

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

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

SEPTEMBER 11, 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. This document and the associated exhibits contain my
5 rebuttal testimony on behalf of the City of Chicago (“City”) and the Citizens Utility
6 Board (“CUB”).

7 **Q. Have you previously testified in this case?**

8 A. Yes. My qualifications are presented in my direct testimony.

9 **SUMMARY OF REBUTTAL TESTIMONY**

10 **Q. What matters do you address in your rebuttal testimony?**

11 A. My rebuttal testimony responds to the rebuttal testimony of various witnesses for
12 Commonwealth Edison Company (“ComEd” or the “Company”), with respect to cost of
13 service and policy issues involving the relationship between residential consumer usage
14 levels and rates. In addition, my testimony indirectly addresses (a) the direct testimony
15 of witnesses for the Illinois Industrial Energy Consumers (IIEC), with respect to
16 secondary street lighting costs, and (b) the direct testimony of witnesses for the Attorney
17 General (AG), and the Commission Staff (Staff), regarding acceptance of high customer
18 charges. Further, I present my analysis of the data collected from ComEd’s load research
19 sample of residential customers. These data were originally requested from ComEd
20 through discovery in late June; however, the full data set, in a usable form, was provided
21 only after a Commission order and numerous discussions with ComEd. The quantity of

22 data and the depth of my analyses precluded earlier completion of this portion of my
23 testimony. These analyses of ComEd's load research data also directly address
24 statements made by Mr. Tenorio in his rebuttal testimony.

25 **Q. Do you have any general comments about the scope or content of ComEd's rebuttal**
26 **testimony?**

27 A. In general, ComEd's rebuttal (by Brinkman, Tenorio, Hanser, Bjerning and Donovan):

28 1) mischaracterizes my direct testimony;

29 (2) re-states the fallacies and poorly supported analytical conclusions
30 offered in ComEd's direct testimony -- without responding substantively to
31 my critiques;

32 (3) offers comments that confuse the issues, rather than rebut my
33 testimony with objective analysis; and

34 (4) ignores key aspects of my cost of service testimony (concerning
35 density, age, undergrounding, and customer related costs).

36 **Q. Aside from your overall impressions, what are the principal substantive conclusions**
37 **you reached after reviewing the ComEd rebuttal testimony?**

38 A. First, the critical findings of the analyses presented in my direct testimony are essentially
39 unaffected by ComEd's rebuttal testimony. My most important observation is that
40 ComEd has presented no substantive evidence to rebut the fundamental conclusion of my
41 direct testimony -- that ComEd's residential rate design must be revised because of its
42 misallocation of cost responsibility and the inequities it creates for low use consumers

43 and for low income consumers. The Company did not respond to the essential points of
44 my analyses of the relevant cost causation and rate impact data.

45 The following points from my analyses are substantively un-rebutted:

46 1) ComEd's distribution (demand) cost of service increases with the
47 level of consumer usage, as evidenced by cost responsibility in terms of miles
48 of wire per ratepayer, poles per ratepayer and miles of underground
49 conductors per ratepayer, as well as by the correlation between density,
50 undergrounding, age and usage; and

51 2) most costs that ComEd labels "customer related" – the above
52 demand costs and items such as the costs of market research, stolen electricity,
53 reconnecting ratepayers, providing technical services to ratepayers, relocating
54 facilities, regulatory strategy, and administrative costs, as well as costs
55 associated with moving, ratepayer complaints, and software bells and whistles
56 in the billing system -- are not caused by the existence of a customer account;
57 and

58 3) the effects of density, age of plant, and undergrounding on
59 ComEd's costs, which I established in my direct testimony, are essentially
60 uncontested; ComEd's suggestion that the deployment of smart meters will
61 resolve the rate design problems I have identified is wrong, because those cost
62 differences will persist and ComEd's proposed rate design would continue to
63 ignore them.

