

1 in the United States and Canada. A copy of my résumé and listing of the
2 testimony I have sponsored previously is included as Exhibit No. __ (JJR-2).

3 **Q. 4 On whose behalf are you sponsoring testimony in this proceeding?**

4 A. I am sponsoring testimony on behalf of Maritimes & Northeast Pipeline, L.L.C.
5 (“Maritimes”).

6 **Q. 5 What is the purpose of your testimony?**

7 A. The purpose of my testimony is two-fold. In Section I, I introduce general
8 information regarding the New England power market and the service problems
9 faced by the New England pipeline grid. I also discuss the numerous direct and
10 indirect benefits that the Maritimes Phase III facilities have brought to Maritimes’
11 existing shippers. My testimony will illustrate how the Phase III project is
12 consistent with the FERC’s criteria for granting rolled-in rate treatment and, as a
13 consequence, how rolled-in rate treatment is consistent with fulfilling the nation’s
14 energy needs. My testimony illustrates how the costs associated with the Phase
15 III project, which was certificated and built in order to enhance service to
16 Maritimes’ existing customers, readily qualify for rolled-in treatment under the
17 FERC’s criteria. My testimony concludes that rolled-in rate treatment for costs
18 associated with the Phase III facilities is appropriate under the 1999 Policy
19 Statement.¹ Furthermore, I conclude that rolling in the costs associated with
20 facilities such as the Phase III extension also encourages investment in critical
21 energy infrastructure that is needed to overcome constrained natural gas service in
22 New England.

¹ Certification of New Interstate Natural Gas Pipeline Facilities, 88 FERC ¶ 61,227, order clarifying same, 90 FERC ¶ 61,128 (2000)(“1999 Policy Statement”).

1 Section II of my testimony provides factual information and professional
2 judgments concerning the nature of the Atlantic Canada natural gas market and
3 the effect of that market on the usage of Maritimes' system. My testimony in this
4 regard supports the adjustment made by Maritimes to system throughput levels as
5 those levels were measured during the base period for Maritimes' rate case (*i.e.*,
6 the twelve (12) months ended February 29, 2004). Section II of my testimony
7 supports a number of the evidentiary showings made by Maritimes in this rate
8 case, including the manner in which throughput levels have been adjusted, as well
9 as the testimony on billing determinants provided by Mr. William C. Penney, Jr.
10 (Exhibit No. __ (WCP-1)). Based on the expected growth in demand for natural
11 gas supplies in Canada and the implications that such demand has for natural gas
12 supplied to New England markets via Maritimes & Northeast Pipeline Limited
13 Partnership ("Maritimes-Canada"), I conclude that it is reasonable to expect that
14 the gas available to the Northeast natural gas markets from Maritimes will be
15 reduced during the test period, which ends November 30, 2004, and beyond. In
16 light of this expected decline in imports, I conclude in Section II that the
17 downward adjustment made by Maritimes to the test period's throughput levels is
18 appropriate.

19 **Q. 6 Are you sponsoring any statements, schedules or exhibits in conjunction with**
20 **your direct testimony?**

21 A. Yes. I am sponsoring the following exhibits: (i) Summary of Education and
22 Qualifications (Exhibit No. __ (JJR-2), (ii) Average Annual Price Differentials
23 (Exhibit No. __ (JJR-3)), (iii) Phase III Value Creation Since In-Service Date

1 (Exhibit No. ___(JJR-4)), and (iv) Phase III Value Creation, Projected for First
2 Year of Operation (Exhibit No. ___(JJR-5)).
3

4 **Section I- Shipper Benefits From Phase III Support Roll-In of Costs**

5 *New England Natural Gas Infrastructure is Constrained*

6 **Q. 7 Please provide an overview of the New England natural gas infrastructure.**

7 A. The natural gas supply infrastructure serving demand in New England consists of
8 interstate natural gas pipelines, underground natural gas storage facilities,
9 liquefied natural gas (“LNG”) facilities (including a marine import terminal, and
10 storage facilities with and without liquefaction capability) and propane air
11 facilities.

12 There are currently five interstate natural gas pipelines that deliver to New
13 England: (i) Algonquin Gas Transmission Company (“Algonquin”);
14 (ii) Tennessee Gas Pipeline Company (“Tennessee”); (iii) Iroquois Gas
15 Transmission System, L.P. (“Iroquois”); (iv) Maritimes; and (v) Portland Natural
16 Gas Transmission System (“PNGTS”). In addition to their independently owned
17 systems, Maritimes and PNGTS also jointly own the primary pipeline facilities
18 from where their two systems interconnect in Westbrook, Maine, to Dracut,
19 Massachusetts. The jointly-owned pipeline facilities are known as the “Joint
20 Facilities.” Together, these five interstate pipelines provide natural gas supplies
21 from four primary supply basins: Western Canada, Eastern Canada (Sable
22 Island), the U.S. Mid-continent and the U.S. Gulf Coast.

1 In addition to the interstate pipelines, New England is served by storage
2 fields in the Pennsylvania and New York areas, by LNG storage facilities in the
3 New England region, and by Distrigas of Massachusetts LLC (“DOMAC”).
4 DOMAC is a large LNG facility located in Everett, Massachusetts. DOMAC is
5 the only facility in New England that operates an import receiving terminal for
6 marine shipments of international LNG supplies. Finally, there are several small
7 propane facilities throughout the region.

8 **Q. 8 Does the New England natural gas infrastructure currently provide sufficient**
9 **supply to meet the region’s demand?**

10 A. Yes. However, while there is sufficient gas supplied to the region to meet the
11 current demand, the infrastructure is insufficient to move the gas freely from the
12 market area delivery points of the pipelines to the load centers. The physical
13 infrastructure limitations create bottlenecks across the system, leading to
14 sustained price differentials on different pipeline systems serving the same
15 market. For example, historically the Algonquin market area has been a tight
16 supply area while Dracut and Tennessee Zone 6 can be a supply bottleneck, which
17 are demonstrated by the pricing differentials in these submarkets.

18
19 *The Phase III Facilities Provide Significant Benefits to Existing Maritimes*
20 *Shippers*

21 **Q. 9 Please describe the Phase III facilities.**

22 A. The Phase III facilities represent an extension of Maritimes’ mainline facilities
23 from Methuen, Massachusetts, to an interconnection in Beverly, Massachusetts,
24 with Algonquin.

1 **Q. 10 What benefits to Maritimes’ existing customers did the Commission note in**
2 **its Preliminary Determinations on Non-Environmental Issues regarding**
3 **Maritimes’ Phase III certificate application?**²

4 A. The Commission specifically identified that the Phase III Project will provide
5 Maritimes’ existing customers with the following benefits: (i) access to existing
6 natural gas markets on the eastern end of Algonquin's system, notably including
7 the Boston market, (ii) access to proposed markets, (iii) access to another
8 downstream pipeline alternative, (iv) greater opportunities to maximize the use of
9 their capacity, and (v) reduced scheduling and curtailment risks associated with
10 using multiple downstream pipelines.

11 **Q. 11 Please explain how Phase III enhances existing customers’ ability to reach**
12 **existing New England markets for their natural gas.**

13 A. The Phase III extension integrates four of the interstate pipelines that serve New
14 England; Maritimes, PNGTS (through the Joint Facilities), Tennessee and
15 Algonquin. As is further explained by Mr. Penney and Mr. Richard J. Kruse in
16 their testimony, the Maritimes pipeline receives essentially all of its supplies from
17 the Sable Offshore Energy Project (“SOEP”) in Goldboro, Nova Scotia. The
18 Maritimes pipeline has the ability to receive additional supplies from PNGTS at
19 Westbrook, Maine, and can receive gas by displacement at most other
20 interconnections on the system. Prior to the development of the Phase III
21 facilities, with the exception of deliveries to power plants located in Maine and
22 New Hampshire, the predominant use of the Maritimes pipeline was to transport
23 gas supplies to Dracut, Massachusetts. At the Dracut delivery point, the only
24 take-away capacity available to transport supplies to end-use markets is

² *Maritimes & Northeast Pipeline, L.L.C.*, Preliminary Determinations on Non-Environmental Issues (“Preliminary Determination”), 95 FERC ¶ 61,077 (2001).

1 Tennessee. The Phase III extension provides Maritimes' existing shippers an
2 alternative to Tennessee to reach downstream markets through the Phase III
3 extension's interconnection with the Algonquin system.

4 **Q. 12 Please explain the benefits to existing shippers of having access to the**
5 **Greater Boston market through Phase III.**

6 A. Prior to Phase III, the only way to access the Greater Boston market was through
7 the Tennessee system. The addition of Phase III allows shippers direct access to
8 the Greater Boston market. In the Phase III certificate proceeding, the FERC
9 observed that direct access to Algonquin's system would permit Maritimes'
10 shippers to have another pipeline alternative to reach gas markets and allow its
11 shippers to avoid the additional costs of transporting gas on Tennessee as well as
12 additional scheduling and curtailment risks inherent in using multiple downstream
13 transporters.³

14 **Q. 13 You indicated earlier that the New England pipeline grid has operational**
15 **constraints that create market inefficiencies. Does Phase III help to relieve**
16 **any of these constraints?**

17 A. Yes. By further integrating the New England pipeline grid, the Phase III facilities
18 allow gas supplies of existing shippers to more easily flow to the highest value
19 market. As I have discussed previously, the New England pipeline grid has
20 physical flow limitations that have created pricing differentials across the region,
21 reflecting the supply-demand imbalances. For example, as is illustrated in Exhibit
22 No. ___ (JJR-3), in the two years prior to the Phase III extension (2002 and 2003),
23 daily gas prices at Dracut averaged \$0.24 per dekatherm ("Dth") less than prices

³ Preliminary Determination, 95 FERC ¶ 61,077, at p. 61,227.

1 at Algonquin city gates in the Boston area, and prices at Dracut averaged
2 \$0.14/Dth less than prices for the rest of Tennessee's New England deliveries.

3 The ability to access higher-value markets is a direct financial benefit to
4 existing shippers. The fact that the Phase III facilities are being well used by
5 Maritimes' shippers, as Mr. Penney notes in his testimony, demonstrates that
6 these facilities have improved the efficiency of the market, and that existing
7 customers are enjoying the benefit of these higher-value markets.

8 **Q. 14 You stated previously that access to higher-value markets, through the Phase**
9 **III facilities has provided existing customers with direct financial benefits.**
10 **Have you conducted an analysis to determine the potential incremental value**
11 **to existing shippers of accessing alternate markets?**

12 A. Yes. I have analyzed the potential value that accrues to Maritimes' existing
13 shippers of having the option to deliver to either Tennessee at Dracut or
14 Algonquin at Beverly. The results of this analysis are presented in Exhibit
15 No. ___ (JJR-4).

16 **Q. 15 Please explain the methodology and assumptions used to develop your**
17 **estimate of potential value.**

18 A. In my analysis, I calculated two potential values for Maritimes' existing shippers'
19 supplies in the New England marketplace for the period beginning on November
20 24, 2003, the in-service date for Phase III, through March 31, 2004.

21 First, I calculated the potential value that would have been achieved by
22 existing shippers if Phase III were not available as an alternative. In my
23 calculation, I assume that the volume that Maritimes' shippers can move to either
24 Beverly or Dracut is 300,000 Dth per day ("Dth/d"), which currently is the
25 approximate takeaway capacity on Algonquin's facilities at Beverly. In this
26 calculation, I assume that the entire 300,000 Dth/d is delivered to Dracut,

1 Massachusetts, during the winter period and all volumes were sold at the average
2 daily price at the Dracut delivery point, as reported in Gas Daily. The total value
3 under this calculation is simply the sum of the daily prices multiplied by the sum
4 of the daily delivery quantities assumed.

5 Next, I calculated the potential value to existing shippers resulting from
6 the ability to choose between delivering to Dracut and delivering supplies to
7 Algonquin in Beverly through the Phase III facilities. In this calculation, I
8 assume that shippers will determine where they nominate based on the average
9 daily market prices as reported by Gas Daily for Dracut and the Algonquin city
10 gate. I assume that a shipper will nominate its full Maximum Daily
11 Transportation Quantity (“MDTQ”) to the higher-value market. Total value is
12 then calculated as the sum of the higher daily market prices multiplied by the sum
13 of the daily delivery quantities assumed.

14 Finally, I calculate the potential value associated with the Phase III
15 facilities. The potential value of Phase III is the difference between the value that
16 would be achieved if existing shippers delivered only to Dracut and the value
17 achieved if existing shippers elect to deliver to the higher priced market on each
18 individual day.

19 **Q. 16 Based on this analysis, what do you conclude is the benefit to existing**
20 **shippers of access to higher value markets through the Phase III facilities?**

21 A. For the four-plus months from the in-service date of the Phase III facilities,
22 November 24, 2003, through March 31, 2004, the potential value created for
23 existing shippers by the addition of the Phase III facilities to the Maritimes system
24 was approximately \$23 million, as shown in Exhibit ___ (JJR-4). If gas prices for

1 April 1, 2004, to November 23, 2004, matched the levels for the same period in
2 the prior year, the total potential value created by the Phase III facilities in their
3 first year of operation would be \$41.2 million, as shown in Exhibit ____ (JJR-5).
4 This value excludes the reliability, flexibility and capacity utilization benefits that
5 existing shippers also receive.

6 **Q. 17 Did shippers actually achieve this value?**

7 A. To the extent that a shipper made its determination on whether to deliver into
8 Tennessee at Dracut or into Algonquin at Beverly due to the basis differential
9 between the two points, that shipper would have achieved this value.

10 **Q. 18 Please identify the new market areas that are accessible to Maritimes’**
11 **existing customers as a result of the Phase III facilities.**

12 A. As identified by the FERC, Phase III provides Maritimes’ existing customers
13 direct access to new and existing markets on the Algonquin system:

14 [T]he Phase III Project’s direct access to proposed markets,
15 such as the Sithe [Exelon] and Southern [Mirant] electric
16 generation facilities, and to existing markets on
17 Algonquin’s system will provide current shippers with a
18 greater opportunity to maximize use of their capacity on
19 Maritimes.⁴

20
21 As noted by Mr. Ditzel, in addition to potential markets that may be developed
22 that are adjacent to the pipeline route, by backfeeding the Algonquin system, the
23 Phase III facilities strengthen all deliveries to Southeastern Massachusetts and
24 Rhode Island.

⁴ Preliminary Determination, 95 FERC at p. 61,227.

1 **Q. 19 What other benefits accrue to Maritimes' existing customers with the**
2 **addition of Phase III to the Maritimes system?**

3 A. In addition to the increased netbacks discussed earlier from the connection to
4 Algonquin, the addition of Phase III provides existing customers with increased
5 reliability of services, system flexibility and incremental market-area capacity that
6 allows them to maximize the use of their capacity.

7 **Q. 20 Please explain how the Phase III facilities have increased the reliability of**
8 **service for existing shippers.**

9 A. The Phase III extension increases reliability on Maritimes, PNGTS, Tennessee
10 and Algonquin by de-bottlenecking two key constraint points on the New England
11 pipeline grid. The first point is the Dracut interconnect between the Joint
12 Facilities and Tennessee, and the second point is the Greater Boston-area terminus
13 of the Algonquin system.

14 By providing an additional outlet for volumes off the Joint Facilities, the
15 Phase III extension has reduced the volumes flowing to Dracut, thereby reducing
16 or eliminating constraints on Tennessee's ability to take volumes away from
17 Dracut and providing existing shippers an alternate route if Tennessee's system
18 were down for repairs, maintenance or an emergency, as discussed by Mr.
19 Christopher T. Ditzel in his testimony.

20 **Q. 21 Can the reliability benefits discussed above be quantified?**

21 A. While the value of increased reliability is difficult to quantify, reliability of the
22 system is critical for Maritimes' shippers. The majority of Maritimes' shippers
23 are affiliates of SOEP producers that have access to only one outlet to bring
24 supplies to market, the Maritimes pipeline. Since it is extremely difficult to
25 regulate production from the offshore platforms, it is critical that the Maritimes

1 pipeline provide shippers with reliable service. In the event that service on the
2 Maritimes system were interrupted for an extended period of time, or during a
3 peak-production period, SOEP production would not have an outlet, leaving only
4 one very costly alternative for producers: shutting in production until Maritimes
5 service was restored.

6 **Q. 22 Please explain the operational flexibility benefits of the Phase III facilities for**
7 **existing Maritimes shippers.**

8 A. As Mr. Ditzel explains in his testimony, by providing an additional interconnect
9 among Maritimes, PNGTS, Tennessee and Algonquin, the Phase III facilities
10 provide existing shippers with greater operational flexibility between the pipelines
11 that serve the region. Maritimes' existing shippers also benefit generally from the
12 increase in the reliability of the New England pipeline grid created by the Phase
13 III facilities.

14 **Q. 23 You indicated previously that Phase III provides existing Maritimes shippers**
15 **the opportunity to maximize the use of their capacity. Please explain.**

16 A. The capacity that existing shippers hold on Maritimes becomes more useful and
17 hence more valuable as a result of the existence of the Phase III facilities. Even
18 when firm shippers choose to continue to deliver gas to Dracut, they have the
19 opportunity to release their firm entitlements on Phase III from Methuen to
20 Beverly, allowing a replacement shipper to access the Algonquin market directly.
21 Alternatively, as Mr. Penney explains in his testimony, an existing shipper can
22 segment the Methuen to Beverly section of the system to deliver additional
23 supplies from PNGTS to Algonquin even when it is delivering its full MDTQ at
24 Dracut. As such, firm capacity holders have the opportunity to access two

1 markets on a daily basis with their full MDTQ, either by delivering to both of
2 these markets or by segmenting the capacity and releasing it to a third party.

