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

A. My name is Stephen R. Hall. My business address is PSNH Energy Park, 7800 North Commercial Street, Manchester, New Hampshire. I am Rate and Regulatory Services Manager for Public Service Company of New Hampshire ("PSNH").

## Q. Have you previously testified before the Commission?

A. Yes, I've testified on numerous occasions before the Commission over the past thirty years.
Q. What is the purpose of your testimony?
A. The purpose of my testimony is to provide the impact on PSNH's rates of PSNH's proposed refinancing of its Series D \& E Pollution Control Revenue Bonds (PCRBs) and its Series A PCRBs.
Q. Have you performed a calculation of the impact of the refinancings on PSNH's proposed Energy Service (ES) rate?
A. Yes, we have. Attachment SRH-1 contains workpapers showing the impact of the effect of the refinancing on PSNH's proposed ES rate. The impact of each refinancing is minimal. In summary, the refinancing of the Series D \& E PCRBs would result in no change to PSNH's proposed ES rate for effect on January 1, 2011. The refinancing of the Series A PCRBs would result in an increase of $0.02 \not \subset$ per kilowatt-hour to PSNH's proposed ES rate for effect on January 1, 2011. However, as described in Ms. Weber's testimony, PSNH will probably not refinance the Series A PCRBs as of January 1, 2011. Rather, that refinancing will be performed at a future date when it is anticipated that interest rates on the Series A PCRBs are increasing and are likely to continue to increase. Therefore, the impact on the ES rate described above is for illustrative purposes, and assumes that the current interest rate on the bonds would remain the same.

## Q. Please describe the assumptions that you used in making your calculations.

A. The calculations are shown in Attachment SRH-1. We started with the calculations supporting the proposed ES rate that was filed with the Commission on September 21, 2010 in Docket No. DE 10-257 (see pages 5 and 6 of Attachment SRH-1). We then modified the return component applied to rate base to account for the different anticipated cost of debt associated with the refinancing of the Series D \& E PCRBs and the refinancing of the Series A PCRBs (see page 9 of Attachment SRH-1 for these calculations). The revised percent return calculation appears on page 7 of Attachment SRH-1 for the Series D \& E PCRBs, and on page 8 for the Series A PCRBs. The revised percent return amounts for the Series D \& E PCRBs, and for the Series A PCRBs were then used on pages 2 and 4, respectively, to recalculate the dollar amount associated with the returns, and those dollar amounts were substituted on pages 1 and 3 in lieu of the original dollar return amounts appearing on RAB-1, Page 1 of PSNH's September 21, 2010 filing in the ES docket (provided on page 5 of Attachment SRH-1).

As summarized above, these calculations show the proposed ES rate would not change as a result of the Series D \& E refinancing, and would increase by about $0.02 \phi$ per kWh due to the Series A refinancing, subject to the caveat discussed above.
Q. Have you performed a similar calculation for the proposed average SCRC rate?
A. Yes, we have. The results show that the proposed refinancings would have no effect on the proposed SCRC rate.
Q. Will there be any impact on other rate components?
A. No. Distribution rates will not change because under the settlement in the rate case in Docket No. DE 09-035, the capital structure, and the cost of capital, is fixed over the term of the settlement. Accordingly, the weighted average cost of capital would not change as a result of any refinancing or new financing. The Transmission Cost Adjustment Mechanism rates would also remain unchanged by these refinancings as the return on the working capital is calculated using the same fixed weighted average cost of capital that is allowed in the distribution segment
Q. Does this complete your testimony?
A. Yes, it does.



[^0]


Amounts showm above may not add due to rounding.


36 (1) The IPP costs represent the forecasted market value of IPP generation.


[^1]

Capitalization © 9/30/10-Pro Forma-Mefin of Series D PCRBosand Series E PCRBs-for FH Purposes Only

