

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

<b>COMMONWEALTH EDISON COMPANY</b>	)	
	)	
<b>Tariff filing to present the Illinois Commerce</b>	)	<b>Docket. 13-0387</b>
<b>Commission with an opportunity to consider</b>	)	
<b>Revenue neutral tariff changes related to rate</b>	)	
<b>Design authorized by subsection 16-108.5(e) of</b>	)	
<b>the Public Utilities Act</b>	)	

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**DIRECT TESTIMONY OF EDWARD C. BODMER**  
**ON BEHALF OF THE CITY OF CHICAGO AND THE CITIZENS UTILITY BOARD**

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**CITY/CUB EXHIBIT 1.0**

**JULY 29, 2013**

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1                                   **QUALIFICATIONS AND SUMMARY OF TESTIMONY**

2   **QUALIFICATIONS**

3   **Q.     What is your name and on whose behalf are you testifying?**

4   A.     My name is Edward C. Bodmer. I am testifying on behalf of the City of Chicago  
5           ("City") and the Citizens Utility Board ("CUB").

6   **Q.     Have you previously testified before the Illinois Commerce Commission (the**  
7           **"Commission")?**

8   A.     Yes. I have provided analyses and testimony in Commission cases over a period  
9           spanning more than three decades. While the majority of my professional activity is no  
10          longer associated with providing testimony in utility proceedings, I have been involved in  
11          a variety of Commonwealth Edison Company ("ComEd" or the "Company") rate and rate  
12          design matters on almost a continual basis since beginning my career as a member of the  
13          Commission Staff when Jimmy Carter was president. I have testified before this  
14          Commission on behalf of Staff, as a consultant for the City of Chicago and other  
15          consumer representatives, and once – many years ago – even in support of ComEd. I  
16          appeared most recently as a rate design expert, on behalf of the City of Chicago, when the  
17          Commission last examined ComEd's rate design – in ComEd's 2010 rate case.

18   **SUMMARY OF FINDINGS**

19   **Q.     What are the principal subject areas that you address your testimony in this case?**

20   A.     My testimony focuses primarily on the unfairness of ComEd's residential rates,  
21          particularly as they affect residential ratepayers in high density areas and consumers who

typically use less electricity than other ComEd ratepayers. First, I examine the context of ComEd's cost of service and rate design. Second, I provide data and analyses that demonstrate variations in costs of service among residential ratepayers that are correlated with ratepayer usage. Third, I discuss policy issues implicated by this investigation of ComEd's rate design. Finally, I examine several specific problems with ComEd's residential usage study.

**Q. What are the major findings from your analyses of ComEd's residential cost of service and usage data?**

**A.** The most compelling findings with respect to ComEd's residential cost of service and rate design are:

- ComEd's monthly customer charge -- the highest in the nation -- is not derived from its cost of service. The high charge is driven in part by ComEd's false contention that the "fixed" nature of distribution costs implies such costs should be recovered through the customer charge. It also comes from ComEd's assertion that a very high percentage of the cost of service (more than 50% of the entire cost for apartments) is "customer related." The only truly "fixed" or "embedded" account related costs are the carrying costs of depreciated meters and the costs of paper and stamps associated with sending out a bill and nothing else. These are the costs that are actually caused by virtue of the existence of a ratepayer account and can be defined by the costs ComEd incurs when a house is split into a duplex or an apartment building is separated into smaller units. These true account related costs sum to about one dollar per ratepayer per month. These true account related costs are about 9% of the total

44 delivery services cost for multi-family consumers, rather than the 52% assumed by  
45 ComEd.

46 ➤ Actual costs of service for residential consumers are closely tied to their average level  
47 of usage. The cost per kWh of delivery services increases with ratepayer usage in the  
48 residential class, because low usage is closely correlated with (1) high density; (2)  
49 better load factors; (3) older housing stock and distribution equipment; (4) less tree  
50 trimming; and, (5) more overhead lines. ComEd's actual costs of service, which  
51 increase as usage increases, are not reflected in the opposite pattern of ComEd's rate  
52 structure, in which prices decline sharply as usage increases.

53 ➤ To further its rate design objectives, ComEd -- by default -- incorrectly attaches the  
54 label "fixed" to any cost that does not rise and fall with each kWh of usage. It does  
55 so, even though its cost of service study recognizes energy usage at the time of the  
56 regional system peak demand (the peak) is the sole driver of distribution costs it calls  
57 "fixed."

58 ➤ Contrary to assertions made by ComEd in testimony, costs associated with consumer  
59 usage during peak periods is not caused by, or properly allocated based on, the  
60 number of accounts.

61 ➤ ComEd's "Residential Usage Study" (ComEd Exhibit 2.33) is highly flawed because  
62 it concludes that there is no relationship between average consumer usage over a year  
63 and customer usage during the peak. This implies that usage during the peak is not  
64 driven by the size of home; not correlated with annual usage; and, not associated with  
65 the number of people who live in a residence. Because of critical defects in the study,  
66 the Commission should not rely on it to design revenue neutral rates in this case.

- 67 ➤ For consumers who are careful in the way they use electricity, ComEd's high  
68 customer charge works directly against Illinois' energy efficiency or conservation  
69 policies.
- 70 ➤ ComEd has presented data that prove usage is very closely correlated with household  
71 income. This confirms that the current rate design is not only unfair, but highly  
72 regressive. ComEd's main objective in establishing high customer charges appears to  
73 be to lower revenue variability and corporate risk. This policy results in an  
74 unnecessary distortion of cost-based rates, given that ComEd's formula rates assure  
75 cost recovery.
- 76 ➤ There are important differences between high customer charges for ComEd and high  
77 customer charges in the natural gas distribution business (which also have been  
78 questioned).
- 79 ➤ An alternative rate design where customer charges increase with defined bands of  
80 usage can avoid the unfair impacts on low use and low income consumers that is part  
81 of ComEd's current structure while protecting recovery of ComEd's embedded costs  
82 from weather fluctuations or long-term weather changes due to global warming.

