

**BEFORE THE
PUBLIC UTILITIES COMMISSION
OF THE
STATE OF RHODE ISLAND
AND PROVIDENCE PLANTATIONS**

IN THE MATTER OF

**The National Grid Annual
Gas Cost Recovery Charge
Filing**

)
)
)

Docket No. 4283

**DIRECT TESTIMONY OF WITNESS
BRUCE R. OLIVER**

On Behalf of

The Division of Public Utilities and Carriers

October 19, 2011

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

TABLE OF CONTENTS

| | Page |
|---|------|
| I. INTRODUCTION | 1 |
| II. DISCUSSION OF ISSUES | 2 |
| A. Changes in GCR Charges and Costs..... | 3 |
| B. Forecasted Sales and Throughput..... | 16 |
| C. GPIP Incentive Calculations | 20 |
| D. Natural Gas Portfolio Management Plan (NGPMP)..... | 22 |
| E. GCR Reconciliations | 26 |
| III. SUMMARY OF RECOMMENDATIONS..... | 27 |

Exhibits BRO-1 through BRO-7

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS FOR THE RECORD.

A. My name is Bruce R. Oliver. My business address is 7103 Laketree Drive, Fairfax Station, Virginia, 22039.

Q. BY WHOM AND IN WHAT CAPACITY ARE YOU EMPLOYED?

A. I am employed by Revilo Hill Associates, Inc., and serve as President of the firm. I manage the firm's business and consulting activities, and I direct its preparation and presentation of economic, utility planning, and policy analyses for our clients.

Q. ON WHOSE BEHALF DO YOU APPEAR IN THIS PROCEEDING?

A. My testimony in this proceeding is presented on behalf of the Division of Public Utilities and Carriers (hereinafter "the Division").

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. This testimony addresses issues relating to National Grid's (or hereinafter "the Company") Annual Gas Cost Recovery (GCR) filing. This testimony reviews and comments on the content of the company's August 1, 2011, GCR reconciliations as well as: the National Grid's September 13, 2011 Direct Testimony of witnesses Arangio, Nestor, and McCauley; the September 27, 2011 Supplemental Testimony

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

of witness Nestor; the attachments submitted in support of those testimonies; and the Company's responses to data requests in this proceeding.

Q. WHAT EXHIBITS ARE YOU SPONSORING AS PART OF THIS TESTIMONY?

A. Attached to this testimony are seven exhibits. They include:

Exhibit BRO-1 Proposed Changes in GCR Charges by Rate Class

Exhibit BRO-2 Changes in Costs by GCR Cost Component

Exhibit BRO-3 Changes in Forecasted Normal Weather Sales and Throughput

Exhibit BRO-4 Changes in Forecasted Design Winter Throughput

Exhibit BRO-5 Comparison of Forecasted and Actual Throughput by Rate Class

Exhibit BRO-6 Comparison of Current Forecast with Prior Forecasts

Exhibit BRO-7 Division Recommended GCR Charges

II. DISCUSSION OF ISSUES

Q. HOW IS YOUR DISCUSSION OF ISSUES RELATING TO NATIONAL GRID'S GCR FILING IN THIS PROCEEDING ORGANIZED?

A. This discussion is presented in five sections. **Section A** discusses the changes in GCR charges by rate class that National Grid proposes and analyzes the changes in costs by gas cost component that underlie the Company's proposed GCR charges. **Section B** evaluates the reasonableness of the forecasts of normalized sales and

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 design winter sales that have been relied upon in the development of National Grid's
2 proposed GCR charges. **Section C** presents an assessment of (1) the Company's
3 GPIP performance, (2) the incentive calculations that National Grid offers for the
4 2010-2011 gas year, (3) the reasonableness of the amount of the GPIP incentive
5 that National Grid seeks, and (4) changes that the Company proposes in the
6 language of the GPIP. **Section D** examines the impacts of the Natural Gas Portfolio
7 Management Plan (NGPMP) on the costs subject to recovery through the
8 Company's proposed GCR rates. **Section E** reviews National Grid's reconciliation
9 of its GCR costs and revenue for the twelve months ended June 30, 2011.

10
11 **A. Changes in National Grid's GCR Rates and Gas Costs**

12
13 **Q. HOW DO THE COMPANY'S PROPOSED CHANGES IN GCR CHARGES VARY**
14 **BY RATE CLASSIFICATION?**

15 A. National Grid's filing proposes reductions in its GCR charges for all rate
16 classifications except the FT-2 Marketer Charge. As shown in **Exhibit BRO-1**, the
17 Company proposes to lower its GCR charges for Residential Heating customers,
18 Small C&I customers, Medium C&I customers, Low Load Factor Large C&I
19 customers, and Low Load Factor Extra Large C&I customers from \$0.9091 per
20 therm to **\$0.7929 per therm**. That represents a **reduction** of **12.8%**. The
21 Company's September 13, 2011 filing also proposes a GCR **reduction** of **14.9%** for
22 Residential Non-Heating customers and High Load Factor Large and Extra Large

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 C&I customers. As a result, GCR charges for those customers would also **decline**
2 from \$0.8803 per therm to **\$0. 7487 per therm**. The GCR rate for Natural Gas
3 Vehicles would also decrease from \$0.7436 to **\$0. 6193 per therm** (i.e., a **16.7%**
4 **reduction**). However, the FT-2 Storage Charge would increase **0.5%** from \$0.0367
5 per therm to **\$0.0369 per therm**.
6

7 **Q. WHY ARE THE PERCENTAGE DECREASES IN GCR CHARGES SHOWN IN**
8 **EXHIBIT BRO-1 NOT UNIFORM ACROSS RATE CLASSES?**

9 A. Three basic factors contribute to the differences in percentage decreases in GCR
10 charges by rate class that National Grid proposes. Those are:

- 11 1. Differences in the rates of change in the size of the
12 GCR cost components; and
13
- 14 2. Differences in the magnitude of over- or under-collec-
15 tions of costs by GCR component; and
16
- 17 3. Differences in the manner in which the five components
18 of GCR costs are allocated among classes.
19
20

21 In this GCR filing, rates for higher load factor service classifications receive
22 somewhat larger percentage decreases in their GCR rates because the Company's
23 forecasted cost reductions are primarily in the Variable Cost elements of its overall
24 gas costs.
25

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 **Q. HAVE THE COMPANY'S GAS COSTS DECREASED UNIFORMLY ACROSS ALL**
2 **GCR COST COMPONENTS?**

3 A. No. Exhibit BRO-2, page 1 of 2, compares the Company's GCR cost projections by
4 component for the 2011-12 GCR year (prior to adjustments and reconciliation
5 amounts) with comparable measures of costs that National Grid projected in its last
6 GCR filing Docket No. 4199. As shown on that page, the cost changes that National
7 Grid projects are negative for all cost components except Supply Fixed Costs.
8 Although the Company's **overall costs** of gas are expected to **decline** by **8.4%**, its
9 **Supply Fixed Costs** are projected to **increase** by **15.0%**.

11 **Q. WHAT IS THE CAUSE OF THE INCREASE IN SUPPLY FIXED COSTS THAT**
12 **NATIONAL GRID PROJECTS FOR ITS 2011-12 GCR YEAR?**

13 A. My review of witness Arangio's Attachment EDA-2, pages 10-14, finds that the
14 Company's projected increase in Fixed Supply Costs is driven largely by a near
15 doubling of the demand rates for key Tennessee Gas Pipeline ("TGP") services.
16 Neither the annual volumes for which the Company has planned nor the Company's
17 Pipeline Fixed Cost billing units has changed substantially from its projections in
18 Docket No. 4199.¹ However, the TGP rate increase adds roughly \$500,000 per
19 month to National Grid's projected Pipeline Demand Costs. As witness Arangio
20 notes, TGP implemented this significant rate increase on June 1, 2011 pending

¹ The monthly and annual "RI Sales GCR" presented on page 1 of Attachment EDA-2 reflect only a 0.9% increase over the comparable sales figures from the Company's filing in Docket No. 4199.

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 resolution of its FERC proceeding. Thus, if the final rates resulting from that case
2 are lower than the rates Tennessee implemented on June 1, 2011, National Grid
3 should receive a refund of amounts paid in excess of the final rates. Moreover, the
4 Company's actual TGP costs for the 2011-2012 GCR year will be less than it has
5 projected for this proceeding.

6 The Commission should take note of the Company's response to Division
7 Data Request DIV 1-14. In that response, witness Arangio indicates a settlement
8 has been reached in the Tennessee Gas Pipeline case which will substantially
9 reduce the amount of the overall increase in fixed costs National Grid has
10 forecasted, as well as provide refunds for the period between June 1, 2011 and the
11 implementation of the Settlement rates, if those rates are approved.

12 The Commission should also note that the terms of the settlement in the TGP
13 rate case before FERC provide for the implementation of a revenue sharing
14 mechanism under which 75% of any excess revenue achieved by TGP will flow back
15 to TGP's customers, such as National Grid. The Division is concerned, however,
16 that the Company's current GCR tariff provisions at Section 2, Gas Charge,
17 Schedule A, Sheet 1, paragraph 1.1, while addressing pipeline refunds, do not
18 explicitly address the rate treatment of such revenue sharing amounts. To avoid
19 any future confusion regarding this matter, the Commission should determine that
20 National Grid should treat any revenue sharing amounts that flow to National Grid
21 based on pipeline or storage services required to serve its Rhode Island

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 jurisdictional customers in the same manner as “supplier refunds.” This will help to
2 ensure that revenue sharing amounts are timely credited to Rhode Island ratepayers
3 through the GCR.