3

4 *The Phase III Facilities Address FERC and Market Issues with the New England*
5 *Pipeline Grid*

6 **Q. 24 Please identify the benefits that are provided to the New England pipeline**
7 **grid by construction of Phase III.**

8 A. The construction of Phase III has provided several benefits to the existing
9 Maritimes' shippers and to the New England pipeline grid. These benefits
10 include: 1) increased reliability of service to the regional power markets,
11 2) increased ability to serve new electric generation, and 3) increased flexibility
12 and reliability to the New England pipeline grid.

13 **Q. 25 How do regional power markets benefit from Phase III?**

14 A. Phase III provides two main benefits to the regional power markets: (i) increased
15 flexibility of the pipeline grid, and (ii) the ability to serve new gas-fired
16 generation.

17 The independent system operator for New England ("ISO-NE")⁵ has
18 raised concerns for several years regarding the ability of the New England
19 pipeline grid to serve the increasing demand of the power markets, potentially
20 threatening the reliability of the power grid. By increasing the flexibility of the
21 New England pipeline system, Phase III makes it possible to provide more
22 reliable gas transportation service to electric generation across the region.

⁵ ISO-NE is the not for profit corporation responsible for the day to day operation of New England's bulk power generation and transmission system; oversight and administration of the region's wholesale electricity marketplace; and management of a comprehensive regional bulk power system planning process. See ISO-NE homepage, available at: <<http://www.iso-ne.com>>.

1 In addition, Phase III provides the ability to serve new generation with
2 firm transportation service offerings. For example, the Phase III facilities have
3 made it possible for Maritimes' shippers to directly serve the new 800 MW Fore
4 River Generating Station in Weymouth, Massachusetts. The addition of the Fore
5 River facility to the power grid increases the reliability of the power grid in a
6 previously constrained region.

7 **Q. 26 Have there been any studies performed to examine the adequacy of the New**
8 **England natural gas infrastructure?**

9 A. Yes. In December 2003, in compliance with The Pipeline Safety Improvement
10 Act of 2002, the FERC, in consultation with the Department of Energy,
11 completed a study of the natural gas pipeline system and storage in New England.

12 **Q. 27 Briefly, what did FERC conclude?**

13 A. The FERC staff concluded that while the New England natural gas market has
14 adequate capacity to meet its short-term projected firm demand, the natural gas
15 infrastructure in New England is tight and has limited ability to withstand or
16 respond to disruptions:

17 The New England natural gas pipeline system is fully
18 loaded December through February, and projected
19 increases in capacity are expected to be completed just-in-
20 time to meet new capacity demands. There is little
21 opportunity for this system to rely on excess capacity as a
22 buffer against curtailment. Should the unexpected occur, a
23 localized curtailment of service is the likely outcome.⁶

24 **Q. 28 Did FERC staff make any recommendations?**

25 A. Yes. The staff report provides short-term and long-term recommendations to
26 enhance the pipeline grid and the New England supply of natural gas. In the long

⁶ "Staff Report of the Federal Energy Regulatory Commission-- New England Natural Gas Infrastructure," Docket No. PL04-1, at 23 (December 13, 2003).

1 term, the staff recommended the development of additional natural gas pipeline
2 capacity to access new natural gas supplies or new LNG facilities. In the short
3 term, the staff recommended additional integration of the existing pipeline system
4 to increase reliability.

5 **Q. 29 What input did FERC receive for the study?**

6 A. The FERC contacted the state public utility commissions, the New England
7 Conference of Public Utility Commissions, ISO-NE, and the Northeast Gas
8 Association (“NGA”) to solicit input on the study. The FERC used input received
9 from these sources, additional parties, and FERC staff primary research to
10 develop its analysis of the New England natural gas infrastructure.⁷

11 The analysis reviewed the current and proposed pipeline infrastructure, as
12 well as New England market demand for natural gas, to determine the adequacy
13 of the pipeline infrastructure to meet the short and long term natural gas demand
14 in the New England region.

15 **Q. 30 Did the FERC receive comments in response to its solicitation?**

16 A. Yes. The FERC received comments from the NGA, ISO-NE and other market
17 participants.

18 **Q. 31 What was the NGA’s assessment of the New England natural gas**
19 **infrastructure?**

20 A. The NGA stated that the New England natural gas system requires continued
21 infrastructure additions to meet increasing market demand, most notably the
22 increasing demand of the power generation sector. In addition, the NGA

⁷ “Staff Report of the Federal Energy Regulatory Commission-- New England Natural Gas Infrastructure,”
Docket No. PL04-1 (December 13, 2003).

1 indicated that the infrastructure additions are necessary to increase the availability
2 of gas supply, as well as to support system flexibility and reliability.

3 **Q. 32 Did the NGA provide recommendations as to specific system enhancements**
4 **that would achieve these goals?**

5 A. Yes. The NGA acknowledged that there were several projects that were proposed
6 and under construction at that time that would help to support system flexibility
7 and increase system reliability and included a list of these projects in its
8 correspondence to the FERC. The NGA stated:

9 Over the last several years, recognizing the need for new
10 infrastructure to meet market demand, the FERC issued
11 approvals for several gas pipeline projects in New England
12 and New York. Three of these are currently under
13 construction and are scheduled to come into operation
14 within the next several months.

15 Additional new infrastructure projects are planned for the
16 region for the 2004-2010 timeframe. These projects will
17 help further increase regional natural gas capacity,
18 deliverability, flexibility and reliability, as well as provide
19 economic benefits to the region.⁸

20 **Q. 33 Did the NGA indicate that Phase III provided these benefits?**

21 A. Yes. The list of projects identified by the NGA as helping to support system
22 flexibility and increase system reliability included the Phase III project.

23 **Q. 34 What was ISO-NE's assessment of the New England pipeline infrastructure?**

24 A. ISO-NE indicated that deliverability of competitively-priced natural gas to
25 generation facilities is a concern for the region. ISO-NE stated that "New
26 England's comparative remoteness from gas producing basins has resulted in less
27 flexible physical ties to the major producing and storage areas serving the

⁸Letter from Thomas Kiley, President of Natural Gas Association to Mark Robinson, Director of the Office of Energy Projects, Federal Energy Regulatory Commission, August 29, 2003, at 4.

1 region.”⁹ Furthermore, ISO-NE stated its concern that due to the limited
2 flexibility of the New England pipeline grid, it is possible that the pipeline grid
3 would not be able to accommodate the demand of gas utilities and merchant
4 generators during the coldest period of the winter.

5 **Q. 35 Did ISO-NE provide any recommendations to resolve this issue?**

6 A. Yes. ISO-NE supported the development of increased flexibility for the system
7 and indicated that increased interconnection between the pipelines serving the
8 region has helped develop this flexibility. “In the last several years,
9 improvements to the ties south of New England, in particular realization of bi-
10 directional supplies in the upstream portions of these ties, has created valuable
11 operating flexibility across all New England pipelines and, thus, has improved the
12 security of gas deliveries.”¹⁰

13 **Q. 36 How do the Phase III facilities address the issues identified by the FERC, the**
14 **NGA and ISO-NE?**

15 A. The FERC, the NGA, and ISO-NE all recognize that in the short term, integration
16 of the pipeline grid is critical to ensure the reliability of delivery capability for the
17 region. By integrating Tennessee, PNGTS, Algonquin and Maritimes, the Phase
18 III facilities help to provide the additional integration of the existing pipeline
19 system and the additional operational flexibility that has been identified as critical
20 to the short-term reliability of the New England pipeline system. By allowing the
21 eastern end of the grid to be served directly by Maritimes, West to East supplies
22 can be delivered to upstream markets, creating more reliability in those markets.

⁹ Letter from Stephen Whitley, ISO-New England to J. Mark Robinson, Director of the Office of Energy Projects, Federal Energy Regulatory Commission, August 14, 2003 at 2.

¹⁰ *Id.*

1 **Q. 37 How do the Phase III facilities address the concerns of ISO-NE with regard**
2 **to deliverability of supplies to new merchant generation?**

3 A. The Phase III facilities provide Maritimes' shippers direct service to 800 MW of
4 incremental electric generation at Fore River Generating Station in Weymouth,
5 Massachusetts.

6

7 *Phase III Costs Qualify For Rolled-In Rate Treatment; Rolled-In Rate Treatment*
8 *Provides Appropriate Market Price Signals.*

9 **Q. 38 Please provide an overview of the FERC's policy with regard to rate**
10 **treatment of new pipeline extension/expansion facilities.**

11 A. The FERC established its current ratemaking policies for pipeline
12 expansion/extensions in its Certification of New Interstate Natural Gas Pipeline
13 Facilities ("1999 Policy Statement").¹¹ The 1999 Policy Statement is intended to
14 provide guidance as to how the Commission will evaluate proposals for
15 certificating the construction of new pipeline facilities.

16 In addition to outlining the FERC's criteria for certificating new pipeline
17 facilities, the 1999 Policy Statement outlines the FERC's intentions with respect
18 to rate treatment for pipeline extension and expansion facilities. In the 1999
19 Policy Statement, the FERC established its threshold requirement for existing
20 pipelines proposing an expansion or extension project: the project must be able to
21 proceed without subsidies from the pipeline's existing customers. The 1999
22 Policy Statement further states a presumption of incremental rates in such cases
23 where rolling in the costs of new facilities would result in a subsidy from existing
24 customers.

¹¹ 1999 Policy Statement, 88 FERC ¶ 61,227 (1999).

1 While the 1999 Policy Statement clearly presents the FERC’s “no
2 subsidies” requirement, it also clearly states that rolled-in rates do not create a
3 subsidy when expansion/extension facilities provide benefits to existing
4 customers:

5 Projects designed to improve existing service for existing
6 customers, by replacing existing capacity, improving
7 reliability or providing flexibility, are for the benefit of
8 existing customers. Increasing the rates of the existing
9 customers to pay for these improvements is not a subsidy.
10 Under current policy these kinds of projects are permitted
11 to be rolled in and are not covered by the presumption of
12 the current [incremental] pricing policy.¹²

13 **Q. 39 Do the Phase III facilities meet the criteria identified by the FERC for rolled-**
14 **in rate treatment?**

15 A. Yes. While the Phase III facilities have created many market benefits, as was
16 recognized by the FERC in the Preliminary Determination for Phase III,¹³ the
17 project was designed with the intention of improving service to existing
18 customers and providing direct access to the Greater Boston market. The benefits
19 of Phase III for existing Maritimes customers, including greater access to new and
20 existing markets, additional operational flexibility and reliability, increased
21 netbacks, and access to higher value markets, have been discussed previously in
22 significant detail in my testimony and in Maritimes’ Phase III certificate
23 application.

24 **Q. 40 Has the FERC acknowledged the benefits to existing shippers from the**
25 **Phase III facilities?**

26 A. Yes. Not only did the FERC acknowledge those benefits in the Preliminary
27 Determination for the Phase III extension, it made those benefits the primary basis

¹² 1999 Policy Statement, 88 FERC at p. 61,746 n. 12.

¹³ Preliminary Determination, 95 FERC ¶ 61,077.

1 of its conclusion that the project was required for the public convenience and
2 necessity. The Commission noted that Maritimes' proposal did not add new load,
3 “but merely enhances its existing service to its existing customers.”¹⁴

4 **Q. 41 Do all existing shippers receive the benefits of the Phase III facilities?**

5 A. Yes. All existing firm shippers have the contractual right to use the Phase III
6 facilities, including the Beverly delivery point as an alternate primary delivery
7 point, for up to their full MDTQ.

8 **Q. 42 Have all existing firm shippers indicated an intention to use the Phase III**
9 **facilities?**

10 A. Yes. As Mr. Penney testifies, prior to the in-service date, Maritimes provided the
11 existing long-term firm shippers the option to specify the new Algonquin delivery
12 point as an additional primary delivery point for up to their full MDTQ. All
13 existing long-term firm shippers elected this option, and Maritimes amended the
14 contracts for all of the existing long-term firm shippers to include the Algonquin
15 delivery point as an additional primary delivery point for their full MDTQ.

16 **Q. 43 Since the Phase III facilities have been operating, have the existing shippers**
17 **utilized the extension?**

18 A. Yes. As stated by Mr. Penney in his testimony, gas has flowed to the Algonquin
19 delivery point on a primary firm basis or through capacity release under each of
20 the existing long-term firm service agreements. Existing shippers have used the
21 extension to deliver their own supplies and have released capacity on this segment
22 of the pipeline to third parties. During the period from December 1, 2003,

¹⁴ Preliminary Determination, 95 FERC ¶ 61,077, at p. 61,228.

1 through April 30, 2004, the Algonquin delivery point on Maritimes has received
2 12,548,239 Dth, or 82,554 Dth/d on average.

3 4 **Section II - Canadian Demand Supports Throughput Adjustment**

5 **Q. 44 What is the purpose of this section of your testimony?**

6 A. In this section I address the growth of the market for natural gas in Atlantic
7 Canada,¹⁵ and I assess the implications of that growth for natural gas supplied to
8 New England markets via the Maritimes pipeline. As of December 1, 1999, the
9 in-service date of the Maritimes system, Maritimes had 195,000 Dth/d in firm
10 contracts for delivery in Canada. Canadian customers have consistently taken far
11 less than that quantity due to various delays in the development of that market and
12 price arbitrage opportunities in U.S. markets. However, as Mr. Kruse notes in his
13 testimony, demand levels for natural gas supplies in Canada have started to
14 increase towards levels originally anticipated, and thus, considering that
15 production from Maritimes' primary supply source is decreasing, as Mr. Kruse
16 explains, gas supplies flowing to the Northeast natural gas markets from
17 Maritimes will be reduced from base period levels. Consequently, I conclude that
18 the downward adjustment made by Maritimes to its base period throughput levels
19 is reasonable.

20 **Q. 45 Please provide an overview of the market for natural gas in Atlantic Canada.**

21 A. The distribution of natural gas has only recently been introduced to Atlantic
22 Canada, beginning with the commencement of service of the Maritimes-Canada

¹⁵ Atlantic Canada is defined as Nova Scotia and New Brunswick, Canada for the purposes of this testimony.

1 pipeline in late 1999. In mid 2000, large industrial customers and electric
2 generation customers began contracting for capacity on the Maritimes-Canada
3 system. Today, these customers have contracted for in excess of 94 percent of the
4 195,000 Dth of capacity that has been contracted to serve the Atlantic Canadian
5 market for natural gas. Contemporaneously with the completion of the
6 Maritimes-Canada pipeline, distribution franchises were awarded in both New
7 Brunswick and Nova Scotia. The capacity commitments of distribution
8 companies represent the remaining 6 percent of the Atlantic Canadian capacity on
9 Maritimes- Canada.

10 **Q. 46 How did the market respond to natural gas as an alternative energy source?**

11 A. As referenced earlier, the natural gas markets in New Brunswick and Nova Scotia
12 experienced some false starts. In New Brunswick, the government redesigned the
13 market to allow the LDC to offer bundled supply service to customers to stimulate
14 market activity.¹⁶ In Nova Scotia, the government was required to award a new
15 franchise after the initial franchise holder abandoned its franchise.¹⁷ Through
16 October 2000, there was no market for natural gas in New Brunswick and Nova
17 Scotia.

18 **Q. 47 Since October 2000, how has the market responded?**

19 A. Since that time, demand for natural gas in these Provinces has increased, as was
20 initially anticipated. As Mr. Penney discusses in his testimony, currently, the

¹⁶ The Gas Distribution Act required that the LDC be only a distributor of natural gas. This structure required the LDC to rely on natural gas marketers to develop the market for natural gas in the province, and those marketers were also selling fuel oil and propane to customers. Due to the problems associated with that model, the Gas Distribution Act was amended in March 2003 to allow the LDC to purchase and sell natural gas directly to customers.

¹⁷ Sempra was awarded the initial distribution franchise for Nova Scotia, but abandoned the franchise in 2001.

1 combined average daily deliveries for New Brunswick and Nova Scotia are
2 approximately 65,000 Dth/d. However, the currently contracted firm
3 transportation on Maritimes-Canada with Canadian primary delivery points is
4 195,000 Dth/d. As illustrated by Mr. Penney in his testimony, this capacity is
5 largely subscribed by large industrial and electric generation users. While the
6 average daily deliveries are approximately 65,000 Dth/day, the fact that large
7 customers have contracted for significantly more capacity indicates the growth in
8 Canadian deliveries that Canadian shippers expect.

9 **Q. 48 Is there evidence to suggest that demand for natural gas in Atlantic Canada**
10 **will continue to increase over time?**

11 A. Yes. The commitment to developing a viable market for natural gas in Atlantic
12 Canada has been widespread. Again, the governments of New Brunswick and
13 Nova Scotia have enacted policies and awarded franchises to promote the
14 development of the natural gas industry. Electric generators have indicated their
15 intentions to increase use of natural gas and have made investments that facilitate
16 increased natural gas consumption. In addition, the LDCs have made long-term
17 commitments to build the infrastructure that is necessary to provide access to
18 natural gas to residential, commercial and industrial end-users. Currently, the
19 LDCs and governments in Atlantic Canada are working together to implement
20 marketing and pricing plans designed to attract existing customers to natural gas
21 as a primary fuel source.

22 **Q. 49 Have generators already planned investments in new gas-fired generation in**
23 **Atlantic Canada?**

24 A. Yes. Nova Scotia Power applied for and was granted approval to purchase and
25 install a \$34.5 million, 50 MW gas-fired turbine at the Tufts Cove facility. Unlike

1 the existing turbine at the Tufts Cove facility, which can switch fuels based on
2 economics, this turbine will burn natural gas exclusively. The new turbine is
3 expected to come on-line by the 2004/2005 winter season.