### 83 **SUMMARY OF COST OF SERVICE AND RESIDENTIAL RATE DESIGN ANALYSES**

#### 84 **Q. Why is your testimony so long?**

85 A. When I was hired to work on this case I told City officials that I would try to keep the  
86 testimony short in this case. However I was not able to achieve my goal. One reason is  
87 that I have included a number of pictures, graphs, and diagrams in my testimony when  
88 they are useful to illustrate or to clarify. Another reason is the need to respond in detail

to the illogical conclusions and the flawed analysis in ComEd's "Residential Usage Study" (ComEd Ex. 2.33). Portions of that study require a line by line critique.

**Q. Does your testimony address any of the Commission directions that were part of the Commission's Order in Docket 10-0467?**

A. Yes. Most of my testimony responds directly to the Commission's directives and expressed concerns in that case, particularly as they related to the equity implications of ComEd's rate structure on low use residential consumers. Many of those consumers live in multi-family housing in Chicago. In its Order in the 10-0467 case and in discussing the issue during oral argument in that case,<sup>1</sup> the Commission was clearly concerned about disparate impacts of ComEd's rate design on low use consumers and expressed a strong interest in receiving evidence on that issue. The Commission ordered ComEd to address the issue in its next rate proceeding.

However, the Commission takes particular note of arguments regarding the possible disparate impact of a SFV design on low-use customers, especially in the Chicago region. Therefore, in its next rate proceeding, ComEd must provide evidence that demonstrates whether the impacts on the low-use subgroup in the residential customer class are such that it would be appropriate to have a new class cost of service and rate design for that identifiable group. The Commission also encourages ComEd to explore how it defines the low-use customer sub-class. Final Order at 232.

Since the last case, ComEd's ratepayers have experienced large increases in monthly customer charges, resulting in precisely the disparate impacts that were of concern to the Commission. Of the many pages of testimony and exhibits in this case, most focused on matters concerning its large business consumers, without sufficiently addressing the above directive. ComEd has provided little or no evidence that it has – as

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<sup>1</sup> The Commissioners' discussion during oral argument can be accessed through the Commission's electronic docket system at [www.icc.illinois.gov/downloads/public/edocket/294273.pdf](http://www.icc.illinois.gov/downloads/public/edocket/294273.pdf) (pp 79-97).

the Commission ordered -- investigated whether new customer class definitions or rate designs are appropriate. Neither did the company address the directive involving how it should define the low-use ratepayer sub-class.

**Q. Since the Commission's order in 10-0467 have there been changes in pertinent factors that increase the need to revisit ComEd's very high customer charges?**

A. Yes, there have been several developments. Any revenue stability justification for a high customer charge has disappeared due to formula rates that assure stable revenues and cost recovery for ComEd. Further, as the commodity portion of consumers' electric bills has declined relative to ComEd's fixed charges, the perverse incentive to waste electricity (created by high customer charges) has been aggravated. Finally, it is clear that copying natural gas utility pricing policies, which have increased their customer charges, over to electric utilities is not appropriate. The evidence of that inappropriateness includes more regressive impacts of high customer charges for electric utility ratepayers, continued trends in global warming, greater geographical diversity of usage among electric utility consumers, and differences in the treatment of gas and electric utility costs for consumers in multi-family housing.

**Q. Describe the proposal you have developed for an alternative rate design that addresses the Commission's concerns, as well as those developments?**

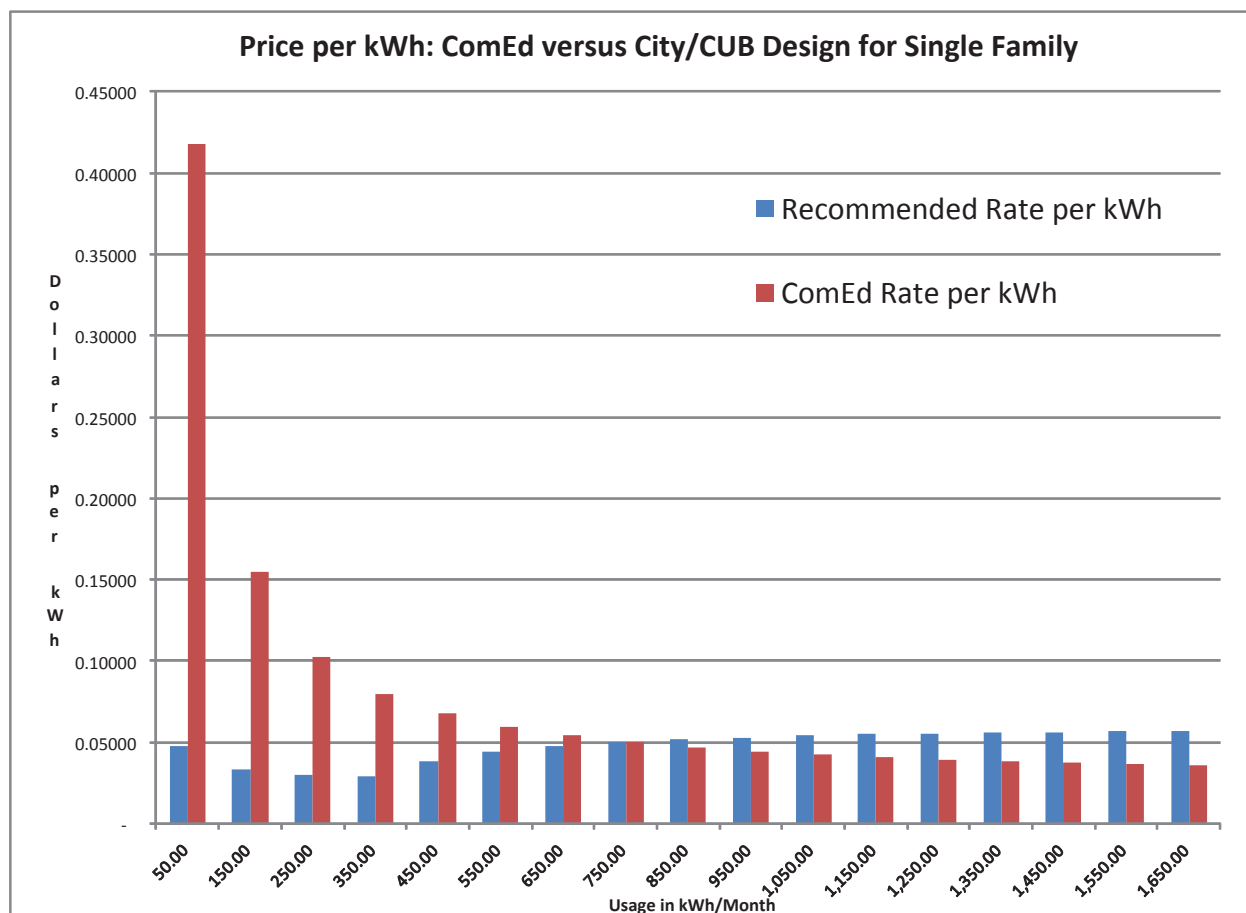
A. I propose a cost-based, revenue neutral, set of tiered monthly customer charges that vary to recognize the correlation between usage and key cost drivers. The idea of a graduated

