

**BEFORE THE  
PUBLIC UTILITIES COMMISSION  
OF RHODE ISLAND**

**THE NARRAGANSETT     )  
BAY COMMISSION        )     DOCKET NO. 4364**

**DIRECT TESTIMONY  
OF  
THOMAS S. CATLIN**

**ON BEHALF OF THE  
DIVISION OF PUBLIC UTILITIES AND CARRIERS**

**March 22, 2013**

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**EXETER**

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1 feasibility, financial and implementation analyses in conjunction with utility  
2 construction projects. I also served as project engineer for two utility valuation  
3 studies.

4 From June 1977 until September 1981, I was employed by Camp Dresser &  
5 McKee, Inc. Prior to transferring to the Management Consulting Division of CDM in  
6 April 1978, I was involved in both project administration and design. My project  
7 administration responsibilities included budget preparation and labor and cost  
8 monitoring and forecasting. As a member of CDM's Management Consulting  
9 Division, I performed cost of service, rate, and financial studies on approximately 15  
10 municipal and private water, wastewater and storm drainage utilities. These projects  
11 included: determining total costs of service; developing capital asset and depreciation  
12 bases; preparing cost allocation studies; evaluating alternative rate structures and  
13 designing rates; preparing bill analyses; developing cost and revenue projections; and  
14 preparing rate filings and expert testimony.

15 In September 1981, I accepted a position as a utility rates analyst with Exeter  
16 Associates, Inc. I became a principal and vice-president of the firm in 1984. Since  
17 joining Exeter, I have continued to be involved in the analysis of the operations of  
18 public utilities, with particular emphasis on utility rate regulation. I have been  
19 extensively involved in the review and analysis of utility rate filings, as well as other  
20 types of proceedings before state and federal regulatory authorities. My work in  
21 utility rate filings has focused on revenue requirements issues, but has also addressed  
22 service cost and rate design matters. I have also been involved in analyzing affiliate  
23 relations, alternative regulatory mechanisms, and regulatory restructuring issues.

1 This experience has involved electric, natural gas transmission and distribution, and  
2 telephone utilities, as well as water and wastewater companies.

3 Q. HAVE YOU PREVIOUSLY TESTIFIED IN REGULATORY  
4 PROCEEDINGS ON UTILITY RATES?

5 A. Yes. I have previously presented testimony on more than 250 occasions before the  
6 Federal Energy Regulatory Commission and the public utility commissions of  
7 Arizona, California, Colorado, Delaware, the District of Columbia, Florida, Idaho,  
8 Illinois, Indiana, Kentucky, Louisiana, Maine, Maryland, Montana, Nevada, New  
9 Jersey, Ohio, Oklahoma, Pennsylvania, Utah, Virginia and West Virginia, as well as  
10 before this Commission. I have also filed rate case evidence by affidavit with the  
11 Connecticut Department of Public Utility Control and have appeared as a witness on  
12 behalf of the Louisiana Public Service Commission before the Nineteenth Judicial  
13 District Court.

14 Q. ARE YOU A MEMBER OF ANY PROFESSIONAL SOCIETIES?

15 A. Yes. I am a member of the American Water Works Association (AWWA) and the  
16 Chesapeake Section of the AWWA.

17 Q. ON WHOSE BEHALF ARE YOU APPEARING?

18 A. I am presenting testimony on behalf of the Division of Public Utilities and Carriers  
19 (the Division).

20 Q. DO YOU HAVE PREVIOUS EXPERIENCE IN MATTERS INVOLVING  
21 THE NARRAGANSETT BAY COMMISSION?

22 A. Yes, I presented testimony on behalf of the Division in the Narragansett Bay  
23 Commission's (NBC's) general rate case in Docket No. 3162, its abbreviated rate  
24 proceeding in Docket No. 3409, in the Commission's examination of issues related to  
25 the implementation of a CSO abatement fee or stormwater fee by NBC in Docket No.

1 3432, NBC's general rate case in Docket No. 3483, its abbreviated rate filing in  
2 Docket No. 3592, its compliance filing on Docket No. 3639, its abbreviated rate filing  
3 in Docket No. 3707, its compliance rate filing in docket No. 3775, its general rate  
4 filing in Docket No. 3797, its general rate filing in Docket No. 4026, and its  
5 compliance rate filing in docket No. 4151. I was also was involved in reviewing and  
6 evaluating NBC's general rate case in Docket No. 4205 before it was withdrawn and  
7 reviewed and provided memorandums to the Division which were provided to the  
8 Commission regarding NBC's compliance filings in Dockets 4214, 4305 and 4352. I  
9 have also assisted in reviewing the a number of the filings that NBC has made with  
10 the Division seeking authorization to issue new debt, including the most recent filing  
11 in Docket No. D-13-13.

12 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

13 A. Exeter Associates was retained by the Division to assist it in the evaluation of the  
14 General Rate Filing submitted by NBC on October 5, 2012. This testimony presents  
15 my findings and recommendations both with regard to the overall revenue increase to  
16 which NBC is entitled and with regard to the design of rates to recover those  
17 additional revenues.

18 Q. HAVE YOU PREPARED SCHEDULES TO ACCOMPANY YOUR  
19 TESTIMONY?

20 A. Yes. I have prepared Schedules TSC-1 through TSC-14. Schedule TSC-1 provides a  
21 summary of revenues and expenses under present and proposed rates. Schedules  
22 TSC-2 through TSC-12 present the adjustments that I am recommending be made to  
23 NBC's claimed revenues and operating expenses. Schedules TSC-13 and TSC-14 set  
24 forth my findings and recommendations with regard to rate design.

25

1 **Summary and Recommendations**

2 Q. PLEASE SUMMARIZE THE RATE RELIEF REQUESTED BY NBC IN  
3 ITS FILING.

4 A. As discussed in the testimony of NBC witness Walter E. Edge, NBC's filing seeks an  
5 increase in revenues of \$12,483,704, which represents an overall revenue increase of  
6 14.50 percent. To develop its claim, NBC utilized the results for fiscal year (FY)  
7 2012 as the test year. NBC then adjusted the test year cost of service to reflect  
8 changes to become effective for a FY 2014 rate year. The increase sought in this  
9 docket is in addition to the increase of \$5,877,586 that was approved in NBC's  
10 Compliance filing in Docket No. 4352 to cover additional debt service effective  
11 January 1, 2013.

12 Q. PLEASE SUMMARIZE YOUR FINDINGS AND RECOMMENDATIONS.

13 A. As shown on Schedule TSC-1, I have determined the NBC's overall revenue  
14 requirement to be \$93,377,869. This represents an increase over revenues at present  
15 rates of \$7,291,683. The revenue increase that I have identified is \$5,192,022 less  
16 than the revenue increase of \$12,483,704 requested by NBC. This difference is the  
17 result of the adjustments to NBC's claimed revenues and operating expenses that are  
18 summarized on Schedule TSC-2.

19 With regard to the development of rates to recover the NBC's overall cost of  
20 service, I have accepted NBC's proposal to recover the additional revenues through a  
21 uniform percentage increase in the flat fees and volumetric rates applicable to  
22 residential, commercial and industrial customers. However, as I discuss in the final  
23 section of my testimony, given the nature of NBC's costs, it would be appropriate to  
24 reevaluate the possibility of implementing a stormwater fee that applies to more than  
25 just wastewater customers.