4
5 **Q. DO THE GAS COSTS BY COMPONENT THAT ARE REFLECTED IN MR.**
6 **NESTOR’S EXHIBITS TIE DIRECTLY TO THE GAS SUPPLY COSTS**
7 **DEVELOPED IN WITNESS ARANGIO’S EXHIBITS?**

8 A. Yes, they do.

9
10 **Q. DO YOU HAVE ANY CONCERNS REGARDING THE ELEMENTS OF THE**
11 **COMPANY’S GCR RATE COMPUTATIONS?**

12 A. Yes, I do. My concerns are summarized as follows:

13
14 1. National Grid has assumed an inappropriately low dollar value for
15 NGPMP credits to Supply Fixed Costs for the 2011-12 GCR period.

16
17 2. As I noted in my recently filed Direct Testimony in Case No. 4269
18 (National Grid’s pending DAC proceeding), the dollar amount of LNG-
19 related costs allocated to the DAC appears to be understated.

20
21 3. The terms of the recently filed settlement in the Tennessee Gas
22 Pipeline rate case currently pending before the Federal Energy

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 Regulatory Commission ("FERC"), if approved, would significantly
2 lower pipeline demand costs that National Grid has assumed in its
3 development of GCR charges in this proceeding.

4
5 4. The changes in the distribution of the Company's forecasted sales
6 and throughput by month and by rate class affect the assignment of
7 gas cost among rate classes.

8
9 5. Due to the present lack of a Long-Range Gas Supply Planning Study
10 that addresses the 2011-12 GCR period and beyond, the Division is
11 unable to verify the reasonableness and appropriateness of the
12 Company's fixed gas supply and storage costs for the 2011-2012
13 GCR year.

14
15 6. Given that National Grid has not finalized its contractual arrangements
16 for LNG supply for the coming winter, the Division is not able to
17 assess the reasonableness of the LNG costs that the Company has
18 estimated for the 2011-12 GCR year.

19
20 **Q. HOW SHOULD THE COMMISSION ADDRESS THE CONCERN IDENTIFIED**
21 **ABOVE WITH RESPECT TO THE COMPANY'S UNDERSTATEMENT OF NGPMP**
22 **CREDITS?**

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 A. A proposed adjustment to the assumed level of NGPMP credits is presented in
2 Section D of this Discussion of Issues.
3

4 **Q. IS COMMISSION ACTION REGARDING THE ALLOCATION OF LNG COSTS**
5 **BETWEEN THE DAC AND THE GCR NECESSARY AT THIS TIME?**

6 A. No. I have discussed this matter with witnesses Nestor and Arangio, and they have
7 agreed to work with the Division to refine further the data and methods used to
8 determine these allocations. In addition, the Commission may be well advised to
9 defer action relating to changes in these allocations until issues associated with the
10 Company's proposed changes in Gas Marketer Tariffs, now pending in Docket No.
11 4270, have been resolved.
12

13 **Q. SHOULD THE COMMISSION ALTER THE ASSUMED LEVEL OF COSTS**
14 **ASSOCIATED WITH TENNESSEE GAS PIPELINE SERVICES THAT ARE**
15 **INCLUDED IN THE COMPANY'S COSTS OF GAS AND PROPOSED GCR**
16 **CHARGES IN THIS PROCEEDING?**

17 A. Although it appears that it would be possible to produce estimates of the gas cost
18 impacts of the rates proposed in the TGP settlement, the Division feels that such an
19 adjustment to National Grid's gas costs based on a proposed settlement may be
20 premature. When a final resolution of that case is known, the Company can assess
21 whether any cost changes resulting from the resolution of that case warrant its
22 offering of an interim adjustment to its GCR charges. If an interim adjustment to the

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 GCR does not occur, all cost reductions associated with implementation of the TGP
2 settlement rates, as well as any refunds received, should be captured for the benefit
3 of ratepayers in the 2012 GCR reconciliation filing.
4

5 **Q. IS IT REASONABLE TO EXPECT THAT THE COMMISSION WOULD BE ABLE**
6 **TO FULLY AND APPROPRIATELY ADDRESS YOUR CONCERNS REGARDING**
7 **THE COMPANY'S FORECASTS OF NORMAL WEATHER AND DESIGN WINTER**
8 **SALES AND THROUGHPUT IN THIS PROCEEDING?**

9 A. No. Resolution of those issues at this time does not appear to be a realistic option
10 given that causes of changes in the Company's forecasts of Normal Weather sales
11 and throughput have not be identified or explained. Without diminishing the
12 importance of these forecasting issues, Division believes the best course of action is
13 for the Company to work with the Division over the next several months to
14 investigate these matters further and to endeavor to develop forecasts for future
15 GCR proceedings that produce more reasonable and reliable results.
16

17 **Q. PLEASE EXPLAIN FURTHER THE IMPORTANCE OF HAVING A LONG-RANGE**
18 **GAS SUPPLY PLAN THAT ADDRESSES THE COMPANY'S PLANNING**
19 **REQUIREMENTS FOR THE WINTER OF 2011-12.**

20 A. The fact that National Grid has not filed a new Long-Term Gas Supply Plan in nearly
21 five years is a matter of considerable concern. The Company's last filed Long-Term
22 Gas Supply Plan (in Docket No. 3789) only assessed the reasonableness of the

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 Company's gas supply portfolio through winter of **2010-2011**. Although the GCR
2 rates being developed in this proceeding are intended to be applicable during the
3 winter of **2011-2012**, no basis is provided in this proceeding for evaluating the
4 reasonableness of the Company's portfolio of gas supply assets for the winter of
5 **2011-2012** or for subsequent winter periods. This concern is further accentuated by
6 the fact that National Grid's forecasted Design Winter Throughput for the winter of
7 2011-12 (as shown in Attachment JFN-1, page 15) reflects disproportionately large
8 increases in its projected Design Winter requirements.

9 Exhibit BRO-3, page 2 of 2, indicates that National Grid's **Normal Weather**
10 **Sales** requirements for the 2011-12 GCR year **increase** by **2.3%** over the annual
11 Normal Weather sales volumes that the Company forecasted in Docket No. 4199.
12 However, Exhibit BRO-4, page 1 of 2, finds that National Grid forecasts a **9.8%**
13 **increase** in **Design Winter Sales**. Thus, the Company's projections reflect an
14 expectation that forecasted growth in Design Winter Sales for the months November
15 through March is more than four (4) times the growth it foresees in Normal Weather
16 Sales requirements. For Sales and FT-2 customers combined, National Grid
17 projects a **7.7% increase** in **Normal Weather Throughput** and a **15.6% increase** in
18 **Design Winter Throughput**. For unexplained reasons, the Company is projecting
19 much greater percentage increases in Design Winter requirements. This is a
20 concern in that the disproportionate increase in projected design winter
21 requirements affects the allocation of Supply Fixed Costs and Storage Fixed Costs
22 between high load factor and low load factor customer groups causing low load

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 factor customers, including Residential Heating customers, to pick up relatively
2 greater costs. It also may affect the establishment of mandatory gas purchase
3 requirements by month.
4

5 **Q. DO YOU HAVE ANY FURTHER CONCERNS REGARDING THE FORECASTS**
6 **UPON WHICH NATIONAL GRID RELIES IN THIS PROCEEDING?**

7 A. Yes, I do. The Company's projected 3.7% increase in Residential Heating
8 customer's Normal Weather Throughput is well above the forecasted growth rate for
9 the Residential Heating class that National Grid reflected in longer-term forecast
10 data provided in response to Division Data Request 2-7 in Docket No. 4269
11 (National Grid's pending DAC proceeding). Furthermore, when the Company's
12 forecasted Normal Weather Throughput by rate class and by month is compared to
13 National Grid's filed forecast of Normal Weather Throughput from its last GCR
14 proceeding, a number of very large and counter intuitive changes in usage are
15 observed. For example, the 3.7% increase in Normal Weather annual therms for
16 the Residential Heating class comprises a 10.3% increase in throughput for the five-
17 month November – March winter peak period, and a 10.4% decrease for the seven
18 off-peak months of April – October. As shown below, similar relationships in the
19 projected throughput for peak and off-peak months are observed in the Company's
20 projected Normal Weather Throughput for other classes:
21

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

| <u>Changes in Normal Weather Throughput</u> | | | |
|---|----------------|-----------------|---------------|
| <u>Rate Class</u> | <u>Peak</u> | <u>Off-Peak</u> | <u>Annual</u> |
| | <u>Nov-Mar</u> | <u>Apr-Oct</u> | |
| | <u>Months</u> | <u>Months</u> | |
| Residential Non-Heat | -15.6% | -20.8% | -18.0% |
| Residential Heat | 10.3% | -10.4% | 3.7% |
| Small C&I | 30.0% | 9.7% | 24.1% |
| Medium C&I | 28.0% | -20.0% | 11.4% |
| Large Low Load Factor C&I | 28.0% | -7.6% | 17.0% |
| Large High Load Factor C&I | 44.0% | 53.2% | 48.3% |
| Extra Large Low Load Factor | -36.4% | -68.6% | -43.5% |
| Extra Large High Load Factor | 89.1% | 259.5% | 155.7% |
| Total All Throughput | 15.2% | -7.9% | 7.7% |

The data above indicate that the changes National Grid projects in its forecasted normal weather sales and throughput for the 2011-12 GCR period differ markedly for Peak and Off-Peak months. One of the most extreme examples is the Medium C&I class for which National Grid projects a **28% increase** in volumes for the Peak usage months of November - March and a **20% decrease** for the April – October Off-Peak months. Likewise, National Grid's 2011-12 Normal Weather forecast for the Large Low Load Factor C&I class reflects a **28% increase** in volumes for the Peak usage months of November - March and a **7.6% decrease** for the Off-Peak months of April – October. Viewed on a monthly basis, the forecasted variations in sales and throughput growth become even more disparate with usage estimates for the months of December, January and February frequently showing the largest increases. These substantial shifts in the monthly distribution of forecasted gas service volumes are too important to be presented without

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 discussion of their causes and the resultant impacts on the Company's gas costs
2 and gas supply planning.
3

4 **Q. ARE THE INCREASES IN FORECASTED THROUGHPUT REQUIREMENTS**
5 **THAT NATIONAL GRID PROJECTS IN THIS PROCEEDING SIMPLY A REVER-**
6 **SAL OF THE DECREASES THAT THE COMPANY PROJECTED LAST YEAR?**

7 A. No. Although there are certainly portions of the forecasted increases in this
8 proceeding that offset declines that were forecasted in Docket No. 4199,
9 comparison of the detail of forecasts from both of its last two GCR proceedings
10 (Docket Nos. 4097 and 4199) with its forecast in this case show a number of rather
11 dramatic changes in seasonal and monthly gas use patterns by rate class. Such
12 large and difficult-to-explain changes in gas use patterns are not generally expected
13 in comparisons of forecasts that are premised on comparable heating degree day
14 assumptions.

