

STATE OF NEW HAMPSHIRE
BEFORE THE
NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION

DOCKET NO. DE 18-142

Enel X North America, Inc.
(Formerly EnerNOC, Inc.)

Petition for Investigation into the
Use of Live, Online Reverse Auction in Electric Procurement

SUPPLEMENTAL JOINT TESTIMONY

of

Sean Perry and Greg Geller
Enel X North America, Inc.

November 22, 2019

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1 **Q. Please describe why you are supplementing your testimony of September 7, 2018.**

2 **A.** As noted in the question, Enel X North America, Inc. (“Enel X”) filed, over one year ago,
3 direct testimony to support its petition. Over the course of 2018 and 2019, Office of the
4 Consumer Advocate (“OCA”) and then Public Service Company of New Hampshire d/b/a
5 Eversource Energy (“Eversource”) conducted discovery on Enel X and Enel X conducted
6 discovery on Eversource. Collectively, this expanded upon issues discussed in the
7 September 2018 testimony. We wish to bring that expanded information to the
8 Commission’s attention and note where the information changed or updated the original
9 testimony.

10 **Q. Please provide a summary of quantitative evidence that Enel X has provided**
11 **throughout the discovery process that was not specifically included in your prior**
12 **testimony and supports your Petition to the Commission.**

13 **A.** Please see OCA 1-7, Eversource 1-14, Eversource 1-15 and Eversource 1-17 for a
14 description of the quantitative evidence provided through the discovery process supporting
15 the competitive nature of the live, online reverse auction method. Utilities will often
16 develop, using their internal modeling tools and data, and commercially available
17 information, an internal, commercial expectation of an energy commodity price reflective
18 of the utility’s understanding of current market conditions for that commodity, which we
19 call their Price to Compare (PTC), and consider a reference value. In a recent wholesale
20 supply auction performed by Enel X for energy to be delivered in 2019 and 2020, the final
21 auction prices were less by a range of 6% to 27%, as compared to the utility’s PTC. In
22 another recent capacity auction, the average final auction results were 17.27% less than the
23 utility’s internal PTC threshold. Enel X attributes those results to the head-to-head

1 competition that our process fosters. Exceeding a utility's expectations on final prices is
2 common and results in real savings to ratepayers.

3 Further quantitative evidence is described in OCA 1-7, in which an Enel X live, online
4 auction procurement is compared to an electronic commodity trading platform commonly
5 used in the utility and energy commodity industry, called the Intercontinental Exchange, or
6 ICE. ICE updates commodity futures in real-time, which suggests that the price on ICE is
7 the prevailing market price for a commodity product. In a recent Enel X auction, the
8 product in the auction was identical to the product on ICE, with sellers showing a price of
9 \$39.90/MWh. The competitive environment, created with the live, online reverse auction,
10 resulted in a purchase price of \$37.88/MWh, which meant utility customer reduced the
11 commodity product cost by over \$2.00/MWh, as compared to purchasing the same product
12 on ICE, and delivered in significant savings to his ratepayers.

13 In discovery initiated by Eversource seeking comparative results for a product's pricing via
14 sealed bid and live, online reverse auction methods, Enel X describes in Eversource 1-21 a
15 procurement event, in which the pricing of winning bids in the live, online reverse auction
16 were 0.7% - 2.0% lower compared to the winning bids in the sealed bid method. Price
17 discovery gave bidders the necessary intelligence they needed to compete to win. The
18 downward pressure resulted in material savings. This example demonstrates how live,
19 online reverse auctions can result in more aggressive bidding behavior than sealed bid
20 procurement events.

