

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

DOCKET NO. DE 14-238

**2015 PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
RESTRUCTURING AND RATE STABILIZATION AGREEMENT**

REBUTTAL TESTIMONY OF LISA K. SHAPIRO, Ph.D.

November 19, 2015

1 **Q. Please state your name, title and business address.**

2 A. My name is Lisa K. Shapiro and my business address is 214 North Main Street,
3 Concord, New Hampshire 03301. I am Chief Economist at Gallagher, Callahan &
4 Gartrell, P.C.

5 **Q. Please summarize your relevant background and employment experience.**

6 A. I hold a Ph.D. in Economics from Johns Hopkins University. I have more than 20 years
7 of experience in energy industry economics and policy, providing strategic advice,
8 economic and policy analysis, and legislative and regulatory representation for electric
9 utilities, large energy users, and independent power plant developers and operators. I
10 have often been called upon by policymakers and business groups to present and provide
11 information on energy issues, and have authored a number of impact studies, reports,
12 and presentations on the economic impacts of energy policies and projects. A copy of
13 my CV is included. (Attachment LKS-R-1.)

14 **Q. Have you previously provided expert testimony?**

15 A. Yes. I previously provided expert economics testimony before this Commission in
16 Docket No. DE 10-195 regarding the Burgess Biomass Plant in Berlin, New Hampshire
17 and Docket No. DE 11-250 regarding the Public Service Company of New Hampshire
18 Investigation of Scrubber Costs and Cost Recovery. I have testified on the economic
19 and policy impacts of proposed legislation concerning electric industry restructuring, the
20 Renewable Portfolio Standard (RPS), the Regional Greenhouse Gas Initiative (RGGI),
21 pollution control tax exemptions and utility taxes. I have also testified before the New
22 Hampshire legislature on the economic impacts of other business and tax proposals and
23 was an expert witness in a business arbitration concerning a large renewable energy
24 project.

25 **Q. What is the purpose of you testimony?**

26 A. The purpose of my testimony is to discuss public policy decisions made by the General
27 Court and the related economic principles to address recommendations made by Non-

1 Advocate Staff in its prefiled testimony. More specifically the purpose of my testimony
2 is to discuss how the testimony filed by Non-Advocate Staff ignores and is inconsistent
3 with the findings, purposes, and determinations found in the law of New Hampshire and
4 the economic principles that underlie it.

5 **Q. What public policy decisions has the General Court made with regard to the**
6 **structure of the electric industry?**

7 A. In 1996, the Legislature enacted and the Governor signed HB 1392, “An act
8 restructuring the electric utility industry in New Hampshire and establishing a legislative
9 oversight committee,” 1996 N.H. Laws, Chapter 129, which created RSA Chapter 374-F
10 (the “Restructuring Law”). The general court made a series of significant legislative
11 findings in that law:

12 129:1 Findings. The general court finds that:

13 I. New Hampshire has the highest average electric rates in the nation and
14 such rates are unreasonably high. The General Court also finds that
15 electric rates for most citizens may further increase during the remaining
16 years of the Public Service Company of New Hampshire rate agreement
17 and that there is a wide rate disparity in electric rates both within New
18 Hampshire and as compared to the region. The general court finds that
19 this combination of facts has a particularly adverse impact on New
20 Hampshire citizens.

21 II. New Hampshire's extraordinarily high electric rates disadvantage all
22 classes of customers: industries, small businesses, and captive residential
23 and institutional ratepayers and do not reflect an efficient industry
24 structure. The general court further finds that these high rates are causing
25 businesses to consider relocating or expanding out of state and are a

1 significant impediment to economic growth and new job creation in this
2 state.

3 III. Restructuring of electric utilities to provide greater competition and
4 more efficient regulation is a nationwide phenomenon and New
5 Hampshire must aggressively pursue restructuring and increased
6 customer choice in order to provide electric service at lower and more
7 competitive rates.

8 IV. Monopoly utility regulation has historically substituted as a proxy for
9 competition in the supply of electricity but recent changes in economic,
10 market and technological forces and national energy policy have
11 increased competition in the electric generation industry and with the
12 introduction of retail customer choice of electricity suppliers as provided
13 by this chapter, market forces can now play the principal role in
14 organizing electricity supply for all customers instead of monopoly
15 regulation.