customer charge came directly from Commissioners' questions and remarks during the oral argument in Docket 10-0467.

The variable cost-based customer charge (which would include the metering charge) would be one dollar per month for single-family ratepayers who use less than an average of 400 kWh per month on a weather adjusted basis.<sup>2</sup> For single-family ratepayers who used, on average, between 401 kWh and 500 kWh in the past year, the customer charge would be higher. The customer charge would continue to gradually increase for each 100 kWh per month increment in prior year average monthly usage. To illustrate the result of this proposal, the graph below compares my recommended rate design (in blue) with ComEd's rate design (in red). The graph shows that my proposal reduces the average price paid per kWh for low use consumers and moderately increases prices for high-use ratepayers. The break-even occurs at a usage level of 750 kWh per month.

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<sup>2</sup> The charge would be adjusted for vacation homes, where zero usage is not counted in the average.



148           The total dollar amount collected from customer charges in my proposal would be  
149           exactly the same as the amounts collected using the current rate design. The only  
150           differences are (1) that revenues from customer charges would be collected from  
151           graduated charges rather than a uniform charge and (2) the allocation of costs that  
152           ComEd treats as customer related is corrected. I have developed a similar graduated  
153           customer charge proposal for the other sub-classes of residential consumers (multi-family  
154           non-space heat, single family space heat and multi-family space heat). Correcting  
155           ComEd’s allocation of costs reduces revenue requirements allocated to the multi-family  
156           non-space class by about 20%.

157 In implementing a graduated customer charge, I suggest that ComEd include on  
158 each ratepayer's electric bill a clear notice that lower usage will reduce the applicable  
159 customer charge, so as to encourage energy efficiency and conservation. The notice  
160 would be a bit like the Surgeon General's warning on cigarette packages, except that  
161 instead of saving your life, you can help save the planet – and your pocketbook.

162 **Q. Does your testimony address any issues related to the inter-class allocation of**  
163 **revenue requirement responsibility?**

164 A. Yes. In past cases, the City has argued in favor of allocating costs on the basis of system  
165 coincident peak that ComEd's facilities must serve. Opponents of that approach have  
166 argued instead for an allocation factor called system-wide non-coincident peak that is  
167 unrelated to the localized demands that drive ComEd's costs of service. ComEd  
168 presented a number of cost studies that use the non-coincident peak approach the  
169 Commission has declined to adopt. Those studies -- unlike neglected issues of rate  
170 design equity for low use ratepayers -- were not part of any Commission directive.  
171 ComEd's selection of cost of service and rate design alternatives to present favors rate  
172 designs and cost allocations preferred by supporters of non-coincident peak allocations.

173 **Q. Is there something in common among the issues that you address?**

174 A. Yes. When evaluating important aspect of ComEd's rate design -- the manner in which  
175 ComEd designs rates to recover distribution costs; how it allocates items that it names  
176 customer related costs; how ComEd ignores impacts on low-use consumers when  
177 presenting tariff components; and the arguments it makes in the residential usage study --

178 it is helpful to take a step back and examine the results of ComEd's analysis. Examples  
179 of where I hope the Commission will ask if things really make sense include:

- 180 - Does it make sense that a large house with many rooms uses the same amount  
181 of electricity at the system peak time and has the same distribution cost as a  
182 small studio apartment;
- 183 - Does it make sense that sending out a bill and having a standard meter should  
184 represent 50% of the entire delivery service costs for an apartment;
- 185 - Does it make sense that regions of ComEd's service area that have more low  
186 income residences should pay prices that are about 25% higher than prices in  
187 high income regions.
- 188 - Does it make sense to ignore density, equipment age, undergrounding, load  
189 factors, and other items that are correlated with usage in designing ComEd's  
190 delivery service rates;
- 191 - Does it make sense, as ComEd claims, that the amount of energy usage during  
192 peak periods has nothing to do with the average energy use of a consumer.

193  
194 **Q. Are there any positive elements of ComEd's presentation?**

195 A. Yes. ComEd was asked to prepare an analysis of call center and other costs that the  
196 utility had previously classified as billing costs, where the new analysis treated them  
197 instead as indirect uncollectible amounts. ComEd did a good job on this task, and they  
198 deserve to be commended for that. Also, ComEd properly computed the costs of  
199 secondary street lighting for City facilities.

**BACKGROUND**  
**A Look at ComEd's System and Costs**

**Q. Are ComEd's rates equitable to low-use consumers in the City of Chicago?**

A. No, they are not, mainly because of the usage characteristics of ComEd's low-use consumers and the nature of its facilities and costs in Chicago.