4 **Q. 50 Are there other natural gas-fired generation projects planned for the**
5 **Maritimes region?**

6 A. Yes. TransCanada Energy Ltd. (“TCE”) has planned an \$85 million, 90 MW
7 heating and electric co-generation project to be located at the Irving Oil refinery
8 in New Brunswick. In January 2004, TCE received a single end-use franchise
9 from the New Brunswick Board of Public Utilities to buy natural gas to fuel this
10 project. The Irving Oil facility will be relying on its contracted capacity on the
11 Maritimes-Canada pipeline to transport the natural gas to fuel this project. The
12 project is currently under construction and is expected to be completed by the end
13 of 2004.¹⁸

14 **Q. 51 Are there other influences on the demand for gas in Atlantic Canada?**

15 A. Yes. The demand for natural gas in the U.S. influences the consumption of
16 natural gas in Canada. Canadian and U.S. markets are economically integrated.
17 As such, as demand increases in the U.S. and the spread between the value of gas
18 in the U.S. and Atlantic Canada widens, increased supplies of natural gas flow to
19 the U.S. during peak periods.

20 **Q. 52 What is the effect of this price arbitrage on the Northeast market?**

21 A. In the example described above, where the value of natural gas is significantly
22 higher in U.S. markets than in Canadian markets, deliveries from Maritimes-
23 Canada to U.S. markets increased, as many Canadian natural gas consumers took

¹⁸ Khalid Malik, “Natural Gas franchise approved for Oil refinery power plant”, New Brunswick Telegraph-Journal, January 7, 2004.

1 advantage of the arbitrage opportunities by diverting gas purchased for Canadian
2 consumption, on an interruptible basis, to the higher-priced U.S. markets. This
3 increase in deliveries to U.S. markets, which was driven by economics, resulted in
4 an increase in the average daily throughput on the U.S. segment of the pipeline.
5 Such significant price differentials are however, temporary phenomena that
6 cannot be predicted or expected.

7 **Q. 53 Assuming the absence of arbitrage opportunities, what is the likely near-term**
8 **outcome of the above-described marketing and development activities on**
9 **Atlantic Canadian consumption of natural gas?**

10 A. Consumption in the Atlantic Canadian markets will continue to increase as a
11 result of these efforts. In the aggregate, Atlantic Canadian consumers have
12 contracted for 195,000 Dth/d of long term firm capacity on Maritimes-Canada
13 with primary delivery points in Atlantic Canada. These contracts were
14 established in order to meet the demand of Canadian consumers. As is discussed
15 by Mr. Penney, Canadian consumption of natural gas is 65,000 Dth/d, with
16 limited demand from the LDCs and a significant amount of gas diverted to U.S.
17 markets to take advantage of price arbitrage opportunities. As the markets
18 equilibrate and arbitrage opportunities between the U.S. and Canadian markets
19 dissipate, the risk of Canadian demand decreasing is minimal. It is much more
20 likely that Canadian demand will increase than decrease.

21
22 *Increasing Demand for Natural Gas in Canada will Reduce the Imports to the*
23 *Northeast Natural Gas Markets From Maritimes.*

24 **Q. 54 What options exist for natural gas supply to the Atlantic Canada?**

1 A. At the present time, the Atlantic Canada natural gas market is supplied almost
2 exclusively by Maritimes-Canada, which transports natural gas sourced
3 essentially just from the SOEP.¹⁹

4 **Q. 55 Does Atlantic Canada have access to storage or LNG facilities to meet**
5 **market demand?**

6 A. No, not at this time.

7 **Q. 56 How will future Atlantic Canadian demand affect the Northeast natural gas**
8 **markets?**

9 A. The Maritimes-Canada system is currently designed with one point of injection, at
10 Goldboro, Nova Scotia. Therefore, as Atlantic Canadian demand increases, the
11 Maritimes pipeline will have less supply to deliver to the Northeast U.S. markets.

12 **Q. 57 What does this increased demand in Canada suggest for the billing**
13 **determinants used to establish rates on the Maritimes pipeline?**

14 A. The billing determinants on the Maritimes pipeline should be adjusted downward
15 from base period levels to reflect expected usage. Based on the market
16 developments described above, the reduction to base period billing determinants
17 proposed by Mr. Penney in his testimony is appropriate. Mr. Penney, in fact, has
18 only adjusted throughput for expected reductions in SOEP production. He has
19 only assumed that Canadian consumption will remain the same during the test
20 period as it was during the base period. I think this is a conservative view. In my
21 view, Canadian consumption will stay the same or increase during the test period.

22

23 **Conclusions**

¹⁹ Atlantic Canada has a very limited amount of local production.

1 **Q.58 Please summarize why rolled-in treatment is appropriate for the costs of the**
2 **Phase III extension.**

3 A. As the FERC has already noted, the Phase III facilities provide significant
4 benefits to existing shippers. These benefits warrant rolled-in rate treatment for
5 the Phase III facilities. For Maritimes shippers, the Phase III facilities provide:

- 6 • Access to higher-value markets on Algonquin; based on recent price
7 differentials, this access has created the potential of up to \$41million in
8 annual benefits for existing Maritimes shippers.
- 9 • A more competitive market at Dracut, resulting in higher net backs for
10 shippers;
- 11 • Increased reliability and flexibility for shippers on the Maritimes system
12 as a whole; and
- 13 • Separate, releasable entitlements on both the Dracut and Beverly market
14 legs, which increases the value of the shippers' mainline capacity.

15

16 **Q.59 Please summarize why you have concluded that it is reasonable to make a**
17 **downward adjustment to the throughput levels as measured over the base**
18 **period.**

19 A. Based on the current demand for natural gas in Canada as compared with the
20 contracted capacity to serve the Canadian market, it is reasonable to conclude that
21 the risks associated with Canadian demand levels are asymmetric. It is much
22 more likely that Canadian demand will increase than decrease. Given the
23 expected growth in demand for natural gas supplies in Canada and the
24 implications that such demand has for natural gas supplied to New England
25 markets via Maritimes-Canada, the volumes likely to flow to the Northeast U.S.
26 natural gas markets via Maritimes will be reduced. Notwithstanding this
27 likelihood, Mr. Penney has only adjusted throughput for expected reductions in
28 SOEP production. Mr. Penney has not assumed any increase in Canadian
29 consumption of SOEP supplies, which I find to be conservative. Thus, in my

1 view, the throughput levels assumed by Mr. Penney for purposes of establishing
2 Maritimes' billing determinants is certainly justified.

3 **Q.60 Does this conclude your testimony?**

4 A. Yes, it does.

5

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Maritimes & Northeast Pipeline, L.L.C.

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Docket No. RP04-

AFFIDAVIT OF JOHN J. REED

JOHN J. REED, being first duly sworn, on oath states that he is the witness whose Prepared Direct Testimony is filed herein; that, if asked the questions which appear in the text of aforesaid Prepared Direct Testimony, affiant would give the answers that are herein set forth; and that affiant adopts the aforesaid Prepared Direct Testimony as his sworn, direct testimony in this proceeding.



JOHN J. REED

SUBSCRIBED AND SWORN TO before me, a Notary Public in and for the Commonwealth of Massachusetts, County of Middlesex this 23rd day of June, 2004.



Notary Public

Christopher P. O'Keefe
My Commission Expires April 17, 2009

My commission expires: _____

John J. Reed
Chairman and Chief Executive Officer

John J. Reed is a financial and economic consultant with more than 25 years of experience in the energy industry. Mr. Reed has also been the CEO of an NASD member securities firm, and Co-CEO of the nation's largest publicly traded management consulting firm (NYSE: NCI). He has provided advisory services in the areas of mergers and acquisitions, asset divestitures and purchases, strategic planning, project finance, corporate valuation, energy market analysis, rate and regulatory matters and energy contract negotiations to clients across North and Central America. Mr. Reed's comprehensive experience includes the development and implementation of nuclear, fossil, and hydroelectric generation divestiture programs with an aggregate valuation in excess of \$20 billion. Mr. Reed has also provided expert testimony on financial and economic matters on more than 125 occasions before the FERC, Canadian regulatory agencies, state utility regulatory agencies, various state and federal courts, and before arbitration panels in the United States and Canada. After graduation from the Wharton School of the University of Pennsylvania, Mr. Reed joined Southern California Gas Company, where he worked in the regulatory and financial groups, leaving the firm as Chief Economist in 1981. He served as executive and consultant with Stone & Webster Management Consulting and R.J. Rudden Associates prior to forming REED Consulting Group (RCG) in 1988. RCG was acquired by Navigant Consulting in 1997, where Mr. Reed served as an executive until leaving Navigant to join CEA as Chairman and Chief Executive Officer.

REPRESENTATIVE PROJECT EXPERIENCE

Executive Management

As an executive-level consultant, worked with CEOs, CFOs, other senior officers, and Boards of Directors of many of North America's top electric and gas utilities, as well as with senior political leaders of the U.S. and Canada on numerous engagements over the past 20 years. Directed merger, acquisition, divestiture, and project development engagements for utilities, pipelines and electric generation companies, repositioned several electric and gas utilities as pure distributors through a series of regulatory, financial, and legislative initiatives, and helped to develop and execute several "roll-up" or market aggregation strategies for companies seeking to achieve substantial scale in energy distribution, generation, transmission, and marketing.

Financial and Economic Advisory Services

Retained by many of the nation's leading energy companies and financial institutions for services relating to the purchase, sale or development of new enterprises. These projects included major new gas pipeline projects, gas storage projects, several non-utility generation projects, the purchase and sale of project development and gas marketing firms, and utility acquisitions. Specific services provided include the development of corporate expansion plans, review of acquisition candidates, establishment of divestiture standards, due diligence on acquisitions or financing, market entry or expansion studies, competitive assessments, project financing studies, and negotiations relating to these transactions.

Concentric Energy Advisors, Inc.
Resume of John J. Reed

Litigation Support and Expert Testimony

Provided expert testimony on more than 125 occasions in administrative and civil proceedings on a wide range of energy and economic issues. Clients in these matters have included gas distribution utilities, gas pipelines, gas producers, oil producers, electric utilities, large energy consumers, governmental and regulatory agencies, trade associations, independent energy project developers, engineering firms, and gas and power marketers. Testimony has focused on issues ranging from broad regulatory and economic policy to virtually all elements of the utility ratemaking process. Also frequently testified regarding energy contract interpretation, accepted energy industry practices, horizontal and vertical market power, quantification of damages, and management prudence. Have been active in regulatory contract and litigation matters on virtually all interstate pipeline systems serving the U.S. Northeast, Mid-Atlantic, Midwest, and Pacific regions.

Also served on FERC Commissioner Terzic's Task Force on Competition, which conducted an industry-wide investigation into the levels of and means of encouraging competition in U.S. natural gas markets. Represented the interests of the gas distributors (the AGD and UDC) and participated actively in developing and presenting position papers on behalf of the LDC community.

Resource Procurement, Contracting and Analysis

On behalf of gas distributors, gas pipelines, gas producers, electric utilities, and independent energy project developers, personally managed or participated in the negotiation, drafting, and regulatory support of hundreds of energy contracts, including the largest gas contracts in North America, electric contracts representing billions of dollars, pipeline and storage contracts, and facility leases.

These efforts have resulted in bringing large new energy projects to market across North America, the creation of hundreds of millions of dollars in savings through contract renegotiation, and the regulatory approval of a number of highly contested energy contracts.

Strategic Planning and Utility Restructuring

Acted as a leading participant in the restructuring of the natural gas and electric utility industries over the past fifteen years, as an adviser to local distribution companies (LDCs), pipelines, electric utilities, and independent energy project developers. In the recent past, provided services to many of the top 50 utilities and energy marketers across North America. Managed projects that frequently included the redevelopment of strategic plans, corporate reorganizations, the development of multi-year regulatory and legislative agendas, merger, acquisition and divestiture strategies, and the development of market entry strategies. Developed and supported merchant function exit strategies, marketing affiliate strategies, and detailed plans for the functional business units of many of North America's leading utilities.

PROFESSIONAL HISTORY

Concentric Energy Advisors, Inc. (2002 – Present)
Chairman and Chief Executive Officer

Navigant Consulting, Inc. (1997- 2002)
President, Navigant Energy Capital (2000 – 2002)
Executive Director (2000 – 2002)
Co-Chief Executive Officer, Vice Chairman (1999 – 2000)
Executive Managing Director (1998 – 1999)
President, REED Consulting Group, Inc. (1997 – 1998)

**Concentric Energy Advisors, Inc.
Resume of John J. Reed**

REED Consulting Group (1988-1997)
Chairman, President and Chief Executive Officer

R.J. Rudden Associates, Inc. (1983-1988)
Vice President

Stone & Webster Management Consultants, Inc. (1981-1983)
Senior Consultant
Consultant

Southern California Gas Company (1976-1981)
Corporate Economist
Financial Analyst
Treasury Analyst

EDUCATION AND CERTIFICATION

BS, Economics and Finance, Wharton School, University of Pennsylvania, 1976
Licensed Securities Professional: NASD Series 7, 63, and 24 Licenses.

BOARDS OF DIRECTORS (PAST AND PRESENT)

Concentric Energy Advisors, Inc.
Navigant Consulting, Inc.
Navigant Energy Capital
Nukem, Inc.
New England Gas Association
R. J. Rudden Associates
REED Consulting Group

AFFILIATIONS

National Association of Business Economists
International Association of Energy Economists
American Gas Association
New England Gas Association
Society of Gas Lighters
Guild of Gas Managers

**EXPERT TESTIMONY OF JOHN J. REED
--REGULATORY AGENCIES--**

| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|---|-------------|--------------------------------|---------------------|---|
| Alaska Public Utilities Commission | | | | |
| Chugach Electric | 12/86 | Chugach Electric | Docket No. U-86-11 | Cost Allocation |
| Chugach Electric | 6/87 | Enstar Natural Gas Company | Docket No. U-87-2 | Tariff Design |
| Chugach Electric | 12/87 | Enstar Natural Gas Company | Docket No. U-87-42 | Gas Transportation |
| Chugach Electric | 2/88 | Chugach Electric | Docket No. U-87-35 | Cost of Capital |
| California Energy Commission | | | | |
| Southern California Gas Co. | 8/80 | Southern California Gas Co. | Docket No. 80-BR-3 | Gas Price Forecasting |
| California Public Utility Commission | | | | |
| Southern California Gas Co. | 3/80 | Southern California Gas Co. | TY 1981 G.R.C. | Cost of Service, Inflation |
| Pacific Gas Transmission Co. | 10/91 | Pacific Gas & Electric Co. | App. 89-04-033 | Rate Design |
| Pacific Gas Transmission Co. | 7/92 | Southern California Gas Co. | A. 92-04-031 | Rate Design |
| Colorado Public Utilities Commission | | | | |
| AMAX Molybdenum | 2/90 | Commission Rulemaking | Docket No. 89R-702G | Gas Transportation |
| AMAX Molybdenum | 11/90 | Commission Rulemaking | Docket No. 90R-508G | Gas Transportation |
| Conn. Department of Public Utilities Control | | | | |
| Connecticut Natural Gas | 12/88 | Connecticut Natural Gas | Docket No. 88-08-15 | Gas Purchasing Practices |
| United Illuminating | 3/99 | United Illuminating | Docket No. 99-03-04 | Nuclear Plant Valuation |
| Southern Connecticut Gas | 2/04 | Southern Connecticut Gas | Docket No. 00-12-08 | Gas Purchasing Practices |
| District Of Columbia PSC | | | | |
| Potomac Electric Power Company | 3/99 | Potomac Electric Power Company | Docket No. 945 | Divestiture of Gen. Assets & Purchase Power Contracts (Direct) |
| Potomac Electric Power Company | 5/99 | Potomac Electric Power Company | Docket No. 945 | Divestiture of Gen. Assets & Purchase Power Contracts (Supplemental Direct) |
| Potomac Electric Power Company | 7/99 | Potomac Electric Power Company | Docket No. 945 | Divestiture of Gen. Assets & Purchase Power Contracts (Rebuttal) |

