THE STATE OF NEW HAMPSHIRE
before the
PUBLIC UTILITIES COMMISSION

Docket No. DE 11-250

Public Service Company of New Hampshire
Investigation of Merrimack Station Scrubber Project and Cost Recovery

POST-HEARING MEMORANDUM OF PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

I. Introduction

RSA 125-O:18 provides that if the owner of Merrimack Station is a regulated utility, it "shall be allowed to recover all prudent costs of complying with the requirements of [RSA 125-O:11-18] in a manner approved by" this Commission. In July 2013, the Commission set the scope of its review for the hearing on whether PSNH would be entitled to recover its costs of installing the Scrubber at Merrimack Station as follows:

> The prudent costs of complying with RSA 125-O must be judged in accordance with the management options available to [PSNH] at the times it made its decisions to proceed with and to continue installation…. The hearing on the merits will therefore … address the conditions in place at the time of the decision-making under review, specifically the period of time after the Legislature's decision to require the Scrubber up to the point of the Scrubber's substantial completion in September 2011.

Order No. 25,546 at 9. The Commission described the hearing as requiring evidence of whether "market and regulatory circumstances at the time decisions were being made justified [or did not justify] continued operation of the plant with the Scrubber installed, and thus [justified or did not justify] the expenses of the Scrubber." *Id.* at 10. The relevant time period for the decisions under review was described as "the period of time after the Legislature's decision to require the Scrubber up to the point of … substantial completion in 2011." *Id.*

This memorandum will address the prudence of PSNH's actions as shown by the evidence at the October 14-23 hearing given the market and regulatory conditions existing in three periods: (1) from 2006 when RSA 125-O:11-18 was passed, to the Spring of 2008, when, based upon bid proposals, the estimated price for the Scrubber was determined to be $457 million; (2) from May 2008 through the end of 2008 (after the issuance of orders by this Commission interpreting the interaction of RSA 125-O:11-18 and RSA 369-B:3-a); and (3) from early 2009 when the Legislature considered amendments to the statute and chose not to pass them, to the completion of the Scrubber in 2011.

In each period the relevant questions are: What market or regulatory conditions were relevant to the continued construction of the Scrubber; and, were PSNH's actions within a range of reasonable conduct and thus prudent? The overwhelming evidence established that PSNH's actions in planning for and installing the Scrubber were prudent in each of these periods given the existing market and regulatory conditions, and were prudent when considered within a range of options available to a prudent utility at those times.[1]

In evaluating PSNH's actions it is also necessary to consider that in this particular instance those actions were constrained by – and thus prudence must be measured against – the statutory requirements of RSA 125-O:11-18 (the "Scrubber Law.") By statute, PSNH is entitled to recover the "prudent costs of complying" with that law. Despite the existence of the

[1] Apart from the question of whether RSA 125-O:11-18 required installation of the Scrubber, there was no dispute at the hearing concerning the proper standard for determining prudence. The Commission has defined the appropriate standard relative to PSNH's generating assets as: "The standard of care which qualified utility management would be expected to exercise under the circumstances that existed at the time the decision in question had to be made. In determining whether a decision was prudently made, only those facts known or knowable at the time of the decision can be considered." *Re PSNH Proposed Restructuring Settlement*, 85 NHPUC 536 (2000). Likewise, the Commission has defined prudence as requiring an assessment of whether a utility's decision falls within a range of reasonable decisions. *Incentives for Conservation and Load Management*, 75 NHPUC 527, 541 (1990). ("[I]n many planning decisions there are ranges of reasonableness. Within that range there are alternatives that benefit both ratepayers and stockholders although perhaps to differing degrees. It is utility management's responsibility to choose among the options in that range.") *See also EnergyNorth Natural Gas, Inc*., 76 NHPUC 358, 367 (1991); Reed, Ex. 22, *passim* and at 7/11 ("prudent behavior encompasses a range of reasonable and acceptable conduct.")

law, the Intervenors[2] posited a parallel universe in which the Scrubber Law did not exist, and in which the sole public interest consideration expressed in the law was whether installation was in the economic interest of PSNH's customers.[3] Thus, every Intervenor witness assumed that PSNH had complete discretion to stop construction whenever economic or regulatory conditions might have been predicted to make installation of the Scrubber at $457 million unfavorable to customers. But pretending that the law did not exist does not make it so. Pretending that the Legislature's public interest findings rested solely on economic benefits to customers and did not also include reduction of mercury, electric reliability resulting from keeping Merrimack Station operating, or other public interests such as the creation of jobs or tax revenues also does not make it so. *See* RSA 125-O:11,V and VI. Unlike the Intervenors, PSNH could not afford to ignore the law.[4] PSNH's actions in installing the Scrubber must therefore be evaluated by the reality that from 2006-2011 the requirements of the Scrubber law constrained PSNH's discretion.[5]

[2] PSNH will use the term "Intervenors" as a shorthand reference to the Office of Consumer Advocate, the Conservation Law Foundation, the TransCanada intervenors, and The Sierra Club.

[3] *See Appeal of Pinetree Power, Inc.*, 152 N.H. 92, 97 (2005) ("the public interest standard . . . is broader than just economic interests.").

[4] As Commission Staff witness Thomas Frantz testified, determination of whether the Scrubber Law created a mandate is "probably the first hurdle" in this proceeding. 2A76/23. [Citations in this memo to the hearing transcript are cited by the day, morning or afternoon session, and page and line numbers. For example, page 76 line 23 of the morning session of day 2 is cited as "2A76/23." Citations to the pre-filed testimony will be referred to by the witness name, hearing exhibit number and page number. For example, Mr. Hachey's testimony at page 6 line 20 will be cited as "Hachey, Ex. 20 at 6/20. Attachments to the pre-filed testimony will be cited with the witness name, hearing exhibit number and the number of the attachment. For example, attachment 6 to Hachey's testimony will be cited as Hachey, Ex. 20-6. Hearing exhibits other than pre-filed testimony will be cited as, for example "Ex. 98."]

[5] Indeed, the legislative requirement that PSNH dedicate its capital to this project invokes state and federal constitutional protections for the recovery of that investment, lest there be an uncompensated taking of property. The Legislature itself noted this constitutional issue in the March 19, 2009, Majority Report of the Science, Technology and Energy Committee, Ex. 12-12, wherein that Committee stated, "The majority believed that placing a cap on cost recovery for a legislatively mandated project was not only arbitrary but could constitute a taking and be unconstitutional."

This Commission is well aware that PSNH has asserted that the Scrubber Law imposed a mandate for the installation of the Scrubber.[6] PSNH will not repeat those arguments here.[7] Instead, in addition to the issues discussed above, this memo will address the potential alternatives to installation this Commission has identified, namely divestiture and the potential of retirement in advance of divestiture.[8] The hearing evidence conclusively established that those alternatives were not practical or viable during the construction of the Scrubber. Likewise, the evidence established that the law required the installation of the Scrubber in the absence of those alternatives.

Accordingly, PSNH submits that it is entitled to recover all costs incurred in complying with RSA 125:11-18.

II. The Evidence Established That PSNH Acted Prudently In Planning for and Installing the Scrubber

A. PSNH Acted Prudently From 2006 to Early 2008 When The Projected Cost of the Scrubber was Set at $457 Million

From the passage of RSA 125-O:11-18 in 2006 until the formal bids were received and the project price was set at $457 million, PSNH engineered, designed, procured, and planned construction of the Scrubber Project. There was very little, if any, testimony from the Intervenors challenging PSNH's conduct during this period.[9] There was good reason for this: Jacobs Consultancy found that PSNH's conduct in planning for the Scrubber, including the solicitation of bids, procurement, risk review and contracting strategy to be appropriate. *See* Jacobs Consultancy Report, Ex. 26.

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[6] *See* Ex. 23-5 at 43 (PSNH Memorandum of Law, Docket DE 08-103, September 2, 2008); Brief of PSNH to the N.H. Supreme Court in *Appeal of Stonyfield Farm, Inc.*, Tab 30, NHPUC Docketbook, DE 11-250.

[7] It must be noted that Staff witness Frantz also testified that the Scrubber Law indeed created a mandate requiring installation of the scrubber. 2A98/9-14.

[8] *See* Order No. 25,546 July 15, 2013 at 8.

[9] OCA's witness Kahal testified that he did not find PSNH's conduct through the fall of 2008 when it submitted its report to the Commission in Docket DE 08-103 to be imprudent. 3A10/13-20.

Jacobs concluded that PSNH had conducted a Scrubber installation cost comparison and had "worked to understand market conditions and their impact on large construction projects." Jacobs, Ex. 26-5 at 8. In his direct testimony in this matter, William Smagula, detailed the process by which PSNH had sought to comply with RSA 125-O:11-18 including: the major components of the project; the project management; oversight of the contracts; efforts undertaken to manage the costs; quality control programs; and audits conducted during construction. *See* Smagula, Ex. 11. Although the Intervenors contended that PSNH's continued construction of the Scrubber was imprudent, with the exception of a question relating to the installation of the truck wash raised by OCA (*see* Part IV, below), no Intervenor contended in direct testimony or at the hearing that the actual costs of construction were not prudently incurred or managed. Only at hearing were questions raised regarding a second component of the project – installation of the secondary waste water treatment facility. That matter is discussed in detail in Part III, below.

The principal attack on PSNH's prudence in the 2006-2008 period was the claim that PSNH had represented to the Legislature that the cost of the project was a "not to exceed" number of $250 million, and thus had an obligation to "correct" this statement. *See* Hachey, Ex. 20 at 6/20-7/4 and Sahu at 3P64/15-65/2; *cf.* Frantz at 2A93/5-21; Jacobs at 2P54-60; and Large at 6A121-135. The Intervenors appeared to claim that there was an understanding that the project would not exceed $250 million, and therefore the public interest findings in the law were based on that cost and no longer applied at any higher figure, or that unless PSNH "corrected" this understanding, installation of the Scrubber was *per se* imprudent.

Whatever the theory, the issue is completely irrelevant. As the Staff's witness pointed out, nothing in the law imposes a cap of $250 million. Frantz 2A93-94. The fiscal note to the Scrubber Law itself notes that the $250 million figure was an "estimate." Ex. 20-1. This

Commission expressly stated in Order No. 24,898 that the Legislature had not placed a cap on the cost and that "a substantial increase in the cost estimate did not constitute a grant of Commission authority to determine whether the project is in the public interest."[10] TransCanada made this argument before this Commission in 2008 and in the Supreme Court and the Legislature in 2009. Its position has been repeatedly rejected. Given this Commission's findings in Order No. 24,898, it cannot seriously be contended that PSNH was imprudent by continuing construction beyond a "cap" that did not exist.[11] Moreover, Jacobs did not find any imprudence on PSNH's part in the solicitation of bids or the process by which the price was set.