**Q. Can you provide a simple explanation of these factors?**

A. Yes. Recently, I was asked to explain many of these same issues to an inquisitive visiting relative during our tour of the City of Chicago. My Uncle Gerald, who resides in London, visited Chicago earlier this year. Gerald visits my father once a year, as my father does not like to travel to England anymore. Gerald has long believed that Chicago is one of the wonderful cities of the world, and on his trip this year he asked me to show him to some of the neighborhoods in Chicago. We took walks around Little Italy, Pilsen, Roger's Park, Lakeview, and other areas of the City. As my uncle is aware of my work, while we walked around the City, we discussed the state of ComEd's distribution system. I had to explain to Gerald why these charming neighborhoods in Chicago had such a tangled mess of wires in the alleyways. He asked how could such a lovely city have electricity wires that could be in a third world megalopolis (he used the politically incorrect "third world" phrase, not me.) I tried to explain that the messy looking above ground distribution system (which does not exist in even the poorest countries of Europe, like Bulgaria) was built to save money. I told him that putting above-ground wires in alleys where there is a high population density means that the cost to distribute electricity is very low for these people and that the high consumer density means that relatively

short wires are used for each home. I have included a couple of the snapshots I took of the above ground distribution lines below.

PICTURES 1A AND 1B



Later in Gerald's visit, we drove around some of the wealthy Chicago suburban areas -- of course we could not walk in those more dispersed neighborhoods as we had in the City. I reminded Gerald of the old distribution system in City alleyways (which looked like it could be from Manila). Then I pointed out that the suburban distribution we saw was often underground and that the lines had to cover much longer distances between houses. Gerald matter-of-factly concluded that the prices per unit of electricity must be much higher for people who live in these suburban palaces, since investment needed to distribute electricity in those areas is an order of magnitudes higher. I tried to explain to him that ComEd plops much of its cost into a standing charge. (In England, the modest customer charge is called a standing charge, but we agreed a better name would be a sleeping charge). I told him that because of the standing charge and because ComEd also does not differentiate its cost recovery according to consumer density, type

of equipment,<sup>3</sup> or age of equipment, the prices per unit of electricity delivered do not follow costs. When I told him that if five small houses in a Chicago neighborhood added up to the size of a house in Lake Forest, that the five houses would pay five times as much even though they might use a smaller quantity of distribution equipment (because of density) with lower cost (density and age), he seemed perplexed and just shrugged his shoulders.

PICTURE 2



If ComEd had achieved its objective of putting 80% of distribution costs into customer charges, the house in the picture above would pay just about the same amount as a small bungalow in the City of Chicago, notwithstanding the obvious differences in the amounts of electricity and facilities needed to serve the houses.

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<sup>3</sup> I am aware that the terms equipment and facilities may have different meanings to engineers, but since my focus is costs, not engineering, I use both terms inclusively.

248 **Q. Did you discuss the origins of the pricing structure your visitor found perplexing?**

249 A. Yes. I told Gerald that the utility company had invented a new scheme called something  
250 like SVA (I may have said VFA or SFA; I couldn't remember the utility-invented  
251 acronym). I tried to explain how the high standing charges were implemented because  
252 the utility company was extremely risk averse. The explanation I offered was that high  
253 standing charges protect the utility company in the case of falling revenues that could  
254 arise if usage goes down due to energy conservation, weather changes, reduced economic  
255 activity, or other things.

256 **Q. Have you included more concrete information in your testimony that provides**  
257 **context for your analysis of the cost of service issues and ratepayer impacts**  
258 **associated with ComEd's customer charges?**

259 A. Yes. I have included a few electric utility bills that demonstrate the problems with  
260 ComEd's existing rate structure and why consumers with different usage levels cannot be  
261 lumped into the same rate class. While just about everybody has probably looked at their  
262 electric bill and though working through bill calculations may seem a bit simplistic, the  
263 exercise of reviewing a few different bills may, in fact, be just as useful as some of the  
264 more sophisticated regression analysis and other research discussed later in my  
265 testimony. I include (and discuss) the electric bills for a low-user in Evanston, a  
266 moderate user in the City, and an inefficient user in the suburbs. This simple review of  
267 actual bills illustrates a host of issues associated with ComEd's data and cost of service  
268 analyses and the current rate structure.

269

270 **Q. Discuss the electric bill for the low user in Evanston.**

271 A. This ratepayer, who lives in an apartment in Evanston, used only 91 kWh in April, which  
272 is consistent with her usage from prior months. She does not have an air conditioner and  
273 the \$12.22 delivery services portion of her bill is a lot more than the \$7.10 commodity  
274 portion. Dividing the \$12.22 by 91 kWh yields a delivery services price of 13.42 cents  
275 per kWh. As we will see shortly, that per kWh delivery price is more than the combined  
276 per kWh rates of 12.05 cents per kWh for the commodity plus taxes plus delivery charges  
277 of the high user. Of the \$12.22 in delivery service charges, \$6.85 is for the customer  
278 charge and \$2.92 is called the standard metering charge. Unlike other utility companies,  
279 ComEd has two charges on its bill that do not vary with usage – the metering charge and  
280 the customer charge. To avoid confusion I will use henceforward use the term “account  
281 charge” to refer to the combined meter charge and customer charge. For this low user,  
282 the account charge of \$9.77 is 80% of the total delivery services bill.