64 Second, even when ComEd tried to rebut my analyses, those efforts fell short of
65 the mark. I reviewed and evaluated ComEd's witnesses' attempts to respond to my direct

66 testimony. My evaluations of those attempts, which are presented later in this testimony,
67 show that they are flawed and cannot be relied on by the Commission. For example,
68 ComEd's main response to my testimony on the relationship of distribution costs to
69 consumer usage was the testimony of Mr. Tenorio, the Company's principal rate design
70 witness. However, Mr. Tenorio's testimony focuses instead on maximum demand load
71 factors, and the particular analysis he offers (individual maximum demands instead of
72 coincident peak loads) fails to inform the Commission's review of a class cost of service
73 study like ComEd's. Even though individual maximum peak loads for single consumers
74 have nothing at all to do with cost of service, Mr. Tenorio asserts that his analysis
75 somehow invalidates my conclusions regarding the relationship between distribution cost
76 of service and usage. His testimony illustrates the confusion and distraction fostered by
77 the types of analyses the Company chose to present.

78 ComEd's suggestion that the implementation smart meters will resolve rate design
79 controversy is wrong. To the contrary, if and when smart meters are implemented the
80 relationship usage and cost affecting factors like density, age, undergrounding will not
81 change. Consumers with low demand and lower costs should still have lower account
82 charges, implemented on a tiered basis.

83 Third, my review of IIEC's testimony (and supporting workpapers) proposing an
84 increased allocation of costs to the Lighting class revealed that ComEd's street lighting
85 rates do not conform to the Commission's decision in the 10-0467 case. ComEd did not
86 determine City rates using the City-specific costs the Commission identified in its
87 decision. (Instead, ComEd spread those lower costs across all municipalities taking the
88 dusk to Dawn lighting service.) ComEd's error means that the City has been charged in

89 excess of \$500,000 more than it would have been charged if ComEd had complied with
90 the Commission's order.

91 Fourth, the testimony submitted by ComEd, the Attorney General, and the ICC
92 Staff highlights the problems with ComEd's rate design. Even if an SFV rate design is
93 eliminated or not fully implemented, ComEd's rates would remain more regressive in its
94 impact on low-use and low income consumers than the rates of other utility companies.
95 If ComEd's rate structure were graded on a curve for encouraging energy efficiency, it
96 would receive a solid "F" – worse than any other utility company in the U.S. and perhaps
97 the world (with possible exceptions of a small utility company in Rochester, New York,
98 and a few cooperative utilities, e.g. Great Lakes Energy Cooperative, that ComEd
99 believes are significant).

100 **Q. How have you structured your responses to the individual ComEd witnesses?**

101 A. I include the responses to Ms. Brinkman, Mr. Tenorio, Mr. Donovan, and Mr. Bjerning in
102 the body of my testimony. My comments on the bulk of Mr. Hanser's testimony are
103 presented in a separate exhibit.

104 **Q. Beyond your analysis of other parties' direct testimony, do you provide any new**
105 **information in this testimony?**

106 A. Yes. As I noted, my analysis of ComEd's residential consumer data was delayed by
107 problems in discovery. My analyses are presented in this testimony.

108 My analyses of the complete load research data provided by ComEd demonstrate
109 that:

(1) no amount of peak demand can be correlated to the existence of a ratepayer account, contrary to the conclusion of ComEd's Residential Usage Study (Exhibit 2.33), which was supposed to examine the same data;

(2) the coincident peak load factor of residential consumers in the City of Chicago is higher (more efficient) in the City of Chicago than in other ComEd regions, implying a 23% lower cost responsibility;

(3) there are serious problems with ComEd's residential load research sample and with the quality of ComEd's load research; those problems may have large implications for the proper allocation of costs of service among and within classes;

(4) dramatic changes ComEd has made in the multi-family load factors that have been used over the years (since the 1994 rate case) need to be explained and addressed;

(5) coincident peak load factor is better for low use consumers (usage up to a level of about 500 kWh per month) than other residential consumers; and

(6) anecdotal reports of low use consumption attributable to people changing residences or going on vacation (resulting in low percentile data points) do not prove that usage is independent of demand.