21 **Q. In Testimony p. 15 of 34, in 18-24 and p.16 line 1-2, you note that "...In a live, online**
22 **reverse auction, there is real-time, dynamic, price discovery throughout the auction,**
23 **as bidders can see what the prevailing best bid is, yet cannot see volume...." and that**
24 **"...this real-time, dynamic price discovery and short auction duration facilitates the**

1 **most competitive auction outcome possible.” Please summarize key points related to**
2 **price discovery and other key elements, from materials submitted in the discovery**
3 **process.**

4 A. Dynamic price discovery drives competitive bidding behavior from suppliers and
5 compressed supplier margins. This has the potential to enable favorable default service
6 pricing to PSNH SOS ratepayers.

7 The key conditions for high degree of competition to thrive are “time pressure”, “short-
8 duration events”, and “price discovery”. These environmental conditions, when combined
9 with head-to-head competition to win business, contribute to “competitive arousal” as
10 referenced in Eversource 1-20, Confidential Supplemental Response, 1st paragraph of 3rd
11 page.

12 Time pressure is evidenced by a time clock, counting down minutes and seconds, visibly
13 displayed for bidders to monitor. “Short-duration events” are events lasting typically
14 between 5 and 15 minutes.

15 Price Discovery is simply the ability for parties to see, real-time, price movement for the
16 Default Service energy supply product. An interactive platform which provides real-time
17 price discovery for bidders, allows all bidders to see the prevailing low price in an auction
18 until the final seconds and can offer increasingly aggressive bids to best their competitors.

19 See OCA 1-11, OCA 1-13, OCA 1-15, OCA 1-19, and Eversource 1-2 for supporting
20 details on Price Discovery.

21 A final condition, namely the loss of price discovery in the final seconds of an auction,
22 leads to a phenomenon of bidders outbidding themselves, and contributes to aggressive
23 bidding behavior. Enel X routinely and repeatedly observes this phenomenon of leading
24 (or winning) bidders outbid themselves, leading to additional ratepayer savings.

1 **Q. Please provide a summary of any examples of how price discovery works in energy**
2 **auctions, which Enel X has provided throughout the discovery process that was not**
3 **specifically included in your prior testimony and supports your petition to the**
4 **Commission.**

5 As described in additional detail in Testimony page 10 of 34, line 13-18, bidders do not
6 have visibility into other bidders, or other bidder's input data on pricing. After they submit
7 a bid, bidders only see the prevailing low price and the time remaining in the auction. This
8 level of price visibility is significant in driving head-to-head competition. An example of
9 such bidding behavior, using actual bid data to illustrate the benefit that bidders receive
10 with price discovery, is provided in OCA 1-10 and OCA 1-13.

11 The table in OCA 1-10 provides data on bidders (the supplier companies), bids, and time
12 of bid. While not every auction will have a bid count in excess of 15 or 20 bids, the table
13 in OCA 1-10 shows how many times the bid amounts changes, and which entities place the
14 bids. Note that in the final seconds, bidders are bidding blind, as they do not have the time
15 to see the other bids in the time necessary for them to enter a bid. Here, the last three or
16 four bids before the auction ends would not be discoverable.

17 In the final minute:

- 18 • 8 bidders place 15 bids;
- 19 • 4 bidders have each placed 2 bids;
- 20 • 1 bidder has placed 4 bids.

21 In the final 20 seconds, there are seven different bids all from different bidders.

22 For the overall auction, we attribute the bidding behavior, and the associated multiple bids
23 from multiple bidder, to price discovery, as it provides feedback to the bidders who seek to
24 competitively secure the customer's business, and are willing to improve their bid to do so.

