



State of Rhode Island and Providence Plantations

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Patrick C. Lynch, Attorney General

September 30, 2009

Ms. Luly Massaro, Clerk
Public Utilities Commission
89 Jefferson Blvd.
Warwick, RI 02888

Re: Docket No. 4065

Dear Ms. Massaro,

Enclosed for filing with the Commission please find the Amended Direct Testimony of Lee Smith. Unfortunately, due to the expedited timetable in the above docket as well as volume of filings due on September 15, 2009, Ms. Smith's Direct Testimony contained a number of typographical errors. Kindly substitute this version of Ms. Smith's Direct Testimony in the Record for that which was filed on September 15, 2009. The following reflect the principal corrections that have been made to the testimony:

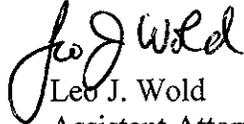
- The referenced resume on Page 1, line 18 is now attached;
- Page 3, line 17-18, the question "How do your recommended disallowances interface with his disallowances?" has been deleted;
- Page 4, line 13, the extra words "utility practice" have been deleted;
- Page 9, line 27, the words "accounts 923, 926 and 930" has been amended to "accounts 588, 923 and 930.1";
- Page 11, lines 11, the clause "(Account 904), Pensions and Benefits (Account 926)," has been inserted after the word "expenses";
- Page 14, line 10, the figure "205%" has been amended to "206%";
- Page 14, line 11, the figures "28% increase and a 335% increase..." have been amended to "...22% and a 314% increase...";

- Page 17, line 28, the figures “23%” and “45%” have been amended to “22%” and “38%”, respectively.
- Page 18, line 6, the figure “18%” has been amended to “12%”; and
- Page 18, line 7, the clause “and of 27% from 2006 to 2008,” has been inserted after the year “2008”.

Please observe that none of these amendments alter in any way the conclusions and recommendations of Ms. Smith. If you have any questions or concerns, please do not hesitate to contact me.

Thank you for your attention to this matter.

Very truly yours,



Leo J. Wold
Assistant Attorney General

cc: Service List

BEFORE THE
RHODE ISLAND PUBLIC UTILITIES COMMISSION

DOCKET NO. 4065

TESTIMONY OF LEE SMITH

ON BEHALF OF THE
RHODE ISLAND DIVISION OF PUBLIC UTILITIES AND CARRIERS

SEPTEMBER 15, 2009

1 **I. INTRODUCTION**

2 **Q. What is your name and business address?**

3 A. My name is Lee Smith, and I work for La Capra Associates, One Washington
4 Mall, Boston, MA 02108.

5

6 **Q. On whose behalf are you testifying in this proceeding?**

7 A. I am testifying on behalf of the Rhode Island Division of Public Utilities and
8 Carriers (“Division”).

9

10 **Q. Please describe your background and experience.**

11 A. I am a Managing Consultant and Senior Economist at La Capra Associates. I
12 have been with this energy planning and regulatory economics firm for 25 years.
13 I have prepared testimony on gas and electric rates, rate adjustors, cost allocation
14 and other issues regarding more than 40 utilities in 19 states and before the
15 Federal Energy Regulatory Commission. Prior to my employment at La Capra
16 Associates, I was Director of Rates and Research, in charge of gas, electric, and
17 water rates, at the Massachusetts Department of Public Utilities. Prior to that
18 period, I taught economics at the college level. My resume is attached as Exhibit
19 (LS-1).

20

21 **Q. Please describe your educational background.**

22 A. I have a bachelor’s degree with honors in International Relations and Economics
23 from Brown University. I have completed all requirements except the dissertation
24 for a Ph.D. in economics from Tufts University.

25

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

27 A. I have been asked by the Division to review the reasonableness and
28 appropriateness of the allocation of costs from affiliates to the Narragansett
29 Electric Company (“Narragansett” or “Company”). Significant amounts of costs
30 allocated from affiliated companies are reflected in Narragansett’s proposed
31 revenue requirement.

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Q. Please summarize your testimony regarding the Company’s filing.

A. I find the following:

- A number of costs charged to the Company by affiliates result from programs which appear to be driven by needs outside of Rhode Island.
- A number of accounts reflect very large increases in 2008 costs, as a result of programs charged by the affiliated companies
- These same accounts result in much higher costs on a normalized basis than costs incurred by comparable utilities
- I recommend a disallowance of 2008 base costs in account 583 of \$2.3 million.
- I recommend a disallowance of 2008 base costs in account 588 of \$0.8 million.

II. IMPACT OF SERVICE COMPANY AND MERGER COSTS ON NARRAGANSETT’S O&M EXPENSES

Q. What is the subject of your testimony in this area?

A. I have reviewed Narragansett’s change in O&M expenses since its acquisition by National Grid, and the allocation of expenses to the Company by National Grid affiliates, focusing on the two service companies, National Grid Service Company and KeySpan Service Company. The allocations from the Service Company must be reviewed carefully, not only in terms of how costs are allocated but also in terms of whether the resulting level of costs is reasonable.

Q. What does the impact of the National Grid organization on Narragansett costs appear to be?

A. It appears that many decisions regarding utility operations and management are driven by an overview by National Grid of all of its affiliates, particularly of all of its electric distribution companies. “Programs” are instituted out of perceived

1 system-wide needs, which may not all be justified by Narragansett Electric needs,
2 and which may not provide benefits that are greater than the costs imposed on
3 Narragansett Electric.

4
5 I do not mean to imply that the size of National Grid's operations, or the impact
6 of the increase in size caused by the KeySpan merger, is all bad. In fact it appears
7 that cost increases may have been moderating in some areas, particularly in some
8 administrative and general accounts. These are in fact the areas in which one
9 would expect that there will be significant opportunities for economies of scale.
10 It does not appear that the Service Company has provided similar benefits in
11 operation and maintenance of the distribution system, or in customer related
12 functions.

13
14 **Q. Based on your review, are you recommending disallowances of some**
15 **expenses?**

16 A. Yes. I have found that 2008 costs have reflected inordinate increases in Service
17 Company costs in certain FERC accounts, and I recommend specific amounts that
18 have not been justified should be disallowed. I am recommending reductions, not
19 to pro forma adjustments, but to base expense amounts that were actually booked
20 in 2008 in accounts 583 and 588. To the extent that 2008 costs cannot be justified
21 or cannot be demonstrated to be recurring, these adjustments should reduce the
22 rate year costs in these accounts.

23
24 **Q. Why are Service Company costs an integral part of recent increases in**
25 **expenses?**

26 A. Expenses billed to the Company by the Service Companies are a large and
27 growing portion of the Company's total O&M expenses (accounts 580 to 935) –
28 46% in 2006, 47% in 2007, and 48% in 2008.

29
30 The NGrid organization is much larger than the Company would be alone,
31 particularly after the recent merger with KeySpan. While larger organizations

1 may create economies of scale in some utility functions, it is not self-evident that
2 they will decrease costs. They may also have higher wage levels than local
3 organizations, and larger levels of bureaucracy may actually increase costs. It is
4 significantly more difficult for a state commission to scrutinize such costs as
5 thoroughly as they can locally incurred costs.