My analyses directly address conclusions presented in the testimony of ComEd's rate design witness, Mr. Tenorio, who defends the Company's usage study.

Q. Have you provided any exhibits to this testimony?

A. Yes, I have prepared the following exhibits that present and illustrate my findings.

- 132 ➤ **Exhibit 2.1** titled “**Correlation between Usage and Demand.**” This exhibit
133 includes a comprehensive review of ComEd’s residential usage data and residential
134 load research data. The review and analyses of the data in his exhibit support my
135 testimony that (1) no amount of demand can be correlated with the presence of a
136 ratepayer account; (2) the load factor inside the City of Chicago is higher than the
137 load factor outside the City of Chicago; (3) in terms of coincident load and peak
138 monthly load, load factors for low use consumers are higher than load factors for high
139 use consumers wherever they reside; (4) there are serious problems with ComEd’s
140 load research, which cast doubt on the company’s entire cost of service study; (5) low
141 usage data points in percentile 1 in the ComEd study are often caused by ratepayers
142 leaving residences vacant and have nothing to do with the relationship between usage
143 and demand; and (6) more than 99% of variation in peak load can be explained by
144 variation in usage.
- 145 ➤ **Exhibit 2.2** titled “**Grading of Utility Companies’ Rate Structures in Terms of**
146 **Energy Efficiency and Regressiveness.**” This exhibit contains an analysis of the
147 structure of ComEd’s rates compared to rate structures for the 20 other largest
148 metropolitan areas in the country, evaluated by the slope of the price/usage curve for
149 each area’s utility. That analysis supports my conclusion that ComEd’s rate structure
150 is the worst of the entire group of companies in encouraging energy efficiency, which
151 directly conflicts with energy efficiency objectives defined by the State Legislature.
152 The analysis in Exhibit 2.2 also shows that, for single family consumers, ComEd has
153 the most regressive rate structure, from the perspective of low income consumers; in

each and every case the price (adjusted for overall revenue levels) is higher for low users under ComEd's rate design than for other companies.

When ranking utilities in terms of encouraging energy efficiency, ComEd's delivery services rate design comes in dead last. This exhibit also demonstrates that while the suggestion of AG witness Scott Rubin is certainly a positive step, his recommended customer charge of approximately \$13 per month for single family consumers, with no inversion in rates, would still leave ComEd's price structure among the most regressive in the nation.

➤ **Exhibit 2.3** titled “**Detailed Response to the Testimony of ComEd Consultant Hanser.**” Many of my responses to the testimony of Mr. Hanser, a consultant hired by ComEd to take an advocacy position with respect to residential rate design, are included in a separate exhibit because his comments are of marginal relevance to the examination of empirical cost of service and rate impact evidence, and because the responses to his many opinions would make my testimony much longer. City/CUB Exhibit 2.3 demonstrates that: (1) Mr. Hanser does not understand my proposal; (2) he does not appreciate (or consider) the characteristics of housing stock and consumption patterns in the Chicago area; (3) Mr. Hanser does not present any empirical evidence or make any valid policy arguments that justify charging distribution costs on the basis of the number of ratepayer accounts; (4) Mr. Hanser has not evaluated the relationship between cost of service and usage for ComEd, arising from differences in density, undergrounding, or age of equipment; (5) the logic of Mr. Hanser's economic analysis is highly flawed; and (6) the most significant aspect of Mr. Hanser's testimony is the fact that it exists -- that ComEd hired an

outside consultant to advocate high customer charges demonstrates that the company may not be indifferent to choices among revenue-neutral rate designs. Specific problems with Mr. Hanser's testimony are presented in City/CUB Exhibit 2.3.

IMPLEMENTATION OF STREET LIGHTING RATES

Q. Since it is somewhat distinct from your broader analyses of ComEd's costs and rate design, I would like for you to address the street lighting issues first. In your direct testimony you commended ComEd for its calculation of street lighting rates. After reviewing the direct testimony of other parties, do you have the same opinion?