EXPERT TESTIMONY OF JOHN J. REED
--REGULATORY AGENCIES--

| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|--|-------------|---|---|--|
| Federal Energy Regulatory Commission | | | | |
| Western Gas Interstate Company | 5/84 | Western Gas Interstate Company | Docket No. RP84-77 | Load Fcst. Working Capital |
| Southern Union Gas | 4/87 | El Paso Natural Gas Company | Docket No. RP87-16-000 | Take-or-Pay Costs |
| Connecticut Natural Gas | 11/87 | Penn-York Energy Corporation | Docket No. RP87-78-000 | Cost Alloc./Rate Design |
| AMAX Magnesium | 12/88 | Questar Pipeline Company | Docket No. RP88-93-000 | Cost Alloc./Rate Design |
| Western Gas Interstate Company | 6/89 | Western Gas Interstate Company | Docket No. RP89-179-000 | Cost Alloc./Rate Design, Open-Access Transportation |
| Associated CD Customers | 12/89 | CNG Transmission | Docket No. RP88-211-000 | Cost Alloc./Rate Design |
| Utah Industrial Group | 9/90 | Questar Pipeline Company | Docket No. RP88-93, Phase II | Cost Alloc./Rate Design |
| Iroquois Gas Trans. System | 8/90 | Iroquois Gas Transmission System | Docket No. CP89-634-000 | Gas Markets, Rate Design, Cost of Capital, Capital Structure |
| Boston Edison Company | 1/91 | Boston Edison Company | Docket No. ER91-243-000 | Electric Generation Markets |
| Cincinnati Gas and Electric Co., Union Light, Heat and Power Company, Lawrenceburg Gas Company | 7/91 | Texas Gas Transmission Corp. | Docket No. RP90-104-000, RP88-115-000, RP90-192-000 | Cost Alloc./Rate Design Comparability of Svc. |
| Ocean State Power II | 7/91 | Ocean State Power II | ER89-563-000 | Competitive Market Analysis, Self-dealing |
| Brooklyn Union/PSE&G | 7/91 | Texas Eastern | RP88-67, et al | Market Power, Comparability of Service |
| Northern Distributor Group | 9/92 | Northern Natural Gas Company | RP92-1-000, et al | Cost of Service |
| Canadian Association of Petroleum Producers and Alberta Pet. Marketing Comm. | 10/92 | Lakehead Pipe Line Co. L.P. | IS92-27-000 | Rate Case Analysis Cost of Service |
| Colonial Gas, Providence Gas | 7/93 | Algonquin Gas Transmission | RP93-14 | Cost Allocation, Rate Design |
| Colonial Gas, Providence Gas | 8/93 | Algonquin Gas Transmission | RP93-14 – Rebuttal | Cost Allocation, Rate Design |
| Iroquois Gas Transmission | 94 | Iroquois Gas Transmission | RP94-72-000 | Cost of Service and Rate Design |
| Transco Customer Group | 1/94 | Transcontinental Gas Pipeline Corporation | Docket No. RP92-137-000 | Rate Design, Firm to Wellhead |
| Pacific Gas Transmission | 2/94 | Pacific Gas Transmission | Docket No. RP94-149-000 | Rolled-In vs. Incremental Rates |

**EXPERT TESTIMONY OF JOHN J. REED
--REGULATORY AGENCIES--**

| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|--|-------------|--|---|---|
| Tennessee GSR Group | 1/95 | Tennessee Gas Pipeline Company | Docket Nos. RP93-151-000, RP94-39-000, RP94-197-000, RP94-309-000 | GSR Costs |
| Pacific Gas Transmission | 2/95 | Pacific Gas Transmission | RP94-149-000 | Rate Design |
| Tennessee GSR Customer Group | 3/95 | Tennessee Gas Pipeline Company | Docket Nos. RP93-151-000, RP94-39-000, RP94-197-000, RP94-309-000 | GSR Costs |
| ProGas and Texas Eastern | 1/96 | Tennessee Gas Pipeline Company | RP93-151 | Declaration |
| PG&E and SoCal Gas | 96 | El Paso Natural Gas Company | RP92-18 | Stranded Costs |
| Iroquois Gas Transmission System, L.P. | 97 | Iroquois Gas Transmission System, L.P. | RP97-126-000 | Cost of Service, Rate Design |
| BEC Energy - Commonwealth Energy System | 2/99 | Boston Edison Company/ Commonwealth Energy System | EC99-___-000 | Market Power Analysis – Merger |
| Central Hudson Gas & Electric, Consolidated Co. of New York, Niagara Mohawk Power Corporation, Dynegy Power Inc. | 10/2000 | Central Hudson Gas & Electric, Consolidated Co. of New York, Niagara Mohawk Power Corporation, Dynegy Power Inc. | Docket No. EC00-___ | Market Power 203/205 Filing |
| Wyckoff Gas Storage | 12/02 | Wyckoff Gas Storage | CP03-33-000 | Need for Storage Project |
| Indicated Shippers/Producers | 10/03 | Northern Natural Gas | Docket No. RP98-39-029 | Ad Valorem Tax Treatment |
| Hawaii Public Utility Commission | | | | |
| Hawaiian Electric Light Company, Inc. (HELCO) | 6/2000 | Hawaiian Electric Light Company, Inc. | Docket No. 99-0207 | Standby Charge |
| Indiana Utility Regulatory Commission | | | | |
| Northern Indiana Public Service Company | 10/2001 | Northern Indiana Public Service Company | Docket No. 99-0207 | Direct Testimony, Valuation of Electric Generating Facilities |
| Maine Public Utility Commission | | | | |
| Northern Utilities | 5/96 | Granite State and PNGTS | Docket No. 95-480, 95-481 | Transportation Service and PBR |

**EXPERT TESTIMONY OF JOHN J. REED
--REGULATORY AGENCIES--**

| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|--|-------------|--|-----------------------|---|
| Maryland Public Service Commission | | | | |
| Eastalco Aluminum | 3/82 | Potomac Edison | Docket No. 7604 | Cost Allocation |
| Potomac Electric Power Company | 8/99 | Potomac Electric Power Company | Docket No. 8796 | Stranded Cost & Price Protection (Direct) |
| Mass. Department of Public Utilities | | | | |
| Haverhill Gas | 5/82 | Haverhill Gas | Docket No. DPU #1115 | Cost of Capital |
| New England Energy Group | 1/87 | Commission Investigation | | Gas Transportation Rates |
| Energy Consortium of Mass. | 9/87 | Commonwealth Gas Company | Docket No. DPU-87-122 | Cost Alloc./Rate Design |
| Mass. Institute of Technology | 12/88 | Middleton Municipal Light | DPU #88-91 | Cost Alloc./Rate Design |
| Energy consortium of Mass. | 3/89 | Boston Gas | DPU #88-67 | Rate Design |
| PG&E Bechtel Generating Co./ Constellation Holdings | 10/91 | Commission Investigation | DPU #91-131 | Valuation of Environmental Externalities |
| The Berkshire Gas Company | 5/92 | The Berkshire Gas Company | DPU #92-154 | Gas Purchase Contract Approval |
| Essex County Gas Company | 5/92 | Essex County Gas Company | DPU #92-155 | Gas Purchase Contract Approval |
| Fitchburg Gas and Elec. Light Co. | 5/92 | Fitchburg Gas and Elec. Light Co. | DPU #92-156 | Gas Purchase Contract Approval |
| Boston Edison Company | 7/92 | Boston Edison | DPU #92-130 | Least Cost Planning |
| Boston Edison Company | 7/92 | The Williams/Newcorp Generating Co. | DPU #92-146 | RFP Evaluation |
| Boston Edison Company | 7/92 | West Lynn Cogeneration | DPU #92-142 | RFP Evaluation |
| Boston Edison Company | 7/92 | L'Energia Corp. | DPU #92-167 | RFP Evaluation |
| Boston Edison Company | 7/92 | DLS Energy, Inc. | DPU #92-153 | RFP Evaluation |
| Boston Edison Company | 7/92 | CMS Generation Co. | DPU #92-166 | RFP Evaluation |
| Boston Edison Company | 7/92 | Concord Energy | DPU #92-144 | RFP Evaluation |
| The Berkshire Gas Company | 11/93 | The Berkshire Gas Company | DPU #93-187 | Gas Purchase Contract Approval |
| Colonial Gas Company | 11/93 | Colonial Gas Company | DPU #93-188 | Gas Purchase Contract Approval |
| Essex County Gas Company | 11/93 | Essex County Gas Company | DPU #93-189 | Gas Purchase Contract Approval |
| Fitchburg Gas and Electric Company | 11/93 | Fitchburg Gas and Electric Company | DPU #93-190 | Gas Purchase Contract Approval |
| Bay State Gas Company | 10/93 | Bay State Gas Company | Docket No. 93-129 | Integrated Resource Planning |
| Boston Edison Company | 94 | Boston Edison | DPU #94-49 | Surplus Capacity |

EXPERT TESTIMONY OF JOHN J. REED
--REGULATORY AGENCIES--

| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|---|-------------|--------------------------------------|--|---|
| Hudson Light & Power Department | 4/95 | Hudson Light & Power Dept. | DPU #94-176 | Stranded Costs – Direct |
| Essex County Gas Company | 5/96 | Essex County Gas Company | Docket No. 96-70 | Unbundled Rates |
| Boston Edison Company | 8/97 | Boston Edison Company | D.P.U. No. 97-63 | Holding Company Corporate Structure |
| Berkshire Gas Company | 6/98 | Berkshire Gas Mergeco Gas Co. | D.T.E. 98-87 | Regulatory Issues |
| Eastern Edison Company | 8/98 | Montaup Electric Company | D.T.E. 98-83 | Marketing for divestiture of its generation business. |
| Boston Edison Company | 98 | Boston Edison Company | D.T.E. 97-113 | Fossil Generation Divestiture |
| Boston Edison Company | 98 | Boston Edison Company | D.T.E. 98-119 | Nuclear Generation Divestiture |
| Eastern Edison Company | 12/98 | Montaup Electric Company | D.T.E. 99-9 | |
| Mass. Energy Facilities Siting Council | | | | |
| Mass. Institute of Technology | 1/89 | M.M.W.E.C. | EFSC-88-1 | Least-Cost Planning |
| Boston Edison Company | 9/90 | Boston Edison | EFSC-90-12 | Electric Generation Mkts |
| Silver City Energy Ltd. Partnership | 11/91 | Silver City Energy | D.P.U. 91-100 | State Policies; Need for Facility |
| Michigan Public Service Commission | | | | |
| Detroit Edison Company | 9/98 | Detroit Edison Company | Case No. U-11726 | Market Value of Generation Assets |
| Missouri Public Service Commission | | | | |
| Missouri Gas Energy | 1/03 | Missouri Gas Energy | Case No. GR-2001-382 | Gas Purchasing Practices; Prudence |
| Aquila Networks | 2/04 | Aquila-MPS, Aquila_L&P | Case Nos. ER-2004-0034 HR-2004-0024 | Cost of Capital, Capital Structure |
| Aquila Networks | 2/04 | Aquila-MPS, Aquila_L&P | Case No. GR-2004-0072 | Cost of Capital, Capital Structure |
| Montana Public Service Commission | | | | |
| Great Falls Gas Company | 10/82 | Great Falls Gas Company | Docket No. 82-4-25 | Gas Rate Adjust. Clause |
| Nat. Energy Board of Canada | | | | |
| Alberta-Northeast | 2/87 | Alberta Northeast Gas Export Project | Docket No. GH-1-87 | Gas Export Markets |
| Alberta-Northeast | 11/87 | TransCanada Pipeline | Docket No. GH-2-87 | Gas Export Markets |
| Alberta-Northeast | 1/90 | TransCanada Pipeline | Docket No. GH-5-89 | Gas Export Markets |

EXPERT TESTIMONY OF JOHN J. REED
--REGULATORY AGENCIES--

| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|--|-------------|----------------------------------|-----------------------|-------------------------------------|
| Indep. Petroleum Association of Canada | 1/92 | Interprovincial Pipe Line, Inc. | RH-2-91 | Pipeline Valuation, Toll |
| The Canadian Association of Petroleum Producers | 11/93 | Transmountain Pipe Line | RH-1-93 | Cost of Capital |
| Maritimes & Northeast Pipeline | 97 | Sable Offshore Energy Project | GH-6-96 | Market Study |
| Maritimes & Northeast Pipeline | 2/02 | Maritimes & Northeast Pipeline | GH-3-2002 | Natural Gas Demand Analysis |
| New Hampshire Public Utilities Commission | | | | |
| Bus & Industry Association | 6/89 | P.S. Co. of New Hampshire | Docket No. DR89-091 | Fuel Costs |
| Bus & Industry Association | 5/90 | Northeast Utilities | Docket No. DR89-244 | Merger & Acq. Issues |
| Eastern Utilities Associates | 6/90 | Eastern Utilities Associates | Docket No. DF89-085 | Merger & Acq. Issues |
| EnergyNorth Natural Gas | 12/90 | EnergyNorth Natural Gas | Docket No. DE90-166 | Gas Purchasing Practices |
| EnergyNorth Natural Gas | 7/90 | EnergyNorth Natural Gas | Docket No. DR90-187 | Special Contracts, Discounted Rates |
| Northern Utilities, Inc. | 12/91 | Commission Investigation | Docket No. DR91-172 | Generic Discounted Rates |
| New Jersey Board of Public Utilities | | | | |
| Hilton/Golden Nugget | 12/83 | Atlantic Electric | B.P.U. 832-154 | Line Extension Policies |
| Golden Nugget | 3/87 | Atlantic Electric | B.P.U. No. 837-658 | Line Extension Policies |
| New Jersey Natural Gas | 2/89 | New Jersey Natural Gas | B.P.U. GR89030335J | Cost Alloc./Rate Design |
| New Jersey Natural Gas | 1/91 | New Jersey Natural Gas | B.P.U. GR90080786J | Cost Alloc./Rate Design |
| New Jersey Natural Gas | 8/91 | New Jersey Natural Gas | B.P.U. GR91081393J | Rate Design; Weather Norm. Clause |
| New Jersey Natural Gas | 4/93 | New Jersey Natural Gas | B.P.U. GR93040114J | Cost Alloc./Rate Design |
| South Jersey Gas | 4/94 | South Jersey Gas | BRC Dock No. GR080334 | Revised levelized gas adjustment |
| New Jersey Utilities Association | 9/96 | Commission Investigation | BPU AX96070530 | PBOP Cost Recovery |
| New Mexico Public Service Commission | | | | |
| Gas Company of New Mexico | 11/83 | Public Service Co. of New Mexico | Docket No. 1835 | Cost Alloc./Rate Design |

EXPERT TESTIMONY OF JOHN J. REED
--REGULATORY AGENCIES--

| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|---|--------|--|--|---|
| New York Public Service Commission | | | | |
| Iroquois Gas. Transmission | 12/86 | Iroquois Gas Transmission System | Case No. 70363 | Gas Markets |
| Brooklyn Union Gas Company | 8/95 | Brooklyn Union Gas Company | Case No. 95-6-0761 | Panel on Industry Directions |
| Central Hudson, ConEdison and Niagara Mohawk | 9/2000 | Central Hudson, ConEdison and Niagara Mohawk | Case No. 96-E-0909 Case No. 96-E-0897 Case No. 94-E-0098 Case No. 94-E-0099 | Section 70 |
| Central Hudson, New York State Electric & Gas, Rochester Gas & Electric | 5/2001 | Joint Petition of NiMo, NYSEG, RG&E, Central Hudson, Constellation and Nine Mile Point | Case No. 01-E-0011 | Section 70, Rebuttal Testimony |
| Rochester Gas & Electric | 12/03 | Rochester Gas & Electric | Case No. 03-E-1231 | Sale of Nuclear Plant |
| Rochester Gas & Electric | 01/04 | Rochester Gas & Electric | Case No. 03-E-0765 | Sale of Nuclear Plant; Ratemaking Treatment of Sale |
| Oklahoma Corporation Commission | | | | |
| Oklahoma Natural Gas Company | 6/98 | Oklahoma Natural Gas Company | Case PUD No. 980000177 | Evaluate their use of storage |
| Pennsylvania Public Utility Commission | | | | |
| ATOC | 4/95 | Equitrans | Docket No. R-00943272 | Tariff Changes |
| ATOC | 3/96 | Equitrans | Docket No. P-00940886 | Rate Service - Direct |
| Rhode Island Public Utilities Commission | | | | |
| Newport Electric | 7/81 | Newport Electric | Docket No. 1599 | Rate Attrition |
| South County Gas | 9/82 | South County Gas | Docket No. 1671 | Cost of Capital |
| New England Energy Group | 7/86 | Providence Gas Company | Docket No. 1844 | Cost Alloc./Rate Design |
| Providence Gas | 8/88 | Providence Gas Company | Docket No. 1914 | Load Forecast., Least-Cost Planning |
| Providence Gas Company and The Valley Gas Company | 1/01 | Providence Gas Company and The Valley Gas Company | Docket No. 1673 and 1736 | Gas Cost Mitigation Strategy |
| The New England Gas Company | 3/03 | New England Gas Company | Docket No. 3459 | Cost of Capital |

EXPERT TESTIMONY OF JOHN J. REED
--REGULATORY AGENCIES--

| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|--|--------|----------------------------------|--|--|
| Texas Public Utility Commission | | | | |
| Southwestern Electric | 5/83 | Southwestern Electric | | Cost of Capital, CWIP |
| P.U.C. General Counsel | 11/90 | Texas Utilities Electric Company | Docket No. 9300 | Gas Purchasing Practices |
| Texas Railroad Commission | | | | |
| Southern Union Gas | 5/85 | Southern Union Gas Company | G.U.D. 1891 | Cost of Service |
| Utah Public Service Commission | | | | |
| AMAX Magnesium | 1/88 | Mountain Fuel Supply Company | Case No. 86-057-07 | Cost Alloc./Rate Design |
| AMAX Magnesium | 4/88 | Utah P&L/Pacific P&L | Case No. 87-035-27 | Merger & Acquisition |
| Utah Industrial Group | 7/90 | Mountain Fuel Supply | Case No. 89-057-15 | Gas Transportation Rates |
| AMAX Magnesium | 9/90 | Utah Power & Light | Case No. 89-035-06 | Energy Balancing Account |
| AMAX Magnesium | 8/90 | Utah Power & Light | Case No. 90-035-06 | Electric Service Priorities |
| Vermont Public Service Board | | | | |
| Green Mountain Power | 8/82 | Green Mountain Power | Docket No. 4570 | Rate Attrition |
| Green Mountain Power | 12/97 | Green Mountain Power | Docket No. 5983 | Tariff Filing |
| Green Mountain Power | 7/98 | Green Mountain Power | Docket No. 6107 | Direct Testimony |
| Green Mountain Power | 9/2000 | Green Mountain Power | Docket No. 6107 | Rebuttal Testimony |
| Wisconsin Public Service Commission | | | | |
| WEC & WICOR | 11/99 | WEC | Docket No. 9401-YO-100 Docket No. 9402-YO-101 | Approval to Acquire the Stock of WICOR |