6
7 **Q. Does the Company have an obligation to provide service efficiently and to**
8 **demonstrate that services provided by affiliates are economical compared to**
9 **alternatives?**

10 A. Yes, it does. State law and good utility practice provide such a mandate. The
11 order of the Commission in Docket No. 3797¹ states that “A utility has an
12 obligation to run an efficient operation” and notes that expenses can be disallowed
13 if the utility’s decision results in “inefficiency” or “unnecessary costs.” (Order
14 pp.22-23)

15
16 **Q. What exactly are “Service Company costs” and how do they impact National**
17 **Grid’s rate request?**

18 A. The National Grid Service Company and the KeySpan Service Company allocate
19 costs to at least 33 separate entities, including the Narragansett Electric Company.
20 The allocatees include four retail electric distribution companies, (“EDCs”), six
21 retail gas utilities, National Grid Service Company and a KeySpan service
22 company, and a large number of smaller generally energy-related companies. The
23 National Grid Service Company’s main if not only activity is to provide services
24 to the other affiliate companies. Most of the National Grid Service Company
25 costs are allocated among the four EDCs (81% of total allocated costs, 85% of
26 costs in accounts 580 to 935). KeySpan Service Company costs have a much
27 smaller impact on the Company than do costs from the NG Service Company.

28
29 When NG Service Company allocates (or directly assigns) costs to Narragansett
30 Electric, these costs are reflected in the Company’s books. The allocated NG

¹ PUC Order No. 19062, issued 9/10/2007, regarding the Narragansett Bay Commission Request for General Rate relief.

1 (and KeySpan) Service Company costs will be a part of this rate case, adjusted by
2 inflation, unless there is some proforma adjustment to remove them.

3
4 **Q. How do the Service Company costs get charged to Narragansett Electric?**

5 A. The majority get allocated to the Company based on a complex series of
6 allocation formulae. These reflect such items as revenues, assets, O&M expenses,
7 number of employees, number of customers, etc. The allocation of costs, by
8 account, or by service, is not directly related to benefits that may be received by
9 the various affiliates.

10
11 **Q. How can we judge whether the Service Company costs are reasonable?**

12 A. We can only judge these costs by comparison to other utilities, and by their
13 apparent impact on Narragansett's costs. Service Company costs have not been
14 tested through RFPs that would determine whether they could be acquired by less.
15 Costs could also be justified by reference to Narragansett's specific needs and
16 benefits that would accrue to Narragansett in excess of the costs.

17
18 **Q. Has the Company presented any evidence that what it is paying the Service
19 Companies for the services provided is reasonable, compared to what it
20 would pay if it performed these services directly or if it purchased them from
21 competitive vendors?**

22 A. No, it has not. It has not market tested these services by issuing RFPs to
23 determine if they could be acquired at less cost elsewhere. (DIV 12-16) It has not
24 presented any benchmark studies that compare its costs to other utilities, other
25 than wage comparisons.

26
27 **Q. How does the Company attempt to defend the level of Service Company
28 costs?**

29 A. The response to DIV 12-16 states that all services procured from affiliates are
30 provided at cost, without the markup that they could incur if the services were
31 provided by other entities. These Service Company costs, however, do include

1 allocations of overhead, pensions and benefits, working capital, depreciation, and
2 a return to the Service Company. These are the costs that an outside supplier
3 could recover through a “markup.”
4

5 The Company testifies that it has benchmarked its labor costs against other
6 utilities. However, nonunion labor compensation in New York is higher than for
7 Narragansett nonunion labor, because the average pay level is 6.4% higher in
8 New York. (Dowd p. 13). Since most of Service Company costs result from
9 activities in New York, this suggests that paying Service Company personnel, all
10 else being equal, will tend to be more expensive than paying local personnel.

11
12 **Q. If all Service Company services which are charged to the Company are**
13 **computed on the basis of a formula referring to Service Company costs or on**
14 **the basis of a direct assignment, does this demonstrate that affiliate costs are**
15 **no greater than the market value of the service?**

16 A. No, it does not. Service Company costs could be higher than market based costs
17 for any of the following reasons:

- 18 ▪ The Service Company was located in a high labor cost area;
- 19 ▪ Competitive suppliers would sometimes accept a lower profit margin than
20 the Service Company builds into their costs;
- 21 ▪ The allocation of costs to the Company raised its share of costs to a higher
22 level than if it selected and contracted for the service based on its own
23 specific needs;
- 24 ▪ The Service Company was not the most efficient provider; and
- 25 ▪ Service Company facilities were located in a high price real estate area.

26
27 **Q. Aside from the fact that these affiliate services do not appear to be market**
28 **tested, are there other reasons why you think that the allocation of Service**
29 **Company costs to the Company is a problem?**

30 A. Yes. There appear to be a number of large expenditures that have not been
31 justified by Narragansett’s needs. This is similar to the situation that Mr. Hahn

1 describes where National Grid sets some sort of target for all its EDCs and
2 Narragansett gets a share of costs even though its own circumstances may not
3 justify this level of spending.

4
5 In addition to my concern about the cost justification for certain Service Company
6 expenses, the impact on Narragansett's costs of Service Company allocations are
7 problematic. The Company's costs in a number of accounts have risen at a rate
8 that is much higher than normal for utilities over many years, but particularly the
9 last few years, and in most cases these increases seem to have been driven by
10 Service Company costs.

11

12 **Q. How have you reviewed Narragansett's O&M costs and the impact of the**
13 **Service Companies costs on the Company?**

14 A. I have compared Narragansett's O&M costs by FERC account to its spending in
15 previous years, both before and after National Grid's acquisition of the former
16 New England Electric companies. I have compared increase percentages by
17 account to increase percentages experienced by other comparable utilities over ten
18 years and over the last two years. I have issued discovery and researched
19 particular accounts that seemed out of line based on those numerical comparisons.

20

21 In order to compare the absolute level of costs between the Company and the
22 comparable utilities, I have also calculated O&M costs by accounts on a per MW
23 basis and a per customer basis. I have also computed the impact of Service
24 Company costs on various accounts.

25

26 **Q. What is the purpose of comparing percentage cost increases by account?**

27 A. Costs increase because of increases in labor costs and increases in materials costs,
28 although they may also decrease because of technological change, and greater
29 efficiency. FERC accounts define utility activities such that we would expect
30 similar rates of cost change between utilities unless there were major changes due
31 to changes in regulations or other extraordinary events. If costs for a particular

1 account increase by much more for one utility than for comparable utilities, it is
2 reasonable to question whether that level of expense is prudent, normal, and will
3 be maintained.

4

5 **Q. What is the purpose of comparing costs on per MW and per customer bases?**

6 A. It is to be expected that larger utilities have larger costs. It is generally expected
7 that most distribution costs will vary directly with the utility's load, most
8 customer related costs will vary with the number of customers, and administrative
9 costs may vary with both of these factors. This review attempts to "normalize"
10 costs across utilities.