Account Number: 10000000000000000000  
Issue Date: May 1, 2013

Bill Summary	
Previous Balance	\$37.04
Total Payments - Thank You	\$37.04
Amount Due on May 23, 2013	\$20.71

Issue Date May 1, 2013

Meter Information									
Read Date	Meter Number	Load Type	Reading Type	Previous	Meter Reading Present		Difference	Multiplier X	Usage
5/1	999537825	General Service	Total kWh	91611 Actual	91702 Actual		91	1	91

Service from 4/4/2013 to 5/1/2013 - 27 Days Residential - Multiple

Electricity Supply Services \$7.10

Electricity Supply Charge	91 kWh	X	0.07491	6.82
Transmission Services Charge	91 kWh	X	0.00811	0.74
Purchased Electricity Adjustment				-0.46

Delivery Services - ComEd \$12.22

Customer Charge				6.85
Standard Metering Charge				2.92
Distribution Facilities Charge	91 kWh	X	0.02566	2.34
IL Electricity Distribution Charge	91 kWh	X	0.00121	0.11

Taxes and Other \$1.39

Environmental Cost Recovery Adj	91 kWh	X	0.00056	0.05
Energy Efficiency Programs	91 kWh	X	0.00157	0.14
Franchise Cost	\$11.65	X	2.91000%	0.34
State Tax				0.30
Municipal Tax				0.56

Total Current Charges \$20.71

284           The bill for our low user can be used to introduce a couple of other issues

285           examined in the data analysis and cost of service evaluation below. Whether her meter is

286           more than 20 years old and fully depreciated or brand new, the metering service charge of

287           \$2.92 is the same for all "Residential-Multiple" ratepayers. For this bill, metering costs

288 constitute a surprising 24% of the entire delivery services cost. This suggests that if you  
289 added the cost of all the 12 kV lines, the secondary lines, the transformers, the poles, the  
290 substations, the tree trimming costs, the service drops, billing costs, stamps and other  
291 equipment used to get electric power to her apartment; a full 24% of the total is  
292 represented by the cost of her meter. My analysis below shows that the true cost of her  
293 depreciated meter is only 1.4% of delivery services costs. In this context, the metering  
294 service charge simply does not make sense.

295         The customer costs that ComEd allocates to low users are very unfair, as  
296 illustrated by the above bill. ComEd classifies things like software costs of its creating its  
297 billing system related to open access as a customer cost, as well as costs of re-connecting  
298 ratepayers, costs of dealing with ratepayer complaints, expenses for customer  
299 representatives, and other items, as costs that are caused by virtue of the existence of a  
300 separate account. This means that our low user would be allocated half of the cost of  
301 billing systems, sales, advertising, and a whole bunch of other things, if she moved in  
302 with somebody else and lived in a larger apartment. Currently she pays the same amount  
303 for these costs as the large mansion shown in the picture above, even though these costs  
304 cannot be directly associated with the processes of reading her meter or sending her  
305 particular bill. As explained below, costs related to things like the implementation of an  
306 open access policy cannot be directly associated with energy, demand, or the number of  
307 customers. Such costs must instead be attributed to ratepayers as a percentage of their  
308 total bills. The case of the low user in Evanston demonstrates that the need to re-  
309 structure ComEd's account charge is not limited to consumers inside the boundaries of  
310 the City of Chicago.

311 **Q. Discuss the electric bill for a moderate user in Chicago?**

312 A. Our moderate user lives in a two-flat in the Little Italy neighborhood of Chicago. Even  
313 though she lives in a two-flat, ComEd defines her multi-family home in the single family  
314 category and applies the higher account charges. Her usage of 445 kWh would put her at  
315 about the City median usage of 450 kWh for single-family accounts and above the  
316 median City usage of 250 kWh for the multi-family class. For this ratepayer, the \$15.96  
317 account charge represents 63% of her delivery services charges bill of \$25.31. The  
318 delivery charges divided by the usage results in a total delivery service price of 5.68 cents  
319 per kWh, which is lower than the price paid by the low user in Evanston because the  
320 fixed charge is spread over more consumption of electricity. Our moderate user moved  
321 to Chicago last year and was used to paying a lower account charge. A comparison of  
322 ComEd's account charge to those of other companies (presented later) demonstrates  
323 Chicago has the highest account charge in the entire U.S.A.

**Bill Summary**

Previous Balance	\$81.75
Total Payments - Thank You	\$81.75
<b>Amount Due on March 27, 2013</b>	<b>\$57.03</b>

Issue Date March 5, 2013

**Meter Information**

Read Date	Meter Number	Load Type	Reading Type	Previous	Meter Reading Present	Difference	Multiplier X	Usage
3/4	995899882	General Service	Total kWh	5786 Actual	6231 Actual	445	1	445

Service from 2/4/2013 to 3/4/2013 - 28 Days

Retail Delivery Service - Res Single

**Electricity Supply Services - Integrys Energy Services Inc**

**\$24.14**

ENERGY CHARGE 445 kWh X 0.05424

24.14

Integrys Energy Services Inc

1-888-802-2885

www.integrysenergy.com

Please refer to your supplier contract for details.

**Delivery Services - ComEd**

**\$25.31**

Customer Charge				13.04
Standard Metering Charge				2.92
Distribution Facilities Charge	445 kWh	X	0.01979	8.81
IL Electricity Distribution Charge	445 kWh	X	0.00121	0.54

**Taxes and Other**

**\$7.58**

Environmental Cost Recovery Adj	445 kWh	X	0.00059	0.26
Energy Efficiency Programs	445 kWh	X	0.00157	0.70
Franchise Cost				2.36
State Tax				1.47
Municipal Tax				2.79

**Total Current Charges**

**\$57.03**

325           The moderate user phoned ComEd's call center when she moved into her duplex,  
 326           as well as at other times last year. The cost of these phone calls to ComEd are incorrectly  
 327           classified as billing costs and would be disproportionately allocated to low-users like the  
 328           person in Evanston, under the company's theory that virtually any overhead cost should

be associated with simply having a meter and paying a bill, even though virtually any other business could only recover these costs through increasing usage based prices. Clearly, our moderate user could reduce her energy usage for her small apartment, by (for example) being more careful about using her air conditioner, turning off the lights, and washing dishes by hand. If there is a big notice on her bill that her fixed charges will decline if she uses less electricity, she may change her behavior, which would be good for the environment and her pocketbook. Finally the moderate user's bill illustrates an important difference between natural gas and electricity account charges that relates directly to the applicable Commission policies. Her landlord pays for her natural gas utility service and includes its cost in her rent. As a result, there is only one account charge for the entire building, which ComEd's tariffs prohibit in almost all cases for electric utility service.