16
17 V. It is in the best interests of all the citizens of New Hampshire that the
18 general court, the executive branch, and the public utilities commission
19 work together to establish a competitive market for retail access to
20 electric power as soon as is practicable and that interim stranded cost
21 recovery charges be determined and put into effect for each utility
22 operating in this state to expedite and facilitate the transition for such a
23 market.

24 Included in these Findings are the following of import to my testimony:

- 25 ▪ In Subparagraph, III, the law expressly finds that greater competition, efficient
26 regulation, and more competitive rates are state goals.

1 ▪ In Subparagraph IV, the law expressly finds that monopoly utility regulation
2 serves as a proxy for competition, and should give way to competition and
3 market forces.

4 ▪ In Subparagraph V, the law expressly finds that all three branches of state
5 government, and expressly the public utilities commission, should work to
6 expeditiously establish a competitive electricity market.

7 Further, the Legislature codified at RSA 374-F:1 the express purpose of the
8 Restructuring Law in the first sentence of Chapter 374-F:

9 RSA 374-F:1, I – “I. The most compelling reason to restructure the New
10 Hampshire electric utility industry is to reduce costs for all consumers of
11 electricity by harnessing the power of competitive markets.”

12 The General Court has also determined in RSA 369-A:1, I that, “Restructuring of
13 electric utilities to provide greater competition and more efficient regulation has been
14 found by the general court to be in the public good and New Hampshire is now
15 aggressively pursuing restructuring and increased customer choice in order to provide
16 electric service at lower and more competitive rates.”

17 **Q. What are the underlying economic and constitutional principles behind these**
18 **General Court Findings?**

19 A. In New Hampshire, competition is more than just a principal of economics – creation
20 and maintenance of a competitive economy rises to the level of constitutional right. Part
21 II, article 83 of the New Hampshire constitution states: "Free and fair competition in the
22 trades and industries is an inherent and essential right of the people and should be
23 protected against all monopolies and conspiracies which tend to hinder or destroy it."
24 The Restructuring Law in RSA 374-F:1, II expressly refers to this Constitutional

1 provision as one of the main purposes for replacing monopoly regulation of utilities with
2 the reliance on competitive market forces.

3 **Q. Is Non-Advocate Staff's recommendation to delay divestiture for at least another 5**
4 **years consistent with harnessing market forces rather than relying on traditional**
5 **regulation to determine default service prices for PSNH ratepayers?**

6 A. No. Non-Advocate Staff recommends that the entire costs of PSNH generation should
7 remain in the default service rate for at least the next 5 years. Under Non-Advocate
8 Staff's recommendation, the recovery of the total costs of PSNH's generation fleet is not
9 controlled by market forces. Counter to foundational principles of restructuring, Non-
10 Advocate Staff's recommendation is that all generation related costs continue to be
11 subject to the cost of service regulation.

12 **Q. How is the cost of generation services generally determined under traditional**
13 **ratemaking as recommended by Non-Advocate Staff as compared with**
14 **restructured markets?**

15 A. Utility service in the United States has traditionally been deemed a monopoly service.
16 That is, by having only one utility provide a complete range of bundled services,
17 customers would be better served than if multiple providers were allowed to provide
18 competing, but redundant services.

19 In the electric industry, bundled services have traditionally been provided by vertically-
20 integrated electric companies. A vertically-integrated electric company was responsible
21 for ensuring that all electricity needs of its customers were met. A vertically-integrated
22 utility was typically given an exclusive franchise for geographic areas. Within its
23 franchise boundaries, an electric utility was responsible for forecasting, planning,
24 creating, and ensuring that all distribution, transmission, capacity, and energy needs of
25 its captive customers were met.

1 As part of what has been deemed the “regulatory compact,” in exchange for receiving an
2 exclusive monopoly franchise to serve, a utility was subject to governmental regulation
3 of what it could charge its customers. This rate regulation was subject to Constitutional
4 bounds, as the U.S. Supreme Court ruled in the Bluefield and Hope decisions.

5 To meet Constitutional requirements, in exchange for a utility dedicating its
6 shareholders’ capital to meet the needs of its customers, those shareholders were entitled
7 to receive a return on their investment at a level consistent with returns received in other
8 enterprises of similar risk.

