>	<u>NA</u>
Pumping		<u>NA</u>	<u>NA</u>	<u>NA</u>

9. Manning Status and Labor Charges

Fully Manned	<u>NA</u>	Partially Manned	<u>NA</u>	Unmanned	<u>X</u>
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Hours Unit Not Manned

Labor Charges - \$/HR

Weekdays	From	<u>NA</u>	To	<u>NA</u>	<u>NA</u>
Saturdays	From	<u>NA</u>	To	<u>NA</u>	<u>NA</u>
Sundays	From	<u>NA</u>	To	<u>NA</u>	<u>NA</u>
Holidays	From	<u>NA</u>	To	<u>NA</u>	<u>NA</u>

10. Data Revision No. 1 Date Prepared 1/30/84 By H. Slattum  
 Requested Effective Date February 1, 1984

\* Denotes data items changed this revision.

NHHA (LAWRENCE READINGS)  
DAILY TOTALS

DATE: JAN 31 1984

CUMMULATIVE MONTHLY TOTAL 687,596

NOTED FEB 3 1984 H.S.S.

TIME	3.5 KWH/ COUNT METER	HOURLY DIFFERENCE X 7	KWH PRODUCED	INSTANTANEOUS K.W.	INSTANTANEOUS K.V.	
2 Mid	575722			2200	34.8	Open
AM	576026	304	2128	2200	34.9	Open
AM	576335	309	2163	2200	34.8	
AM	576647	312	2184	2200	34.8	
AM	576963	316	2212	2300	34.8	
AM	577286	323	2261	2300	34.8	
AM	577611	325	2275	2350	34.1	Open
AM	577940	329	2303	2380	34.2	Open
AM	578282	342	2394	2420	34.2	
AM	578626	344	2408	2500	34.2	
AM	578976	350	2450	2550	34.2	
AM	579328	352	2464	2450	34.2	
PM	579679	351	2457	2550	34.3	
PM	580033	354	2478	2550	34.2	
PM	580397	364	2548	2600	34.2	Open
PM	580757	360	2520	2600		Open
PM	581118	361	2527	2600	34.5	
PM	581490	362	2534	2600		
PM	581846	366	2562	2600	34.5	
PM	582209	363	2541	2600	34.4	
PM	582577	368	2576	2610	34.5	
PM	582945	368	2576	2650	34.6	
PM	583316	371	2607	2650	34.9	Open
PM	583680	364	2548	2700	35.0	
Mid	584048	368	2576	2630	34.8	
TOTALS			58088			

745878 *monthly final*

ATTACHMENT C

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

NOTED JAN 22 1982 R.V.P.

NOTED JAN 21 1981 J.E.L.

January 21, 1982

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

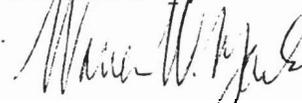
Re: Penacook Lower Falls Power Sales Agreement

Dear Mr. Lyons: *J.E.L.*

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 . 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.