EXPERT TESTIMONY OF JOHN J. REED
--COURTS AND ARBITRATION--

| SPONSOR | DATE | CASE/APPLICANT | DOCKET No. | SUBJECT |
|--|-------------|---|----------------------------|--|
| American Arbitration Association | | | | |
| Michael Polsky | 3/91 | M. Polsky vs. Indeck Energy | | Corporate Valuation, Damages |
| ProGas Limited | 7/92 | ProGas Limited v. Texas Eastern | Arbitration Panel | Gas Contract Arbitration |
| Attala Generating Company | 10/03 | Attala Generating Co v. Attala Energy Co. | Case No. 16-Y-198-00228-03 | Power Project Valuation; Breach of Contract; Damages |
| Commonwealth of Massachusetts, Suffolk Superior Court | | | | |
| John Hancock | 1/84 | Trinity Church v. John Hancock | C.A. No. 4452 | Damages Quantification |
| State of Colorado District Court, County of Garfield | | | | |
| Questar Corporation, et al | 11/2000 | Questar Corporation, et al. | Case No. 00CV129-A | Partnership Fiduciary Duties |
| Illinois Appellate Court, Fifth Division | | | | |
| Norweb, plc | 8/02 | Indeck No. America v. Norweb | Docket No. 97 CH 07291 | Breach of Contract; Power Plant Valuation |
| Independent Arbitration Panel | | | | |
| Ocean State Power | 9/02 | Ocean State Power v. ProGas Ltd. | 2001/2002 Arbitration | Gas Price Arbitration |
| Ocean State Power | 2/03 | Ocean State Power v. ProGas Ltd. | 2002/2003 Arbitration | Gas Price Arbitration |
| International Court of Arbitration | | | | |
| Wisconsin Gas Company, Inc. | 2/97 | Wisconsin Gas Co. vs. Pan-Alberta | Case No. 9322/CK | Contract Arbitration |
| Minnegasco, A Division of NorAm Energy Corp. | 3/97 | Minnegasco vs. Pan-Alberta | Case No. 9357/CK | Contract Arbitration |
| Utilicorp United Inc. | 4/97 | Utilicorp vs. Pan-Alberta | Case No. 9373/CK | Contract Arbitration |
| IES Utilities | 97 | IES vs. Pan-Alberta | Case No. 9374/CK | Contract Arbitration |
| U.S. Securities and Exchange Commission | | | | |
| Eastern Utilities Association | 10/92 | EUA Power Corporation | File No. 70-8034 | Value of EUA Power |
| State of Rhode Island, Providence City Court | | | | |

EXPERT TESTIMONY OF JOHN J. REED
--COURTS AND ARBITRATION--

| SPONSOR | DATE | CASE/APPLICANT | DOCKET No. | SUBJECT |
|--|-------------|--|-------------------------------|-----------------------------|
| Aquidneck Energy | 5/87 | Laroche vs. Newport | | Least-Cost Planning |
| State of Texas Hutchinson County Court | | | | |
| Western Gas Interstate | 5/85 | State of Texas vs. Western Gas Interstate Co. | Case No. 14,843 | Cost of Service |
| U.S. Bankruptcy Court, District of New Hampshire | | | | |
| EUA Power Corporation | 7/92 | EUA Power Corporation | Case No. BK-91-10525-JEY | Pre-Petition Solvency |
| U.S. Bankruptcy Court, So. District Of New York | | | | |
| Johns Manville | 5/04 | Enron Energy Mktg. v. Johns Manville; Enron No. America v. Johns Manville | Case No. 01-16034 (AJG) | Breach of Contract; Damages |
| U. S. District Court, Boulder County, Colorado | | | | |
| KN Energy, Inc. | 3/93 | KN Energy vs. Colorado GasMark, Inc. | Case No. 92 CV 1474 | Gas Contract Interpretation |
| U. S. District Court, Northern California | | | | |
| Pacific Gas & Electric Co./PGT PG&E/PGT Pipeline Exp. Project | 4/97 | Norcen Energy Resources Limited | Case No. C94-0911 VRW | Fraud Claim |
| U.S. District Court, Massachusetts | | | | |
| Eastern Utilities Associates & Donald F. Pardus | 3/94 | NECO Enterprises Inc. vs. Eastern Utilities Associates | Civil Action No. 92-10355-RCL | Seabrook Power Sales |
| U. S. District Court, Montana | | | | |
| KN Energy, Inc. | 9/92 | KN Energy v. Freeport MacMoRan | Docket No. CV 91-40-BLG-RWA | Gas Contract Settlement |

EXPERT TESTIMONY OF JOHN J. REED
--COURTS AND ARBITRATION--

| SPONSOR | <u>DATE</u> | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|--|-------------|--|----------------------------------|--|
| U.S. District Court, New Hampshire | | | | |
| Portland Natural Gas Transmission and Maritimes & Northeast Pipeline | 9/03 | Public Service Company of New Hampshire vs. PNGTS and M&NE Pipeline | Docket No. C-02-105-B | Impairment of Electric Transmission Right-of-Way |
| U. S. District Court, Southern District of New York | | | | |
| Central Hudson Gas & Electric | 11/99 | Central Hudson v. Riverkeeper, Inc., Robert H. Boyle, John J. Cronin | Civil Action 99 Civ 2536 (BDP) | Expert Report, Shortnose Sturgeon Case |
| Central Hudson Gas & Electric | 8/2000 | Central Hudson v. Riverkeeper, Inc., Robert H. Boyle, John J. Cronin | Civil Action 99 Civ 2536 (BDP) | Revised Expert Report, Shortnose Sturgeon Case |
| Consolidated Edison | 3/02 | Consolidated Edison v. Northeast Utilities | Case No. 01 Civ. 1893 (JGK) (HP) | Industry Standards for Due Diligence |
| U. S. District Court, Portland Maine | | | | |
| ACEC Maine, Inc. et al. | 10/91 | CIT Financial vs. ACEC Maine | Docket No. 90-0304-B | Project Valuation |
| Combustion Engineering | 1/92 | Combustion Eng. vs. Miller Hydro | Docket No. 89-0168P | Output Modeling; Project Valuation |

| | Average Monthly Prices | | | Average Monthly Price Differential | | |
|--------------|------------------------|---------|---------|------------------------------------|---------------|------------|
| | Algonquin | Dracut | Tenn Z6 | Algonquin-Dracut | Algonquin-TZ6 | TZ6-Dracut |
| Nov-01 | \$2.72 | \$2.45 | \$2.64 | \$0.27 | \$0.08 | \$0.18 |
| Dec-01 | \$2.84 | \$2.53 | \$2.72 | \$0.31 | \$0.12 | \$0.19 |
| Jan-02 | \$2.88 | \$2.42 | \$2.77 | \$0.46 | \$0.10 | \$0.36 |
| Feb-02 | \$2.71 | \$2.49 | \$2.62 | \$0.22 | \$0.08 | \$0.14 |
| Mar-02 | \$3.40 | \$3.21 | \$3.34 | \$0.19 | \$0.06 | \$0.13 |
| Apr-02 | \$3.70 | \$3.50 | \$3.65 | \$0.20 | \$0.05 | \$0.15 |
| May-02 | \$3.86 | \$3.70 | \$3.82 | \$0.16 | \$0.05 | \$0.11 |
| Jun-02 | \$3.51 | \$3.32 | \$3.45 | \$0.19 | \$0.06 | \$0.13 |
| Jul-02 | \$3.34 | \$3.12 | \$3.26 | \$0.22 | \$0.08 | \$0.14 |
| Aug-02 | \$3.45 | \$3.24 | \$3.38 | \$0.21 | \$0.07 | \$0.14 |
| Sep-02 | \$3.81 | \$3.62 | \$3.76 | \$0.19 | \$0.05 | \$0.14 |
| Oct-02 | \$4.33 | \$4.40 | \$4.31 | -\$0.06 | \$0.03 | -\$0.09 |
| Nov-02 | \$4.58 | \$4.46 | \$4.55 | \$0.11 | \$0.03 | \$0.08 |
| Dec-02 | \$5.95 | \$5.63 | \$5.69 | \$0.32 | \$0.26 | \$0.06 |
| Jan-03 | \$8.52 | \$8.17 | \$8.35 | \$0.35 | \$0.17 | \$0.17 |
| Feb-03 | \$10.90 | \$10.36 | \$10.39 | \$0.55 | \$0.51 | \$0.04 |
| Mar-03 | \$8.29 | \$8.08 | \$8.02 | \$0.21 | \$0.27 | -\$0.06 |
| Apr-03 | \$5.97 | \$4.96 | \$5.85 | \$1.01 | \$0.12 | \$0.89 |
| May-03 | \$6.18 | \$5.99 | \$6.11 | \$0.19 | \$0.07 | \$0.12 |
| Jun-03 | \$6.23 | \$6.04 | \$6.15 | \$0.19 | \$0.08 | \$0.11 |
| Jul-03 | \$5.46 | \$5.31 | \$5.40 | \$0.15 | \$0.07 | \$0.08 |
| Aug-03 | \$5.43 | \$5.33 | \$5.40 | \$0.10 | \$0.03 | \$0.07 |
| Sep-03 | \$4.81 | \$4.88 | \$4.97 | -\$0.07 | -\$0.16 | \$0.09 |
| Oct-03 | \$5.16 | \$5.05 | \$5.17 | \$0.10 | -\$0.01 | \$0.11 |
| Nov-03 | \$5.11 | \$4.93 | \$5.01 | \$0.18 | \$0.10 | \$0.08 |
| Dec-03 | \$6.97 | \$6.62 | \$6.87 | \$0.35 | \$0.10 | \$0.25 |
| Jan-04 | \$12.69 | \$11.04 | \$11.53 | \$1.64 | \$1.15 | \$0.49 |
| Feb-04 | \$6.48 | \$6.21 | \$6.34 | \$0.27 | \$0.13 | \$0.13 |
| Mar-04 | \$5.98 | \$5.81 | \$5.92 | \$0.17 | \$0.06 | \$0.11 |
| 2002 | \$3.79 | \$3.59 | \$3.72 | \$0.20 | \$0.08 | \$0.12 |
| 2003 | \$6.59 | \$6.31 | \$6.47 | \$0.28 | \$0.11 | \$0.16 |
| 2004 Q1 | \$8.38 | \$7.69 | \$7.93 | \$0.69 | \$0.45 | \$0.24 |
| 01-02 Winter | \$2.96 | \$2.66 | \$2.87 | \$0.30 | \$0.09 | \$0.20 |
| 02-03 Winter | \$8.42 | \$8.06 | \$8.11 | \$0.36 | \$0.31 | \$0.05 |
| 03-04 Winter | \$8.03 | \$7.42 | \$7.67 | \$0.61 | \$0.36 | \$0.24 |

**Phase III Value Creation Since In-Service Date
Maximum Market Price Scenario
Algonquin versus Dracut
11/25/03-3/31/04**

| MDQ (Dth) | 300,000 | | Maximum | Incremental Margin | Total Incremental |
|------------|-----------|----------|--------------|--------------------|-------------------|
| | Algonquin | Dracut | Market Price | (Max- Dracut) | Value Over Dracut |
| | (\$/Dth) | (\$/Dth) | (\$/Dth) | (\$/Dth) | (\$) |
| 11/24/2003 | \$4.51 | 4.46 | \$4.51 | \$0.05 | \$16,500 |
| 11/25/2003 | \$5.31 | 5.18 | \$5.31 | \$0.13 | \$39,000 |
| 11/26/2003 | \$5.18 | 5.02 | \$5.18 | \$0.16 | \$48,000 |
| 11/27/2003 | \$5.78 | 5.44 | \$5.78 | \$0.34 | \$102,000 |
| 11/28/2003 | \$5.78 | 5.44 | \$5.78 | \$0.34 | \$102,000 |
| 11/29/2003 | \$5.78 | 5.44 | \$5.78 | \$0.34 | \$102,000 |
| 11/30/2003 | \$5.78 | 5.44 | \$5.78 | \$0.34 | \$102,000 |
| 12/1/2003 | \$5.78 | 5.44 | \$5.78 | \$0.34 | \$102,000 |
| 12/2/2003 | \$7.01 | 6.54 | \$7.01 | \$0.47 | \$141,000 |
| 12/3/2003 | \$7.78 | 6.99 | \$7.78 | \$0.80 | \$238,500 |
| 12/4/2003 | \$6.42 | 5.83 | \$6.42 | \$0.59 | \$177,000 |
| 12/5/2003 | \$6.63 | 6.30 | \$6.63 | \$0.33 | \$97,500 |
| 12/6/2003 | \$7.35 | 7.18 | \$7.35 | \$0.17 | \$52,500 |
| 12/7/2003 | \$7.35 | 7.18 | \$7.35 | \$0.17 | \$52,500 |
| 12/8/2003 | \$7.35 | 7.18 | \$7.35 | \$0.17 | \$52,500 |
| 12/9/2003 | \$6.93 | 6.75 | \$6.93 | \$0.18 | \$52,500 |
| 12/10/2003 | \$7.21 | 6.97 | \$7.21 | \$0.25 | \$73,500 |
| 12/11/2003 | \$7.48 | 7.24 | \$7.48 | \$0.24 | \$72,000 |
| 12/12/2003 | \$7.43 | 7.05 | \$7.43 | \$0.38 | \$112,500 |
| 12/13/2003 | \$7.93 | 7.62 | \$7.93 | \$0.31 | \$93,000 |
| 12/14/2003 | \$7.93 | 7.62 | \$7.93 | \$0.31 | \$93,000 |
| 12/15/2003 | \$7.93 | 7.62 | \$7.93 | \$0.31 | \$93,000 |
| 12/16/2003 | \$7.35 | 7.10 | \$7.35 | \$0.25 | \$75,000 |
| 12/17/2003 | \$7.20 | 7.04 | \$7.20 | \$0.16 | \$49,500 |
| 12/18/2003 | \$7.30 | 6.85 | \$7.30 | \$0.45 | \$133,500 |
| 12/19/2003 | \$8.14 | 7.80 | \$8.14 | \$0.34 | \$100,500 |
| 12/20/2003 | \$7.66 | 7.18 | \$7.66 | \$0.48 | \$145,500 |
| 12/21/2003 | \$7.66 | 7.18 | \$7.66 | \$0.48 | \$145,500 |
| 12/22/2003 | \$7.66 | 7.18 | \$7.66 | \$0.48 | \$145,500 |
| 12/23/2003 | \$6.96 | 6.46 | \$6.96 | \$0.50 | \$150,000 |
| 12/24/2003 | \$5.90 | 5.53 | \$5.90 | \$0.38 | \$112,500 |
| 12/25/2003 | \$5.93 | 5.55 | \$5.93 | \$0.37 | \$112,500 |
| 12/26/2003 | \$5.93 | 5.55 | \$5.93 | \$0.37 | \$112,500 |
| 12/27/2003 | \$5.93 | 5.55 | \$5.93 | \$0.37 | \$112,500 |
| 12/28/2003 | \$5.93 | 5.55 | \$5.93 | \$0.37 | \$112,500 |
| 12/29/2003 | \$5.93 | 5.55 | \$5.93 | \$0.37 | \$112,500 |
| 12/30/2003 | \$5.80 | 5.58 | \$5.80 | \$0.23 | \$67,500 |
| 12/31/2003 | \$6.30 | 6.14 | \$6.30 | \$0.17 | \$49,500 |
| 1/1/2004 | \$6.23 | 5.90 | \$6.23 | \$0.32 | \$97,500 |
| 1/2/2004 | \$6.23 | 5.90 | \$6.23 | \$0.32 | \$97,500 |
| 1/3/2004 | \$6.23 | 5.90 | \$6.23 | \$0.32 | \$97,500 |
| 1/4/2004 | \$6.23 | 5.90 | \$6.23 | \$0.32 | \$97,500 |
| 1/5/2004 | \$6.23 | 5.90 | \$6.23 | \$0.32 | \$97,500 |
| 1/6/2004 | \$7.85 | 7.25 | \$7.85 | \$0.60 | \$180,000 |
| 1/7/2004 | \$8.88 | 8.73 | \$8.88 | \$0.15 | \$45,000 |
| 1/8/2004 | \$10.13 | 9.83 | \$10.13 | \$0.30 | \$90,000 |
| 1/9/2004 | \$11.83 | 11.75 | \$11.83 | \$0.08 | \$24,000 |
| 1/10/2004 | \$11.38 | 10.00 | \$11.38 | \$1.38 | \$412,500 |
| 1/11/2004 | \$11.38 | 10.00 | \$11.38 | \$1.38 | \$412,500 |
| 1/12/2004 | \$11.38 | 10.00 | \$11.38 | \$1.38 | \$412,500 |
| 1/13/2004 | \$9.13 | 7.74 | \$9.13 | \$1.39 | \$415,500 |
| 1/14/2004 | \$28.25 | 19.50 | \$28.25 | \$8.75 | \$2,625,000 |
| 1/15/2004 | \$56.50 | 50.00 | \$56.50 | \$6.50 | \$1,950,000 |
| 1/16/2004 | \$39.50 | 23.50 | \$39.50 | \$16.00 | \$4,800,000 |
| 1/17/2004 | \$10.25 | 9.50 | \$10.25 | \$0.75 | \$225,000 |
| 1/18/2004 | \$10.25 | 9.50 | \$10.25 | \$0.75 | \$225,000 |
| 1/19/2004 | \$10.25 | 9.50 | \$10.25 | \$0.75 | \$225,000 |
| 1/20/2004 | \$10.25 | 9.50 | \$10.25 | \$0.75 | \$225,000 |
| 1/21/2004 | \$8.38 | 9.40 | \$9.40 | \$0.00 | \$0 |

