COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC UTILITIES

Petition of NSTAR Electric Company and	**)**	
Western Massachusetts Electric Company, each	**)**	
d/b/a Eversource Energy for Approval of	**)**	**D.P.U. 17-05**
an Increase in Base Distribution Rates for Electric	**)**	
Service Pursuant to G.L. c. 164, §94 and	**)**	
220 C.M.R. §5.00	**)**	

DIRECT TESTIMONY OF

JONATHAN F. WALLACH

ON BEHALF OF

THE CAPE LIGHT COMPACT

APRIL 27, 2017

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I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name and business address.

A. My name is Jonathan F. Wallach. My business address is Resource Insight, Inc., 5 Water Street, Arlington, Massachusetts.

Q. What is your occupation?

A. I am Vice President of Resource Insight, Inc.

Q. Please summarize your professional experience.

A. I have worked as a consultant to the electric power industry since 1981. From 1981 to 1986, I was a Research Associate at Energy Systems Research Group. In 1987 and 1988, I was an independent consultant. From 1989 to 1990, I was a Senior Analyst at Komanoff Energy Associates. I have been in my current position at Resource Insight since 1990.

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

My resume is included as Exhibit CLC-JFW-2.

Q. Have you testified previously in utility proceedings?

A. Yes. I have sponsored expert testimony in more than eighty state, provincial, and federal proceedings in the U.S. and Canada. In Massachusetts, I testified before the Department of Public Utilities (the "Department") in D.P.U. 89-100, D.T.E. 97-11, D.T.E. 97-120, D.P.U. 10-170, and D.P.U. 11-05/06/07. Exhibit CLC-JFW-2 (at 7-16) provides a detailed list of my previous testimony.

Q. On whose behalf are you testifying in this proceeding?

A. I am testifying on behalf of the Cape Light Compact (the "Compact") in this proceeding.

Q. What is the purpose of your direct testimony?

A. My direct testimony addresses the following rate-design proposals by NSTAR Electric Company and Western Massachusetts Electric Company, each d/b/a Eversource Energy ("Eversource"):

- For all NSTAR Electric Company ("NSTAR Electric") residential rate classes, Eversource proposes to set the customer charge at $8.00 per customer per month.
- For NSTAR Electric residential customers who commence net-metering service on or after January 1, 2018, Eversource proposes to set the customer charge to $10.38 per customer per month for R-1/R-2 customers and to $11.43 per customer per month for R-3/R-4 customers.

- For NSTAR Electric residential customers who commence net-metering service on or after January 1, 2018, Eversource proposes to impose a demand rate of $2.12/kW for R-1/R-2 customers and $2.97/kW for R-3/R-4 customers.

Eversource proposes these changes to the design of its residential rates as part of a broader proposal to consolidate the base distribution and reconciling rates across the Boston Edison Company ("BECO"), Cambridge Electric Light Company ("CAMB"), and Commonwealth Electric Company ("COM") service territories of NSTAR Electric. Consequently, these proposals will have varying impacts on residential customers in each of the NSTAR Electric service territories. However, my direct testimony is primarily concerned with the impact on COM residential customers.

Q. What materials submitted by Eversource did you review in order to prepare your testimony?

A. I reviewed the ten-volume filing entitled NSTAR Electric Company and Western Massachusetts Electric Company, each d/b/a Eversource Energy, Petition for Approval of a Performance-Based Ratemaking Mechanism and General Distribution Revenue Change, D.P.U. 17-05, and dated January 17, 2017 (the "Initial Filing"). Specifically, I focused on Volumes 8, 9, and 10 of the Initial Filing. I also reviewed a number of Eversource's discovery responses, including associated attachments.

Q. Did you review any other materials in preparing this testimony?

A. Yes. I reviewed various comments and other filings regarding the Monthly Minimum Reliability Contribution ("MMRC") in D.P.U. 16-64. I also reviewed the Department's orders in D.P.U. 13-75, D.P.U. 13-90, and D.P.U. 15-155.

