

STATE OF NEW HAMPSHIRE
PUBLIC UTILITIES COMMISSION

DE 09-035, DE 11-150 & DE 14-238

In the Matter of:

2015 Public Service Company of New Hampshire Restructuring and Rate
Stabilization Settlement Agreement

Rebuttal Testimony

of

Thomas C. Frantz
Director – Electric Division

November 23, 2015

THE STATE OF NEW HAMPSHIRE
BEFORE THE NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION
REBUTTAL TESTIMONY OF THOMAS C. FRANTZ
PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE D/B/A EVERSOURCE ENERGY
DETERMINATION REGARDING PSNH GENERATING ASSETS
Docket No. DE 14-238

1 **Q. Please state your name, position, and responsibilities.**

2 **A. My name is Thomas C. Frantz. I am Director, Electric Division at the New Hampshire**
3 **Public Utilities Commission. My responsibilities encompass providing regulatory and**
4 **policy analysis and advice regarding electricity-related matters to the Commission as**
5 **well as to the Legislature when requested. I also have the responsibilities associated**
6 **with administering a department of energy professionals.**

7

8 **Q. Have you previously filed direct testimony in this proceeding?**

9 **A. Yes.**

10

11 **Q. What is the purpose of your rebuttal testimony?**

12 **A. The purpose of my rebuttal testimony is to address issues raised in the pre-filed**
13 **testimony of Michael D. Cannata, testimony he filed on behalf of non-advocate Staff. In**
14 **particular, I address issues associated with the lack of savings Mr. Cannata asserts in**
15 **his pre-filed testimony and the benefits he calculates would accrue to PSNH's default**
16 **service customers if the Company were to keep the generation assets. The savings**
17 **estimate that Mr. Cannata disagrees with is contained in the 2015 Public Service**
18 **Company of New Hampshire Restructuring and Rate Stabilization Agreement ("the**
19 **Settlement Agreement")**

1

2 **Q. Please summarize your concerns with the pre-filed testimony of Mr. Cannata.**

3 **A. Mr. Cannata finds that PSNH's customers would incur additional costs of \$677.6 million**
4 **over five years if the generation assets were to be sold as anticipated in the Settlement**
5 **Agreement, a dramatic and erroneous conclusion based primarily on his adjustments to**
6 **customer savings shown on Exhibit MDC-3A. The resulting rate impact of his**
7 **adjustments is shown on Exhibit MDC 3-B. His analysis attributes savings of keeping the**
8 **units to three main areas which he refers to in Exhibit MDC-3A as Adjustment #B:**
9 **Partially Missed Load Obligation Payments with Sale; Adjustment #C: Savings From**
10 **High Market Prices and Missed Winter Price Spikes; and Adjustment #D: Use of Low**
11 **Gas Price Only on Competitive ES Rates¹.**

12

13 **In each of these three areas, Mr. Cannata picked a specific recent change or event in**
14 **the market and used it going forward for the period 2016-2021 in order to devalue the**
15 **savings estimates in the Settlement Agreement and justify postponing the auction of the**
16 **fossil-hydro (F/H) assets. In isolation, they may appear logical at first look and he was**
17 **correct to point these issues out in his testimony, but he fails to consider the complexity**
18 **of the adjustments or the changes that have occurred that mitigate his findings. Perhaps**
19 **the strongest criticism I have though, is even if his belief about the added value of**
20 **retaining the assets were true, which I want to be clear that I don't find compelling, he**
21 **seems to totally disregard why that added value wouldn't be reflected in the prices**
22 **received in an auction. In fact, his testimony ignores the dynamic characteristics of**
23 **markets, generally.**

24

¹ Testimony of Michael D. Cannata, Jr. Exhibit MDC-3A. Two other adjustments were made by Mr. Cannata in Exhibit MDC-3A which I am not addressing in my rebuttal testimony.