9 The cost-of-service based regulation paradigm was the most commonly used method of
10 determining how much a utility could charge its customers, and of regulating the return,
11 or profit, that the utility was allowed to earn for its shareholders. This governmental
12 regulation of rates and profits served as a “proxy” to substitute for the competitive forces
13 that would limit costs and profits where there was not a monopoly. New Hampshire law
14 expressly recognized this in 1996, 129:1, IV: “Monopoly utility regulation has
15 historically substituted as a proxy for competition in the supply of electricity.”

16 New Hampshire has made a policy decision by law to largely abandon the monopoly
17 regulation of the electricity generation segment of the utility industry and instead rely
18 upon market forces. In such restructured markets, the recovery of generation costs is
19 subject to market forces. If the revenue merchant generators collect through the
20 restructured markets covers their operating costs but is not enough to cover all of their
21 capital costs, they may be forced to write the assets down to the market value, and
22 consider other options. In contrast, under Non-Advocate Staff recommendations, above-
23 market costs of PSNH generation will be paid by default service customers. This is
24 because under the Non-Advocate Staff recommendation, the total costs of PSNH
25 generation will continue to be protected from market forces because PSNH default
26 service customers will continue to cover all prudently-incurred costs passed on to them
27 through the traditional cost-of-service recovery model favored by Non-Advocate Staff.

1 This recommendation contradicts New Hampshire public policy and the economic
2 principles underlying it that generation should be subject to market forces.

3 **Q. How does Non-Advocate Staff take into account that the PSNH default service**
4 **customers rather than all PSNH retail customers, generally pay for any on-going**
5 **above-market costs of retained generation?**

6 A. Non-Advocate Staff appears to acknowledge that some PSNH customers have been
7 “saddled with PSNH’s default energy service rate which currently includes a portion of
8 the cost of the Merrimack Station Scrubber.” (Richard Chagnon, pg. 8 lines 5 – 7.) Its
9 solution of the possible risk from relying on default service customers to pay for PSNH
10 generation costs, however, appears to rely upon the legislature changing their long
11 standing policy to promote restructuring of the electric industry. It also appears to rely
12 upon adoption of a new law to 1) allow some of the costs of generation to be socialized
13 across all customers, and 2) that forces default service customers to continue to bear the
14 remaining cost of regulated generation going forward. (Jay Dudley, pg. 14, lines 15 –
15 20). Such a policy fix to manage risk and reduce stranded costs as suggested by Non-
16 Advocate Staff directly contradicts the General Court’s policy and related economic
17 principles to promote market forces to determine prices rather than traditional cost of
18 service regulation, and to complete restructuring.

19 Furthermore, Non-Advocate Staff’s recommendation that it is in the economic interest
20 of PSNH retail customers to retain generation for at least another five years would seem
21 to ignore mathematical calculations for default service customers: Under the Non-
22 Advocate Staff recommendation roughly 50 percent of the default service load is paying
23 for 100 percent of any above market generation costs whereas under divestiture these
24 costs are put to the market test, minimized, and then spread fairly to all PSNH retail
25 customers.

1 **Q. How do the principles of harnessing market forces relate to the testimony filed by**
2 **Non-Advocate Staff?**

3 A. The testimony filed by Non-Advocate Staff does not accept the change from monopoly
4 regulation of electricity generation as a proxy for competition, to actual competition. Its
5 testimony focuses on various forecasts of costs, supplies, demand, and the like, and
6 criticizes the Settling Parties' estimates. In Non-Advocate Staff's views of the industry,
7 PSNH's generating assets have great value for at least the near-term. Non-Advocate
8 Staff however recommends that no divestiture of those assets occur for at least five years
9 so that customers can extract and benefit from that near-term value.

10 In coming to its conclusions and recommendations, Non-Advocate Staff ignores the
11 fundamental principles of the competitive marketplace that the General Court has
12 enacted. Non-Advocate Staff appears to reject the State policy favoring competition in
13 the electricity generation sector because it hopes the Public Utilities Commission can
14 out-guess the marketplace and time the sale of the assets.

15 Regardless of whether one accepts Non-Advocate Staff's estimates or the Settling
16 Parties' estimates of projected consumer savings and costs, only the marketplace can
17 determine the fair market value of PSNH's assets. Furthermore, forecasting PSNH's
18 default service rate with and without the fully loaded costs of regulated generation is
19 only a guess. If there is near-term value as Non-Advocate Staff suggest, that near-term
20 value will raise the price of the assets in an open-market divestiture process. If that
21 near-term value was extracted via the passage of time, then the fair market value would
22 decrease over time.