Q. How is the rest of your testimony organized?

A. In Section II, I discuss how Eversource's proposal for the residential customer charge would dampen price signals to consumers for reducing energy usage and would disproportionately and inequitably increase bills for Eversource's lowest-usage residential customers. In Section III, I explain how Eversource's proposal to implement a demand charge for new residential net-metering customers would reduce customers' ability to control their bills and perversely encourage inefficient consumption patterns. Finally, Section IV summarizes my conclusions and recommendations.

Q. Before you present these findings in detail, what is your overall impression of Eversource's rate-design proposals for residential customers?

A. In the Initial Filing, Eversource asserts that it "relied on the Department's long-standing rate design goals of *efficiency, simplicity, continuity, fairness* and *earnings stability*" as a guide in formulating its proposals to consolidate and design rates. (Initial Filing, Vol. 8, Exh. ES-RDP-1 at 11.) However, as I discuss in detail below, Eversource's proposals for residential customer and demand charges run counter to the Department's goals. In particular, the Department has long held that "meeting the goal of efficiency should involve rate structures that provide strong signals to consumers to decrease energy consumption in consideration of price and non-price

social, resource, and environmental factors." (D.P.U. 15-155 Order at 383-84 (September 30, 2016).) As I discuss below, Eversource's proposals regarding residential customer and demand charges will likely weaken, not strengthen, price signals and thereby hinder achievement of the Department's economic efficiency goal.

II. RESIDENTIAL CUSTOMER CHARGE

Q. What is Eversource's proposal with respect to the customer charge for NSTAR Electric residential customers?

A. As part of its proposal to consolidate rates across the BECO, CAMB, and COM service territories, Eversource proposes to set the customer charge for all residential rate classes to $8.00 per month. (Initial Filing, Vol. 8, Exh. ES-RDP-1 at 42.) For new net-metering residential customers, Eversource proposes to set the customer charge to $10.38 per month for customers without space heating ("R-1/R-2") and to $11.43 per month for customers with space heating ("R-3/R-4"). (Initial Filing, Vol. 8, Exh. ES-RDP-6, Sch. RDP-1 (East).)

For COM residential customers without electric space heating, Eversource's proposal would more than double the customer charge from its current rate of $3.73 per month. If these customers became net-metering customers after January 1, 2018, their customer charge would increase again by an additional 30% under Eversource's proposal.

For COM space-heat residential customers, Eversource's proposal would reduce the customer charge by about 20% from its current rate of $10.03 per month. However, if those space-heat customers became net-metering customers after January 1, 2018, their customer charge would then increase by about 43% to a rate that exceeds their current charge by about 14%.

Eversource contends that its proposal would move the residential customer charge closer to the fully allocated embedded cost of service for customer-related costs, as indicated by the results of Eversource's Allocated Cost of Service Study for the NSTAR Electric service territory (the "ACOS (East)").[1] (Initial Filing, Vol. 8, Exh. ES-RDP-1 at 42.) Specifically, the ACOS (East) estimates a customer-related cost of $10.38 per customer per month for R-1/R-2 customers and $11.43 per customer per month for R-3/R-4 customers. (Initial Filing, Vol. 10, Exh. ES-ACOS-2 (East) at 3.) This means that the proposed residential customer charge would recover between 70% and 77% of the embedded costs classified as customer-related and allocated to the residential rate classes in the ACOS (East). For new net-metering customers, the proposed customer charge would recover 100% of the ACOS (East) estimate of residential customer-related costs.

Q. What costs are classified as customer-related in the ACOS (East)?

[1] The term "embedded costs" refers to the accounting costs on Eversource's books in the test year.

A. The ACOS (East) estimate of customer-related costs includes the embedded costs of meters, service drops, meter reading, billing, collections, other customer services, uncollectible costs, and an allocation of overhead costs.

Q. Why does Eversource want to move the customer charge for NSTAR Electric residential customers closer to the ACOS (East) estimate of embedded customer-related costs?