11

12 **Q. Please describe the other utilities, the costs of which you have compared to**
13 **the Company's distribution costs.**

14 A. I have looked at cost data by account from FERC Form 1s, for a sample of
15 comparable utilities. The original sample from which I worked was developed to
16 be used in a settlement that resulted in Massachusetts Electric's rates being
17 adjusted annually based on a formula reflecting increases received by the
18 comparable utilities. I have removed the smallest utilities from the original
19 sample, on the theory that there may be some diseconomies of scale experienced
20 by these utilities. I also removed the other NGrid companies, which will also
21 have been impacted by NGrid Service Company costs and the merger. This
22 resulted in a sample of 14 restructured utilities from Pennsylvania to Maine which
23 offered the comparability of unbundled rates. The average size of these utilities,
24 on a peak load basis, is somewhat higher than the average size of Narragansett.
25 The list of utilities included is found below:

1 Connecticut Light and Power
2 United Illuminating
3 NStar
4 Western Mass Electric Co.
5 Public Service of New Hampshire
6 Atlantic City Electric
7 Jersey Central Power and Light
8 Public Service Electric and Gas
9 Duquesne Light Company
10 Metropolitan Edison
11 PECO Energy
12 Pennsylvania Electric Company
13 Pennsylvania Power and Light
14 West Penn Power
15

16 **Q. Is this the same sample utilized by Mr. Richard Hahn in his comparison of**
17 **capital expenditures?**

18 A. Yes.
19

20 **Q. What Company cost data have you used to compare to this data?**

21 A. The initial data was the FERC Form 1 data. Massachusetts and Narragansett data
22 was adjusted to remove Merger Costs to Achieve (“CTA”) in 2008, costs which
23 the Company has identified as being removed from the basis for the revenue
24 requirement.

25
26 I have subtracted the CTA removed, by account, from the 2008 booked data to get
27 the basis for comparison with past years. The only significant amounts removed
28 were in accounts 588, 923, and 930.1.²

² As discussed on p.11, the costs and benefits account, 926, was not included in the comparison of utility costs.

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TABLE 1
REMOVAL OF CTA FROM 2008

	Narragansett FERC Form 1 Costs	Narragansett CTA	Adjusted Narragansett FERC Form 1 Costs
Distribution			
580 Operation Supervision and Engineering	\$1,214,774		\$1,214,774
581 Load Dispatching	\$2,144,144		\$2,144,144
582 Station Expenses	\$3,062,633	(\$18,571)	\$3,044,062
583 Overhead Line Expenses	\$5,095,785		\$5,095,785
584 Underground Line Expenses	\$1,750,672		\$1,750,672
585 Street Lighting and Signal System Expenses	\$483,557		\$483,557
586 Meter Expenses	\$2,596,836		\$2,596,836
587 Customer Installations Expenses	\$1,432,144		\$1,432,144
588 Miscellaneous Expenses	\$10,642,693	(\$510,715)	\$10,131,978
589 Rents	\$107,332		\$107,332
590 Maintenance Supervision and Engineering	\$41,343		\$41,343
591 Maintenance of Structures	\$23,666		\$23,666
592 Maintenance of Station Equipment	\$3,146,960		\$3,146,960
593 Maintenance of Overhead Lines	\$15,967,258		\$15,967,258
594 Maintenance of Underground Lines	\$1,069,780		\$1,069,780
595 Maintenance of Line Transformers	\$247,381		\$247,381
596 Maintenance of Street Lighting and Signal Systems	\$1,564,051		\$1,564,051
597 Maintenance of Meters	\$305,587		\$305,587
598 Maintenance of Miscellaneous Distribution Plant	\$196		\$196
TOTAL WIRES	\$50,896,792	(\$529,286)	\$50,367,506
Customer Accounts Expenses			
901 Supervision	\$1,126,914	(\$344)	\$1,126,570
902 Meter Reading Expenses	\$1,211,647		\$1,211,647
903 Customer Records and Collection Expenses	\$10,704,988	(\$802)	\$10,704,186
905 Miscellaneous Customer Accounts Expenses	\$1,021,581	(\$175)	\$1,021,406
Subtotal	\$14,065,130	(\$1,321)	\$14,063,809
Customer Service and Informational Expenses			
907 Supervision	\$82,193		\$82,193
909 Informational and Instructional Expenses	\$347,747		\$347,747
910 Miscellaneous Customer Service and Informational Expenses	\$2,379,969		\$2,379,969
Subtotal	\$2,809,909	\$0	\$2,809,909
Sales Expenses			
911 Supervision	\$0		\$0
912 Demonstrating and Selling Expenses	\$423		\$423
913 Advertising Expenses	\$0		\$0
916 Miscellaneous Sales Expenses	\$212		\$212
Subtotal	\$635	\$0	\$635
TOTAL Customer & Sales	\$16,875,674	(\$1,321)	\$16,874,353
Administrative and General			
920 Administrative and General Salaries	\$9,118,040	(\$14,122)	\$9,103,918
921 Office Supplies and Expenses	\$9,848,177	\$58,994	\$9,907,171
922 Administrative Expenses Transferred-Credit	\$0		\$0
923 Outside Services Employed	\$2,436,365	(\$436,032)	\$2,000,333
924 Property Insurance	\$1,078,119		\$1,078,119
925 Injuries and Damages	\$7,054,506	(\$166)	\$7,054,340
927 Franchise Requirements	\$0		\$0
928 Regulatory Commission Expenses	\$3,330,759		\$3,330,759
929 Duplicate Charges-Cr.	\$0		\$0
930.1 General Advertising Expenses	\$508,532	(\$242,856)	\$265,676
930.2 Miscellaneous General Expenses	\$4,140,504		\$4,140,504
931 Rents	\$4,180,773	(\$118,457)	\$4,062,316
935 Maintenance of General Plant	\$256,705		\$256,705
TOTAL A&G	\$41,952,480	(\$752,639)	\$41,199,841
GRAND TOTAL	\$109,724,946	(\$1,283,246)	\$108,441,700

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1 **Q. Why did you make these computations rather than utilizing either the rate**
2 **filing or the unadjusted FERC Form 1 data?**

3 A. The purpose of this cost data is to allow a comparison of cost increases up to the
4 year 2008 by the Company and by the comparable utilities. I removed the CTAs
5 since they were not normal expenses. I utilized the adjusted 2008 costs rather
6 than the expenses reported in the revenue requirement, because the revenue
7 requirement values are intended to reflect costs in the rate year, 2010.

8
9 In comparing expenses by account and by cost category, I excluded uncollectible
10 expenses (Account 904), Pensions and Benefits (Account 926), and Account 908,
11 which is largely Demand Side Management or Energy Efficiency programs.
12 Individual utilities often do not have much control over these costs, which will be
13 affected by regulatory policies and local economic conditions.

14
15 **Q. What have you observed from the most recent cost increase data?**

16 A. The Company's expenses show high increases from 2007 to 2008, particularly
17 with regard to the pure distribution costs (Accounts 580 to 598,) that I label
18 "wires" cost. The percentage increases are much higher in general than the
19 increases found in the data for the comparable companies. The sum of expenses
20 in the wires costs increased by 23% for the Company but only by 3% for the
21 average of the sample utilities.