1 **Q. On page 20, lines 7-12, you describe the “best bid blind” aspect of the live, online**
2 **reverse auction and how it leads to a more competitive outcome. Please explain how**
3 **this aspect and greater price discovery leads to an outcome that is more competitive**
4 **than the outcome obtained with a traditionally run sealed bid auction.**

5 **A.** In response to OCA 1-15, we describe how knowledge of other bidders’ prices drive
6 competition, similar to bidding on a house. Using the home buying analogy, we compare a
7 result if, hypothetically, home buyers use a sealed bid method of bidding on a house. The
8 lack of price discovery does not drive competition whereas, in Enel X’s experience, price
9 discovery does drive more competitive outcomes. With the house example, the result is a
10 higher home price for the seller. With energy procurements, the result is a lower
11 commodity price for the buyer. See OCA 1-15. The combination of price discovery for
12 the overwhelming majority of the auction, and then a lack of price discovery over the last
13 few seconds, drives competitive outcomes. As we note above, in the table in OCA 1-10,
14 the moment that Bidder I, J, B and likely also K submits a new, improved bid, the bidder
15 moves to a bid confirmation screen in the auction platform, and loses visibility to the real-
16 time streaming time clock, counting down time, and to the real-time update on any new
17 low bid amount – at this moment in the auction, the bidder loses price discovery on the low
18 bid amount, and has to bid aggressively in hopes of besting the competition. Enel X calls
19 this element “last bid blind”, and routinely observes bidders outbidding themselves, a key
20 signal of competition in the auction.

21 **Q, Please provide a high-level summary of your understanding of Eversource’s concerns**
22 **regarding transitioning from the sealed bid to a live, online reverse auction in their**
23 **New Hampshire service territory.**

1 **A.** Eversource's concerns were evident from its requests to Enel X, which are noted below, as
2 well as from its responses to data requests propounded by Enel X. Our understanding of
3 Eversource's top concerns are:

4 a. In a situation where there are only two bidders, the winning bid in a live, on-line
5 reverse auction could be higher than under a sealed bid. A winning bidder could realize
6 they only have one competitor and if that other bidder is not bidding, then Eversource
7 believes there is nothing compelling the first bidder to bid lower and a high bid could
8 win. Because of the historical record of supplier participation in New Hampshire,
9 Eversource believes it is possible that there will only be two bidders.

10 b. A live, on-line reverse auction will add costs to ratepayers without benefits. Suppliers
11 go into an auction with static risk premiums and profit margin for (and the other
12 pricing components that comprise) the default service energy product, based on
13 internally-vetted and pre-approved pricing limits, and have the intent to bid at that
14 lowest price, therefore, the benefits of price discovery are overstated.

15 c. A live, on-line reverse auction is untested in New Hampshire and it is too risky for
16 Eversource to implement a new method with so many dollars at stake.

17 This list is not meant to be exhaustive but rather includes our understanding of their top
18 concerns.

19 **Q. Please provide a summary of Enel X's response to the first concern.**

20 **A.** Please see responses to OCA 1-13, OCA 1-14, and Eversource 1-2, which includes actual
21 bid data from a June 2019 auction. Enel X has run 199 successful wholesale energy
22 auctions where there have been just two bidders. Awards were given in all auctions which
23 means that the utility was satisfied that the outcome was competitive. The competitive
24 results can – at least partially – be attributed to bidders not knowing the number of bidders

1 and not knowing if bidders are waiting until the last moments before bidding. Moreover,
2 significant work is done before the auction in conjunction with the utility to ensure that the
3 auction design yields a competitive outcome. For example, the starting price for the
4 auction could be set at a price level that the utility would deem to be transactable if there
5 were concerns about where bids would fall. Thoughtful and deliberation auction design is
6 paramount to a competitive outcome, regardless of bidders.

7 **Q. Please provide a summary of Enel X's response to the second concern.**

8 **A.** In addition to the quantitative and qualitative discussion starting on page 3 of this
9 testimony, Enel X has provided significant quantitative and qualitative evidence that live,
10 on-line reverse auctions result in more competitive outcomes than sealed bids and that the
11 costs paid by the winning suppliers are more than offset by the amount of ratepayers
12 savings. While we do not dispute that suppliers may have a pre-defined price or set limit
13 going into an auction of how low they can bid, Eversource has provided zero evidence that
14 suppliers reach that limit in a sealed bid procurement. Enel X has demonstrated that in the
15 live, on-line reverse auction, suppliers repeatedly submit final bids well below where they
16 started and even outbid themselves, illustrating the impact of price discovery on bidding
17 behavior.