A. According to Eversource, moving the customer charge closer to embedded cost of service is consistent with the Department's efficiency goal because "*efficiency* means that the rate structure should reflect the cost of providing distribution service and provide an accurate basis for consumer decisions on the optimum means for fulfilling their requirements." (Initial Filing, Vol. 8, Exh. ES-RDP-1 at 43.) In other words, Eversource claims that moving the residential customer charge closer to embedded cost of service – more precisely, the average embedded cost per customer – would improve price signals for promoting economically efficient behavior by residential customers.

Eversource also claims that moving the residential customer charge closer to embedded cost of service would yield a fairer rate design, since it would reduce the potential for cost-shifting to other rate classes under the proposed decoupling mechanism. (Initial Filing, Vol. 8, Exh. ES-RDP-1 at 43.) However, increasing the residential customer charge would do nothing to alleviate the potential for cost-shifting from other rate classes onto the residential classes under the proposed

decoupling mechanism. Thus, increasing the residential customer charge would be more-favorable to other rate classes, but not fairer for all rate classes.

Q. Would moving the customer charge closer to average embedded cost per customer necessarily improve price efficiency as Eversource alleges?

A. No. From a strict efficiency perspective, the customer charge should reflect *marginal*, not *embedded*, cost of service. In other words, prices are efficient in theory when they reflect the future cost to add one customer, not the average historic or "sunk" cost to serve one customer. Consequently, Eversource's proposal would dampen price signals for efficient behavior if moving the customer charge closer to embedded cost also moves it further from marginal cost.

Q. How should residential energy and customer charges be designed in order to provide price signals for efficient customer behavior?

A. Customer charges are intended to recognize that all customers contribute to the cost of distribution service regardless of the customer's energy usage, whereas energy charges recognize that customers of different sizes and load profiles contribute to distribution service costs at different levels. If usage-driven costs are inappropriately collected through fixed customer charges, then customers will have reduced incentives to maximize their energy efficiency.

Accordingly, energy charges should be set at levels that recover costs that tend to increase with customer usage. Energy charges should include costs directly driven by customer usage, such as distribution plant costs, operation and maintenance ("O&M") costs, and any other costs directly related to maintaining reliability of an

expanding distribution system. They should also include costs that tend to rise indirectly with customer usage level, such as collection costs, uncollectible costs, and some other customer-service costs.

In contrast, the customer charge is intended to reflect the cost to connect to the distribution system a customer who uses very little or zero energy. Thus, the customer charge should not be expected to cover all customer-related embedded costs for the average residential customer, but only those incremental costs incurred to connect one more very small customer. Such "minimum connection costs" are generally limited to plant and maintenance costs for a service drop and meter, along with meter-reading, billing, and other customer-service expenses not recovered through energy charges.[2] Administrative and general overhead costs other than for pensions and benefits are reasonably excluded from the customer charge because such costs do not vary with number of customers.

Q. Have you estimated the minimum cost to connect an NSTAR Electric residential customer?

A. Yes. Based on the allocation of customer-related costs in the ACOS (East), I find that the incremental connection cost for R-1/R-2 customers could be as little as $6.60 per customer per month where the connection does not require a service drop and as much as $8.10 for a connection with a dedicated service drop.[3] For R-3/R-4

[2] A very small customer in multi-family housing might not require their own service drop. If so, the minimum cost to connect such a customer would not include the cost of a service drop.

[3] I derived my estimates of minimum connection cost using Eversource's ACOS (East) spreadsheet model, which was provided in response to Department discovery. (Disc. Attachment DPU-1-3.) I derived my high-end estimate of R-1/R-2 minimum cost as total customer-related revenue requirements allocated to the R-1/R-

customers, my estimate of minimum connection cost ranges from about $7.40 to about $9.00 per customer per month.

My low-end estimate of minimum connection cost is comparable to the current average customer charge of $5.61 for NSTAR Electric R-1/R-2 customers.[4] If the current customer charge reasonably reflects minimum connection costs, Eversource's proposal to increase the residential customer charge would shift costs to the customer charge that are more appropriately recovered through the energy charge. Such a cost shift would dampen price signals and discourage economically efficient conservation by residential customers, contrary to the Department's economic efficiency goal.