1 Q. WHAT TIME PERIODS HAVE YOU UTILIZED IN MAKING YOUR  
2 DETERMINATION OF NBC'S REVENUE REQUIREMENTS?

3 A. Consistent with NBC's filing, I have utilized a test year ended June 30, 2012 and a  
4 rate year ending June 30, 2014 as the basis for determining NBC's revenue  
5 requirements and the revenue increase necessary to recover those requirements.

6 Q. HOW IS THE REMAINDER OF YOUR TESTIMONY ORGANIZED?

7 A. The remainder of my testimony is organized into sections corresponding to the issue  
8 or topic being addressed. These sections are set forth in the Table of Contents for  
9 this testimony.

10

11

**Revenues**

12 Q. PLEASE EXPLAIN THE DIVISION ADJUSTMENT TO REVENUES AT  
13 PRESENT RATES SHOWN ON SCHEDULE TSC-1.

14 A. I have calculated rate year revenues at present rates based on the billing determinants  
15 shown on Schedule WEE-15 accompanying Mr. Edge's testimony. As Mr. Edge  
16 notes on page 7 of his direct testimony, this amount is \$1,703 greater than the  
17 revenues Mr. Edge utilized as his starting point based on adjusting test year revenues  
18 by the percentage increases allowed in Docket Nos. 4305 and 4352. Because Mr.  
19 Edge uses the billing determinants on Schedule WEE-15 to calculate revenues at  
20 proposed rates, the \$1,703 is effectively included in Mr. Edge's final revenues. I  
21 have simply used the billing determinants to calculate revenues at both present and  
22 proposed rates for purposes of consistency.

23

1 **Grant Related Costs**

2 Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO GRANT RELATED  
3 COSTS.

4 A. In developing projected revenues and expenses for the rate year, NBC adjusted the  
5 test year revenues and expenses that it used as the starting point to remove grant  
6 revenues and the related operating expenses. However, in response to Division data  
7 request set 1, question 1 (DIV. 1-1), NBC stated that it had determined that an  
8 additional \$4,247 should have been removed from operating expenses. As shown on  
9 Schedule TSC-3, I have reduced operating expenses for the rate year by this amount.  
10

11 **Employee Health Insurance**

12 Q. WHAT CHANGES ARE YOU PROPOSING TO MAKE TO EMPLOYEE  
13 HEALTH INSURANCE COSTS?

14 A. I am proposing to make two adjustments to NBC's rate year claim for employee  
15 health insurance costs. First, I have revised the growth rate used to project medical  
16 and dental premiums for the FY 2014 rate year. In its filing, NBC estimated the rate  
17 year premiums by escalating the premiums for FY 2013 by the percentage increase in  
18 premiums experienced from FY 2012 to FY 2013. Because the percentage increase  
19 for a single year can be distorted by various factors, I have revised the calculation of  
20 rate year premiums to use an the average annual increase in medical and dental  
21 premiums that NBC experienced over the three year period from FY 2010 to FY  
22 2013. This change results in only a minor difference in the growth rate for medical  
23 premiums. However for dental premiums, the three-year average increase was  
24 reduced from the 7.5 percent increase used by NBC to approximately 2.3 percent  
25 overall.



1 expense by \$20,374 to reflect the amounts that are no longer being paid. This  
2 adjustment is shown on Schedule TSC-5.

3  
4 **Biosolids Disposal Costs**

5 Q. HOW ARE THE COSTS FOR BIOSOLIDS DISPOSAL AT THE FIELD'S  
6 POINT AND BUCKLIN POINT TREATMENT FACILITIES  
7 DETERMINED?

8 A. NBC has a contract for the disposal of the biosolids at the Field's Point Wastewater  
9 Treatment Facility (Field's Point) and the Bucklin Point Wastewater Treatment  
10 Facility (Bucklin Point) under which the costs are based on the tons of sludge  
11 produced and the applicable rate for a given contract year. (Contract years  
12 correspond to calendar years.) The disposal rate is adjusted annually based on the  
13 increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers  
14 (CPI-W) for Boston-Brockton-Nashua (Boston area) from November to November.

15 Q. HOW DID NBC DEVELOP ITS CLAIMED RATE YEAR SLUDGE  
16 DISPOSAL COSTS PURSUANT TO THIS ARRANGEMENT?

17 A. NBC estimated the quantity of biosolids for the rate year based on the average tons of  
18 sludge at each facility in FY 2011 and FY 2012. To determine the rates applicable in  
19 the rate year, NBC escalated the contract rate for calendar year 2012 by 3.12 percent  
20 per year to determine the rate for 2013 (applicable to the first half of the rate year)  
21 and by an additional 3.12 percent to determine that rate for 2014 (applicable to the  
22 second half of the rate year). The 3.12 percent annual escalation rate used by NBC  
23 was based on the increase in the CPI-W for the Boston area from November 2010 to  
24 November 2011.

1 Q. WHAT ADJUSTMENT ARE YOU PROPOSING TO MAKE TO NBC'S  
2 CLAIMED BIOSOLIDS DISPOSAL COSTS?

3 A. I am proposing to adjust NBC's claimed costs to reflect revised sludge disposal rates  
4 for the rate year. As noted previously, NBC escalated the disposal rate for 2012 by  
5 3.12 percent per year to project the disposal rates for 2013 and 2014. This escalation  
6 rate of 3.12 percent was based on the historical increase in the CPI-W for the Boston  
7 area from November 2010 to November 2011 that was used to establish the disposal  
8 rate for 2012 and not the prospective level of inflation that will determine 2013 and  
9 2014 sludge disposal rates. I have revised the 2013 sludge disposal rate to reflect the  
10 actual increase in the CPI for the Boston area from November 2011 to November  
11 2012 of 1.90 percent. I have revised the 2014 sludge disposal rate to reflect projected  
12 inflation from November 2012 to November 2013 based on the Blue Chip Economic  
13 Indicators consensus forecast of the increase in the CPI for all urban consumers  
14 (CPI-U) from the fourth quarter of 2012 to the fourth quarter of 2013.

15 Q. HAVE YOU PREPARED A SCHEDULE SHOWING THE EFFECT OF  
16 YOUR ADJUSTMENT TO THE 2013 AND 2014 SLUDGE DISPOSAL  
17 RATES ON PROJECTED RATE YEAR BIOSOLIDS DISPOSAL COSTS?

18 A. Yes. Schedule TSC-6 presents my adjustment to biosolids disposal costs. As shown  
19 there, I have calculated biosolids disposal costs for the first half of the rate year using  
20 NBC's estimated sludge quantities and the actual rate that will be in effect during the  
21 period from July 1, 2012 through December 31, 2013. For the second half of the rate  
22 year, I have escalated the 2013 disposal rate by 1.9 percent. As noted previously, this  
23 reflects the projected increase in the CPI-U from the fourth quarter of 2012 to the  
24 fourth quarter of 2013 based on the February 10, 2013 Blue Chip Economic  
25 Indicators consensus forecast. I have then applied this rate to NBC's projected sludge

1 quantities for the second half of the rate year. As shown on Schedule TSC-6, I have  
2 estimated biosolids disposal costs to be \$4,223,730, which is \$76,364 less than the  
3 estimate of \$4,300,094 that NBC included in its filed claim.