A. No, I was mistaken. I reviewed ComEd's cost calculations for secondary street lights associated with City of Chicago facilities, which were reasonable. However, because of the manner in which ComEd used those correctly calculated costs in determining its rates (the very last step in complying with the Commission's Docket 10-0467 Order), secondary street lighting rates to the City of Chicago are overstated by more than 500%.

Q. Have you re-evaluated whether ComEd's street lighting charges were consistent with the Commission's Order in Docket No. 10 0467?

A. In validating the appropriateness of IIEC's proposal to increase the allocation of secondary costs to the Lighting Class, I discovered that despite ComEd's claim of compliance with the Commission's 10-0467 Order, ComEd has not set rates as mandated by the Commission in that order. The rate developed by ComEd does not reflect what the Commission recognized and ordered taken into account in ComEd's rates -- the unique nature of the facilities serving the City of Chicago (or any other affected municipality).

Instead of using Chicago's unique costs to determine Chicago's rates, the calculations underlying ComEd's rates use a weighted average of Chicago's unique costs and costs for other lighting ratepayers that were calculated using the costing approach that was rejected by the Commission. The resulting average was applied to all municipalities (despite any unique costs) recreating the failure to recognize the City's lower costs -- a failure the Commission ordered corrected. As the Docket 10-0467 Order explained, the corrected costs incorporated in the Chicago Method approved by the Commission do reflect the significant differences in lighting class secondary distribution facilities serving affected municipalities, and (as the Commission required) those differences must be recognized in reasonable rates for each municipality.

Q. What is the cost per kWh for City of Chicago street lighting secondary equipment and services that is computed in the ComEd cost of service study?

A. The table below shows that, in measuring the amount of wire and the cost of services for City of Chicago street lights, the average cost per kWh is \$.000410 or \$.41 per MWH.

TABLE - CITY STREET LIGHTING COSTS

Cost per kWh of City Dusk to Dawn per ComEd Cost Study				
Column	Units F	Amount G	Row H	Source I
Total Dusk to Dawn kWh	kWh	569,516,945	29	=Sch 2b Allocation Factors!R7
City of Chicago Percent	Pct	55%	30	=Chicago D to D Adj!D17
City of Chicago kWh	kWh	311,467,673	31	=G29*G30
City Cost of Secondary Lines	USD	\$127,575.00	33	=Chicago D to D Adj!D11
City Cost of Services	USD	\$0.00	34	
Total City Cost of Secondary Lines and Services	USD	\$127,575.00	36	=SUM(G33:G35)
City Cost per kWh	USD/kWh	\$0.000410	38	=G36/G31
City Cost per MWH	USD/MWH	\$0.409593	39	=G38*1000

Q. What cost of service for secondary equipment and for services does ComEd compute for the Dusk to Dawn street lighting, before ComEd's adjustment for the City costs?

A. For the Dusk to Dawn Class, ComEd makes the same calculation it did in pre-Docket 10-0467 studies, where it allocates services on the basis of labor costs for hooking-up lights, and it allocates the cost of secondary wire through a top-down application of non-coincident peak. The table below shows that, using this method, the cost of secondary wire and services is \$0.003272 per kWh or \$3.27 per MWH, which is 700% more than the cost of service for the City Facilities.

TABLE - COMED CALCULATION OF GENERIC STREET LIGHTING COSTS

Cost per kWh of Generic Dusk to Dawn per ComEd Cost Study				
Column	Units F	Amount G	Row H	Source I
Total Dusk to Dawn kWh	kWh	569,516,945	49	=Sch 2b Allocation Factors!R7
Total Cost of Secondary Lines	USD	\$1,314,101.41	51	=Chicago D to D Adj!D15
Total Cost of Services	USD	\$549,406.58	52	=Chicago D to D Adj!D28
Total Cost	USD	\$1,863,507.99	53	=SUM(G51:G52)
Cost per kWh of Generic DD Street Lights	USD/kWh	\$0.003272	55	=G53/G49
Cost per MWH of Generic DD Street Lights	USD/MWH	\$3.2721	56	=G55*1000
Percent above cost for City of Chicago	Percent	699%	58	=G55/G38-1

Q. What is the cost of service for secondary equipment and for services that ComEd applies to the entire Dusk to Dawn street lighting class, including the City of Chicago?