22
23 The Company's various Customer Cost categories, excluding uncollectibles and
24 account 908, increased by more than the sample. Administrative and General
25 costs, excluding pensions and benefits, decreased for both the Company and the
26 sample, but the decrease is greater for the sample. Table 2 below shows the one-
27 year percentage increase in the adjusted 2008 Company data and the percentage
28 increase in the sample of utilities.

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TABLE 2
Increase from 07 to 08

	Average Non- NGrid	Narragansett Electric
Distribution		
580 Operation Supervision and Engineering	2%	-14%
581 Load Dispatching	1%	5%
582 Station Expenses	-15%	37%
583 Overhead Line Expenses	2%	46%
584 Underground Line Expenses	8%	12%
585 Street Lighting and Signal System Expenses	-12%	-6%
586 Meter Expenses	-2%	6%
587 Customer Installations Expenses	-2%	14%
588 Miscellaneous Expenses	19%	22%
589 Rents	10%	5%
590 Maintenance Supervision and Engineering	12%	-49%
591 Maintenance of Structures	-6%	346%
592 Maintenance of Station Equipment	-1%	23%
593 Maintenance of Overhead Lines	3%	33%
594 Maintenance of Underground Lines	-10%	127%
595 Maintenance of Line Transformers	7%	-57%
596 Maintenance of Street Lighting and Signal Systems	4%	-7%
597 Maintenance of Meters	-7%	27%
598 Maintenance of Miscellaneous Distribution Plant	11%	2%
TOTAL WIRES	3%	23%
Customer Accounts Expenses		
901 Supervision	-8%	21%
902 Meter Reading Expenses	0%	-6%
903 Customer Records and Collection Expenses	10%	29%
905 Miscellaneous Customer Accounts Expenses	48%	107%
Subtotal	15%	28%
Customer Service and Informational Expenses		
907 Supervision	30%	63%
909 Informational and Instructional Expenses	164%	42%
910 Miscellaneous Customer Service and Informational Expenses	6%	128%
Subtotal	29%	110%
Sales Expenses		
911 Supervision	-32%	-
912 Demonstrating and Selling Expenses	-10%	14000%
913 Advertising Expenses	-11%	-
916 Miscellaneous Sales Expenses	-7%	-
Subtotal	-14%	21067%
TOTAL Customer & Sales	15%	37%
Administrative and General		
920 Administrative and General Salaries	-4%	7%
921 Office Supplies and Expenses	7%	2%
922 Administrative Expenses Transferred-Credit	32%	-100%
923 Outside Services Employed	-7%	-34%
924 Property Insurance	41%	-1%
925 Injuries and Damages	2%	81%
927 Franchise Requirements	0%	-
928 Regulatory Commission Expenses	11%	1%
929 Duplicate Charges-Cr.	0%	-
930.1 General Advertising Expenses	44%	-
930.2 Miscellaneous General Expenses	-27%	3%
931 Rents	1%	17%
935 Maintenance of General Plant	3%	10%
TOTAL A&G	-3%	11%

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Q. Does data on all categories of costs suggest that the Service Company allocations have increased costs?

A. No. Except for Account 925, Injuries and Damages, administrative and general costs appear to show relatively low rates of increase for this one-year period, and may be evidence of that some of the much touted economies of scale are appearing for some of these functions.

Q. How have the Company’s costs compared with these comparable utilities over a longer period of time?

A. Reviewing the period from 1999 to 2008, the Company again shows a significantly higher rate of cost increase than the sample utilities.³ This ten-year period begins a year before the acquisition of the former New England Electric System companies by National Grid. Table 3 below shows this comparison.

TABLE 3
10 Year Cost Increase by Category

	Average Non-NGrid	Narragansett Electric
TOTAL WIRES	23%	121%
TOTAL Customer & Sales	19%	56%
TOTAL A&G	-26%	87%
GRAND TOTAL	-2%	95%

Q. How do National Grid utilities in New England compare with the sample utilities costs on a normalized basis?

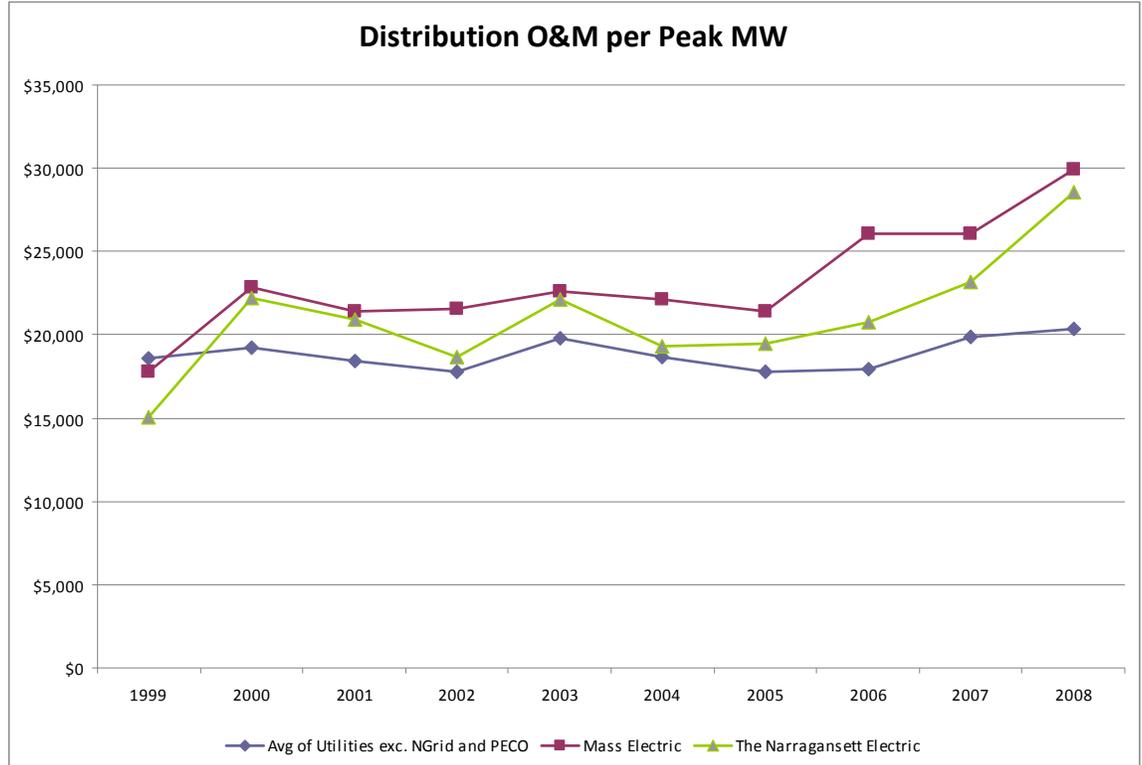
A. The graph below shows the cost on a per MW basis of the sample utilities and of both Narragansett and Massachusetts Electric. It is evident that these two

³ For the 10 year comparison, I removed PECO from the sample, as the PECO data from 1999-2003 costs by account showed a great deal of variability.

