

**STATE OF NEW HAMPSHIRE
BEFORE THE PUBLIC UTILITY COMMISSION**

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
TRANSMISSION COST ADJUSTMENT MECHANISM**

**PREPARED TESTIMONY OF
STEPHEN R. HALL**

1 Q. Please state your name, business address and your present position.

2 A. My name is Stephen R. Hall. My business address is PSNH Energy Park, 780 North
3 Commercial Street, Manchester, New Hampshire. I am Rate and Regulatory Services
4 Manager for Public Service Company of New Hampshire ("PSNH").

5 Q. Have you previously testified before the Commission?

6 A. Yes, I have testified on numerous occasions before the Commission over the past thirty
7 years.

8 Q. What is the purpose of your testimony?

9 A. The purpose of my testimony is to propose transmission prices for effect July 1, 2010
10 under the Transmission Cost Adjustment Mechanism (TCAM). My testimony proposes
11 specific rates and charges for transmission based on the transmission revenue requirement
12 contained in the attachments to Mr. Baumann's testimony.

13 Q. Have you calculated specific rates and charges for transmission for all rate classes?

14 A. Yes, we have. The proposed rates and charges are included in Attachment SRH-1.

15 Q. Please describe generally the transmission pricing rate design contained in Attachment
16 SRH-1.

1 A. The design of transmission prices was contained in the settlement agreement in Docket No.
2 DE 06-028. The settlement agreement describes the design of transmission pricing for
3 Backup Delivery Service Rate B specifically, and for all other rate classes in general. For
4 Rate B, the settlement agreement provides that transmission costs be recovered through a
5 demand charge, and it splits the demand charge into two components for rate calculation
6 purposes: a base component and an incremental component¹. The settlement agreement
7 describes the cost allocation for the base component, and it also states that other
8 transmission prices will be calculated through an equi-proportional adjustment.

9 Q. Please describe how the base component of the Rate B demand charge was determined.

10 A. First, the ratio of average Rate B demands to average total PSNH demands at the time of
11 the monthly NU system peaks was calculated. The calculation of that ratio is shown on
12 Page 2 of Attachment SRH-2. Once the ratio was calculated, the Rate B base component
13 revenue requirement for the forecast period was determined by multiplying the ratio by the
14 total transmission revenue requirement for the forecast period included in Mr. Baumann's
15 Attachment RAB-1. The Rate B base component forecasted revenue requirement is shown
16 on line 7 of Page 1 of Attachment SRH-2. The base component reconciliation from the
17 prior period was then added to the base component forecasted revenue requirement to
18 determine the total base component revenue requirement (line 11 of Page 1 of Attachment
19 SRH-2). The Rate B base component rate was then determined by dividing the total base
20 component revenue requirement by projected billing demand. As shown on Page 1 of
21 Attachment SRH-2, that calculation produces a Rate B base component rate of \$0.95 per
22 kW or kVA per month.

23 Q. How did you calculate the base component reconciliation?

24 A. The base component reconciliation calculation is shown on Page 3 of Attachment SRH-2.
25 It was calculated by multiplying the prior period transmission revenue requirement by the
26 base component ratio for the prior period. The base component revenue for the prior
27 period was then subtracted from the base component revenue requirement to determine the
28 base component reconciliation (in this case, an under-recovery).

¹ For billing purposes, the two components are summed so only one demand charge is billed.

1 Q. How did you forecast the data to perform the calculations described above?

2 A. For the contribution to the monthly NU system peaks, we used historical data as a proxy
3 for what will occur in the prospective period because there is no other reasonable way to
4 forecast Rate B contributions to peak load. The projected billing demand for Rate B was
5 based on actual data for the reconciliation period, with adjustments that could reasonably
6 be anticipated. For total transmission revenue requirements, we used the data provided in
7 Mr. Baumann's testimony.