ATTACHMENT D

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,

S. B. Wicker, Jr.  
Manager

Supplemental Energy Sources

GSS/pjb



85/01/31	4000	0	8.00	0.00	1382500	138250.00	110600.00	27650.00	780489.46	10621.49	818760.95	5.11	36.00	70585.06	67664.94	47.35
85/01/30	4000	0	8.00	0.00	2219000	221900.00	173920.00	44380.00	818760.95	11124.32	874283.27	5.89	36.00	130707.81	91912.19	75.99
85/01/29	4000	0	8.00	0.00	2271500	227150.00	181720.00	45730.00	874283.27	11897.91	931611.18	7.21	36.00	153711.89	64368.11	77.79
85/01/28	4000	0	8.00	0.00	1536500	153650.00	122920.00	30730.00	931611.18	12672.07	975019.25	5.78	36.00	88830.48	65819.52	52.62
85/01/27	4000	0	8.00	0.00	2331000	233100.00	186480.00	46620.00	975019.25	13268.80	1034908.05	4.68	36.00	108995.92	126104.68	79.83
85/01/26	4000	0	8.00	0.00	2401000	240100.00	192080.00	48020.00	1034908.05	14083.81	1097011.86	3.99	36.00	95801.46	144298.54	82.23
85/01/25	4000	0	8.00	0.00	2775500	277550.00	227040.00	55510.00	1097011.86	14928.97	1167450.83	4.16	36.00	116745.00	162978.03	95.05
85/01/24	4000	0	8.00	0.00	1382500	138250.00	110600.00	27650.00	1167450.83	15887.56	1219388.40	4.76	36.00	65831.95	72418.77	67.35
85/01/23	4000	0	8.00	0.00	2089500	208950.00	167160.00	41790.00	1219388.40	16480.05	1289258.45	3.28	36.00	68331.61	140318.39	71.56
85/01/22	4000	0	8.00	0.00	1221500	122150.00	97720.00	24430.00	1289258.45	17233.03	1310961.48	3.18	36.00	58061.35	83248.65	41.83
85/01/21	4000	0	8.00	0.00	2040500	204050.00	163240.00	40810.00	1310961.48	17840.56	1396412.04	3.04	36.00	62063.95	141962.05	69.88
85/01/20	4000	0	8.00	0.00	3955000	395500.00	316400.00	79110.00	1396412.04	18638.72	158160.76	5.77	36.00	22417.38	16732.62	13.54
85/01/19	4000	0	8.00	0.00	8225000	822500.00	65860.00	16460.00	158160.76	19000.01	164644.21	2.99	36.00	4520.90	186229.80	51.88
85/01/18	4000	0	8.00	0.00	1515000	151500.00	121200.00	30330.00	164644.21	19482.44	181610.77	2.99	36.00	4520.90	186229.80	51.88
85/01/17	4000	0	8.00	0.00	3430000	343000.00	274600.00	68600.00	181610.77	21368.60	201600.00	3.43	36.00	117330.82	228461.79	111.67
85/01/16	4000	0	8.00	0.00	1799000	179900.00	143920.00	35980.00	201600.00	21580.52	216750.36	3.88	36.00	69853.46	110066.54	61.61
85/01/15	4000	0	8.00	0.00	1074500	107450.00	85960.00	21490.00	216750.36	22148.97	1671191.30	4.59	36.00	49307.14	58142.86	36.80
85/01/14	4000	0	8.00	0.00	1998500	199850.00	159880.00	39970.00	1671191.30	22742.84	1735904.14	3.56	36.00	71224.35	128625.61	68.44
85/01/13	4000	0	8.00	0.00	2800000	280000.00	224000.00	56000.00	1735904.14	25656.28	1813500.42	4.07	36.00	133870.19	166129.81	95.89
85/01/12	4000	0	8.00	0.00	1074500	107450.00	85960.00	21490.00	1813500.42	26379.49	1881509.91	3.99	47.00	86300.39	130309.61	74.20
85/01/11	4000	0	8.00	0.00	2166500	216650.00	173320.00	43330.00	1813500.42	26505.01	1993008.95	4.07	47.00	65813.23	95886.77	55.38
85/01/10	4000	0	8.00	0.00	1617000	161700.00	129360.00	32340.00	193344.92	26324.03	2072931.35	3.79	47.00	45812.90	66817.10	36.44
85/01/09	4000	0	8.00	0.00	1400000	140000.00	112000.00	28000.00	2022931.35	27129.38	2071740.91	3.91	47.00	41592.90	66817.10	36.44
85/01/08	4000	0	8.00	0.00	1064000	106400.00	85120.00	21280.00	2022931.35	27129.38	2071740.91	3.91	47.00	41592.90	66817.10	36.44
85/01/07	4000	0	8.00	0.00	1431500	143150.00	114520.00	28630.00	2071740.91	28193.82	2128564.73	4.62	47.00	66140.10	70709.90	49.02
85/01/06	4000	0	8.00	0.00	1704500	170450.00	136560.00	34090.00	2128564.73	28987.12	2191621.85	4.99	47.00	85112.46	85337.54	58.37
85/01/05	4000	0	8.00	0.00	2107000	210700.00	168560.00	42140.00	2191621.85	29825.25	2263827.10	5.70	47.00	98992.10	111782.80	72.16
85/01/04	4000	0	8.00	0.00	1071000	107100.00	85680.00	21420.00	2263827.10	30804.61	2263827.10	4.39	47.00	91767.85	119752.15	73.12
85/01/03	4000	0	8.00	0.00	1960000	196000.00	158600.00	39290.00	2263827.10	31515.32	2336527.03	4.68	47.00	91706.44	102923.56	67.12
85/01/02	4000	0	8.00	0.00	2135000	213500.00	170800.00	42700.00	2336527.03	32477.67	2461704.70	4.39	47.00	93747.83	119752.15	73.12