B. PSNH's Actions in 2008 Were Prudent

By May 2008, based on bid proposals and actual contracts, PSNH determined that the estimated price of the Scrubber project had increased to $457 million. Following that increase, PSNH took steps that were wholly consistent with the obligations of a prudent utility.

First, PSNH retained Power Advocate, Inc. to conduct an analysis of whether the direct costs of the project were in line with other scrubbers installed in the United States. *See* draft and final Power Advocate Reports, Exs. 20-9 and 11-3. Power Advocate concluded that when accounting for specific factors relating to this technology at this site, the "levelized" direct costs placed this project within the cost range of 18 other projects.[12]

[10] Moreover, in 2009, when given the opportunity to place a limit on the cost of the Scrubber through HB 496, the Legislature refused to do so.

[11] Even assuming that PSNH stated that the cost would not exceed $250 million, the assertion that PSNH somehow misled the Legislature or the Commission and therefore had some obligation to correct the statement is meritless. By 2008, well in advance of actual construction, the Commission and the Legislature were aware that the cost had increased to the projected $457 million figure. The Legislature was free to amend the law and stop construction at any time – and most particularly in early 2009 when HB 496 and SB 152 were before it.

[12] TransCanada's witness Hachey implied that PSNH had misstated the cost of the Scrubber when providing information to Power Advocate. Hachey, Ex. 20 at 9/12-10/10. But he admitted that he did not understand that Power Advocate considered only the direct costs of construction and compared those costs to the direct costs of other projects and that if he had known this, it likely would have changed his testimony. 5A31/15-32/21.

Second, PSNH undertook an analysis of the costs of the project, including the preparation of a "sensitivity analysis" that was presented to both the Northeast Utilities Risk and Capital Committee ("RaCC") (Large/Vancho, Ex. 23-1**)** and the Board of Trustees (Large/Vancho, Ex. 23-4). This analysis was based on modelling of five scenarios – "unlikely, possible low, base, possible high, and unlikely high" – using a number of inputs including projected gas prices, coal prices, and carbon prices. *See, e.g.*, Large/Vancho, Ex. 23-2 at 11; 23-3 at 8-10; 23-4 at 7-8. This analysis and modelling followed a series of prior analyses prepared during 2007-2008. Large/Vancho, Ex. 23 at 4-5. While the Intervenors contended that PSNH had improperly forecasted gas prices from NYMEX futures, Large provided a detailed explanation of the process PSNH followed in forecasting a natural gas price of $11/MMBtu in 2012. 5P101/3-17. He explained that PSNH's projection was based on a comparison of 2008 EIA forecasts, NYMEX prices and actual delivered gas prices to New Hampshire. *Id.* OCA's witness Kahal testified that PSNH's method of analysis was not unreasonable, Kahal, Ex. 17 at 32/3-5, and that he specifically did not contest PSNH's $11/MMBtu gas price, Ex. 63, response to Staff data request 1-4.

The evidence confirmed the reasonableness of PSNH's projections.[13] Drs. Harrison and Kaufman of NERA Economic Consulting conducted an independent economic analysis of the Scrubber Project for the Summer of 2008 and March 2009. NERA's analysis included 12 different scenarios to calculate the costs to PSNH's customers of proceeding with the Scrubber as opposed to constructing a natural gas fired plant or purchasing electricity from the wholesale market. NERA, Ex. 24 at 6-7. This model included projections of natural gas and wholesale electricity prices, regulations relating to CO_2 emissions and other environmental

[13] In the Fall of 2008, this Commission approved a projected gas price of $12/MMbtu for Concord Steam. Large/Vancho, Ex. 23 at 6/7-13, 23-14.

regulations as of the two dates. *Id.* NERA, Ex. 24 at 6/13-22 and Ex. 24-6. NERA demonstrated that based on market and regulatory factors known in the Summer of 2008, the Scrubber Project was the low-cost alternative in the majority of scenarios to PSNH customers and within a range of reasonable options. NERA, Ex. 24 at 24-25/3-11 and Ex. 24-12.

Third, following its internal presentations, PSNH held a confidential meeting with the representatives of the Commission Staff and OCA in advance of communicating the increased price to the public. Frantz 1P82-85; 96-100; Smagula, Ex. 12 at 63; *See also* Ex. 39. The Intervenors (principally TransCanada) were highly critical of the information presented at that meeting, specifically the alleged failure to disclose the "break-even" point for gas and coal prices in PSNH's models, or historical information on the coal-gas spread. But Frantz testified that the Staff was well aware of the importance of the spread, 1P85/19–86/4.[14] Frantz further testified that in this meeting (and others in this time frame) the Staff was told about the sensitivity of the gas/coal spread to PSNH's analysis, the assumptions PSNH used in the analysis, likely asked questions at the meeting, and that "unequivocally" he did not believe PSNH lied to the Staff, misrepresented facts to it or was less than candid at any point in the process. 2A133-136. Large testified that, in fact, the break-even point was discussed at the July 30, 2008 meeting. 6A53/18-55/11; 105-106. Frantz did not recall this discussion, and testified to the contrary (2A137/2-7), but he also stated that PSNH's assumptions were disclosed (*id.*), that the Staff had the opportunity to ask any questions of PSNH in the meetings (2A134/16-22), that the Staff looked at gas prices "over different periods of time to see how they compared," "[t]hey weren't significantly different than PSNH's prices at the time"

[14] In response to TransCanada data request TC 1-6, Staff specifically noted: "The July 30, 2008 meeting was not a meeting designed to provide Staff with all justifications or analyses related to the scrubber project." Ex. 40.

(2A129/7-19), and that having all of the information provided to the NU Boards, likely would not have "overall changed our opinion on the prudence of the case." 2A118/15-119/21.[15]

Fourth, at the request of the Commission and upon the opening of Docket DE 08-103, PSNH provided a detailed report to the Commission on September 2, 2008. *See* Ex. 23-5. Among other information, that report included both the gas and coal price assumptions used by PSNH in its modelling, together with information from the model itself. Large/Vancho, Ex. 23-5, at 14-16.

The Intervenors made much of the fact that PSNH did not discuss the increased $457 million dollar price estimate with the Legislative Oversight Committee in its required annual report dated June 18, 2008. There was a simple explanation for this: the revised project cost could not be disclosed until it was vetted internally and then disclosed to the investment community per U.S. Securities and Exchange Commission requirements.[16] And the testimony also disclosed that notwithstanding whether the Legislature knew of the price increase in late June, key representatives of New Hampshire government, such as the Governor and Senator Gatsas, were well aware of this price by late August 2008. *See* Ex. 94. It is absurd to think that PSNH made public disclosures on SEC Forms 8-K on August 1, 2008 and 10-Q on August 7, 2008, the Commission opened a docket on the increased cost, the Intervenors sought

[15] Despite TransCanada's contention that PSNH was hiding information on the $5.29 figure, Hachey admitted that the participants in the July meeting could have followed up, and were in fact given information that "customer economic benefits" were "most sensitive to the coal/natural gas price spread." 4P53/5-13; 4P62/18-67/1. Moreover, Hachey could not say whether PSNH's decision not to include the break-even point in the presentation to the Commission was imprudent. 4P54/18-56/13.

[16] The evidence does show PSNH told the LOC during the June 18, 2008 meeting that, "Project Costs will be updated with review of major equipment bids." Ex. 27-16 at 32.

intervention in that docket and challenged the price before the Commission and the Supreme Court in the Fall of 2008, but the Legislature had no knowledge of the increased price.[17]

The principal attack on PSNH's prudence in continuing to install the Scrubber in the Summer and Fall of 2008 came from TransCanada and its witness Hachey, who offered opinions on PSNH's overall prudence. But Hachey's testimony was discredited by TransCanada's conduct and by Hachey's lack of knowledge.

Based on TransCanada's refusal to comply with discovery orders, the Commission struck significant opinions and conclusions in Hachey's testimony[18] and application of an adverse inference arising from the information refused to supply.[19] The stricken testimony formed the basis of Hachey's opinion on prudence. Accordingly, Hachey and TransCanada have no support for their claim that PSNH's actions were not prudent in 2008 or thereafter.[20]

In addition, TransCanada itself substantially undermined Hachey's credibility by admitting that he had no knowledge regarding most of the subjects on which he testified or offered opinions. Hachey's lack of knowledge covered the following:

- **Fuel price forecasts:** forecasts produced by or available to TransCanada from 2005-2012; any after-the-fact assessment made by TransCanada containing an evaluation of such forecasts; documents concerning how TransCanada believes

[17] *See also* Mullen (Frantz) Direct Testimony, Ex. 15, 13/14-16: "It is important to establish that a) back in the 2008 and 2009 time period, the general public, as well as legislators, were aware of the cost escalation of the project, and b) despite that knowledge, no cost limitations were imposed on the project."

[18] The testimony was struck by Order No 25,640 dated March 26, 2014 and Order No. 25,687 dated July 2, 2014. In particular, Hachey was prevented from offering opinions on: PSNH's gas price forecast, Hachey, Ex. 20 at 13/20-21; PSNH's assumptions about the spread between coal and natural gas, *id*.14/15-17; PSNH's reliance on NYMEX futures or NYMEX prices, *id*. 16/12-16; whether customers would benefit from installation of the scrubber, *id*.17/4-6; whether PSNH's gas price projects were appropriate, *id*.16/19-17/1; and whether the Summer of 2008 was an appropriate starting date for long-term analyses, *id*.17/20-21 and 18/15-18.

[19] Order No. 25,687 at 10; ("[T]he the Commission may infer as appropriate during the balance of this docket that documents and information the TransCanada Intervenors refused to provide as required by Order No. 25,663 would have, if produced, been adverse to the TransCanada Intervenors' positions relative to those topics described in the data requests." *Id*. at 11-12.