1 **Q. Would you address each of Mr. Cannata's main points about the additional costs**
2 **customers would incur if the assets were divested?**

3 **A. Yes. In Adjustment B, Mr. Cannata attributes \$206 million in lost savings due to the**
4 **increase in Forward Capacity Market (FCM) prices that occurred in ISO-NE FCM**
5 **Auction #9 in which Rest-of-Pool prices cleared at \$9.55 per kW-month. He contrasts**
6 **that to La Capra's FCM price forecast in its March 31, 2014 PSNH Generation Asset and**
7 **PPA Valuation Report (La Capra Report) that contained a table of historic and**
8 **forecasted FCM prices. At the time of the La Capra Report, Forward Capacity Market**
9 **(FCA) Auction 9 had not been held and the actual clearing price for FCA #9 resulted in**
10 **higher prices than was contained in the La Capra Report by \$4.84 per kW-month. Mr.**
11 **Cannata's analysis used the clearing price for Rest-of-Pool from FCA-9 as the clearing**
12 **price throughout his review of the customer savings contained in the Settlement**
13 **Agreement.**

14
15 **Q. That assumption about FCM prices appears reasonable. Do you disagree with it?**

16 **A. I agree that FCM conditions have changed since the La Capra Report and Staff's**
17 **accompanying report issued on April 1, 2014 in IR 13-020 entitled *Preliminary Status***
18 ***Report Addressing the Economic Interest of PSNH's Retail Customers as it Relates to***
19 ***the Potential Divestiture of PSNH's Generating Assets* (Staff Report). What I don't agree**
20 **with is Mr. Cannata's statement that retail customers will pick up all the Load Obligation**
21 **Payments if the generating assets are sold. True, there won't be an offset based on**
22 **revenues from the assets that cleared in future auctions, but it's misleading and**
23 **inappropriate to view this adjustment or his others, in isolation. The markets, capacity**
24 **and energy, are inter-related and, moreover, the analysis and modeling that was done**
25 **by La Capra captures that interdependence.**

Q. Would you expand on that?

A. Yes. The La Capra study involved a large number of integrated variables to derive the value of the PSNH fossil-hydro assets as well as the value of the two PPAs. Historical and forecasted data on a myriad of variables - such as loads, fuel prices, outage characteristics, dispatch of units, imports and exports, transmission upgrades, retirements, new generation, energy efficiency and renewable portfolio standards – to mention just a few, went into La Capra's valuation of the PSNH F/H assets as well as the forecast for the locational marginal prices in New Hampshire which Staff then used to derive its comparison of PSNH Energy Service Rate to future market prices. To pick one or two items that have changed since the study, such as the capacity market or winter price spike, while ignoring others, such as the effects of the ISO-NE winter fuel program or the forecast of lower natural gas prices, is inappropriate and unbalanced, a point I'll address more fully later in my testimony.

Q. Are you saying the recent results from FCA-9 should be ignored?

A. No, but I am saying it should be viewed in context and that context is applicable to his other two adjustments, also. Energy markets are dynamic and complex and as I've said, issues shouldn't be viewed in isolation.

Q. Do you believe a new study needs to be done to confirm the savings of the Settlement Agreement?

A. No, for several reasons. The first is that to the extent the capacity values now are higher the additional value should be reflected in the auction price of the units, which would lower the level of stranded costs, all else equal. More importantly, the savings values that the Settlement Agreement was based upon from the April 1, 2014 Staff Report

1 haven't changed materially as I'll describe later. I will note that La Capra did update its
2 capacity forecast, but Mr. Cannata chose not to use the updated capacity values done
3 by La Capra (see Attachment TCF-R-01). The third reason is that I'm not convinced the
4 future capacity value of the fossil units to customers if the assets aren't divested will
5 cover the PSNH Capacity Supply Obligation as it does today. Mr. Cannata never
6 mentions the risk to capacity payments posed by ISO-NE's "Pay-for-Performance"
7 program that was proposed by ISO-NE and approved by FERC for the 2018-2019
8 capacity period (see 147 FERC 61, 172, Order on Tariff Filing and Instituting Section
9 206 Proceeding, May 30, 2014).

