

**STATE OF ILLINOIS**  
**ILLINOIS COMMERCE COMMISSION**

ILLINOIS COMMERCE COMMISSION :  
ON ITS OWN MOTION :  
VS. : Docket No. 11-0546  
COMMONWEALTH EDISON COMPANY :  
Evaluation of experimental real-time pricing program. :

Direct Testimony of  
**AHMAD FARUQUI, PH.D**  
Principal- the Brattle Group  
On behalf of  
Commonwealth Edison Company

1 **I. Introduction**

2 **A. Identification of Witness**

3 **Q. What is your name and business address?**

4 A. My name is Ahmad Faruqui. My business address is 201 Mission Street, Suite 2800, San  
5 Francisco, California.

6 **Q. By what entity are you employed and in what position are you employed?**

7 A. I am a Principal with The Brattle Group (“Brattle”).

8 **B. Purpose of Direct Testimony**

9 **Q. What is the purpose of your direct testimony?**

10 A. The purpose of my testimony is to present Brattle’s report entitled *The Benefits of*  
11 *Commonwealth Edison Company’s Residential Real Time Pricing Program, 2012* (the  
12 “Brattle Report”) prepared for Commonwealth Edison Company (“ComEd”), and  
13 attached hereto as ComEd Ex. 4.2.

14 **C. Background and Qualifications**

15 **Q. What are your current duties and responsibilities?**

16 A. I am a Principal with Brattle and specialize in the design and evaluation of innovative  
17 energy programs involving the customer, such as dynamic pricing, block rate design,  
18 demand response and energy efficiency. I also specialize in load forecasting and cost-  
19 benefit analysis, especially as it relates to advanced metering infrastructure (AMI) and  
20 smart grid systems.

21 Q. **What is your educational background and professional experience?**

22 A. I graduated with a B.A. in economics, mathematics, and statistics from the University of  
23 Karachi, Pakistan, where I earned a Gold Medal in economics. I also earned an M.A. in  
24 agricultural economics and a Ph.D. in economics from the University of California at  
25 Davis, where I was a Regents Fellow and wrote my dissertation on demand forecasting  
26 under a grant from the Kellogg Foundation. I have authored, co-authored, or co-edited  
27 four books and more than one hundred articles, papers and reports on various aspects of  
28 energy policy. A major focus of my work during the past thirty years has been the design  
29 and evaluation of pricing experiments. My early work on time-of-use pricing is cited in  
30 Professor Bonbright's text on public utility regulation.<sup>1</sup> I was one of the lead designers  
31 and evaluators of California's Statewide Pricing Pilot with time-based pricing. I was also  
32 the lead investigator in Baltimore Gas & Electric's dynamic pricing experiment, which  
33 began in the summer of 2008 and has been running ever summer since then.  
34 Additionally, I was the lead designer and evaluator of Northeast Utilities' time-based  
35 pricing experiment in Connecticut and I am assisting Florida Power & Light Company in  
36 the evaluation of their smart grid pilot involving several customer applications. I would  
37 like to note that since the beginning of my career in 1979, I have been tracking smart grid  
38 pilots that have been conducted around the globe. Additional information about my  
39 qualifications appears in my resume, which is appended to this testimony. My  
40 *curriculum vitae* is attached hereto as ComEd Ex. 4.1.

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<sup>1</sup> James C. Bonbright, Albert L. Danielson, David R. Kamerschen, Principles of Public Utility Rates, Public Utility Reports (2d ed., 1988).

41 **II. The Brattle Report**

42 **Q. Why did Brattle prepare the Brattle Report?**

43 A. In its order in ICC Docket 06-0617, the Illinois Commerce Commission (“Commission”)  
44 required that an economic evaluation of ComEd’s residential real-time pricing (“RRTP”)   
45 program be conducted to assess if the program generated net benefits for ComEd  
46 customers. In June 2011, ComEd filed with the ICC the *Evaluation of the Residential*  
47 *Real Time Pricing Program, 2007-2010* (“Navigant Report”), prepared by Navigant  
48 Consulting, Inc. (“Navigant”). In its Order initiating an evaluation of ComEd’s RRTP,  
49 Docket No. 11-0546, the ICC further requested that the parties in the proceeding provide  
50 supplemental estimations of direct and indirect consumer and societal costs and benefits  
51 of the RRTP program that go beyond the initial filing. ComEd retained *The Brattle*  
52 *Group* to carry out an assessment that would expand on the benefits presented in the  
53 Navigant Report and Navigant Supplemental Report.

54 **Q. Could you describe your participation in the preparation of the Brattle Report?**

55 A. Yes. I helped conceptualize the approach to quantifying benefits, extensively reviewed  
56 literature on the subject, supervised the development of the new benefit estimates, and  
57 assisted in drafting the final report.

58 **Q. Could you provide an overview of the Brattle Report?**

59 A. Yes. Attached ComEd Ex. 4.2 is the Brattle Report. In its Order initiating an evaluation  
60 into ComEd’s RRTP, the ICC requested that the parties “provide supplemental  
61 estimations of direct and indirect consumer and societal costs and benefits” of the RRTP  
62 program that go beyond the Navigant Report and Supplemental Navigant Report.  
63 ComEd retained Brattle to carry out an assessment that would expand upon the benefits

64 presented in the Navigant Report and the Supplemental Navigant Report. Accordingly,  
65 we identified and analyzed three new benefit areas. Those are: avoided transmission and  
66 distribution capacity costs, improved customer satisfaction, and improved national  
67 security. Additionally, while maintaining the same methodologies used by Navigant, we  
68 performed the same calculations, but with higher enabling technology and participation  
69 assumptions consistent with best industry practice for customer-side programs.  
70 Accordingly, we present two new scenarios that expand upon Navigant's initial analysis.  
71 The first serves as a baseline that is close to Navigant's results and the second is an  
72 Aggressive Scenario that provides a reasonable upper bound, consistent with best  
73 industry practices.

74 **Q. Could you summarize the findings and conclusions set forth in the Brattle Report?**

75 A. Yes. We conclude that adding the three new benefit categories would add non-zero  
76 benefits. However, these are relatively small compared to the already quantified  
77 categories. The best way to significantly enhance the benefits is by expanding the number  
78 of participating customers. This would likely mean higher costs, but because of  
79 economies of scale in program deployment, we would expect net benefits to increase as  
80 participation increases.

81 **Q. Does this complete your direct testimony?**

82 A. Yes.