23 Furthermore, Non-Advocate Staff would seem to recognize that the value of generation
24 plants in a competitive market is at least as much as in a regulated market.

25 In PSNH data request Q-1-062(b), Non-Advocate Staff was asked, "Under Staff's
26 proposed auction process, Staff believes there will be an efficient outcome that

1 maximizes TTR. What are the conditions under which an efficient auction process
2 would lead to value less than what the plant is worth as a regulated plant?” Non-
3 Advocate Staff’s response to that question was, “Staff has not claimed that an efficient
4 auction process would lead to value less than what the plant is worth as a regulated
5 plant.” Despite this recognition of market forces, Non-Advocate Staff seems to believe
6 that it can however optimize the value to customers by timing the sale of the assets and
7 thus beat the market, directly counter to the legislative and economic principles behind
8 the restructuring and related findings, purposes, and determinations.

9 Whether the plants are sold now or 5 years from now, it appears that under an efficient
10 auction process the value of the plants would not be less than what they are worth as a
11 regulated plant, Non-Advocate Staff appears to concede. But if an efficient auction
12 process and continued operation of the plants in a regulated environment do not produce
13 disparate values, and forecasting PSNH default service rates with and without regulated
14 generation is fraught with uncertainty, then only exogenous events and externalities
15 should be considered to determine when divestiture should take place.

16 **Q. What type of exogenous events and externalities impact whether PSNH’s assets**
17 **should be divested now or sometime in the future?**

18 A. Over the more than five additional years that Non-Advocate Staff recommends PSNH
19 generation plants remain under cost-of-service rather than divested, there are risks of
20 exogenous events and externalities that may impact the future of PSNH’s generating
21 assets. Non-Advocate Staff’s testimony however does not rely upon externalities or
22 exogenous events for its recommendation that divestiture be delayed for at least five
23 years.

24 Externalities or exogenous events ignored by Non-Advocate Staff that may impact the
25 future value of PSNH’s generating assets to customers include change in government
26 policies, interest rates and environmental regulation for example, and catastrophic events
27 to power plants not fully covered by insurance.

- 1 ▪ Rising interest rates. An increase in the cost of money would impact the value of
2 PSNH's generating assets to customers in two ways. First, such an increase in
3 interest rates would amount to an increase in costs that would tend to decrease
4 the price a bidder would be willing to pay for those assets. Secondly, any
5 financing of stranded costs subsequent to divestiture would both cost more and
6 have a larger amount of stranded costs to finance.

- 7 ▪ The possibility of a catastrophic event that is not fully compensated by
8 insurance. A catastrophic turbine failure, explosion or fire could occur that
9 significantly reduces an asset's value. Similarly, a natural disaster (hurricane,
10 tornado, flood, etc.) could have the same effect.

- 11 ▪ Changes in public policy. When will the next "scrubber" type situation be
12 mandated by law? When will new greenhouse gas restrictions be placed into
13 law?

14 Non-Advocate Staff appears to believe that regulators can time the market for when to
15 best divest, rely on forecasted default service rates being lower with the inclusion of all
16 PSNH generation costs, and recommend that exogenous risks to the value of the PSNH
17 generation plants continue to be borne by PSNH retail customers for at least the next
18 five years. This Non-Advocate Staff recommendation is directly counter to the General
19 Court's findings, purposes and determinations to move generation out from under
20 traditional cost of service regulation.

21 **Q. Have Non-Advocate Staff ignored other factors in its recommendation that**
22 **divestiture be delayed for at least five years?**

23 A. Yes. Non-Advocate Staff ignores at least three additional significant factors in its effort
24 to maintain the traditional model of cost-of-service, and time the market of when best to
25 sell the plants.

1 First, Non-Advocate Staff ignores the law. The General Court has chosen to accept
2 competitive market forces to control the electricity generation market. Non-Advocate
3 Staff wants to continue the use of regulation as a proxy for competition. Non-Advocate
4 Staff refuses to accept the public policy determination of the Legislature, the Governor,
5 and the law and instead prolong the past regulatory paradigm.
6 Second, Non-Advocate Staff also ignores the mandate in the law that the change to a
7 competitive market takes place expeditiously. In 1996, the General Court found and the
8 law states that:

9 V. It is in the best interests of all the citizens of New Hampshire that the
10 general court, the executive branch, and the public utilities commission
11 work together to establish a competitive market for retail access to
12 electric power *as soon as is practicable* and that interim stranded cost
13 recovery charges be determined and put into effect for each utility
14 operating in this state *to expedite* and facilitate the transition for such a
15 market.

