

STATE OF NEW HAMPSHIRE

before the

NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION

TESTIMONY OF WILLIAM H. SMAGULA

Investigation of Merrimack Station Scrubber Project and Cost Recovery

Docket No. DE 11-250

ORIGINAL	
N.H.P.U.C. Case No.	DE 11-250
Exhibit No.	12
Witness	William H. Smagula
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1 INTRODUCTION

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

3 A. My name is William H. Smagula. Since the filing of my previous testimony in this proceeding, I
4 have been promoted to the position of Vice President of Generation for Public Service Company
5 of New Hampshire, ("PSNH" or the "Company"), a subsidiary of Northeast Utilities (NU). My
6 business address is 780 North Commercial Street, P.O. Box 330, Manchester, New Hampshire
7 03105.

8 Q. What are your responsibilities as Vice President – Generation?

9 A. As Vice President of Generation, I am responsible for the safe, reliable and economic operation
10 and maintenance of PSNH's generating stations while maintaining compliance with all laws,
11 regulations, and permits.

12 Q. What is the purpose of your rebuttal testimony?

13 A. The purpose of this testimony is to demonstrate that, given the circumstances facing it, PSNH
14 acted reasonably and prudently in complying with the Scrubber Law, and that PSNH did all the
15 right things under the law to design, build, commission, and operate this project. In addition, I
16 will comment on portions of the testimony submitted by intervenors in this proceeding.

1 **Q. Who are PSNH's other rebuttal witnesses?**

2 A. In addition to my rebuttal testimony, PSNH is also presenting rebuttal testimony sponsored by the
3 following witnesses:

- 4 • Mr. John Reed, Chairman and Chief Executive Officer, Concentric Energy Advisors,
5 who discusses the applicable "prudence" standard, gives his opinion on the prudence of
6 PSNH's actions, and comments on the alternatives to construction of the scrubber
7 postulated by other parties.
- 8 • Dr. David Harrison, Jr, Senior Vice President, and Dr. Noah Kaufman, Senior
9 Consultant, NERA Economic Consulting, who present their independent economic
10 analysis of the Scrubber project, plus discuss and critique the analyses of other parties in
11 this docket.
- 12 • Dr. Lisa K. Shapiro, Chief Economist, Gallagher, Callahan & Gartrell, P.C., who presents
13 and discusses the results of her 2009 study entitled, "The Economic Impacts of
14 Constructing a Scrubber at Merrimack Station," concerning public interest benefits of the
15 Scrubber project to rebut portions of intervenors' economic analyses claims.
- 16 • Messrs. Terrance J. Large of PSNH and James J. Vancho of Northeast Utilities Service
17 Company ("NUSCO"), to present the economic analyses prepared by PSNH/NUSCO
18 during the course of the Scrubber Project in response to other parties' suggestions that
19 PSNH failed to prudently perform such analyses.
- 20 • Mr. Eric H. Chung, Director, Revenue Requirements of NUSCO, who adopts and updates
21 the previously-filed testimony of Mr. Baumann, who has retired, and discusses the
22 current rate impacts of including the prudent costs of the Scrubber Project in PSNH's
23 rates.

24 **Q. Please summarize your testimony briefly.**

25 A. There are three key components to my rebuttal testimony. First, I will discuss the legislative,
26 economic, and public interest aspects of the obligation facing PSNH with respect to the
27 Merrimack Scrubber project and how those contextual factors led to reasonable and prudent
28 efforts by PSNH to comply with the mandates we were required to follow. Much of my
29 testimony will focus on this discussion. Next, I will discuss how well the scrubber has run since

1 being put in service, including specific performance results and the numerous awards it has
2 received. Finally, I will provide specific rebuttal on various statements made in testimony by
3 intervenors in this proceeding.

4 Following the main body of my testimony, I provide supplemental testimony containing
5 additional details supporting my arguments, to which I refer throughout this document.

6 **I. DISCUSSION OF THE CONTEXTUAL FACTORS THAT LED TO PSNH'S PRUDENT**
7 **COMPLIANCE WITH THE SCRUBBER LAW**

8 **Q. Please give an overview of this section of your testimony.**

9 A. Due to the testimony filed by other parties, I feel it is important to reiterate the key aspects of the
10 obligation facing PSNH in the 2008-2009 time period, including:

- 11 • PSNH's understanding of the legislative mandate it faced;
- 12 • Insights drawn from the economic analysis of the scrubber conducted by PSNH;
- 13 • The public interest benefits of the scrubber, such as incremental jobs, that were expected
14 from its installation and operation.

15 It was the careful consideration of these important factors in aggregate that led to PSNH's
16 perspective that it had no reasonable choice but to comply with the Scrubber Law and proceed
17 with the prudent installation and operation of the scrubber at Merrimack Station.

18 **Q. Why did PSNH install the scrubber?**

19 A. As stated in my direct testimony dated June 15, 2012, PSNH installed the scrubber because New
20 Hampshire law contains a mandate that a scrubber shall be installed and operational at Merrimack
21 Station by July 1, 2013, with incentive language to complete this project sooner.

1 **Q. Where does state law contain that mandate?**

2 A. It appears in the Scrubber Law twice:

- 3 • RSA 125-O:13 contains the actual legal mandate to install the scrubber, as well as setting the
4 mercury emissions reduction requirement: “I. The owner shall install and have operational
5 scrubber technology to control mercury emissions at Merrimack Units 1 and 2 no later than
6 July 1, 2013.”
- 7 • In addition, RSA 125-O:11, I states “I. It is in the public interest to achieve significant
8 reductions in mercury emissions at the coal-burning electric power plants in the state as soon
9 as possible. ... To accomplish this objective, the best known commercially available
10 technology shall be installed at Merrimack Station no later than July 1, 2013.” Furthermore,
11 in RSA 125-O:11, II, the Legislature held that, “The department of environmental services
12 has determined that the best known commercially available technology is a wet flue gas
13 desulphurization system, hereafter ‘scrubber technology.’”

14 In addition, the remainder of the Scrubber Law, and indeed the entire New Hampshire Clean
15 Power Act (RSA Chapter 125-O), which is a four-pollutant reduction law that includes the
16 Scrubber Law, clearly requires the installation of scrubber technology at the Merrimack Station.

17 **Q. PSNH refers to the Scrubber Law as containing a “mandate.” Why?**

18 A. Our state Supreme Court has used the term “statutory mandate” in at least 135 cases to reflect just
19 that – a mandate created by statute – so it has a particular legal meaning. Similarly, this
20 commission has used that same term, “statutory mandate,” repeatedly in dozens of decisions.
21 The Legislature enacted a binding state law that includes such a statutory mandate: “The owner

1 *shall* install and have operational scrubber technology to control mercury emissions at Merrimack
2 Units 1 and 2 no later than July 1, 2013.”¹

3 The Scrubber Law clearly created a mandate, enforceable by criminal and civil penalties under
4 RSA 125-O:7, ordering installation and operation of scrubber technology at Merrimack Station
5 by no later than July 1, 2013. PSNH did not believe that there was any other reasonable
6 interpretation of the statute, particularly after the decisions of the PUC in the fall of 2008 and the
7 Supreme Court in 2009. PSNH operates its generating facilities with a clear focus on following
8 all applicable laws, regulations, and permits.

9 The Scrubber Law’s mandate was clearly stated in temporary permit TP-0008 issued by the New
10 Hampshire Department of Environmental Services requiring the operation of the scrubber,
11 “Beginning on July 1, 2013, the Owner shall not operate MK2 unless MK2-PC7 (the scrubber) is
12 in operation.” There is no question that Merrimack Station must operate in compliance with all
13 of its air permits.

14 **Q. Has anyone other than PSNH expressed a view that the Scrubber Law was a mandate**
15 **requiring installation of the scrubber?**

16 **A.** Yes. The Legislature and every agency that has had a role in reviewing the scrubber project have
17 all recognized that the Scrubber Law created a mandate requiring the installation of scrubber
18 technology at Merrimack Station by PSNH. Moreover, every active party-intervenor in this
19 proceeding has also stated that the Scrubber Law required PSNH to install the scrubber.²

¹ Please refer to Appendix 1 for further discussion on how the Scrubber Law established a “statutory mandate.”

² Please refer to Appendix 1 and Attachment WHS-R 24 for supplemental testimony and information with specific details of such statements.

1 **Q. What other organizations expressed views interpreting the Scrubber Law as a mandate**
2 **requiring installation of the scrubber?**

3 A. The New Hampshire Supreme Court; the New Hampshire Attorney General; the New Hampshire
4 Department of Environmental Services; the New Hampshire Air Resources Council; the New
5 Hampshire Site Evaluation Committee; the Office of Consumer Advocate; the Conservation Law
6 Foundation; the Sierra Club; TransCanada; the United States Environmental Protection Agency;
7 Jacobs Consultancy; and others all have stated that installation of the scrubber was mandated by
8 New Hampshire law.³

9 **Q. Why is it relevant on rebuttal in this proceeding that this Commission, the New Hampshire**
10 **Supreme Court, the Attorney General, the Department of Environmental Services, the Site**
11 **Evaluation Committee, the Air Resources Council, the U.S. EPA, the Office of Consumer**
12 **Advocate, the Sierra Club, the Conservation Law Foundation and TransCanada all have**
13 **recognized that the Scrubber Law required the installation of the scrubber at Merrimack**
14 **Station?**

15 A. It is important because this is a prudence proceeding to determine what a reasonable person
16 would have done under the circumstances faced by PSNH. Other parties have presented
17 testimony stating that PSNH made an imprudent “decision” to install the scrubber. That
18 testimony is flat out wrong and contrary to those parties own earlier admissions.

19 In Order No 24,979 dated June 19, 2009, issued in Docket No. DE 09-033 at page 15, this
20 Commission held, “*The Legislature, not PSNH, made the choice*, required PSNH to use a

³ Please refer to Appendix 1 and Attachment WHS-R 24 for supplemental testimony and information with specific details of such statements.

1 particular pollution control technology at Merrimack Station, and found that installation is ‘in the
2 public interest of the citizens of New Hampshire and the customers of the affected sources.’”
3 Since this Commission, the New Hampshire Supreme Court, the Attorney General, the
4 Department of Environmental Services, the Site Evaluation Committee, the Air Resources
5 Council, the U.S. EPA, the Office of Consumer Advocate, the Sierra Club, the Conservation Law
6 Foundation and TransCanada all have recognized that the Scrubber Law *required* the installation
7 of the scrubber at Merrimack Station, any testimony asserting that such installation was
8 “discretionary” on the part of PSNH or that PSNH made the “decision” to install the scrubber
9 cannot be given any credence.

10 **Q. Given that PSNH properly complied with the requirements of the Scrubber Law, what is**
11 **the nature of the recovery to which PSNH is entitled?**

12 A. The Scrubber Law mandates at RSA 125-O:18 that if the owner of Merrimack Station is a
13 regulated utility, the owner shall be allowed to recover all prudent costs of complying with the
14 requirements of the Scrubber Law. PSNH is the owner of Merrimack Station; PSNH is a
15 regulated utility; therefore, PSNH shall be allowed to recover all prudent costs of complying with
16 the Scrubber Law. That is what PSNH has requested, and that is what the Staff of this
17 Commission agrees is the proper and required result under the law.

18 **Q. What is your understanding of the prudence standard, as upheld by this Commission?**

19 A. This Commission has repeatedly described the prudence standard as “what a reasonable person
20 would do under the circumstances existing at the time of a decision.” The un-appealable
21 decisions of the Supreme Court and multiple state and federal agencies, including this
22 Commission, as well as the statements and admissions of the party-intervenors to this proceeding
23 all evidence that courts, boards, commissions, councils, agencies, and party-opponents have

1 concluded that the law of this state required PSNH to install the scrubber at Merrimack Station.

2 Under those circumstances, a reasonable person would have installed the scrubber.

3 **Q. Were there practical options available to PSNH aside from complying with the mandate,**
4 **such as the retirement or divestiture of Merrimack Station?**

5 A. No. Aside from ignoring the law, there were no realistic alternatives available to PSNH. Other
6 parties have suggested that divestiture or retirement of Merrimack Station could have or should
7 have been initiated by PSNH, rather than installation of the scrubber. However, neither of these
8 alternatives was realistically available to PSNH.

9 **Q. Is it your testimony, then, that PSNH complied with the Scrubber Law in a manner**
10 **consistent with the perspective of a “reasonable person...under the circumstances existing**
11 **at the time”?**

12 A. Yes. Moreover, PSNH witness John Reed, who provides detailed expert testimony regarding the
13 prudence standard as used in utility regulatory proceedings, concurs with my opinion. Based
14 upon his expertise, and after consideration of the Scrubber Law, the analyses performed by Drs.
15 Harrison and Kaufman, the pre-filed testimony, and discovery responses made in this proceeding,
16 Mr. Reed testifies that PSNH’s actions regarding the Scrubber Project should be considered to be
17 prudent.

18 Consistent with Mr. Reed’s testimony, it is my opinion that a reasonable person would come to
19 the same conclusion as this Commission, the New Hampshire Supreme Court, the Attorney
20 General, the Department of Environmental Services, the Site Evaluation Committee, the Air
21 Resources Council, the U.S. EPA, the Office of Consumer Advocate, the Sierra Club, the
22 Conservation Law Foundation and TransCanada; that is, *the Scrubber Law mandated the*

1 *installation of scrubber technology at Merrimack Station by PSNH*; moreover, as testified by Drs.
2 Harrison and Kaufman and Mr. Reed, the actions of PSNH were prudent even if one were to
3 ignore the statutory mandate.

4 Furthermore, if one were to conclude that PSNH was unreasonable for considering the Scrubber
5 Law to be a statutory mandate requiring it to install the scrubber, that conclusion would
6 necessarily imply that the Supreme Court, this Commission, and every other department, agency,
7 board, and intervenor were similarly unreasonable. That just cannot be the case. PSNH's
8 understanding of the Scrubber Law and actions taken to comply with that law were reasonable
9 and prudent. Hence, as confirmed by the Jacobs Consultancy report, I believe that all the costs
10 PSNH is seeking to recover in this proceeding were prudently incurred in order to comply with
11 the requirements of the Scrubber Law set forth in RSA Chapter 125-O.