10
11 **Q. Please describe the risk posed by Pay-for-Performance.**

12 **A.** The capacity market is a forward market intended to provide the region, both system-
13 wide and locally, with the resources necessary to meet the expected electricity demand
14 plus reserve requirements three years in the future. As Mr. Cannata points out, the
15 clearing price for FCA-9 increased significantly indicating the need for new resources to
16 meet the expected capacity requirement for 2018-2019. What he doesn't mention are
17 the changes in FCA-9, including the sloped demand curve, the seven year lock-in
18 provision for new resources and the Pay-for-Performance incentive program. The Pay-
19 for-Performance program is intended to better align performance of capacity resources
20 during the times they're needed most, during Capacity Scarcity Conditions. Resources
21 that can't meet their capacity obligation when called upon during those scarcity periods
22 will be subject to penalties. It's not clear at this time how PSNH's fossil assets will
23 perform during these Capacity Scarcity Conditions, but the new program does pose a
24 risk as those resources that take on a Capacity Supply Obligation, as PSNH now does,
25 will receive capacity payments known as a Base Capacity Payment, the product of the

1 MW cleared in the market multiplied by the clearing price in that capacity auction;
2 however, the second part of the program is the Capacity Performance Payment. The
3 Capacity Performance Payment can be either positive or negative depending on the
4 performance of the resource during Capacity Scarcity Conditions. A resource that
5 doesn't deliver during the period will pay to those that provide more than their share of
6 energy and reserves. Very poor performance could wipe out the Capacity Base
7 Payment. That type of potential risk should have been recognized by Mr. Cannata.

8
9 **Q. You also mentioned Adjustment #C: Savings From High Market Prices and Missed**
10 **Winter Price Spikes. Do you have concerns about this adjustment?**

11 **A. Yes, I do. Mr. Cannata adjusts the savings from the Settlement Agreement downward by**
12 **\$583 million based upon his simple extension of PSNH stating that its generating assets**
13 **provided its ES rate customers \$103.4 million in value in 2013, \$134.1 million in 2014**
14 **and \$54 million through the first half of 2015. Those amounts were based on comparing**
15 **the operation of the generating assets versus purchasing the equivalent amount of**
16 **power in the real-time market. Mr. Cannata then averaged that 2.5 year amount and put**
17 **it on an annual basis and multiplied by 5 to come up with the "lost savings" due to**
18 **running PSNH's generating assets during the high peak winter periods recently**
19 **experienced in New England. Attractively simple, but wrong for a number of reasons.**

20
21 **Q. Please elaborate.**

22 **A. The first criticism I have is minor, but indicates how this "savings" can be so easily**
23 **overstated. A look at the savings to customers indicates that the savings associated with**
24 **using PSNH's generating assets during the high-priced periods of 2013 and 2014 and**
25 **then extending those years, can easily result in overstating the savings. Because the**

1 vast majority of the savings occur in 3 to 4 months of the year, using only 2.5 years
2 instead of a longer period overstates Mr. Cannata's loss of savings.

3
4 A more important criticism is that he doesn't recognize that steps have been taken that
5 have affected the wholesale market prices during the winter. ISO-NE amended its winter
6 Reliability program for the winter 2014-2015 to allow LNG to participate. The result was
7 that for a winter that was colder than the winter of 2013-2014, overall wholesale market
8 costs were down for the December 2014-February 2015 by more than \$2 billion
9 compared to the same period a year earlier. If Mr. Cannata's assumptions were correct,
10 the winter forward prices for 2015-2016 and 2016-2017 would be as high or higher than
11 they were for the 2014-2015 forward contracts, but that isn't what has happened. The
12 markets have continued to adjust. This year's January 2016 forward contracts for on-
13 peak power are trading around \$70 to \$75 per MWh, down more than \$100 per MWh
14 from the same period a year earlier. Similar changes are reflected in the prices of the
15 default service prices for UES and NHEC for same period compared to last year.

16 Another indication of the change in wholesale prices is the recently filed November 2015
17 Report on Rate ADE (see Attachment TCF-Reb-02). It indicates that the marginal cost of
18 service for customers on Rate ADE will be 7.30 cents per kWh for December 2015 and
19 9.90 cents per kWh for January 2016 and 10.20 cents per kWh for February 2016.