**Phase III Value Creation Since In-Service Date
Maximum Market Price Scenario
Algonquin versus Dracut
11/25/03-3/31/04**

| MDQ (Dth) | 300,000 | | Maximum | Incremental Margin | Total Incremental |
|-----------|-----------|--------|--------------|--------------------|-------------------|
| | Algonquin | Dracut | Market Price | (Max- Dracut) | Value Over Dracut |
| 1/22/2004 | \$7.60 | 7.10 | \$7.60 | \$0.50 | \$150,000 |
| 1/23/2004 | \$8.85 | 8.48 | \$8.85 | \$0.38 | \$112,500 |
| 1/24/2004 | \$10.50 | 9.38 | \$10.50 | \$1.13 | \$337,500 |
| 1/25/2004 | \$10.50 | 9.38 | \$10.50 | \$1.13 | \$337,500 |
| 1/26/2004 | \$10.50 | 9.38 | \$10.50 | \$1.13 | \$337,500 |
| 1/27/2004 | \$10.54 | 9.20 | \$10.54 | \$1.34 | \$400,500 |
| 1/28/2004 | \$12.25 | 12.50 | \$12.50 | \$0.00 | \$0 |
| 1/29/2004 | \$13.73 | 14.01 | \$14.01 | \$0.00 | \$0 |
| 1/30/2004 | \$11.05 | 8.87 | \$11.05 | \$2.18 | \$654,000 |
| 1/31/2004 | \$11.05 | 8.87 | \$11.05 | \$2.18 | \$654,000 |
| 2/1/2004 | \$8.15 | 7.35 | \$8.15 | \$0.80 | \$240,000 |
| 2/2/2004 | \$8.15 | 7.35 | \$8.15 | \$0.80 | \$240,000 |
| 2/3/2004 | \$6.55 | 6.45 | \$6.55 | \$0.10 | \$30,000 |
| 2/4/2004 | \$6.55 | 6.35 | \$6.55 | \$0.20 | \$60,000 |
| 2/5/2004 | \$6.75 | 6.55 | \$6.75 | \$0.20 | \$60,000 |
| 2/6/2004 | \$6.43 | 6.26 | \$6.43 | \$0.17 | \$51,000 |
| 2/7/2004 | \$6.33 | 6.25 | \$6.33 | \$0.07 | \$22,500 |
| 2/8/2004 | \$6.33 | 6.25 | \$6.33 | \$0.07 | \$22,500 |
| 2/9/2004 | \$6.33 | 6.25 | \$6.33 | \$0.07 | \$22,500 |
| 2/10/2004 | \$6.38 | 6.18 | \$6.38 | \$0.20 | \$58,500 |
| 2/11/2004 | \$6.38 | 5.98 | \$6.38 | \$0.40 | \$120,000 |
| 2/12/2004 | \$6.13 | 5.88 | \$6.13 | \$0.26 | \$76,500 |
| 2/13/2004 | \$6.01 | 5.76 | \$6.01 | \$0.25 | \$75,000 |
| 2/14/2004 | \$7.93 | 7.35 | \$7.93 | \$0.58 | \$172,500 |
| 2/15/2004 | \$7.93 | 7.35 | \$7.93 | \$0.58 | \$172,500 |
| 2/16/2004 | \$7.93 | 7.35 | \$7.93 | \$0.58 | \$172,500 |
| 2/17/2004 | \$7.93 | 7.35 | \$7.93 | \$0.58 | \$172,500 |
| 2/18/2004 | \$6.10 | 5.87 | \$6.10 | \$0.23 | \$70,500 |
| 2/19/2004 | \$5.85 | 5.73 | \$5.85 | \$0.13 | \$37,500 |
| 2/20/2004 | \$5.74 | 5.69 | \$5.74 | \$0.05 | \$15,000 |
| 2/21/2004 | \$5.79 | 5.60 | \$5.79 | \$0.19 | \$55,500 |
| 2/22/2004 | \$5.79 | 5.60 | \$5.79 | \$0.19 | \$55,500 |
| 2/23/2004 | \$5.79 | 5.60 | \$5.79 | \$0.19 | \$55,500 |
| 2/24/2004 | \$5.80 | 5.69 | \$5.80 | \$0.11 | \$33,000 |
| 2/25/2004 | \$5.78 | 5.68 | \$5.78 | \$0.10 | \$30,000 |
| 2/26/2004 | \$5.81 | 5.74 | \$5.81 | \$0.06 | \$19,500 |
| 2/27/2004 | \$5.66 | 5.55 | \$5.66 | \$0.11 | \$33,000 |
| 2/28/2004 | \$5.81 | 5.58 | \$5.81 | \$0.24 | \$70,500 |
| 2/29/2004 | \$5.81 | 5.58 | \$5.81 | \$0.24 | \$70,500 |
| 3/1/2004 | \$5.81 | 5.58 | \$5.81 | \$0.24 | \$70,500 |
| 3/2/2004 | \$5.67 | 5.49 | \$5.67 | \$0.18 | \$52,500 |
| 3/3/2004 | \$5.89 | 5.72 | \$5.89 | \$0.17 | \$49,500 |
| 3/4/2004 | \$5.87 | 5.72 | \$5.87 | \$0.15 | \$45,000 |
| 3/5/2004 | \$5.66 | 5.52 | \$5.66 | \$0.14 | \$40,500 |
| 3/6/2004 | \$5.93 | 5.78 | \$5.93 | \$0.15 | \$45,000 |
| 3/7/2004 | \$5.93 | 5.78 | \$5.93 | \$0.15 | \$45,000 |
| 3/8/2004 | \$5.93 | 5.78 | \$5.93 | \$0.15 | \$45,000 |
| 3/9/2004 | \$6.15 | 5.94 | \$6.15 | \$0.22 | \$64,500 |
| 3/10/2004 | \$6.03 | 5.83 | \$6.03 | \$0.20 | \$60,000 |
| 3/11/2004 | \$5.99 | 5.82 | \$5.99 | \$0.17 | \$51,000 |
| 3/12/2004 | \$6.05 | 5.82 | \$6.05 | \$0.23 | \$69,000 |
| 3/13/2004 | \$6.05 | 5.85 | \$6.05 | \$0.20 | \$61,500 |
| 3/14/2004 | \$6.05 | 5.85 | \$6.05 | \$0.20 | \$61,500 |
| 3/15/2004 | \$6.05 | 5.85 | \$6.05 | \$0.20 | \$61,500 |
| 3/16/2004 | \$6.32 | 6.18 | \$6.32 | \$0.15 | \$43,500 |
| 3/17/2004 | \$6.33 | 6.11 | \$6.33 | \$0.23 | \$67,500 |
| 3/18/2004 | \$6.35 | 6.21 | \$6.35 | \$0.15 | \$43,500 |
| 3/19/2004 | \$6.37 | 6.25 | \$6.37 | \$0.12 | \$36,000 |
| 3/20/2004 | \$6.22 | 6.06 | \$6.22 | \$0.16 | \$48,000 |
| 3/21/2004 | \$6.22 | 6.06 | \$6.22 | \$0.16 | \$48,000 |

**Phase III Value Creation Since In-Service Date
Maximum Market Price Scenario
Algonquin versus Dracut
11/25/03-3/31/04**

| MDQ (Dth) | 300,000 | | Maximum Market Price | Incremental Margin (Max- Dracut) | Total Incremental Value Over Dracut |
|-------------------------------------|-----------|--------|-------------------------|-------------------------------------|--|
| | Algonquin | Dracut | | | |
| 3/22/2004 | \$6.22 | 6.06 | \$6.22 | \$0.16 | \$48,000 |
| 3/23/2004 | \$6.18 | 6.04 | \$6.18 | \$0.15 | \$43,500 |
| 3/24/2004 | \$6.01 | 5.88 | \$6.01 | \$0.13 | \$37,500 |
| 3/25/2004 | \$5.84 | 5.78 | \$5.84 | \$0.06 | \$18,000 |
| 3/26/2004 | \$5.69 | 5.56 | \$5.69 | \$0.13 | \$39,000 |
| 3/27/2004 | \$5.58 | 5.42 | \$5.58 | \$0.16 | \$48,000 |
| 3/28/2004 | \$5.58 | 5.42 | \$5.58 | \$0.16 | \$48,000 |
| 3/29/2004 | \$5.58 | 5.42 | \$5.58 | \$0.16 | \$48,000 |
| 3/30/2004 | \$5.81 | 5.65 | \$5.81 | \$0.17 | \$49,500 |
| 3/31/2004 | \$6.04 | 5.85 | \$6.04 | \$0.19 | \$57,000 |
| Total Incremental Value Over Dracut | | | | | \$23,349,000 |

**Phase III Value Creation, Projected
Maximum Market Price Scenario
Algonquin versus Dracut
04/01/03-3/31/04**

| MDQ (Dth) | 300,000 | | Maximum | Incremental Margin | Total Incremental |
|-----------|-----------|----------|--------------|--------------------|-------------------|
| | Algonquin | Dracut | Market Price | (Max- Dracut) | Value Over Dracut |
| | (\$/Dth) | (\$/Dth) | (\$/Dth) | (\$/Dth) | (\$) |
| 4/1/2003 | \$5.80 | \$5.58 | \$5.80 | \$0.23 | \$67,500 |
| 4/2/2003 | \$5.60 | \$5.35 | \$5.60 | \$0.26 | \$76,500 |
| 4/3/2003 | \$5.57 | \$5.31 | \$5.57 | \$0.26 | \$78,000 |
| 4/4/2003 | \$5.53 | \$0.00 | \$5.53 | \$5.53 | \$1,657,500 |
| 4/5/2003 | \$5.69 | \$0.00 | \$5.69 | \$5.69 | \$1,705,500 |
| 4/6/2003 | \$5.69 | \$0.00 | \$5.69 | \$5.69 | \$1,705,500 |
| 4/7/2003 | \$5.69 | \$0.00 | \$5.69 | \$5.69 | \$1,705,500 |
| 4/8/2003 | \$6.17 | \$6.28 | \$6.28 | \$0.00 | \$0 |
| 4/9/2003 | \$6.70 | \$6.23 | \$6.70 | \$0.48 | \$142,500 |
| 4/10/2003 | \$6.55 | \$6.03 | \$6.55 | \$0.53 | \$157,500 |
| 4/11/2003 | \$6.13 | \$5.60 | \$6.13 | \$0.53 | \$157,500 |
| 4/12/2003 | \$5.97 | \$5.50 | \$5.97 | \$0.47 | \$139,500 |
| 4/13/2003 | \$5.97 | \$5.50 | \$5.97 | \$0.47 | \$139,500 |
| 4/14/2003 | \$5.97 | \$5.50 | \$5.97 | \$0.47 | \$139,500 |
| 4/15/2003 | \$5.71 | \$5.48 | \$5.71 | \$0.24 | \$70,500 |
| 4/16/2003 | \$6.20 | \$5.89 | \$6.20 | \$0.31 | \$93,000 |
| 4/17/2003 | \$6.58 | \$6.34 | \$6.58 | \$0.24 | \$72,000 |
| 4/18/2003 | \$6.13 | \$5.73 | \$6.13 | \$0.40 | \$118,500 |
| 4/19/2003 | \$6.13 | \$5.73 | \$6.13 | \$0.40 | \$118,500 |
| 4/20/2003 | \$6.13 | \$5.73 | \$6.13 | \$0.40 | \$118,500 |
| 4/21/2003 | \$6.13 | \$5.73 | \$6.13 | \$0.40 | \$118,500 |
| 4/22/2003 | \$6.06 | \$5.80 | \$6.06 | \$0.26 | \$76,500 |
| 4/23/2003 | \$6.14 | \$5.90 | \$6.14 | \$0.23 | \$70,500 |
| 4/24/2003 | \$6.11 | \$5.88 | \$6.11 | \$0.23 | \$69,000 |
| 4/25/2003 | \$6.00 | \$5.74 | \$6.00 | \$0.26 | \$78,000 |
| 4/26/2003 | \$5.85 | \$5.64 | \$5.85 | \$0.21 | \$63,000 |
| 4/27/2003 | \$5.85 | \$5.64 | \$5.85 | \$0.21 | \$63,000 |
| 4/28/2003 | \$5.85 | \$5.64 | \$5.85 | \$0.21 | \$63,000 |
| 4/29/2003 | \$5.71 | \$5.60 | \$5.71 | \$0.11 | \$31,500 |
| 4/30/2003 | \$5.59 | \$5.40 | \$5.59 | \$0.19 | \$57,000 |
| 5/1/2003 | \$5.69 | \$5.52 | \$5.69 | \$0.17 | \$51,000 |
| 5/2/2003 | \$5.71 | \$5.59 | \$5.71 | \$0.13 | \$37,500 |
| 5/3/2003 | \$5.69 | \$5.52 | \$5.69 | \$0.17 | \$49,500 |
| 5/4/2003 | \$5.69 | \$5.52 | \$5.69 | \$0.17 | \$49,500 |
| 5/5/2003 | \$5.69 | \$5.52 | \$5.69 | \$0.17 | \$49,500 |
| 5/6/2003 | \$5.75 | \$5.64 | \$5.75 | \$0.11 | \$31,500 |
| 5/7/2003 | \$6.14 | \$5.86 | \$6.14 | \$0.28 | \$82,500 |
| 5/8/2003 | \$5.93 | \$5.73 | \$5.93 | \$0.20 | \$60,000 |
| 5/9/2003 | \$6.03 | \$5.79 | \$6.03 | \$0.24 | \$70,500 |
| 5/10/2003 | \$6.00 | \$5.88 | \$6.00 | \$0.13 | \$37,500 |
| 5/11/2003 | \$6.00 | \$5.88 | \$6.00 | \$0.13 | \$37,500 |
| 5/12/2003 | \$6.00 | \$5.88 | \$6.00 | \$0.13 | \$37,500 |
| 5/13/2003 | \$6.29 | \$6.10 | \$6.29 | \$0.19 | \$57,000 |
| 5/14/2003 | \$6.35 | \$6.25 | \$6.35 | \$0.10 | \$30,000 |
| 5/15/2003 | \$6.57 | \$6.39 | \$6.57 | \$0.19 | \$55,500 |
| 5/16/2003 | \$6.68 | \$6.53 | \$6.68 | \$0.15 | \$46,500 |
| 5/17/2003 | \$6.29 | \$6.14 | \$6.29 | \$0.16 | \$46,500 |
| 5/18/2003 | \$6.29 | \$6.14 | \$6.29 | \$0.16 | \$46,500 |
| 5/19/2003 | \$6.29 | \$6.14 | \$6.29 | \$0.16 | \$46,500 |
| 5/20/2003 | \$6.40 | \$6.35 | \$6.40 | \$0.04 | \$13,500 |
| 5/21/2003 | \$6.39 | \$6.27 | \$6.39 | \$0.12 | \$36,000 |
| 5/22/2003 | \$6.58 | \$6.36 | \$6.58 | \$0.22 | \$64,500 |
| 5/23/2003 | \$6.57 | \$6.35 | \$6.57 | \$0.22 | \$66,000 |
| 5/24/2003 | \$6.44 | \$6.07 | \$6.44 | \$0.37 | \$111,000 |
| 5/25/2003 | \$6.44 | \$6.07 | \$6.44 | \$0.37 | \$111,000 |
| 5/26/2003 | \$6.44 | \$6.07 | \$6.44 | \$0.37 | \$111,000 |
| 5/27/2003 | \$6.44 | \$6.07 | \$6.44 | \$0.37 | \$111,000 |
| 5/28/2003 | \$6.33 | \$6.18 | \$6.33 | \$0.15 | \$43,500 |
| 5/29/2003 | \$6.13 | \$5.95 | \$6.13 | \$0.18 | \$52,500 |