12 **Q. You have commented that other agencies and parties to this docket have expressed views**
13 **that result in the conclusion that PSNH acted prudently in complying with the Scrubber**
14 **Law. Please explain.**

15 A. It is very important to note that every one of the orders, decisions, and statements I refer to that
16 were made by the Supreme Court, this Commission, the AG, the NHDES, the SEC, the ARC, the
17 U.S. EPA, the OCA, the Sierra Club, CLF, and TransCanada stating the position that PSNH was
18 required by law to install the scrubber came after the estimated \$457 million cost of the project
19 was disclosed by PSNH in the SEC Form 10-Q disclosure in August, 2008.

20 Importantly, the Legislature knew the estimated \$457 million cost in 2009 when it found both
21 Senate Bill 152 "relative to an investigation by the PUC to determine whether the scrubber
22 installation at the Merrimack station is in the public interest of retail consumers" and House Bill

1 496 "establishing a limit on the amount of cost recovery for emissions reduction equipment
2 installed at Merrimack Station" inexpedient to legislate, stating, "the legislature mandated in 2006
3 for PSNH to install the scrubber without placing a limit on the costs;" "that placing a cap on cost
4 recovery for a legislatively mandated project was not only arbitrary but could constitute a taking
5 and be unconstitutional;" and "that the passage of this bill would lead to a pause in or cancellation
6 of the project."

7 In light of the fact that the Legislature and every cited agency and intervenor had held that PSNH
8 was required to install the scrubber knowing the then estimated \$457 million cost, there is but one
9 answer to the prudence question of "What would a reasonable person do under the circumstances
10 facing PSNH at the time?" - - clearly, in my mind and in that of our company, the only proper
11 answer is to obey the law and install the scrubber.

12 As I just noted, the PUC's independent engineering expert, Jacobs Consultancy, concurs with my
13 opinion on the prudence of PSNH's actions and expenditures made to comply with the Scrubber
14 Law. The Jacobs report includes a paragraph captioned "2.4 What Law Required PSNH to Do" –
15 in that paragraph, Jacobs states,

16 In July 2002, the state of New Hampshire passed the New Hampshire Clean
17 Power Act (NHCPA), also known as the Multiple Pollutant Reduction Program;
18 RSA 125-O. NHCPA addressed four pollutant emissions: sulfur dioxide (SO₂),
19 nitrogen oxide (NO_x), mercury (Hg), and carbon dioxide (CO₂). ***This Act,***
20 ***amended in June 2006, specifically required PSNH to reduce mercury***
21 ***emissions by 80% using wet flue-gas desulphurization (FGD) technology.***
22 (Emphasis added.)

23 Jacobs found that PSNH's actions in the planning, engineering, design, contracting, installation,
24 and commissioning of the scrubber were indeed prudent. The Commission's Staff also came to
25 the same conclusion. The testimony of Mr. Steven E. Mullen, former Assistant Director –

1 Electric Division (which counsel for Staff has indicated will be adopted and sponsored by Mr.
2 Thomas Frantz, Director – Electric Division), states:

3 After careful consideration of the facts of this case along with a) the conclusions
4 of Staff's consultant who oversaw the construction phase of the project, b) the
5 results of the financial audit performed by the Commission's Audit Staff, and c)
6 the requirements of the controlling legislation, Staff's position is that PSNH was
7 prudent in its management of the Scrubber project and the costs incurred in
8 constructing the Scrubber were prudent.

9 The singular issue that other parties are contesting in this proceeding is whether PSNH was
10 prudent in pursuing the installation of the scrubber at all. The cited references from this
11 Commission, the New Hampshire Supreme Court, the Attorney General, the Department of
12 Environmental Services, the Site Evaluation Committee, the U.S. EPA, the OCA, the Sierra Club,
13 the Conservation Law Foundation, TransCanada, Jacobs Consultancy and Commission Staff all
14 recognize and admit that the Scrubber Law did indeed mandate the installation of the scrubber.
15 Not only do they recognize and admit that installation of the scrubber was mandated, but all of
16 these entities have specifically stated *it was PSNH that was mandated to install the scrubber*.
17 And, these Orders, findings, statements, and *admissions that PSNH was mandated to install the*
18 *scrubber* came at points in time when PSNH was signing contracts and committing significant
19 resources and capital in order to comply with the law's mandate.

20 PSNH earlier provided a summary of statements noting that the Scrubber Law created a mandate
21 requiring installation of the scrubber. That listing was the attachment to PSNH's August 28,
22 2012 "Memorandum of Law" filed with the Commission in this proceeding. I have attached that
23 listing hereto as Attachment WHS-R-01. Myriad similar statements are included in my
24 supplemental testimony attached as Appendix 1 hereto.

1 **Q. What conclusions do you draw from the above information?**

2 A. In my opinion, PSNH's actions to install the scrubber were well within the range of what a
3 reasonable and prudent utility would do. What PSNH was required to do is not really a disputed
4 question of fact, and that there is little question what a reasonable person would have done at the
5 time – a reasonable person would have complied with the law and installed the scrubber.

6 **Q. What were the potential consequences of ignoring the law?**

7 A. Ignoring the law was not, and never is, an option. PSNH and its parent, Northeast Utilities, have
8 in place rigorous compliance programs to ensure all legal requirements are met. Compliance is
9 one of my highest priorities and that of the Generation department, second only to safety.

10 But, more significantly, the law itself contains stringent and severe penalties in the event of
11 noncompliance.⁴ The potential for felony prosecution and civil forfeitures of \$25,000 for each
12 violation, and for each day of a continuing violation, are severe penalties the State could have
13 imposed if PSNH just "ignored" the law. And, a reasonable person would just not ignore the law;
14 hence, such an action would in and of itself be imprudent.

15 I would not allow my company to be exposed to such penalties. Furthermore, as a Registered
16 Professional Engineer in New Hampshire, I have an obligation to follow laws and legal and
17 ethical obligations and act in a manner to protect that obligation. See RSA 310-A:22, II.

⁴ Please see Appendix 2 for details on RSA 125-O:7, "Enforcement,"

1 **Q. So, did PSNH merely follow the mandate of the Scrubber Law when it proceeded with**
2 **installation of the scrubber?**

3 A. It is my opinion that “merely following the law” would indeed have been sufficient to meet the
4 prudence standard of this Commission, because complying with the law is what a reasonable
5 person would have done. Our country is based upon the “rule of law.” The Scrubber project was
6 vetted by numerous public agencies and courts, including the Legislature, the New Hampshire
7 Supreme Court, this Commission, the Site Evaluation Committee, the Air Resources Council, and
8 the Department of Environmental Services, amongst others. We have reached the point where an
9 expeditious decision consistent with the confines of the law is essential.

10 That said, PSNH did more than “merely follow the law.” PSNH performed economic analyses to
11 assess the impacts the Scrubber Law mandate would have on our customers. In addition to
12 economic analyses, broader public interest impacts of the scrubber’s installation were also
13 investigated. In each case, the results of those inquiries indicated that there were positive benefits
14 that would accrue as a result of proceeding with the scrubber project. Those economic analyses
15 are described and discussed in the testimony of my colleagues, Mr. Terrance J. Large and Mr.
16 James J. Vancho, and Dr. Shapiro testifies to other public benefits created by the Scrubber
17 Project. In addition, Drs. Harrison and Kaufman of NERA provide testimony discussing their
18 own independent analysis of the Project, as well as reviewing and discussing the economic
19 analyses performed by intervenors to this proceeding.

20 **Q. Was retirement of Merrimack Station an option for PSNH to comply with the Scrubber**
21 **Law?**

22 A, No, in light of the legislative and regulatory context. At the time PSNH was considering
23 contracts to procure the materials, machinery and manpower to build the scrubber, this

1 Commission had ruled that retirement of Merrimack Station was not an option. In Order No.
2 24,898 issued on September 19, 2008 in Docket No. DE 08-103, at page 12, this Commission
3 expressly held:

4 Nowhere in RSA 125-O does the Legislature suggest that an alternative to
5 installing scrubber technology as a means of mercury compliance may be
6 considered, whether in the form of some other *technology or retirement of the*
7 *facility*.

8 This Commission holding came before the execution of major contracts and before physical
9 construction of the scrubber began; PSNH relied upon that holding as well as on the underlying
10 law when it moved ahead with the scrubber project.⁵

11 Clearly, the Scrubber Law did not contemplate retirement of the plant in lieu of installation of the
12 scrubber. If PSNH retired Merrimack Station, PSNH would still be the “owner” of that station.
13 The law’s clear, unequivocal mandate found in RSA 125-O:13 provides that “The owner shall
14 install and have operational scrubber technology to control mercury emissions at Merrimack
15 Units 1 and 2 no later than July 1, 2013.” After retirement, PSNH, as the “owner,” would still be
16 subject to the mandate that it “shall install and have operational scrubber technology.” Such an
17 absurd result is evidence that retirement was not a viable option.

18 The Legislature in 2009 also indicated that retirement was not a choice available under the law.
19 Recall my earlier testimony quoting from the Legislature when it deemed changes to the Scrubber
20 Law “inexpedient to legislate.” One of the reasons stated by the Legislature for not changing the
21 Scrubber Law was:

⁵ The Commission’s decisions in Docket No. DE 08-103 were appealed to the New Hampshire Supreme Court. In its *Stonyfield Farm* decision, the Supreme Court dismissed those appeals.

1 The majority was also concerned that the passage of this bill would lead to a
2 pause in or cancellation of the project. This would not only have significant
3 environmental ramifications but also would lead to the loss of several hundred
4 short term and long term jobs related to the construction and operation of the
5 scrubber.

6 *The Legislature expressly stated that it did not want the scrubber project to be delayed or*
7 *cancelled* – it wanted the project to move forward, it wanted the emissions reductions the
8 scrubber would produce, and it wanted the hundreds of short- and long-term jobs that
9 construction and operation of the scrubber would produce during the recession.

10 Indeed, retirement could not be an option under the Scrubber Law because that law’s mandate
11 required not only that the owner “install” the scrubber, but that it be “operational.” It would have
12 been impossible to have the scrubber operational if Merrimack Station had been retired. The
13 State, in the Attorney General’s Brief to the New Hampshire Supreme Court in the *Stonyfield*
14 *Farm* appeal [Attachment WHS-R-02], agrees that the entire statutory scheme of the Scrubber
15 Law was based upon the requirement that the scrubber must be installed at Merrimack Station.
16 “Other provisions of this section either require or are premised on the installation of scrubber
17 technology at the Merrimack Station.” AG Brief at 6; “Similarly, RSA 125-O:11, III, which
18 begins with the phrase ‘[a]fter scrubber technology is installed at Merrimack Station,’ presumes
19 the installation of scrubber technology. RSA 125-O:11, III (Supp. 2008).” AG Brief at 7.

20 Finally, there was one other material roadblock to a potential PSNH retirement of Merrimack
21 Station. PSNH does not have unilateral authority to close any of its generating stations. Under
22 RSA 369-B:3-a, PSNH cannot retire any of its generating assets unless “the commission finds
23 that it is in the public interest of retail customers of PSNH to do so, and provides for the cost
24 recovery of such modification or retirement.” But, in the case of the scrubber, the Legislature had

1 made express findings embodied in governing statutes that the scrubber project was in the public
2 interest. RSA 125-O:11 states that “the general court finds:”

3 I. It is in the public interest to achieve significant reductions in mercury
4 emissions at the coal-burning electric power plants in the state as soon as
5 possible. The requirements of this subdivision will prevent, at a minimum, 80
6 percent of the aggregated mercury content of the coal burned at these plants from
7 being emitted into the air by no later than the year 2013. To accomplish this
8 objective, the best known commercially available technology shall be installed at
9 Merrimack Station no later than July 1, 2013.

10 VI. The installation of such technology is in the public interest of the citizens of
11 New Hampshire and the customers of the affected sources.

12 The Commission supported this same conclusion in Order No. 24,898 issued on September 19,
13 2008, at page 8:

14 [W]e find that the “public interest of retail customers of PSNH” is the same as
15 the “public interest of... the customers of the affected sources” because the
16 customers of the affected sources are, in fact, PSNH retail customers. The
17 standard or target population in RSA 369- B:3-a is a subset of the standard or
18 target population in RSA 125-O:11, VI. Therefore, the Legislature’s finding
19 under RSA 125-O:11, VI subsumes any finding the Commission might make
20 under RSA 369-B:3-a.

21 In that same Order, the Commission found that the Legislature had divested it of any jurisdiction
22 to consider whether the Scrubber should be constructed or whether Merrimack Station should be
23 retired by referencing only divestiture in the Scrubber Law. This Commission found that the
24 requirements of the Scrubber Law “overridden” the provisions of RSA 369-B:3-a. (Order 24,898
25 at 13.) The Commission concluded in that Order, “The Commission has only those powers
26 delegated to it by the Legislature. *See, Appeal of Public Service Co. of N.H.*, 122 N.H. 1062,
27 1066 (1982)” and:

28 **DECIDED**, that, *as a result of the Legislature’s mandate* that the owner of
29 Merrimack Station install scrubber technology by a date certain, and its finding
30 pursuant to RSA 125-O:11 that such installation of scrubber technology at
31 PSNH’s Merrimack Station is in the public interest of the citizens of New
32 Hampshire and the customers of the station, the Commission lacks the authority

1 to make a determination pursuant to RSA 369-B: 3-a as to whether this particular
2 modification is in the public interest.

3 The Commission was later joined in its finding by the Attorney General on behalf of the State. In
4 its Brief to the New Hampshire Supreme Court in the *Stonyfield Farm* case [Attachment WHS-R-
5 02], the Attorney General agreed “that RSA 369-B:3-a does not apply to the installation of
6 scrubber technology.” AG Brief at 9. Therefore, PSNH could not have sought permission from
7 the Commission to retire the plant, and suggestions to the contrary are unreasonable.

8 **Q. Is it your testimony that it was prudent for PSNH to deem retirement of Merrimack Station**
9 **as an option unavailable to PSNH for complying with the Scrubber Law?**

10 A. Yes. Based upon all the factors set forth above, a reasonable person would have considered a
11 potential retirement of Merrimack Station not to be an option available to meet the requirements
12 of the Scrubber Law. Moreover, the facts and legal decisions I summarized above were what was
13 known and decided at the time PSNH executed contracts committing time, talent, and capital
14 resources to installation of the scrubber at Merrimack Station. This Commission has noted that
15 “In determining whether a judgment was prudently made, only those facts available at the time of
16 the judgment was exercised can be considered.” *Re Unitil Service Corp.*, 72 NHPUC 467 (1987).
17 My scrubber team, PSNH management, and I relied upon these facts and legal decisions available
18 at the time when we committed our company’s and our shareholder’s investment capital to the
19 scrubber project.