Q. Would Eversource's proposal with regard to the residential customer charge conflict with any of the Department's other rate-design goals?

A. Yes. Eversource's proposal to increase the customer charge would shift recovery of usage-related costs from the energy charge to the customer charge. To the extent that volumetric costs are recovered through the customer charge, a low-usage residential customer will contribute a larger share toward recovery of such costs than a high-usage customer. If so, smaller customers will be paying for more than their fair share of usage-related costs, in conflict with the Department's fairness goal – at least from an intra-class perspective.

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2 class less allocated revenue requirements for: (1) uncollectible costs; and (2) administrative and general costs other than for pensions and benefits. I derived my low-end estimate by netting allocated service-drop revenue requirements from my high-end estimate.

[4] This is the customer-weighted average of the current rates charged to R-1/R-2 customers in the BECO, CAM, and COM service territories.

In addition, increasing the residential customer charge as proposed by Eversource would violate the Department's continuity principle. For R-1/R-2 customers in the COM service territory, Eversource's proposal would more than double the customer charge and then increase the rate by an additional 30% for new net-metering customers. By no stretch of the imagination could such sharp increases be considered gradual.

Q. What do you recommend with regard to Eversource's proposal for the residential customer charge?

A. The Department should reject Eversource's proposal to set the customer charge to $8.00 per customer per month for all NSTAR Electric residential customers. Instead, the customer charge for residential rate classes should be set at the current average rate for each rate class if the Department approves the consolidation of rates across NSTAR Electric or at the current rates for each of the BECO, CAMB, and COM service territories if not.

Likewise, the Department should reject Eversource's proposal for the customer charge for new net-metering residential customers. The minimum cost to connect such customers is no different than that to connect other customers in their rate class. These customers should therefore pay the same customer charge as all other customers in their rate class.

III. RESIDENTIAL NET-METERING DEMAND CHARGE

Q. What is Eversource's proposal with respect to a demand charge for NSTAR Electric residential customers?

A. Pursuant to recent Massachusetts solar energy legislation, Eversource proposes to include an MMRC on the bills of customers who commence net-metering service on or after January 1, 2018. (*An Act Relative to Solar Energy* ("Solar Energy Act"), St. 2016, c. 75, §§3-9, 12 (April 11, 2016).) The MMRC proposed by Eversource would be recovered in part through the customer charge (as discussed above in Section II) and in part through a demand charge. Eversource proposes a monthly demand rate of $2.12/kW for NSTAR Electric R-1/R-2 customers and $2.97/kW for NSTAR Electric R-3/R-4 customers. (Initial Filing, Vol. 8, Exh. ES-RDP-6, Sch. RDP-1 (East).) The proposed demand rate would be applied to a customer's maximum 15-minute demand during the month, whenever that maximum occurs.

For 2018, Eversource proposes a base distribution energy rate of 5.011¢/kilowatt-hour ("kWh") for NSTAR Electric R-1/R-2 customers and 4.293¢/kWh for NSTAR Electric R-3/R-4 customers. (Initial Filing, Vol. 8, Exh. ES-RDP-2, Sch. RDP-6 (East).) For NSTAR Electric residential customers who commence net-metering service on or after January 1, 2018, imposition of the proposed MMRC would reduce the base distribution energy rate to 3.064¢/kWh for R-1/R-2 customers and to 1.845¢/kWh for R-3/R-4 customers. (Initial Filing, Vol. 8, Exh. ES-RDP-6, Sch. RDP-1 (East).) Consequently, imposition of the MMRC would reduce both: (1) bill savings from customer load reductions due to energy efficiency or distributed energy resources ("DER"); and (2) the value of net-metering credits from any DER generation in excess of customer monthly consumption.