15 **Exhibit BRO-6** summarizes my efforts to compare the Company's Normal
16 Winter Throughput forecast in each of its last two GCR proceedings with National
17 Grid's Normal Winter Throughput forecast in this proceeding. The far right hand
18 column of that exhibit shows the percentage changes in forecasted throughput
19 between the current forecast in this docket and the forecast filed two year ago in
20 GCR docket 4097. Moreover, the comparisons in that column depict changes in
21 forecasted Annual Throughput, changes in forecasted throughput for the months of
22 November through March, and changes in forecasted throughput for the month of

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 January (i.e., generally the peak month under Normal Weather conditions). For
2 every class, the data in this last column show that the forecasted throughput growth
3 for the months of November through March is greater than growth in forecasted
4 throughput on an annual basis. In addition, the forecasted growth for the month of
5 January is greater than the growth for the months of November – March period.
6

7 **Q. ARE THE GCR CHARGES THAT NATIONAL GRID PROPOSES IN ITS**
8 **SEPTEMBER 13, 2011 FILING PROPERLY COMPUTED?**

9 A. The methods that National Grid uses in its September 13, 2011 filing to compute the
10 GCR charges that it proposes are generally consistent with those the Company has
11 used, and the Commission has accepted, in past GCR filings. One exception is the
12 reflection of a reconciliation amount on page 2 of witness Nestor's Attachment JFN-
13 1, line 13, for Marketers Fixed Costs. I have discussed this with witness Nestor and
14 traced its derivation of the adjustment amounts back to witness Arangio's
15 Attachment EDA-4, page 10 of 16. With the addition of that reconciliation amount,
16 the computations the Company has used to derive the charges set forth in witness
17 Nestor's testimony and Attachment NG-JFN-1 appear to be mathematically
18 accurate. As a result, the reasonableness of the GCR charges that National Grid
19 proposes is primarily a function of:
20

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

(1) The reasonableness of the forecasts of Normal Weather and Design Winter throughput requirements upon which the Company relies in this proceeding;

(2) The data and analyses which underlie the Company's capacity planning and National Grid's determination of fixed gas supply and storage costs for the projected GCR period; and

(3) Other data inputs and assumptions the Company has used to compute its projected gas costs including its deferred gas costs.

B. Forecasted Sales and Throughput

Q. DOES NATIONAL GRID ANTICIPATE SIGNIFICANT CHANGES IN ITS FORECASTED SALES AND THROUGHPUT FOR THE 2011-2012 GCR PERIOD (I.E., NOVEMBER 2011 THROUGH OCTOBER 2012)?

A. Yes. As explained earlier in this testimony, Exhibit BRO-3, pages 1 of 2 and 2 of 2, the Company expects its overall **sales** volumes will **increase** by **2.3%** over the level projected in its 2010-2011 GCR filing while it forecasts that combined throughput for **Sales and FT-2 customers** will increase **7.7%**. In addition, Exhibit BRO-3, page 1, depicts large differences in forecasted growth by rate class.

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 **Q. WHAT OBSERVATIONS HAVE YOU MADE WITH RESPECT TO THE**
2 **COMPANY'S FORECASTED CHANGES IN ITS DESIGN WINTER SALES AND**
3 **THROUGHPUT REQUIREMENTS?**

4 A. Exhibit BRO-4, pages 1 of 2 and 2 of 2, compares the changes that the
5 Company forecasts in its Design Winter Requirements for the winter of 2011-2012 to
6 similar forecasts the Company included in its filings in Docket No. 4199 for the
7 winter of 2010-2011. National Grid's projected increases in design winter
8 requirements for Sales and FT-2 customers are substantially greater than its
9 forecasted increases in annual sales and throughput. The projected one-year
10 increase Normal Weather annual Sales and FT-2 throughput is **7.7%**. However, the
11 Company's forecasted increase in Design Winter requirements for the same
12 customers is **15.6%**. Surprisingly, even the Company's projections of Design
13 Winter Throughput for customers in high load factor service classification are far
14 greater than the projected increases in annual throughput requirements for those
15 customers. For example, National Grid's forecasts indicate that **Design Winter**
16 throughput requirements for Extra Large High Load Factor sales and FT-2
17 customers will increase **81.8%** while annual **Normal Weather** throughput for those
18 customers will grow only **7.3%**.

19
20 **Q. IS THERE ANY DISCUSSION IN NATIONAL GRID'S FILED SEPTEMBER 13,**
21 **2011 TESTIMONY WHICH ADDRESSES AND ATTEMPTS TO EXPLAIN THE**

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 **FORECASTED CHANGES IN SALES AND THROUGHPUT VOLUMES YOU**
2 **HAVE IDENTIFIED?**

3 A. No, there is nothing in the testimony of any of the Company's witnesses that
4 identifies changes in its forecasted sales and throughput or explains the factors that
5 drive those changes.

6
7 Q. **CAN YOU ASSESS THE RELIABILITY OF THE FORECAST OF WEATHER-**
8 **NORMALIZED ANNUAL SALES AND THROUGHPUT THAT WITNESS NESTOR**
9 **PRESENTS ON BEHALF OF NATIONAL GRID IN THIS PROCEEDING?**

10 A. I recognize that forecasts by their very nature are most likely to be inaccurate.
11 However, the cause of major changes in forecasted requirements should be
12 explainable. Without any explanation of the factors contributing to National Grid's
13 forecasted year-over-year changes in **Normal Weather** sales and throughput and
14 **Design Winter** requirements, it is impossible to assess the reliability of the forecasts
15 the Company has filed in this proceeding.

16
17 Q. **GIVEN THAT GCR PROVIDES A FULLY RECONCILING MECHANISM FOR**
18 **NATIONAL GRID'S GAS SUPPLY RELATED COSTS, WHY SHOULD THE**
19 **COMMISSION FOCUS ITS ATTENTION ON CONCERNS REGARDING THE**
20 **REASONABLENESS AND APPROPRIATENESS OF THE COMPANY'S**
21 **THROUGHPUT FORECASTS?**

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 A. The Commission's consideration of the reasonableness of National Grid's
2 throughput forecast is important for two reasons.

3 First, those forecasts affect the Company's allocation of Supply Fixed Costs
4 and Storage Variable Costs by rate classification, and those rate class allocations of
5 fixed costs are not subject to subsequent reconciliation. Thus, misallocations
6 among rate classes of Supply Fixed Costs and Storage Fixed Costs may never be
7 corrected or fully offset.

8 Second, National Grid's forecasts of Normal Weather and Design Winter
9 sales and throughput play an essential role in the Company's planning of gas supply
10 resources and directly impact the amounts of pipeline, storage, and peaking supply
11 capacity the Company maintains, as well as the costs of those supply resources.

12 Third, inappropriate changes in the Company's forecasted sales and
13 throughput volumes by month can adversely impact monthly mandatory and
14 discretionary gas purchase volumes that are identified under the provisions of
15 National Grid's Gas Procurement Incentive Plan ("GPIP").
16

17 **Q. WHAT IMPACT DO THE COMPANY'S THROUGHPUT FORECASTS HAVE ON**
18 **ITS PROJECTED DESIGN DAY GAS SUPPLY REQUIREMENTS?**

19 A. In the Company's last Long-Range Gas Supply Planning Study (filed in Docket No.
20 3789), National Grid projected a Design Day Peak for January 2011 of **349,367**

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 **Dth.**² National Grid's response to Division Data Request DIV 2-10 in Docket No.
2 4199 reflected a forecasted Design Day Peak requirement of **289,700 Dth** which
3 represented a **17% reduction** from the level forecasted at the time of the Com-
4 pany's long-range gas supply planning study. In Division Data Request 1-3 in this
5 proceeding, National Grid was asked to provide the information it relies upon to
6 assess the adequacy of its gas supply resources for meeting Design Peak Day
7 requirements for the winter of 2011-12. In its response to that request, National
8 Grid uses a Forecasted Peak Day Sendout Requirement of **279,500 Dth**. Thus, it
9 appears that the Design Day Peak for the winter of 2011-12 for which the Company
10 is now planning is **69,867 Dth** or **20% below** the level reflected in its last Long-
11 Range Gas Supply Plan. However, the lowered Design Peak Day requirement cited
12 by witness Arangio in response to Division Data Request 1-3 appears inconsistent
13 with the detail of the Sales and Throughput forecasts found in Attachment NG-JFN-
14 1(5) to witness Nestor's Direct Testimony in this docket.

16 **C. GPIIP Incentive Calculations**

17
18 **Q. DOES THE COMPANY SEEK APPROVAL OF A GAS PROCUREMENT INCEN-**
19 **TIVE FOR THE 12 MONTH PERIOD ENDED JUNE 2011?**

² National Grid's last Long-Range Gas Supply Planning Study only projected Design Day Peak Demands through the winter of 2010-11. Witness Arangio has indicated in response to Division Data Request 1-2 in this proceeding that the Company plans to file a new long-term gas supply planning study in January 2012.

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 A. Yes. The September 13, 2011 testimony of witness Stephen McCauley presents
2 National Grid's request for approval of an incentive of **\$226,102** for the twelve
3 months ended June 30, 2011. The incentive request is noticeably less than the level
4 it sought last year. I find the lower level of that requested incentive appears to be a
5 reflection of the comparatively low and more stable gas prices generally experienced
6 over the last year.