20 In summary, based upon all of these factors and the state of the law at the time relevant decisions
21 were being made, a reasonable person would not have deemed retirement of Merrimack Station to
22 be an option available to comply with the Scrubber Law.

1 **Q. Why wasn't divestiture a reasonable alternative available to PSNH?**

2 A. In light of the legislative mandate requiring the owner to install and operate the scrubber by July,
3 2013, divestiture of Merrimack Station was not a realistic option to comply with the Scrubber
4 Law. PSNH is presenting the expert testimony of Mr. John Reed. Mr. Reed discusses in detail
5 why divestiture was not an option that would have been successful, as well as why such a
6 hypothetical divestiture would not have been economically beneficial to customers.

7 **Q. Why was the cost of the scrubber higher than what was anticipated during initial**
8 **consideration of the Scrubber Law?**

9 A. The reasons for the final cost of the scrubber have been explained many times, and the
10 Commission's outside engineering expert, Jacobs Consultancy, reviewed and discussed this issue
11 in its prudence report.⁶ PSNH also discussed this issue back in 2008, when it submitted its
12 September 2, 2008 Report on the scrubber to the Commission in Docket No. DE 08-103.
13 Furthermore, as noted in PSNH's September, 2008 Report, the mandate to construct the scrubber
14 came at a time when the costs of raw materials, fabrication of components, and construction were
15 rapidly escalating, and the preliminary cost estimate of \$250 million was understood to not have
16 contemplated such increases.⁷

⁶ Jacobs noted that "PSNH's process for developing the project estimate chain follows this sequence with the initial conceptual estimate, the detailed Clean Air Project estimate, and the current estimate. The initial estimate of \$250M, developed by Sargent and Lundy, was based on existing FGD designs and installations, did not contain any specific mercury or sulfur dioxide guarantees, PSNH costs, or site-specific needs." Jacobs Report at p. 3.

⁷ In our report, we noted that "The initial estimated cost of the project was based on a Sargent & Lundy estimate performed in 2005. There have been significant increases in the cost of raw materials, steel, labor, and energy, since this estimate was made, as noted by the Wall Street Journal in a May 27, 2008 article entitled 'Costs to Build Power Plants Pressure Rate' (Atch 1) and echoed by the FERC's Office of Enforcement's report to the FERC Commissioners on Increasing Costs in Electric Markets, presented on June 19, 2008 (Atch 2)." Report at p. 11, (referenced attachments included in PSNH's original 2008 filing).

1 **Q. When the increases in the cost of the scrubber project became known, why did PSNH**
2 **continue with that project?**

3 A. The most significant reason why PSNH continued with the scrubber project was that the
4 Company has a duty to obey the law. As I discussed previously, the Scrubber Law mandated the
5 installation and operation of scrubber technology at Merrimack Station by July 1, 2013. And,
6 with full knowledge of the estimated \$457 million cost, the Legislature decided that the project
7 should continue.

8 Furthermore, the Scrubber Law mandate was not contingent upon the contracted price for
9 engineering, design, fabrication, and installation of the scrubber. This Commission agreed with
10 this view, holding, "The Legislature could have provided express cost limitations on the scrubber
11 installation, but it did not." Order No. 24,914, November 12, 2008, at 12. This Commission
12 decision came before physical construction of the scrubber began; PSNH relied upon that
13 decision as well as on the underlying law when it dedicated its capital to the scrubber project.

14 **Q. How was the Scrubber Project cost update communicated to regulators and legislators?**

15 A. When the contracted prices for the scrubber project became known, PSNH publically disclosed
16 the new cost estimate in a Form 10-Q filing made to the U.S. Securities and Exchange
17 Commission. PSNH had also notified the PUC and scheduled an informative meeting with Staff,
18 the OCA, and the Governor's Energy Office to convey this change. As a result of PSNH's
19 disclosure, during its 2009 session the Legislature took a second look at the Scrubber Law. Two
20 bills that would have changed the Scrubber Law were considered: Senate Bill 152 "relative to an
21 investigation by the PUC to determine whether the scrubber installation at the Merrimack station
22 is in the public interest of retail consumers" (deemed inexpedient to legislate) and House Bill 496

1 "establishing a limit on the amount of cost recovery for emissions reduction equipment installed
2 at Merrimack Station" (also deemed inexpedient to legislate).

3 Thus, knowing that the scrubber was then-estimated to cost \$457 million, and after hearing from
4 myriad other interested parties, the Legislature expressly chose not to change the mandate that a
5 scrubber must be installed and operated at Merrimack Station. As the Commission recently held
6 regarding the Scrubber Law, "PSNH is not responsible for the Legislature's actions, nor for
7 ours." Order No. 25,566, August 27, 2013, at p. 5. PSNH did have and continues to have a
8 continuing obligation to obey the law. PSNH relied upon the Legislature's decision not to alter
9 the Scrubber Law's mandate when it continued to construct the scrubber. This Commission came
10 to the same conclusion as PSNH in Order No. 24,898, after the \$457 million cost estimate was
11 known.⁸

12 **Q. Did PSNH continue to reassess the economic benefits associated with the scrubber project**
13 **once the Legislature decided not to change the Scrubber Law?**

14 A. Once the Legislature made the decision to keep the scrubber mandate in place (with full
15 knowledge of the estimated \$457 million cost), we took the prudent approach of focusing on
16 executing the project as planned, especially in light of the Legislature's statements in 2009 that it
17 did not want "a pause in or cancellation of the project." See my Appendix 1.

⁸ Please see Appendix 3 for a discussion of this activity.

1 **Q. Could PSNH have cancelled the project contracts?**

2 A. I performed a review of the “sunk costs” PSNH would experience if contracts had been cancelled
3 after their execution. It indicates that customers would have faced payment for significant “sunk
4 costs” if the Project had been terminated and the contracts cancelled.

5 **Q. Was installation of the scrubber, pursuant to the mandates you discussed, in the public**
6 **interest?**

7 A. Yes.

8 **Q. Why was installation of the scrubber in the public interest?**

9 A. The public interest associated with the scrubber installation has been established as a matter of
10 law. As a result, it is by definition in the public interest and need not be a subject of debate in this
11 proceeding.⁹ However, I can suggest additional reasons why installation of the scrubber was in
12 the public interest.

13 The scrubber accomplished a dramatic and significant reduction in both air and water emissions
14 from Merrimack Station, far exceeding the emissions reductions requirements of the Scrubber
15 Law and air permit, as I discuss later.

16 In addition, installation of the scrubber met many additional public interests, including the
17 following:

⁹ The Legislature itself made the statutory finding in RSA 125-O:11, V that, “The installation of such technology is in the public interest of the citizens of New Hampshire and the customers of the affected sources.” Early on, in Order No. 24,898 issued on September 19, 2008, at page 7 – before physical construction of the scrubber began - this Commission held, “the Legislature has determined that the scrubber project is in the public interest and has directed PSNH to go forward with the project and have it operational no later than July 1, 2013.”

- 1 • Constructed during the height of the recent recession, the scrubber project created
2 hundreds of well-paying union and non-union jobs.¹⁰
- 3 • This past winter season, the operation of the “affected sources” (RSA 125-O:12, I) which
4 includes Merrimack Station created over \$119 million in savings to PSNH’s customers
5 compared to purchasing an equivalent amount of energy at prevailing market prices. [See
6 Attachment WHS-R-03 to this testimony.] Without the scrubber, Merrimack Station
7 could not operate past July 1, 2013, due to the statutory emissions reductions
8 requirements set forth in both RSA 125-O:13 and the air permit issued by NHDES, which
9 states, “Beginning on July 1, 2013, the Owner shall not operate MK2 unless MK2-PC7
10 (the scrubber) is in operation,” so these and future savings could not have been
11 achieved.¹¹
- 12 • This past winter, ISO-NE could not rely upon natural gas-fired generation to keep the
13 lights on. ISO-NE’s Winter Reliability Program, which paid dual fuel oil/gas units to
14 pre-buy oil for the winter season, was running low on fuel well before the winter was
15 over. The region’s coal-fired generating stations, including Merrimack and Schiller
16 Stations, as well as oil and gas fueled Newington Station, were pivotal in avoiding
17 shortages of electricity. These PSNH units ran very reliably during this past winter
18 period and they demonstrated the wisdom of having a diversified portfolio of generating
19 resources, rather than over-relying on natural gas-fired generation. These benefits were
20 well understood when the legislature determined that the installation of the scrubber was
21 in the public interest – it was the Legislature itself that found that the installation of

¹⁰ PSNH witness Dr. Lisa Shapiro testifies about the results of her 2009 study titled, “The Economic Impacts of Constructing a Scrubber at Merrimack Station,” wherein she determined that the scrubber project was directly responsible for “immediate and significant job creation.”

¹¹ Since installation and operation of the scrubber was the only way these savings could be achieved, if customers receive these benefits of the scrubber project through the ratemaking process, customers have the obligation to pay for all prudent costs of installing the Scrubber Law.

1 scrubber technology will not only reduce mercury emissions significantly but will do so
2 without jeopardizing electric reliability. RSA 125-O:11, V. ISO-NE has clearly signaled
3 its concern for the upcoming winter period by establishing another Winter Reliability
4 Program, especially in light of the recently-retired generating stations in the region.

- 5 • As a matter of state law, fuel diversity (i.e., having a variety of fuels used to generate
6 electricity) in the region is a matter of public interest.¹² In New England today, the lack
7 of fuel diversity has become a critical issue. In its May 2013 strategic planning
8 discussion, ISO-NE stated, “Today, however, a unique convergence of economic and
9 environmental factors is having a serious impact on the diversity, flexibility, and
10 performance of the region’s resource mix—risks that threaten the reliable supply of
11 electricity for New England’s homes, businesses, and public services.” In discussing
12 “The Risks Ahead” ISO-NE went on to say, “The loss of fuel diversity will amplify the
13 region’s dependence on natural gas outlined in Challenge One.” [Attachment WHS-R-
14 04]. In New Hampshire, Governor Maggie Hassan noted the importance of fuel diversity
15 during her February 6, 2014, “State of the State” address to the Legislature, where she
16 stated, “[W]e must work to diversify our energy sources so we are not disproportionately
17 reliant on any one source. Over the course of this year, stakeholders throughout the state
18 will be working to develop a long-term energy strategy for New Hampshire that will help
19 reduce energy costs, create jobs and improve reliability and diversity.” In just the past
20 few weeks, the three unit coal-fired Salem Harbor station ceased operation and Mt. Tom

¹² See, for example, RSA 362-F:1 [“Renewable energy generation technologies can provide fuel diversity to the state”]; RSA 374-F:8 [“The commission shall participate in the activities of ... the New England Independent System Operator and NEPOOL to advance the interests of New Hampshire with respect to wholesale electric issues, including policy goals relating to fuel diversity”]; RSA 378:7-a [“The commission may establish requirements for ... fuel diversity”]; RSA 4-E:1, I [“The state energy strategy shall include, but not be limited to, sections on the following: (c) ...fuel diversity”] and RSA 4-E:1, II [“II. The strategy shall include ...recommendations for policy changes and priorities necessary to ensure ... fuel diversity”].

1 generating station announced it would cease operations later this summer, removing
2 nearly 1 gigawatt of generating capacity from the ISO-NE region that does not rely upon
3 natural gas for fuel. At or around the time of the scheduled hearing for this docket, the
4 region will lose an additional 620 MW of non-gas fueled generating capacity when the
5 Vermont Yankee nuclear power plant ceases operation.

- 6 • Without Merrimack Station, the continued reliable operation of the railroad line serving
7 Nashua, Manchester, and Concord is put in doubt. The railroad owner stated to the
8 Senate Committee on Energy, Environment and Economic Development during its
9 hearing on SB 152 on March 13, 2009, that without the coal trains delivering fuel to
10 Merrimack Station, the economics of this rail line could be jeopardized and there could
11 be insufficient base load traffic required to keep this rail line viable. A curtailment of
12 railroad operations could impact businesses and jobs throughout southern New
13 Hampshire and significantly impact the consideration of expanded passenger rail service
14 envisioned by many in southern New Hampshire.
- 15 • The continued operation of Merrimack Station is necessary to provide a continued source
16 of revenues to the state and local municipalities. Already, the Town of Bow is facing a
17 property tax dilemma due to uncertainties involving the long-term future of Merrimack
18 Station. The New Hampshire Department of Environmental Services Air Resource
19 Division is heavily funded by air emission fees from Merrimack Station as well as other
20 PSNH steam electric generating stations.
- 21 • Finally, the continued operation of Merrimack Station is important to the economy of
22 southern New Hampshire and the surrounding region. Annual expenditures of tens of
23 millions of dollars to support over one hundred Union and non-union employees as well
24 as contractors, materials supply companies, maintenance services companies, retail firms,

1 and other businesses that all rely on the operation of Merrimack Station for their
2 livelihood and revenue streams. These employees and businesses in turn sustain
3 additional jobs, businesses, and families. Without Merrimack Station, there would be
4 significant adverse economic impacts.

5 For additional perspectives on the public interest benefits, I refer you to the rebuttal testimony of
6 Dr. Lisa Shapiro, submitted on behalf of PSNH.

7 **II. DISCUSSION OF SCRUBBER OPERATIONS**

8 **Q. Please provide an overview of this section of your testimony.**

9 A. In this section, I discuss key features of ongoing scrubber operations, as well as awards and other
10 achievements related to the scrubber project.

11 **Q. How is the scrubber working?**

12 A. The Scrubber is performing exceptionally well. Its initial startup was trouble-free and its ability
13 to remove both mercury and sulfur from the two Merrimack boiler emission gas streams exceeds
14 the level required by the Scrubber Law and the station's air permit. In my experience in this
15 industry, I have not previously seen such a successful initial online result for a project as complex
16 as the Scrubber.

17 Not only was the initial startup of the scrubber a success, but the scrubber is working extremely
18 well on an ongoing basis. This project comprises numerous pieces of equipment and systems, all
19 of which in turn consist of various mechanical, electrical, and control system components. These
20 elements have to work together to achieve the emissions reductions required. Thousands of pieces

1 of equipment have to work reliably in unison and can only do so having been properly designed,
2 engineered, installed, and maintained. The scrubber project is large and complex, and operates in
3 an extremely effective manner.