4

5 **Maintenance and Service Agreements**

6 Q. HOW DID NBC DEVELOP ITS CLAIM FOR MAINTENANCE AND  
7 SERVICE AGREEMENT COSTS?

8 A. NBC projected the rate year level of maintenance and service (M&S) agreement costs  
9 by escalating the test year expense for these agreements by a 13.8 percent annual  
10 growth rate for two years and then adding the cost for two new agreements. The 13.8  
11 percent annual escalation rate was calculated based on the increase in M&S  
12 agreement expense from FY 2010 to FY 2012. The two new agreements, totaling  
13 \$108,434, are identified as being associated with the new Field's Point facilities and a  
14 new maintenance agreement for laboratory instruments.

15 Q. DO YOU AGREE WITH THIS PROJECTION?

16 A. No. The growth rate utilized by NBC is largely driven by the increase in M&S  
17 agreement costs from \$597,968 in FY 2011 to \$735,174 in FY 2012. However, in  
18 Docket No. 4205, NBC noted that FY 2011 costs were expected to increase by  
19 \$106,867 because the costs associated with two service agreements that had  
20 previously been charged to capital would be charged to expense prospectively.  
21 Accordingly, basing the annual growth rate for the period from FY 2010 to FY 2012  
22 significantly overstates the normal growth rate.

23 Q. DO YOU HAVE ANY OTHER COMMENTS WITH REGARD TO THE  
24 PROJECTED INCREASE IN THE COSTS OF M&S AGREEMENTS?

1 A. Yes. In dockets prior to Docket 4205, NBC was able to provide a breakdown of the  
2 amounts spent on M&S agreements by vendor/provider. However, NBC's new  
3 Oracle accounting software is not capable of providing that information. As a result,  
4 it was not possible to determine whether the increase from FY 2010 to FY 2012, other  
5 than the increase due to agreements being expensed instead of capitalized, was the  
6 result of normal growth or new agreements (or some other cause).

7 Q. WHAT IS YOUR RECOMMENDATION FOR ESTABLISHING THE  
8 ALLOWABLE LEVEL OF M&S AGREEMENT COSTS FOR THE RATE  
9 YEAR?

10 A. I am proposing to establish the allowable level of M&S agreement expense for the  
11 rate year by escalating the FY 2012 amount for projected inflation from FY 2012 to  
12 FY 2014 and adding the cost of the two new agreements that NBC has identified. As  
13 shown on Schedule TSC-7, this results in rate year M&S agreement costs of  
14 \$899,322. This represents a reduction of \$161,230 compared to NBC's claimed rate  
15 year M&S agreement expense.

16

17

### **Natural Gas Costs**

18 Q. PLEASE SUMMARIZE HOW NBC DEVELOPED ITS RATE YEAR  
19 PROJECTION OF NATURAL GAS COSTS.

20 A. NBC first estimated the quantities of natural gas that would be required at each of its  
21 existing facilities based on the average therms of gas used at each facility in FY 2011  
22 and FY 2012. NBC then projected the costs at each facility based on the average rate  
23 per therm paid to National Grid for delivery at that facility in FY 2012 plus the two

1 year average National Grid GCR rate for FY 2011 and FY 2012.<sup>2</sup> To the projected  
2 costs at its existing facilities, NBC added the projected costs of natural gas at the new  
3 Field's Point Biological Nutrient Removal (BNR) facilities based on the estimated  
4 therms of usage provided by SEA consultants multiplied by the estimated delivery  
5 rate and the historical average supply rate for FY 2011 and FY 2012.

6 Q. WHAT CONCERN DO YOU HAVE WITH REGARD TO NBC'S  
7 ESTIMATE OF RATE YEAR NATURAL GAS COSTS?

8 A. By utilizing National Grid's average GCR rate over the 24 months ended June 30,  
9 2012, NBC has overstated its rate year natural gas costs by failing to recognize the  
10 decline in natural gas commodity or supply costs that took place both during that  
11 period and that has taken place subsequently. During the two year historical period  
12 that NBC utilized, National Grid's primary GCR rate was: \$1.0801 per therm for the  
13 months of July through October of 2010; \$0.9091 per therm for the months from  
14 November 2010 through October 2011; and \$0.7896 per therm for the period from  
15 November 2011 through July 2012. Since then, National Grid's primary GCR rate  
16 had been further reduced to \$0.6725 per therm for the 12 months from November 1,  
17 2012 through October 2013. Moreover, based on National Grid's hedged volumes  
18 and prices for the year ended October 2014 compared to those for the year ended  
19 October 2013, as reported to the PUC on a quarterly basis, the GCR rates for the 2014  
20 year can be expected to decline further.

21 Q. HOW ARE YOU PROPOSING TO ACCOUNT FOR THE DECLINE THAT  
22 HAS TAKEN PLACE IN NATURAL GAS SUPPLY COSTS?

---

<sup>2</sup> National Grid has two separate GCR rates for non-residential accounts: one that applies to small and large, low load factor accounts and a slightly lower rate for large, high load factor commercial/industrial customers. NBC has facilities that qualify for both of these GCR rates.

1 A. To account for the decline in natural gas costs, I have developed a projection of  
2 National Grid's GCR rates for the period November 1, 2013 through October 31,  
3 2014 (the 2014 GCR rates) by adjusting the 2013 GCR rates to account for the known  
4 decline in National Grid's hedged gas costs. As shown on page 2 of Schedule TSC-8,  
5 I have compared the average cost of gas for the 2013 and 2014 GCR years based on  
6 the prices that National Grid has paid for its hedged gas purchases in each month of  
7 those two years. As shown there, the average cost for the 2014 GCR year is \$0.5563  
8 per dekatherm (or \$0.05563 per therm) less than the cost for the 2013 GCR year.  
9 Accordingly, I have reduced National Grid's 2011 GCR rates by this amount to  
10 estimate the GCR rates that will be in effect for the 12 months ending October 2014.

11 Page 1 of Schedule TSC-8 shows my calculation of NBC's natural gas supply  
12 costs for the rate year. I have used the same therms of gas that NBC utilized in  
13 preparing its projection of rate year costs. For the GCR rates applicable in the rate  
14 year I have used composite rates based on averages of four months (July through  
15 October) of the 2013 GCR rates and eight months (November through June) of the  
16 2014 GCR rates. Because I am not proposing any adjustment to delivery rates, I have  
17 not included those costs in the calculation of my adjustment. As shown on page 1 of  
18 Schedule TSC-8, I have estimated rate year gas supply costs to be \$212,028. This is  
19 \$95,937 less than NBC's projection before accounting for gross earnings tax savings  
20 of \$2,967.

21

22

**Electricity Costs**

23

Q. PLEASE SUMMARIZE HOW NBC DEVELOPED ITS RATE YEAR  
24 PROJECTION OF ELECTRICITY COSTS.

24

1 A. Similar to natural gas, NBC first estimated the quantities of electricity (kWh) that  
2 would be required at each of its existing facilities based on the average kWh used at  
3 each facility in FY 2011 and FY 2012. NBC then projected the rate year costs at each  
4 facility based on National Grid's tariffed delivery rates for each facility in FY 2012  
5 plus National Grid's Standard Offer supply rate for FY 2012.<sup>3</sup> To the projected costs  
6 at existing facilities, NBC added the projected costs of electricity at the new Field's  
7 Point BNR facilities based on the estimated electricity usage provided by SEA  
8 consultants multiplied by the estimated delivery rate and National Grid's Standard  
9 Offer supply rate for FY 2012. Finally, NBC reflected an offset to the cost of  
10 electricity at the Field's Point facilities to reflect the reduced purchases that will be  
11 required during the rate year due to the kWh that will be generated by the three new  
12 wind turbines installed there in late 2012.