20 Those are indications of what the wholesale market is anticipating for clearing prices
21 going into this winter.

22
23 **Q. Are there other problems with Adjustment #C: Savings From High Market Prices**
24 **and Missed Winter Price Spikes?**

1 A. Yes. Perhaps the most significant again is that if he's correct about the risk of high,
2 volatile winter prices, a possibility that shouldn't be ignored or brushed aside, the
3 question remains why that added value wouldn't be seen in the results of the auction? It
4 is hard to imagine that market participants wouldn't recognize that value and reflect it in
5 their bids.

6
7 Another point I would like to make is that those benefits, ultimately, are overstated
8 because customers on default service don't pay real-time LMPs and wholesale market
9 suppliers can mitigate those costs in their portfolio by buying strips of power for that time
10 period. As I've stated earlier and as shown in Attachment TCF-Reb-03, forward on-peak
11 power futures were trading at \$48.22 per MWh for December 2015, \$71.75 per MWh
12 for January 2016, \$73.25 per MWh for February 2016 and similar, though slightly higher
13 for the same periods in 2017 and 2018. Off-peak prices are even lower, trading in the
14 \$50-\$70 per MWh range (see Attachment TC-Reb-04). The winter premium does exist,
15 but is far less than Mr. Cannata estimates in Adjustment #C. In short, the value of the
16 PSNH "hedge" of owning generating assets is vastly overstated and nowhere near the
17 \$583 million stated in Mr. Cannata's testimony.

18
19 Q. Do you have any other comments on the lost savings from Adjustment #C?

20 A. Yes, I would like to point out that ultimately the results should show up in rates and that
21 if Mr. Cannata is correct, the rates for PSNH with the costs of the scrubber, but ignoring
22 the deferral costs, should be lower than the default service costs of the other NH electric
23 utilities who go out and solicit power from the market. I address rates below, but another
24 point I would like to make and which is captured in the rate analysis that follows is the
25 lack of recognition by Mr. Cannata for the fixed costs associated with PSNH's

1 generating assets. While fixed costs aren't important in deciding whether to run a unit or
2 not, they do factor into the level of costs that are paid by default service customers.

3 Fixed costs are included in the overall rate comparison discussion below.
4

5 **Q. Have you made a rate comparison of default service?**

6 **A.** Yes. Attachment TCF-Reb-05 shows the actual default service rates of NHEC and UES
7 for residential customers since January 2012. It also shows what residential customers
8 could have paid for power from a competitive electric power supplier, North American
9 Power (NAP), since December 2012. Those rates are contrasted with PSNH's default
10 service rate had the full cost of the scrubber been in effect since January 2012. That
11 cost was estimated by using an adder of 0.4 cents per kWh to the temporary rate that
12 went into effect of 0.98 cents per kWh. It is carried through for the upcoming period as
13 are the effective default service rates for UES and NHEC and the rate a residential
14 customer could contract to pay with NAP.
15

16 **Q. What does Attachment TCF-Reb-05 indicate?**

17 **A.** It indicates that in an "apples-to-apples" comparison of default service rates, PSNH's
18 default service rate was or would have been substantially higher than the rates default
19 customers paid at UES, NHEC or could have paid with NAP. There are periods where
20 the PSNH rate is less than the rates of default service paid by UES, in particular, which
21 reflects the winter premium seen last year, but that premium disappeared for this
22 upcoming winter period for UES, NHEC and NAP. In fact, since January 2012, the
23 average price through April 2016 indicates that PSNH default service customers –
24 assuming the scrubber had gone into rates at its full cost without a deferral – would have
25 paid approximately 0.76 cents per kWh (UES) to 1.46 cents per kWh (NHEC) more than

1 residential customers of UES, NHEC or NAP. It also indicates that the large winter value
2 Mr. Cannata asserts will be lost to customers from the sale of the assets, at least for this
3 upcoming period, does not appear to exist. Of course, I understand that the assets
4 wouldn't be divested until late 2016 at the earliest, but I use this upcoming period as an
5 indication that Mr. Cannata's adjustment isn't supported by current market data.
6

7 **Q. Would you now address Adjustment #D: Use of Low Gas Price Only on**
8 **Competitive ES Rates.**