Q. How did Eversource determine the rates for its proposed residential demand charges?

A. Eversource proposes to set the demand charges for each residential rate class at the rate that recovers the portion of the total cost for the distribution system (i.e., for poles, conductors, conduits, and line transformers) attributable to a "minimum distribution system." (Initial Filing, Vol. 8, Exh. ES-RDP-1 at 94.) Eversource further proposes to estimate the cost of a minimum distribution system using the minimum-size method for classifying distribution plant costs. Under Eversource's proposal the estimated cost of a minimum-size system would be recovered through the demand charge, while the remainder of the total cost of the distribution system in excess of minimum cost would be recovered through the base distribution energy charge. (Initial Filing, Vol. 8, Exh. ES-RDP-1 at 86.)

Q. What is the basis for Eversource's proposal to set the MMRC demand charge based on the cost of a minimum distribution system?

A. The Solar Energy Act provides that the Department may approve an MMRC so long as it "equitably allocates the fixed costs of the electric distribution system not caused by volumetric consumption." (Solar Energy Act, §9.) Eversource claims that all distribution system costs are fixed. (Initial Filing, Vol. 8, Exh. ES-RDP-1 at 93.) However, in order to "avoid any question about cost causation relative to volumetric consumption," Eversource proposes an MMRC that recovers just the portion of total distribution system costs attributable to a minimum distribution system. (Initial Filing, Vol. 8, Exh. ES-RDP-1 at 93-94.)

Q. Do you agree with Eversource's contention that all distribution system costs are fixed?

A. No. Such costs may appear "fixed" from the short-term perspective of utility accounting treatment since the revenue requirements associated with debt service and maintenance in any year are unlikely to vary much with load or sales in that year. However, from the longer-term perspective of cost-causation and economic efficiency, distribution plant and O&M costs are variable with respect to customer usage and therefore avoidable by reducing customer usage.

Q. Does Eversource explain why it believes that the cost of a minimum distribution system would reasonably represent the portion of total distribution system costs not caused by volumetric consumption?

A. No.

Q. Please describe the minimum-size method for classifying distribution system costs.

A. A minimum-size analysis attempts to estimate the cost to install the same amount of poles, wires, conduits, and transformers as are currently on the distribution system, assuming that each piece of distribution equipment is the smallest size currently used on the system. In other words, a minimum-size analysis attempts to estimate the cost to exactly replicate the configuration of the existing distribution system using the smallest-size equipment currently used on the system.

Minimum-size analyses are typically used to separate distribution-system costs into customer-related and demand-related portions for the purposes of allocating distribution costs to rate classes in a cost of service study. In those cases, the

estimated minimum cost of existing distribution plant is deemed to be customer-related, and the remainder of distribution plant cost in excess of minimum cost is classified as demand-related.

In this case, Eversource proposes to use the minimum-size method not for the purposes of classifying and allocating costs to rate classes, but to determine the portion of the distribution costs allocated to each rate class in the ACOS (East) that is attributable to the minimum system.[5] As noted above, under Eversource's MMRC proposal, the minimum-system portion of allocated distribution costs would be recovered through the demand charge and the remainder recovered through the energy charge.

Q. However estimated, should MMRC costs be recovered from residential new net-metering customers through a demand charge as proposed by Eversource?

A. No. Recovery of MMRC costs through a demand charge would dampen price signals for conservation, promote inefficient customer behavior, and would undermine net-metering customers' ability to control electricity costs. As proposed by Eversource, the demand charges on a net-metering-customer's monthly bill will be determined based on the customer's 15-minute maximum demand, whenever that maximum occurs during the month. In order to control monthly demand costs, a customer would therefore need to have detailed information regarding his 15-minute load profile for each day of the month as well as in-depth understanding of

[5] The ACOS (East) classifies 100% of pole, wire, conduit, and transformer costs as demand-related and allocates such demand-related costs to rate classes on the basis of each class's non-coincident peak.

which combination of appliance- or equipment-usage gives rise to monthly maximum demands. Even with such information, it would be difficult to reduce demand charges, since even a single failure to control load during the month would result in the same demand charge as if the same demand had been reached in every day or every hour.