7
8 **Q. DO YOU FIND ANY REASON TO QUESTION THE ACCURACY OF THE**
9 **COMPANY'S GPIP INCENTIVE CALCULATIONS?**

10 A. No, I do not. I have reviewed the supporting detail for the Company's mandatory
11 and discretionary gas purchases for the twelve months ended June 2011, and I find
12 that the Company's incentive calculation is consistent with the terms of the Gas
13 Procurement Incentive Plan (GPIP).

14
15 **Q. WHAT IS YOUR ASSESSMENT OF NATIONAL GRID'S PROPOSAL TO ELIMIN-**
16 **ATE PERMENANTLY THE \$1,000,000 CAP ON THE AMOUNT OF INCENTIVE**
17 **THE COMPANY CAN EARN ON AN ANNUAL BASIS?**

18 A. I find no problem with National Grid's proposal to make the elimination of the cap on
19 GPIP incentive permanent. In the present market with lowered prices (compared to
20 pre-recession levels) and reduced price volatility, the likelihood of the Company
21 exceeding \$1,000,000 in earned GPIP incentives for any 12-month period appears
22 low. It also appears that for, at least the next couple of years, market conditions are

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 not likely to provide the Company frequent opportunities to achieve large reductions
2 in purchased gas costs through discretionary purchases. Even if the market should
3 turn around and once again exhibit volatile and upward trending natural gas prices,
4 the value to ratepayers of providing incentives to National Grid to pursue
5 discretionary gas purchases to lower its overall gas purchase costs is also likely to
6 increase. In that context, I agree with the Company that it is important to maintain
7 incentives for the Company to lower costs to ratepayers even if an arbitrary
8 threshold (e.g., \$1,000,000 per year of incentives for the Company) is surpassed.

9
10 **Q. DO YOU SUPPORT COMMISSION APPROVAL OF THE CHANGES IN THE**
11 **PROVISIONS OF THE GPIIP THAT WITNESS MCCAULEY PRESENTS IN**
12 **ATTACHMENTS SAM-1 AND SAM-1A?**

13 A. Yes. I have reviewed those changes, and I find them to be consistent with the
14 understanding reached between the Company and the Division. Therefore, I
15 support the Commission's approval of the changes in the GPIIP that National Grid
16 presents in this proceeding.

17
18 **D. Natural Gas Portfolio Management Plan (NGPMP)**

19
20 **Q. DOES THE COMPANY REQUEST APPROVAL OF AN INCENTIVE PAYMENT**
21 **UNDER THE PROVISIONS OF THE NGPMP?**

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 A. Yes. Witness McCauley's September 13, 2011 testimony at page 7 requests
2 approval of NGPMP incentive payment of **\$731,094** for the period April 2010 through
3 March 2011.

4
5 **Q. IS THE INCENTIVE THAT NATIONAL GRID COMPUTES UNDER THE**
6 **PROVISIONS OF THE NATURAL GAS PORTFOLIO MANAGEMENT PLAN**
7 **(NGPMP) APPROPRIATELY COMPUTED?**

8 A. Yes, it is.
9

10 **Q. HOW DOES THE LEVEL OF NGPMP CREDIT INCLUDED IN THE COMPANY'S**
11 **GCR FILING IN THIS PROCEEDING COMPARE TO THE ACTUAL NGPMP**
12 **BENEFITS THAT THE COMPANY REFLECTS FOR THE CAPACITY CREDITS**
13 **THAT NATIONAL GRID REFLECTED IN LAST YEAR'S GCR FILING?**

14 A. Witness McCauley testifies that the NGPMP produced total savings for the period
15 April 2010 through March 2011 of **\$4,655,474**. I have reviewed the supporting detail
16 of the Company's NGPMP transactions and savings calculations, and I concur with
17 National Grid's assessment of those savings. Based on the achievement of
18 **\$4,655,474** in asset management savings, the formula established for sharing net
19 revenue under the NGPMP dictates that the first \$1.0 million of asset management
20 revenue is assigned 100% to ratepayers. Thus, the remaining \$3,655,474 (i.e.,
21 \$4,655,474 - \$1,000,000) is credited 80% to ratepayers and 20% to the Company.
22 In this instance 80% of \$3,655,474 equals \$2,924,380. That amount, plus the

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 \$1,000,000 that is applied 100% to ratepayers, yields a **total ratepayer benefit** for
2 the twelve months ended March 31, 2011 of **\$3,924,380**. The remainder (i.e., 20%
3 of 3,655,474 or **\$731,094**) becomes the Company's incentive. For the twelve
4 months ended March 31, 2011, the Company's incentive of \$731,094 equates to
5 **15.7%** of the total net asset management savings generated by the Company.
6

7 **Q. DO YOU FIND ANY REASON THAT THE COMMISSION SHOULD WITHHOLD**
8 **APPROVAL OF THE \$731,094 NGPMP INCENTIVE THAT NATIONAL GRID HAS**
9 **COMPUTED?**

10 A. No, I do not. Although the roughly \$4.6 million of net asset management revenue is
11 below the levels realized years prior to the recession, the Company's achievement
12 of that amount under the market conditions that prevailed during the twelve months
13 ended March 31, 2011 should be viewed as a strong performance.
14

15 **Q. WHAT LEVEL OF ASSET MANAGEMENT BENEFIT IS ASSUMED BY**
16 **NATIONAL GRID IN WITNESS NESTOR'S DEVELOPMENT OF THE**
17 **COMPANY'S PROPOSED GCR RATES IN THIS PROCEEDING?**

18 A. Attachment NG-JFN-1 (5), page 2, line 3, column (c), reflects assumed "NGPMP
19 Customer Benefits" of **\$3,120,000** for the November 2011 – October 2012 GCR
20 year.
21

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 **Q. IS THE LEVEL OF ASSET MANAGEMENT BENEFIT ASSUMED IN NATIONAL**
2 **GRID’S DETERMINATION OF GCR CHARGES FOR THE 2011-12 GCR YEAR**
3 **REASONABLE AND APPROPRIATE?**

4 A. The **\$3,120,000** amount of NGPMP credit for ratepayer benefit that National Grid
5 assumes appears rather conservative. Last year in Docket No. 4199 the Company
6 initially assumed \$2,400,000 of customer benefit from the NGPMP in its computation
7 of GCR charges for the 2010-11 GCR year. At that time I testified that the
8 Commission should assume not less than \$3,400,000 of customer benefits for the
9 2010-11 GCR year. As shown in witness McCauley’s testimony in this proceeding,
10 the Company actually achieved over \$4.6 million of net asset revenue for the twelve
11 months ended March 31, 2011 of which over \$3.9 million has been credited to
12 ratepayers. In other words, the Company’s actual performance for the twelve
13 months ended March 2011 exceeded the amount I recommended the Commission
14 assume in last years determination of GCR rates by more than \$500,000. The
15 Company’s actual ratepayer share of NGPMP capacity release credits for the twelve
16 months ended March 2011 also exceeds the NGPMP that is assumed in witness
17 Nestor’s 2011-2012 GRC rate computations by roughly \$800,000.

18
19 **Q. DOES NATIONAL GRID PROVIDE ANY SUPPORTING ANALYSES, RATION-**
20 **ALES OR OTHER JUSTIFICATION FOR THE LEVEL OF NGPMP CUSTOMER**
21 **BENEFIT THAT IT HAS ASSUMED FOR THE 2011-12 GCR YEAR?**

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 A. No, it does not. Although witness Nestor's Attachment NG-JFN-1, page 2, line 3,
2 references Attachment EDA-1, to witness Arangio's testimony, witness Arangio's
3 Attachment EDA-1 simply shows 12 monthly "NGPMP Credits" of \$260,000 per
4 month (i.e., $\$260,000 * 12 \text{ months} = \$3,120,000$).

5
6 **Q. WHAT LEVEL OF NGPMP CREDITS SHOULD BE ASSUMED IN THE DEVELOP-**
7 **MENT OF PROPOSED GCR CHARGES FOR THE 2011-12 GCR PERIOD?**

8 A. I encourage the Commission to assume annual NGPMP credits to ratepayers for the
9 coming GCR year will be at least as much as the \$3.92 million the Company actually
10 achieved for the twelve months ended March 2011. With further planned closings of
11 coal-fired electric generating plants and continued growth in the demand for gas for
12 electric generation, as well as rapidly expanding use of natural gas for Central Heat
13 and Power facilities by large Commercial and Industrial customers, the Commission
14 should determine that it is reasonable to assume that National Grid's NGPMP
15 performance in the coming year is likely to equal or exceed its achieved results for
16 its last fiscal.

17
18 **E. Gas Cost Reconciliations**

19
20 **Q. HAVE YOU REVIEWED THE COMPANY'S RECONCILIATION OF GAS COSTS**
21 **FOR THE TWELVE MONTHS ENDED JUNE 30, 2011?**

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 A. Yes, I have. Attachment JFN-2 submitted with witness Nestor's September 13,
2 2011 testimony in this proceeding provides the Company's "Annual Gas Cost
3 Recovery Reconciliation Report." In that reconciliation report, the Company
4 presents its costs and revenue collections by month for each of the major compon-
5 ents of its Gas Supply Costs for the twelve months ended June 30, 2011. As part of
6 my preparation of this testimony, I have reviewed the full detail of those recon-
7 ciliations.

8
9 **Q. ARE THE COMPANY'S RECONCILIATIONS MATHEMATICALLY ACCURATE?**

10 A. Although the Division's review has been somewhat time constrained due to the
11 nearly two week delay in the Company's filing of its Direct Testimony in this
12 proceeding, to date I have found no reason to question the accuracy of the mathe-
13 matical computations upon which National Grid's GCR reconciliations are based.