8 Q. How did you calculate all other transmission rates and charges?

9 A. The transmission rate calculations were based on billing determinants for the 2009 test
10 year, as proformed in Docket No. DE 09-035. On Attachment SRH-3, we multiplied the
11 forecasted TCAM rate provided in Mr. Baumann's attachment by test year MWH sales to
12 produce the target transmission revenue for the test year. From that test year revenue
13 requirement, we subtracted special pricing revenue imputed at the average transmission
14 rate level and the Rate B base component revenue which was calculated based on test year
15 billing determinants on Attachment SRH-4. The result of this subtraction is the amount to
16 be recovered from all other customers. Revenue and the resulting rates and charges were
17 determined by proportionally adjusting all currently-effective revenue and rates to the level
18 necessary to recover the transmission revenue requirement net of the Rate B base amount.
19 The allocation of transmission revenue to class under this methodology is shown on
20 Attachment SRH-3.

21 Q. Does this complete your testimony?

22 A. Yes, it does.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
TRANSMISSION COST ADJUSTMENT MECHANISM (TCAM) CALCULATION
TRANSMISSION RATES PROPOSED FOR EFFECT ON JULY 1, 2010

| | | | (1) Current Rates Effective 08/01/2009 | (2) 07/01/2010 Proposed Rates |
|----|----------------------------|-------------------------|--|--|
| | <u>Rate</u> | <u>Blocks</u> | | |
| | R | All KWH | \$ 0.01307 | \$ 0.01625 |
| 10 | Uncontrolled Water Heating | All KWH | \$ 0.01010 | \$ 0.01255 |
| 13 | Controlled Water Heating | All KWH | \$ 0.01010 | \$ 0.01255 |
| 16 | R-OTOD | On-peak KWH | \$ 0.01307 | \$ 0.01625 |
| 17 | | Off-peak KWH | \$ 0.00853 | \$ 0.01060 |
| 20 | G | Load charge (over 5 KW) | \$ 3.38 | \$ 4.20 |
| 22 | | First 500 KWH | \$ 0.01217 | \$ 0.01513 |
| 23 | | Next 1,000 KWH | \$ 0.00458 | \$ 0.00569 |
| 24 | | All additional KWH | \$ 0.00246 | \$ 0.00306 |
| 27 | Space Heating | All KWH | \$ 0.01217 | \$ 0.01513 |
| 30 | G-OTOD | Load charge | \$ 2.23 | \$ 2.77 |
| 33 | LCS | Radio-controlled option | \$ 0.01010 | \$ 0.01255 |
| 34 | | 8-hour option | \$ 0.01010 | \$ 0.01255 |
| 35 | | 10 or 11-hour option | \$ 0.01010 | \$ 0.01255 |
| 38 | GV | First 100 KW | \$ 4.52 | \$ 5.62 |
| 39 | | All additional KW | \$ 4.52 | \$ 5.62 |
| 42 | LG | Demand charge | \$ 4.44 | \$ 5.52 |
| 45 | B | Demand charge | \$ 0.88 | \$ 1.31 |
| 48 | OL, EOL | All KWH | \$ 0.00894 | \$ 0.01111 |

Notes:

(1) Current rates are based on a retail average transmission rate of 1.195 ¢/KWH.

(2) Proposed rates are based on a retail average transmission rate of 1.501 ¢/KWH.

The calculation of the Rate B charge is shown on Attachment SRH-4. All other rates have been calculated by equi-proportionally adjusting current rates by the ratio necessary to recover the remaining transmission revenue requirement.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
TRANSMISSION COST ADJUSTMENT MECHANISM (TCAM) CALCULATION
RATE B CUSTOMERS

| | | | |
|----|---|-------------------|------------------------|
| 1 | Base Component Revenue Requirement | | |
| 2 | | | |
| 3 | Total Transmission Revenue Requirement | \$ 116,922,000 | RAB-1, Page 1, Line 16 |
| 4 | | | |
| 5 | Times Base Component Ratio | <u>0.66573%</u> | SRH-2, Page 2 |
| 6 | | | |
| 7 | Base Component Forecasted Revenue Requirement | \$ 778,390 | |
| 8 | | | |
| 9 | Base Component Reconciliation | <u>\$ 212,862</u> | SRH-2 Page 3 |
| 10 | | | |
| 11 | Base Component Revenue Requirement | \$ 991,253 | |
| 12 | | | |
| 13 | Rate B Projected Billing Demand | 1,041,610 | |
| 14 | | | |
| 15 | Rate B Base Component (L11/L13) | \$ 0.95 | per kW or kVA |