4 **Q. Please describe the mercury and SO₂ emissions reduction achieved by the scrubber.**

5 A. We have performed five stack tests at Merrimack Station since the scrubber has been placed into
6 operation. The results of those tests demonstrate mercury emissions reductions of 90-95%.
7 These reports are on file with NHDES and are publicly available. The most recent report is
8 attached hereto as Attachment WHS-R-05. A continuous emissions monitor is installed and
9 reports SO₂ emissions reduction co-benefits in excess of 90%. This data is publically available
10 and confirms the significant reduction of SO₂ emissions.

11 **Q. Are the scrubber project and this rate request in conformity with the least cost integrated**
12 **resource plan most recently filed by PSNH and found adequate by the Commission?**

13 A. Yes. The least cost integrated resource plan (LCIRP) discussing generation most recently filed
14 by PSNH and found adequate by the Commission is PSNH's 2010 plan, which the Commission
15 reviewed in Docket No. DE 10-261, and approved by Order No. 25,459 issued on January 29,
16 2013. The installation of the scrubber pursuant to the mandate contained in the Scrubber Law is
17 discussed myriad times throughout PSNH's 2010 LCIRP. The installation and operation of the
18 scrubber pursuant to the Scrubber Law conforms to that law and PSNH's 2010 LCIRP.

19 **Q. What is your opinion regarding PSNH's management of the Clean Air Project?**

20 A. I truly believe that PSNH did an exceptional job in its management of the Clean Air Project from
21 its inception through its completion. This was clearly echoed by the two PUC audit teams who
22 investigated the Project in rigorous detail over a four-year period; Jacob's Consultancy on

1 technical and project cost and the NHPUC Audit Department on contract adherence, cost
2 management, cost allocation per Purchasing and Accounting policies, and FERC Chart of
3 Accounts compliance.¹³ These rigorous assessments were each performed during many multi-
4 day meetings with PSNH providing large volumes of data in response to hundreds of detailed
5 inquiries. The final reports issued by these two independent teams concluded with no findings of
6 imprudence. While a few comments were made to change the accounting of items, no items were
7 deemed inappropriate or imprudent after our open book approach to these visits.

8 **Q. Has the Scrubber project received any awards?**

9 A. Yes, the Scrubber Project has also been lauded with numerous local, regional, national, and
10 international awards, including:

- 11 • International Green Apple Award for Environmental Best Practice, 2013, by The
12 Green Organisation
- 13 • Outstanding Environmental-Energy Technology Application Achievement
14 Award by the Environmental Business Council of New England.
- 15 • POWER Magazine Top Plant, 2012, One of six "most noteworthy coal fired
16 plants worldwide" by meeting state and future federal regulations and
17 establishing itself as "one of the cleanest coal plants in the country."
- 18 • 2009 Excellence in Concrete Award - Slip Formed Concrete from Northern New
19 England Concrete Promotion Association

20 The Project also received several safety awards including:

- 21 • Old Republic (Insurance) Construction Program Group - 1 Million Safe Work
22 Hours
- 23 • URS Presidential Award for 1,200,000 Consecutive Safe Work Hours

¹³ Please refer to the testimony of Steve Mullen dated December 23, 2013, attachments SEM-10 and SEM-11 for the results of the financial audits of the scrubber costs conducted by the NHPUC Audit Department.

1 **Q. Are there any other achievements of the Scrubber project to which you would like to speak?**

2 A. Yes. We are very proud of the fact that, over the course of the entire project, over 1.6 million
3 man-hours were worked on the job site without one lost time accident. This is an exceptional
4 achievement and one certainly worth emphasizing here. PSNH commends all of the workers, our
5 contractors, and Project Management Team for achieving this remarkable result. URS, the
6 Project's Program Manager, presented PSNH with an award for this result because in its
7 experience with large construction projects, this was a very significant achievement.

8 **III. REBUTTAL TO SELECTED INTERVENOR TESTIMONY**

9 **Q. Please provide an overview of this section of your testimony.**

10 A. In this section, I will first comment on specific points raised by Dr. Sahu in testimony submitted
11 on behalf of the Sierra Club. Then, I will comment on specific points raised by Mr. Kahal and
12 Mr. Eckberg in testimony submitted on behalf of OCA. Finally, I will comment on specific points
13 raised by Dr. Stanton in testimony submitted on behalf of CLF.

14 **Q. Are you familiar with Dr. Sahu's testimony on behalf of the Sierra Club?**

15 A. Yes, I am.

1 **Q. Dr. Sahu stated "...the Scrubber Project, as conceived, was highly unusual," and "The**
2 **whole decision is perplexing because other focused mercury reduction technologies were**
3 **available in the mid - 2000's and could have achieved system-wide mercury reductions at**
4 **far lower capital costs." Did the company investigate other mercury reduction technologies**
5 **at Merrimack Station?**

6 A. Yes we did, and Dr. Sahu's confusion surprises me. Based on his stated experience in research
7 and environmental projects, I would have thought the large amount of information available on
8 this project would have explained in detail why the so-called low cost mercury emission
9 reduction technologies Dr. Sahu refers to would not achieve the mercury reduction percentage
10 required by the Scrubber Law. Since the statutory emission reduction required PSNH to achieve
11 an 80% mercury reduction for Merrimack Units 1 and 2 as well as the Schiller units, the
12 project at Merrimack had to be designed and guaranteed to achieve an approximately 85%
13 reduction of the emissions from Merrimack alone.

14 **Q. Please summarize the nature of the special testing regarding mercury emission reduction**
15 **technologies conducted by PSNH in advance of the scrubber project.**

16 A. In 2005, PSNH conducted special tests with an industry-recognized chemical injection consultant,
17 which resulted in sustainable mercury reduction levels of only about 20%. PSNH then worked
18 with another broadly recognized company (ADA-ES) as part of a \$2.5 Million U.S. Department
19 of Energy grant to conduct additional testing with various activated carbon formulas with and
20 without gas preconditioning enhancements. These tests lasted over a year and they also failed to
21 meet sustainable mercury reduction levels, achieving sporadic peak reduction levels of 50-60%.
22 NHDES monitored these programs and approved them prior to being conducted.

1 The research conducted by PSNH on its boiler combustion products' chemistry and temperature
2 profiles, coupled with the evolving expansion of the industry's understanding of the capability of
3 wet flue gas desulfurization equipment technology and the growing knowledge of reactive
4 chemistry, resulted in numerous scrubber manufacturers expressing interest in providing
5 equipment guarantees to meet the required level of mercury reduction. Ultimately, Siemens
6 Environmental Systems and Services was selected as the lowest evaluated bidder who provided a
7 guarantee on mercury reduction percentage sufficient to meet the New Hampshire law. In fact,
8 the results of numerous tests conducted since the scrubber became operational have proven that
9 the scrubber's mercury emissions reduction performance has exceeded requirements by
10 repeatable tests of between 90-95% reduction of mercury emissions.

11 **Q. Was the Legislature aware of this early mercury reduction testing performed in advance of**
12 **the Scrubber Law?**

13 A. Yes they were. Prior to passing the law, the Legislature requested and received presentations,
14 updates, and general input from not only PSNH, but also other entities including vendors of
15 mercury reduction technology, environmental organizations, regulators, etc.

16 **Q. How did the information concerning these mercury reduction technologies inform the**
17 **discussion that led to the Scrubber Law being passed?**

18 A. As described in discovery responses from the Sierra Club, as the mercury emission reduction
19 debate became distilled the final areas of debate specific to the installation of the scrubber were
20 few: a shorter installation window of the scrubber technology (The New Hampshire Clean Power
21 Coalition advocated for 2011), near-term action to control mercury prior to the installation of the
22 scrubber, and a higher level of mercury control from the installed scrubber (The New Hampshire

1 Clean Power Coalition suggested 90%). See Attachment WHS-R-25 (Sierra Club data
2 responses).

3 **Q. Did the company, NHDES, company consultants, outside groups such as the Sierra Club or**
4 **the Legislature express opinions regarding any other mercury reduction technology**
5 **installed at Merrimack Station that would get the reductions desired by the State, besides**
6 **the scrubber?**

7 A. No.

8 **Q. Dr. Sahu states that PSNH irresponsibly incurred hundreds of millions in Merrimack**
9 **Station. Do you agree with his opinion?**

10 A. No, for all the reasons I have previously discussed in this testimony, including the following:

11 First and foremost, Dr. Sahu ignores the legal mandate PSNH had requiring the installation of a
12 wet flue gas desulphurization system (scrubber) in order to be compliant with New Hampshire
13 Law. Dr. Sahu might think it unusual and perplexing, but this was exactly the plan laid out by the
14 Legislature beginning in 2001 with the passage of RSA 125-O, known as the New Hampshire
15 Clean Power Act (NHCPA). The NHCPA, the first in the nation four pollutant bill, as structured
16 was further defined in 2006 when “the Scrubber Law became effective on June 8, 2006.”

17 Second, the installation of the scrubber has significantly reduced emissions in New Hampshire,
18 well beyond the levels prescribed by the Legislature.

19 Third, the installation of the wet flue gas desulphurization system (scrubber) has positioned
20 Merrimack Station to comply with EPA’s MATS Regulation.

1 **Q. Do you see other examples where Dr. Sahu's statements are not consistent with the actual**
2 **circumstances at the PSNH coal plants?**

3 A. Yes. Recognizing Dr. Sahu has no familiarity with the plants, another example is highlighted
4 where he states that there will be "significant" compliance costs necessary at Schiller Station. In
5 fact, PSNH has a compliance plan in place that will not result in significant compliance costs for
6 Units 4 and 6. This information, our testing program performed in 2012 and 2013, and related
7 data is public and available at the NHDES. We are surprised these positive facts have not been
8 reflected in Dr. Sahu's testimony given that technology and regulatory process are his stated areas
9 of expertise and experience.

10 **Q. Dr Sahu also said, regarding Schiller Station, that PSNH was caught "flat footed" and has a**
11 **"mess" on our hands as a result of the MATS regulations. Is this a fair characterization?**

12 A. No. Specifically, Schiller Station has completed two rounds of site-specific testing to ensure the
13 right solution at the best value for customers. In fact, we have a demonstrated and cost effective
14 plan for which NHDES has received timely information and updates.

15 **Q. Do you have another example where Dr. Sahu's discussion is not consistent with a**
16 **reasonable planning scenario associated with potential environmental regulations?**

17 A. Yes. The greenhouse gas rule Dr. Sahu cites addresses the same emissions, CO₂, as has been and
18 is currently being addressed in the northeast region as part of the Regional Greenhouse Gas
19 Initiative (RGGI). PSNH currently participates in the RGGI cap-and-trade program and incurs
20 the associated compliance costs. There was a strong push for RGGI to be an acceptable
21 compliance path for any federal GHG rule, and interestingly, with that latest proposed guideline,
22 RGGI has been touted as an example of how states can work together for a regional solution.

1 Carbon regulation will increase everyone's costs, not just those at Merrimack Station, and as
2 many have already noted, the price of electricity will increase. PSNH plants will comply with a
3 carbon emission plan, consistent with statements made by the NHDES, within the framework of
4 the RGGI Program and will meet Federal and State compliance obligations by 2030.

5 **Q. Are you familiar with Mr. Kahal's testimony submitted on behalf of the OCA?**

6 A. Yes, I am.

7 **Q. Did Mr. Kahal consider the Scrubber Law at all as part of the opinions he rendered in his**
8 **testimony?**

9 A. No. Mr. Kahal expressly stated that his testimony "does not" address all aspects of the prudence
10 of the Clean Air Project. (Kahal Testimony at p. 3). Mr. Kahal goes on to testify that he "takes
11 no position" on whether the Scrubber Law mandated installation and operation of the scrubber.
12 (Kahal Testimony at P. 5). In discovery, Mr. Kahal repeatedly responded, "Mr. Kahal is not
13 expressing a legal opinion on PSNH's obligations regarding the scrubber." (Responses to
14 questions PSNH-OCA 1-3a; 1-4a; 1-4b; 1-5a; 1-9; 1-11; 1-12; 1-42. Attachment WHS-R-06).

15 Notwithstanding his repeated claims to the contrary, Mr. Kahal does indeed testify that the
16 Scrubber Law requires PSNH to install and operate the scrubber:

17 This case involves PSNH's compliance with a statute enacted by the New
18 Hampshire legislature in 2006 that requires the owner of the two-unit Merrimack
19 coal-fired power plant to reduce emissions of mercury by at least 80 percent
20 (RSA 125-0:11-18, or "the Scrubber Law"). This compliance is to take place
21 through the installation and operation of a scrubber system.

22 Kahal Testimony at p. 4. Mr. Kahal's response to Q-PSNH-OCA 1-34 also notes "the required
23 completion and in-service date for the Merrimack scrubber so as to meet the 80 percent emissions

1 reduction target.” [Attachment WHS-R-07]. So, although Mr. Kahal admits that compliance
2 with the Scrubber Law requires the installation and operation of a scrubber system at Merrimack
3 Station, he ignores that legal requirement in the rest of his testimony as if it does not exist. The
4 entire substance of Mr. Kahal’s testimony was made in a hypothetical vacuum that not only
5 ignored the underlying law which he admits required scrubber installation, but then concentrates
6 on comparisons of PSNH’s Clean Air Project to Entergy’s Little Gypsy Project – projects which
7 he admits in discovery entail “an entirely different set of factual circumstances.”

8 **Q. Did Mr. Kahal suggest alternatives to installation of the scrubber by PSNH?**

9 A. Yes and no. Mr. Kahal discussed “alternatives” to installation of the scrubber by PSNH. But, on
10 discovery he admitted that he was not expressing an opinion on the feasibility of any of those
11 alternatives. See Q-PSNH-OCA 1-9 [Attachment WHS-R-08] and Q-PSNH-OCA 1-11a
12 [Attachment WHS-R-06]. Not only is Mr. Kahal unaware whether any of his suggested
13 alternatives are legal, he also has taken the illogical position that an illegal alternative could have
14 been pursued by PSNH! (Q-PSNH-OCA 1-11b)) [Attachment WHS-R-06].

15 **Q. In his testimony, did Mr. Kahal make significant reference to the “Little Gypsy Project” of**
16 **Entergy Louisiana?**

17 A. Yes. Over 20% of his pre-filed testimony was devoted to a comparison of Entergy Louisiana,
18 LLC’s (“ELL”) actions regarding its Little Gypsy Project to PSNH’s actions in the Clean Air
19 Project.