13 Q. WHAT ADJUSTMENTS HAVE YOU IDENTIFIED WITH REGARD TO  
14 NBC'S ESTIMATE OF RATE YEAR ELECTRICITY COSTS?

15 A. I have identified three adjustments that should be made to NBC's estimate of rate  
16 year electricity costs. First, I have updated the Standard Offer rates to reflect  
17 National Grid's average rate for the most recent 12 months available. For the G-02  
18 rate, information on approved rates was available through June 2013. For the G-32  
19 rate, approved rates were available through March 2013. However, National Grid  
20 recently filed for approval of G-32 rates for April-June of 2013 and I have used those  
21 proposed rates pending Commission approval. National Grid's Standard Offer rates  
22 have been gradually declining due to reductions in the market for electricity and those

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<sup>3</sup> National Grid's G-32 Standard Offer for Industrial Customers was applied to all facilities except the Interceptor Maintenance (IM) facilities for which the G-02 Standard Offer rate for Large Customers was used.

1 reductions should be taken into account in projecting NBC's rate year electricity  
2 costs.

3 Second, I have increased the projected kWh that will be available from the  
4 three wind turbines at Field's Point to reduce the amount of electricity that must be  
5 purchased at that facility. In developing its estimate of the kWh that will be  
6 generated by those three wind turbines, NBC reduced the engineer's estimate that  
7 7,113,000 kWh per year that will be generated by 25 percent. However, based on the  
8 information submitted to the Division in Division Docket D-12-7 seeking approval to  
9 construct the wind turbines, the engineer's estimate of the kWh generation already  
10 assumes that the turbines will operate with only an 18 percent capacity factor based  
11 on a site specific wind resources study. NBC relied on that estimate to demonstrate  
12 the cost effectiveness of the turbine project and it has not justified why that same  
13 estimate should not be used in estimating FY 2014 electricity costs in this case.  
14 Therefore, I have adjusted rate year electricity costs to eliminate the 25 percent  
15 reduction applied by NBC to the engineer's estimated wind generation.

16 Finally, in determining electricity costs, NBC did not recognize any revenues  
17 from the sale of the renewable energy credits (RECs) that will be produced in  
18 conjunction with the electricity generated by the wind turbines nor did it recognize  
19 any operating costs for those turbines. In the "Fields Point Renewable Wind Energy  
20 Feasibility Study Report and Project Cost Analysis" provided in Division Docket No.  
21 D-12-7, it was projected that NBC would initially receive revenues of 4.9 cents per  
22 kWh (\$49 per MWh) for its wind RECs. It is my understanding that current REC  
23 prices in New England have increased to levels in excess of \$60 per MWh. Based on  
24 this information, but to be conservative to account for the possibility of REC market  
25 price reductions from present levels, I have recognized revenues from the sale of the

1 wind RECs of \$50 per MWh or 5.0 cents per kWh. I have also recognized that NBC  
2 has agreed to pay Gilbane Building Company \$62,000 per year for monitoring and  
3 maintenance service for the wind turbines.

4 Q. HAVE YOU PREPARED A SCHEDULE SHOWING YOUR  
5 ADJUSTMENT TO NBC'S PROJECTED RATE YEAR ELECTRICITY  
6 COSTS?

7 A. Yes, my adjustment to NBC's rate year projection of electricity costs is shown on  
8 Schedule TSC-9. As shown there, adjusting the supply rate to reflect National Grid's  
9 most recent 12 month average standard offer rates and eliminating the 25 percent  
10 reduction in the expected wind turbine output results in total electricity costs of  
11 \$3,462,634, which is \$489,498 less than NBC's projection. After accounting for the  
12 projected revenues from the sale of RECs and the O&M costs associated with the  
13 wind turbines, I have estimated net electricity costs to be \$3,168,984, which is  
14 \$783,148 less than NBC's estimate of rate year electricity costs.

15

16 **Field's Point Chemical Costs**

17 Q. WHAT ADJUSTMENT ARE YOU PROPOSING TO NBC'S CLAIM FOR  
18 CHEMICAL COSTS AT THE FIELD'S POINT TREATMENT FACILITY?

19 A. In response to DIV. 1-19, NBC indicated that it made an error in the calculation of its  
20 filed claim for bisulfate costs at Field's Point and provided a revised estimate of the  
21 rate year expense. I have adjusted rate year expense to reflect that correction. As  
22 shown on Schedule TSC-10, this adjustment reduces projected rate year chemical  
23 expense at the Field's Point by \$68,136.

1 Q. DO YOU HAVE ANY OTHER CONCERNS ABOUT NBC'S CLAIMED  
2 CHEMICAL COSTS?

3 A. Yes. NBC is expected to begin operation of the Field's Point BNR facilities around  
4 July 1, 2013. As part of its claimed rate year chemical costs, NBC has included the  
5 engineer's estimate of the annual costs that will be incurred for the new carbon feed  
6 and sodium hydroxide that will be used by those facilities. In the case of both  
7 electricity and natural gas, the engineer's estimated costs were based on prices that  
8 were well above current levels based on the amounts that NBC included in its filing,  
9 even before the Division's adjustments. I am concerned that that the estimated  
10 chemical prices that the engineer used for carbon feed and sodium hydroxide may  
11 also be overly conservative. The Division has requested that NBC attempt to obtain  
12 indicative prices for these chemicals from its suppliers. In addition, NBC is also  
13 expected to obtain new bids for the hypochlorite and bisulfate, the chemicals that it  
14 currently uses at the Field's Point facility before June 30, 2013. If any new chemical  
15 prices become available, I will update the Division's recommendation.

16

17 **Bad Debt Expense**

18 Q. WHAT CONCERN DO YOU HAVE WITH REGARD TO NBC'S  
19 CLAIMED BAD DEBT EXPENSE FOR THE RATE YEAR?

20 A. NBC treated its test year bad debt expense of \$170, 457 as representative of the bad  
21 debt expense that would be incurred in the rate year. Prior to FY 2012, the last time  
22 NBC recorded any bad debt expense was in FY 2008, when \$77,534 was written off  
23 as uncollectible. In FY 2009 and FY 2010, NBC recorded negative bad debt expense  
24 indicating the recovery of prior period write-offs, and in FY 2011, NBC recorded \$0  
25 of bad debt expense. This would indicate that the test year expense may include the

1 write-off of amounts of uncollectible revenue accrued over more than a single year.  
2 This is supported by the response to DIV. 1-2, which indicates that the past due  
3 receivables at the time of the response were \$68,500.

4 Q. WHAT ADJUSTMENT ARE YOU PROPOSING TO MAKE TO NBC'S  
5 CLAIMED EXPENSE?

6 A. As shown on Schedule TSC-11, the average annual bad debt expense that NBC  
7 incurred over the period from FY 2008, when NBC last recorded the write-off of  
8 receivables, through FY 2012 was \$43,901. However, it is possible that some portion  
9 of the negative bad debt recorded in FY 2009 and FY 2010 represents the recovery of  
10 write-offs taken prior to FY 2008. Therefore, to be conservative, I am proposing to  
11 utilize the average bad debt in FY 2011 and FY 2012 as representative of the ongoing  
12 level of bad debt expense. As shown on Schedule TSC-11, this results in a reduction  
13 in bad debt expense of \$85,229.