**Q. Discuss the electric bill for a high user who lives in the western suburbs?**

A. The high user in the suburbs lives in a single family home. For the month selected, our high user used 1,859 kWh which puts him above the 75th percentile for single-family consumers outside of the City. In his bill, the account charge of \$15.96 per month is only 29% of the delivery services cost of \$55.00 which, when divided by the usage produces a delivery services price of 2.95 cents per kWh. Many nearby suburban subdivisions that were built during the housing boom that occurred prior to the financial crisis are served from underground primary and secondary lines. In its 2007 rate case that increased distribution rates by \$273 million, ComEd repeatedly argued about just how much more

350 the cost of new distribution equipment was than the existing distribution equipment in  
 351 order to justify the increase.

352 **FIGURE 4 -- SUBURBAN HIGH USER**

<b>Bill Summary</b>	
Previous Balance	\$192.28
Total Payments - Thank You	\$192.28
<b>Amount Due on April 10, 2013</b>	<b>\$224.15</b>

Issue Date March 19, 2013

<b>Meter Information</b>								
Read Date	Meter Number	Load Type	Reading Type	Previous	Meter Reading Present	Difference	Multiplier X	Usage
3/19	998555792	General Service	Total kWh	1368 Actual	3227 Actual	1859	1	1859

Service from 2/19/2013 to 3/19/2013 - 28 Days

Residential - Single

<b>Electricity Supply Services</b>				<b>\$145.04</b>	
Electricity Supply Charge	1,859 kWh	X	0.07491		139.26
Transmission Services Charge	1,859 kWh	X	0.00811		15.08
Purchased Electricity Adjustment					-9.30
<b>Delivery Services - ComEd</b>				<b>\$55.00</b>	
Customer Charge					13.04
Standard Metering Charge					2.92
Distribution Facilities Charge	1,859 kWh	X	0.01979		36.79
IL Electricity Distribution Charge	1,859 kWh	X	0.00121		2.25
<b>Taxes and Other</b>				<b>\$24.11</b>	
Environmental Cost Recovery Adj	1,859 kWh	X	0.00059		1.10
Energy Efficiency Programs	1,859 kWh	X	0.00157		2.92
Franchise Cost	\$54.43	X	4.21400%		2.29
State Tax					6.13
Municipal Tax					11.67
<b>Total Current Charges</b>				<b>\$224.15</b>	

353           The higher user in the suburbs is such an in-efficient user that he regularly  
354 receives a letter from ComEd comparing his usage to other consumers. Even though he  
355 throws the letters away without reading them, they are probably a good idea. The issue  
356 raised by those letters is not whether they are part of a good plan, but how the costs of  
357 preparing and sending them should be allocated. As with so many other costs not related  
358 directly to either the number of customers or the number of kWhs consumed in a month,  
359 ComEd, by default, shoves the costs of these letters into the customer cost category. That  
360 classification means they are disproportionately allocated to consumers such as the low  
361 user in Evanston, who does not even receive them. Such costs are related to energy  
362 efficiency and should either be directly allocated to inefficient users or across the whole  
363 system on a non-arbitrary basis.

#### 364           **RATE DESIGN IMPACTS ON LOW USE RATEPAYER BILLS**

365   **Q. Did ComEd present any specifics on how the account charge increase after the**  
366   **change in Docket 10-0467 affected low use consumers, as directed by the**  
367   **Commission?**

368   **A.** Certainly not enough, in my opinion. In the hundreds of pages of ComEd's direct  
369 testimony, the Company does not report the level of its customer charges that would  
370 result from the rate design changes. After digging into exhibits you can find a number  
371 for the monthly account charge resulting from the 2013 revenue requirement – charges  
372 that are imposed on a fixed basis and not affected by usage. That number is \$18.21 for  
373 ratepayers who live in single family homes or duplexes and is higher than the customer

charge imposed by any other utility company in the nation. For ratepayers who live in apartments or three-flats, the total monthly account charge is proposed to be \$10.97.

**Q. What has happened to account charges since the Commission order in the 2010 case?**

**A.** Before the last case, the account charge for single family ratepayers was \$9.88 meaning that the charge would increase by 84% if ComEd's proposed account charge of \$18.21 is approved. The reason for this increase is that in 10-0467 ComEd succeeded in moving 50% of its distribution capacity costs from the energy charge to the customer charge. For multi-family consumers, the account charge increased from a level of \$8.89 implying a percent increase of 23%.

Changes between ComEd prices before the 10-0467 Order and prices presented in this case are shown in the table below. For single family ratepayers, the energy charge has decreased while the customer charge has increased. Prices for space heat ratepayers have declined while the non-space heat prices have increased dramatically.

	<b>Single Family w/o Space Heat</b>	<b>Multi Family w/o Space Heat</b>	<b>Multi Family w/ Space Heat</b>	<b>Multi Family w/ Space Heat</b>
<b>ComEd Exhibit (1)</b>				
Customer Charge (\$/Month)	18.21	10.97	20.3	11.94
Energy Charge (\$/kWh)	0.0238	0.031	0.01135	0.01431
<b>Prior to 2010 Rate Increase</b>				
Customer Charge (\$/Month)	9.88	8.89	9.88	8.89
Energy Charge (\$/kWh)	0.02437	0.02437	0.02048	0.02048
<b>Percent Increase</b>				
Customer Charge (\$/Month)	84.31%	23.40%	105.47%	34.31%
Energy Charge (\$/kWh)	-2.34%	27.21%	-44.58%	-30.13%
<b>Billing Units (2)</b>				
Customers (Annual)	2,232,153	1,041,504	34,999	159,349
Energy (MWH)	20,471,629	4,425,831	750,454	1,593,009
Average Use per ComEd	764.27	354.12	1,786.84	833.08
<b>Revenues (Total Electric Bill in USD)</b>				
Prior to 2010 Case	763,537,697	218,965,120	19,518,797	49,624,141
ComEd Exhibit	974,994,924	274,304,312	17,043,449	45,627,431
Increase	211,457,227	55,339,192	-2,475,348	-3,996,710
Percent Increase	27.7%	25.3%	-12.7%	-8.1%