[20] Hachey readily conceded that he is not a prudence expert (4P33/12-21; 5A28/3) and that his duties at TransCanada do not involve gas forecasting or responsibility for real-time prudence decisions. 5A39/17-40/1. Instead, he claimed to offer opinions as a "generalist in the industry" compared to a "detailed set of knowledge and training in a particular area." 5A29/1-3.

such forecasts should be made; whether in 2007 it was reasonable to expect gas production in North America to remain flat and therefore for gas prices to rise; whether in February 2009 it was reasonable to assume that the natural gas supply bubble could continue for 12-18 months and that prices probably would not drop much lower; and, whether since 2006, TransCanada has used gas price forecasts as an input to economic analyses for new facilities. 5A20/16-21 and Ex. 92;

- **On the Forecasts Used in his Cost-to-Go Analysis**: whether NYMEX futures prices were used in those forecasts; whether engineering analyses of future supply and demand were used; and whether historical analysis was used in those forecasts. 5A20/22-21/3 and Ex. 92;

- **On Unconventional Gas Supplies or "Fracking:"** statements made by TransCanada in 2008-2009 on the effects of horizontal drilling or fracking on future gas supply and prices; statements made by TransCanada's CEO on these topics; and when TransCanada first acknowledged the impact of Marcellus gas on gas prices. 5A21/4-11 and Ex. 92;

- **On the "Death Spiral" He Claimed PSNH was in:** how he defined this term. 5A21/11-12 and Ex.92; and,

- **On the Jacobs Consultancy Report:** whether TransCanada challenged any portion of that report. 5A21/14-15.

Given Hachey's admitted ignorance on these topics, he has no basis for most, if not all, of his testimony.

Hachey's credibility was further called into question by the fact that he made no effort to inform himself of information in TransCanada's possession. Despite the fact that TransCanada had corporate gas forecasts (5P31/12-19) and was twice ordered by this Commission to produce them, and that his testimony focused on the reasonableness of PSNH's forecasts, Hachey conceded he made no effort to determine whether gas price forecasts in TransCanada's possession confirmed or contradicted his testimony. 4P77/5-13; 79/10-12; 5P31/12-19. Hachey didn't even bother to seek information from the TransCanada entities that intervened in this Docket (4P107/5-20), other TransCanada entities for which he is an officer or director, or to examine public documents. 5A84/1-7. The hearing evidence established that had he done so, he would have found a number of gas forecasts and statements

about the production of unconventional gas that were directly contrary to, or inconsistent with his testimony. Hachey was thus forced to concede that upon application of the "adverse inference" standard, his testimony would have been rendered "silly" by information in TransCanada's possession:

> Q: I want you to assume that TransCanada has in its possession multiple gas price forecasts from the 2008 period that are completely consistent with the gas price forecasts that PSNH relied on for its economic analysis. Would that change your opinion?
>
> A: …[I]f I'm to presume that it's completely consistent with PSNH's forecast, however unlikely that may be, that would have been kind of silly of me to have prepared this testimony, wouldn't it."

4P115/20-116/17.[21] Hachey's lack of knowledge and complete failure to research the subjects on which he offered testimony speaks volumes about his credibility and the reliability of his testimony. In the end, what is left of his testimony is nothing more than the biased view of a competitor whose sole interest in this Docket is to cause economic harm to PSNH.[22]

Headed by TransCanada, the Intervenors attacked the prudence of PSNH's actions in the Spring of 2008 on essentially four grounds. First, they asserted that a $457 million price for the Scrubber mandated reconsideration of the project because the price was simply "too high," and that the increase above the alleged "not to exceed" $250 million price tag should have caused any prudent utility to reconsider the project. Apart from the fact that RSA 125-O:11-18 had no cap on costs or rates,[23] evidence from TransCanada's own documents demonstrated that accurately forecasting construction costs in a project such as the Scrubber is

[21] As shown below, such evidence actually existed and was in TransCanada's possession when Hachey prepared his testimony.

[22] Hachey conceded that TransCanada and its customers would suffer no harm whether or not PSNH recovered its costs in this Docket because charges relating to the Scrubber could not be passed on to TransCanada's customers without a change in the law. 5A42-44. Thus, although permitted to participate as a discretionary intervenor based in part on its representation that its "competitive position relative to PSNH may be harmed," TransCanada has no "injury in fact" and thus no legal standing to challenge PSNH's actions. And even if the mere status of being a competitor conferred standing (and it does not), Hachey subsequently denied that TransCanada competes with PSNH. 4P45/1-3.

[23] Order No. 24,898 at 12.

a difficult task. *See* Ex. 93; 5A32/22-34/20. TransCanada's redevelopment of its Vernon Hydroelectric Station (which straddles the New Hampshire-Vermont border) suffered a 60 percent increase in projected costs, which is substantially the same as the percentage increase of the cost of the Scrubber. Ex.93; 5A38/14-23. Furthermore, the Power Advocate and Jacobs reports established that the direct costs of the Scrubber were in line with other projects and that the project was well managed.[24]

Second, in addition to the claim that PSNH withheld critical information about the "break-even" point in the coal/gas spread as discussed above, the Intervenors contended that a Power Point or "regulator slide" presented to the Staff was purposely altered (by using a shorter time period portraying the gas/coal spread) to hide information given to the NU RaCC or Board that was unfavorable to PSNH. Hachey, Ex. 20, 12/13-13/11. Although Hachey refused to say whether PSNH eliminated data on the slides to justify construction of the Scrubber (4P70/19-71/15), his direct testimony certainly inferred as much. *Id.* 19/10-15. But he was forced to concede that the slide showing only the period from 2000 to 2008 (Ex. 45) included information that did not support PSNH's projected spread between the coal and gas prices from 2000-2006 (just as the excluded period from 1993-2000 did not support that spread). Hachey therefore conceded that the chart supposedly designed to favor PSNH (Ex. 45) was not necessarily helpful to it and that if PSNH was hiding information, it was "hiding in plain sight." 4P74/17-75/8.

[24] TransCanada contended at the hearing, as it has (unsuccessfully) for six years, that PSNH's position concerning the law means that "PSNH was required to build the project at any cost," even "two billion dollars." Hachey, Ex. 20 at 7/9-13. This is sophistry. PSNH has never so contended. Rather, it has contended that both this Commission and the Legislature were aware of the $457 million cost estimate and the Commission found that it had no jurisdiction over the project and the Legislature, knowing the cost, determined that it did not want to stop the construction. PSNH has asserted only that at the price estimated in 2008 that was known to the Legislature in 2009 it was required to install the Scrubber, and that no alternatives to that installation were viable or consistent with the public interest considerations set out in RSA 125-O:11-18.

Third, Hachey contended that PSNH's gas forecasts were unreasonable because PSNH should have known in 2006-2007 that unconventional gas supply or fracking was a "looming issue." He claimed that if PSNH had investigated that issue, it would have realized that its projected $11 price for natural gas in 2012 was flawed and would have stopped construction. Hachey, Ex. 20 at 21/7-22/8.[25] By contrast, Reed testified that the real impact of fracking on gas prices was not clear until the fall of 2009 or early 2010. Reed, Ex. 22 at 27/6-28/13. While TransCanada made much of the fact that Yankee Gas, an NU subsidiary, raised this issue in early 2009, TransCanada's own documents demonstrated that there was substantial disagreement over the impact of unconventional gas supplies on gas prices.

PSNH demonstrated that from 2007-2011, TransCanada's own Transportation Supply Outlooks and the statements of its chief executive and financial officers were completely inconsistent with Hachey's claim that a prudent utility should have known of the impact of fracking in 2006, 2007, or 2008. *See* Exs. 100-113. In 2007 and 2008, TransCanada projected that gas prices would continue to be high and that no growth would occur in gas production in the U.S. Exs. 100-101; 5A85-90. By mid-2009, TransCanada continued to project increased prices through 2020, which was wholly inconsistent with Hachey's contention that PSNH should have known in 2008 that its gas prices were overstated. Exs. 103-104; 5A96-101. Also in May of 2009, TransCanada's CEO downplayed the role of shale gas and opined that TransCanada expected gas prices could go above $10. Ex. 107; 5A 110/7. The evidence showed that as late as 2011, TransCanada was just beginning to recognize the impact of Marcellus shale but was still projecting higher gas prices in the future. Ex. 106; 5A104-105.

[25] Of course, the projected price of natural gas was just one factor in PSNH's model. *See* Exhibit 40, Staff's response to data request TC 1-8 ("While that spread was a key factor in determining customer benefit/cost, it was not the only factor, and it was based on consideration of a number of interdependent components.") and TC 1-37 ("one would have to look at all of the interdependent factors that went into the development of the gas/coal spread.")

Hachey knew none of this when he prepared his testimony. 5A105/24-106/5; 5A111/24-112/3; 5A114/8-10; 5A116/3-6; 5A122/4-6;5A125/4-6.[26]

Finally, the Intervenors claimed that if PSNH had reviewed information available to it in 2008 (principally from four studies cited by Hachey), it would have realized that the Scrubber project would result in a "net present value loss" to its customers and would have stopped construction. Hachey, Ex. 20 at 23/2-24/17. Apart from the fact that PSNH was not free to simply stop construction (as Hachey admitted), the forecasts used by Hachey failed to reflect the considerable uncertainty in the market in mid-2008[27] and did not establish that PSNH's projections were outside the range of reasonableness. All of these studies projected increasing gas prices out to 2027 (the end date of the PSNH forecasts) albeit at lower prices than the PSNH forecast. *See* NERA, Ex. 24-17. But as NERA pointed out, these forecasts were not contemporaneous with mid-2008 or early 2009 and presented only a very narrow band of prices.[28] NERA's calculations demonstrated that the band of reasonableness was much broader.[29]

Equally important, Hachey's testimony failed to take into account forecasts in TransCanada's possession that contradicted his conclusions. In June 2014, after being compelled to produce documents it claimed to be irrelevant, TransCanada produced forecasts from ESAI, including forecasts for June and September 2008.[30] These forecasts were entirely consistent with PSNH's forecasts in the same period. In fact, ESAI's "base" and "high" cases

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[26] These exhibits provide further proof that information in TransCanada's possession would, in fact, contradict Hachey's testimony and justify an adverse inference that "the information the TransCanada Intervenors refused to provide … would have, if produced, been adverse" to their position. Order No. 25,687 at 11-12.

[27] *See* NERA, Ex.24 at 8/19-22 and 36/13–37/13.

[28] NERA Ex. 24 at 34-38.

[29] *See* NERA, Ex. 24-17; NERA, Ex. 24 at 8/24–9/3.

[30] The ESAI forecasts were heavily redacted so that neither PSNH nor this Commission could determine the methodology ESAI employed. *See* Ex. 91; 4P127-128.

for June 2008 showed gas price projections and a price escalator higher than those projected or used by PSNH. 4P130/7-131/12. For September 2008, the ESAI forecasts were very similar to those used by PSNH. 4P132/5-133/10. This completely undermined Hachey's contention that fuel price forecasts for this period would have shown PSNH's forecasts to be unreasonable. Hachey did not include the ESAI forecasts on the chart he attached as Attachment 20 to his testimony. 4P143/8-10. He conceded that if he had done so, the ESAI forecasts would have been higher than PSNH's forecasts for the high case and similar for the base case. 4P145-146. Put simply, information TransCanada had in its possession when Hachey prepared his testimony substantially undermined his claims and proved that PSNH's 2008 forecasts were within a reasonable range.