1 companies' total O&M costs on a per MW basis have increased faster than the
2 sample and are considerably higher than the sample.

3 GRAPH 1

4



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6

7 **Q. Are some accounts of more concern than others?**

8 A. Yes. I focused my attention on accounts with a high percentage increase,
9 excepting those that contained very few dollars. These include Account 583, with
10 a one-year increase of 46% and a 206% increase over the past ten years, and
11 Account 588, with a one-year increase of 22% and a 314% increase over the past
12 ten years.

13

14 **Q. Please discuss Account 583.**

15 A. This account increased by 46%, or \$1.6 million, The response to DIV 1-29
16 attributed \$1.6 million of the increase to an inspection and maintenance program.
17 This is not the same as the Inspection and Maintenance program for which the
18 Company is seeking additional dollars in this proceeding, but is called The New

1 England Geographic Information System (“GIS”) Survey. The GIS work was
2 begun in the summer of 2005. It is primarily staffed by contractors who were
3 engaged by the NGrid Service Company and its costs are allocated to the New
4 England EDCs. The response to DIV-22-3 shows that the Service Company
5 billed \$2.3 million in 2008 for the Survey and Inspection Project.

6

7 **Q. What evidence is there regarding the benefits of this project?**

8 A. According to the Proposal for a GIS Inventory Survey and Inspection provided in
9 response to DIV 22-1, the total project (for the New England EDCs) was expected
10 to cost \$17.9 million and to provide net benefits of about one million.

11

12 The same response also indicated that the project was intended to correct the
13 problem of inaccurate data, but that GIS data inaccuracies varied between
14 districts. The allocation of costs to the EDCs for the program evidently did not
15 reflect the level of data correction necessary in each EDC, so it is not clear
16 whether Narragansett will receive net benefits. The Company describes benefits
17 to Narragansett as resulting from quicker response to service requests and
18 outages, and better operation of the network, due to more accurate asset data.
19 (DIV 22-2) If Narragansett’s data was originally more accurate than the average
20 Grid EDC, then the impact on its GIS data will be less than its allocation of costs.

21

22 The Company further defines the benefits as improved service quality and
23 reliability, rather than cost reduction, but provides no estimates of how much of
24 these improvements will be realized by Narragansett customers.

25

26 **Q. Does this appear to be an ongoing expense?**

27 A. No it does not. The project milestones (p. 2, Attachment DIV 22-2-2) indicate that
28 project completion was scheduled for October 2009. Expenditures on the same
29 project by Massachusetts Electric were completed by June 2009. According to
30 DIV 22-2, only \$1.2 million is expected to be spent in 2009.

31

1 The cost of this project in 2009 will be much less than the booked 2008 cost that
2 the Company reflects in its revenue requirement. According to information
3 provided in the Massachusetts Electric case (D.P.U. 09-39), the cost of this
4 project will be zero in 2010.

5

6 Of the total 2008 costs in Account 583, 66% are Service Company costs charged
7 to the Company. In total, the Company's Account 583 costs increased from 2007
8 to 2008 by 46%, while the sample companies increase in this account was only
9 2%.

10

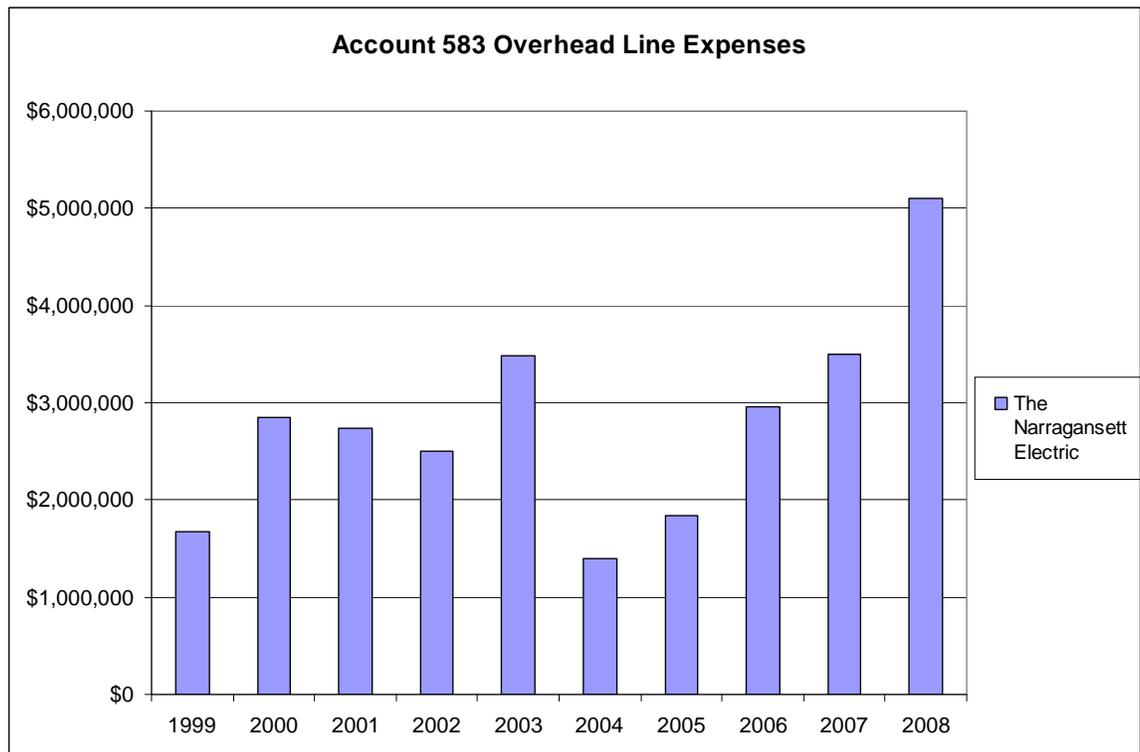
11 **Q. Did you review this account in any other way to determine whether the \$1.6**
12 **million increase was extraordinary?**

13 A. Yes. I reviewed the Company's spending in Account 583 over 10 years. This
14 history, is illustrated in the graph below, shows that the increase in 2008, due
15 primarily to a non-recurring expense, was extraordinary.

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GRAPH 2

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Q. What do you recommend with regard to costs in account 583?

A. I recommend that the Commission approve an increase in costs in this account which reflects a disallowance of the 2008 GIS costs of \$2.3 million, the amount of the GIS program, which does not appear to be a recurring expense.

Q. Please discuss Account 588.

A. According to the response to DIV1-29, most of the increase in this account from 2007 to 2008 was attributed to a program which is intended to “improve customer satisfaction reliability and efficiency”. The program is the Electricity Distribution Transformation Program. There was no cost benefit analysis performed to justify this program. The program is intended to “formalize a review of work processes”. Without a cost benefit analysis, it is impossible to judge how customers may benefit from this expenditure. According to a PowerPoint page submitted in the Massachusetts proceeding in response to DOER-1-20-B, evidently customer satisfaction is supposed to be increased by the program because of a “focus on operation excellence” and because reliability is to be improved to the top quartile.

