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N.H.P.U.C. Case No.	DG 10-261
Exhibit No.	TransCanada #15
Witness	M. Hackey
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THE STATE OF NEW HAMPSHIRE  
BEFORE THE  
NEW HAMPSHIRE  
PUBLIC UTILITIES COMMISSION

DE 10-261

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

2010 Least Cost Integrated Resource Plan

SUPPLEMENTAL PREFILED TESTIMONY OF MICHAEL E. HACHEY  
ON BEHALF OF TRANSCANADA POWER MARKETING LTD. AND  
TRANSCANADA HYDRO NORTHEAST INC.

October 7, 2011

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

A. The purpose of my supplemental testimony is to review PSNH's response to Q-TC-002. The information in this question was first requested by TransCanada on June 3, 2011, was the subject of a Motion to Compel and an order of the Commission, Order No. 25,263 (dated August 30, 2011), but was not received from PSNH until September 29, 2011.

**Q. What information was requested in Q-TC-002?**

A. Q-TC-002 requested "Newington annual generation costs, revenues, profit margins and profitability indices from the GE-MAPS model runs prepared for Northeast Utilities by Charles River Associates ("CRA") as part of CRA's study entitled "LMP and Congestion Impacts of Northern Pass Transmission Project" dated December 7, 2010." [Hereinafter referred to as the "Northern Pass Study"].

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37 **Q. Why did TransCanada request this data?**

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39 A. We requested this data because, as I stated in my original testimony, "the Levitan  
40 study has been performed in a manner that has created biased results in favor of PSNH's desired  
41 outcome: a determination that Newington Station is now and continues in the future to be  
42 economic for PSNH's customers." (Testimony of Michael E. Hachey, lines 56-59) We believed  
43 the Northern Pass Study would provide further insight into the credibility of the Levitan Study as  
44 well as provide an unbiased view of Newington's net energy benefits for scenarios both with and  
45 without Northern Pass.

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47 **Q. Why do you contend the Newington analysis from the Northern Pass Study is**  
48 **unbiased?**

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50 A. I believe the Newington analysis from the Northern Pass Study is unbiased because  
51 even though PSNH's parent, Northeast Utilities, controlled the study, I have no reason to believe  
52 they modified assumptions or study methodology to favor – or disfavor – Newington. In fact, in  
53 commissioning the Northern Pass Study, Northeast Utilities has, in effect, conducted a net  
54 energy benefits analysis of every generating unit in New England, including all of those owned  
55 by PSNH.

56  
57 **Q. In your original testimony, your principal conclusion was that the Levitan study**  
58 **"must be redone by an analytical firm that is completely independent of PSNH." Does the**  
59 **Northern Pass Study satisfy that recommendation?**

60 A. Yes, for reasons discussed above, I believe it adequately satisfies my recommendation,  
61 with respect to a determination of Newington's net energy benefits.

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**Q. How did the Northern Pass Study determine Newington's net energy benefits?**

A. In conducting the Northern Pass Study, Charles River Associates ("CRA") simulated the "competitive market dispatch and market clearing process for ISO-NE and neighboring markets. CRA used the General Electric Multi-Area Production Simulation Model ("GE MAPS"), a chronological production cost model licensed by GE Power Systems. The GE MAPS model was used to estimate the market clearing prices and the associated dispatch of generating units throughout the system under scenarios both with and without the NPT line." The model output provides detailed generator specific annual generation costs, revenues, and profit margins for generators throughout NEPOOL, notably including Newington.

**Q. What were the key input assumptions of the Northern Pass Study?**

A. The assumptions are all detailed thoroughly within the body of the study itself. They include:

New England energy demand and peak load based on the 2010 ISO-NE CELT forecast.

Planned capacity additions and retirements based on actual cleared resources in the ISO-NE Forward Capacity Market.

Renewable capacity additions based on current RPS levels for each state as well as any projected revisions of the RPS levels.

Long term natural gas prices at Henry Hub based on Energy Information Administration's Annual Energy Outlook 2010 ("AEO 2010") forecast.

Natural gas basis differentials to regional trading hubs based on NYMEX futures and historical data.

Crude oil prices were based on the AEO 2010 forecast, and fuel oil prices were derived from historical relationships between crude oil prices and refined products.

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97           **Q. Did PSNH indicate the modeling of Newington Station that it conducted in the**  
98 **Northern Pass Study was flawed in any way?**

99           A. No, it did not.

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101  
102           **Q. How did the results for Newington from the Northern Pass Study compare with**  
103 **the results from the Levitan analysis?**

104           A. In the initial analysis undertaken by Levitan and filed with the Commission as  
105 “Appendix G: Newington Station Continuing Unit Operations Study”, dated September 28,  
106 2010, Levitan found the present value of Newington’s net energy benefits from 2011 through  
107 2020 to be \$120 Million. In a subsequent analysis undertaken by Levitan and filed with the  
108 Commission on April 26, 2011 in which Levitan made a variety of “corrections” to the initial  
109 analysis, the present value of Newington’s net energy benefits from 2011 through 2020 was  
110 reduced to \$40 Million. The Northern Pass Study was not conducted for the entire period of the  
111 Levitan analysis; rather, only results for the years 2015, 2016, and 2018 were provided that  
112 coincided with years from the Levitan analysis. I used these values to develop a ratio to  
113 extrapolate the Northern Pass Study results over the period 2011 through 2020. Accordingly,  
114 with Northern Pass assumed not built, the Newington net energy benefits from 2011 through  
115 2020 from the Northern Pass Study would be \$1.3 Million, and with Northern Pass assumed  
116 built, the Newington net energy benefits forecasted from 2011 through 2020 from the Northern  
117 Pass Study would be about \$0.5 Million, with most of the assumed benefits coming in years prior  
118 to the date of Northern Pass construction.

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122           **Q. Does this conclude your supplemental testimony?**

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124           A. Yes, it does.

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