C. Based on Market and Regulatory Conditions Known to PSNH in Late 2008 and the Spring of 2009, PSNH's Continued Installation of the Scrubber Was Prudent

By the Fall of 2008 and into early 2009, market conditions were changing substantially. The financial crisis in the United States and the increased production of natural gas from fracking resulted in highly volatile and uncertain conditions. Reed, Ex. 22 at 23; 27-29.[31] Although, as demonstrated above, natural gas price forecasts were consistent with PSNH's forecasts well into the Fall of 2008, later in 2008 or in early 2009, gas prices had begun to drop. Reed, Ex. 22 at 28/8-11. But it was not at all clear at that time (as evidenced by TransCanada's own statements and projections)[32] that these decreases were sustainable

[31] *See also* Jacobs, Ex. 16, at 29 (economic and commodity volatility were major factors affecting the price of the scrubber); Kahal, Ex.17 at 7/13 (citing volatile economic and market conditions); Power Advocate, Ex. 20-9, at 7 (discussing recent volatility of costs associated with the supply market); Frantz, 2A/127/15 (citing a change and volatility in the markets) and 2A/135/19 (testifying that the price of natural gas is "one of the most volatile commodities out there"); TransCanada, Ex. 107, by Mr. Kvisle, its CEO ("Gas prices are obviously volatile").

[32] Ex. 107, TransCanada Earnings Call of May 1, 2009. (Per TransCanada's CEO: "we expect gas prices to move back up into that 6 to 10 range"); Ex. 103 (TransCanada was projecting in June of 2009 that gas prices were going to remain flat over the long term).

long-term. *Id.* Likewise, the potential for increased environmental regulation was equally uncertain.

There was little, if any, dispute that the reasonable time frame under which PSNH could have considered an alternative to construction was from late 2008 to mid-2009. *See, e.g.*, Kahal, Ex. 17, 34/15-17; at 34/11-15.[33] Faced with the market and regulatory conditions known in that period, what alternatives could PSNH have pursued to installation of the Scrubber? Witnesses for the Intervenors (Kahal, Sahu, Stanton and Hachey) each claimed that PSNH should have stopped construction and either waited until the market conditions stabilized, or should have allowed either this Commission or the Legislature to study whether the project should continue. *See e.g.* Kahal, Ex. 17 at 34/15; 3A40/19-41/2. In fact, that is what happened when the Legislature considered SB 152 and HB 496 in early 2009. Although it has found that the alternatives of divestiture or retirement were available to PSNH, this Commission has never found that PSNH could have stopped construction unilaterally. The evidence demonstrated that PSNH's decision to complete installation was both reasonable and prudent, and that legally and practically, there was no available alternative.

1. Continued Installation Was Consistent With the Interests of PSNH's Customers

Despite the volatility in the markets generally, and the uncertainty concerning natural gas supply and environmental regulations, NERA's analysis evaluated various market (gas and coal prices) and environmental regulations (including CO_2 emissions) for mid-2008 and early 2009 and concluded that in the majority of the scenarios considered, the Scrubber Project was "the low cost alternative to PSNH ratepayers." NERA at 18-20 and 24. (The results of NERA's analysis for early 2009 are contained in NERA Exs. 24-14a and 24-14b [which were

[33] At the hearing, Kahal testified, "I tend to think that by the time we got to 2010, we were beyond the point of no return with this project because of the spending at that point." 3A 45/22-46/2.

attachments to NERA's testimony]).[34] While that was not true in every scenario, prudence requires only that a utility act within a range of prudent options. Moreover, as NERA demonstrated, natural gas and electricity prices were high in the futures market in early 2009, increasing the potential cost savings of the Scrubber. *Id.*

The sole evidence to counter the claim that continued construction of the Scrubber was economic came from CLF's witness Dr. Elizabeth Stanton. Like Kahal and Hachey, Stanton ignored the Scrubber Law,[35] and relied on a cash-flow analysis using a methodology that was similar to NERA's. Stanton concluded that in the Spring of 2009, it was imprudent for PSNH to continue construction. NERA, Ex. 24 at 25/23-25.[36] Although Stanton's analysis was based on very different expectations of the future costs associated with the regulation of CO_2 emissions (NERA, Ex. 24 at 7/22), her analysis did not place PSNH's conduct outside a range of reasonable behavior. While in four of her five scenarios her analysis showed that "the costs of running the plant were higher than the revenues received from running the plant," in one scenario the opposite was true. 4A42/4-18; Ex. 21-4, at 7-16. And although the principal difference between Stanton's analysis and NERA's focused on CO_2 prices, Stanton conceded that "different economists might come to different conclusions about future CO_2 prices." 4A76/13-22.

In fact, Stanton's analysis was flawed for a number of reasons. First, she included CO_2 prices that were "significantly higher than prices predicted by contemporaneous studies" of cap-and-trade proposals and she failed to account for free allowances. NERA, Ex. 24 at 27/19-28/21 and Ex. 24-15. NERA explained that "what matters to ratepayers is not CO_2 prices …

[34] For 2008 results see Exs. 24-13a and 24-13b.

[35] 4A40/9 ("I am not a lawyer. I'm not hear [sic] to talk about the Scrubber Law. I'm an economist.")

[36] Stanton focused on market conditions in March 2009 and thus presented no evidence that PSNH's forecasts or actions in mid-2008 were unreasonable. NERA, Ex. 24 at 7/14.

[but] the cost of complying with the CO_2 regulations." 6P(late)12/20-13/14. When NERA substituted prices that incorporated "the effects of expected free allocation of allowances under a national cap-and-trade program" into Stanton's analysis, in only one of the five scenarios were "the costs of running the plant . . . higher than the revenues that were received from running the plant." NERA, Ex 24 at 29/1-16 and Ex. 24-16. Put differently, continued construction of the Scrubber was reasonable in all but one of Stanton's scenarios.

Second, Stanton did not account for any cancellation costs in her analysis. Thus, she did not know how the sunk cancellation costs determined by Smagula would change her analysis. 4A96/20-97/15.

Third, Stanton's analysis used only one year (2008) to establish both the operating costs and capacity factor for Merrimack Station, notwithstanding that in 2008 the plant had operated far less than in previous years because of the installation of a new turbine. 4A82-96. As explained by Smagula, "2008 was atypical with extended major maintenance outages occurring at both Merrimack units." Smagula Rebuttal, Ex. 12 at 44/21-45/11. Stanton conceded that a lower capacity factor would produce less favorable results for PSNH in her study and that conversely, a higher capacity factor would produce more favorable results. 4A81/18-82/1. Stanton did not recall whether she was aware of the turbine installation when her direct testimony was prepared (4A85/6) but conceded that the plant's capacity factor in 2008 was lower than other years or for a 3-5 year average. 4A86/16-19. As with cancellation costs, Stanton did not know how using a three to five year average for the capacity factor, or for operating costs of Merrimack Station, would affect her analysis. 4A 96/14-19. PSNH demonstrated that using historic data available from FERC Form 1 filings, the average capacity factor was higher and operating costs were much lower than what Stanton used in her analysis. Exs. 82 and 84; and 4A90/3-15. It thus demonstrated that if Stanton had not selected

this one aberrant year, but had instead used 3-5 year averages for capacity and operating costs, her study would have produced far more favorable results for PSNH.[37] In sum, the clear weight of the evidence was that based on market conditions in early 2009, continued installation of the Scrubber was economic for PSNH's customers. Likewise, based on Dr. Stanton's own analyses, the Scrubber was certainly within a reasonable range of options based on information known at that time.

2. Based on Regulatory Conditions In Late 2008 and Spring of 2009, Continued Construction of the Scrubber Was Prudent

Based on the rulings of this Commission in the Fall of 2008, and the Legislature's actions in the Spring of 2009, a prudent utility in PSNH's position was presented with no reasonable course but to continue construction of the Scrubber.

Orders issued by the Commission in the Fall of 2008 established a regulatory framework that presented PSNH with virtually no alternatives to installation or, at the very least, substantially limited PSNH's options. The Commission issued Order No. 24,898 on September 19, 2008. That Order concluded that RSA 125-O:11-18 "trumped" RSA 369-B:3-a and divested the Commission of any jurisdiction to review construction. The Commission concluded that although RSA 369-B:3-a provided that "PSNH ***may*** modify or retire [its] generation asset if the Commission finds that it is in the public interest," it also concluded that "[i]n this instance, the Legislature has made a public interest determination and ***required*** the owner of Merrimack Station, *viz*., PSNH, to install and have operational scrubber technology to control mercury emissions no later than July 2, 2013." *Id.* at 10 (italics and boldface type in original). The Commission also found that two other considerations supported its conclusion that the Legislature "intended its findings in RSA 125-O:11 to foreclose a Commission

[37] Use of a single year's data as input into Stanton's analyses is all the more surprising given her testimony at the hearing that use of a "range" of information as input to an analysis would be more reasonable. 4A54/13.

proceeding pursuant to RSA 369-B:3-a," namely: the Legislative history, which supported a conclusion that "the Legislature viewed time to be of the essence," and the requirement that PSNH was to report cost information to the Legislature, not the Commission. *Id.* at 10-11. The Order concludes with the now well-known statement:

> Nowhere in RSA 125-O does the Legislature suggest that an alternative to installing scrubber technology may be considered, whether in the form of some other technology or retirement of the facility. Furthermore, RSA 125-O does not: (1) set any cap on costs or rates; (2) provide for Commission review under any particular set of circumstances; or (3) establish some other alternative review mechanism. We must therefore accede to its findings.

Id. at 12-13.[38]

On reconsideration, the Commission reiterated that the Legislature's public interest findings were not based on a "specific level of investment, *i.e.* $250 million," and that reading such a limit into the statute would "go[…] beyond the express terms of the statute." Order No. 24,914 at 12. The Commission also stated that the Scrubber Law did not provide authority "for the Public Utilities Commission to determine in advance whether it is in the public interest for PSNH to install scrubber technology." *Id.* at 13.[39] Nothing in the Commission's 2008 Orders suggested that the increased price required a change of course. Then, in the Spring of 2009, the Commission concluded that "installation of Merrimack Station is a

[38] While this Commission has concluded that PSNH had discretion to retire Merrimack Station in Order Nos. 25,546 (July 2013) and 25,565 (August 2013), it concluded in Order No. 24,898 that the Legislature's express reservation of authority over divestiture in RSA 125-O:18 evidenced intent that RSA 369-B:3-a "not apply absent divestiture." *Id*. at 12. RSA 369-B:3-a prohibits PSNH from modifying, retiring, or divesting its assets without Commission approval. Thus, if the Legislature intended 369-B:3-a to grant the Commission authority only in the case of divestiture, it follows that it also removed the Commission's authority to consider retirement. This is consistent with the explicit findings in Order No. 24,898 cited above. The Commission's Order No. 24,898 also contained the only Commission ruling regarding retirement of Merrimack Station made before construction of the Scrubber had been completed and placed into commercial operation.