14

15 **Debt Service Expense**

16 Q. WHAT ADJUSTMENT ARE YOU PROPOSING TO MAKE TO RATE  
17 YEAR DEBT SERVICE EXPENSE?

18 A. Recently, NBC filed an update to its debt issuance plans in Division Docket No. D-  
19 13-13. In that filing, NBC indicated that it will be borrowing a total of \$107 million  
20 in FY 2013, including \$82 million of open market bonds and \$25 million of State  
21 Revolving Fund (SRF) debt from the Rhode Island Clean Water Finance Agency  
22 (RICWFA). Because of favorable interest rates, NBC will be able to meet the debt  
23 service for this \$107 million of debt based on the revenues approved by the  
24 Commission in Docket No. 4352, at which time only \$73 million was expected to be  
25 issued. In addition, NBC also noted that its FY 2013 and FY 2014 capital needs had

1           been reduced by approximately \$17.5 million. As a result, it is now estimated that  
2           NBC will only need to issue approximately \$50 million in additional debt in FY 2014  
3           instead of the \$111,470,000 anticipated at the time of this filing. Accordingly, I am  
4           proposing to reduce rate year debt service to account for this reduction in the  
5           expected issuance of new debt in FY 2014.

6           Q.           HOW DID YOU ESTIMATE THE DEBT SERVICE REQUIREMENTS  
7                           FOR THE RATE YEAR?

8           A.           I utilized the debt service schedule provided by NBC in Division Docket No. D-13-13  
9                           as my starting point. That debt service schedule includes the principal and interest  
10                          payments on NBC's existing debt plus the payments associated with the planned  
11                          issuance of \$25 million of SRF debt and \$82 million of open market bonds in FY  
12                          2013. To these amounts, I added the estimated debt service for \$12 million of SRF  
13                          loans in FY 2014, as provided in response to DIV 1-28. I also included debt service  
14                          on an additional \$40 million of open market bonds. I estimated the debt service on  
15                          these bonds based on an interest only payment with interest at 5.0 percent, consistent  
16                          with the method that NBC used to estimate the debt service associated with its  
17                          original projection that \$99.47 million of open market bonds would be issued in FY  
18                          2014. While I believe this interest rate is conservative, I have accepted it in order to  
19                          allow some cushion for issuing additional debt if needed.

20                          The calculation of my debt service allowance is shown on Schedule TSC -12.  
21                          As indicated there, the debt service associated with the current debt plus the FY 2013  
22                          debt issues of \$107 million is \$42,062,563.<sup>4</sup> I have then added the debt service for  
23                          the 2014 SRF loan of \$831,767 and the open 2014 market bonds of \$2,000,000 to

---

<sup>4</sup> Consistent with the requirement of the Trust Indenture that revenues be sufficient to cover the highest debt service during the three year certificate period, FY 2015 was utilized as to determine rate year debt service, although the amounts do not vary significantly from year to year.

1 arrive at total debt service of \$44,894,330. After adding the 25 percent coverage  
2 requirement, I have determined the total amount required for debt service and  
3 coverage is \$56,117,913. This is \$3,619,652 less than the amount included in NBC's  
4 filing.

5

6

**Operating Reserve**

7 Q.

HOW HAVE YOU CALCULATED THE OPERATING RESERVE  
ALLOWANCE INCLUDED IN THE DIVISION'S RECOMMENDED  
TOTAL COST OF SERVICE?

10 A.

I have set the allowed operating reserve included in my determination of NBC's  
overall cost of service equal to one percent (1%) of total expenses excluding  
personnel services, debt service and debt coverage. This is the same method for  
determining NBC's operating reserve that the Commission has adopted in each NBC  
rate case since Docket No. 3797 in 2007. As shown on Schedule TSC-1, this results  
in a reduction of \$414,269 to NBC's requested operating reserve allowance based on  
1.5 percent of total expenses excluding debt service and debt coverage.

17

18

**Rate Design**

19 Q.

HOW ARE YOU PROPOSING TO DESIGN RATES TO RECOVER THE  
REVENUE INCREASE THAT YOU HAVE IDENTIFIED ON BEHALF OF  
THE DIVISION?

22 A.

For this proceeding, I am accepting NBC's proposal to recover the revenue increase  
through uniform percentage increases in user fee rates including residential,  
commercial and industrial flat fees or service charges and residential commercial, and  
industrial measured fees or usage charges.

25

1 Q. DO YOU HAVE ANY OTHER COMMENTS WITH REGARD TO THE  
2 RECOVERY OF NBC'S COSTS?

3 A. Yes. My agreement to recover the revenue increase through a uniform percentage  
4 increase in all user charges recognizes that the options that can be considered in the  
5 context of this or any other NBC rate proceeding are extremely limited. As I noted in  
6 NBC's rate case in Docket No. 4026, the major factors affecting NBC's revenue  
7 requirements are the costs of the CSO project and the treatment (and collection) of  
8 stormwater. These costs are not a function of customers' wastewater volumes.

9 A significant portion of NBC's costs that are associated with the CSO project  
10 and the collection and treatment of stormwater are attributable to non-wasterwater  
11 customers and/or to wastewater customers in a manner that is unrelated to those  
12 customers' wastewater system usage. However, the current system of cost recovery  
13 imposes none of NBC's costs on those "non-customers," which are sometimes  
14 referred to as "free riders." Instead, all of NBC's costs are imposed on its wastewater  
15 customers based on their use of the wastewater collection and treatment system.

16 In Docket No. 3342 in 2002-2003, the Commission conducted an  
17 investigation into issues related to the implementation of a stormwater abatement fee  
18 that would recover a portion of NBC's costs from non-wastewater system users. At  
19 that time, it was determined that legislation would be required to allow such fees to be  
20 imposed. Given the continued growth in NBC's costs that can be expected as Phase  
21 II and Phase III of the CSO facilities are constructed, consideration should again be  
22 given to the possibility of implementing a stormwater fee that applies to a broader  
23 customer base.

24 Q. HAVE YOU PREPARED SCHEDULES SHOWING THE CALCULATION  
25 OF THE RATES THAT YOU ARE PROPOSING?

1 A. Yes. Schedule TSC-13 shows the derivation of the uniform percentage increase in  
2 existing rates necessary to generate the required rate increase. As shown on that  
3 schedule, the overall percentage increase in rates is 8.75 percent.

4 Schedule TSC-14 shows the calculation of the proposed rates based on the  
5 application of the 8.75 percent increase to the current rates. Schedule TSC-14 also  
6 provides a proof of revenue at present and proposed rates.

7 Q. DOES THIS COMPLETE YOUR TESTIMONY?

8 A. Yes, it does.

**BEFORE THE  
PUBLIC UTILITIES COMMISSION  
OF RHODE ISLAND**

**THE NARRAGANSETT        )  
BAY COMMISSION        )        **DOCKET NO. 4364****

**SCHEDULES ACCOMPANYING THE  
DIRECT TESTIMONY  
OF  
THOMAS S. CATLIN**

**ON BEHALF OF THE  
DIVISION OF PUBLIC UTILITIES AND CARRIERS**

**March 22, 2013**

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**EXETER**

ASSOCIATES, INC.  
10480 Little Patuxent Parkway  
Suite 300  
Columbia, Maryland 21044

THE NARRAGANSETT BAY COMMISSION

Summary of Revenues and Expenses at  
 Present and Proposed Rates  
 Rate Year Ended June 30, 2014