18 Finally, we reiterate that ratepayers incur no cost if Eversource or the Commission does
19 not wish to transact on the auction results. Enel X has explained its fees and services in
20 response to Eversource 1-13 and Eversource 1-22. If Eversource and the Commission
21 decide to transact, then Enel X will invoice the winning supplier to pay for Enel X's fees in
22 running the auction. See Enel X's responses to Eversource 1-27 and Eversource 1-28.

23

24

1 **Q. Please provide a summary of Enel X's response to the third concern.**

2 **A.** Live, on-line reverse auctions have proven to yield competitive results in both deregulated
3 states and regulated states. Eversource's position that utilities in New England have always
4 used the sealed bid method, and therefore should continue to in the future, is unpersuasive.
5 While we recognize that there are several factors that contribute to high energy bills in
6 New England that have nothing to do with procurement methodology, no one should be
7 satisfied with the status quo and be so quick to dismiss innovative procurement solutions
8 that have proven track records in other jurisdictions. We find it far riskier to maintain a
9 methodology (the sealed bid) which even Eversource does not argue results in the lowest
10 possible cost to New Hampshire default service customers. See Eversource response to
11 Enel X 1-001. Moreover, Enel X is not asking the Commission to decide now to
12 permanently transition to the live, online reverse auction or even to use Enel X's platform.
13 Enel X provided this clarification in response to Eversource 1-19. The relief we request is
14 to pilot the live, online reverse auction for three procurement periods. We fully expect that
15 Eversource would need to issue a competitive solicitation for a vendor to run the auction,
16 and that the Commission would evaluate the results over these three procurements before
17 deciding what procurement method to use going forward. In response to Eversource 1-20,
18 Enel X provided metrics that the Commission could use to evaluate the effectiveness of the
19 live, on-line reverse auction.

20 **Q. Please summarize Eversource's evidence that the sealed bid method will result in**
21 **lower costs to its default service customers in New Hampshire than the live, on-line**
22 **reverse auction.**

23 **A.** Eversource's argument in favor of maintaining the sealed bid relies more on their
24 perceived shortcomings of the live, on-line reverse auction, rather than the virtues of the

1 sealed bid method. Eversource was given the opportunity to provide evidence in favor of
2 the sealed bid method, but repeatedly fell back on high-level statements such as
3 “Approximately two decades of experience gives the Company confidence in the
4 reasonableness of sealed bid procurements.” See Eversource response to Enel X 1-003.
5 These statements were not accompanied by any evidence. Referring to the sealed bid,
6 Eversource also stated “The Company believes each bidder offers prices in each
7 solicitation at the lowest level it is comfortable with, at that time, given the then current
8 position of their business and their appetite to win the business.” See Eversource response
9 to Enel X 1-004. This is a critical statement, yet Eversource offers no support or evidence
10 that it is true, and therefore it should be disregarded by the Commission. On the other
11 hand, Enel X offers significant quantitative and qualitative evidence that price discovery
12 under the live, on-line reverse auction drives bidders to lower their prices.

13 **Q. Please provide a list of companies/utilities for whom Enel X has hosted supplier of**
14 **last resort (“SOLR” or default service) live, online reverse auction services.**

15 **A.** As noted in response to Eversource 1-1, Enel X is assuming that Eversource is using
16 “default service” and “SOLR” to mean customers in deregulated states with competitive
17 choice. The utilities that have allowed Enel X to disclose for which Enel X has hosted
18 supplier of last resort (“SOLR” or default service) live online reverse auction services are:
19 (1) Delmarva Power & Light Company; (2) Con Edison; and (3) Orange & Rockland.
20 Enel X currently supports many additional utilities with live online reverse auctions in
21 vertically integrated territories. Enel X has conducted 225 auctions for the utilities that
22 have allowed Enel X to disclose that Enel X has hosted supplier of last resort (“SOLR” or
23 default service) live online reverse auction services. In particular, the Delmarva Power &
24 Light Company procurements have many similarities to what Eversource is seeking to

1 procure, have similar supplier participation, and are slightly larger in energy commodity
2 volume.