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
TRANSMISSION COST ADJUSTMENT MECHANISM (TCAM) CALCULATION
RATE B CUSTOMERS

| | | | |
|---------------------------------------|---------------|-------------------|-------------------|
| 1 Contribution to NU System Peak (KW) | | | |
| 2 Period Ending 6/30/10 | | | |
| 3 | | | Ratio of |
| 4 | <u>Rate B</u> | <u>Total PSNH</u> | <u>Rate B to</u> |
| 5 | | | <u>Total PSNH</u> |
| 6 Jul '09 | 1,922 | 1,389,093 | |
| 7 Aug | 2,898 | 1,559,154 | |
| 8 Sep | 3,401 | 1,184,316 | |
| 9 Oct | 14,157 | 1,121,400 | |
| 10 Nov | 5,300 | 1,196,094 | |
| 11 Dec | 44,138 | 1,430,449 | |
| 12 Jan '10 | 3,281 | 1,286,070 | |
| 13 Feb | 1,350 | 1,275,081 | |
| 14 Mar | 6,084 | 1,175,853 | |
| 15 Apr (1) | 6,728 | 1,042,050 | |
| 16 May (1) | 6,000 | 1,101,000 | |
| 17 Jun (1) | 6,000 | 1,449,609 | |
| 18 Average | 8,438 | 1,267,514 | 0.66573% |

(1) Estimated data

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
TRANSMISSION COST ADJUSTMENT MECHANISM (TCAM) CALCULATION
RATE B CUSTOMERS

1 Estimated Base Component Reconciliation, 12 months ending June 30, 2010

2

3 Prior Period Transmission Revenue Requirement:

4

5 Retail Transmission Operating Costs \$ 96,325,000 RAB-1, Pages 4 & 5, line 21

6 (Over)/Underrecovery, period ending 6/30/09 \$ 3,805,000 RAB-1, Page 4, line 25

7 Return on monthly (over)/underrecovery, period ending 6/30/10 \$ 76,000 RAB-1, Pages 4 & 5, line 40

8

9 Prior Period Transmission Revenue Requirement \$ 100,206,000

10

11 Times Base Component Ratio 0.66573% SRH-2, Page 2

12

13 Prior Period Base Component Revenue Requirement \$ 667,106

14

15 Base Component Reconciliation for 12-Month Period Ending 6/30/09 \$ 137,065 SRH-2, Page 5, line 21

16

17 Total Base Component Revenue Requirement \$ 804,171

18

19 Base Component Revenue (actual through 5/10; 6/10 estimated) \$ 591,309

20

21 Estimated Base Component Reconciliation, 12 months ending 6/30/10 \$ 212,862

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
TRANSMISSION COST ADJUSTMENT MECHANISM (TCAM) CALCULATION
RATE B CUSTOMERS

| | | | |
|----|--|-------------------|-------------------|
| 1 | Actual Contribution to NU System Peak (KW) | | |
| 2 | Period Ending 6/30/09 | | |
| 3 | | | Ratio of |
| 4 | <u>Rate B</u> | <u>Total PSNH</u> | <u>Rate B to</u> |
| 5 | | | <u>Total PSNH</u> |
| 6 | Jul '08 | 9,345 | 1,508,181 |
| 7 | Aug | 9,090 | 1,405,016 |
| 8 | Sep | 1,715 | 1,365,700 |
| 9 | Oct | 1,368 | 1,164,590 |
| 10 | Nov | 1,347 | 1,271,782 |
| 11 | Dec | 10,077 | 1,416,229 |
| 12 | Jan '09 | 1,511 | 1,360,671 |
| 13 | Feb | 8,871 | 1,336,775 |
| 14 | Mar | 10,957 | 1,264,363 |
| 15 | Apr | 9,404 | 1,139,736 |
| 16 | May | 3,785 | 1,156,648 |
| 17 | Jun | 9,843 | 1,079,565 |
| 18 | | | |
| 19 | Average | 6,443 | 1,289,105 |
| | | | 0.49978% |