16 It is now nineteen years since that law was enacted, yet Non-Advocate Staff ignores it.
17 In its effort to maintain traditional cost of service regulation and “time the market,”
18 Non-Advocate Staff testifies that another five years of regulation makes sense. If
19 continued regulation in lieu of competition makes sense, the remedy is the Legislature.
20 Non-Advocate Staff has thus exceeded its authority by rejecting the State’s policy
21 favoring competition as the proper means of valuing PSNH’s generating assets, and
22 instead spend significant effort guessing at that value by quibbling over which forecasts
23 are better, and choosing some benefits, costs and risk to PSNH generation but
24 discounting others, to buttress its recommendation to maintain the status quo.

25 The State policy of expediting the move to competition is not just an aging, two-decade
26 old pronouncement. In 2014 N.H. Laws, Ch. 310, the Legislature amended RSA 369-

1 B:3-a to require, “I. Before January 1, 2015, *the commission shall commence and*
2 *expedite a proceeding* to determine whether all or some of PSNH’s generation assets
3 should be divested.” Just this year, the Legislature repealed and reenacted RSA 369-
4 B:3-a as part of 2015 N.H. Laws, Chapter 221:10, to read in part, “II. *As part of an*
5 *expedited proceeding, the commission shall review* the 2015 settlement proposal and
6 determine whether its terms and conditions are in the public interest.” The State policy
7 to expeditiously adopt a competitive electric generation segment is clearly expressed.

8 Rather than expedite the transition to competition, Non-Advocate Staff seeks to delay
9 that transition for at least another half decade.

10 Third, the General Court has found it in the public interest to resolve matters impacting
11 potential stranded costs via settlement. In relevant part, in 2014 N.H. Laws 310:1, the
12 law says, “310:1 Purpose. The purpose of allowing the public utilities commission to
13 determine if divestiture of Public Service Company of New Hampshire’s (PSNH)
14 remaining generation assets is in the economic interests of PSNH’s retail customers
15 should be to ... promote the settlement of outstanding issues involving stranded costs...
16 .” Such a settlement of issues involving stranded costs exists today – the 2015 PSNH
17 Settlement Agreement that is the subject of this proceeding. Approximately a dozen
18 disparate parties reached agreement on highly contentious issues. Non-Advocate Staff
19 ignores the General Court’s desire to promote such a settlement resolving outstanding
20 issues identified in the Law and recommends that the Commission join in estimates
21 which circumvent public policy by trying to time the market, and maintain traditional
22 cost of service regulation on generation.

23 **Q. Can you please state your conclusions?**

24 A. Trying to time the market and get increased value for PSNH’s generating assets as Non-
25 Advocate Staff recommends by waiting 5 years, and forcing default service customers to
26 continue to pay all the costs, is a bet that regulators know better than the market. Non-

1 Advocate Staff's conclusions are inconsistent with the State's constitution, with several
2 statutory enactments, and with State policy and the economic principles related to them.

3 As Chairman Honigberg noted during the October 8, 2015, hearing in this proceeding,
4 the issue is not if divestiture should go forward; it's when. Non-Advocate Staff
5 acknowledges that an efficient auction process would not lead to values less than what
6 the plant is worth as a regulated plant yet concludes that about 50 percent of the PSNH
7 retail customers "saddled with PSNH's default service rate" is somehow a good bet for
8 the next 5 years.

9 Non-Advocate Staff acknowledges that the market value of PSNH generation is not less
10 than the regulated value of the plants. That holds true whether the plants are sold now or
11 5 years from now. Trying to time the market of when to sell the assets would appear to
12 have no basis.

13 Hence, the State's public policy requiring the creation of a competitive electric
14 generating market "expeditiously," "as soon as practicable," and via "settlement"
15 control. The law's directive seeking to promote the resolution of outstanding issues
16 affecting stranded costs is clear; and, the resolution of Chairman Honigberg's issue of
17 "when" is clearly "now." The Commission should approve the 2015 PSNH Settlement
18 quickly and start the divestiture process in order to "harness[] the power of competitive
19 markets" as the Restructuring Law demands.