3 **Q. On page 8 of the testimony, you describe the types of methods Enel X primarily uses**
4 **to deliver procurement services; please provide a current count of those methods as**
5 **detailed in OCA 1-6.**

6 **A.** Over the last ten years, Enel X has conducted 42,439 sealed bid events; 296 descending
7 clock auctions; and 17,939 live, online reverse auctions as of January 3, 2019.

8 **Q. On page 8 of your testimony, you describe the support Enel X provides its utility**
9 **partners. You described this support in more detail in response to Eversource 1-13**
10 **and Supplemental Eversource 1-13, please summarize that detail.**

11 **A.** The detail in Supplemental Eversource 1-13 is proprietary and confidential and, therefore,
12 Enel X directs the Commission to that specific data response. In the non-confidential
13 response to Eversource 1-13, Enel X's support varies by utility partner but can include:

14 (1) Design of the auction architecture, evaluate procurement objectives and market
15 conditions to identify a best-fit method of procurement. Enel X then develops the
16 procurement strategy, activities, and schedule.

17
18 (2) Enel X defines the pool of providers.

19
20 (3) Enel X has developed the RFP and associated forms. Enel X will configure the
21 Enel X Exchange for the procurement event.

22
23 (4) Enel X will commence robust origination efforts to drive increased levels of
24 supplier participation, develop a cohort of qualified suppliers, and gather market
25 intelligence. Almost every utility-partner uses Enel X for this service.

26
27 (5) Some utility-partners use Enel X services to assist with evaluating supplier
28 creditworthiness, and with executing master agreements for future transactions. These
29 services are typically performed in collaboration with the utility, as the utility maintains
30 final approval of supplier qualification, including credit standing and legal ability to
31 transact.

32
33 (6) Enel X provides market feedback and market pricing estimates.
34

1 (7) In all instances, Enel X will consult with the utility-partner to establish Auction
2 opening prices, which Enel X will communicate to the suppliers and publish on the
3 Exchange.
4

5 (8) Enel X trains bidders on its platform and on key elements of the procurement to
6 ensure smooth performance on auction day.
7

8 (9) Enel X runs the auction event(s), which includes supporting bidders, regulators,
9 market monitors, and consultants, actively monitoring the bidding process, implementing
10 any planned adjustments, reporting, supporting the award allocation, and supporting the
11 trade confirmation processes.
12

13 (10) Enel X provides post-auction briefings.
14

15 **Q. On page 9, lines 4 and 5, you describe what services you would expect to offer**
16 **Eversource. Can you please clarify that statement?**

17 **A.** As noted in response to OCA 1-8, Enel X takes direction from its partners on the extent of
18 Enel X's support services. We would also like to clarify that when Enel X stated in its
19 testimony that it expected "to focus on automating and enhancing the bidding process with
20 technology-enabled auctions", Enel X meant to state what Enel X would recommend for
21 Eversource, if it were chosen by Eversource to support its procurement.