14
15 **Q. DO YOU SUPPORT THE COMMISSION'S ACCEPTANCE OF NATIONAL GRID'S**
16 **ANNUAL GAS COST RECOVERY RECONCILIATION REPORT AS FILED?**

17 A. Yes, I do.
18

19 **III. SUMMARY OF RECOMMENDATIONS**

20
21 **Q. PLEASE SUMMARIZE THE RECOMMENDATIONS THAT YOU HAVE**
22 **PRESENTED IN THIS TESTIMONY.**

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 A. My recommendations to the Commission in this proceeding include the following:

2
3 1. The Commission should direct National Grid to include **\$3.9 million** of
4 NGPMP net customer benefit in its GCR rate calculations for the
5 November 2011 to October 2012 period.

6
7 2. The Commission should find that National Grid's GCR as presented in
8 Attachment NG-JFN-1 (Supplemental) should be adjusted to reflect an
9 \$800,000 increase in assumed NGPMP credits for the 2011-12 GCR
10 year as shown in Exhibit BRO-7 attached to this testimony.

11
12 3. The Commission should accept National Grid's request to recover
13 **\$226,102** in GPIP incentives for the twelve months ended June 30,
14 2011.

15
16 4. The Commission should approve National Grid's computed NGPMP
17 incentive of **\$731,094** for the period April 2010 through March 2011.

18
19 5. The Commission should determine that any revenue sharing amounts
20 associated with the Company's Rhode Island gas service that may be
21 received by National Grid in the future from TGP should be treated in

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 the same manner as “refunds” from pipeline companies for GCR rate
2 computation purposes.

3
4 6. The Commission should require that National Grid file a new Long-
5 Range Gas Supply Planning Study not later than the end of January
6 2012.

7
8 7. To avoid a repeat of the situation in this proceeding in which no basis
9 exists for assessing the reasonableness of the Company’s portfolio of
10 gas supply resources, the Commission should also require that
11 National Grid file a **new** Long-Range Gas Supply Planning Study at
12 least once **every three (3) years** to support assessments of the
13 reasonableness of the Company’s planned gas supply resources
14 under forecasted Design Day, Design Winter and Cold Snap
15 conditions. Each Long-Range Gas Supply Planning Study should
16 address a planning period which extends not less than five (5) full
17 years into the future.

18
19 8. Given large unexplained irregularities in the magnitude and monthly
20 distribution of the Company’s forecasted changes in Normal Weather
21 and Design Winter Sales and Throughput, the Commission should
22 require National Grid to provide the Division a fully documented copy

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 of the methodologies it has used in this proceeding for forecasting
2 Normal Weather Sales and Throughput and Design Winter Sales and
3 Throughput, as well as full and complete explanations of the factors
4 driving the large variations in monthly and seasonal volumes by rate
5 classification. Furthermore, the Company should be directed to work
6 with the Division to produce forecasts for future GCR and DAC
7 proceedings that will provide greater confidence in their results.

8
9 9. The Commission should approve the changes to the provisions of the
10 GPIIP that National Grid presents in witness McCauley's Attachments
11 SAM-1 and SAM-1a.

12
13 **Q. HAVE YOU COMPUTED PROPOSED GCR CHARGES THAT REFLECT THE**
14 **CHANGES TO THE COMPANY'S GCR COSTS AND RATES THAT YOU HAVE**
15 **RECOMMENDED IN THIS PROCEEDING?**

16 A. Yes, I have. A revised set of GCR charges is computed in Exhibit BRO-7. This
17 revised set of GCR charges reflects the inclusion of an additional \$800,000 of
18 assumed NGPMP credits which lowers the Company's projected Supply Fixed
19 Costs. This change **lowers** the Supply Fixed Cost component of National Grid's
20 forecasted 2011-2012 gas costs by **\$0.0327 per Dth** for **Low Load Factor** customer
21 classifications and **\$0.0221** for **High Load Factor** customer classes. It also **lowers**

TESTIMONY OF BRUCE R. OLIVER

Docket No. 4283

October 19, 2011

1 the Company's proposed GCR charges to **\$0.7896** for Low Load Factor classes and
2 to **\$0.7464** for High Load Factor classes.

3
4 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

5 **A.** Yes, it does.
6
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National Grid - RI Gas

Docket No. 4283

Company Proposed Changes in GCR Charges by Rate Class

Based on NG's Currently Effective Rates and September 13, 2011 GCR Filing

| Rate Classification | Current GCR Rate (\$/Therm) | NGrid Proposed GCR Rate (\$/Therm) ^{1/} | Increase (Decrease) | |
|------------------------------------|--------------------------------------|--|---------------------|--------|
| | | | \$ (\$/Therm) | % |
| Residential | | | | |
| Non-Heating | \$0.8803 | \$0.7487 | (\$0.1316) | -14.9% |
| LI - Non-Heating | \$0.8803 | \$0.7487 | (\$0.1316) | -14.9% |
| Heating | \$0.9091 | \$0.7929 | (\$0.1162) | -12.8% |
| LI - Heating | \$0.9091 | \$0.7929 | (\$0.1162) | -12.8% |
| Commercial & Industrial | | | | |
| Small | \$0.9091 | \$0.7929 | (\$0.1162) | -12.8% |
| Medium | \$0.9091 | \$0.7929 | (\$0.1162) | -12.8% |
| Large Low Load Factor | \$0.9091 | \$0.7929 | (\$0.1162) | -12.8% |
| Large High Load Factor | \$0.8803 | \$0.7487 | (\$0.1316) | -14.9% |
| Extra Large Low Load Factor | \$0.9091 | \$0.7929 | (\$0.1162) | -12.8% |
| Extra Large High Load Factor | \$0.8803 | \$0.7487 | (\$0.1316) | -14.9% |
| Natural Gas Vehicles | \$0.7436 | \$0.6193 | (\$0.1243) | -16.7% |
| FT-2 Storage Service Charge | \$0.0367 | \$0.0369 | \$0.0002 | 0.5% |

^{1/} Source: Docket No. 4283, Attachment JFN-1(5), September 13, 2011, page 1.

National Grid - RI Gas*Docket No. 4283***Changes in Costs by GCR Cost Component**

*Based on National Grid's September 1, 2010 and September 13, 2011 GCR Filings
Without Adjustments and Reconciliations*

| GCR Cost Component | Forecasted Annual Cost 2010-11 ^{1/} | Forecasted Annual Cost 2011-12 ^{2/} | Change | |
|------------------------------------|--|--|-----------------|--------|
| | | | \$ | % |
| Supply Fixed Costs | \$ 27,527,751 | \$ 31,644,446 | \$ 4,116,695 | 15.0% |
| Storage Fixed Costs | \$ 11,454,439 | \$ 10,518,269 | \$ (936,170) | -8.2% |
| Supply Variable Costs | \$ 149,514,232 | \$ 131,388,232 | \$ (18,126,000) | -12.1% |
| Storage Variable Product Costs | \$ 23,083,547 | \$ 20,475,336 | \$ (2,608,211) | -11.3% |
| Storage Variable Non-Product Costs | <u>\$ 715,645</u> | <u>\$ 523,065</u> | \$ (192,580) | -26.9% |
| TOTAL | \$ 212,295,614 | \$ 194,549,348 | \$ (17,746,266) | -8.4% |
| Total Fixed Costs | \$ 38,982,190 | \$ 42,162,715 | \$ 3,180,525 | 8.2% |
| Total Variable Costs | \$ 173,313,424 | \$ 152,386,633 | \$ (20,926,791) | -12.1% |

1/ Source: Docket No. 4199, Attachment JFN-1, September 1, 2010, pages 2-5.

2/ Source: Docet No. 4283, Attachment JFN-1(5), September 13, 2011, pages 2-5.

National Grid - RI Gas*Docket No. 4283***Changes in Reconciliation Amounts by Gas Cost Component***Based on National Grid's September 1, 2010 and September 13, 2011 GCR Filings***With Adjustments and Reconciliations**

| GCR Cost Component | Forecasted Annual Cost 2010-11 ^{1/} | Forecasted Annual Cost 2011-12 ^{2/} | Change | |
|------------------------------------|--|--|---------------------|---------|
| | | | \$ | % |
| Supply Fixed Costs | \$ 20,634,737 | \$ 23,805,648 | \$ 3,170,911 | 15.4% |
| Storage Fixed Costs | \$ 11,745,346 | \$ 9,125,077 | \$ (2,620,269) | -22.3% |
| Supply Variable Costs | \$ 161,984,006 | \$ 133,640,863 | \$ (28,343,143) | -17.5% |
| Storage Variable Product Costs | \$ 25,183,914 | \$ 25,073,158 | \$ (110,756) | -0.4% |
| Storage Variable Non-Product Costs | <u>\$ (676,387)</u> | <u>\$ 854,313</u> | <u>\$ 1,530,700</u> | -226.3% |
| TOTAL | \$ 218,871,616 | \$ 192,499,059 | \$ (26,372,557) | -12.0% |
| Total Fixed Costs | \$ 32,380,083 | \$ 32,930,725 | \$ 550,642 | 1.7% |
| Total Variable Costs | \$ 186,491,533 | \$ 159,568,334 | \$ (26,923,199) | -14.4% |

1/ Source: Docket No. 4199, Attachment JFN-1, September 1, 2010, pages 2-5.

2/ Source: Docet No. 4283, Attachment JFN-1(5), September 13, 2011, pages 2-5.