The demand charge proposed by Eversource would also provide little or no incentive to take actions that reduce distribution-system costs. As reflected in the ACOS (East), distribution equipment costs are driven primarily by the coincident peak load for all customers sharing the equipment. An individual customer is unlikely to reach her maximum demand at the same time as when coincident peak on the distribution system occurs. Thus, a demand charge will provide an incentive to a net-metering customer to control load at the time that customer reaches maximum demand, but not necessarily at the time of peak load on the distribution system. In fact, customers could avoid demand charges merely by redistributing load within the peak period. Some of those customers might shift loads from their own peak to the peak hour on the local distribution system, thereby increasing their contribution to maximum or critical loads on the local distribution system.

Finally, Eversource's proposal to shift recovery of MMRC costs from the energy charge to a demand charge would lower the energy rate and thereby perversely encourage increased energy consumption, some of which might occur at times of peak loading on the distribution system. Shifting costs from the energy charge to a

demand charge could therefore increase distribution system costs and offset anticipated benefits from a demand charge.

Q. Is there a way to provide for an equitable contribution of MMRC costs from new net-metering customers that would not hamper customers' ability to control costs or dampen price signals for conservation?

A. Yes. Rather than recovering MMRC costs through a demand charge, the net-metering credit for excess generation could be modified for new net-metering customers such that excess generation is compensated only for the portion of total distribution costs avoided by the generation and not for the fixed (i.e., MMRC) portion of total costs. Thus, under this approach, excess generation from new net-metering customers would not reduce those customers' share of MMRC costs.

Specifically, the net metering credit for excess generation from new net-metering customers could be derived based on an explicit valuation of the price and non-price benefits from such excess generation, including:

- Avoided locational energy-market costs.
- Avoided locational capacity-market costs.
- Avoided transmission and distribution capacity costs.
- Reduced line losses.
- Avoided carbon and other environmental externalities.
- Reduced energy and capacity market prices.

Under this approach, new net-metering customers would pay the same customer and distribution energy charges as all other residential customers and would therefore face the same price incentives for controlling load. However, for these new net-metering customers, the net-metering credit for excess generation would reflect only avoidable, and not fixed, distribution costs. Consequently, excess generation would not reduce a new net-metering customer's contribution to fixed costs.

IV. CONCLUSION

Q. Could you please review your concerns regarding Eversource's proposed residential customer charge and residential net-metering demand charge?

A. Contrary to the Department's long-standing rate design goals, Eversource's proposals to sharply increase residential customer charges and to impose a demand charge on new net-metering customers would dampen price signals to consumers for reducing energy usage, weaken customers' control of their bills, promote inefficient behavior, and disproportionately burden Eversource's lowest-usage residential customers.

Q. Do you have any recommendations as to how the Department should resolve these concerns?

A. Yes. The Department should reject Eversource's proposal regarding customer charges for NSTAR Electric residential customers, including for new net-metering residential customers. Instead, I recommend that the customer charge for all customers in each residential rate class (including new net-metering customers)

should be set at: (1) the current average rate for each rate class if the Department approves the consolidation of rates across NSTAR Electric; or (2) at the current rates for each of the BECO, CAMB, and COM service territories if not.

Moreover, the Department should reject Eversource's proposal to impose a demand charge on residential customers who commence net-metering service on or after January 1, 2018. I recommend that Eversource be directed to estimate a net-metering credit for new net-metering residential customers based on an explicit valuation of the price and non-price benefits attributable to excess generation.

Q. Does this conclude your direct testimony?

A. Yes it does.

Qualifications of

JONATHAN F. WALLACH

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SUMMARY OF PROFESSIONAL EXPERIENCE

1990–Present **Vice President, Resource Insight, Inc.** Provides research, technical assistance, and expert testimony on electric- and gas-utility planning, economics, regulation, and restructuring. Designs and assesses resource-planning strategies for regulated and competitive markets, including estimation of market prices and utility-plant stranded investment; negotiates restructuring strategies and implementation plans; assists in procurement of retail power supply.