	Rate Year Amount Per NBC	Division Adjustments	Rate Year at Present Rates	Allowable Rate Increase	Rate Year at Proposed Rates
<b>Revenue</b>					
User Fee Revenue	\$ 83,335,797	\$ 1,703	\$ 83,337,500	\$ 7,291,683	\$ 90,629,183
Other Service Revenue	1,570,246	-	1,570,246	-	1,570,246
Miscellaneous	1,178,440	-	1,178,440	-	1,178,440
Total Revenue	\$ 86,084,483	\$ 1,703	\$ 86,086,186	\$ 7,291,683	\$ 93,377,869
<b>Expenses</b>					
Personnel Services	21,011,491	120,859	21,132,350	-	21,132,350
Operating Supplies & Expenses	14,520,058	(1,277,258)	13,242,800	-	13,242,800
Professional Services	2,715,533	-	2,715,533	-	2,715,533
Capital Outlays	-	-	-	-	-
Amortization	9,690	-	9,690	-	9,690
Debt Service	47,790,051	(2,895,721)	44,894,330	-	44,894,330
Debt Coverage	11,947,513	(723,930)	11,223,583	-	11,223,583
Total Expenses	\$ 97,994,336	\$ (4,776,050)	\$ 93,218,286	\$ -	\$ 93,218,286
Operating Reserve	573,852	(414,269)	159,583	-	159,583
Total Cost of Service	\$ 98,568,188	\$ (5,190,319)	\$ 93,377,869	\$ -	\$ 93,377,869
Revenue Surplus/(Deficiency)	\$ (12,483,705)	\$ 5,192,022	\$ (7,291,683)	\$ 7,291,683	\$ -

THE NARRAGANSETT BAY COMMISSION

Summary of Division Adjustments to  
 Rate Year Revenues and Expenses at Present Rates  
 Rate Year Ended June 30, 2014

<u>Description</u>	<u>Amount</u>	<u>Source</u>
<b><u>Revenue Adjustments</u></b>		
Billing Determinant True-Up	1,703	Refer to testimony
<b><u>Expense Adjustments</u></b>		
Grant Expense	(4,247)	Schedule TSC-3
Employee Health Insurance	141,233	Schedule TSC-4
Workers' Compensation-Old Claims	(20,374)	Schedule TSC-5
Biosolids Disposal Costs	(76,364)	Schedule TSC-6
Maintenance & Service Agreements	(161,230)	Schedule TSC-7
Natural Gas Expense	(98,904)	Schedule TSC-8
Electricity Expense	(783,148)	Schedule TSC-9
Field's Point Chemicals	(68,136)	Schedule TSC-10
Bad Debt Expense	(85,229)	Schedule TSC-11
Debt Service	(3,619,651)	Schedule TSC-12
Operating Reserve	(414,269)	See Note (1)
Total Division Adjustments to Expenses	<u>\$ (5,190,319)</u>	
<b>Total Division Adjustments to Operating Income</b>	<u><u>\$ 5,192,022</u></u>	

Note:

(1) Adjusted to reflect 1.0% of Division Operating Expenses excluding Personnel and Debt costs per Schedule TSC-1. Refer to testimony for explanation.

THE NARRAGANSETT BAY COMMISSION

Adjustment to Remove Additional Grant Related Costs  
Rate Year Ended June 30, 2014

	<u>Amount</u>
Additional Grant Related Expenses in Test Year (1)	<u>\$ 4,247</u>
Adjustment to Rate Year Expense	<u><u>\$ (4,247)</u></u>

Note:

(1) Per response to DIV. 1-1.

THE NARRAGANSETT BAY COMMISSION

Adjustment to Health Insurance Expense  
 Rate Year Ended June 30, 2014

	Health Insurance	Dental Insurance	Total
Rate Year Weighted Average Premium (1)	\$ 16,811	\$ 982	\$ 17,793
Number of Employees (2)	249	249	249
Annual Premiums	\$ 4,185,939	\$ 244,518	\$ 4,430,457
Less Employee Copayments (3)	(778,585)	-	(778,585)
NBC Premium Expense	\$ 3,407,354	\$ 244,518	\$ 3,651,872
Amount per NBC (2)	3,259,966	250,673	3,510,639
Adjustment to Rate Year Expense	\$ 147,388	\$ (6,155)	<u>\$ 141,233</u>

Notes:

- (1) Refer to page 2 of this schedule.
- (2) Per Schedule WEE-4.
- (3) Reflects weighted average copayment of 18.6%.

THE NARRAGANSETT BAY COMMISSION

Adjustment to Health Insurance Expense  
 Rate Year Ended June 30, 2014

	<u>FY 2013 Annual Premium (1)</u>	<u>Percentage Increase (2)</u>	<u>Projected FY 2014 Premium</u>	<u>FTEs</u>	<u>Weighted Average</u>
<u>Medical Premiums</u>					
Family	\$ 20,057	7.44%	\$ 21,548	172	14,825
Single	7,340	7.43%	7,886	56	1,766
Waivers	2,500	-	2,500	22	220
Total				<u>250</u>	<u>16,811</u>
<u>Dental Premiums</u>					
Family	\$ 1,159	2.44%	\$ 1,187	187	888
Single	399	1.37%	405	56	91
Waivers	110	-	110	7	3
Total				<u>250</u>	<u>982</u>

Notes:

(1) Per response to DIV. 1-8.

(2) Based on average annual increase from FY 2010 to FY 2013. FY 2010 premiums per response to DIV. 2-3.

THE NARRAGANSETT BAY COMMISSION

Adjustment to Workers' Compensation Claims Expense  
Rate Year Ended June 30, 2014

	<u>Amount</u>
FY 2012 Workers' Comp--Old Claims	\$ 62,620
Less: Discontinued Amounts (1)	<u>(20,374)</u>
Estimated Rate Year Expense	\$ 42,246
Amount per NBC (2)	<u>62,620</u>
Adjustment to Rate Year Expense	<u><u>\$ (20,374)</u></u>

Notes:

(1) Per response to DIV. 1-10.

(2) Per Schedule WEE-1.

THE NARRAGANSETT BAY COMMISSION

Adjustment to Biosolids Disposal Costs  
 Rate Year Ended June 30, 2014

	<u>7/1/2013 to 12/31/2013</u>	<u>1/1/2014 to 6/30/2014</u>	<u>Total</u>
Field's Point-Dry Tons (1)	3,864	3,864	7,728
Bucklin Point-Dry Tons (1)	<u>1,050</u>	<u>1,050</u>	<u>2,100</u>
Total Biosolids for Disposal-Dry Tons	4,914.0	4,914.0	9,828
Rate per Ton (2)	<u>\$ 425.72</u>	<u>\$ 433.81</u>	
Biosolids Disposal Costs	\$ 2,091,988	\$ 2,131,742	\$ 4,223,730
Amount per NBC (1)			<u>4,300,094</u>
Adjustment to Rate Year Expense			<u>\$ (76,364)</u>

Notes:

(1) Per Schedule WEE-6

(2) Rates calculated as follows:

Disposal rate for Calendar Year 2012	\$ 417.77
Increase in CPI for Boston Area from November 2011 to November 2012	<u>1.019</u>
Disposal rate for Calendar Year 2013 (3)	\$ 425.72
Projected increase in CPI-U from 4Q12 to 4Q13 per Blue Chip Economic Indicators dated 1/10/2013	<u>1.0190</u>
Disposal rate for Calendar Year 2014	\$ 433.81

(3) Matches actual rate per response to DIV. 2-5.