| [A] <br> Balance-LTD | [B] Unamor Issuance Expense | [C] <br> Net Balance $[\mathrm{A}]+[\mathrm{B}]$ | [D] <br> Annualized Amor. Expense | [E] <br> Int Rate | [F] <br> Arn. Int. Exp. <br> [A] X [E] | [G] <br> Total Ann. Exp. $[\mathrm{D}]+[\mathrm{F}]$ | $\begin{gathered} {[\mathrm{H}]} \\ \text { Eff. Int. Rate } \\ {[\mathrm{G}] /[\mathrm{C}]} \end{gathered}$ | Attachment SRH-1 Page 7 of 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 89,250,000 | $(3,255,479)$ | 85,994,521 | 413,404 | 0.40\% |  |  |  |  |
| 89,250,000 | $(4,190,122)$ | 85,059,878 | 501,744 | 4.75\% | 357,000 $4,239,375$ | 770,404 $4,741,119$ |  |  |
| 108,985,000 | $(4,522,270)$ | 104,462,730 | 427,301 | 5.45\% | 5,939,683 | 6,366,984 |  |  |
| 75,000,000 | $(2,398,511)$ | 72,601,489 | 230,507 | 3.65\% | 2,737,500 | 2,968,007 |  |  |
| 44,800,000 | $(1,501,174)$ | 43,298,826 | 144,387 | 3.65\% | 1,635,200 | 1,779,587 |  |  |
| 50,000,000 | $(243,402)$ | 49,756,598 | 63,496 | 5.25\% | 2,625,000 | 2,688,496 |  |  |
| 50,000,000 | $(578,996)$ | 49,421,004 | 23,160 | 5.60\% | 2,800,000 | 2,823,160 |  |  |
| 70,000,000 | $(627,993)$ | 69,372,007 | 89,211 | 6.15\% | 4,305,000 | 4,394,211 |  |  |
| 110,000,000 | $(1,563,058)$ | 108,436,942 | 206,117 | 6.00\% | 6,600,000 | 6,806,117 |  |  |
| 150,000,000 | $(1,609,830)$ | 148,390,170 | 175,651 | 4.50\% | 6,750,000 | 6,925,651 |  |  |
| 837,285,000 | (20,490,834) | 816,794,166 | 2,274,978 |  | 37,988,758 | 40,263,736 | 4.9295\% | forma |
|  |  |  |  |  |  |  | $5.2290 \%$ | ctual Q3 2010 |



Capitalization (0) 9/30/10-Pro Forma-Refin of Sews A PCRBs-for FH Puxposes Only

| [A] <br> Balance-LTD | [B] Unamor Issuance Expense | [C] Net Balance $[\mathrm{A}]+[\mathrm{B}]$ | [D] <br> Annualized Amor. Expense | [E] <br> Int Rate | [F] Ann. Int. Exp. [A] $X$ [E] | $\begin{gathered} {[\mathrm{G}]} \\ \text { Total Arn. Exp. } \\ {[\mathrm{D}]+[\mathrm{F}]} \\ \hline \end{gathered}$ | [H] <br> Eff. Int. Rate [G]/[C] | Attachment Page |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 89,250,000 | $(4,094,804)$ | 85,155,196 | 494892 |  |  |  |  |  |
| $89,250,000$ 108,085000 | $(4,190,122)$ | 85,059,878 | 494,892 | 3.65\% $4.75 \%$ | $3,257,625$ $4,239,375$ | 3,752,517 |  |  |
| $108,985,000$ 75,000 | $(4,522,270)$ | 104,462,730 | 427,301 | 5.75\% | 4,239,375 $5,939,683$ | 4,741,119 |  |  |
| 75,000,000 | (907,511) | 74,092,489 | 427,301 85,749 | 5.45\% | 5,939,683 | 6,366,984 |  |  |
| 44,800,000 | $(522,554)$ | 44,277,446 | 85,749 | 6.00\% | 4,500,000 | 4,585,749 |  |  |
| 50,000,000 | $(243,402)$ | 49,756,598 | 63,496 | 6.00\% $5.25 \%$ | 2,688,000 | 2,737,375 |  |  |
| 50,000,000 | $(578,996)$ | 49,421,004 | 63,496 23,160 | 5.25\% | 2,625,000 | 2,688,496 |  |  |
| 70,000,000 | $(627,993)$ | 69,372,007 | 23,160 | 5.60\% | 2,800,000 | 2,823,160 |  |  |
| 110,000,000 | $(1,563,058)$ | 108,436,942 | $\begin{array}{r}89,211 \\ \hline 206,117\end{array}$ | $6.15 \%$ $6.00 \%$ | 4,305,000 | 4,394,211 |  |  |
| 150,000,000 | $(1,609,830)$ | 148,390,170 | 175,651 | 6.00\% | 6,600,000 | 6,806,117 |  |  |
| 837,285,000 | $(18,860,539)$ | 818,424,461 | 2,116,697 | 4.50\% | 6,750,000 | 6,925,651 |  |  |
|  |  | 818, | 2,116,697 |  | 43,704,683 | 45,821,380 | 5.59870 | forma |


| [A] <br> Balance-LTD | [B] <br> Capitalization Percentage | $\begin{gathered} {[\mathrm{C}]} \\ \text { Embedded } \\ \text { Cost/Return } \\ \hline \end{gathered}$ | Pro forma [D] <br> Weighted Avg. $[B]^{*}[C]$ | $\begin{gathered} {[\mathrm{E}]} \\ \substack{\text { Tax Gross-up } \\ [\mathrm{D}] /[1-\mathrm{TR}]} \end{gathered}$ | Pro forma [F] Tax-Adjusted Return | Pro forma [G] <br> Return By Month |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 818,424,461 | 48.1792\% | 5.5987\% | 2.6974\% | N/A | 2.6974\% |  |
| 880,285,981 | 51.8208\% | 9.8100\% | 5.0836\% | -8.5475 | 8.5475\% |  |
| 1,698,710,442 | 100.0000\% |  | 7.7810\% |  | 11.2449\% | 0.937077\% |
|  |  |  | 7.6017\% |  | 11.0639\% | 0.921992\% |
|  |  | Increase | 0.1793\% |  | Increase | 0.0151\% |