9 A. Yes. I believe that the use of the low natural gas price forecast to calculate savings is
10 supported by all the information about natural gas markets and current forecasts,
11 including the updated forecast by La Capra, the forecast used by TCR for its Avoided
12 Energy Supply Costs 2015 study (AESC 20015), as well as the future prices for natural
13 gas (see Attachment TCF-Reb-06). La Capra updated its natural gas forecast as well as
14 its forecast of NH LMPs. Mr. Cannata chose not to use those updated forecasts in his
15 analysis.
16

17 **Q. What does the updated forecast indicate?**

18 A. It indicates that natural gas prices are forecasted to be \$2 per MMBtu lower than what
19 was in the original La Capra forecast (see Figure 2 on page 8 of August 2015 Update by
20 La Capra) which I have attached as Attachment TCF-Reb-01).
21

22 **Q. And did that natural gas forecast affect NH LMPs?**

23 A. Yes. The NH LMPs are lower in the updated La Capra Report due to the lower
24 forecasted natural gas prices. In fact, they indicate significantly lower LMPs in NH.
25

1 Q. Based on the updated La Capra Report, do you have concerns about Staff's
2 original savings estimates?

3 A. No. The original market prices estimated by Staff in its April 1, 2014 report, used La
4 Capra Reference NH LMPs. I re-calculated the expected default service prices using the
5 La Capra "low gas" case from 2014, not the updated NH LMPs, and the FCM prices
6 used by Mr. Cannata of \$9.55 per kW-month for the years 2016-2021. I kept the other
7 market assumptions about load factor, losses and risk factor/profit the same as what we
8 used in the April 1, 2014 Staff Report.

9
10 Q. What were the results of your re-calculation?

11 A. The NH LMPs adjusted to reflect possible default service prices going forward
12 decreased compared to the April 1, 2014 Staff Report. Those results are shown below.
13

Year	Staff Original NH LMP	Updated NH LMP
2017	\$73.94 per MWh	\$62.45 per MWh
2018	\$78.91 per MWh	\$74.53 per MWh
2019	\$78.54 per MWh	\$76.74 per MWh
2020	\$87.00 per MWh	\$83.41 per MWh
2021	\$89.18 per MWh	\$84.04 per MWh

14
15
16 Q. What do you conclude based on your analysis shown above?

17 A. I remain concerned about the risk of continued ownership on PSNH's default service
18 customers and whether the rates with the scrubber will be sustainable going forward, the
19 same concern Staff voiced in its April 1, 2014 Report. Some market conditions have

1 changed since the spring 2014, but the overall findings remain the same. The value of
2 the Fossil/Hydro assets is approximately \$235 million and numerous risks to customers
3 remain.

4
5 **Q What recommendation do you have concerning the Settlement Agreement?**

6 **A.** That it should be approved as filed. One can always wait for more information, the
7 newest FCM results, the latest EIA natural gas forecast, the updated CELT Report, but
8 inaction now will cost customers money, in my opinion. More importantly, over time,
9 opportunities and markets change and new risks emerge. The Legislature has
10 expressed its view about the value of competitive electricity markets. We have them for
11 UES and Liberty Utilities as well as NHEC. They all use competitive solicitations for
12 default service and it has worked well over the last decade or more. The risk of "another
13 scrubber" investment doesn't exist for their default service customers. That risk is borne
14 by market participants. It is time to move away from this "hybrid" model. The Settlement
15 Agreement gives us that opportunity.

16
17 **CONCLUSION**

18 **Q. Do you have any additional issues or comments you want to address?**

19 **A.** Yes, I do. I want to take this opportunity to express my appreciation for the work Staff
20 has done on this difficult and challenging proceeding. Their coordination and efforts
21 should be recognized as a sincere effort to give the Commission a complete record upon
22 which to make one of the more difficult decisions in the energy industry in New
23 Hampshire since, quite possibly, restructuring. If they made us, the Settling Parties,

1 sharpen our pencils more and explain our analysis and results more clearly, so much the
2 better.

3

4 I believe we, the Settling Parties, have done just that and I believe the record before the
5 Commission is better now. It also more strongly supports a finding by the Commission
6 that the Settlement Agreement should be approved as filed.

7 Q. Does this conclude your rebuttal testimony?

8 A. Yes, it does.