(1) ComEd Ex. 2.03 2013 FRU ECOSS Current RRL

(2) ComEd Ex. 2.03

390      **Q.      How does ComEd's rate design and account charge compare to the account charges**  
391                    **of utility companies that serve other large metropolitan areas in the U.S.?**

392      A.      In the table below I have compared ComEd's account charge to the account charge of  
393                    utilities that serve the twenty largest metropolitan areas in the country. In addition to  
394                    account charge, I include an indicator that displays whether the utility has an inverted  
395                    block rate structure where prices increase with usage levels. I gathered the data by going  
396                    to the website of each of the utility company and making a screen shot of the tariff book  
397                    or a section of the website where the residential bill was explained. I was not able to find  
398                    information for Texas utilities in Dallas because the website seemed to only deal with the  
399                    competitive choice. The table below shows that ComEd not only stands out because of  
400                    the very high account charge but also because of it is accompanied by a flat energy

charge. For example, Potomac Edison has a relatively high account charge of \$9.50 in Washington D.C. (still about half of ComEd's), but that company also has an inverted energy charge that includes an energy price of \$0.00737 per kWh for the first 400 kWh, which is only 35% of the energy charge of \$0.02144 per kWh for subsequent energy usage.

**TABLE 2 – MAJOR CITY RATE STRUCTURES**

<b>Metropolitan Area and Population</b>	<b>Utility/Rate</b>	<b>Accounts Charge</b>	<b>Inverted Rates</b>
1) New York-Newark-Bridgeport, NY-NJ-CT-PA - 21,976,224	ConEd Low Income	\$15.76	SUMMER
	ConEd Non Low Income	\$7.26	SUMMER
	Public Service Electric and Gas	\$2.27	FALSE
2) Los Angeles-Long Beach-Riverside, CA - 17,775,984	So Cal Edison	\$0.87	TRUE
	LADWP	\$0.00	TRUE
3) Chicago-Naperville-Michigan City, IL-IN-WI - 9,725,317	ComEd Single Family	\$18.21	FALSE
	ComEd Multi-Family	\$10.97	FALSE
4) Washington-Baltimore-Northern Virginia, DC-MD-VA-WV - 8,211,213	PEPCO Washington DC	\$9.50	TRUE
	PEPCO Maryland	\$6.78	FALSE
	BG&E	\$7.50	FALSE
5) Boston-Worcester-Manchester, MA-RI-NH - 7,465,634	NSTAR	\$6.43	FALSE
6) San Jose-San Francisco-Oakland, CA - 7,228,948	PG&E Minimum Charge	\$4.44	TRUE
7) Philadelphia-Camden-Vineland, PA-NJ-DE-MD - 6,382,714	PECO	\$7.09	FALSE
8) Dallas-Fort Worth, TX - 6,359,758	Texas Utilities	NOT FOUND	
9) Houston-Baytown-Huntsville, TX - 5,641,077	Reliant Energy Clear Flex	\$0.00	FALSE
10) Atlanta-Sandy Springs-Gainesville, GA-AL - 5,478,667	Georgia Power	\$9.00	SUMMER
11) Miami-Fort Lauderdale-Miami Beach, FL - 5,463,857	FPL	\$7.24	FALSE
12) Detroit-Warren-Flint, MI - 5,410,014	DTE	\$6.00	FALSE
13) Phoenix-Mesa-Scottsdale, AZ - 4,039,182	APS	\$8.55	TRUE
14) Seattle-Tacoma-Olympia, WA - 3,876,211	Puget Sound Energy	\$7.25	TRUE
15) Minneapolis-St. Paul-St. Cloud, MN-WI - 3,502,891	Excel MN Overhead	\$6.50	FALSE
16) Denver-Aurora-Boulder, CO - 2,927,911	Excel CO	\$6.75	TRUE
17) San Diego-Carlsbad-San Marcos, CA - 2,941,454	SDG&E	\$0.00	TRUE
18) Cleveland-Akron-Elyria, OH - 2,917,801	First Energy	\$4.00	FALSE
19) St. Louis-St. Charles-Farmington, MO-IL - 2,858,549	Ameren Missouri	\$8.00	FALSE
20) Tampa-St. Petersburg-Clearwater, FL - 2,697,731	Tampa Electric	\$10.50	TRUE

407 In reviewing the electric bills of other utilities, a number of the companies are  
408 notable for the manner in which they use of inverted rates to explicitly encourage energy  
409 efficiency. In particular, the two metropolitan areas that are larger than Chicago have  
410 inverted rates. For example LADWP, the municipal utility serving Los Angeles states  
411 when explaining its bill that: “Your monthly usage is divided into three tiers and each tier  
412 has its own corresponding price. During the summer high-demand months, this three tier  
413 system is used as an incentive for residential customers to conserve energy.” The  
414 example of San Diego Gas and Electric stands out as a contrast to ComEd. This  
415 company has both an inverted energy charge and a zero account charge that very strongly  
416 encourages energy efficiency.