[39] The Commission also concluded that RSA 125-O:17 provided a basis for it to "consider, in the context of a later prudence review, arguments as to whether PSNH had been prudent in proceeding with the scrubber in light of increased cost estimates and additional costs from other foreseeable regulatory requirements." *Id*. at 13. The Commission later found in its July and August 2013 Orders that it had intended to reference RSA 125-O:18, not 125-O:17 in the quoted portion of Order 24,914, and that Section 17 indeed did not provide a basis for subsequent prudence review. But given that the Commission had been responding in Order 24,914 to a specific argument of TransCanada concerning Section 17, the Commission's mistaken citation was not apparent to PSNH between 2008 and 2011.

legislative mandate, with a fixed deadline…. and that "[t]he Legislature, not PSNH made the choice, required PSNH to use a particular pollution control technology…. and found that installation 'is in the public interest of the citizens of New Hampshire and the customers of the affected sources.'" Order No. 24,979 at 15.

In the Fall of 2008 (and until the completion of the Scrubber) PSNH operated in an environment in which the Commission had concluded that: the law *required* the installation of the Scrubber; retirement was *not* an option to comply with the law; there was *no* cap placed on costs or rates by the legislature; *time was of the essence* in construction; the Commission had *no jurisdiction* over the construction; and *the Legislature, not PSNH had made the choice* to install the Scrubber.[40]

Although subsequent Commission orders issued after the Scrubber was complete suggested that PSNH had alternatives to installation, the Commission was quite clear that the option of retirement was limited:

> While, under RSA 125-O, PSNH had no discretion, *and continues to have no discretion*, whether to install and operate the scrubber if it remains the owner and operator of Merrimack Station, the Scrubber Law does not allow PSNH to act irrationally with ratepayer funds. RSA 125-O:18 makes clear that PSNH retained the management discretion to divest itself of Merrimack Station, if appropriate. Likewise, PSNH retained the management discretion to retire Merrimack Station *in advance of divestiture*.

Order No. 25,546 at 8 (emphasis added).[41] The option to retire Merrimack Station appears to have been tied to divestiture since the Commission expressly stated that PSNH had no discretion to retire the Station if it remained the owner or to meet mercury reduction which, of

[40] PSNH concedes that during this period the Commission had not expressly excluded the option of divestiture; however, it also had not raised the issue of divestiture during construction in any of its orders.

[41] *See also* Order No. 25,565 (August 2013) at 17: "PSNH prevailed on its interpretation of whether retirement of Merrimack Station was a recognized method of compliance with the mercury reduction requirements of RSA 125-O and whether retirement would have formed a legitimate basis for a variance under RSA 125-O:17."

course, requires installation of the Scrubber.[42] In sum, a prudent utility reading the law and these orders in the Fall of 2008 could reasonably have concluded that there were no alternatives to installation or at most, that the only alternative was divestiture.

PSNH's options were also constrained by the Legislature in the Spring of 2009. Despite the Commission's orders, the Intervenors asserted at the hearing that PSNH could have asked the Legislature to change the law when market conditions deteriorated. But the Legislature did review the law in early 2009, refused to change it, and expressly noted that the law's mandate stood and that it did not want the project paused or cancelled. Smagula, Ex. 12-12 at 2. Faced with that problem, the Intervenors contended that the Legislature's refusal to change the law is meaningless or that the Legislature's actions (for which this Commission has made clear PSNH is not responsible)[43] were somehow the result of PSNH failing to provide the Legislature with accurate information.[44]

While the Intervenors have repeatedly downplayed the Legislature's actions in 2009, a prudent utility could not reasonably have ignored the Legislature's decision not to amend the law. Bills introduced in early 2009 were designed to address the complaints the Intervenors made in Docket DE 08-103 and to stop construction of the Scrubber. HB 496[45] and SB 152,[46]

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[42] The Commission's Order No. 25,722 (October 13, 2014) issued on the eve of this hearing, although appearing to address retirement and divestiture as separate alternatives, also expressly reaffirms that retirement is not an option for compliance with the emissions reduction requirements of the law. *See* Order No. 25,722 at 6-7. Since emission reductions must be achieved by the owner of the plant, retirement separate from divestiture would not seem to be an option.

[43] Order No. 25,566 at 5 ("PSNH is not responsible for the Legislature's actions, nor for ours.")

[44] Order No. 25,592 at 5 ("We would be hard pressed to second guess the legislature and determine what the law would have become if PSNH had made a particular showing before a legislative committee.")

[45] As introduced in January 2009, HB 496, entitled "Mercury Emissions; Cost Recovery" proposed to amend RSA 125-O:18 to read as follows: "125-O:18 Cost Recovery. If the owner is a regulated utility, the owner shall be allowed to recover [all] prudent costs up to $250,000,000 of complying with the requirements of this subdivision in a manner approved by the public utilities commission. During ownership and operation by the regulated utility, such costs shall be recovered via the utility's default service charge. In the event of divestiture of affected sources by the regulated utility, such divestiture and recovery of costs shall be governed by the provisions of RSA 369:B:3-a."

respectively would have limited the cost of the Scrubber at $250 million or required the Commission to review Scrubber costs and evaluate the elements of the increased cost projection. As shown at the hearing, many parties opposing the Scrubber provided the Legislature with reports, studies and testimony criticizing the continued construction of the Scrubber. *See* Ex. 96 ("Compendium of Concerns Regarding Installation of a Scrubber" by Symbiotic Strategies, LLC); Ex. 97 (Report on SB152 by Synapse) and Ex. 99 (Summary of Testimony on SB 152); 5A67/14-71/3. These reports raised issues relating to PSNH's fuel forecast assumptions (5A70/19) and the impact of environmental regulations (5A69/21), and asserted that construction would not be in the best interest of PSNH's customers. TransCanada, CLF and Sierra Club all participated in the legislative process supporting those bills. 5A63.

Just months before the bills were filed, TransCanada sought reconsideration of Order No. 24,898, contending that the public interest considerations in RSA 125-O:11-18 were limited to $250 million and that at any higher cost the project was not economic for customers. While the bills were pending, certain commercial ratepayers filed an appeal from Order No. 24,898 to the New Hampshire Supreme Court raising those same contentions. The Intervenors joined that appeal as *amici*.[47] Thus, the issues in this Docket were raised in a number of settings. It is highly unlikely that the Legislature was not aware of those filings when it considered SB 152 and HB 496.

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[46] SB 152 would have effectively overturned Order 24,898 by ordering the Commission to conduct a study of whether the installation of the Scrubber "as mandated by RSA 125-O:11 *et seq*., is in the public interest of retail customers of PSNH." The scope of the proposed study included, among several areas of inquiry: "The projected future operating and capital costs of Merrimack Station, including but not limited to, costs associated with the scrubber project, future projected carbon prices, and other actual or reasonably anticipated environmental compliance costs and coal prices."

[47] *Appeal of Stonyfield Farm*, 159 N.H. 227 (2009). In *Stonyfield*, the Supreme Court stated "[T]he legislation ***specifically requires PSNH to install*** 'the best known commercially available technology . . . at Merrimack Station,' which the New Hampshire Department of Environmental Services (DES) has determined is scrubber technology." (at 228, emphasis added).

This Commission concluded that the Legislature's failure to pass SB 152 and HB 486 "tells us nothing about the meaning of RSA 125-O:11-18" since the "demise of the 2009 bills may signal that the Legislature believed that the Commission already had the authority to review PSNH's decision-making in a prudence review, in which case the legislation may have been unnecessary" or that it did not wish to provide the Commission with such authority. Order No. 25,565 at 11.[48] It cannot be disputed, however, that the Legislature knew the increased cost of the Scrubber, and had an opportunity to cap that cost or stop construction or to study the increased costs. Moreover, with due respect to the Commission, it seems unlikely that the Legislature believed the Commission to have authority to review the continued installation of the Scrubber (whatever it might have thought of prudence review) when the Commission had disclaimed that very authority eight months earlier, and when the Legislature's Majority Committee report expressly stated that it did not want the project paused or cancelled, and did not want to lose the jobs related to the construction and operation of the Scrubber.[49]

Whatever the Legislature intended by its failure to pass the proposed amendments, the issue in this Docket is what a prudent utility should have concluded in the Spring and Summer of 2009 when presented with the following: the only body with authority to review continued installation of the Scrubber was asked to reconsider its public interest findings, to limit the costs of construction and to study whether economic conditions still favored construction and decided not to do so; the legislative committee considering HB 496 stated that the law created a mandate and that a study of the Scrubber would lead to a pause in or cancellation of the

[48] *Cf. Franklin v. Town of Newport*, 151 N.H. 508, 512 (2004) (Subsequent history, though not controlling, may be considered when interpreting a statute.)

[49] Smagula, Ex. 12-12. Notably, none of the Intervenors considered public interest benefits that the Legislature did, or may have considered, when it decided that construction of the project should continue. The Majority Report specifically identified jobs – the thousands of jobs that Dr. Shapiro's study in Shapiro, Ex. 25-2 identified. How the Legislature valued those jobs, or tax revenues, or reliability, or fuel diversity would require speculation.

project **(**Smagula, Ex. 12-12); and the Supreme Court declined to address the issues on the merits but nonetheless referred to the law as a "mandate" while stating that to comply with the mercury reduction requirements of the law, "PSNH must install the Scrubber technology and have it operational….by July 1, 2013." *Appeal of Stonyfield Farm*, 159 N.H. 227, 229-230 (2009). PSNH submits that no prudent utility could have concluded other than that the Legislature had in fact reaffirmed the Scrubber Law. Likewise, no prudent utility would have considered the Supreme Court's view of the Scrubber Law to be "mere dicta." Hence, no prudent utility would have taken any course but to continue construction. *See* Reed, Ex. 22 at 35/15-16; 36/5-8 ("[T]he best course of action for ratepayers was in fact exactly what PSNH did – to continue building the scrubber.")