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
TRANSMISSION COST ADJUSTMENT MECHANISM (TCAM) CALCULATION
RATE B CUSTOMERS

| | | | |
|----|--|---------------|--------------------------------------|
| 1 | Actual Base Component Reconciliation, 12 months ending June 30, 2009 | | |
| 2 | | | |
| 3 | Prior Period Transmission Revenue Requirement: | | |
| 4 | | | |
| 5 | Retail Transmission Operating Costs | \$ 75,531,000 | RAB-1, P3, L21 & 2009 RAB-1 P4, L17 |
| 6 | (Over)/Underrecovery, period ending 6/30/08 | \$ 2,006,000 | 2009 RAB-1, P4, L21 |
| 7 | Return on monthly (over)/underrecovery, period ending 6/30/09 | \$ 72,000 | RAB-1, P3, L40 & 2009 RAB-1, P4, L36 |
| 8 | | | |
| 9 | Prior Period Transmission Revenue Requirement | \$ 77,609,000 | |
| 10 | | | |
| 11 | Times Base Component Ratio | 0.49978% | SRH-2, Page 4 |
| 12 | | | |
| 13 | Prior Period Base Component Revenue Requirement | \$ 387,878 | |
| 14 | | | |
| 15 | Base Component Reconciliation for 12-Month Period Ending 6/30/08 | \$ (227,971) | 2009 SRH-2, P5, L21 |
| 16 | | | |
| 17 | Total Base Component Revenue Requirement | \$ 159,907 | |
| 18 | | | |
| 19 | Actual Base Component Revenue, Period Ending 6/30/09 | \$ 22,842 | |
| 20 | | | |
| 21 | Actual Base Component Reconciliation, 12 months ending 6/30/09 | \$ 137,065 | |

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
TRANSMISSION COST ADJUSTMENT MECHANISM (TCAM) CALCULATION
ALLOCATION OF JULY 1, 2010 TRANSMISSION REVENUE TO CLASS
BASED ON BILLING DETERMINANTS FOR THE 2009 TEST YEAR**