20 **Q. In your opinion, is the Little Gypsy Project comparable to the Clean Air Project?**

21 A. No. Except for the fact that both projects involved electric generating stations, the two projects
22 have no similarities whatsoever.

1 Mr. Kahal has stated that:

- 2 • ELL's Little Gypsy Project did not involve the installation of a wet flue gas
3 desulphurization system (scrubber) at an existing coal-fired generating station (Q-
4 PSNH-OCA 1-59a) ." [Attachment WHS-R-09].
- 5 • ELL's Little Gypsy Project did involve the conversion of an existing natural gas-fired
6 generating station to one that burned coal or coke (Q-PSNH-OCA 1-59b) ." [Attachment
7 WHS-R-09].
- 8 • The Little Gypsy Project was not undertaken by ELL pursuant to a state law directing the
9 installation of specific technology at a specific location (Q-PSNH-OCA 1-67a)
10 [Attachment WHS-R-10]
- 11 • The only legislation he is aware of regarding the Little Gypsy Project would permit
12 securitization financing of cancelled plant costs, subject to Louisiana PSC approval (Q-
13 PSNH-OCA 1-65b) [Attachment WHS-R-11].

14 Despite his significant reliance on the actions of Entergy Louisiana in the Little Gypsy Project to
15 support his testimony, OCA objected to the following questions and provided no answers (Q-
16 PSNH-OCA 1-67) [Attachment WHS-R-10]:

17 b. Was ELL subject to felony criminal conviction and/or civil penalties for failing to
18 comply with a law mandating the project under consideration?

19 c. Did the state legislature enact statutory findings determining that the Little Gypsy
20 Project was in the public interest?

21 d. Did the state legislature enact a statutory finding that the Little Gypsy Project should
22 be completed "as soon as possible"?

1 e. Did the state legislature dictate the precise technology that had to be installed in ELL's
2 Little Gypsy Project?

3 f. Did the state legislature dictate the precise location for the Little Gypsy Project?

4 g. Did the state legislature specify a date in law by which the Little Gypsy Project had to
5 be completed?

6 h. Did the state legislature provide statutory incentives to ELL for early completion of the
7 Little Gypsy Project?

8 i. Do you agree that when the Louisiana PSC approved the Little Gypsy Project, it did so
9 knowing that the cost of the Little Gypsy Repowering Project over its useful life ultimately could
10 exceed the cost of an alternative Combined Cycle Gas Turbine?

11 j. Do you agree that the Louisiana PSC found, that the fuel diversity benefit provided by
12 the Little Gypsy Project was sufficiently important that the Project should be certified despite the
13 risk that the cost of the Project over its useful life ultimately could exceed the cost of a CCGT?

14 o. Are you aware that ELL informed the Louisiana PSC that "the projects that ELL needs
15 to complete and ELL's need to ensure that it has adequate liquidity to address storm events
16 counsel against undertaking an investment of the size of the [Little Gypsy] Repowering Project at
17 this time given its declining economics."?

18 p. Is it true that ELL reported to the Louisiana PSC that in 2008 "gas prices also were
19 increasing and reaching record high levels"?

20 q. Is it true that ELL reported to the Louisiana PSC that "Gas prices continued to trend
21 upward for the remainder of the Summer of 2008"?

22 r. Is It true that ELL reported to the Louisiana PSC that the Little Gypsy Project would
23 provide a physical hedge against high natural gas prices?

24 s. Is it true that ELL reported to the Louisiana PSC in 2009 that "Until very recently,
25 natural gas prices were expected to increase substantially in future years."?

1 t. Is it true that ELL reported to the Louisiana PSC that “The upward trend in natural gas
2 prices continued into the summer of 2008 when Henry Hub prices reached a high
3 of \$13.32/mmBtu.”?

4 u. Is it true that ELL reported to the Louisiana PSC that, “it should be noted that it is not
5 possible to predict natural gas prices with any degree of certainty, and ELL cannot know whether
6 gas prices may rise again.”?

7 v. Are you aware that in its Order No. U-30192 issued on March 19, 2008, that the
8 Louisiana PSC noted “one cannot predict with certainty the ultimate cost of . . . natural gas prices
9 over the next 30 years.”?

10 w. Is it true that when the Louisiana PSC made the statement in the prior question, that it
11 cited to your testimony as a Staff Witness for that proposition?

12 x. Is it true that ELL told the Louisiana PSC that “The portion of [Project cancellation
13 costs] attributable to contract cancellation costs is only an estimate, as ELL must negotiate with
14 many of the Project vendors in order to determine the actual cancellation costs.”?

15 y. Is it true that ELL told the Louisiana PSC that if the Little Gypsy Project was
16 suspended, “if the Project were to be restarted . . . there could be additional costs beyond those
17 contemplated by the current Project estimate such as, for example, storage costs and costs to treat
18 and protect fabricated materials so that they would be available for use when the Project
19 resumed.”?

20 z. Is it true that ELL told the Louisiana PSC that “A suspension or multi-year delay in the
21 Project would affect the permits in other, more significant ways. ELL would be required to seek
22 renewal of existing permits, permit extensions, or new permits for the Project, including new air
23 permits. Moreover, it is possible that any extensions, renewals, or new permits would contain new
24 provisions that would have a significant effect on the economics or technological feasibility of the
25 Project.”?

1 **Q. Have you been able to ascertain the answers to the questions that Mr. Kahal did not**
2 **answer?**

3 A. Yes. We researched these questions, and also contacted officials at Entergy Louisiana. The
4 responses to the questions that PSNH asked, and that Mr. Kahal did not answer are:

5 b. Was ELL subject to felony criminal conviction and/or civil penalties for failing to
6 comply with a law mandating the project under consideration? – NO.

7 c. Did the state legislature enact statutory findings determining that the Little Gypsy
8 Project was in the public interest? – NO.

9 d. Did the state legislature enact a statutory finding that the Little Gypsy Project should
10 be completed "as soon as possible"? – NO.

11 e. Did the state legislature dictate the precise technology that had to be installed in ELL's
12 Little Gypsy Project? – NO.

13 f. Did the state legislature dictate the precise location for the Little Gypsy Project? – NO.

14 g. Did the state legislature specify a date in law by which the Little Gypsy Project had to
15 be completed? – NO.

16 h. Did the state legislature provide statutory incentives to ELL for early completion of the
17 Little Gypsy Project? – NO.

18 i. When the Louisiana PSC approved the Little Gypsy Project, did it do so knowing that
19 the cost of the Little Gypsy Repowering Project over its useful life ultimately could exceed the
20 cost of an alternative Combined Cycle Gas Turbine? – YES.

21 j. Did the Louisiana PSC find, that the fuel diversity benefit provided by the Little Gypsy
22 Project was sufficiently important that the Project should be certified despite the risk that the cost
23 of the Project over its useful life ultimately could exceed the cost of a CCGT? – YES.

1 o. Did ELL inform the Louisiana PSC that “the projects that ELL needs to complete and
2 ELL's need to ensure that it has adequate liquidity to address storm events counsel against
3 undertaking an investment of the size of the [Little Gypsy] Repowering Project at this time given
4 its declining economics.”? – YES.

5 p. Is it true that ELL reported to the Louisiana PSC that in 2008 “gas prices also were
6 increasing and reaching record high levels”? – YES.

7 q. Is it true that ELL reported to the Louisiana PSC that “Gas prices continued to trend
8 upward for the remainder of the Summer of 2008”? – YES.

9 r. Is it true that ELL reported to the Louisiana PSC that the Little Gypsy Project would
10 provide a physical hedge against high natural gas prices? – YES.

11 s. Is it true that ELL reported to the Louisiana PSC in 2009 that “Until very recently,
12 natural gas prices were expected to increase substantially in future years.”? – YES.

13 t. Is it true that ELL reported to the Louisiana PSC that “The upward trend in natural gas
14 prices continued into the summer of 2008 when Henry Hub prices reached a high of
15 \$13.32/mmBtu.”? – YES.

16 u. Is it true that ELL reported to the Louisiana PSC that, “it should be noted that it is not
17 possible to predict natural gas prices with any degree of certainty, and ELL cannot know whether
18 gas prices may rise again.”? – YES.

19 v. In its Order No. U-30192 issued on March 19, 2008, did the Louisiana PSC note “one
20 cannot predict with certainty the ultimate cost of . . . natural gas prices over the next 30 years.”? –
21 YES.

22 x. Is it true that ELL told the Louisiana PSC that “The portion of [Project cancellation
23 costs] attributable to contract cancellation costs is only an estimate, as ELL must negotiate with
24 many of the Project vendors in order to determine the actual cancellation costs.”? – YES.

1 y. Is it true that ELL told the Louisiana PSC that if the Little Gypsy Project was
2 suspended, “if the Project were to be restarted... there could be additional costs beyond those
3 contemplated by the current Project estimate such as, for example, storage costs and costs to treat
4 and protect fabricated materials so that they would be available for use when the Project
5 resumed.”? – YES.

6 z. Is it true that ELL told the Louisiana PSC that “A suspension or multi-year delay in the
7 Project would affect the permits in other, more significant ways. ELL would be required to seek
8 renewal of existing permits, permit extensions, or new permits for the Project, including new air
9 permits. Moreover, it is possible that any extensions, renewals, or new permits would contain new
10 provisions that would have a significant effect on the economics or technological feasibility of the
11 Project.”? – YES.

12 Clearly, the Little Gypsy Project was not mandated by law; ELL was not subject to criminal
13 penalties for failing to pursue that project; and was cancelled in great part due to financial
14 liquidity issues affecting ELL. For these reasons, the Little Gypsy Project has substantial and
15 material differences from the Scrubber Project – or as noted by Mr. Kahal himself, “an entirely
16 different set of factual circumstances” (See Q-PSNH-OCA 1-59g [Atch WHS-R-09] and 1-65c
17 and 1-65e [Atch WHS-R-11]).

18 However, ELL noted that gas prices were highly volatile; that gas prices could not be predicted
19 with any degree of certainty; the Little Gypsy Project would provide a physical hedge against
20 high gas prices; that in 2008 gas prices were increasing; that the project would provide fuel
21 diversity benefits. Thus, ELL - - the company that Mr. Kahal cites to as an example - -
22 recognized energy market phenomena that duplicate those of PSNH during the same time period.

1 **Q. When addressing PSNH’s questions concerning the differences between PSNH’s Scrubber**
2 **Project and the Little Gypsy Project, did Mr. Kahal discuss the similarities between these**
3 **projects?**

4 A. Yes. In data request PSNH-OCA 1-65 (c), Mr. Kahal was asked, “If the Louisiana PSC had
5 determined that it did not *want ‘a pause in or cancellation of the project’* is it your opinion that
6 Entergy Louisiana would have terminated its project anyway? Similarly, in data request PSNH-
7 OCA 1-65 (e), Mr. Kahal was asked, “If the Louisiana PSC had issued an order stating that
8 cancellation of the Entergy Louisiana project ‘*would not only have significant environmental*
9 *ramifications but also would lead to the loss of several hundred short term and long term jobs*
10 *related to the construction and operation of the’* project, is it your opinion that Entergy
11 Louisiana would still have terminated the project?” [Attachment WHS-R-11]. (The italicized
12 words in quotation in both questions come directly from the House Science and Technology
13 Committee’s Majority Report on HB 496 regarding the scrubber, attached hereto as Attachment
14 WHS-R-12.)

15 Mr. Kahal’s response to both questions is telling - - he answered, “Mr. Kahal does not know what
16 actions Entergy Louisiana management would *take under an entirely different set of factual*
17 *circumstances.*” Even Mr. Kahal himself had to admit that the Scrubber Project presented “*an*
18 *entirely different set of factual circumstances*” than what Entergy Louisiana faced with its Little
19 Gypsy Project.

20 **Q. Do you have any other observations regarding Mr. Kahal’s testimony?**

21 A. Yes. Mr. Kahal correctly notes that, “Prudence must be based on the facts and circumstances
22 known or reasonably knowable at the time the decision was made.” (Kahal Testimony, p. 36).
23 Yet, when applying that standard to the Scrubber Project, he cites to portions of Commission

1 Order No. 25,565 as “guidance on standards of prudence as applicable to this case.” The problem
2 with that is Order No. 25,565 was issued on August 27, 2013 - - nearly two years *after* the
3 scrubber had entered commercial service. The Commission’s decisions after completion of the
4 scrubber were significantly different than earlier decisions (i.e., “facts and circumstances known
5 or reasonably known at the time”); earlier decisions that held:

- 6 • Nowhere in RSA 125-O does the Legislature suggest that an alternative to installing
7 scrubber technology as a means of mercury compliance may be considered, whether in
8 the form of some other technology or retirement of the facility. (Order No. 24,898,
9 September 19, 2008 at 12).
- 10 • RSA 125-O does not: (1) set any cap on costs or rates; (2) provide for Commission
11 review under any particular set of circumstances; or (3) establish some other alternative
12 review mechanism. (Id.).
- 13 • The Legislature has already made an unconditional determination that the scrubber
14 project is in the public interest. (Id.).
- 15 • The legislative history supports a conclusion that the Legislature viewed time to be of the
16 essence. This conclusion is consistent with the economic performance incentives that
17 PSNH can earn, pursuant to RSA 125-O:16, if the scrubber project comes on line prior to
18 July 1, 2013. (Id. at 10).
- 19 • RSA 125-O:13, IX directs PSNH to report annually to the legislative oversight committee
20 on electric utility restructuring the progress and status of installing the scrubber
21 technology including any updated cost information. This reporting requirement also
22 suggests the Legislature’s intent to retain for itself duties that it would otherwise expect
23 the Commission to fulfill if RSA 369-B:3-a applied. (Id. at 10-11).
- 24 • the scrubber installation at Merrimack Station does not reflect a utility management
25 choice among a range of options. Instead, installation of scrubber technology at the
26 Merrimack Station is a legislative mandate, with a fixed deadline. See RSA 125-O:11, 1,
27 II; RSA 125-O:13, I. The Legislature, not PSNH, made the choice, required PSNH to use
28 a particular pollution control technology at Merrimack Station, and found that installation
29 is “in the public interest of the citizens of New Hampshire and the customers of the
30 affected sources.” RSA 125-O:11, VI. (Order No. 24,979, June 19, 2009 at 15).
- 31 • the Legislature pre-approved constructing a particular scrubber technology at Merrimack
32 Station by finding it to be in the public interest and thereby removing that consideration
33 from the Commission’s jurisdiction. (Id.).
- 34 • The Legislature has also retained oversight of the scrubber installation including periodic
35 reports on its cost. (Id.).
- 36 • the Commission has only those powers delegated to it by the Legislature, see Appeal of
37 Public Service Co. of N.H., 122 N.H. at 1066, and, by statute, the Commission’s
38 regulatory oversight here is limited to after-the-fact determinations of whether costs
39 incurred by PSNH in complying with RSA 125-O:11-18 are prudent. RSA 125-O:18.
40 (Id. at 15-16).