**Phase III Value Creation, Projected
Maximum Market Price Scenario
Algonquin versus Dracut
04/01/03-3/31/04**

| MDQ (Dth) | 300,000 | | Maximum | Incremental Margin | Total Incremental |
|-----------|-----------|--------|--------------|--------------------|-------------------|
| | Algonquin | Dracut | Market Price | (Max- Dracut) | Value Over Dracut |
| 5/30/2003 | \$6.06 | \$5.78 | \$6.06 | \$0.28 | \$82,500 |
| 5/31/2003 | \$6.35 | \$6.12 | \$6.35 | \$0.23 | \$69,000 |
| 6/1/2003 | \$6.35 | \$6.12 | \$6.35 | \$0.23 | \$69,000 |
| 6/2/2003 | \$6.35 | \$6.12 | \$6.35 | \$0.23 | \$69,000 |
| 6/3/2003 | \$6.69 | \$6.47 | \$6.69 | \$0.22 | \$66,000 |
| 6/4/2003 | \$6.67 | \$6.46 | \$6.67 | \$0.21 | \$63,000 |
| 6/5/2003 | \$6.89 | \$6.62 | \$6.89 | \$0.27 | \$79,500 |
| 6/6/2003 | \$6.44 | \$6.35 | \$6.44 | \$0.09 | \$27,000 |
| 6/7/2003 | \$6.61 | \$6.42 | \$6.61 | \$0.19 | \$57,000 |
| 6/8/2003 | \$6.61 | \$6.42 | \$6.61 | \$0.19 | \$57,000 |
| 6/9/2003 | \$6.61 | \$6.42 | \$6.61 | \$0.19 | \$57,000 |
| 6/10/2003 | \$6.57 | \$6.42 | \$6.57 | \$0.15 | \$45,000 |
| 6/11/2003 | \$6.45 | \$6.30 | \$6.45 | \$0.15 | \$45,000 |
| 6/12/2003 | \$6.39 | \$6.24 | \$6.39 | \$0.16 | \$46,500 |
| 6/13/2003 | \$6.30 | \$6.17 | \$6.30 | \$0.13 | \$39,000 |
| 6/14/2003 | \$5.74 | \$5.55 | \$5.74 | \$0.19 | \$55,500 |
| 6/15/2003 | \$5.74 | \$5.55 | \$5.74 | \$0.19 | \$55,500 |
| 6/16/2003 | \$5.74 | \$5.55 | \$5.74 | \$0.19 | \$55,500 |
| 6/17/2003 | \$5.83 | \$5.70 | \$5.83 | \$0.14 | \$40,500 |
| 6/18/2003 | \$6.05 | \$5.99 | \$6.05 | \$0.06 | \$18,000 |
| 6/19/2003 | \$5.93 | \$5.76 | \$5.93 | \$0.17 | \$49,500 |
| 6/20/2003 | \$5.86 | \$5.74 | \$5.86 | \$0.12 | \$36,000 |
| 6/21/2003 | \$6.20 | \$5.88 | \$6.20 | \$0.32 | \$96,000 |
| 6/22/2003 | \$6.20 | \$5.88 | \$6.20 | \$0.32 | \$96,000 |
| 6/23/2003 | \$6.20 | \$5.88 | \$6.20 | \$0.32 | \$96,000 |
| 6/24/2003 | \$6.57 | \$6.45 | \$6.57 | \$0.12 | \$36,000 |
| 6/25/2003 | \$6.51 | \$6.45 | \$6.51 | \$0.06 | \$18,000 |
| 6/26/2003 | \$6.28 | \$6.19 | \$6.28 | \$0.09 | \$27,000 |
| 6/27/2003 | \$6.11 | \$5.84 | \$6.11 | \$0.27 | \$81,000 |
| 6/28/2003 | \$5.65 | \$5.41 | \$5.65 | \$0.25 | \$73,500 |
| 6/29/2003 | \$5.65 | \$5.41 | \$5.65 | \$0.25 | \$73,500 |
| 6/30/2003 | \$5.65 | \$5.41 | \$5.65 | \$0.25 | \$73,500 |
| 7/1/2003 | \$5.89 | \$5.75 | \$5.89 | \$0.14 | \$40,500 |
| 7/2/2003 | \$5.63 | \$5.48 | \$5.63 | \$0.16 | \$46,500 |
| 7/3/2003 | \$5.40 | \$5.29 | \$5.40 | \$0.11 | \$33,000 |
| 7/4/2003 | \$5.29 | \$5.19 | \$5.29 | \$0.11 | \$31,500 |
| 7/5/2003 | \$5.29 | \$5.19 | \$5.29 | \$0.11 | \$31,500 |
| 7/6/2003 | \$5.29 | \$5.19 | \$5.29 | \$0.11 | \$31,500 |
| 7/7/2003 | \$5.29 | \$5.19 | \$5.29 | \$0.11 | \$31,500 |
| 7/8/2003 | \$5.81 | \$5.53 | \$5.81 | \$0.28 | \$84,000 |
| 7/9/2003 | \$6.10 | \$5.89 | \$6.10 | \$0.21 | \$63,000 |
| 7/10/2003 | \$6.07 | \$5.85 | \$6.07 | \$0.22 | \$66,000 |
| 7/11/2003 | \$5.82 | \$5.58 | \$5.82 | \$0.25 | \$73,500 |
| 7/12/2003 | \$5.59 | \$5.44 | \$5.59 | \$0.15 | \$46,500 |
| 7/13/2003 | \$5.59 | \$5.44 | \$5.59 | \$0.15 | \$46,500 |
| 7/14/2003 | \$5.59 | \$5.44 | \$5.59 | \$0.15 | \$46,500 |
| 7/15/2003 | \$5.67 | \$5.43 | \$5.67 | \$0.24 | \$70,500 |
| 7/16/2003 | \$5.66 | \$5.49 | \$5.66 | \$0.18 | \$52,500 |
| 7/17/2003 | \$5.45 | \$5.25 | \$5.45 | \$0.20 | \$58,500 |
| 7/18/2003 | \$5.41 | \$5.23 | \$5.41 | \$0.19 | \$55,500 |
| 7/19/2003 | \$5.38 | \$5.22 | \$5.38 | \$0.15 | \$46,500 |
| 7/20/2003 | \$5.38 | \$5.22 | \$5.38 | \$0.15 | \$46,500 |
| 7/21/2003 | \$5.38 | \$5.22 | \$5.38 | \$0.15 | \$46,500 |
| 7/22/2003 | \$5.52 | \$5.41 | \$5.52 | \$0.11 | \$33,000 |
| 7/23/2003 | \$5.54 | \$5.42 | \$5.54 | \$0.12 | \$34,500 |
| 7/24/2003 | \$5.37 | \$5.23 | \$5.37 | \$0.14 | \$42,000 |
| 7/25/2003 | \$5.38 | \$5.21 | \$5.38 | \$0.17 | \$51,000 |
| 7/26/2003 | \$5.08 | \$5.01 | \$5.08 | \$0.08 | \$22,500 |
| 7/27/2003 | \$5.08 | \$5.01 | \$5.08 | \$0.08 | \$22,500 |
| 7/28/2003 | \$5.08 | \$5.01 | \$5.08 | \$0.08 | \$22,500 |

**Phase III Value Creation, Projected
Maximum Market Price Scenario
Algonquin versus Dracut
04/01/03-3/31/04**

| MDQ (Dth) | 300,000 | | Maximum | Incremental Margin | Total Incremental |
|-----------|-----------|--------|--------------|--------------------|-------------------|
| | Algonquin | Dracut | Market Price | (Max- Dracut) | Value Over Dracut |
| 7/29/2003 | \$5.08 | \$4.96 | \$5.08 | \$0.13 | \$37,500 |
| 7/30/2003 | \$5.20 | \$5.04 | \$5.20 | \$0.17 | \$49,500 |
| 7/31/2003 | \$5.14 | \$5.04 | \$5.14 | \$0.10 | \$30,000 |
| 8/1/2003 | \$5.03 | \$4.94 | \$5.03 | \$0.09 | \$27,000 |
| 8/2/2003 | \$5.06 | \$4.96 | \$5.06 | \$0.10 | \$30,000 |
| 8/3/2003 | \$5.06 | \$4.96 | \$5.06 | \$0.10 | \$30,000 |
| 8/4/2003 | \$5.06 | \$4.96 | \$5.06 | \$0.10 | \$30,000 |
| 8/5/2003 | \$5.20 | \$5.15 | \$5.20 | \$0.05 | \$15,000 |
| 8/6/2003 | \$5.23 | \$5.06 | \$5.23 | \$0.17 | \$49,500 |
| 8/7/2003 | \$5.24 | \$5.15 | \$5.24 | \$0.09 | \$27,000 |
| 8/8/2003 | \$5.27 | \$5.15 | \$5.27 | \$0.12 | \$34,500 |
| 8/9/2003 | \$5.43 | \$5.25 | \$5.43 | \$0.18 | \$52,500 |
| 8/10/2003 | \$5.43 | \$5.25 | \$5.43 | \$0.18 | \$52,500 |
| 8/11/2003 | \$5.43 | \$5.25 | \$5.43 | \$0.18 | \$52,500 |
| 8/12/2003 | \$5.57 | \$5.42 | \$5.57 | \$0.15 | \$45,000 |
| 8/13/2003 | \$5.59 | \$5.44 | \$5.59 | \$0.15 | \$45,000 |
| 8/14/2003 | \$5.71 | \$5.58 | \$5.71 | \$0.13 | \$39,000 |
| 8/15/2003 | \$5.80 | \$5.72 | \$5.80 | \$0.08 | \$22,500 |
| 8/16/2003 | \$5.35 | \$5.18 | \$5.35 | \$0.18 | \$52,500 |
| 8/17/2003 | \$5.35 | \$5.18 | \$5.35 | \$0.18 | \$52,500 |
| 8/18/2003 | \$5.35 | \$5.18 | \$5.35 | \$0.18 | \$52,500 |
| 8/19/2003 | \$5.51 | \$5.50 | \$5.51 | \$0.01 | \$3,000 |
| 8/20/2003 | \$5.63 | \$5.53 | \$5.63 | \$0.11 | \$31,500 |
| 8/21/2003 | \$5.61 | \$5.53 | \$5.61 | \$0.08 | \$22,500 |
| 8/22/2003 | \$5.62 | \$5.53 | \$5.62 | \$0.09 | \$28,500 |
| 8/23/2003 | \$5.64 | \$5.58 | \$5.64 | \$0.07 | \$19,500 |
| 8/24/2003 | \$5.64 | \$5.58 | \$5.64 | \$0.07 | \$19,500 |
| 8/25/2003 | \$5.64 | \$5.58 | \$5.64 | \$0.07 | \$19,500 |
| 8/26/2003 | \$5.75 | \$5.65 | \$5.75 | \$0.10 | \$30,000 |
| 8/27/2003 | \$5.59 | \$5.47 | \$5.59 | \$0.13 | \$37,500 |
| 8/28/2003 | \$5.58 | \$5.47 | \$5.58 | \$0.11 | \$33,000 |
| 8/29/2003 | \$5.31 | \$5.37 | \$5.37 | \$0.00 | \$0 |
| 8/30/2003 | \$5.31 | \$5.37 | \$5.37 | \$0.00 | \$0 |
| 8/31/2003 | \$5.31 | \$5.37 | \$5.37 | \$0.00 | \$0 |
| 9/1/2003 | \$5.23 | \$5.14 | \$5.23 | \$0.09 | \$27,000 |
| 9/2/2003 | \$5.23 | \$5.14 | \$5.23 | \$0.09 | \$27,000 |
| 9/3/2003 | \$5.00 | \$4.86 | \$5.00 | \$0.15 | \$43,500 |
| 9/4/2003 | \$5.07 | \$4.90 | \$5.07 | \$0.16 | \$49,500 |
| 9/5/2003 | \$0.00 | \$4.83 | \$4.83 | \$0.00 | \$0 |
| 9/6/2003 | \$5.07 | \$4.96 | \$5.07 | \$0.11 | \$31,500 |
| 9/7/2003 | \$5.07 | \$4.96 | \$5.07 | \$0.11 | \$31,500 |
| 9/8/2003 | \$5.07 | \$4.96 | \$5.07 | \$0.11 | \$31,500 |
| 9/9/2003 | \$5.18 | \$5.10 | \$5.18 | \$0.08 | \$24,000 |
| 9/10/2003 | \$5.09 | \$5.01 | \$5.09 | \$0.08 | \$24,000 |
| 9/11/2003 | \$5.15 | \$5.07 | \$5.15 | \$0.08 | \$24,000 |
| 9/12/2003 | \$5.18 | \$5.07 | \$5.18 | \$0.11 | \$31,500 |
| 9/13/2003 | \$4.93 | \$4.79 | \$4.93 | \$0.15 | \$43,500 |
| 9/14/2003 | \$4.93 | \$4.79 | \$4.93 | \$0.15 | \$43,500 |
| 9/15/2003 | \$4.93 | \$4.79 | \$4.93 | \$0.15 | \$43,500 |
| 9/16/2003 | \$5.02 | \$4.95 | \$5.02 | \$0.07 | \$22,500 |
| 9/17/2003 | \$5.06 | \$5.03 | \$5.06 | \$0.03 | \$7,500 |
| 9/18/2003 | \$5.05 | \$4.95 | \$5.05 | \$0.10 | \$30,000 |
| 9/19/2003 | \$4.91 | \$4.76 | \$4.91 | \$0.15 | \$43,500 |
| 9/20/2003 | \$4.70 | \$4.65 | \$4.70 | \$0.05 | \$15,000 |
| 9/21/2003 | \$4.70 | \$4.65 | \$4.70 | \$0.05 | \$15,000 |
| 9/22/2003 | \$4.70 | \$4.65 | \$4.70 | \$0.05 | \$15,000 |
| 9/23/2003 | \$4.80 | \$4.72 | \$4.80 | \$0.07 | \$22,500 |
| 9/24/2003 | \$5.01 | \$4.87 | \$5.01 | \$0.14 | \$42,000 |
| 9/25/2003 | \$5.08 | \$4.97 | \$5.08 | \$0.11 | \$33,000 |
| 9/26/2003 | \$4.95 | \$4.86 | \$4.95 | \$0.09 | \$27,000 |

**Phase III Value Creation, Projected
Maximum Market Price Scenario
Algonquin versus Dracut
04/01/03-3/31/04**

| MDQ (Dth) | 300,000 | | Maximum | Incremental Margin | Total Incremental |
|------------|-----------|--------|--------------|--------------------|-------------------|
| | Algonquin | Dracut | Market Price | (Max- Dracut) | Value Over Dracut |
| 9/27/2003 | \$4.75 | \$4.68 | \$4.75 | \$0.07 | \$21,000 |
| 9/28/2003 | \$4.75 | \$4.68 | \$4.75 | \$0.07 | \$21,000 |
| 9/29/2003 | \$4.75 | \$4.68 | \$4.75 | \$0.07 | \$21,000 |
| 9/30/2003 | \$5.15 | \$5.02 | \$5.15 | \$0.13 | \$39,000 |
| 10/1/2003 | \$5.06 | \$5.02 | \$5.06 | \$0.04 | \$12,000 |
| 10/2/2003 | \$4.88 | \$4.95 | \$4.95 | \$0.00 | \$0 |
| 10/3/2003 | \$4.85 | \$4.80 | \$4.85 | \$0.05 | \$15,000 |
| 10/4/2003 | \$4.79 | \$4.69 | \$4.79 | \$0.10 | \$28,500 |
| 10/5/2003 | \$4.79 | \$4.69 | \$4.79 | \$0.10 | \$28,500 |
| 10/6/2003 | \$4.79 | \$4.69 | \$4.79 | \$0.10 | \$28,500 |
| 10/7/2003 | \$4.88 | \$4.79 | \$4.88 | \$0.09 | \$27,000 |
| 10/8/2003 | \$5.12 | \$5.06 | \$5.12 | \$0.06 | \$18,000 |
| 10/9/2003 | \$5.34 | \$5.18 | \$5.34 | \$0.16 | \$46,500 |
| 10/10/2003 | \$5.18 | \$5.06 | \$5.18 | \$0.12 | \$34,500 |
| 10/11/2003 | \$5.36 | \$5.26 | \$5.36 | \$0.10 | \$30,000 |
| 10/12/2003 | \$5.36 | \$5.26 | \$5.36 | \$0.10 | \$30,000 |
| 10/13/2003 | \$5.36 | \$5.26 | \$5.36 | \$0.10 | \$30,000 |
| 10/14/2003 | \$5.38 | \$5.27 | \$5.38 | \$0.11 | \$34,500 |
| 10/15/2003 | \$5.29 | \$5.29 | \$5.29 | \$0.00 | \$0 |
| 10/16/2003 | \$5.50 | \$5.40 | \$5.50 | \$0.10 | \$30,000 |
| 10/17/2003 | \$5.53 | \$5.45 | \$5.53 | \$0.08 | \$24,000 |
| 10/18/2003 | \$4.99 | \$4.87 | \$4.99 | \$0.12 | \$36,000 |
| 10/19/2003 | \$4.99 | \$4.87 | \$4.99 | \$0.12 | \$36,000 |
| 10/20/2003 | \$4.99 | \$4.87 | \$4.99 | \$0.12 | \$36,000 |
| 10/21/2003 | \$4.83 | \$4.81 | \$4.83 | \$0.01 | \$4,500 |
| 10/22/2003 | \$5.53 | \$5.37 | \$5.53 | \$0.16 | \$48,000 |
| 10/23/2003 | \$5.70 | \$5.64 | \$5.70 | \$0.06 | \$18,000 |
| 10/24/2003 | \$5.67 | \$5.46 | \$5.67 | \$0.21 | \$63,000 |
| 10/25/2003 | \$5.25 | \$5.01 | \$5.25 | \$0.24 | \$70,500 |
| 10/26/2003 | \$5.25 | \$5.01 | \$5.25 | \$0.24 | \$70,500 |
| 10/27/2003 | \$5.25 | \$5.01 | \$5.25 | \$0.24 | \$70,500 |
| 10/28/2003 | \$5.10 | \$4.98 | \$5.10 | \$0.12 | \$34,500 |
| 10/29/2003 | \$5.07 | \$4.98 | \$5.07 | \$0.08 | \$25,500 |
| 10/30/2003 | \$5.02 | \$4.95 | \$5.02 | \$0.07 | \$19,500 |
| 10/31/2003 | \$4.85 | \$4.75 | \$4.85 | \$0.11 | \$31,500 |
| 11/1/2003 | \$4.25 | \$4.17 | \$4.25 | \$0.08 | \$24,000 |
| 11/2/2003 | \$4.25 | \$4.17 | \$4.25 | \$0.08 | \$24,000 |
| 11/3/2003 | \$4.25 | \$4.17 | \$4.25 | \$0.08 | \$24,000 |
| 11/4/2003 | \$4.57 | \$4.36 | \$4.57 | \$0.22 | \$64,500 |
| 11/5/2003 | \$4.50 | \$4.40 | \$4.50 | \$0.10 | \$30,000 |
| 11/6/2003 | \$5.18 | \$5.10 | \$5.18 | \$0.08 | \$24,000 |
| 11/7/2003 | \$5.53 | \$5.37 | \$5.53 | \$0.16 | \$48,000 |
| 11/8/2003 | \$5.43 | \$5.04 | \$5.43 | \$0.39 | \$117,000 |
| 11/9/2003 | \$5.43 | \$5.04 | \$5.43 | \$0.39 | \$117,000 |
| 11/10/2003 | \$5.43 | \$5.04 | \$5.43 | \$0.39 | \$117,000 |
| 11/11/2003 | \$5.19 | \$5.09 | \$5.19 | \$0.10 | \$30,000 |
| 11/12/2003 | \$5.17 | \$5.12 | \$5.17 | \$0.05 | \$16,500 |
| 11/13/2003 | \$5.80 | \$5.50 | \$5.80 | \$0.30 | \$88,500 |
| 11/14/2003 | \$5.56 | \$5.30 | \$5.56 | \$0.26 | \$78,000 |
| 11/15/2003 | \$5.32 | \$5.11 | \$5.32 | \$0.21 | \$61,500 |
| 11/16/2003 | \$5.32 | \$5.11 | \$5.32 | \$0.21 | \$61,500 |
| 11/17/2003 | \$5.32 | \$5.11 | \$5.32 | \$0.21 | \$61,500 |
| 11/18/2003 | \$5.12 | \$4.96 | \$5.12 | \$0.16 | \$48,000 |
| 11/19/2003 | \$4.80 | \$4.79 | \$4.80 | \$0.01 | \$3,000 |
| 11/20/2003 | \$4.93 | \$4.88 | \$4.93 | \$0.05 | \$15,000 |
| 11/21/2003 | \$4.77 | \$4.77 | \$4.77 | \$0.00 | \$0 |
| 11/22/2003 | \$4.51 | \$4.46 | \$4.51 | \$0.05 | \$16,500 |
| 11/23/2003 | \$4.51 | \$4.46 | \$4.51 | \$0.05 | \$16,500 |
| 11/24/2003 | \$4.51 | \$4.46 | \$4.51 | \$0.05 | \$16,500 |
| 11/25/2003 | \$5.31 | \$5.18 | \$5.31 | \$0.13 | \$39,000 |