Recognizing that the Legislature had failed to provide relief from the requirements of the law and that it was the only body PSNH could have turned to for that relief, the Intervenors contended that the Legislature had been misled. Specifically, they claimed that PSNH had misrepresented facts to the Legislature as to the amount of money customers would be required to absorb if the project was cancelled in early 2009. They argued that a March 2009 presentation (Ex. 32) stating that "$230 million (over half the cost to engineer and build the Scrubber) has been spent or contractually committed," was inaccurate because later studies by Smagula (prepared after-the-fact and after review of the specific contracts) indicated that cancellation costs in March 2009 would be $128 million. 1A79/8-83/2. This argument fails. Smagula explained the difference between cancellation costs and contractual commitments. 1A83/3-23. Moreover, even if the $230 million figure was inaccurate, the Intervenors are simply speculating that among the many facts submitted to the Legislature, this was the critical one that caused the Legislature to kill the bills. This Commission has ruled that "[t]estimony that attempts to explain why the legislature did or did not pass legislation is speculative,"

Order No. 25,714 at 9, as is information that suggests how the Legislature would have acted with different information. Order 25,718 at 8.

In summary, continuation of Scrubber construction in 2009 was prudent. Notwithstanding changes in the natural gas markets, evidence at the hearing established that the Scrubber remained a low cost alternative for customers or was certainly within the range of reasonable alternatives, and that regulatory and legal conditions gave PSNH little option but to build it. And in fact, by the Spring of 2009, the only alternatives to construction identified by this Commission were neither practical nor possible.

3. The Evidence Demonstrated That Divestiture Was Not a Viable or Available Option From 2008 to 2011

Prior to the hearing, PSNH contended that divestiture and retirement were not practical or available options because a divestiture proceeding would have taken years to complete and thus would have left PSNH with a Hobson's choice. If it stopped construction during divestiture proceedings it risked missing the July 2013 construction deadline.[50] Also, if this Commission concluded that divestiture was not in the public interest and additional costs were incurred in re-starting the project, those costs might be deemed imprudent. If the Commission found divestiture to be in the public interest, but PSNH continued construction during divestiture proceedings, those construction costs might be deemed imprudent. *Id.* at 18-19. The Commission found that these "practical concerns….are matters of fact that must be weighed and tested as part of the adjudicative process." Order No. 25,565 at 9. The hearing supported PSNH's claim that divestiture (or retirement in advance of divestiture) was not a practical or viable alternative.

[50] Under the law's "Enforcement" provision, RSA 125-O:7, failing to meet the compliance deadline set in RSA 125-O:13, I, would have subjected PSNH to potential criminal prosecution and civil forfeitures of $25,000 per day.

PSNH's witness John Reed ("Reed") offered the *only* substantive testimony concerning divestiture and retirement[51] and directly addressed the "practical concerns" surrounding those alternatives. Reed, Ex. 22 at 27. Reed has extensive experience in the energy industry in general and with divestiture in particular, having managed divestiture processes involving more than 75 generating units across the United States. *Id.* at 2/3; 7A122-124.

Reed testified that by late 2008, it was too late for divestiture to be a practical alternative available to PSNH. This is because by the Fall of 2009 or early 2010 the market had turned against coal plants, and "by the time any divestiture process for Merrimack Station could have gone to market (*i.e.*, the 2010 time frame), it would not have been possible for such a divestiture to produce any benefit for customers." Reed, Ex. 22 at 29/6-13.[52] Reed considered the alternative of divestiture during that time period. *Id.* Ex. 22, 20/9-21/12. Reed's testimony established the following:

> When "gas prices began dropping in later 2008 and early 2009, it was impossible to know if the decrease was sustainable" but by 2010, "it became clear that technology advances in gas fracking were fundamentally affecting the supply of natural gas and that low prices were actually sustainable." Reed Ex. 22 at 28/8-10;
>
> Because of the low gas prices in 2010, the economics for coal plants changed, and it became very difficult to sell such plants. *Id*. at 27/12-20; 28/11-29/18;
>
> A divestiture process would have taken "at least a year or more to complete" and more likely, given both the "litigated phase" of an RSA 369-B:3-a proceeding and time to make a sale, the process would take 18 months to 2 years. *Id*. at 31/17-32/8;
>
> Even if PSNH had sought divestiture in fall of 2008, the process would have pushed a sale completion date to mid to late 2010 at best. *Id*. 31/1-32/5-8;

[51] Reed also offered testimony on whether a variance could have been sought under RSA 125-O:17. Reed, Ex. 22 at 24-27. This testimony is consistent with this Commission's orders that a variance was not an available option.

[52] Nearly every party agreed that this was the time period in which the Scrubber could have been reconsidered. *See* footnote 33 above.

> Any prospective buyer of the Station would have factored into the price its obligation to install the Scrubber, and the potential costs thereof. *Id.* 33/28-35/4;
>
> Because of market conditions in 2010, it is highly likely that any prospective buyer would have insisted on a purchase power agreement at an above market price that covered all of the buyer's expenses including a merchant return on equity, thus negating the possibility of any benefit to PSNH customers from the sale, *Id.* 30/12-21;
>
> Any prospective buyer would have factored contingencies into the purchase price, including a potential project cost contingency in addition to the $457 million project cost, likely increasing the project cost above $500 million, *Id.* 34/8-35/4. This would have meant that PSNH would have to pay a buyer to take the project, *Id.* 34/21-35/4;
>
> PSNH's installation of the Scrubber benefitted PSNH customers by removing many of the contingencies involved in a sale, *Id.* 35/19-36/2;

Reed thus concluded that "it would have been virtually impossible for a divestiture process in this time frame to have produced benefits for PSNH's customers," *Id*. 34/6-7.

Reed also addressed the option of retirement, concluding that it provided no viable options for PSNH. Reed, Ex. 22 at 36-37. Although he did not specifically address retirement as a prelude to a divestiture, given his testimony that divestiture was not an option, it follows that retirement in advance of a divestiture was also not an option. Moreover, even if separately available, retirement also required an RSA 369-B:3-a proceeding, and thus would only serve to create further delay. Reed thus concluded that a prudent utility faced with the Commission's 2008 orders would have concluded that retirement was not a viable option, and that other public interest considerations set out in the Scrubber law, namely mercury reduction and energy diversity, and the Legislature's interest in prompt completion of the project and job creation, would have been undercut by retirement. *Id.* 36/10-37/17.

Reed's testimony was uncontested at the hearing and in fact, supported by witnesses for the Staff, OCA, and the Sierra Club. Frantz testified that a divestiture of Merrimack Station would also likely require the divestiture of Schiller Station. 1P65/8-17; 68/1-13. He

concluded that a divestiture process would "require a significant time frame" (1P71/12) and that the obligation to install the Scrubber would "create challenges for any option with that type of requirement hanging over the buyer." 1P72/10-73/12. In addition, the obligation would make a "buyer more nervous or at least risk averse" and that financial uncertainty "would complicate any analysis of a bidder interested in those assets." 1P73/14-23. OCA's witness Kahal opined that the Scrubber Law required the installation of the Scrubber and that any buyer would have "priced [that obligation] into the bid… [and] the transaction outcome." 3A52/24-54/18. Thus, it would be "logical" that construction would have to continue during any divestiture. 3A55/12-56/2. The Sierra Club's witness, Ranajit Sahu, testified that any potential buyer would consider environmental risks and costs he identified (3P27/3-12) and "make their prudent decision on whether to buy the asset or not, having considered these costs and weighing them appropriately based on their context." 3P29/5-8.

By contrast, TransCanada's witness Hachey contended that PSNH could have divested or retired Merrimack Station.[53] But Hachey was forced to concede that he had no basis to conclude that these options were viable or would result in a benefit to PSNH's customers – which was the touchstone he used to measure prudence. Hachey admitted that he did no analysis of the benefits or costs of retirement, 5P11/4-12/7; no analysis of the impact of delay on the project, 5P16/11, and no analysis of the costs or benefits of a sale of the plant, of whether divestiture would produce a buyer or was a good option for ratepayers, or whether the obligation to install the Scrubber would affect the price of sale, 5P20/21-24/15. He was thus forced to admit that he did not know whether divestiture, retirement or a study would have

[53] Hachey also contended that PSNH could have stopped construction at any time or could have sought a variance. The allegedly available option to stop construction assumes that the law does not exist, and this Commission has explicitly found that requesting a variance was not an available "off-ramp" to avoid construction of the Scrubber. Order No. 25,506 at 17; Order No. 25,722 at 6. In any event, Hachey conceded that PSNH could not have taken any of the options he claimed to be available without the approval of a regulatory body. 5P 5/15-20. Thus, even Hachey concluded that PSNH did not have complete discretion not to install the Scrubber.

benefitted PSNH's customers in 2008, or at any other time. 5P24/16-22; 5P13/13-17; and 5P16/21-17/3.

The sole evidence of record at the hearing therefore demonstrated that divestiture and retirement were not practical or viable options, would not benefit PSNH's customers, and would not serve the public interests in mercury reduction and energy diversity identified by the Legislature. As a result, faced with the Commission's orders and the Legislature's refusal to amend the law, PSNH's continued construction of the Scrubber was prudent. This Commission has expressly noted that in adjudicative proceedings its decisions must be based solely on evidence of record. *Re Exeter and Hampton Electric Co.,* 69 NH PUC 259, 262 (1984) ("This Commission is required to adhere to certain procedural standards including, *inter alia*, rights of notice, hearing and decision-making based on evidence of record. *See e.g.,* RSA Chapter 541-A.") Based on the record, PSNH is entitled to precisely what RSA 125-O:18 requires, namely that it be allowed to "recover all prudent costs of complying with the requirements of this subdivision."

III. Installation of the Secondary Wastewater Treatment System Was Prudent

The prudence of PSNH's installation, and of the status and functionality of the "secondary waste water treatment system" or "SWWTS," was raised for the first time at the hearing, notwithstanding that as a component of the Scrubber project the SWWTS was subject to the comprehensive review of Jacobs Consultancy.[54] While the need for the SWWTS and its future use were questioned, no evidence was presented to support a finding of imprudence regarding the Company's decision to install the SWWTS. The only evidence of record clearly

[54] Indeed, the absence of any direct testimony whatsoever questioning the need for the SWWTS made it unnecessary for Mr. Smagula to include any discussion of the SWWTS in his rebuttal testimony (Ex. 12) nor to prepare in depth for questions at the hearing regarding the SWWTS.

demonstrates that in light of the information available to PSNH at the time the decision to install the SWWTS was made, that decision was indeed reasonable and prudent.

Jacobs' Final Report (Ex. 26-5) discusses the SWWTS in detail and concludes that installation of the SWWTS was indeed a reasonable and prudent decision:

- "In Jacobs' opinion, the decision to install the secondary system was the proper one, as it allowed the completion and timely start-up and operation of this relatively environmentally benign power resource." Ex. 26-5 at 58.
- "The installation of the secondary system was expensive, but it eliminated the potential litigation delays that most certainly would have accompanied a public involvement in the revision of the plant NPDES permit." *Id.* at 63.