This program raises three problems. It has not been demonstrated that the program is worth the cost to the Company. It has not been demonstrated that such a program performed primarily by the affiliate company is least cost. It has not been demonstrated that the Company will continue spending the same amount on “Transformation” during the rate year.

It is clear that the cost of this program is what caused Company’s account 588 costs to increase by 22% in 2008, and from 2006 to 2008 by 38% while the sample utilities’ costs in this account increased by 19% from 2006 to 2008,

Q. What do you recommend with regard to this expense?

1 A. I recommend that at least half of the 2008 cost of the Transformation program,
2 \$800,000 should be disallowed, unless the Company provides evidence that: 1)
3 the program provides net benefits for the Company's customers, 2) that the
4 program could not have been performed at less cost, and 3) that the program will
5 cost the same amount or more in the rate year as it did in 2008. Specifically, a
6 disallowance of \$0.8 million will still allow an increase of 12% from 2007 to
7 2008, and of 27% from 2006 to 2008, in this account.

8

9 **Q. Do you have any other recommendations?**

10 A. Yes. I recommend that the Commission instruct the Company that in the future it
11 should be prepared to demonstrate that significant expenditures made by the
12 Service Company and allocated to Narragansett would produce benefits to
13 Narragansett Electric ratepayers.

14

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

16 A. Yes.

Lee Smith

Senior Economist, Managing Consultant

Lee Smith is a Managing Consultant and Senior Economist at La Capra Associates. Ms. Smith has twenty-six years experience in utility economics and regulation. Her work has encompassed all aspects of utility pricing, cost analysis, forecasting, and both demand-side and supply planning in electric, gas, and water utility cases. Ms. Smith has analyzed issues of electric and gas rate design, including rate unbundling and appropriateness of utility costs in 18 different states for a multitude of utilities and other entities. She participated in development of the New England ISO, and has advised a number of clients on various aspects of electric restructuring. As a consultant, her clients have included gas and electric utilities, regulatory commissions and other public bodies. Prior to joining La Capra Associates, Ms. Smith was employed as the Director of Rates and Research at the Department of Public Utilities.

RELEVANT EXPERIENCE

- Testified on behalf of the Ohio Consumers' Counsel on American Electric Power case that AEP projection of market costs was incorrect.
- Testified on behalf of the Wisconsin Citizens Utility Board in a number of cases on cost allocation, power costs, and ratemaking methodology.
- Testified on behalf of the Massachusetts Attorney General regarding Performance Based Ratemaking for gas utilities.
- Testified on behalf of the Georgia Public Service Commission staff on allocation of distribution and generation costs by the Savannah Electric Company.
- Advised the Pennsylvania Office of the Public Advocate staff and the Maryland Office of the People's Counsel on FERC SMD issues.
- Advised Pennsylvania Office of the Public Advocate staff in restructuring proceedings; presented testimony on cost functionalization and rate unbundling in eight cases; testified against GPU's attempt to change Restructuring Settlement.
- Represented the Massachusetts Department of Energy Resources at NEPOOL committees engaged in developing the New England Independent System Operator, and an Open Access Transmission Tariff for New England.

EMPLOYMENT HISTORY

La Capra Associates <i>Managing Consultant</i>	Boston, MA 1984 - present
Department of Public Utilities <i>Director of Rates and Research</i>	Boston, Ma 1982 - 1984

EDUCATION

Tufts University <i>Ph.D. in Economics, all but dissertation</i> Economics Department Fellowship	Medford, MA 1966 - 1969
Boston College <i>Study of Statistics</i>	Boston, MA 1966
Brown University <i>B.A. with Honors, International Relations and Economics</i> Prize in International Relations	Providence, RI 1965

PROFESSIONAL

Bunting Institute Fellowship	1970 - 1971
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PUBLICATIONS

Non-price Issues in Gas Supply Planning, NATIONAL REGULATORY RESEARCH INSTITUTE, Biennial Regulatory Research Conference, 1994

The Economic Impact of Hurricane Agnes on the Chesapeake Bay in Maryland, JOHN HOPKINS PRESS

"*Development and Implementation of Restructuring in New England*", Institute of Public Utilities at Michigan State University Williamsburg Conference, December 1995

"*Planning for Gas and Electric Reliability*", NARUC Biennial Regulatory Information Conference, Vol. II, 1994

DESCRIPTION OF SELECTED PROJECTS

Massachusetts Office of the Attorney General 2009

Testified in National Grid rate case on various cost and rate issues. Recommended that some of National Grid's expenses in various accounts, resulting from Service Company allocations, should be disallowed as excessive, and that all transmission costs and revenues should be removed from the retail revenue requirement.

Nevada Bureau of Consumer Protection 2009

Testified that Nevada Power Company's marginal cost study contained numerous significant errors which overstated the allocation of costs to residential customers. In particular, the marginal cost of new generating capacity was overstated.

Ohio Consumers' Counsel 2008

Testified in this major rate case in which American Electric Power requested approval of an Electric Security Plan ("ESP") which would allow them to significantly increase distribution and generation rates. Ms. Smith's testimony demonstrated that AEP did not demonstrate that their ESP was more favorable than the market based option and that the ESP included features that should not be allowed under Ohio energy law.

New Hampshire Office of the Consumer Advocate 2008

Assisting the OCA in a Keyspan Gas case in which the Company's proposal to allocate delivery service costs on the basis of a marginal cost study. Testified that there were problems with the marginal cost study and that the proposed cost allocation would not result in a more efficient allocation of resources.

Hingham Municipal Light Department 2008

Managed preparation of an allocated cost of service study and development of new rates for this Massachusetts municipal utility.

Washington Public Counsel 2008

Assisted Public Counsel in Puget Sound Energy rate case; reviewed power cost projections and presented testimony opposing continuation of power cost only rate case mechanism for Puget Sound. (Docket UE-072300)

Massachusetts Office of the Attorney General 2008

Reviewed proposal by Bay State Gas to increase its rates to reflect a claimed decrease in Average Use per Customer. Testified that Bay State had not demonstrated that the decrease was as large or permanent as it claimed, and that the proposal was inconsistent with Bay State's existing Performance-Based Ratemaking Plan.

Kentucky Governor's Office of Energy Policy 2007

Researched and authored a report for the Governor's Office of Energy Policy on whether and how changes in rate designs and ratemaking methodology could contribute to encouraging more efficient use of electric energy. This addressed the potential for seasonal rates, increasing block rates, decoupling, and other possible rate treatment of energy efficiency.

Belmont Municipal Light Department 2007

Managed preparation of an allocated cost of service study and development of new rates for this Massachusetts municipal utility which was faced with large rate increase because of expiration and replacement of old below market power contract. Introduced rate elements, including summer rates, higher demand charges, and increasing block rates, to encourage load response from ratepayers.

Oklahoma Office of the Attorney General 2007

Assisted the Attorney General in a case in which two utilities requested approval of construction of a large coal plant and special rate treatment to recover costs during construction. Testified that utilities had overstated total capital needs and that the proposed rate rider would shift risk from stockholders to customers.

Groton Municipal Utilities 2007

Prepared updated allocated cost of service study, developed unbundled electric rates, and introduced new rates and seasonal element to all rates for large municipal utility. Also, prepared standby and net metering rates.