**Phase III Value Creation, Projected
Maximum Market Price Scenario
Algonquin versus Dracut
04/01/03-3/31/04**

| MDQ (Dth) | 300,000 | | Maximum Market Price | Incremental Margin (Max- Dracut) | Total Incremental Value Over Dracut |
|------------|-----------|---------|-------------------------|-------------------------------------|--|
| | Algonquin | Dracut | | | |
| 11/26/2003 | \$5.18 | \$5.02 | \$5.18 | \$0.16 | \$48,000 |
| 11/27/2003 | \$5.78 | \$5.44 | \$5.78 | \$0.34 | \$102,000 |
| 11/28/2003 | \$5.78 | \$5.44 | \$5.78 | \$0.34 | \$102,000 |
| 11/29/2003 | \$5.78 | \$5.44 | \$5.78 | \$0.34 | \$102,000 |
| 11/30/2003 | \$5.78 | \$5.44 | \$5.78 | \$0.34 | \$102,000 |
| 12/1/2003 | \$5.78 | \$5.44 | \$5.78 | \$0.34 | \$102,000 |
| 12/2/2003 | \$7.01 | \$6.54 | \$7.01 | \$0.47 | \$141,000 |
| 12/3/2003 | \$7.78 | \$6.99 | \$7.78 | \$0.80 | \$238,500 |
| 12/4/2003 | \$6.42 | \$5.83 | \$6.42 | \$0.59 | \$177,000 |
| 12/5/2003 | \$6.63 | \$6.30 | \$6.63 | \$0.33 | \$97,500 |
| 12/6/2003 | \$7.35 | \$7.18 | \$7.35 | \$0.17 | \$52,500 |
| 12/7/2003 | \$7.35 | \$7.18 | \$7.35 | \$0.17 | \$52,500 |
| 12/8/2003 | \$7.35 | \$7.18 | \$7.35 | \$0.17 | \$52,500 |
| 12/9/2003 | \$6.93 | \$6.75 | \$6.93 | \$0.18 | \$52,500 |
| 12/10/2003 | \$7.21 | \$6.97 | \$7.21 | \$0.25 | \$73,500 |
| 12/11/2003 | \$7.48 | \$7.24 | \$7.48 | \$0.24 | \$72,000 |
| 12/12/2003 | \$7.43 | \$7.05 | \$7.43 | \$0.38 | \$112,500 |
| 12/13/2003 | \$7.93 | \$7.62 | \$7.93 | \$0.31 | \$93,000 |
| 12/14/2003 | \$7.93 | \$7.62 | \$7.93 | \$0.31 | \$93,000 |
| 12/15/2003 | \$7.93 | \$7.62 | \$7.93 | \$0.31 | \$93,000 |
| 12/16/2003 | \$7.35 | \$7.10 | \$7.35 | \$0.25 | \$75,000 |
| 12/17/2003 | \$7.20 | \$7.04 | \$7.20 | \$0.16 | \$49,500 |
| 12/18/2003 | \$7.30 | \$6.85 | \$7.30 | \$0.45 | \$133,500 |
| 12/19/2003 | \$8.14 | \$7.80 | \$8.14 | \$0.34 | \$100,500 |
| 12/20/2003 | \$7.66 | \$7.18 | \$7.66 | \$0.48 | \$145,500 |
| 12/21/2003 | \$7.66 | \$7.18 | \$7.66 | \$0.48 | \$145,500 |
| 12/22/2003 | \$7.66 | \$7.18 | \$7.66 | \$0.48 | \$145,500 |
| 12/23/2003 | \$6.96 | \$6.46 | \$6.96 | \$0.50 | \$150,000 |
| 12/24/2003 | \$5.90 | \$5.53 | \$5.90 | \$0.38 | \$112,500 |
| 12/25/2003 | \$5.93 | \$5.55 | \$5.93 | \$0.37 | \$112,500 |
| 12/26/2003 | \$5.93 | \$5.55 | \$5.93 | \$0.37 | \$112,500 |
| 12/27/2003 | \$5.93 | \$5.55 | \$5.93 | \$0.37 | \$112,500 |
| 12/28/2003 | \$5.93 | \$5.55 | \$5.93 | \$0.37 | \$112,500 |
| 12/29/2003 | \$5.93 | \$5.55 | \$5.93 | \$0.37 | \$112,500 |
| 12/30/2003 | \$5.80 | \$5.58 | \$5.80 | \$0.23 | \$67,500 |
| 12/31/2003 | \$6.30 | \$6.14 | \$6.30 | \$0.17 | \$49,500 |
| 1/1/2004 | \$6.23 | \$5.90 | \$6.23 | \$0.32 | \$97,500 |
| 1/2/2004 | \$6.23 | \$5.90 | \$6.23 | \$0.32 | \$97,500 |
| 1/3/2004 | \$6.23 | \$5.90 | \$6.23 | \$0.32 | \$97,500 |
| 1/4/2004 | \$6.23 | \$5.90 | \$6.23 | \$0.32 | \$97,500 |
| 1/5/2004 | \$6.23 | \$5.90 | \$6.23 | \$0.32 | \$97,500 |
| 1/6/2004 | \$7.85 | \$7.25 | \$7.85 | \$0.60 | \$180,000 |
| 1/7/2004 | \$8.88 | \$8.73 | \$8.88 | \$0.15 | \$45,000 |
| 1/8/2004 | \$10.13 | \$9.83 | \$10.13 | \$0.30 | \$90,000 |
| 1/9/2004 | \$11.83 | \$11.75 | \$11.83 | \$0.08 | \$24,000 |
| 1/10/2004 | \$11.38 | \$10.00 | \$11.38 | \$1.38 | \$412,500 |
| 1/11/2004 | \$11.38 | \$10.00 | \$11.38 | \$1.38 | \$412,500 |
| 1/12/2004 | \$11.38 | \$10.00 | \$11.38 | \$1.38 | \$412,500 |
| 1/13/2004 | \$9.13 | \$7.74 | \$9.13 | \$1.39 | \$415,500 |
| 1/14/2004 | \$28.25 | \$19.50 | \$28.25 | \$8.75 | \$2,625,000 |
| 1/15/2004 | \$56.50 | \$50.00 | \$56.50 | \$6.50 | \$1,950,000 |
| 1/16/2004 | \$39.50 | \$23.50 | \$39.50 | \$16.00 | \$4,800,000 |
| 1/17/2004 | \$10.25 | \$9.50 | \$10.25 | \$0.75 | \$225,000 |
| 1/18/2004 | \$10.25 | \$9.50 | \$10.25 | \$0.75 | \$225,000 |
| 1/19/2004 | \$10.25 | \$9.50 | \$10.25 | \$0.75 | \$225,000 |
| 1/20/2004 | \$10.25 | \$9.50 | \$10.25 | \$0.75 | \$225,000 |
| 1/21/2004 | \$8.38 | \$9.40 | \$9.40 | \$0.00 | \$0 |
| 1/22/2004 | \$7.60 | \$7.10 | \$7.60 | \$0.50 | \$150,000 |
| 1/23/2004 | \$8.85 | \$8.48 | \$8.85 | \$0.38 | \$112,500 |
| 1/24/2004 | \$10.50 | \$9.38 | \$10.50 | \$1.13 | \$337,500 |

**Phase III Value Creation, Projected
Maximum Market Price Scenario
Algonquin versus Dracut
04/01/03-3/31/04**

| MDQ (Dth) | 300,000 | | Maximum | Incremental Margin | Total Incremental |
|-----------|-----------|---------|--------------|--------------------|-------------------|
| | Algonquin | Dracut | Market Price | (Max- Dracut) | Value Over Dracut |
| 1/25/2004 | \$10.50 | \$9.38 | \$10.50 | \$1.13 | \$337,500 |
| 1/26/2004 | \$10.50 | \$9.38 | \$10.50 | \$1.13 | \$337,500 |
| 1/27/2004 | \$10.54 | \$9.20 | \$10.54 | \$1.34 | \$400,500 |
| 1/28/2004 | \$12.25 | \$12.50 | \$12.50 | \$0.00 | \$0 |
| 1/29/2004 | \$13.73 | \$14.01 | \$14.01 | \$0.00 | \$0 |
| 1/30/2004 | \$11.05 | \$8.87 | \$11.05 | \$2.18 | \$654,000 |
| 1/31/2004 | \$11.05 | \$8.87 | \$11.05 | \$2.18 | \$654,000 |
| 2/1/2004 | \$8.15 | \$7.35 | \$8.15 | \$0.80 | \$240,000 |
| 2/2/2004 | \$8.15 | \$7.35 | \$8.15 | \$0.80 | \$240,000 |
| 2/3/2004 | \$6.55 | \$6.45 | \$6.55 | \$0.10 | \$30,000 |
| 2/4/2004 | \$6.55 | \$6.35 | \$6.55 | \$0.20 | \$60,000 |
| 2/5/2004 | \$6.75 | \$6.55 | \$6.75 | \$0.20 | \$60,000 |
| 2/6/2004 | \$6.43 | \$6.26 | \$6.43 | \$0.17 | \$51,000 |
| 2/7/2004 | \$6.33 | \$6.25 | \$6.33 | \$0.07 | \$22,500 |
| 2/8/2004 | \$6.33 | \$6.25 | \$6.33 | \$0.07 | \$22,500 |
| 2/9/2004 | \$6.33 | \$6.25 | \$6.33 | \$0.07 | \$22,500 |
| 2/10/2004 | \$6.38 | \$6.18 | \$6.38 | \$0.20 | \$58,500 |
| 2/11/2004 | \$6.38 | \$5.98 | \$6.38 | \$0.40 | \$120,000 |
| 2/12/2004 | \$6.13 | \$5.88 | \$6.13 | \$0.26 | \$76,500 |
| 2/13/2004 | \$6.01 | \$5.76 | \$6.01 | \$0.25 | \$75,000 |
| 2/14/2004 | \$7.93 | \$7.35 | \$7.93 | \$0.58 | \$172,500 |
| 2/15/2004 | \$7.93 | \$7.35 | \$7.93 | \$0.58 | \$172,500 |
| 2/16/2004 | \$7.93 | \$7.35 | \$7.93 | \$0.58 | \$172,500 |
| 2/17/2004 | \$7.93 | \$7.35 | \$7.93 | \$0.58 | \$172,500 |
| 2/18/2004 | \$6.10 | \$5.87 | \$6.10 | \$0.23 | \$70,500 |
| 2/19/2004 | \$5.85 | \$5.73 | \$5.85 | \$0.13 | \$37,500 |
| 2/20/2004 | \$5.74 | \$5.69 | \$5.74 | \$0.05 | \$15,000 |
| 2/21/2004 | \$5.79 | \$5.60 | \$5.79 | \$0.19 | \$55,500 |
| 2/22/2004 | \$5.79 | \$5.60 | \$5.79 | \$0.19 | \$55,500 |
| 2/23/2004 | \$5.79 | \$5.60 | \$5.79 | \$0.19 | \$55,500 |
| 2/24/2004 | \$5.80 | \$5.69 | \$5.80 | \$0.11 | \$33,000 |
| 2/25/2004 | \$5.78 | \$5.68 | \$5.78 | \$0.10 | \$30,000 |
| 2/26/2004 | \$5.81 | \$5.74 | \$5.81 | \$0.06 | \$19,500 |
| 2/27/2004 | \$5.66 | \$5.55 | \$5.66 | \$0.11 | \$33,000 |
| 2/28/2004 | \$5.81 | \$5.58 | \$5.81 | \$0.24 | \$70,500 |
| 2/29/2004 | \$5.81 | \$5.58 | \$5.81 | \$0.24 | \$70,500 |
| 3/1/2004 | \$5.81 | \$5.58 | \$5.81 | \$0.24 | \$70,500 |
| 3/2/2004 | \$5.67 | \$5.49 | \$5.67 | \$0.18 | \$52,500 |
| 3/3/2004 | \$5.89 | \$5.72 | \$5.89 | \$0.17 | \$49,500 |
| 3/4/2004 | \$5.87 | \$5.72 | \$5.87 | \$0.15 | \$45,000 |
| 3/5/2004 | \$5.66 | \$5.52 | \$5.66 | \$0.14 | \$40,500 |
| 3/6/2004 | \$5.93 | \$5.78 | \$5.93 | \$0.15 | \$45,000 |
| 3/7/2004 | \$5.93 | \$5.78 | \$5.93 | \$0.15 | \$45,000 |
| 3/8/2004 | \$5.93 | \$5.78 | \$5.93 | \$0.15 | \$45,000 |
| 3/9/2004 | \$6.15 | \$5.94 | \$6.15 | \$0.22 | \$64,500 |
| 3/10/2004 | \$6.03 | \$5.83 | \$6.03 | \$0.20 | \$60,000 |
| 3/11/2004 | \$5.99 | \$5.82 | \$5.99 | \$0.17 | \$51,000 |
| 3/12/2004 | \$6.05 | \$5.82 | \$6.05 | \$0.23 | \$69,000 |
| 3/13/2004 | \$6.05 | \$5.85 | \$6.05 | \$0.20 | \$61,500 |
| 3/14/2004 | \$6.05 | \$5.85 | \$6.05 | \$0.20 | \$61,500 |
| 3/15/2004 | \$6.05 | \$5.85 | \$6.05 | \$0.20 | \$61,500 |
| 3/16/2004 | \$6.32 | \$6.18 | \$6.32 | \$0.15 | \$43,500 |
| 3/17/2004 | \$6.33 | \$6.11 | \$6.33 | \$0.23 | \$67,500 |
| 3/18/2004 | \$6.35 | \$6.21 | \$6.35 | \$0.15 | \$43,500 |
| 3/19/2004 | \$6.37 | \$6.25 | \$6.37 | \$0.12 | \$36,000 |
| 3/20/2004 | \$6.22 | \$6.06 | \$6.22 | \$0.16 | \$48,000 |
| 3/21/2004 | \$6.22 | \$6.06 | \$6.22 | \$0.16 | \$48,000 |
| 3/22/2004 | \$6.22 | \$6.06 | \$6.22 | \$0.16 | \$48,000 |
| 3/23/2004 | \$6.18 | \$6.04 | \$6.18 | \$0.15 | \$43,500 |
| 3/24/2004 | \$6.01 | \$5.88 | \$6.01 | \$0.13 | \$37,500 |

**Phase III Value Creation, Projected
Maximum Market Price Scenario
Algonquin versus Dracut
04/01/03-3/31/04**

| MDQ (Dth) | 300,000 | | Maximum Market Price | Incremental Margin (Max- Dracut) | Total Incremental Value Over Dracut |
|-------------------------------------|-----------|--------|-------------------------|-------------------------------------|--|
| | Algonquin | Dracut | | | |
| 3/25/2004 | \$5.84 | \$5.78 | \$5.84 | \$0.06 | \$18,000 |
| 3/26/2004 | \$5.69 | \$5.56 | \$5.69 | \$0.13 | \$39,000 |
| 3/27/2004 | \$5.58 | \$5.42 | \$5.58 | \$0.16 | \$48,000 |
| 3/28/2004 | \$5.58 | \$5.42 | \$5.58 | \$0.16 | \$48,000 |
| 3/29/2004 | \$5.58 | \$5.42 | \$5.58 | \$0.16 | \$48,000 |
| 3/30/2004 | \$5.81 | \$5.65 | \$5.81 | \$0.17 | \$49,500 |
| 3/31/2004 | \$6.04 | \$5.85 | \$6.04 | \$0.19 | \$57,000 |
| Total Incremental Value Over Dracut | | | | | \$41,262,000 |