# Public Service Company of X _ lampshire and Subsidiaries 

 Pro forma adjustments to capitalization 0 6/30/10 - for FH Purposes Only
## 1--Series D and Series E

10 PCRB Series D Tax-Exempt-updated 3rd qtr
11 Refinancing costs and call premiums (1)
12 Amortization of refin/call premium over 10.3 yrs ( 124 mths )
13 Recalculated interest costs / new int rate
4 (Incr)/Decr in int costs-Ser D
15
16
17 PCRB Series E Tax-Exempt-updated 3rd qtr
18 Refinancing costs and call premiums (2)
19 Amortization of refin/call premium over 10.3 yrs ( 124 mths )
20 Recalculated interest costs / new int rate
21 (Incr) / Decr in int costs-Ser E
22
Total annual (Incr) / Decr in int costs

| [A] <br> Balance-LTD | [B] <br> Unamor Issuance Expense | [C] <br> Net Balance $[A]+[B]$ | [D] <br> Annualized Amor. Expense | [E] <br> Int Rate | [F] <br> Ann. Int. Exp. $[\mathrm{A}] \times[\mathrm{E}]$ | [G] <br> Total Ann. Exp. $[\mathrm{D}]+[\mathrm{F}]$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 75,000,000 | (907,511) | 74,071,051 | 85,749 | 6.00\% | 4,500,000 | 4,585,749 |
| (1,491,000) |  |  |  |  |  |  |
|  |  |  | 144,757 |  |  |  |
| 75,000,000 | (2,398,511) | 72,601,489 | 230,507 | 3.65\% | 2,737,500 | 2,968,007 |
|  |  |  |  |  |  | 1,617,743 |

24

| $44,800,000$ | $(522,554)$ | $44,265,102$ | 49,375 | $6,00 \%$ | $2,688,000$ |
| ---: | ---: | ---: | ---: | ---: | ---: |
|  | $(978,620)$ |  |  |  |  |
| $44,800,000$ |  | 95,012 |  |  |  |
|  |  | $14,501,174)$ | $43,298,826$ | 14,387 | $3.65 \%$ |
|  |  | $1,635,200$ | $1,779,587$ |  |  |

(1) Series D fees of $\$ 741,000$ and a call premium of $\$ 750,000$, totalling $\$ 1,491,000$. Amor period between $1 / 1 / 2011$ and the maturity date of $5 / 1 / 2021$ is 124 months

26
27 (2) Series E fees of $\$ 530,620$ and a call premium of $\$ 448,000$, totalling $\$ 978,620$. Amor period between $1 / 1 / 2011$ and the maturity date of $5 / 1 / 2021$ is 124 months

33 2--Series A
35
36
37 PCRB Series A Tax-Exempt-updated 3rd qtr
38 Refinancing costs and call premiums (1)
39 Amortization of refin/call premium over 10.3 yrs ( 124 mths )
40 Recalculated interest costs / new int rate
41
42 Total annual (Incr) / Decr in int costs
43
4 (1) Includes Series A fees of $\$ 839,325$. There are no MBIA insurance termination costs or call premium. Amortization period between $1 / 1 / 2011$ and the maturity date of
$455 / 1 / 2021$ is 124 months
1
3
4
5
6
7
8
9 PCRB Series A Tax-Exempt Series B Tax-Exempt-FR

## Public Service Co iy of New Hampshire and Subsidiaries

Capitalization (1) 9/30/10 - for FH Puxposes Only


| $[\mathrm{A}]$ | $[\mathrm{B}]$ <br> Capitalization <br> Percentage | [C] <br> Embedded <br> Cost/Return | Weighted Avg. <br> $[B] *[C]$ |
| :---: | :---: | :---: | :---: |
| $819,263,786$ | $48.2048 \%$ |  |  |
| $880,285,981$ | $51.7952 \%$ | $5.2290 \%$ | $2.5206 \%$ |
| $1,699,549,767$ | $100.0000 \%$ | $9.8100 \%$ | $5.0811 \%$ |

$\left.\begin{array}{ccc}\text { [E] } & \text { [F] } & \text { [G] } \\ \begin{array}{c}\text { Tax Gross-up } \\ \text { [D]/[1-TR] }\end{array} & \begin{array}{c}\text { Tax-Adjusted } \\ \text { Return }\end{array} & \begin{array}{c}\text { Return } \\ \text { By Month }\end{array} \\ \hline & & \\ \text { N/A } & & 2.5206 \% \\ & 8.5433 \% & 8.5433 \%\end{array}\right]$


[^0]:    Amounts shown above may not add due to rounding

[^1]:    Amounts shown above may not add due to rounding