- 1 • we find it inconceivable that the Legislature would countenance a situation where it had
2 determined that the installation of this specific scrubber technology is in the public
3 interest, but that the Commission could nonetheless determine that financing used for that
4 very purpose is not in the public good. (Id.at 16).
- 5 • it was the Legislature who determined that the scrubber technology is in the public
6 interest and, therefore, any modification or rescission of that finding logically rests with
7 that body. Consequently, we may not revisit or review the finding. (Id.).
- 8 • With regard to OCA's arguments that this is the last time we will have a meaningful
9 opportunity to review PSNH's installation of the scrubber technology at Merrimack
10 Station, as discussed above we do not have the jurisdiction to determine whether the use
11 of PSNH's financing proceeds for the installation of the scrubber is for the public good.
12 We cannot arrogate to ourselves authority that the Legislature has reserved to itself.
13 Presumably, the Legislature was in a position to assess alternatives through the legislative
14 process that culminated in RSA 125-O:11, VI. (Id.at 17).

15 **Q. Are you familiar with Mr. Eckberg's testimony wherein he testifies that a \$50,000 payment**
16 **to the New Hampshire Department of Fish and Game should be disallowed?**

17 A. Yes, I am.

18 **Q. Please provide your viewpoint on Mr. Eckberg's recommendation.**

19 A. As we explained in response to data request OCA-04-015 (Attachment WHS-R-13), the \$50,000
20 in question results from a permit requirement instituted by the NHDES. In its Docket No. 2008-
21 02312, the New Hampshire Department of Environmental Services Wetlands Bureau included the
22 following two conditions in its permit relating to the Scrubber Project [Attachment WHS-R-14]:

23 22. The applicant shall provide a report to NH DES Wetlands including those areas
24 identified for potential New England Cottontail Habitat enhancement. This report
25 shall include the, locations, and status of the enhancements proposed.

26 23. The applicant shall provide receipts or alternate evidence, by January 1, of the next 5-
27 years that they have contributed to the 5-year program designed to identify, manage
28 and foster potential habitat for the New England Cottontail within existing PSNH.

29 As a result of these permit requirements, an agreement was reached between PSNH and the N.H.
30 Fish and Game Department, whereby PSNH "contributed to the 5-year program designed to
31 identify, manage and foster potential habitat for the New England Cottontail" to mitigate the

1 potential impacts of the parking lot construction on the New England Cottontail habitat. The
2 parking lot was constructed to be used by employees building the scrubber. PSNH provided
3 \$10,000 a year for five years to fund efforts of that Department's Nongame and Endangered
4 Wildlife Program to enhance New England Cottontail habitat in numerous PSNH transmission
5 rights-of-way. The total cost of that funding was less than the cost of alternative parking
6 arrangements that otherwise would have been required. I believe this outcome was a win-win-
7 win solution for PSNH, the State, and for the New England Cottontail, and that the expenditure in
8 question was required by the NHDES permitting process. I deem compliance with applicable
9 permits to be a prudent management decision that positively served all parties; therefore, I
10 disagree with Mr. Eckberg's recommended disallowance.

11 **Q. Are you familiar with Dr. Stanton's testimony submitted on behalf of the Conservation Law**
12 **Foundation (CLF)?**

13 A. Yes, I am.

14 **Q. Please describe some of your major concerns with the issues raised in Dr. Stanton's**
15 **testimony.**

16 A. I was not surprised that Dr. Stanton confirmed in Q-PSNH-7, that she has not worked directly at
17 coal-fired facilities, and therefore has not worked on large construction projects at coal fired
18 plants or done other site specific work at coal-fired plants. (Attachment WHS-R-15). Her lack of
19 coal generation and large construction project experience was evident in a number of assumptions
20 throughout her analysis:

- 21 • One particularly surprising and inappropriate assumption used by Dr. Stanton was her use
22 of 2008 as the reference year. Clearly, 2008 annual data would not have been available to

1 PSNH mid-year when PSNH was performing our analysis. And even more influential to
2 the analysis was the fact that 2008 was atypical with extended major maintenance
3 outages occurring at both Merrimack units. These longer planned outages and additional
4 forced outage time resulted in lower capacity factors and higher average production costs.
5 To illustrate this point, if Dr. Stanton had used data from 2007, the last full year of
6 operational data available prior to the analysis, the annual generation would have been
7 3.2 million MWh, or 15% greater than the value she chose for her analysis.

- 8 • Similarly, due to the additional maintenance completed during the 2008 outages, the
9 production cost in 2008 was inflated 24% greater than the similar cost figure in 2007.

10 These two inappropriate assumptions, negatively skew her results. PSNH's other rebuttal
11 witnesses include additional critiques of Dr. Stanton's analysis in their testimony.

12 **Q. Dr. Stanton assumed that Merrimack Station would require the addition of activated**
13 **carbon injection. Is that assumption correct?**

14 A. No. Her assumption, regarding the use of activated carbon injection (ACI) to satisfy federal
15 mercury regulation beginning in 2015, highlights her lack of specific knowledge at Merrimack
16 Station. She apparently does not realize that the scrubber satisfies all related emissions
17 compliance requirements.

1 **CONCLUSION**

2 **Q. Do you have any concluding remarks at this time?**

3 A. Yes, I do. Based on the facts and circumstances known or reasonably knowable at the time,
4 installation of scrubber technology at the Merrimack Station was a specific legislative mandate,
5 with the choice made by the Legislature, that had an unconditional public interest determination,
6 with a fixed deadline where time was of the essence, and punishment for failure to comply
7 included potential felony criminal conviction and civil penalties. In light of the clear statutory
8 directive and the myriad decisions by judicial and quasi-judicial agencies as well as the
9 statements and admissions of all the other parties to this proceeding, there can be no doubt what a
10 reasonable person would have done facing these facts and circumstances - - a reasonable person
11 would have concluded that complying with the mandate set out in the Scrubber Law was the
12 reasonable course of action. And that is exactly what PSNH did.

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

14 A. Yes, it does.

APPENDIX 1 – SUPPLEMENTAL TESTIMONY CONCERNING THE
“STATUTORY MANDATE”

Q. Please describe in further detail how this Commission has established the definition of a “statutory mandate.”

A. In previous cases, this Commission has noted that the Legislature’s use of the word “shall” denotes a mandatory statutory prescription, citing to New Hampshire Supreme Court decisions. PSNH noted this in its first scrubber filing to the Commission made in Docket No. DE 08-103 on September 2, 2008:

In *City of Rochester v. Corpening*, 153 N.H. 571, 907 A.2d 383, 386 (2006) the Court held:

The intention of the Legislature as to the mandatory or directory nature of a particular statutory provision is determined primarily from the language thereof." *Appeal of Rowan*, 142 N.H. 67, 71, 694 A.2d 1002 (1997) (quotation and citation omitted). The general rule of statutory construction is that "the word 'may' makes enforcement of a statute permissive and that the word 'shall' requires mandatory enforcement." *Town of Nottingham v. Harvey*, 120 N.H. 889, 895, 424 A.2d 1125 (1980).

I am aware that as recently as this past November, the New Hampshire Supreme Court stated, The use of the word ‘shall’ in a statute is generally regarded as a command, *see State v. Fournier*, 158 N.H. 441, 446, 969 A.2d 434 (2009)...” *State v. Cheney*, 2011-465, 2013 WL 5943922 (N.H. Nov. 7, 2013). .”

Q. Please describe in further detail how the Legislature, this Commission, and the Supreme Court expressed views that the scrubber installation was a “statutory mandate.”

A. The Legislature enacted the Scrubber Law in 2006. In 2009, the Legislature considered H.B. 496, which sought to place a cap on the amount PSNH could recover for the scrubber project. In its

1 “Majority Committee Report” finding H.B. 496 “inexpedient to legislate,” on March 19, 2009,
2 the House Committee on Science, Technology and Energy expressly noted that installation of the
3 scrubber was a legislative mandate:

4 While this bill is well intentioned, the committee received many hours of
5 testimony outlining the negative and unintended consequences associated with
6 passing the bill. The committee heard lengthy testimony from both sides **and the**
7 **majority decided that since the legislature mandated in 2006 for PSNH to**
8 **install the scrubber without placing a limit on the costs**, to choose to place a
9 limit on the cost nearly three years later would pose significant problems. While
10 the committee recognizes that the increase in projected cost for the scrubber is
11 significant, there is no evidence that PSNH has acted improperly in their costing
12 or contracting process. The majority believed that placing a cap on cost recovery
13 **for a legislatively mandated project** was not only arbitrary but could constitute a
14 taking and be unconstitutional. The majority was also concerned that the passage
15 of this bill would lead to a pause in or cancellation of the project. This would not
16 only have significant environmental ramifications but also would lead to the loss
17 of several hundred short term and long term jobs related to the construction and
18 operation of the scrubber. The committee also decided that an unofficial late
19 amendment was too far reaching, requiring more time to debate and receive
20 public input. As a result, the potential amendment was not considered by the
21 committee and discussion was focused on the bill as introduced.

22 [Attachment WHS-R-12, emphases added]

23 Thus, the Legislature itself, in 2009, three years after its initial enactment of the Scrubber Law
24 and seven months after PSNH’s disclosure of the \$457 M cost estimate for the scrubber project,
25 stated that by the Scrubber Law “the legislature mandated in 2006 for PSNH to install the
26 scrubber” and that the Legislature did not want “a pause in or cancellation of the project.” PSNH
27 relied upon these determinations of the Legislature as part of the Company’s efforts to comply
28 with the Scrubber Law.

29 This Commission has also recognized the Scrubber Law’s mandate on myriad occasions in
30 decisions upon which PSNH relied. In its first official document regarding the scrubber project,

1 the Commission noted, “RSA 125-O:11, enacted in 2006, *requires PSNH to install new scrubber*
2 *technology at Merrimack Station* by July 1, 2013 that will achieve at least an 80 percent
3 reduction in mercury emissions.” Secretarial Letter dated August 22, 2008, Docket No. DE 08-
4 103. During the 2012 Performance Audit of the Commission by the Office of Legislative Budget
5 Assistant, the Commission noted: “*The PUC Chairman during the audit period and the*
6 *General Counsel stated secretarial letters were the equivalent of Commission orders.*”

7 The Commission issued its first formal decision and Order regarding the scrubber project on
8 September 19, 2008, Order No. 24,898 in Docket No. DE 08-103. In that Order, the Commission
9 expressly stated, “RSA 125-O:11 et seq. *requires PSNH to install the scrubber technology at*
10 *Merrimack Station*, a coal-fired electric generation facility in the town of Bow, in order to reduce
11 mercury emissions.” Order No. 24,898 at 1. The Commission also noted in that Order that by its
12 enactment of the Scrubber Law “the Legislature has determined that the scrubber project is in the
13 public interest and has *directed PSNH to go forward with the project and have it operational no*
14 *later than July 1, 2013.*” Order No. 24,898 at 7. The Commission also decided, “In this instance
15 the Legislature has made the public interest determination and required the owner of the
16 Merrimack Station, viz., PSNH, to install and have operational scrubber technology to control
17 mercury emissions no later than July 1, 2013.” Order No. 24,898 at 10. Note that it was the
18 Commission itself that emphasized the word “*required*” in its Order. The Commission concluded
19 its discussion in Order No. 24,898 by saying “The Legislature has already made an unconditional
20 determination that the scrubber project is in the public interest. Nowhere in RSA 125-O does the
21 Legislature suggest that an alternative to installing scrubber technology as a means of mercury
22 compliance may be considered, whether in the form of some other technology or retirement of the
23 facility.” Order No. 24,898 at 12. In light of these decisions made by the Commission, the
24 Commission expressly “**DECIDED**, that, as a result *of the Legislature’s mandate* that the owner

1 of Merrimack Station install scrubber technology by a date certain, and its finding pursuant to
2 RSA 125-O:11 that such installation of scrubber technology at PSNH's Merrimack Station is in
3 the public interest of the citizens of New Hampshire and the customers of the station, the
4 Commission lacks the authority to make a determination pursuant to RSA 369-B: 3-a as to
5 whether this particular modification is in the public interest." Clearly, in its first Order discussing
6 the Scrubber Law, this Commission itself held that the Scrubber Law created a legislative
7 mandate to install the scrubber.

8 On November 12, 2008, the Commission issued its next Order regarding the scrubber project. In
9 Order No. 24,914 in Docket No. DE 08-103, the Commission again stated, "***RSA 125-O:11 et***
10 ***seq. requires PSNH to install the scrubber technology at Merrimack Station*** in order to reduce
11 mercury emissions."

12 The Commission again confirmed the existence of a legislative mandate to install the scrubber in
13 2009. In Order No 24,979 dated June 19, 2009, issued in Docket No. DE 09-033 at page 15 this
14 Commission said:

15 ***[T]he scrubber installation at Merrimack Station does not reflect a utility***
16 ***management choice*** among a range of options. Instead, ***installation of scrubber***
17 ***technology at the Merrimack Station is a legislative mandate, with a fixed***
18 ***deadline.*** See RSA 125-O:11, 1,11; RSA 125-O:13, I. ***The Legislature, not***
19 ***PSNH, made the choice,*** required PSNH to use a particular pollution control
20 technology at Merrimack Station, and found that installation is "in the public
21 interest of the citizens of New Hampshire and the customers of the affected
22 sources." RSA 125-O:11, VI.

23 Further, on February 6, 2012, in Order No. 25,332 issued in both this docket (11-250) and Docket
24 No. DE 08-103, the Commission again noted, "***RSA 125-O:11 et seq. requires PSNH to install***

1 ***the Scrubber at Merrimack Station*** to reduce air pollution, including mercury emissions. Order
2 No. 25,332 at page 1.