85/01/01	4000	0	8.00	0.00	2355000	235500.00	196000.00	49560.00	2461704.70	33500.04	2546305.44	4.39	47.00	93747.83	119752.15	73.12
85/01/30	4000	0	8.00	0.00	3165000	316500.00	252800.00	63210.00	2546305.44	34662.76	264467.49	3.33	47.00	105335.17	21074.83	88.26
85/01/29	4000	0	8.00	0.00	1109500	110950.00	83360.00	22190.00	264467.49	35775.51	2702341.33	4.31	47.00	105335.17	21074.83	88.26
85/01/28	4000	0	8.00	0.00	787500	78750.00	63000.00	15750.00	2702341.33	36775.51	275486.83	3.25	47.00	28563.48	53126.52	25.97
85/01/27	4000	0	8.00	0.00	672000	67200.00	53760.00	13440.00	275486.83	38143.41	2805797.15	2.47	47.00	28563.48	53126.52	25.97
85/01/26	4000	0	8.00	0.00	1060500	106050.00	84840.00	21210.00	2805797.15	38143.41	285190.56	3.75	47.00	285190.56	78898.11	36.32
85/01/25	4000	0	8.00	0.00	6195000	619500.00	49560.00	12390.00	285190.56	38991.68	2916572.25	3.41	47.00	285190.56	184780.65	96.01
85/01/24	4000	0	8.00	0.00	2803500	280350.00	22480.00	56070.00	2916572.25	39649.92	3012333.17	4.00	75.00	64600.00	94600.00	55.14
85/01/23	4000	0	8.00	0.00	1610000	161000.00	128800.00	32200.00	3012333.17	40994.11	3083527.28	4.00	75.00	64600.00	94600.00	55.14
85/01/22	4000	0	8.00	0.00	1029000	102900.00	82320.00	20360.00	3083527.28	41990.19	3148097.47	5.13	75.00	52782.66	50117.34	35.26
85/01/21	4000	0	8.00	0.00	934500	93450.00	74760.00	18490.00	3148097.47	42841.70	3209629.17	4.97	75.00	46407.27	47062.73	32.00
85/01/20	4000	0	8.00	0.00	1522500	152250.00	121800.00	30450.00	3209629.17	43679.07	3283758.23	4.47	75.00	46407.27	47062.73	32.00
85/01/19	4000	0	8.00	0.00	2929500	292950.00	234360.00	58390.00	3283758.23	44687.87	3357038.10	3.71	75.00	108798.11	18451.89	100.33
85/01/18	4000	0	8.00	0.00	3055500	305550.00	24440.00	61110.00	3357038.10	46093.35	3424239.46	2.76	75.00	84477.55	221022.45	106.64
85/01/17	4000	0	8.00	0.00	2495500	249550.00	199640.00	49910.00	3424239.46	47552.26	351701.71	2.73	75.00	84477.55	181298.57	85.16
85/01/16	4000	0	8.00	0.00	1057000	105700.00	84560.00	21140.00	351701.71	48888.60	3561720.31	2.54	75.00	2976.66	78321.90	36.20
85/01/15	4000	0	8.00	0.00	1015000	101500.00	81200.00	20300.00	3561720.31	49831.46	3617851.78	2.54	75.00	2976.66	78321.90	36.20
85/01/14	4000	0	8.00	0.00	5635000	563500.00	45080.00	11270.00	3617851.78	50785.87	3739307.64	2.72	75.00	2976.66	78321.90	36.20
85/01/13	4000	0	8.00	0.00	1653500	165350.00	132440.00	33110.00	3739307.64	51830.37	387868.01	3.32	75.00	54881.31	110668.69	56.70
85/01/12	4000	0	8.00	0.00	2968000	296800.00	237440.00	59360.00	387868.01	52783.51	3990791.99	3.77	75.00	114830.98	188969.02	101.64
85/01/11	4000	0	8.00	0.00	1263500	126350.00	101080.00	25720.00	3990791.99	54309.72	4070371.31	7.53	75.00	99141.55	31208.45	43.42
85/01/10	4000	0	8.00	0.00	1589000	158900.00	127120.00	31780.00	4070371.31	55392.70	4157544.00	7.53	75.00	119651.70	53298.30	54.42
85/01/09	4000	0	8.00	0.00	2383500	238350.00	190640.00	47820.00	4157544.00	56579.01	4261943.01	7.53	75.00	179477.55	59022.45	81.63
85/01/08	4000	0	8.00	0.00	2835000	283500.00	226600.00	56700.00	4261943.01	57999.75	431667.06	7.53	75.00	213475.50	70204.50	97.09
85/01/07	4000	0	8.00	0.00	0	0.00	0.00	0.00	4378662.76	59560.67	4378662.76	7.53	75.00	0.00	0.00	0.00
85/01/06	4000	0	8.00	0.00	0	0.00	0.00	0.00	4436203.43	60371.22	4436203.43	7.53	75.00	0.00	0.00	0.00
85/01/05	4000	0	8.00	0.00	0	0.00	0.00	0.00	4496574.65	61192.79	4496574.65	7.53	75.00	0.00	0.00	0.00
85/01/04	4000	0	8.00	0.00	0	0.00	0.00	0.00	4553747.44	62025.55	4553747.44	7.53	75.00	0.00	0.00	0.00
85/01/03	4000	0	8.00	0.00	0	0.00	0.00	0.00	4619792.99	62838.44	4619792.99	7.53	75.00	0.00	0.00	0.00
85/01/02	4000	0	8.00	0.00	0	0.00	0.00	0.00	4682662.63	63725.22	4682662.63	7.53	75.00	0.00	0.00	0.00
85/01/01	4000	0	8.00	0.00	0	0.00	0.00	0.00	4682662.63	63725.22	4682662.63	7.53	75.00	0.00	0.00	0.00

TOTALS: 126,366,000

12,636,800

10,107,680

2,527,120

CUMULATIVE TOTAL:

,766,368

5,515,565

6,438,355

AVE PF:

52.10