Wisconsin Citizens Utility Board 2007

Testified on behalf of the CUB in a rate case regarding Wisconsin Electric Power's (WEPCO) requested increase in power costs. Testimony demonstrated that WEPCO's new MISO-wide dispatch modeling overstated its costs, and that there was not justification to set aside much of the proceeds of the sale of the Point Beach unit.

Oklahoma Office of the Attorney General 2007

Testified on behalf of the AG on proposals by Oklahoma Gas and Electric and Public Service of Oklahoma to build a 900 MW coal plant. Ms. Smith testified that charging customers for this plant during construction through a rate rider would inappropriately shift risk to customers.

Wisconsin Citizens Utility Board 2007

Testified on behalf of the CUB in a case addressing Midwest Independent System Operator ("MISO") charges and impact on costs of all Wisconsin investor-owned utilities. The testimony found that many of the charges imposed by MISO were not actually incremental to how the utilities had previously estimated their costs based on own-load dispatch models.

Pennsylvania Office of the Public Advocate 2006

Testified on cost allocation, rate design and PJM costs in the Penelec and Met Ed rate cases. Testimony also addressed the collection of stranded costs.

Wisconsin Citizens Utility Board 2006

Testified on behalf of the CUB in a fuel rule case regarding Wisconsin Power and Light Company, regarding WPL's projection of fuel costs.

Green Mountain Power Company 2006

Assisted the Company in considering various alternative ratemaking mechanisms. This has included drafting the first electric Fuel and Purchased Power Adjustment proposals in Vermont, and also an Earnings Sharing Mechanism.

- Wisconsin Citizens Utility Board** 2005
Testified on behalf of the CUB in a fuel rule case regarding Wisconsin Electric, regarding WEPCO's projection of fuel costs. Identified a number of modeling errors, particularly in treatment of coal generation.
- Massachusetts Office of the Attorney General** 2006
Testified on interpretation of automatic distribution rate adjustment agreement and appropriate normalization of regional index of utility distribution rates.
- Wisconsin Citizens Utility Board** 2005
Testified on behalf of the CUB in a rate case regarding Wisconsin Electric regarding a number of issues, including cost allocation, rate design, a proposed Earnings Sharing Mechanism, proper treatment of synergy savings resulting from merger, and the Company's projected power costs in 2005. Ms. Smith testified that the Company's modeling of its coal units resulted in an overstatement of fuel costs.
- Georgia Public Utility Commission Staff** 2005
Testified on allocation of distribution and generation costs and rate design in Savannah Electric Power Company rate case.
- Connecticut Office of the Consumer Counsel** 2005
Testified jointly in United Illuminating rate case on distribution revenue requirements, proposal for multiple rate increases, and on time of use rates.
- Pennsylvania Office of the Public Advocate** 2005
Testified on cost allocation and rate design in the Pike County Gas rate case. We addressed the need to weight most customer allocators. We testified that the utility was using borrowed load data that did not reflect the utility's service territory, and that it is inappropriate to treat part of the gas distribution mains as customer related.

Testified against allocation based on a single issue, and on the need for a cost allocation study before realigning class revenues in Valley Energy (gas) rate cases. Also assisted in analysis of synergies in Exelon/PSEG merger and appropriate allocation of synergy savings. Assisted OPA in settlement of FERC gas pipeline case.
- Washington Electric Cooperative** 2005
Estimated load data, assisted in development of allocated costs.
- Wisconsin Citizens Utility Board** 2005
Testified on allocation of power supply costs and energy efficiency program costs in WEPCO Fuel rule case.
- New Hampshire Office of the Consumer Advocate** 2004
Testified on cost allocation and rate design in Public Service Company of New Hampshire rate case.
- Arizona Corporation Commission Staff** 2004
Assisted Staff with major rate case in which APS proposed to rate base generating plants which had been built by its competitive affiliate; testified on accounting for stranded costs.

- Massachusetts Office of the Attorney General** 2003
Testified on Performance Based Ratemaking Plan proposed by Boston Gas.
- Connecticut Office of the Consumer Counsel** 2003
Testified jointly in CL&P rate case on distribution revenue requirements with Waine Whittier
- Arkansas Public Service Commission Staff** 2003
Advised the Arkansas Staff and presented testimony on EAI's proposal to sell baseload generating capacity to other Entergy companies.
- Business Energy Alliance and Resources** 2003
Testified in two gas cases in front of the Illinois Commerce Commission on gas cost allocation, rate design, and transportation rates.
- Pennsylvania Office of the Consumer Advocate** 2003
Advised OCA on and testified at FERC in FERC Docket EL-02-111-000, regarding proposals to eliminate Regional Through or Out Rates for MISO and PJM, and possibly to introduce a Seams Elimination Charge Adjustment.
- Groton Municipal Utilities** 2003
Prepared allocated cost of service study, developed unbundled electric rates for two electric utilities. Also prepared standby and delivery backup service rates.
- New York State Energy Research Development Authority** 2003
Managed development of model to determine impact on electric bills of installing On-Site Generation, and advised NYSERDA on net metering law and rules.
- Arkansas Public Service Commission Staff** 2002
Advised the Arkansas Staff on EAI's two proposals to sell capacity freed up by the loss of the North Little Rock load, first to Arkansas retail load, and then to Entergy's Louisiana utilities.
- Arizona Corporation Commission Staff** 2002
Testified against Citizens' request for increase in PPFAC to recover \$87 million in power costs, as Citizens' management of its power costs had not been prudent.
- New Hampshire Public Utility Commission** 2002
Testified on Unitol proposal to raise delivery service rates and consolidate two utilities.
- Massachusetts Water Resources Authority** 2002
Testified against BECo request to raise delivery service rates in spite of rate freeze.
- Illinois Citizens Utilities Board** 2001
Testified on appropriate distribution cost allocation and rate design.
- Arkansas Public Service Commission Staff** 2001
Analysis of generation prices under competition and under deregulation, supported by testimony.
- Pennsylvania Office of the Consumer Advocate** 2001

Testified on GPU restructuring settlement and merger proposal and against GPU's request to increase its Provider of Last Resort Rates.

Texas Retailers Association 2000

Testified as to the appropriate cost of service for three major Texas utilities, focusing on transition costs, transmission plant increases, and support services costs allocated to regulated affiliates.

Burlington Electric Department 2000

Testimony on Transportation Rate proposed by Vermont Gas Systems.

Arkansas Public Utilities Commission 2000

Estimated retail class rates under continued regulated and retail access.

Hawaii Division of Consumer Advocacy 2000

Prepared allocated cost of service study and rate design for the Hawaii Electric Company.

Arizona Corporation Commission 2000

Helped develop Codes of Conduct for Electric Affiliates; testified in stranded cost case for Arizona Electric Cooperative.

Arkansas Public Utilities Commission 1999

Assisted in market power docket, standard offer and default service policy development, rate unbundling.

Ohio Consumer's Counsel 1999

Advised OCC on stranded generation costs and retail market generation costs.