417 The company with the second highest account charge is ConEd of New York.  
418 While this company has a relatively high account charge, it also has much higher total  
419 costs than ComEd, implying that its account charge as a percent of the total is much  
420 smaller (its delivery services energy charge for the first block is 8.99 cents per kWh  
421 compared to ComEd’s charge of 2.43 cents per kWh, in part because you do not see any  
422 overhead lines on the Island of Manhattan.) However, unlike ComEd, ConEd has an  
423 inverted energy charge that increases to 10.2 cents per kWh, and it has a special low  
424 income charge of 7.26.<sup>4</sup>

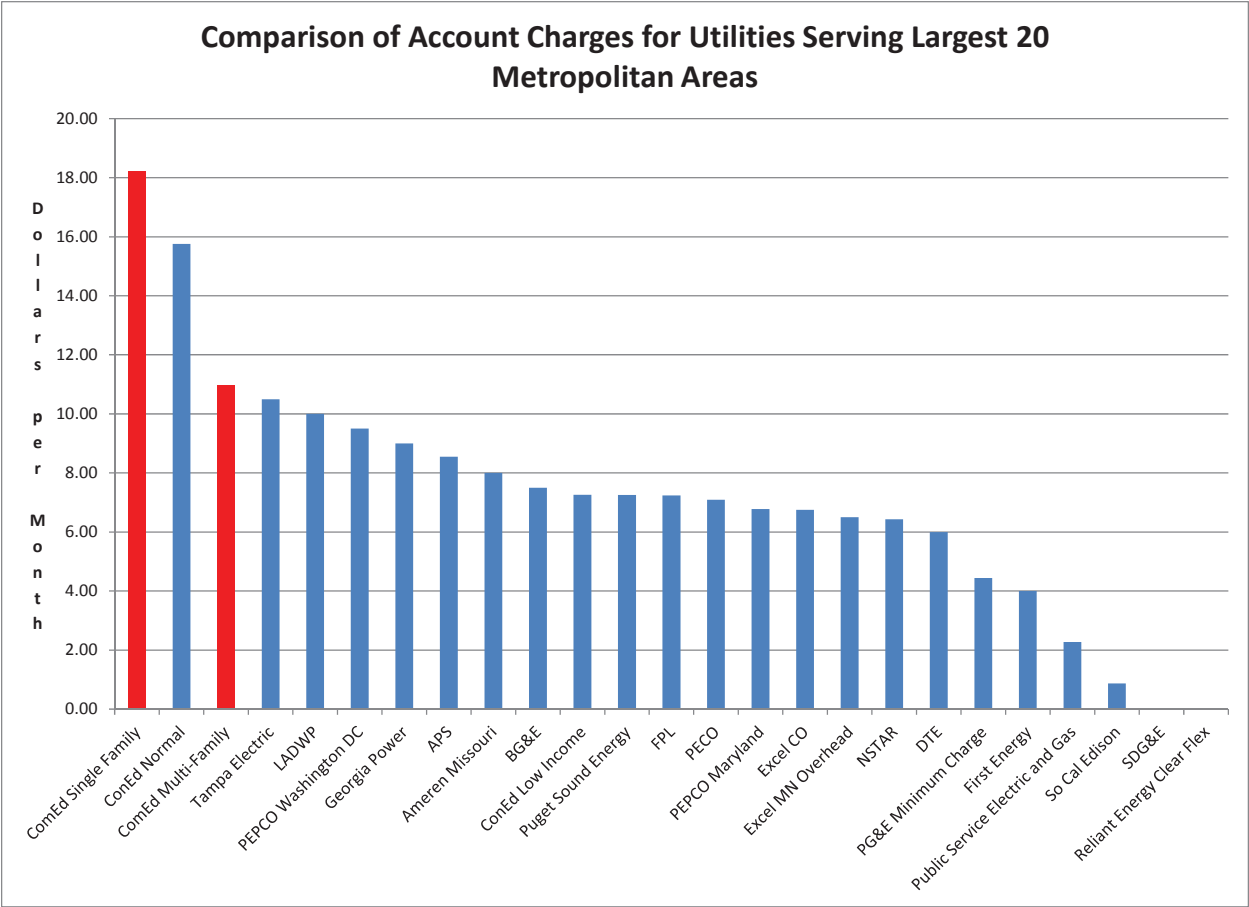
425 I have graphed the above data on the chart below. I also have computed the  
426 median account charge. The median account charge without ComEd on the graph is

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<sup>4</sup> The low income charge can be obtained if a ratepayer is enrolled in Direct Vendor or Utility Guarantee Program and/or receiving benefits under Supplemental Security Income, Temporary Assistance to Needy Persons/Families, Safety Net Assistance, or Food Stamps, or have received a Home Energy Assistance Program grant in the preceding 12 months.

427 \$7.09, implying that ComEd’s charge is 158% higher than the typical charge for other  
428 cities.

429 **FIGURE 5 -- MAJOR CITY ACCOUNT CHARGES**



430 **Q. How does ComEd’s account charge affect consumer bills in different regions of the**  
431 **service territory?**

432 **A.** If all ratepayers in ComEd’s service territory used about the same amount of electricity,  
433 then the increased customer charge might not be that big a deal. But the greater Chicago  
434 metropolitan area has a very diverse housing stock, encompassing many different types  
435 of apartment buildings and a wide range of sizes of single family homes. Partly because

of the geographic distribution of the different types, big differences in usage exist between the City of Chicago and the outside city regions of the service territory.

I often use comparisons of the City of Chicago relative to outside City areas to point out the importance of diversity in usage and to demonstrate the very large effects on the average prices paid by ComEd consumers caused by the current pricing structure. To be clear, I am not arguing in this case for differentiated rates according to location, as the City advocated in ComEd's 2007 case and as existed prior to 1978. Relevant characteristics of low-use consumers -- in terms of load factor, age of housing stock, population density, and undergrounding are driven by the type of housing stock in the area in which the residence is located. The characteristics of low use City consumers would likely be similar (of course, not exactly the same) in nearby suburbs and other areas where average income is lower than the wealthy suburban areas.

The median usage and the twenty-fifth and seventy-fifth percentile usages for City consumers relative to outside City consumers are shown in the graph below. (I use the terms ratepayer and consumer, rather than customer, because I consume electricity and pay rates; I do not choose to be a customer of ComEd. No delivery service user in ComEd territory has a choice of utility.) Differences in income, life styles, and other factors result in the median monthly use per non-space heating consumer in the City being only 58.5% of median monthly use for outside City consumers. In making comparisons, I generally stick to non-space heat consumers, as they are the vast majority of ratepayers and space heat usage can distort comparisons.