In their direct testimony, Jacobs' witnesses DiPalma and Dalton supported the Report's conclusions when they testified:

> Q. What are the benefits associated with the installed wastewater system?
>
> A. While the installation of the secondary wastewater system represents a significant cost of $36.4M, it is in line with costs for similar installations that have been and are being installed on other power plant flue gas desulphurization systems. By choosing to add the secondary treatment system, PSNH sought to avoid potential litigation delays that probably would have accompanied a public involvement in the revision of the plant NPDES permit, potentially rendering the Merrimack Station output unusable. The new enhanced wastewater treatment system and secondary wastewater systems are providing immediate benefits of eliminating the discharge of metals, especially mercury and arsenic, into the Merrimack River. This is a path being taken by a number of utilities in the U.S. to avoid potentially costly delays. …Considering the cost of the secondary wastewater system, which is in line with similar installations, and the fact that this system would allow the Merrimack Station to meet the Legislative mandate for mercury removal, it is Jacobs' opinion that the decision to install the secondary wastewater system was a prudent one.

DiPalma and Dalton, Ex. 16, at 36-37.

Mr. Smagula testified that a significant factor in the decision to install the SWWTS was the elimination of the accrual of additional AFUDC costs[55] that ultimately would be borne by customers. Those additional costs would be in the "millions of dollars." Smagula, Exhibit 11, 10/9. Specifically discussing the SWWTS, Audit Staff concurred with this concern, "Audit

[55] *See* Staff Audit Report, Ex. 15-10 at 10 for a description of AFUDC.

understands that the scrubber was declared in service in September 2011, and that further delay of the permit process would have increased the cost of the project by the AFUDC calculation." Exhibit 15-10 at 32.

Hearing testimony from Staff confirmed Jacobs' view that the Company's decision to install the SWWTS was prudent. When asked during the hearing whether Staff's determination and recommendation to the Commission that PSNH's efforts to comply with the mercury reduction law were prudent included a review of the Company's installation of the secondary wastewater treatment facility, Mr. Frantz responded succinctly: "It did." 1P74/6.[56]

It is undisputed that the SWWTS is fulfilling the goal for which it was constructed (Smagula, 7P59/11-13) and will continue to fulfill that role in the future. *Id.* 7P66/11-13. Questions at the hearing regarding the SWWTS focused on several areas: the need for the SWWTS and the ability of PSNH to avoid installation of the SWWTS by trucking liquid effluent from the primary wastewater treatment system ("PWWTS") to off-site treatment works ("POTWs"); PSNH's recent comments (August 18, 2014) (Ex. 56) to EPA in response to a revised draft NPDES permit issued by EPA on April 18, 2014 (Ex. 61); and the future use of the SWWTS.

Smagula testified that the need to consider how to dispose of treated wastewater from the primary wastewater treatment system arose when EPA refused to work with both NHDES leadership and PSNH. Smagula, Ex. 11 at 9/14-10/11; 1A23/21–27/18. NHDES had worked closely with PSNH for over a year and had determined that the wastewater effluent from the Scrubber, after undergoing treatment in the PWWTS, would meet all water quality standards required to be deemed environmentally safe to discharge to the Merrimack River. Smagula

[56] The Commission's Audit Staff Report also discussed the SWWTS: "PSNH was mandated to construct and operate the Scrubber System by law (RSA 125-O:11-18) as soon as possible but no later than July 2013. Due to a lag in the water discharge permitting, other provisions had to be made to comply with the above RSA which would allow for the immediate operation of the scrubber." Ex. 15-10 at 55.

stated that EPA had traditionally concurred with recommendations supported by NHDES and that EPA's refusal to do so in this matter was "very unique." 1A24/22-25/22. Instead of issuing the permit modification recommended by NHDES, and despite the requirements of the state law and the public interest findings of the Legislature, and the significant environmental benefits that would result from early operation of the Scrubber system, in this instance EPA decided that it would deal with the Scrubber wastewater issue not now, but on its own schedule and as one part of its much-delayed future renewal of Merrimack's station-wide NPDES permit.

PSNH's existing NPDES permit for Merrimack Station expired more than seventeen years ago and will not be finalized for years to come. At the time the EPA refused to work with both PSNH and NHDES, EPA's on-going renewal process had entered its thirteenth year and EPA was unable to provide even an estimated date for issuance of a draft permit, much less when a new final permit would take effect. The record is undisputed that EPA's NPDES permitting process takes many years. Dalton testified that Jacobs is working on projects where EPA had issued three permit revisions over a period of years, remarking, "the EPA works in a different world." 2P18/12. Smagula testified that it is his opinion that EPA will not issue a final NPDES permit "for a long period to come" (1A26/6-7), that any new permit will not become effective until the completion of any and all appeals (per 40 CFR 124.15), and that the "appeal process can take a very long time." 1A26/3-4. In the case of Merrimack Station, the permit renewal process has resulted in many thousands of pages of detailed information submitted by PSNH and by its expert consultants to EPA, all with the goal of a final permit that provides Merrimack Station with maximum operation flexibility to continue to provide reliable service economically to PSNH's customers. *See e.g.*, Exs. 56, 61, and 77.

As noted by Smagula during the hearing, on October 23, 2009, just prior to the time when EPA decided not to work with NHDES and PSNH, EPA had issued public notice that it was starting the process:

> to develop regulations, called effluent guidelines, to limit the amount of pollutants that are discharged to surface waters or to sewage treatment plants. The effluent guidelines for the steam electric power generating point source category apply to steam electric generating units at establishments that are primarily engaged in the generation of electricity for distribution and sale, resulting primarily from a process using nuclear or fossil-type fuels, such as coal, oil and natural gas.

73 Federal Register 55837, October 29, 2009. Both Smagula and Sahu provided testimony regarding these Effluent Limitation Guidelines, or "ELGs." *See also* Ex. 56, at 64-65, and the discussion of EPA's on-going ELG process throughout that exhibit; Ex. 77, Attachment E, at 3. In Exhibit 76 (response to PSNH's data request 17 to the Sierra Club), Sahu responded in relevant part that "PSNH should have considered as part of its decision as to whether or not to proceed with the Scrubber Project . . . effluent limitations guidelines." In his direct testimony, he stated that he saw "no evidence that PSNH properly considered any of the above potential (and now real) regulatory impacts in its decision to proceed with the Scrubber Project… ." Exhibit 19 at 9.[57] By contrast, Smagula testified that PSNH had directly considered the EPA's ELG process as one of the reasons why the SWWTS was pursued. "That system was put into place because alternate means of disposing of liquid effluent from the treatment system would not be sustained in the long run. The ability to truck was not sustainable, due to emerging federal regulations." 7P57/10-11. He also testified that PSNH was well aware of EPA's Federal Register notice initiating the ELG process to limit the amount of pollutants that are discharged to surface waters or to sewage treatment plants: "Specifically, the Steam Electric

[57] But Dr. Sahu later admitted that he could not offer any opinion on the applicability to PSNH of any of the environmental requirements contained in his testimony." 3P69/7.

Generating Station Effluent Limitation Guidelines, referred to as "EGLs" [sic], were in discussion at the federal level in early 2009 – or, excuse me, late 2009."[58] 7P57/22-58/1. Smagula further explained that disposal of Scrubber wastewater effluent from the primary wastewater treatment system via the use of sewage treatment plants was not viable for the long term because the disposal of the effluent from the PWWTS would have required many hundreds of trucks a month, a situation that ran counter to the permits and project approvals issued by the Town of Bow (1P22/5-23/16; Exs. 4, 68 and 69) and which would place the reliable operation of Merrimack Station in jeopardy. In sum, there were no reasonable long-term alternatives other than to install the SWWTS, a conclusion Jacobs confirmed. Jacobs, Ex.16 at 37.

The second question raised by the other parties regarding the need for the SWWTS revolves around PSNH's very recent (August, 2014) comments to EPA in response to EPA's revised NPDES permit issued for Merrimack Station in April, 2014. As a preliminary matter, no one can dispute that EPA proceedings that occurred in 2014 may not and should not be considered as part of prudence review limited to what PSNH knew, or reasonably should have known, when decisions regarding the Scrubber – or specifically, the SWWTS – were made.

EPA finally issued its first draft NPDES permit on September 30, 2011 – fourteen years after the prior permit term had expired and two days *after* the Scrubber went into commercial service. Over two and a half years later, in April, 2014, the EPA issued a revised

[58] At the end of the hearings, Commissioner Iacopino questioned Mr. Smagula on when he first became aware of the EPA's ELG process. The EPA's ELG proceeding was discussed in various prior PUC proceedings, including Docket Nos. 10-261 and IR 13-020. For example, hearing exhibit NHSC #2 in Docket DE 10-261 is a June 7, 2010, letter from EPA's Director, Office of Wastewater Management, discussing that Agency's ELGs and their application to discharges from flue gas desulphurization systems installed at coal generating stations. In addition, Mr. Smagula was contacted directly via letter dated October 29, 2010 by the U.S. EPA, Region 1, seeking information for the establishment of effluent limits relating to the Scrubber; the EPA's October 2009 investigation was referenced in that letter. *See*, http://tinyurl.com/nyarf3b . PSNH filed comments with the EPA in its ELG investigation in 2013. *See*, http://tinyurl.com/n6mtcp5 . Clearly, both Mr. Smagula specifically, and PSNH more generally, were well aware of the EPA's ELG proceeding when decisions regarding the SWWTS were being made.

draft NPDES permit. Ex. 61. In the revised draft, EPA indicated that a SWWTS, as installed by PSNH, is required and based upon EPA's "Best Professional Judgment" is what PSNH should have and use at Merrimack Station. *Id.* However, the EPA would require all components of the SWWTS be operated *at all times* that Merrimack Station is generating and that a discharge limitation of zero liquid effluent would be allowed – a discharge limitation more stringent than required at other coal-fired plants in the United States. Such a requirement would limit much needed operational flexibility, particularly at a time when EPA is working to place restrictions on industrial discharges to publicly owned treatment systems through the proposed Effluent Limitation Guidelines. For example, even if it was the middle of winter and the generating capacity from Merrimack Station was needed to ensure reliable electricity service to the region, something as simple as a broken SWWTS pump or valve would require that the entire Station be taken off line.[59]

In its August 2014 comments on that new revised draft NPDES permit (Ex. 56), PSNH did exactly what a prudent utility would and should do – it pushed back on EPA's unreasonable requirements, seeking changes to the draft permit that would allow Merrimack Station to operate in a more reliable, predictable, and economic manner. This is exactly what this Commission expects of the state's utilities. In a similar situation, this Commission found that a prudent utility has "an obligation" to push back and challenge tax assessments deemed to be unreasonable. In *Re Utility Property Tax Abatements and Limitation of Expenses,* 80 NH PUC 390, 392-393 (1995), rejecting a rulemaking request that would have prevented recovery of property tax appeal expenses incurred by utilities, the Commission held:

[59] Consider Mr. Smagula's responses to Commissioner Iacopino during the last day of hearings, when asked whether it was PSNH's plan to have the SWWTS sit unused: "The plan is that the secondary wastewater treatment facility will be required to operate continuously going forward. However, if there are upsets with that system or equipment in that facility, we would like to have the ability, for operational flexibility, to allow the discharge from the primary system. That is the thrust of why we're arguing so strongly that that continue to be allowed." 7P66/11-18.