October 19, 2011

National Grid - RI Gas

Docket No. 4283

Changes in Forecasted Normal Weather Sales & Throughput Volumes by Rate Class

For Twelve Months Ended October

| | Forecasted 2010-11 Throughput (MMBtu) | 1/ | Forecasted 2011-12 Throughput (MMBtu) | 2/ | Forecasted Change In Throughput (MMBtu) | Change % |
|---|--|----|--|----|--|--------------|
| Sales | | | | | | |
| Residential Non-Heat | 698,210 | | 572,364 | | (125,846) | -18.0% |
| Residential Heat | 16,815,263 | | 17,436,451 | | 621,188 | 3.7% |
| Small C&I | 1,987,380 | | 2,466,704 | | 479,324 | 24.1% |
| Medium C&I | 3,252,891 | | 3,125,172 | | (127,719) | -3.9% |
| Large LLF | 862,458 | | 686,212 | | (176,246) | -20.4% |
| Large HLF | 235,719 | | 280,646 | | 44,927 | 19.1% |
| Extra Large LLF | 264,369 | | 38,886 | | (225,483) | -85.3% |
| Extra Large HLF | 139,872 | | 214,510 | | 74,638 | 53.4% |
| Total Sales | 24,256,162 | | 24,820,945 | | 564,783 | 2.3% |
| FT-2 Throughput | | | | | | |
| Medium C&I | 650,002 | | 1,222,588 | | 572,586 | 88.1% |
| Large LLF | 606,975 | | 1,033,368 | | 426,393 | 70.2% |
| Large HLF | 144,746 | | 283,671 | | 138,925 | 96.0% |
| Extra Large LLF | 22,796 | | 123,371 | | 100,575 | 441.2% |
| Extra Large HLF | 18,203 | | 189,727 | | 171,524 | 942.3% |
| Total FT-2 Throughput | 1,442,722 | | 2,852,725 | | 1,410,003 | 97.7% |
| Total Sales & FT-2 Throughput | 25,698,884 | | 27,673,670 | | 1,974,786 | 7.7% |
| FT-1 Throughput | | | | | | |
| Medium C&I | 619,282 | | 857,636 | | 238,354 | 38.5% |
| Large LLF | 960,238 | | 1,085,313 | | 125,075 | 13.0% |
| Large HLF | 622,524 | | 593,322 | | (29,202) | -4.7% |
| Extra Large LLF | 538,450 | | 789,419 | | 250,969 | 46.6% |
| Extra Large HLF | 5,021,935 | | 5,156,225 | | 134,290 | 2.7% |
| Total FT-1 Throughput | 7,762,429 | | 8,481,915 | | 719,486 | 9.3% |
| Total Sales FT-1 & FT-2 Throughput | | | | | | |
| Residential Non-Heat | 698,210 | | 572,364 | | (125,846) | -18.0% |
| Residential Heat | 16,815,263 | | 17,436,451 | | 621,188 | 3.7% |
| Small C&I | 1,987,380 | | 2,466,704 | | 479,324 | 24.1% |
| Medium C&I | 4,522,175 | | 5,205,396 | | 683,221 | 15.1% |
| Large LLF | 2,429,671 | | 2,804,893 | | 375,222 | 15.4% |
| Large HLF | 1,002,989 | | 1,157,639 | | 154,650 | 15.4% |
| Extra Large LLF | 825,615 | | 951,676 | | 126,061 | 15.3% |
| Extra Large HLF | 5,180,010 | | 5,560,462 | | 380,452 | 7.3% |
| Total THROUGHPUT | 33,461,313 | | 36,155,585 | | 2,694,272 | 8.1% |

1/ Source: Docket No. 4199, Attachment JFN-1, September 1, 2010, page 14.

2/ Source: Docet No. 4283, Attachment JFN-1(5), September 13, 2011, pages 14.

October 19, 2011

National Grid - RI Gas

Docket No. 4283

Forecasted Normal Weather Sales & Throughput by Month

| | Forecasted 2010-11 Throughput 1/ (MMBtu) | Forecasted 2011-12 Throughput 2/ (MMBtu) | Forecasted Change In Throughput (MMBtu) | Change % |
|------------------------------------|---|---|--|--------------|
| Sales | | | | |
| November | 1,645,083 | 1,535,118 | (109,965) | -6.7% |
| December | 2,830,271 | 3,180,988 | 350,717 | 12.4% |
| January | 4,004,935 | 4,873,978 | 869,043 | 21.7% |
| February | 4,181,709 | 4,746,147 | 564,438 | 13.5% |
| March | 3,765,571 | 3,655,918 | (109,653) | -2.9% |
| April | 2,790,327 | 2,373,147 | (417,180) | -15.0% |
| May | 1,602,241 | 1,463,678 | (138,563) | -8.6% |
| June | 949,867 | 640,234 | (309,633) | -32.6% |
| July | 631,387 | 616,681 | (14,706) | -2.3% |
| August | 518,143 | 499,951 | (18,192) | -3.5% |
| September | 562,453 | 540,215 | (22,238) | -4.0% |
| October | 774,174 | 694,889 | (79,285) | -10.2% |
| Total Sales | 24,256,162 | 24,820,944 | 564,782 | 2.3% |
| FT-2 Throughput | | | | |
| November | 103,208 | 214,070 | 110,862 | 107.4% |
| December | 160,475 | 361,310 | 200,835 | 125.2% |
| January | 214,635 | 537,853 | 323,218 | 150.6% |
| February | 231,207 | 448,739 | 217,532 | 94.1% |
| March | 200,393 | 419,552 | 219,159 | 109.4% |
| April | 171,481 | 323,045 | 151,564 | 88.4% |
| May | 113,420 | 153,993 | 40,573 | 35.8% |
| June | 74,488 | 111,624 | 37,136 | 49.9% |
| July | 36,450 | 54,078 | 17,628 | 48.4% |
| August | 38,449 | 55,222 | 16,773 | 43.6% |
| September | 56,033 | 56,173 | 140 | 0.2% |
| October | 42,483 | 117,066 | 74,583 | 175.6% |
| Total FT-2 Throughput | 1,442,722 | 2,852,725 | 1,410,003 | 97.7% |
| Sales & FT-2 Throughput | | | | |
| November | 1,748,291 | 1,749,188 | 897 | 0.1% |
| December | 2,990,746 | 3,542,298 | 551,552 | 18.4% |
| January | 4,219,570 | 5,411,831 | 1,192,261 | 28.3% |
| February | 4,412,916 | 5,194,886 | 781,970 | 17.7% |
| March | 3,965,964 | 4,075,470 | 109,506 | 2.8% |
| April | 2,961,808 | 2,696,192 | (265,616) | -9.0% |
| May | 1,715,661 | 1,617,671 | (97,990) | -5.7% |
| June | 1,024,355 | 751,858 | (272,497) | -26.6% |
| July | 667,837 | 670,759 | 2,922 | 0.4% |
| August | 556,592 | 555,173 | (1,419) | -0.3% |
| September | 618,486 | 596,388 | (22,098) | -3.6% |
| October | 816,657 | 811,955 | (4,702) | -0.6% |
| Total Sales & FT-2 | 25,698,884 | 27,673,669 | 1,974,785 | 7.7% |

1/ Source: Docket No. 4199, Attachment JFN-1, September 1, 2010, page 14.

2/ Source: Docet No. 4283, Attachment JFN-1(5), September 13, 2011, page 14.

October 19, 2011

National Grid - RI Gas

Docket No. 4283

Changes in Forecasted Design Winter Sales and Throughput by Rate Class
For November through October (12 Months)

| | Forecasted 2010-11 Throughput (MMBtu) | 1/ | Forecasted 2011-12 Throughput (MMBtu) | 2/ | Forecasted Change In Throughput (MMBtu) | Change % |
|--|--|----|--|----|--|---------------|
| Sales | | | | | | |
| Residential Non-Heat | 405,772 | | 342,673 | | (63,099) | -15.6% |
| Residential Heat | 13,013,430 | | 14,377,509 | | 1,364,079 | 10.5% |
| Small C&I | 1,610,982 | | 2,101,211 | | 490,229 | 30.4% |
| Medium C&I | 2,416,991 | | 2,767,471 | | 350,480 | 14.5% |
| Large LLF | 699,149 | | 570,716 | | (128,433) | -18.4% |
| Large HLF | 144,596 | | 153,650 | | 9,054 | 6.3% |
| Extra Large LLF | 240,000 | | 39,893 | | (200,107) | -83.4% |
| Extra Large HLF | 95,670 | | 106,081 | | 10,411 | 10.9% |
| Total Sales | 18,626,590 | | 20,459,204 | | 1,832,614 | 9.8% |
| FT-2 Throughput | | | | | | |
| Medium C&I | 452,368 | | 954,408 | | 502,040 | 111.0% |
| Large LLF | 466,071 | | 934,250 | | 468,179 | 100.5% |
| Large HLF | 73,840 | | 158,092 | | 84,252 | 114.1% |
| Extra Large LLF | 19,954 | | 125,362 | | 105,408 | 528.3% |
| Extra Large HLF | 9,791 | | 85,681 | | 75,890 | 775.1% |
| Total FT-2 Throughput | 1,022,024 | | 2,257,793 | | 1,235,769 | 120.9% |
| Sales & FT-2 Throughput | | | | | | |
| Residential Non-Heat | 405,772 | | 342,673 | | (63,099) | -15.6% |
| Residential Heat | 13,013,430 | | 14,377,509 | | 1,364,079 | 10.5% |
| Small C&I | 1,610,982 | | 2,101,211 | | 490,229 | 30.4% |
| Medium C&I | 2,869,359 | | 3,721,879 | | 852,520 | 29.7% |
| Large LLF | 1,165,220 | | 1,504,966 | | 339,746 | 29.2% |
| Large HLF | 218,436 | | 311,742 | | 93,306 | 42.7% |
| Extra Large LLF | 259,954 | | 165,255 | | (94,699) | -36.4% |
| Extra Large HLF | 105,461 | | 191,762 | | 86,301 | 81.8% |
| Total Sales & FT-2 Throughput | 19,648,614 | | 22,716,997 | | 3,068,383 | 15.6% |

1/ Source: Docket No. 4199, Attachment JFN-1, September 1, 2010, page 15.

2/ Source: Docet No. 4283, Attachment JFN-1(5), September 13, 2011, page 15.