3 Again on April 10, 2012, in Order No. 25,346 issued in this docket, the Commission stated,
4 “Pursuant to the express language in RSA 125-O:11, ***the Legislature required that PSNH install***
5 ***the Scrubber by July 1, 2013*** because, according to DES, it was the best known commercially
6 available technology for the reduction of mercury. RSA 125-O:11, I and II.” Order No. 25,346
7 at 21. This Commission also held, “***RSA 125-O:11 requires PSNH to build the Scrubber***”
8 (Order No. 25,346 at 23); “Given the fact that this capital project is unique, in ...that it is made
9 pursuant to ***a specific legislative mandate...***” (Id.); and, “Because of the unique nature of the
10 Scrubber project and the related rate request, ***the Commission must consider ... the terms of the***
11 ***statute mandating the Scrubber installation...***” (Id. at 21).

12 This Commission made determinations in six distinct Orders and secretarial letters that PSNH
13 was ***required*** to build the scrubber, and that the Scrubber Law contained a legislative ***mandate***.
14 These Commission determinations spanned the time period from August 22, 2008 – before PSNH
15 executed contracts for the manufacture and installation of the scrubber – through April of 2012 –
16 seven months after the scrubber was completed and successfully placed into operation. The only
17 reasonable and prudent response by any public utility regulated by this Commission would be to
18 do what this Commission has repeatedly held the law required and mandated – i.e., install and
19 have operational scrubber technology at Merrimack Station by July 1, 2013.

1 **Q. Please describe in further detail how other organizations and parties in NH viewed the**
2 **scrubber installation as a “statutory mandate.”**

3 A. The New Hampshire Supreme Court in its *Appeal of Stonyfield Farm* decision issued on August
4 5, 2009, referencing the Scrubber Law stated, “***the legislation specifically requires PSNH to***
5 ***install*** ‘the best known commercially available technology . . . at Merrimack Station,’ which the
6 New Hampshire Department of Environmental Services (DES) has determined is ***the scrubber***
7 ***technology.***” The Supreme Court also said, “***To comply with the Mercury Emissions Program,***
8 ***PSNH must install the scrubber technology and have it operational at Merrimack Station by***
9 ***July 1, 2013.***”

10 On July 21, 2011, the New Hampshire Supreme Court issued a second decision regarding the
11 Scrubber Law in *Appeal of Campaign for Ratepayers’ Rights*. In that decision, the Supreme
12 Court stated:

13 This case involves the installation of a wet flue gas desulphurization system (also
14 known as a “scrubber”) at Merrimack Station, an electricity generating facility in
15 Bow owned by the appellee, Public Service Company of New Hampshire
16 (PSNH). *See generally Appeal of Stonyfield Farm*, 159 N.H. 227, 228-29 (2009)
17 (discussing scrubber technology at Merrimack Station). ***The installation of such***
18 ***a system was mandated by the legislature in 2006.***

19 On January 16, 2009, the Union-Leader reported that Mr. Robert Scott, then Director of the New
20 Hampshire Department of Environmental Services Air Resources Division (and now, a
21 Commissioner of the NHPUC), said the mandate to install the scrubber comes from state
22 lawmakers ... “My job is to follow state law.” PSNH had the same duty to follow state law.

23 The State of New Hampshire itself has recognized that the Scrubber Law mandated installation of
24 the scrubber. In the New Hampshire Attorney General’s Brief dated May 6, 2009 [Attachment
25 WHS-R-02] filed with the New Hampshire Supreme Court in the *Stonyfield Farm* case on behalf

1 of the State, the Attorney General stated, “[T]he legislature required PSNH to install ‘scrubber
2 technology’ at the Merrimack Station no later than July 1, 2013.” AG Brief at 2. The AG also
3 stated that, “the Mercury Emissions subdivision can only be implemented if scrubber technology
4 is installed at the Merrimack Station.” AG Brief at 10.

5 The Attorney General also noted that the Scrubber Law “is an integral and indivisible part of the
6 multi-pollutant program beginning at section 1 of RSA chapter 125-O and continuing through
7 section 18.” AG Brief at 10. The AG continued, “By law, DES is the agency charged with
8 implementing the regulatory aspects of the multi-pollutant program.” AG Brief at 11.

9 Given the Attorney General’s position that the Department of Environmental Services, not this
10 Commission, was the agency charged with implementing the Scrubber Law, it is important to
11 note that DES also held the view that the Scrubber Law required the installation of the scrubber.
12 On March 9, 2009, the DES issued its “Findings of Fact and Director’s Decision: In the matter of
13 the Issuance of a Temporary Permit To Public Service Company of New Hampshire, Merrimack
14 Station Located in Bow, New Hampshire.” [Attachment WHS-R-16]. That document, signed by
15 the Director, Air Resources Division of DES (and now PUC Commissioner) Robert R. Scott,
16 discussed matters relating to the issuance of a temporary permit by DES allowing the construction
17 of the scrubber to proceed and listing requirements associated with the installation and operations
18 of the scrubber. Discussing PSNH’s plan to install the scrubber at Merrimack Station, in his
19 Findings of Fact and Director’s Decision, Director Scott noted, “*New Hampshire state law (RSA-*
20 *125:O) requires PSNH to undertake this project* and to file an application for a Temporary
21 Permit with DES no later than June 8, 2007.” DES Findings of Fact at page 2. Then-Director
22 Scott also noted, “*RSA 125-O:13 requires PSNH to install a FGD system to control mercury*
23 *emissions from Merrimack Station Units MK1 and MK2 no later than July 1, 2013.*” Id. at 3.

1 The permit lists the specific Operational and Emission Limitations including the required
2 operation of the scrubber no later than July 1, 2013.¹⁴

3 On April 11, 2006, during a hearing before the Senate Committee on Energy and Economic
4 Development, then-Director Scott provided the following testimony in support of House Bill
5 1673-FN, the bill that was later codified as RSA 125-O:11 through RSA 125-O:18:

6 It's also been raised, *why are we being prescriptive?* Why are we in this
7 regular... *in this law to PSNH to put in a scrubber?* And I have to take some
8 personal responsibility for that; I advocated for that myself. Why would I do
9 that? Everybody, including myself I think agrees that we want to see mercury
10 reductions, a high level of mercury reductions sooner than later. We know today
11 that the installation of scrubbers which have a wonderful benefit of SO2
12 reductions, also reduce mercury at a high percentage. That is today the best
13 technology, especially taking in to account the multi-pollutant benefits that we
14 know of. *What we wanted to avoid is extra time* being given, another year, two
15 years of a selection process, what's the best technology, the *owner's having to go*
16 *to PUC to convince them* that this is the best technology, and then perhaps
17 having some other company come in and say, "Well, I had this new alchemy and
18 I can do something even better." That's all fine and dandy, but what we're
19 concerned about is we don't want to have this as a method where we're constantly
20 delaying the installation. *By calling out scrubber technology in the bill, we're*
21 *signaling PSNH from the word go to start to engineer, design and build*
22 *scrubber technology right away.* The bill has in it, within one year of passage of
23 the bill, they are required to have all their applications in to us, which means
24 there's a lot of engineering work they have to do. This is starting ... this is in the
25 ground writing for the plan, and this is why we did that.

26 Hearing on H.B. 1673-FN Before the S. Comm. on Energy & Econ. Dev., *33 (N.H. 2006)
27 (statement of Bob Scott, Director, Air Resources Division, Dep't. of Envir. Servs.) (Emphases
28 added.) [Attachment WHS-R-17]. DES's view regarding the nature of the Scrubber Law's
29 mandate could not have been more plainly stated.

¹⁴ The temporary permit issued by NHDES is available from the DES' web site at:
<http://www2.des.state.nh.us/OneStopPub/Air/330130002611-0078TypePermit.pdf>

1 The Wetlands Bureau of NHDES also had permitting authority over the Scrubber Project. In the
2 Permit it issued to PSNH on January 6, 2009, for the Scrubber Project, DES's Wetlands Bureau
3 made the finding; "2. ***The proposed scrubber has been mandated to be installed by the NH***
4 ***Legislature per HB 1673.***" [Attachment WHS-R-14]:

5 The New Hampshire Air Resources Council also made rulings of fact and conclusions of law that
6 the Scrubber Law required installation of the scrubber at Merrimack Station. In its Docket Nos.
7 09-10 ARC (Appeal of Sierra Club) and 09-11 ARC (Appeal of Conservation Law Foundation),
8 the Air Resources Council found, "***As a matter of law, PSNH is required to install and operate***
9 ***the Scrubber system. RSA 125-O:11-18.***" Finding of Fact and Conclusion of Law No. 107,
10 granted on p. 7, "Decision and Orders on Appeals," September 20, 2010. [Attachment WHS-R-
11 18]. Since neither Sierra Club nor CLF appealed the Air Resource Council's decision, they are
12 bound by this decision.

13 Similarly, in its "Decision and Order on Notice of Appeal" in its Docket No. 11-10, PSNH
14 Appeal of Mercury Baseline Decision, dated December 17, 2012, [Attachment WHS-R-19] the
15 Air Resources Council found as a matter of fact:

16 In 2006, the New Hampshire General Court enacted RSA 125-O: 11 - 18. ***The***
17 ***statute required the installation and operation of the Scrubber***, established
18 mercury emissions reduction levels for Affected Sources, and created economic
19 performance incentives for PSNH in association with early mercury emissions
20 reductions. See RSA 125-O: 11 - 18.

21 The Site Evaluation Committee also had an opportunity to state its view of the Scrubber Law. In
22 its August 10, 2009, "Order Denying Motion for Declaratory Ruling" issued in its Docket No.
23 2009-01, Re: Motion of Campaign for Ratepayers Rights, et al., for a Declaratory Ruling

1 Regarding Modifications to Merrimack Station Electric Generating Facility, at page 2, the SEC
2 noted:

3 In 2006, the New Hampshire Legislature passed a law referred to as the
4 "Scrubber Bill" that was codified at RSA 125-O:11-18. The statute mandates
5 significant reductions (80%) in mercury emissions at coal burning electric power
6 plants in the state. ***The statute also requires the installation of a wet flue gas***
7 ***desulfurization system (Scrubber Project) otherwise known as a "Scrubber" at***
8 ***the Merrimack Station facility no later than the year 2013.*** See, RSA 125-O:
9 11. The Legislature found that the installation of scrubber technology was in the
10 public interest of the citizens of New Hampshire and customers of the affected
11 sources. In accordance with RSA 125-O, PSNH has begun construction of
12 portions of the scrubber technology at the Merrimack Station facility.

13 In its Order, the SEC also noted that "the Legislature ***required*** the construction of the Scrubber
14 Project in 2006." SEC Order at page 6. Similarly, at page 11 of its Order, the SEC stated, "In
15 addition, because ***the Legislature specifically required the installation of the scrubber***, it could
16 not be found that the project is inconsistent with the state's energy policy as established by the
17 Legislature." The SEC Order with the quoted statements in it was signed by eight SEC members,
18 including Clifton Below, Michael Harrington, and Robert Scott, all of whom were then, became,
19 or are now PUC Commissioners.

20 The U.S. Environmental Protection Agency has also commented on the Scrubber Law. The EPA
21 expressly stated, "In 2006, ***the New Hampshire legislature enacted RSA 125-O:11-18, which***
22 ***requires PSNH to install and operate a wet flue gas desulfurization (FGD) system at***
23 ***Merrimack Station*** to reduce air emissions of mercury and other pollutants." "Determination of
24 Technology-Based Effluent Limits for the Flue Gas Desulfurization Wastewater at Merrimack
25 Station in Bow, New Hampshire," September 23, 2011, p. 1. This EPA Determination also
26 stated, "The New Hampshire statute expressly requires PSNH to install a 'wet' FGD system at
27 Merrimack Station." Id. at 1-2. In its "Fact Sheet" issued along with its Draft NPDES Permit for
28 Merrimack Station, the EPA noted, "Within New Hampshire, ***the state legislature has*** responded

1 to this [mercury] problem by *requiring installation of the wet FGD scrubber system at*
2 *Merrimack Station* to reduce in-state air emissions of mercury.” “Fact Sheet,” September 27,
3 2011 at p. 25. Similarly, the EPA has stated, “[T]he State of New Hampshire has mandated that
4 *Merrimack Station install new scrubbers to substantially reduce the facility’s air pollutant*
5 *emissions.*” “Clean Water Act NPDES Permitting Determinations for the Thermal Discharge and
6 Cooling Water Intake Structures at Merrimack Station in Bow, New Hampshire, NPDES Permit
7 No. NH 0001465,” p. 158.

8 **Q. Please describe in further detail how the Office of Consumer Advocates (OCA), a party-**
9 **opponent intervenor to this proceeding, has recognized that the Scrubber Law mandated**
10 **the installation of a scrubber at Merrimack Station.**

11 A. As early as September 11, 2008, the Office of Consumer Advocate admitted, “*RSA 125-O*
12 *requires PSNH to reduce mercury emissions by 80% by installing a ‘scrubber technology’ at*
13 *Merrimack Station no later than July 1, 2013.*” OCA’s Memorandum of Law, Docket No. DE
14 08-103, page 6.

15 **Q. Please describe in further detail how the Sierra Club, a party-opponent intervenor to this**
16 **proceeding, has recognized that the Scrubber Law mandated the installation of a scrubber**
17 **at Merrimack Station.**

18 A. On its website, the Sierra Club’s Upper Valley chapter stated, “*The NH Legislature has*
19 *mandated (RSA 125-O et seq) the installation of the wet flu [sic] gas desulphurization system*
20 *(“scrubber”) at the Merrimack Station* electric generating facility in Bow, NH.” [Attachment
21 WHS-R-20] This website posting is consistent with the Sierra Club’s pleadings before this
22 Commission, where it acknowledged, “*the ambit of RSA 125-O... requires only that Public*
23 *Service Company of New Hampshire install flue gas desulphurization equipment.*” Motion of

1 Sierra Club, Docket No. DE 08-103, May 24, 2010, at p. 2, and its “Reply to Objection” in that
2 same docket dated June 4, 2010, where it stated, “On August 28, 2008, the Public Utilities
3 Commission, by Secretarial letter, opened Docket DE 08-103 to review PSNH compliance with
4 RSA 125-O:11-18, *which required PSNH to install a wet flue gas desulphurization [scrubber]*
5 *system at Merrimack station by July 1, 2013.*”

6 **Q. Please describe in further detail how the Conservation Law Foundation (CLF), a party-**
7 **opponent intervenor to this proceeding, has recognized that the Scrubber Law mandated**
8 **the installation of a scrubber at Merrimack Station.**

9 A. CLF has also admitted that PSNH was required under New Hampshire law to install the scrubber:
10 On February 26, 2009, in its formal “Notice of Intent to File Clean Air Act Citizen Suit” sent to
11 PSNH pursuant to Section 304(b) of the Clean Air Act, 42 U.S.C. sec. 7604(b), CLF stated:

12 *PSNH is required under New Hampshire law to install by 2013 wet flu [sic] gas*
13 *desulphurization scrubbers* that will reduce mercury emissions from the plant by
14 eighty percent (“Scrubber Project”). See RSA 125-O:11, et seq. (“Scrubber
15 Law”). [Attachment WHS-R-21]

16 CLF repeated this exact same language less than a month later in its filing with the New
17 Hampshire Air Resources Council. “Conservation Law Foundation's Notice of Appeal of
18 Temporary Permit Issued to Public Service Company of New Hampshire Permit No. TP-0008,”
19 Air Resources Council Docket No. 09-11, Appeal of Conservation Law Foundation, March 19,
20 2009, page 3. [Attachment WHS-R-22].