THE NARRAGANSETT BAY COMMISSION

Adjustment to Maintenance & Service Agreement Costs  
Rate Year Ended June 30, 2014

	<u>Amount</u>
FY 2012 Maintenance & Service Agreement Expense (1)	\$ 735,174
Escalation from FY 2012 to FY 2014 (2)	<u>1,0372</u>
Rate Year Allowance for Existing Agreements	\$ 790,888
Additional Agreements Expensed (1)	<u>108,434</u>
Rate Year Expense	\$ 899,322
Amount per NBC (1)	<u>1,060,552</u>
Adjustment to Rate Year Expense	<u><u>\$ (161,230)</u></u>

Notes:

(1) Per Schedule WEE-7.

(2) Based on the 2 year increase in the CPI from 1st Quarter of 2012 to projected 1st Quarter of 2014 of 3.8% per Blue Chip Economic Indicators, February 10, 2013.

THE NARRAGANSETT BAY COMMISSION

Adjustment to Natural Gas Costs to Reflect  
 National Grid Gas Supply Costs for the Rate Year  
 Rate Year Ended June 30, 2014

	Annual Therms (1)	GCR Rate Per NBC (1)	GCR Rate per Division (2)	Supply Cost Per NBC (1)	Supply Cost per Division
Field's Point					
Tunnel Pump Station	38,449	\$ 0.88980	\$ 0.58692	\$ 34,212	\$ 22,566
2 Ernest	79,208	0.90990	0.63542	72,071	50,330
37 Ernest	28,081	0.91210	0.63542	25,613	17,843
BNR Facilities	36,658	0.90990	0.63542	33,355	23,293
Bucklin Point					
Admin	6,350	0.90800	0.63542	5,766	4,035
Plant	33,226	0.91700	0.63542	30,468	21,112
Exchange	65,263	0.91700	0.63542	59,846	41,469
Interceptor Maintenance	13,291	0.90990	0.63542	12,093	8,445
COB	19,977	0.99510	0.63542	19,879	12,694
Lab	16,113	0.90990	0.63542	14,661	10,239
Total	336,616			\$ 307,965	\$ 212,028
Difference in Supply Costs					\$ (95,937)
RIGET at 3.09278% (1)					(2,967)
Adjustment to Natural Gas Costs					\$ (98,904)

Notes:

(1) Per response to DIV. 1-14.

(2) Reflects Composite of following National Grid 2013 GCR rate for 4 Months and 2014 GCR rate for 8 months:

	High Load Factor	All Other	
2013 GCR Rate	\$ 0.62400	\$ 0.67250	(per page 2 of this schedule)
Expected Reduction	0.05563	0.05563	
2014 GCR Rate	\$ 0.56837	\$ 0.61687	
Weighted Rate	\$ 0.58692	\$ 0.63542	

THE NARRAGANSETT BAY COMMISSION

Analysis of Expected Reduction in National Grid  
 Gas Supply Costs for the 2014 GCR Period

	Volume Forecast (Dth)	Average Price of Hedged Dth		2012-13 Cost	2013-14 Cost
		2012-13	2013-14		
November	2,263,973	\$ 4.5912	\$ 4.2661	\$ 10,394,353	\$ 9,658,335
December	3,639,909	4.6429	4.2595	16,899,733	15,504,192
January	3,693,950	4.7416	4.1874	17,515,233	15,468,046
February	3,284,612	4.6180	4.0955	15,168,338	13,452,128
March	3,448,137	4.7096	3.9898	16,239,346	13,757,377
April	2,843,609	4.4707	3.7386	12,712,923	10,631,117
May	1,986,560	4.4577	3.8144	8,855,489	7,577,534
June	1,223,024	4.6068	3.7594	5,634,227	4,597,836
July	720,291	4.6961	3.9847	3,382,559	2,870,144
August	652,188	4.7776	3.9877	3,115,893	2,600,730
September	709,898	4.2978	3.9843	3,051,000	2,828,447
October	1,268,633	4.1806	4.1841	5,303,647	5,308,087
<b>Total</b>	<b>25,734,784</b>			<b>\$ 118,272,741</b>	<b>\$ 104,253,974</b>
		Weighted Average Price		\$ 4.5958	\$ 4.0511
Supply Variable Cost Factor =		\$4.6931	X \$ 4.0511	/ \$ 4.5958	= \$ 4.1368
Reduction in 2010-11 Supply Variable Cost per Dth =		\$4.6931	- \$ 4.1368	=	\$0.55627
Reduction in 2010-11 Supply Variable Cost per Therm =					\$0.05563

Sources: National Grid Semi-Annual Report on Gas Procurement Incentive Plan dated January 31, 2013  
 and Revised Gas Charge Recovery Filing Dated January 24, 2013, both filed in Docket No. 4346.

THE NARRAGANSETT BAY COMMISSION

Adjustment to Electricity Costs to Reflect  
 Updated Supply Costs and Offset for REC Revenues  
 Rate Year Ended June 30, 2014

	Cost per NBC	Cost per Division	Supply Cost per Division
Field's Point			
Field's Point	1,132,051	\$ 1,034,790	\$ (97,261)
Tunnel Pump Station	705,634	650,623	(55,011)
New Operations Bldg.	71,927	65,696	(6,231)
BNR Facilities	1,134,439	1,036,158	(98,281)
Turbines	(528,329)	(643,411)	(115,082)
Bucklin Point	1,147,336	1,051,062	(96,274)
Interceptor Maintenance	139,572	130,187	(9,385)
COB	149,502	137,529	(11,973)
Total Electricity Cost	\$ 3,952,132	\$ 3,462,634	\$ (489,498)
Less: RECs	-	(355,650)	(355,650)
Plus: Turbine O&M	-	62,000	62,000
Net Electricity Costs	\$ 3,952,132	\$ 3,168,984	<u>\$ (783,148)</u>

Notes:

(1) Per response to DIV. 1-18.

(2) Refer to page 2 of this schedule.

THE NARRAGANSETT BAY COMMISSION

Adjustment to Electricity Costs to Reflect  
 Updated Supply Costs and Offset for REC Revenues  
 Rate Year Ended June 30, 2014

DETAIL (1)

	COB	FP	TPS	New Ops	BNR	Turbines	FP Total	BP	IM
FY 2014 Projected kWh	1,395,500	11,336,000	6,411,600	726,280	11,454,879	(7,113,000)	22,815,759	11,221,000	1,029,847
<b>Rates:</b>									
Customer Chg.	\$ 751	\$ 751	\$ 751					\$ 751	\$ 1,134
Supply	0.05526	0.05526	0.05526	0.05526	0.05526	0.05526	0.05526	0.05526	0.06375
Avg. Delivery per kWh	0.02955	0.02823	0.03741	0.02823	0.02823	0.02823	0.02823	0.03051	0.04105
Capacity Chg	\$ 0.00334	\$ 0.00334	\$ 0.00334	\$ 0.00334	\$ 0.00334	\$ 0.00334		\$ 0.00334	\$ 0.00334
Customer Chg.	\$ 9,010	\$ 9,010	\$ 9,010	\$ -	\$ -	\$ -	\$ 18,020	\$ 9,010	\$ 13,608
Supply	77,120	626,465	354,326	40,137	633,035	(393,088)	1,260,875	620,110	65,654
Avg. Delivery per kWh	41,235	320,048	239,840	20,505	323,404	(200,820)	702,976	342,408	42,276
Capacity Charge	4,663	37,876	21,423	2,427	38,273	(23,766)	76,233	37,492	3,441
Subtotal	\$ 132,028	\$ 993,399	\$ 624,599	\$ 63,068	\$ 994,712	\$ (617,675)	\$ 2,058,104	\$ 1,009,020	\$ 124,980
Gross Earnings Tax	\$ 5,501	\$ 41,391	\$ 26,025	\$ 2,628	\$ 41,446	\$ (25,736)	\$ 85,753	\$ 42,042	\$ 5,207
Total	\$ 137,529	\$ 1,034,790	\$ 650,623	\$ 65,696	\$ 1,036,158	\$ (643,411)	\$ 2,143,857	\$ 1,051,062	\$ 130,187

Note:  
 (1) All amounts per response to DIV. 1-18 except supply rate which is developed on page 3 of this schedule.