October 19, 2011

National Grid - RI Gas

Docket No. 4283

Forecasted Design Winter Sales & Throughput by Month

| | Forecasted 2010-11 Throughput ^{1/} (MMBtu) | Forecasted 2011-12 Throughput ^{2/} (MMBtu) | Forecasted Throughput Increase (MMBtu) | % Increase |
|------------------------------------|--|--|---|---------------|
| Sales | | | | |
| November | 2,420,992 | 2,629,112 | 208,120 | 8.6% |
| December | 4,098,495 | 4,508,184 | 409,689 | 10.0% |
| January | 4,469,187 | 4,924,059 | 454,872 | 10.2% |
| February | 4,249,392 | 4,686,170 | 436,778 | 10.3% |
| March | 3,388,525 | 3,711,677 | 323,152 | 9.5% |
| Total Sales | 18,626,591 | 20,459,202 | 1,832,611 | 9.8% |
| FT-2 Throughput | | | | |
| November | 137,814 | 287,801 | 149,987 | 108.8% |
| December | 223,813 | 498,006 | 274,193 | 122.5% |
| January | 242,711 | 544,577 | 301,866 | 124.4% |
| February | 230,067 | 518,599 | 288,532 | 125.4% |
| March | 187,619 | 408,810 | 221,191 | 117.9% |
| Total FT-2 Throughput | 1,022,024 | 2,257,793 | 1,235,769 | 120.9% |
| Sales & FT-2 Throughput | | | | |
| November | 2,558,806 | 2,916,913 | 358,107 | 14.0% |
| December | 4,322,308 | 5,006,190 | 683,882 | 15.8% |
| January | 4,711,898 | 5,468,636 | 756,738 | 16.1% |
| February | 4,479,459 | 5,204,769 | 725,310 | 16.2% |
| March | 3,576,144 | 4,120,487 | 544,343 | 15.2% |
| Total Sales & FT-2 | 19,648,615 | 22,716,995 | 3,068,380 | 15.6% |

1/ Source: Docket No. 4199, Attachment JFN-1, September 1, 2010, page 15.

2/ Source: Docet No. 4283, Attachment JFN-1(5), September 13, 2011, page 15.

October 19, 2011

National Grid - RI Gas

Docket No. 4283

Comparison of Forecasted and Actual Sales and Throughput by Rate Class

| | Forecasted 2010-11 Throughput (MMBtu) | 1/ | Actual Jul 10 - Jun 11 Throughput (MMBtu) | 2/ | Difference From Actual Throughput (MMBtu) | % Change | Forecasted 2011-12 Throughput (MMBtu) | 3/ | Forecasted 2011-12 Less Actual | % Change |
|---|--|----|--|----|--|--------------|--|----|--------------------------------------|--------------|
| Sales | | | | | | | | | | |
| Residential Non-Heat | 698,210 | | 614,612 | | (83,598) | -12.0% | 572,364 | | (42,248) | -6.9% |
| Residential Heat | 16,815,263 | | 17,953,760 | | 1,138,497 | 6.8% | 17,436,451 | | (517,309) | -2.9% |
| Small C&I | 1,987,380 | | 2,469,399 | | 482,019 | 24.3% | 2,466,704 | | (2,695) | -0.1% |
| Medium C&I | 3,252,891 | | 3,234,524 | | (18,367) | -0.6% | 3,125,172 | | (109,352) | -3.4% |
| Large LLF | 862,458 | | 683,639 | | (178,819) | -20.7% | 686,212 | | 2,573 | 0.4% |
| Large HLF | 235,719 | | 242,556 | | 6,837 | 2.9% | 280,646 | | 38,090 | 15.7% |
| Extra Large LLF | 264,369 | | 31,787 | | (232,582) | -88.0% | 38,886 | | 7,099 | 22.3% |
| Extra Large HLF | 139,872 | | 215,808 | | 75,936 | 54.3% | 214,510 | | (1,298) | -0.6% |
| Total Sales | 24,256,162 | | 25,446,085 | | 1,189,923 | 4.9% | 24,820,945 | | (625,140) | -2.5% |
| FT-2 Throughput | | | | | | | | | | |
| Medium C&I | 650,002 | | 1,236,632 | | 586,630 | 90.3% | 1,222,588 | | (14,044) | -1.1% |
| Large LLF | 606,975 | | 770,837 | | 163,862 | 27.0% | 1,033,368 | | 262,531 | 34.1% |
| Large HLF | 144,746 | | 275,142 | | 130,396 | 90.1% | 283,671 | | 8,529 | 3.1% |
| Extra Large LLF | 22,796 | | 69,655 | | 46,859 | 205.6% | 123,371 | | 53,716 | 77.1% |
| Extra Large HLF | 18,203 | | 165,323 | | 147,120 | 808.2% | 189,727 | | 24,404 | 14.8% |
| Total FT-2 Throughput | 1,442,722 | | 2,517,589 | | 1,074,867 | 74.5% | 2,852,725 | | 335,136 | 13.3% |
| Total Sales & FT-2 Throughput | 25,698,884 | | 27,963,674 | | 2,264,790 | 8.8% | 27,673,670 | | (290,004) | -1.0% |
| FT-1 Throughput | | | | | | | | | | |
| Medium C&I | 619,282 | | 761,271 | | 141,989 | 22.9% | 857,636 | | 96,365 | 12.7% |
| Large LLF | 960,238 | | 1,091,846 | | 131,608 | 13.7% | 1,085,313 | | (6,533) | -0.6% |
| Large HLF | 622,524 | | 534,643 | | (87,881) | -14.1% | 593,322 | | 58,679 | 11.0% |
| Extra Large LLF | 538,450 | | 941,519 | | 403,069 | 74.9% | 789,419 | | (152,100) | -16.2% |
| Extra Large HLF | 5,021,935 | | 4,861,276 | | (160,659) | -3.2% | 5,156,225 | | 294,949 | 6.1% |
| Total FT-1 Throughput | 7,762,429 | | 8,190,555 | | 428,126 | 5.5% | 8,481,915 | | 291,360 | 3.6% |
| Total All Throughput Classifications | | | | | | | | | | |
| Residential Non-Heat | 698,210 | | 614,612 | | (83,598) | -12.0% | 572,364 | | (42,248) | -6.9% |
| Residential Heat | 16,815,263 | | 17,953,760 | | 1,138,497 | 6.8% | 17,436,451 | | (517,309) | -2.9% |
| Small C&I | 1,987,380 | | 2,469,399 | | 482,019 | 24.3% | 2,466,704 | | (2,695) | -0.1% |
| Medium C&I | 4,522,175 | | 5,232,427 | | 710,252 | 15.7% | 5,205,396 | | (27,031) | -0.5% |
| Large LLF | 2,429,671 | | 2,546,322 | | 116,651 | 4.8% | 2,804,893 | | 258,571 | 10.2% |
| Large HLF | 1,002,989 | | 1,052,341 | | 49,352 | 4.9% | 1,157,639 | | 105,298 | 10.0% |
| Extra Large LLF | 825,615 | | 1,042,961 | | 217,346 | 26.3% | 951,676 | | (91,285) | -8.8% |
| Extra Large HLF | 5,180,010 | | 5,242,407 | | 62,397 | 1.2% | 5,560,462 | | 318,055 | 6.1% |
| Total System Throughput | 33,565,068 | | 36,154,229 | | 1,155,998 | 3.4% | 36,259,340 | | 105,111 | 0.3% |

1/ Source: Docket No. 4199, Attachment JFN-1, September 1, 2010, page 14.

2/ Source: Docket No. 4283, Attachment JFN-2, Sch. 6. Actual include TSS and Default Service

3/ Source: Docet No. 4283, Attachment JFN-1(5), September 13, 2011, page 14.