22 **Q. Eversource has asked how supplier credit and pre-approval requirements are**
23 **addressed during the procurement process. Please explain your response.**

24 **A.** As noted in Eversource 1-13 and Supplemental Eversource 1-13, this is a service Enel X
25 can provide. In Eversource 1-7, we described that Enel X can support as much or as little
26 of these administrative elements. Typically, utilities prefer to maintain control over
27 assessments of credit exposure to suppliers and find it helpful when Enel X takes on some
28 portion of these tasks, and further helpful to tackle the bulk of the remaining pre-approval
29 requirements. Eversource would still make the final decisions as to a supplier's
30 creditworthiness and fulfillment of pre-approval requirements. Typically, a utility will
31 have, in the RFP, provisions or conditions outlining conditions that a supplier will have to

1 meet, or to demonstrate that the supplier has the financial wherewithal to perform its
2 obligations. Further, the utility may have specific credit thresholds related to a certain
3 supplier, which are tied, for example, to the utility-partner's existing credit exposure to the
4 supplier, and the utility's assessment of the creditworthiness of a supplier. These
5 requirements would be reflected in Enel X procurement materials. Enel X has supported
6 utilities-partners with a wide range of financial tasks, from arranging for and administering
7 escrow accounts for pre-bid collateral, to tracking materials from suppliers related to
8 documenting financial health, or materials required for credit-enhancement or
9 improvement actions, to tracking the utility-partner's increasing financial exposure with a
10 cohort of suppliers as the utility makes award allocations, and to having very limited
11 involvement in this area of administering procurements. For some customers, Enel X
12 handles part or all these requirements, necessary to provide assurance and documentation
13 to the utility, of the supplier's financial health, and willingness to meet financial
14 requirements to participate, as determined by the utility. For other customers, the utility
15 administers 100% of the tasks related to credit and pre-approval requirements.

16 **Q. On page 15, lines 23-24, you state that Enel X offers a no-risk proposal and in**
17 **response to Supplemental Eversource 1-13, Enel X provides the cost of its services.**
18 **Please explain.**

19 **A.** If auctions are not successful in meeting the utility partner's requirements, the auction
20 result would be non-binding for Eversource. Enel X offers this no-risk option to its utility
21 partners but it does not know if its competitors provide similar options. The import of Enel
22 X's no-risk proposal is that Eversource would not have to award anything following an
23 auction. Enel X's utility-partner maintains control of what bids it accepts or does not
24 accept. In the event of no award, Enel X would receive no compensation.

1 **Q. Are there circumstances where an auction may need to be postponed?**

2 **A.** Yes, in Enel X's response to Eversource 1-6 and Supplemental Eversource 1-6, Enel X
3 described circumstances such as natural disasters and weather events which might
4 necessitate delaying the auction until the adverse event is resolved. This is one way to
5 mitigate instances where an auction result may not produce a result that the utility-partner
6 finds acceptable.

7 **Q. Reference to OCA 1-10, footnote 1, what constitutes a "transactable bid" and**
8 **what are the consequences if a supplier rescinds that offer?**

9 **A.** Enel X provides the mechanism to collect the most competitive bids possible. Bids in the
10 Enel X tool are not binding until Eversource allocates and awards, and the supplier
11 confirms. In most cases following an auction, the utility calls the winning supplier on a
12 recorded line, confirms the bid volume and price, and makes an award. Some utilities ask
13 suppliers to hold their bid open for a longer period of time, which is acceptable. How the
14 utility and the supplier finalize their agreement does not change.

15 A "transactable bid" is one that meets the requirements of the RFP to allow utility and
16 supplier to execute a procurement.

17 For example, a proposed offer to provide default service power supply, according to
18 product specifications set forth in the Utility's standard RFP, and for which the supplier
19 may not – for a set period of time after the auction closes – change or withdraw the offer.
20 Qualified suppliers that are selected by the utility are required to have in place an executed
21 agreement and agreed form of Transaction Confirmation prior to submitting bids. A
22 winning supplier is typically required to execute the Transaction Confirmation documents
23 within limited time period, after being notified by the utility (or by the independent auction
24 manager) that it has been selected as awardee in the auction process as a winning supplier,

1 and may be asked to provide any required financial assurance in accordance with the terms
2 of an executed agreement.

3 The consequences of rescission by a supplier are typically determined by the utility. In
4 Eversource's case, we believe we would model requirements and consequences for non-
5 compliance per what Eversource already articulates in its RFPs.

