

STATE OF CONNECTICUT
BEFORE THE PUBLIC UTILITIES REGULATORY AUTHORITY

PURA Establishment of Rules for)	
Electric Suppliers and EDCs Concerning)	Docket No. 13-07-18
Operations and Marketing in the)	
<u>Electric Retail Market</u>)	

DIRECT TESTIMONY OF
JONATHAN WALLACH
ON BEHALF OF
THE OFFICE OF CONSUMER COUNSEL

Resource Insight, Inc.

APRIL 11, 2014

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

2 A: My name is Jonathan F. Wallach. I am Vice President of Resource Insight,
3 Inc., 5 Water Street, Arlington, Massachusetts.

4 **Q: Please summarize your professional experience.**

5 A: I have worked as a consultant to the electric-power industry since 1981.
6 From 1981 to 1986, I was a research associate at Energy Systems Research
7 Group. In 1987 and 1988, I was an independent consultant. From 1989 to
8 1990, I was a senior analyst at Komanoff Energy Associates. I have been in
9 my current position at Resource Insight since September of 1990.

10 Over the past thirty years, I have advised and testified on behalf of
11 clients on a wide range of economic, planning, and policy issues relating to
12 the regulation of electric utilities, including: electric-utility restructuring;
13 wholesale-power market design and operations; transmission pricing and
14 policy; market-price forecasting; market valuation of generating assets and
15 purchase contracts; power-procurement strategies; risk assessment and
16 mitigation; integrated resource planning; mergers and acquisitions; cost
17 allocation and rate design; and energy-efficiency program design and
18 planning.

19 My resume is attached as Exhibit JFW-1.

20 **Q: Please describe your experience forecasting market prices for wholesale
21 supply to serve retail load.**

22 A: Since 2007, I have monitored the procurement process for Standard Service
23 (“SS”) power supply on behalf of the Office of Consumer Counsel. For each
24 of those procurements, I developed independent forecasts of the market price
25 of wholesale supply to serve SS load. Similarly, since 2004, I have developed
26 independent forecasts of the wholesale market prices to serve residential load

1 in Maryland as part my work monitoring the procurement process for
2 Standard Offer Service. In addition, for more than a decade I have assisted
3 the Cape Light Compact, a municipal aggregator in Massachusetts, in
4 purchasing power supply to serve the Compact's aggregated load. That effort
5 also entails forecasting of wholesale market prices.

6 **Q: Have you testified previously in utility regulatory proceedings?**

7 A: Yes. I have sponsored expert testimony in more than sixty state, provincial,
8 or federal proceedings in the U.S. and Canada. Exhibit JFW-1 includes a
9 detailed list of my previous testimony.

10 **Q: On whose behalf are you testifying?**

11 A: I am testifying on behalf of the Office of Consumer Counsel.

12 **Q: What is the purpose of your testimony?**

13 A: The Office of Consumer Counsel has requested that I estimate the power-
14 supply costs that would have been incurred by an Electric Supplier to provide
15 generation service to a typical residential customer in the Connecticut Light
16 and Power Company ("CL&P") or United Illuminating Company ("UI")
17 service territories during the ten-month period from May of 2013 to February
18 of 2014. This testimony describes how I estimated these costs and provides
19 my cost estimates for the CL&P and UI service territories.

20 **Q: Please describe your approach for estimating the costs to provide**
21 **residential generation service.**

22 A: For each service territory, I calculated the costs to procure all necessary
23 electricity products in the ISO New England ("ISO-NE") wholesale markets
24 to provide a "load-following" supply of power that matches a typical
25 residential customer's load in every hour and complies with Connecticut's
26 Renewable Portfolio Standard. For the purposes of this analysis, I assume

1 that energy requirements would be met through purchases in the day-ahead
2 market.¹ In addition, I included the effective cost to Electric Suppliers
3 associated with the discount on competitive generation service billings
4 flowed through to suppliers.²

5 **Q: How did you estimate the cost of wholesale power supply to serve**
6 **residential load in each utility's service territory?**

7 A: For each utility, I calculated the cost to procure wholesale power supply
8 based on actual costs (or credits) between May of 2013 and February of 2014
9 for the following components of wholesale power supply:

- 10 • Hourly day-ahead market energy delivered at the ISO-NE Massachusetts
11 Hub.
- 12 • Energy congestion between the ISO-NE Massachusetts Hub and the
13 Connecticut load zone.
- 14 • Marginal transmission losses between the ISO-NE Massachusetts Hub
15 and the Connecticut load zone.
- 16 • Auction Revenue Rights for the Connecticut load zone.³
- 17 • Capacity procured through the Forward Capacity Market.
- 18 • Ancillary services.

¹ In other words, this analysis assumes that Electric Suppliers were fully exposed to load and price volatility by meeting all of their energy requirements through the day-ahead markets. In reality, Electric Suppliers would likely meet expected and actual requirements through a mix of forward and spot-market purchases, thereby hedging some portion of their potential exposure.