Arizona Corporation Commission 1998

Assisted ACC in cases that developed unbundled rates for all regulated Arizona utilities; testified on stranded cost and retail access for AEPCO, APS, and TEP.

Maryland Office of the People's Counsel 1998

Advised on stranded cost, prepared analysis and testimony on rate unbundling for PEPCO and Delmarva.

Burlington Electric Department 1998

Prepared testimony on interruptible gas transportation rate for an electric generator.

Pennsylvania Office of the Consumer Advocate 1997

Analyzed and prepared testimony on rate unbundling in eight major utility cases; advised OCA on stranded cost; assisted in testimony on stranded cost and market price; assisted in settlement discussions.

Maine Office of the Public Advocate 1997

Prepared testimony on Bangor Hydro Electric emergency rate and normal rate proceeding; issues included Maine Yankee, replacement power costs, depreciation rates, and cost mitigation.

Maryland/Pennsylvania Public Advocates 1997
Advised staff of both public advocates on PJM restructuring, including analysis of FERC filings and ongoing development of market structures and ISO.

Massachusetts Division of Energy Resources 1997
Assisted DOER in drafting restructuring legislation, negotiating additional restructuring settlements with utilities, consideration of ratemaking methodologies, and with development of New England ISO.

New Hampshire Public Utilities Commission 1996
Assisted Commission staff in writing Draft Order on Restructuring; prepared discovery for utilities; prepared discovery questions for hearings on various issues, including corporate unbundling, market structure, transmission, stranded cost theory, measurement, and mitigation.

Massachusetts Division of Energy Resources 1996
Represented the DOER at NEPOOL committees engaged in developing an Independent System Operator, a revised NEPOOL Agreement, and an Open Access Transmission Tariff for New England. Assisted the DOER in other matters including development of model for Boston Edison pilot program based on proxy for competitive market real-time pricing.

CMEEC 1996
Developed methodological basis for rate unbundling for the five Connecticut municipal utilities that are members of CMEEC.

Black Hills Power and Light Company, South Dakota 1995
Advised Company on development of ancillary services and open access transmission rates.

Pennsylvania Office of the Consumer Advocate 1995
Assisted with preparation of comments on restructuring issues.

Maine Office of the Public Advocate 1995
Prepared alternative marginal cost study on Maine Public Service Company. Presented testimony advocating allocation of excess costs on the basis of generation allocators rather than EPMC.

Massachusetts Division of Energy Resources 1995
Assisted DOER in all aspects of electric industry restructuring, from rate unbundling to planning and developing revised market structure for the New England Power Pool.

Littleton Water and Light Department, N.H. 1995
Developed retail wheeling rate; advised on retail wheeling issues.

Boston Edison Company 1995
Presented rate design workshop for Company personnel to assist in preparing for restructuring.

Kansas Citizens Ratepayers Utility Board 1995

Testimony on proposed class rate increases, which were not based on allocated costs, and on rate design.

World Bank 1995

Developing conditions under which State of Orissa, which is privatizing its electric distribution system, should consider revaluation; assisting with other restructuring issues.

Division of Energy Resources 1994

Advised DOER on position on changes in Integrated Resource Management, including proposal to open Transmission and Distribution access to meet resource needs.

Black Hills Power and Light Company, South Dakota 1994

Advised Company on rate treatment and phase-in of major new generating unit, development of wholesale transmission rate, and response to retail wheeling.

New Hampshire Office of the Consumer Advocate 1994

Advised Office on retail wheeling concerns; prepared testimony on cost of service, cost allocation and marginal cost presented by an electric utility.

Town of Fort Fairfield 1994

Prepared response of town to CMP's threat to shut down a renewable energy facility following state-financed buyout of a high-priced unit contract, resulting in settlement.

Constellation Energy 1994

Projected market price of power, advised developer on potential market.

Stow Electric Energy Study Committee 1994

Advised committee on setting up new municipal utility, based upon results of response to RFP for provision of power and operations services, negotiated with bidders.

Massachusetts Department of Energy Resources 1993

Assisted with analysis of economic impact of retiring older generating plants to meet Clear Air Act Targets.

Eastern Energy Associates 1993

Directed analysis and computation of avoided costs of a major electric utility.

Maine Public Utility Commission Staff 1993

Directed Staff's case in opposition to Central Maine Power Comp.'s request that it be allow to market power at below marginal cost rates; presented testimony on impact of CMP's proposal.

Office of the People's Counsel, Washington D.C. 1993

Advised Office, presented testimony on appropriate recovery of deferred and present costs of ongoing Least Cost Planning program.

Plattsburgh Municipal Lighting Department 1993

Advised utility on selection of least-cost power contracts.

Nantucket Electric Company 1993

Directed development of long-run end-use load forecast for tourism-based economy.

Massachusetts Municipal Wholesale Electric Company 1992
Analysis of and testimony on economic inefficiencies created by Bay State pricing of interruptible gas to Stony Brook generating unit.

Woodsville Water and Light Department 1992
Advised Department on least-cost power supply and led negotiations with potential suppliers, resulting in significant long-run savings.

Stow Electric Energy Study Committee 1992
Advised Committee on advisability of separating from municipal electric system currently serving the town; analyzed costs and benefits of different sources of supply.

Boston Edison Electric Company 1992
Assisted in analysis of customer's demand for experimental color-corrected streetlighting, resulting in settlement of long-standing dispute.

Plattsburgh Municipal Light Department 1992
Prepared rate case, including revenue needs, allocation of costs, and rate design; directed Company in reorganization of billing data.

Altresco 1992
Advised on siting, fuel costs, and bidding of potential new intermediate power project.

Middleton Electric Light Department 1992
Renegotiation of contract for transmission of all power to the utility.

Nantucket Electric Company 1992
Directed revision of load research sampling (determining appropriate sample size and selection).

Nantucket Electric Company 1991
Applied load research data to develop detailed (daily) demand and revenue projections.

Nantucket Electric Company 1991
Assisted in rate case, including allocating costs between customer classes, developing marginal costs, designing rates.

Nantucket Electric Company 1991
Presented testimony on externalities created by emissions from electric generation on Nantucket Island, and potential impact of inclusion of externalities on ratepayers.

Illinois Office of Public Counsel 1990
Provided expert advice to consumer advocate group on developing state least-cost planning guidelines for gas utilities.

Plattsburgh Municipal Light Department 1990
Developed new rate for large, 46 KV service customers, directed development of value of

plant serving the proposed class.

Middleton Electric Light Department 1989

Developed innovative cost-based rate for very large interruptible customer and negotiated with both NEPOOL and customer.

Littleton Water and Light Department 1989

Updated Company's revenue allocation and rates to reflect new marginal-cost based wholesale power tariff.

Boston Edison Company 1989

Assisted Company in analysis of jurisdictional cost allocations in major court dispute; developed company response to FERC order on allocation of distribution/transmission plant.

Reading Municipal Light Department 1988

Analyzed power supply options, determined least-cost options.

Wellesley Municipal Light Plant 1987

Redesigned rates for municipal utility, including allocating costs, estimating marginal costs, and designing rates, including a time-of-use rate for largest customers.