21 On May 22, 2009, CLF again noted in a pleading filed with this Commission that installation of
22 the scrubber was mandated by the Legislature. In a pleading captioned “Conservation Law
23 Foundation, Freedom Logistics, LLC, and Halifax-American Energy Co. LLC’S Memorandum of
24 Law Regarding Application of RSA 369-B:3-a to PSNH’S Merrimack Unit 2 Capacity Expansion

1 Project,” in Docket No. DE 08-145, CLF stated, “During a planned outage in April and May of
2 2008 (‘April-May Outage’), PSNH undertook the Capacity Expansion Project, making substantial
3 modifications to MK2 *to accommodate the operation of a wet flue gas desulphurization system*
4 *mandated to be installed at Merrimack Station by RSA 125-O et seq. (‘Scrubber Project’).*”
5 CLF Memo at 2 (emphasis added).

6 On April 8, 2011, CLF again threatened PSNH that it intended to initiate suit under the Clean Air
7 Act, wherein it admitted that the Scrubber Law created a mandate requiring installation of the
8 scrubber: “Nothing *in the state law mandating the Scrubber Project, N.H. RSA §§ 125-O: 11 -*
9 *18*, disturbs those requirements.” “Notice of Intent to File Clean Air Act Citizen Suit” at p. 6.
10 Further, CLF’s 2011 Notice of Intent to Sue stated, “The MK2 work took place over the course of
11 at least eleven and one-half weeks in 2008, five years before July 2013, *when the Scrubber Law*
12 *requires the scrubber to be operational.*” Id. at p. 10. [Attachment WHS-R-23].

13 CLF similarly stated on its website that “*PSNH is required under the New Hampshire Clean*
14 *Power Act (CPA) to install by 2013 a wet flu gas desulphurization scrubber system* that will
15 reduce mercury emissions from the plant by eighty percent.” [Attachment WHS-R-24].

16 And, the testimony filed on behalf of CLF by Dr. Stanton in this proceeding also notes that the
17 Scrubber Law mandated installation of the scrubber. At page 5 of her testimony, Dr. Stanton
18 testifies: “*In 2006, New Hampshire passed legislation ordering that a wet scrubber be installed*
19 *at Merrimack Station by July 1, 2013 to reduce emissions of mercury.*” (Emphasis added.)
20 Despite her own testimony that installation of the scrubber was ordered as a matter of law, Dr.
21 Stanton inexplicably bases the entirety of her testimony on the premise that installation of the
22 scrubber was a “decision” made by PSNH.

1 **Q. Please describe in further detail how TransCanada, a party-opponent intervenor to this**
2 **proceeding, has recognized that the Scrubber Law mandated the installation of a scrubber**
3 **at Merrimack Station.**

4 **A. Intervenor TransCanada agrees with every other court, agency, and intervenor:**

5 Although *RSA 125-O requires PSNH to install scrubber technology at*
6 *Merrimack Station to reduce mercury emissions*, it also clearly requires PSNH
7 to seek all necessary approvals before proceeding with the scrubber project: “The
8 achievement of this requirement is contingent upon obtaining all necessary
9 permits and approvals from federal, state, and local regulatory agencies and
10 boards.” RSA 125-O:13,1. The Commission is clearly one of the state regulatory
11 agencies, if not the primary state agency, involved with any approvals that PSNH
12 must obtain before making modifications to assets that are included in its rate
13 base and paid for by ratepayers.

14 TransCanada’s Motion for Reconsideration and Rehearing, Docket No. DE 08-103, October 17,
15 2008, page 10.

16 Indeed, TransCanada and CLF (along with the Campaign for Ratepayers Rights, Freedom
17 Logistics LLC, Granite Ridge Energy, LLC, Halifax-American Energy LLC, and the Union of
18 Concerned Scientists) entered into a “Stipulation of the Parties” in the Site Evaluation
19 Committee’s Docket No. 2009-01, including Stipulation Number 1.b, which again reflects that
20 installation of the scrubber by PSNH was mandated by law:

21 *"Scrubber Project" means the wet flue gas desulphurization system (FGD*
22 *System) mandated by the New Hampshire legislature to be installed by PSNH*
23 *and operational at the Merrimack generating station no later than July 1,*
24 *2013, under RSA 125-O:11 through 18 inclusive.*

**APPENDIX 2 – POTENTIAL ENFORCEMENT PENALTIES FACING PSNH FOR FAILURE
TO COMPLY WITH THE SCRUBBER LAW**

Q. Please explain your understanding of the enforcement penalties to which PSNH would be subject, should it choose not to comply with the Scrubber Law.

A. My understanding is that PSNH would have been subject to the provisions of RSA 125-O:7, “Enforcement,” which provides the following:

I. Any violation of any provision of this chapter, or of any rule adopted under this chapter, shall be subject to enforcement by injunction, including mandatory injunction, issued by the superior court upon application of the attorney general. Any such violation shall also be subject to a civil forfeiture to the state of not more than \$25,000 for each violation, and for each day of a continuing violation.

II. Any person who knowingly violates any of the provisions of this chapter, or any rule adopted under this chapter, shall be guilty of a misdemeanor if a natural person, or guilty of a felony if any other person.

III. The commissioner, after notice and hearing pursuant to RSA 541-A, may impose an administrative fine not to exceed \$2,000 for each offense upon any person who violates any provision of this chapter or any rule adopted pursuant to this chapter. Rehearings and appeals from a decision of the commissioner under this paragraph shall be in accordance with RSA 541. Any administrative fine imposed under this paragraph shall not preclude the imposition of further penalties under this chapter. The proceeds of administrative fines imposed pursuant to this paragraph shall be deposited in the general fund.

(a) Notice and hearing prior to the imposition of an administrative fine shall be in accordance with RSA 541-A and procedural rules adopted by the commissioner pursuant to RSA 541-A:16.

(b) The commissioner shall determine fines based on the following:

(1) For a minor deviation from a requirement causing minor potential for harm, the fine shall be not less than \$100 and not more than \$1,000.

(2) For a minor deviation from a requirement causing moderate potential for harm, the fine shall be not less than \$601 and not more than \$1,250.

(3) For a minor deviation from a requirement causing major potential for harm, the fine shall be not less than \$851 and not more than \$1,500.

(4) For a moderate deviation from a requirement causing minor potential for harm, the fine shall be not less than \$601 and not more than \$1,250.

(5) For a moderate deviation from a requirement causing moderate potential for harm, the fine shall be not less than \$851 and not more than \$1,500.

(6) For a moderate deviation from a requirement causing major potential for harm, the fine shall be not less than \$1,251 and not more than \$1,750.

1 (7) For a major deviation from a requirement causing minor potential for harm, the
2 fine shall be not less than \$851 and not more than \$1,500.

3 (8) For a major deviation from a requirement causing moderate potential for harm,
4 the fine shall be not less than \$1,251 and not more than \$1,750.

5 (9) For a major deviation from a requirement causing major potential for harm, the
6 fine shall be not less than \$1,501 and not more than \$2,000.

7 (c) The commissioner may assess additional fines for repeat violations.

8 The potential for felony prosecution and civil forfeitures of \$25,000 for each violation, and for
9 each day of a continuing violation, are severe penalties the State could have imposed if PSNH
10 just “ignored” the law. And, a reasonable person would not just ignore the law; hence, such an
11 action would in and of itself be imprudent..

APPENDIX 3 – SUPPLEMENTAL TESTIMONY REGARDING THE COMMISSION’S
REVIEW OF THE SCRUBBER COST ESTIMATE

Q. In your testimony, you refer to interaction with this Commission discussing the updates to the preliminary estimate of \$250 million for the cost of the scrubber. Please explain in further detail.

A. When the contracted prices for the scrubber project became known, PSNH notified the PUC and scheduled an informative meeting with Staff to also convey this change. This information was also publically disclosed as a new cost estimate in a Form 10-Q filing made to the U.S. Securities and Exchange Commission. A Form 10-Q filing is a quarterly financial update required to be filed pursuant to the Securities Exchange Act of 1934. As a result of PSNH’s disclosure, this Commission issued a RFI letter requesting the Company file a comprehensive status report regarding the installation of the scrubber. Also, during its 2009 session, the Legislature took a second look at the scrubber law. Two bills that would have changed the Scrubber Law were considered: Senate Bill 152 “relative to an investigation by the PUC to determine whether the scrubber installation at the Merrimack station is in the public interest of retail consumers” (deemed inexpedient to legislate) and House Bill 496 “establishing a limit on the amount of cost recovery for emissions reduction equipment installed at Merrimack Station” (also deemed inexpedient to legislate).

Thus, knowing that the scrubber was then-estimated to cost \$457 Million, the Legislature expressly chose *not* to change the mandate that a scrubber must be installed and operated at Merrimack Station. As the Commission recently held regarding the Scrubber Law, “PSNH is not responsible for the Legislature’s actions, nor for ours.” Order No. 25,566, August 27, 2013, at p. 5. PSNH did have and continues to have a continuing obligation to obey the law. PSNH relied

1 upon the Legislature's decision not to alter the Scrubber Law's mandate when it continued to
2 construct the scrubber.

3 This Commission came to the same conclusion as PSNH. In Order No. 24,898, issued on
4 September 19, 2008 in Docket No. DE 08-103 – after the \$457 Million cost estimate was known
5 – this Commission held:

6 Our finding that the Legislature intended its findings in RSA 125-O:11 to
7 foreclose a Commission proceeding pursuant to RSA 369-B:3-a is supported by
8 the overall statutory scheme of RSA 125-O:11 et seq. as well as its legislative
9 history. A review of the Senate Journal for April 20, 2006, at p. 935 et seq.,
10 shows that the members of the Senate Finance Committee were focused largely
11 on the timing of installation and the prospect that PSNH could install the
12 scrubber technology in advance of the July 1, 2013 deadline. The legislative
13 history supports a conclusion that the Legislature viewed time to be of the
14 essence. This conclusion is consistent with the economic performance incentives
15 that PSNH can earn, pursuant to RSA 125-O:16, if the scrubber project comes on
16 line prior to July 1, 2013. Finally, RSA 125-O:13, IX directs PSNH to report
17 annually to the legislative oversight committee on electric utility restructuring the
18 progress and status of installing the scrubber technology including any updated
19 cost information. This reporting requirement also suggests the Legislature's
20 intent to retain for itself duties that it would otherwise expect the Commission to
21 fulfill if RSA 369-B:3-a applied. (Order at pages 10-11).

22 Noting the \$457 Million cost estimate, the Commission further held in that Order that:

23 We are sensitive to the OCA's point that the cost estimates for the scrubber
24 project have increased approximately 80 percent from \$250 million to \$457
25 million in a relatively short time. In fact, that circumstance is what prompted us
26 to open this investigation. However, a substantial increase in the cost estimate
27 does not constitute a grant of Commission authority to determine whether the
28 project is in the public interest. The Legislature has already made an
29 unconditional determination that the scrubber project is in the public interest.
30 Nowhere in RSA 125-O does the Legislature suggest that an alternative to
31 installing scrubber technology as a means of mercury compliance may be
32 considered, whether in the form of some other technology or retirement of the
33 facility. Furthermore, RSA 125-O does not: (1) set any cap on costs or rates; (2)
34 provide for Commission review under any particular set of circumstances; or (3)
35 establish some other alternative review mechanism. Therefore, we must accede to
36 its findings. (Order 24,898 at page 12).

37 And:

38 We do not find it reasonable to conclude that the Legislature would have made a
39 specific finding in 2006 that the installation of scrubber technology at the

1 Merrimack Station is in the public interest, set rigorous timelines and incentives
2 for early completion, and provided for annual progress reports to the Legislature,
3 while simultaneously expecting the Commission to undertake its own review,
4 conceivably arrive at a different conclusion, and certainly add significant time to
5 the process. (Order 24,898 at page 9).

6 **Q. To what extent did PSNH rely on the Commission's orders regarding the cost estimates to**
7 **guide its path towards complying with the Scrubber Law?**

8 A. A great extent. PSNH relied upon the September 2008 Commission decision as part of the
9 Company's overall Scrubber Law compliance initiative.

10 Later, the Commission endorsed its holding regarding the public interest of the Scrubber Project
11 in its Order No. 24,979 issued on June 19, 2009, at page 15 – another Order that PSNH relied
12 upon:

13 Further distinguishing this case is the fact that the Legislature pre-approved
14 constructing a particular scrubber technology at Merrimack Station by finding it
15 to be in the public interest and thereby removing that consideration from the
16 Commission's jurisdiction.

17 And:

18 It was the Legislature who determined that the scrubber technology is in the
19 public interest and, therefore, any modification or rescission of that finding
20 logically rests with that body. Consequently, we may not revisit or review the
21 finding. (Id. at 17.)

22 The prudence standard applied by the Commission is "what a reasonable person would do under
23 the circumstances existing at the time of a decision." (*Re PSNH*, 76 NH PUC 645 (1991); *Re*
24 *PSNH*, 77 NH PUC 268 (1992); *Re PSNH*, 81 NH PUC 531 (1996); *Re PSNH*, 83 NH PUC 54
25 (1998)). Given the factors stated above and the Commission's own findings on what was
26 reasonable, it would have been unreasonable for PSNH to take any course of action that would
27 have negated the Legislature's specific findings and that would have added time to the project.