National Grid - RI Gas

Docket No. 4283

Changes in Forecasted Normal Weather Sales & Throughput Volumes by Rate Class

For Twelve Months Ended October

| | Forecasted 2009-10 Throughput (MMBtu) | 1/ | Forecasted 2010-11 Throughput (MMBtu) | 2/ | Forecasted 2011-12 Throughput (MMBtu) | 3/ | Forecasted Change In Throughput (MMBtu) | Percentage Changes in Throughput | | |
|--|--|----|--|----|--|----|--|----------------------------------|---------------------------------|---------------------------------|
| | | | | | | | | 2010-11 Over 2009-10 % | 2011-12 Over 2010-11 % | 2011-12 Over 2009-10 % |
| Forecasted Annual Throughput | | | | | | | | | | |
| Total Sales FT-1 & FT-2 Throughput | | | | | | | | | | |
| Residential Non-Heat | 650,517 | | 698,210 | | 572,364 | | (125,846) | 7.3% | -18.0% | -12.0% |
| Residential Heat | 17,121,460 | | 16,815,263 | | 17,436,451 | | 621,188 | -1.8% | 3.7% | 1.8% |
| Small C&I | 2,672,144 | | 1,987,380 | | 2,466,704 | | 479,324 | -25.6% | 24.1% | -7.7% |
| Medium C&I | 5,823,407 | | 4,522,175 | | 5,205,396 | | 683,221 | -22.3% | 15.1% | -10.6% |
| Large LLF | 2,947,458 | | 2,429,671 | | 2,804,893 | | 375,222 | -17.6% | 15.4% | -4.8% |
| Large HLF | 1,144,534 | | 1,002,989 | | 1,157,639 | | 154,650 | -12.4% | 15.4% | 1.1% |
| Extra Large LLF | 832,497 | | 825,615 | | 951,676 | | 126,061 | -0.8% | 15.3% | 14.3% |
| Extra Large HLF | 4,166,918 | | 5,180,010 | | 5,560,462 | | 380,452 | 24.3% | 7.3% | 33.4% |
| Total THROUGHPUT | 35,358,935 | | 33,461,313 | | 36,155,585 | | 2,694,272 | -5.4% | 8.1% | 2.3% |
| Forecasted November - March Throughput | | | | | | | | | | |
| Total Sales FT-1 & FT-2 Throughput | | | | | | | | | | |
| Residential Non-Heat | 322,373 | | 374,024 | | 315,528 | | (58,496) | 16.0% | -15.6% | -2.1% |
| Residential Heat | 11,490,446 | | 11,456,551 | | 12,635,950 | | 1,179,399 | -0.3% | 10.3% | 10.0% |
| Small C&I | 1,800,862 | | 1,414,091 | | 1,837,649 | | 423,558 | -21.5% | 30.0% | 2.0% |
| Medium C&I | 3,801,937 | | 2,973,184 | | 3,878,637 | | 905,453 | -21.8% | 30.5% | 2.0% |
| Large LLF | 2,048,256 | | 1,726,206 | | 2,126,934 | | 400,728 | -15.7% | 23.2% | 3.8% |
| Large HLF | 578,889 | | 508,642 | | 604,702 | | 96,060 | -12.1% | 18.9% | 4.5% |
| Extra Large LLF | 544,333 | | 605,284 | | 740,984 | | 135,700 | 11.2% | 22.4% | 36.1% |
| Extra Large HLF | 1,926,914 | | 2,404,681 | | 2,664,976 | | 260,295 | 24.8% | 10.8% | 38.3% |
| Total THROUGHPUT | 22,514,010 | | 21,462,663 | | 24,805,359 | | 3,342,696 | -4.7% | 15.6% | 10.2% |
| Forecasted January Throughput | | | | | | | | | | |
| Total Sales FT-1 & FT-2 Throughput | | | | | | | | | | |
| Residential Non-Heat | 74,986 | | 82,003 | | 74,908 | | (7,095) | 9.4% | -8.7% | -0.1% |
| Residential Heat | 2,916,336 | | 2,750,982 | | 3,445,597 | | 694,615 | -5.7% | 25.2% | 18.1% |
| Small C&I | 460,582 | | 356,865 | | 491,295 | | 134,430 | -22.5% | 37.7% | 6.7% |
| Medium C&I | 916,290 | | 718,853 | | 1,039,674 | | 320,821 | -21.5% | 44.6% | 13.5% |
| Large LLF | 503,601 | | 407,197 | | 548,439 | | 141,242 | -19.1% | 34.7% | 8.9% |
| Large HLF | 127,363 | | 114,773 | | 162,692 | | 47,919 | -9.9% | 41.8% | 27.7% |
| Extra Large LLF | 124,813 | | 174,056 | | 189,233 | | 15,177 | 39.5% | 8.7% | 51.6% |
| Extra Large HLF | 421,606 | | 518,585 | | 649,419 | | 130,834 | 23.0% | 25.2% | 54.0% |
| Total THROUGHPUT | 5,545,577 | | 5,123,314 | | 6,601,257 | | 1,477,943 | -7.6% | 28.8% | 19.0% |

October 19, 2011

National Grid - RI Gas

Docket No. 4199

Division Recommended Gas Cost Recovery (GCR) Charges

Factors Effective November 1, 2010

(\$ per Dth except where otherwise indicated)

| Line No. | Description | Reference | Residential Non-Heat | Residential Heating | Small C&I | Medium C&I | Large LLF | Large HLF | Extra Large LLF | Extra Large HLF | FT-2 Marketer | NGV |
|----------|--|-----------------|----------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) |
| 1 | Supply Fixed Cost Factor | JFN-1 (5), p. 2 | \$ 0.6345 | \$ 0.9400 | \$ 0.9400 | \$ 0.9400 | \$ 0.9400 | \$ 0.6345 | \$ 0.9400 | \$ 0.6345 | n/a | \$ 0.6345 |
| 2 | Storage Fixed Cost Factor | JFN-1 (5), p. 3 | \$ 0.2206 | \$ 0.3362 | \$ 0.3362 | \$ 0.3362 | \$ 0.3362 | \$ 0.2206 | \$ 0.3362 | \$ 0.2206 | \$ 0.3290 | n/a |
| 3 | Supply Variable Cost Factor | JFN-1 (5), p. 4 | \$ 5.3842 | \$ 5.3842 | \$ 5.3842 | \$ 5.3842 | \$ 5.3842 | \$ 5.3842 | \$ 5.3842 | \$ 5.3842 | n/a | \$ 5.3842 |
| 4a | Storage Variable Product Cost Factor | JFN-1 (5), p. 5 | \$ 1.0102 | \$ 1.0102 | \$ 1.0102 | \$ 1.0102 | \$ 1.0102 | \$ 1.0102 | \$ 1.0102 | \$ 1.0102 | n/a | n/a |
| 4b | Storage Variable Non-product Cost Factor | JFN-1 (5), p. 5 | \$ 0.0309 | \$ 0.0309 | \$ 0.0309 | \$ 0.0309 | \$ 0.0309 | \$ 0.0309 | \$ 0.0309 | \$ 0.0309 | \$ 0.0309 | n/a |
| 5 | Total Gas Cost Recovery Charge | (1)+(2)+(3)+(4) | \$ 7.2804 | \$ 7.7015 | \$ 7.7015 | \$ 7.7015 | \$ 7.7015 | \$ 7.2804 | \$ 7.7015 | \$ 7.2804 | \$ 0.3599 | \$ 6.0187 |
| 6 | Uncollectible % | Docket 3943 | 2.46% | 2.46% | 2.46% | 2.46% | 2.46% | 2.46% | 2.46% | 2.46% | 2.46% | 2.46% |
| 7 | Total GCR Charge Adjusted for Uncollectibles | (5)/[1-(6)] | \$ 7.4641 | \$ 7.8957 | \$ 7.8957 | \$ 7.8957 | \$ 7.8957 | \$ 7.4641 | \$ 7.8957 | \$ 7.4641 | \$ 0.3690 | \$ 6.1705 |
| 8 | GCR Charge on a per therm basis | (7)/10 | \$ 0.7464 | \$ 0.7896 | \$ 0.7896 | \$ 0.7896 | \$ 0.7896 | \$ 0.7464 | \$ 0.7896 | \$ 0.7464 | \$ 0.0369 | \$ 0.6171 |
| 9 | Current Effective Rate 11/1/09 | Docket 4199 | \$ 0.8803 | \$ 0.9091 | \$ 0.9091 | \$ 0.9091 | \$ 0.9091 | \$ 0.8803 | \$ 0.9091 | \$ 0.8803 | \$ 0.0367 | \$ 0.7436 |
| 10 | Difference | (8)-(9) | \$ (0.1339) | \$ (0.1195) | \$ (0.1195) | \$ (0.1195) | \$ (0.1195) | \$ (0.1339) | \$ (0.1195) | \$ (0.1339) | \$ 0.0002 | \$ (0.1265) |
| 11 | Percent Change | (10)/(9) | -15.2% | -13.1% | -13.1% | -13.1% | -13.1% | -15.2% | -13.1% | -15.2% | 0.5% | -17.0% |

National Grid - RI Gas
Docket No. 4283

Gas Cost Recovery (GCR)
Division Adjusted Supply Fixed Cost Calculation (\$ per therm)

| Ln No | Description | Reference | Amount As Filed By Company | Residential Heating | Small C&I | Medium C&I | Large LLF | Extra Large LLF | Low Load Factor Total | Residential Non-Heat | Large HLF | Extra Large HLF | High Load Factor Total |
|-------|---------------------------------|------------------|----------------------------|---------------------|--------------|--------------|------------|-----------------|-----------------------|----------------------|------------|-----------------|------------------------|
| | (a) | (b) | (c) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) | (n) | (o) |
| 1 | Supply Fixed Costs | EDA-1 | \$ 31,644,448 | | | | | | | | | | |
| | Less: | | | | | | | | | | | | |
| 2 | NGPMP Customer Benefit | EAD-1/BRO | \$ 3,920,000 | | | | | | | | | | |
| 3 | Interruptible Costs | | \$ - | | | | | | | | | | |
| 4 | Non-Firm Sales Costs | | \$ - | | | | | | | | | | |
| 5 | Off-System Sales Margin | | \$ - | | | | | | | | | | |
| 6 | Refunds | | \$ - | | | | | | | | | | |
| 7 | Total Credits | Sum[(3)-(5)] | \$3,920,000 | | | | | | | | | | |
| | Plus: | | | | | | | | | | | | |
| 8 | Working Capital Requirement | JFN-1(5), p. 10 | \$ 209,965 | | | | | | | | | | |
| 9 | Reconciliation Amount | JFN-1(5), p. 8 | \$ (5,965,587) | | | | | | | | | | |
| 10 | Reconciliation Amount - Mktrs | EDA-4, p. 10 | \$ 1,036,820 | | | | | | | | | | |
| 11 | Total Additions | (8) + (9) + (10) | \$ (4,718,802) | | | | | | | | | | |
| 12 | Total Storage Fixed Costs | (1) -(7) + (12) | \$ 23,005,646 | | | | | | | | | | |
| 13 | Design Winter Throughput (Dt) % | JFN-1(5), p. 15 | 100.00% | 70.27% | 10.27% | 13.53% | 2.79% | 0.19% | 97.06% | 1.67% | 0.75% | 0.52% | 2.94% |
| 14 | Allocated Supply Fixed Costs | (12) x (13) | 23,005,646 | \$ 16,166,997 | \$ 2,362,737 | \$ 3,111,922 | \$ 641,750 | \$ 44,858 | \$ 22,328,264 | \$ 385,324 | \$ 172,774 | \$ 119,284 | \$ 677,382 |
| 15 | Sales (DTh) Nov 11 - Oct 12 | JFN-1 (5), p. 14 | 24,820,943 | 17,436,451 | 2,466,704 | 3,125,172 | 686,212 | 38,886 | 23,753,424 | 572,364 | 280,646 | 214,510 | 1,067,519 |
| 16 | Supply Fixed Cost Factor | (14)/(15) | | | | | | | \$ 0.9400 | | | | \$ 0.6345 |