6 **Q. On page 34 of your testimony, you state that most suppliers are familiar with live,**
7 **online reverse auctions. Can you please explain the evidence on which Enel X relies**
8 **for that opinion?**

9 **A.** As noted in response to OCA 1-20, Enel X reviewed recent winning suppliers on the NH
10 PUC website. Non-winning bidders are redacted from the site, so Enel X has not reviewed
11 those. Based on the overlap between suppliers who participate on the Enel X Exchange
12 and the aforementioned winners, Enel X is confident that winning bidders have used the
13 Enel X Exchange platform.

14 Additionally, Enel X has compared the list of companies participating on the Enel X
15 platform with the companies identifying as suppliers, as generators, and as alternate
16 providers in the ISO-NE Customer Directory. That review makes us confident that
17 suppliers serving the New Hampshire market are familiar with the process and our
18 platform.

19 Finally, when Eversource sends out an RFP, all supplier emails are visible. Enel X
20 reviewed the suppliers contained in Eversource's May 9, 2018 email, in which Eversource
21 announced an RFP seeking default service. We found a significant overlap between those
22 who received that email, especially the larger energy suppliers, and users of our platform.

23

1 **Q. Does Enel X utilize key indicators in evaluating the performance of the procurement**
2 **method in achieving the customer objectives?**

3 **A.** Yes, its key indicators for evaluating the relative success of auctions are more fully
4 described in its response to Supplemental Eversource 1-20; please note portions of that
5 response are proprietary and confidential.

6 **Q. Please provide citations to research to support your contention on page 15, lines 1-2**
7 **that real-time, dynamic price discovery facilitates the most competitive auction**
8 **outcomes.**

9 **A.** Yes, please see the following articles that were provided in response to OCA 1-12:

10
11 (1) Wyld, David C. *Reverse Auctioning – Saving Money and Increasing*
12 *Transparency*. The IBM Center, 2011.

13 Accessed 1/3/19 from:

14 <http://www.businessofgovernment.org/sites/default/files/Reverse%20Auctioning.pdf>
15

16 (2) Luiz T. A. Maurer, Luiz A. Barroso; with support from Jennifer M. Chang [et
17 al] *Electricity auctions: an overview of efficient practices*. Washington, DC: The World
18 Bank, 2011

19 Accessed 1/3/19 from:

20 [https://www.ifc.org/wps/wcm/connect/8a92fa004aaba73977bd79e0dc67fc6/Electricity+a](https://www.ifc.org/wps/wcm/connect/8a92fa004aaba73977bd79e0dc67fc6/Electricity+and+Demand+Side+Auctions.pdf?MOD=AJPERES)
21 [nd+Demand+Side+Auctions.pdf?MOD=AJPERES](https://www.ifc.org/wps/wcm/connect/8a92fa004aaba73977bd79e0dc67fc6/Electricity+and+Demand+Side+Auctions.pdf?MOD=AJPERES)

22 This study was written, in part, for, "...professionals interested in learning how to improve
23 the competitiveness of existing electricity procurement mechanisms, taking into account
24 recent academic and empirical evidence."
25

26 (3) For research that speaks to the impact of short-duration auctions on competition,
27 see Haruvy, E., & Popkowski Leszczyc, P. T., *The impact of online auction duration*.
28 *Decision Analysis*, 7(1), 99–106 (2010).