| | | | | | |
|----|---|-------------------|-------------------|------------------|-----------------|
| 1 | Retail delivery sales for the 2009 test year | | | 7,657,472 | MWH |
| 2 | Forecasted TCAM Rate (from Attachment RAB-1, Page 1, Line 20) | | | \$ 0.01501 | per KWH |
| 3 | Target transmission revenue based on the test year: Line (1) x Line (2) | | | \$ 114,939 | (000) |
| 4 | Special pricing delivery sales included in Line (1) | | | 4,709 | MWH |
| 5 | Transmission revenue from special pricing at proposed rate level: Line (2) x Line (4) | | | \$ 71 | (000) |
| 6 | Rate B Base Component Revenue, based on the test year (from Attachment SRH-4) | | | \$ 925 | (000) |
| 7 | Transmission revenue to be recovered from all other classes: Line (3) - Line (5) - Line (6) | | | \$ 113,943 | (000) |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | (1) | (2) | (3) | (4) |
| 12 | | | | | |
| 13 | | Revenue at | 07/01/2010 | | |
| 14 | Standard Tariff Customers | 08/01/2009 | Revenue | | <u>Increase</u> |
| 15 | excluding Rate B Base Component | <u>Rate Level</u> | <u>Target</u> | \$ | % |
| 16 | | | | | |
| 17 | Residential Rates R, R-OTOD | \$ 39,518 | \$ 49,118 | \$ 9,600 | 24.29% |
| 18 | | | | | |
| 19 | General Service Rates G, G-OTOD | 20,867 | 25,937 | 5,069 | 24.29% |
| 20 | | | | | |
| 21 | Primary General Service Rate GV | 19,182 | 23,842 | 4,660 | 24.29% |
| 22 | GV Rate B - incremental component only | 9 | 11 | 2 | 24.29% |
| 23 | | | | | |
| 24 | Large General Service Rate LG | 11,453 | 14,235 | 2,782 | 24.29% |
| 25 | LG Rate B - incremental component only | 274 | 340 | 66 | 24.29% |
| 26 | | | | | |
| 27 | Outdoor Lighting Rates OL, EOL | <u>369</u> | <u>459</u> | <u>90</u> | <u>24.29%</u> |
| 28 | | | | | |
| 29 | Total | \$ 91,673 | \$ 113,943 | \$ 22,270 | 24.29% |
| 30 | | | | | |
| 31 | | | | | |
| 32 | Special Pricing Customers, at Retail Average Rate | | | | |
| 33 | Rate LG (4,709 MWH) | 57 | 71 | 14 | 24.56% |
| 34 | | | | | |
| 35 | | | | | |
| 36 | Rate B Base Component | | | | |
| 37 | GV Rate B - base component | \$ 18 | \$ 29 | \$ 11 | 61.02% |
| 38 | LG Rate B - base component | <u>557</u> | <u>896</u> | <u>340</u> | <u>61.02%</u> |
| 39 | Total | \$ 575 | \$ 925 | \$ 351 | 61.02% |
| 40 | | | | | |
| 41 | | | | | |
| 42 | Total, all customers | \$ 92,304 | \$ 114,939 | \$ 22,634 | 24.52% |
| 43 | | | | | |
| 44 | | | | | |
| 45 | Total Rate B, incremental plus base: | | | | |
| 46 | Rate GV | \$ 27 | \$ 40 | \$ 13 | 48.91% |
| 47 | Rate LG | <u>830</u> | <u>1,237</u> | <u>406</u> | <u>48.91%</u> |
| 48 | Total | \$ 857 | \$ 1,277 | \$ 419 | 48.91% |

Notes:

- (1) The result of applying rates effective August 1, 2009 to test year billing determinants.
- (2) Special pricing revenue was imputed at the overall average rate. The Rate B base component was taken from Attachment SRH-4. Revenue targets for all other classes were calculated by equi-proportionally adjusting current revenues.
- (3) Column (2) - Column (1).
- (4) Column (3) / Column (1).

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
TRANSMISSION COST ADJUSTMENT MECHANISM (TCAM) CALCULATION
CALCULATION OF TRANSMISSION REVENUE AND RATES FOR RATE B CUSTOMERS
BASED ON SETTLEMENT AGREEMENT ARTICLE V, SECTION 5.1.1. AND
BILLING DETERMINANTS FOR THE 2009 TEST YEAR**

| | (1) | (2) | (3) | (4) | (5) | (6) |
|--------------------------------|----------------|----------------|-------------------|--------------------|----------------|--------------------|
| | Test Year | Base | Revenue from | Allocated | Incremental | Total Base |
| | Billing | Component | Base | Revenue from | Component | Plus |
| | <u>Demand</u> | <u>of Rate</u> | <u>Component</u> | <u>Incremental</u> | <u>of Rate</u> | <u>Incremental</u> |
| | | | | <u>Component</u> | | <u>Rate</u> |
| 7 Rate B customers on Rate GV | 30,468 | \$ 0.95 | \$ 28,944.60 | \$ 10,982.15 | \$ 0.36 | \$ 1.31 |
| 10 Rate B customers on Rate LG | <u>943,642</u> | \$ 0.95 | <u>896,459.90</u> | <u>340,134.54</u> | \$ 0.36 | \$ 1.31 |
| 13 Total Rate B customers | 974,110 | | \$ 925,404.50 | \$ 351,116.69 | | |

(2) From Attachment SRH-2, Page 1.

(3) Column (1) x Column (2).

(4) From Attachment SRH-3, Column (2), Lines 22 and 25.

(5) Column (4) / Column (1).

(6) Column (2) + Column (5).