1989–90 **Senior Analyst, Komanoff Energy Associates.** Conducted comprehensive cost-benefit assessments of electric-utility power-supply and demand-side conservation resources, economic and financial analyses of independent power facilities, and analyses of utility-system excess capacity and reliability. Provided expert testimony on statistical analysis of U.S. nuclear plant operating costs and performance. Co-wrote *The Power Analyst*, software developed under contract to the New York Energy Research and Development Authority for screening the economic and financial performance of non-utility power projects.

1987–88 **Independent Consultant.** Provided consulting services for Komanoff Energy Associates (New York, New York), Schlissel Engineering Associates (Belmont, Massachusetts), and Energy Systems Research Group (Boston, Massachusetts).

1981–86 **Research Associate, Energy Systems Research Group.** Performed analyses of electric utility power supply planning scenarios. Involved in analysis and design of electric and water utility conservation programs. Developed statistical analysis of U.S. nuclear plant operating costs and performance.

EDUCATION

BA, Political Science with honors and Phi Beta Kappa, University of California, Berkeley, 1980.

Massachusetts Institute of Technology, Cambridge, Massachusetts. Physics and Political Science, 1976–1979.

PUBLICATIONS

"The Future of Utility Resource Planning: Delivering Energy Efficiency through Distributed Utilities" (with Paul Chernick), *International Association for Energy Economics Seventeenth Annual North American Conference* (460–469). Cleveland, Ohio: USAEE. 1996.

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"Comments Regarding Retail Electricity Competition." 2001. Filed by the Maryland Office of People's Counsel in U.S. FTC Docket No. V010003.

"Final Comments of the City of New York on Con Edison's Generation Divestiture Plans and Petition." 1998. Filed by the City of New York in PSC Case No. 96-E-0897.

"Response Comments of the City of New York on Vertical Market Power." 1998. Filed by the City of New York in PSC Case Nos. 96-E-0900, 96-E-0098, 96-E-0099, 96-E-0891, 96-E-0897, 96-E-0909, and 96-E-0898.

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Cost allocation and rate design; rate-stabilization mechanism.

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Cost allocation and rate design.

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Estimation of retail costs of power supply for residential standard-offer service.

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Cost allocation and rate design.

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Cost allocation and rate design.

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Cost allocation and rate design.

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Allocation of fuel-adjustment costs.

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Proposed rates for components of the Administrative Charge for residential standard-offer service.

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Cost allocation and rate design.

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Cost allocation and rate design.

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Nova Scotia UARB Case No. NSUARB P-887(7), Nova Scotia Power fuel-adjustment mechanism; Nova Scotia Consumer Advocate. Evidence, December 2015.

Accounting adjustment for estimated over-earnings. Proposal for modifying procedures for setting the Actual Adjustment.

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Allocation of Smart Grid costs. Recovery of conduit fees. Rate design.

Nova Scotia UARB Case No. NSUARB P-887(16), Nova Scotia Power 2017-2019 Fuel Stability Plan; Nova Scotia Consumer Advocate. Direct, May 2016; Reply, June 2016.

Base Cost of Fuel forecast. Allocation of Maritime Link capital costs. Fuel cost hedging plan.

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COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF PUBLIC UTILITIES

Petition of NSTAR Electric Company and Western Massachusetts Electric Company, each d/b/a Eversource Energy for Approval of an Increase in Base Distribution Rates for Electric Service Pursuant to G.L. c. 164, §94 and 220 C.M.R. §5.00	)	D.P.U. 17-05

AFFIDAVIT OF JONATHAN F. WALLACH

Jonathan F. Wallach does hereby depose and say as follows:

I, Jonathan F. Wallach, certify that the direct testimony and exhibits submitted on behalf of the Cape Light Compact in the above-captioned proceeding, which bear my name, were prepared by me or under my supervision and are true and accurate to the best of my knowledge and belief.

Signed under the pains and penalties of perjury.

Jonathan F. Wallach
Vice President, Resource Insight, Inc.

Dated: April 27, 2017