THE NARRAGANSETT BAY COMMISSION

Adjustment to Electricity Costs to Reflect  
 Updated Supply Costs and Offset for REC Revenues  
 Determination of Updated Standard Offer Rates  
 Rate Year Ended June 30, 2014

	G-02 Standard Offer (1)	G-32 Standard Offer (1)(2)
July 2012	\$ 5.9930	\$ 4.4460
August 2012	5.9590	4.4470
September 2012	5.5900	4.5070
October 2012	5.6460	4.5980
November 2012	5.8660	4.7480
December 2012	6.8460	5.7990
January 2013	8.5820	8.6620
February 2013	8.1490	8.0820
March 2013	6.3730	5.9550
April 2013	6.0460	5.2670
May 2013	5.5650	4.8000
June 2013	5.8870	5.0050
Average	\$ 6.3752	\$ 5.5263

Notes:

- (1) Reflects National Grid Standard Offer rates as shown on RIPUC Website on March 4, 2013.
- (2) G-32 reflects April through June 2012 because April through June 2013 not available. Will be updated when available.

THE NARRAGANSETT BAY COMMISSION

Adjustment to Field's Point Chemicals Costs  
Rate Year Ended June 30, 2014

	<u>Hypochlorite (1)</u>	<u>Bisulfate (1)</u>	<u>Total</u>
FY 2011 Gallons	785,597	233,017	
FY 2012 Gallons	<u>450,103</u>	<u>193,037</u>	
Average	617,850	213,027	
Price Per Gallon (2)	<u>\$ 0.5981</u>	<u>\$ 1.4615</u>	
Annualized Expense	\$ 369,547	\$ 311,329	\$ 680,876
Amount per NBC (2)	<u>369,547</u>	<u>379,465</u>	<u>749,012</u>
Adjustment to Rate Year Expense	<u>\$ -</u>	<u>\$ (68,136)</u>	<u>\$ (68,136)</u>

Notes:

(1) Gallons per response to DIV. 1-19

(2) Per Schedule WEE-11.

THE NARRAGANSETT BAY COMMISSION

Adjustment to Bad Debt Expense  
Rate Year Ended June 30, 2014

	<u>Amount</u>
<u>Historical Bad Debt (1)</u>	
FY 2008	\$ 77,534
FY 2009	(15,905)
FY 2010	(12,582)
FY 2011	-
FY 2012	170,457
Average Bad Debt over 2008 through 2012	<u>\$ 43,901</u>
Average Bad Debt in FY 2011 and FY 2012	\$ 85,229
Bad Debt Expense per NBC (2)	<u>170,457</u>
Total Adjustment to Bad Debt Expense	<u>\$ (85,229)</u>

Notes:

(1) Per Schedule WEE-3 and Schedule WEE-3 in Docket No. 4205.

(2) Per Schedule WEE-3.

THE NARRAGANSETT BAY COMMISSION

Adjustment to Debt Service Expense  
Rate Year Ended June 30, 2014

<u>Debt Service Associated with:</u>	<u>Amount</u>
Existing Debt plus \$107 million being issued in FY 2013 (1)	\$ 42,062,563
FY 2014 SRF Loan of \$12 million (2)	831,767
Open Market Bonds of \$40 million in FY 2014 (3)	<u>2,000,000</u>
Total Debt Service	\$ 44,894,330
Coverage Requirement at 25%	<u>\$ 11,223,583</u>
Total Debt Service and Coverage	\$ 56,117,913
Amount per NBC (4)	<u>59,737,564</u>
Adjustment to Rate Year Expense	<u>\$ (3,619,651)</u>

Note:

- (1) Per Exhibit KG-2 in Division Docket No. D-13-13. Reflects expense for FY 2015.
- (2) Per response to DIV. 1-28. Reflects Expense for FY 2015.
- (3) Based on \$40 million of debt with principal only payments in initial years per response to DIV. 1-28.

THE NARRAGANSETT BAY COMMISSION

Calculation of Uniform Percentage Increase  
Based on Division Recommended Revenue Increase  
Rate Year Ended June 30, 2014

Division Recommended Revenue Increase (1)	<u>\$ 7,291,683</u>
Revenues from Services Subject to Increase (2)	
Flat Fees-Residential	\$ 21,790,217
Measured Fees-Residential	25,700,104
Flat Fees-Commercial and Industrial	13,192,676
Measured Fees-Commercial	21,439,959
Measured Fees-Industrial	1,214,544
Total Revenue Subject to Increase	<u>83,337,501</u>
Uniform Percentage Increase	<u>8.75%</u>

Notes:

(1) Per Schedule TSC-1

(2) Per Schedule TSC-14.

THE NARRAGANSETT BAY COMMISSION  
Calculation of Proposed Rates and  
Proof of Revenues at Present and Proposed Rates  
Rate Year Ended June 30, 2014

	<u>Current Rate</u>	<u>Increase</u>	<u>Present Rates</u>	<u>Billing Units (1)</u>	<u>Revenue at Present Rates</u>	<u>Revenue at Proposed Rates</u>
<b>Flat Fees</b>						
Residential	\$ 184.63	8.75%	\$ 200.78	118,021	\$ 21,790,217	\$ 23,696,770
<b>Commercial &amp; Industrial</b>						
Meter Size						
5/8"	\$ 441.00	8.75%	480.00	3,685	1,625,085	1,768,800
3/4"	659.00	8.75%	717.00	1,016	669,544	728,472
1"	1,096.00	8.75%	1,192.00	1,161	1,272,456	1,383,912
1.5"	2,200.00	8.75%	2,392.00	843	1,854,600	2,016,456
2"	3,514.00	8.75%	3,821.00	1,457	5,119,898	5,567,197
3"	6,583.00	8.75%	7,159.00	84	552,972	601,356
4"	10,970.00	8.75%	11,930.00	41	449,770	489,130
6"	21,949.00	8.75%	23,869.00	52	1,141,348	1,241,188
8"	35,117.00	8.75%	38,190.00	13	456,521	496,470
10"	50,482.00	8.75%	54,899.00	1	50,482	54,899
Total Commercial & Industrial Flat Fees				8,353	\$ 13,192,676	\$ 14,347,880
<b>Measured Fees</b>						
Residential	\$ 2.979	8.75%	3.240	8,627,091	25,700,104	27,951,775
Commercial	4.321	8.75%	4.699	4,961,805	21,439,959	23,315,522
Industrial	2.778	8.75%	3.021	437,201	1,214,544	1,320,784
Total Measured Fees					\$ 48,354,608	\$ 52,588,081
<b>Other Revenue</b>					\$ 2,748,686	\$ 2,748,686
<b>Total Revenue</b>					\$ 86,086,187	\$ 93,381,417
Target Revenue (2)						93,377,869
Variance						\$ 3,548

Notes:

(1) Per Schedule WEE-15

(2) Per Schedule TSC-1.