> Our decision is predicated on our continued finding that a utility has an obligation to seek abatement of tax assessments it considers unreasonable. RSA 378:28 requires that we include in permanent rates a return on those items which we find to be prudent; prudence is the standard against which we measure utility actions. In the language of the law, prudence is commonly associated with diligence and contrasted with negligence. As we previously stated, "we will require (a utility) to pursue any tax abatement that a reasonably prudent utility would pursue." *Re Southern New Hampshire Water Company, Inc*., 74 NHPUC 248, 254 (1989). The proposed rulemaking could very well have the effect of discouraging a reasonably prudent utility from challenging a tax assessment which would contort the prudence standard itself.

In this proceeding, the Commission should not rely upon comments made in 2014 by PSNH to challenge unreasonable draft EPA permit requirements. To do so would not only require the use of hindsight, but would also be contrary to the Commission's finding in *Re Utility Property Tax Abatements* in that it would discourage a prudent utility from challenging an unreasonable (and potentially costly) permit requirement, "contort[ing] the prudence standard itself."[60]

Moreover, regardless of what EPA eventually puts into its final NPDES permit for Merrimack Station, as noted above, that final permit will undoubtedly be subject to years of appeals.[61] Jacobs noted:

> Based on the Environmental Protection Agency's position, that discharge from the secondary wastewater treatment system could only be accommodated by adding it to the plant's National Pollutant Discharge Elimination System (aka NPDES) permit, and the NPDES Permit Process has been in revision for 14 years, PSNH felt that approval would be an extremely long process, possibly taking many years. A delay of this magnitude could also delay the start-up of the scrubber and keep the Merrimack Station from operating.

DiPalma and Dalton, Ex. 16, at 35.

[60] Consider the alternative where PSNH did nothing, and just accepted the restrictions placed in the draft NPDES permit notwithstanding the costs and operating constraints that such a permit would impose. Any action taken by the Commission that "punishes" PSNH for doing the right thing will have long-standing consequences impacting all the state's utilities.

[61] Under the Clean Water Act, appeals of a final EPA NPDES permit first go to the EPA's Environmental Appeals Board (40 CFR 124.19), and decisions of the EAB may be appealed to the U.S. Circuit Court of Appeals. (5 U.S. Code 704). As noted by Smagula, the appeals process alone will take many years.

Jacobs was quite clear about the prudence of PSNH's actions leading up to the decision to install the SWWTS:

> Based on PSNH's corporate environmental and legal opinions, and faced with the real possibility of not being able to place the Scrubber Project into service at completion, PSNH chose to add the secondary treatment system. Based on the operational intentions for the Merrimack Station that existed when the decision was made to add this last system to ensure on-time start-up, PSNH felt that it was a prudent decision. The secondary wastewater system was the only method available to avoid an effluent discharge and therefore, without it, likely to further delay the long sought after NPDES permit. Consequently, PSNH decided to proceed with the installation of this system. Considering the cost of the secondary wastewater system, which is in line with similar installations, and the fact that this system would allow the Merrimack Station to meet the Legislative mandate for mercury removal, it is Jacobs' opinion that the decision to install the secondary wastewater system was a prudent one.

Id. at 37. Likewise, Jacobs made clear that that installation of the SWWTS was prudent, based on that technology's ability to allow PSNH to operate Merrimack Station in compliance with its existing NPDES permit:

> Q. [F]or purposes of your findings and recommendation, was it important for the secondary wastewater treatment facility to be a "zero liquid discharge" facility or was it important for that to be a technology that would meet the current NPDES permit issued by EPA and allow the Company to continue to operate the Merrimack Station, while the EPA goes through the process of issuing a new NPDES permit?
>
> A. (DiPalma) It's the latter, obviously.

2P101/10-21.

As noted repeatedly by Jacobs Consultancy, the SWWTS enabled Merrimack Station to comply with the deadline set forth in the Scrubber Law in a manner that also complied with the NPDES permit in effect when the EPA refused to cooperate with NHDES and PSNH, in effect when the Scrubber entered commercial operation, in effect now, and likely to be in effect for many years to come. That is exactly what the SWWTS has done since its installation and will continue to do. During the hearing, Smagula confirmed EPA's statement in the

revised draft NPDES permit that, "The secondary wastewater treatment system is a technology that will be used on a permanent basis to complement the primary treatment system." 7P64/6-9. *See also* Ex. 61 at 26.

Despite the questions raised at the hearing, none of the Intervenors offered any evidence contradicting Jacobs' expert opinion regarding the prudence of the SWWTS. Based on the requirements of the state's Administrative Procedures Act as noted by the Commission itself in *Re Exeter and Hampton Electric Co.*, *supra.*, this evidence of record is controlling and clearly demonstrates that based upon what PSNH knew, or should have known, when it made the decision to install the SWWTS, that decision was well within the range of options that a reasonable person would make.[62] On that basis alone, the Commission should conclude that the findings and testimony of Jacobs contained in its September 2012 Final Report are controlling on the prudence of installation of the SWWTS.

IV. The Decision to Install the Truck Wash Facility Was Prudent

OCA suggested that the Commission should not allow PSNH to earn a return on the investment made for the project's truck wash facility. Absent a finding of imprudence in the decision to construct that facility, OCA's suggestion would result in an uncompensated taking of PSNH's property, and should thus be rejected.

The record evidence provides ample justification why the truck wash facility was constructed. The Jacobs' Report (Ex. 26-5) and the Jacobs' witnesses (2P21/12–22/2) found the decision to install the truck wash to be prudent. Smagula provided additional background

[62] Note that regarding the SWWTS the Jacobs' witnesses testified "similar installations … are being installed on other power plant flue gas desulphurization systems." DiPalma and Dalton, Ex. 16, at 36.

regarding the concerns of the Town of Bow regarding truck traffic. 1P25/13-14 and Exs. 68 and 69.[63] There was no evidence whatsoever countering these prudence recommendations.

The New Hampshire Supreme Court has found that absent imprudence, a utility is entitled to earn a reasonable return commensurate with returns on investments in other enterprises having corresponding risks. *New England Tel. & Tel. Co. v. State*, 95 N.H. 353, 361 (1949).[64] As there is no evidence of imprudence, there is no legal basis to implement OCA's suggestion.

V. Conclusion

Based upon the evidence of record, there can be no doubt that PSNH's belief that the Scrubber Law required it to install and have operational scrubber technology, at Merrimack Station, to reduce emissions of mercury by a set amount, as soon as possible but no later than July, 2013 was both prudent and reasonable. That is what PSNH did, and it did so in a manner ultimately found to be completely prudent by Jacobs Consultancy and its witnesses – the only substantive evidence on this topic.

The Commission Staff aptly described why, at the end of this eight-year process, PSNH should be entitled to recover the entire cost of constructing the Scrubber:

> As demonstrated by the prolonged procedural schedule, numerous legal filings, extensive media coverage and legislative involvement, the Scrubber project has generated lots of controversy due in large part to the large capital cost. The rate impact associated with the project becomes magnified due to a) the restriction that the costs of the project be recovered only from PSNH's default service customers, b) the extended period of time that has transpired since the implementation of a temporary Scrubber cost recovery rate at a level that provided less than 100 percent recovery, and c) significant customer migration

[63] *See also*, Exhibit 4, which lists the permits from the Town of Bow, including "203-08 Site Plan Compliance Truck Wash Facility" and "Traffic Impact Study."

[64] *See also Appeal of Conservation Law Foundation*, 127 N.H. 608, 635 (1986) ("The commission is bound to set a rate of return that falls within a zone of reasonableness, neither so low as to result in a confiscation of company property, nor so high as to result in extortionate charges to customers. A rate falling within that zone should, at a minimum, be sufficient to yield the cost of debt and equity capital necessary to provide the assets required for the discharge of the company's responsibility." (Internal citations omitted)).

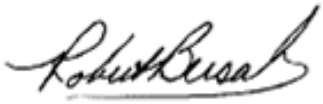
> away from PSNH's default service to competitive supply options. In a perfect world, we all could have predicted the movements in the natural gas, electricity and SO2 markets and the current high levels of customer migration (which only recently began significantly increasing). If we all knew back in 2005-2006 what we all know now, many things would be different, and the Scrubber Law, for one, may not have existed in its current form. However, perfect foresight rarely exists, if at all, especially when it comes to predicting energy markets. …[W]e could spend all sorts of time exploring a range of different "what-if" scenarios: what if the plant was sold; what if the plant was retired; what if the Legislature had capped the costs; what if the Scrubber Law was written differently. While this all makes for interesting discussion, it distracts from the facts of the case. The Scrubber Law exists and the Scrubber exists. The Scrubber is performing as planned and is reducing emissions of mercury and SO2 as required by law. The plant was not sold nor was it retired and PSNH, as the owner, had – and continues to have – a duty to comply with the law. Based on Staff's review, including the thorough reviews performed by Jacobs Consultancy and the Audit Staff, Staff's position is that PSNH acted prudently in complying with the Scrubber Law and constructing the Scrubber, and the resulting costs….were prudently incurred.

Mullen (Frantz), Ex.15, at 29-30.

Pursuant to RSA 125-O:18, PSNH respectfully requests that the Commission find that all of its costs of complying with the requirements of the Scrubber Law were prudently incurred and upon that finding, issue an order allowing the recovery of those costs, in the manner recommended by Mr. Chung. Ex. 14.

Respectfully submitted this 14th day of November, 2014.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

By: 

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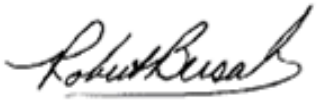
Certificate of Service

I hereby certify that a copy of this Post-Hearing Memorandum has been served electronically on the persons on the Commission's service list in accordance with Puc 203.11 this 14th day of November, 2014.



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