29 [https://www.researchgate.net/publication/220210242_The_Impact_of_Online_Auction_Du](https://www.researchgate.net/publication/220210242_The_Impact_of_Online_Auction_Duration)
30 [ration](https://www.researchgate.net/publication/220210242_The_Impact_of_Online_Auction_Duration)
31

32 **Q. In discovery, did the OCA request that you provide hyperlinks or copies of reports**
33 **referenced in your testimony?**

34 **A.** Yes. Those reports were referenced as follows:

35 (1) Ref. Testimony of Sean Perry and Greg Geller, Page 21 of 34, Line 18, footnote 9.
36 See: L. Maurer and L. Barraso, *Electricity Auctions, An Overview of Efficient Practices*,

1 The World Bank, p. xvii (2011) eISBN: 978-0-8213-8824-2.

2 [https://openknowledge.worldbank.org/bitstream/handle/10986/2346/638750PUB0Exto00B](https://openknowledge.worldbank.org/bitstream/handle/10986/2346/638750PUB0Exto00Box0361531B0PUBLIC0.pdf;sequence=1)
3 [ox0361531B0PUBLIC0.pdf;sequence=1](https://openknowledge.worldbank.org/bitstream/handle/10986/2346/638750PUB0Exto00Box0361531B0PUBLIC0.pdf;sequence=1)

4 (2) Ref. Testimony of Sean Perry and Greg Geller, Page 25 of 34, Line 4, footnote 15.

5 See: Woo, Chi-Keung, Karimov, Rouslan, Horowitz, Ira. Energy and Environmental
6 Economics, Inc and Warrington College of Business, University of Florida. 2004.

7 *Managing Electricity Procurement Cost and Risk by a Local Distribution Company* p. 16.
8 (“Woo, et. al.”).

9 [https://bear.warrington.ufl.edu/centers/purc/docs/papers/0322_Woo_Managing_Electricity](https://bear.warrington.ufl.edu/centers/purc/docs/papers/0322_Woo_Managing_Electricity_Procurement.pdf)
10 [_Procurement.pdf](https://bear.warrington.ufl.edu/centers/purc/docs/papers/0322_Woo_Managing_Electricity_Procurement.pdf)

11 (3) Ref. Testimony of Sean Perry and Greg Geller, Page 27 of 34, Line 7, footnote 20.

12 See: Liberty Consulting Group, Technical Consultant’s Final Report to the Delaware
13 Public Service Commission, Delmarva Power & Light’s 2015-16 Request for Proposals for
14 Full Requirements Wholesale Electric Supply for Standard Offer Service, March 8, 2016,
15 p. 6.

16 [https://dep.sc.delaware.gov/wp-content/uploads/sites/54/2017/03/Liberty-DE-PSC-](https://dep.sc.delaware.gov/wp-content/uploads/sites/54/2017/03/Liberty-DE-PSC-Technical-Consultant-Final-Report-03-08-16-Final.pdf)
17 [Technical-Consultant-Final-Report-03-08-16-Final.pdf](https://dep.sc.delaware.gov/wp-content/uploads/sites/54/2017/03/Liberty-DE-PSC-Technical-Consultant-Final-Report-03-08-16-Final.pdf)
18

19 **Q. With respect to Enel X’s work for the Regional Greenhouse Gas Initiative (“RGGI”),**
20 **please amend your description of the savings you described on page 7, footnote 3 of**
21 **your testimony.**

22 **A.** The figure representing the benefits to New Hampshire from the RGGI program that we
23 cited in footnote 3 should be \$140,768,526.00 instead of the approximately \$187M figure.
24 The table of auction proceeds from which this figure was derived is attached to OCA 1-3,
25 attached.

26 **Q. Please state how the RGGI proceeds benefit New Hampshire.**

27 **A.** As stated in response to Eversource 1-11 and Eversource 1-12, the RGGI program has
28 generated over \$3 billion in proceeds for participating states and nearly \$150,000,000 for
29 New Hampshire. Across the participating states, for years 2015-2017 alone, the RGGI
30 program has generated \$1.4 billion in net economic benefit and 14,500 additional job
31 years. For the life of the program there has been a net economic benefit of \$4 billion, and

1 tens of thousands of additional job years. As the auction administrator for RGGI, Enel X
2 is proud to have a role in benefiting New Hampshire.

3 **Q. Does this complete your testimony?**

4 **A. Yes.**