² I did not include estimates for marketing, customer relations, credit, collection, or other such retail transaction costs, since such costs are generally proprietary and thus difficult to estimate from publicly available data.

³ Auction Revenue Rights had very little value in 2013. For the purposes of this analysis, I assume a zero value for ARR revenues.

- 1 • Renewable Portfolio Standard compliance.
- 2 • Average distribution losses.

3 **Q: How did you derive the cost to provide retail generation service from**
4 **your estimate of the cost to procure wholesale supply?**

5 A: In order to calculate the cost to provide generation service, I added to my
6 estimate of the cost of wholesale power supply the effective cost to Electric
7 Suppliers associated with the discount on competitive generation service
8 billings flowed through to suppliers. The CL&P discount rate was 0.47% for
9 May and June of 2013 and 0.24% for July of 2013 through February of 2014.
10 The UI discount rate was 1.17% for May through December of 2013 and
11 0.72% for January and February of 2014.⁴

12 **Q: Please provide your estimates of the cost to provide retail generation**
13 **service.**

14 A: Table 1 provides my estimate of the monthly cost per kilowatt-hour to
15 provide retail generation service for a typical residential customer in each
16 utility service territory.⁵

17

⁴ The CL&P discount rate is applied solely to billings of customers that receive a consolidated bill. For the purposes of this calculation, I assume that all CL&P residential customers taking competitive generation service receive consolidated bills. Similarly, the UI discount rate is applied solely to billings of non-hardship customers that receive a consolidated bill. For the purposes of this calculation, I assume that all UI residential customers taking competitive generation service are non-hardship customers that receive consolidated bills. In either case, I likely overstate the effective cost to Electric Suppliers associated with the discount rate as a result of these assumptions.

⁵ As noted in footnote 2 herein, these estimates exclude retail transaction costs.

1

Table 1: Cost of Generation Service (¢/kWh)

	CL&P	UI
May-13	6.31	6.40
Jun-13	6.15	6.26
Jul-13	8.53	8.64
Aug-13	5.76	5.85
Sep-13	6.18	6.35
Oct-13	5.71	5.80
Nov-13	7.06	7.20
Dec-13	12.49	12.68
Jan-14	23.07	23.15
Feb-14	19.15	19.02

2

3 **Q: Did you estimate the effect on the cost of generation service under a**
4 **scenario where Electric Suppliers hedged a portion of their day-ahead**
5 **price exposure?**

6 A: Yes. For this analysis, I assumed that Electric Suppliers financially hedged a
7 portion of their price exposure by buying a monthly forward contract one
8 month in advance of contract delivery and then selling the power delivered
9 under that forward contract into the day-ahead market.⁶ For example, I
10 assumed that Electric Suppliers would purchase forward contracts in April of
11 2013 for delivery at the Massachusetts Hub of a fixed block of power in

⁶ Alternatively, Electric Suppliers could financially settle contract deliveries at day-ahead market prices.

1 every hour in May of 2013.⁷ I further assumed that Electric Suppliers would
 2 take delivery in April and resell that power into the day-ahead market at the
 3 Massachusetts Hub. This resale would generate a profit in every hour where
 4 the day-ahead price exceeded the forward contract price. Conversely, the
 5 resale would generate a loss in every hour where the day-ahead price was less
 6 than the forward contract price.

7 Table 1, above, provides my estimate of the monthly cost of generation
 8 service under the assumption that all energy requirements are met with
 9 purchases in the day-ahead market. Table 2, below, provides the impact on
 10 the monthly costs shown in Table 1 under a scenario where Electric Suppliers
 11 financially hedge 10% of load.

12

Table 2: Impact of 10% Hedge (¢/kWh)

	Cost Impact
May-13	0.01
Jun-13	0.12
Jul-13	(0.06)
Aug-13	0.10
Sep-13	(0.07)
Oct-13	0.02
Nov-13	0.02
Dec-13	0.06
Jan-14	(0.21)
Feb-14	(0.14)

⁷ Specifically, I assumed that Electric Suppliers purchased separate forward contracts for delivery in on-peak hours and for delivery in off-peak hours.

1 As indicated in Table 2, hedging 10% of load in June of 2013 would
2 have *increased* my estimate of the cost of generation service by 0.12¢/kWh.
3 On the other hand, hedging 10% of load in January of 2014 would have
4 *reduced* my estimated cost by 0.21¢/kWh.

5 These results scale linearly. For example, increasing the hedge to 50%
6 of load in any month would increase the cost impact by five times.
7 Consequently, increasing the hedge to 50% would have increased my
8 estimate of the cost of generation service in June of 2013 by about 0.6¢/kWh
9 and would have decreased my estimate of the cost of generation service in
10 January of 2014 by more than a penny per kilowatt-hour.

11 **Q: Does this conclude your direct testimony?**

12 A: Yes.