A. Instead of using the City's actual cost of service (as determined in the Docket 10-0467 order) to determine the rate applied to City street lighting (as that order requires), ComEd

(a) substitutes the City of Chicago cost for services and secondary wire (described above) for the fraction of street lighting energy that is used in the City, (b) essentially computes a class weighted average cost of service, and charges the City a rate based on that average cost instead of a rate based on the City's cost, as ordered by the Commission. ComEd's cost calculation of \$0.002136 per kWh or \$2.136 per MWH is shown on the table below.

TABLE - COMED CALCULATION OF COSTS RECOVERED IN CITY RATES

Cost of Services and Secondary Wire Applied to All DD Ratepayers				
Column	Units F	Amount G	Row H	Source I
Total Dusk to Dawn kWh	kWh	569,516,945	66	=Sch 2b Allocation Factors!R7
Total Cost of Secondary Lines	USD	\$1,314,101.41	68	=G51
Total Cost of Services	USD	\$549,406.58	69	=G52
Total Cost	USD	\$1,863,507.99	70	=SUM(G68:G69)
Less: Adjustment for City Cost	USD	(\$646,978.07)	71	=Chicago D to D Adj!D44
Net Cost	USD	\$1,216,529.92	72	=G70+G71
Cost per kWh of Generic DD Street Lights	USD/kWh	\$0.002136	74	=G72/G66
Cost per MWH of Generic DD Street Lights	USD/MWH	\$2.1361	75	=G74*1000
Cost per kWh as Percent of City Cost	Percent	522%	77	=G74/G38

Because ComEd ignored the Docket 10-0467 Order and subtracted the City Adjustment when computing costs for the entire class, the rates to all consumers in the class are essentially a weighted average of the City cost and the non-city cost. This failure to follow the Commission's directive results in charges to the City that are 522% above the correctly computed cost. If ComEd had ignored the City's lower costs entirely (instead of diluting their impact) the excess charges would have been 700% above the correctly computed cost.

241 **Q. Did the Commission Order in Docket 10-0467 specify how those costs peculiar to the**
242 **City of Chicago should be used?**

243 A. Yes. The ordered changes in rates recognized that certain costs were peculiar to the City
244 of Chicago, and the Commission ordered that those unique City costs be used in the
245 determination of the City's Dusk to Dawn rates, explicitly re-approving the "Chicago
246 Method" over ComEd's objections.

247 **Q. Did the Commission spell out the proper application of the "Chicago Method" when**
248 **determining the rates of other municipalities in the class?**

249 A. Yes. The Commission's Order stated:

250 So that the record is clear, the "Chicago Method" is again adopted here.
251 The Commission further cautions that use of the "Chicago Method" by
252 other municipalities must take into account alley lighting. Many
253 municipalities in Illinois do not have alleys, and therefore, do not have
254 alley lighting. Other municipalities using this method must state whether
255 they have alleys and appropriately account for the difference used by the
256 City of Chicago and the respective municipality(s). Dkt. 10-0467 Order,
257 May 24, 2011 at ~280.

258 **Q. What rate design change do you propose to correct this instance of non-compliance**
259 **with the Commission's order?**

260 A. ComEd's Dusk to Dawn street lighting tariffs must incorporate the cost differences
261 among municipalities recognized by the Commission, particularly the cost effect of alley
262 lighting. Since ComEd has not identified any other municipality that asked to use the
263 Chicago Method or that has a similar cost structure, the rate for the City of Chicago (or
264 other municipalities with unique costs) should be distinct.

265 **ISSUES NOT ADDRESSED BY COMED**

266 **Q. Several ComEd witnesses spend many pages addressing various issues in your**
267 **testimony. Did their testimony cover the important issues in this case?**

268 A. No. First, as I noted earlier, ComEd has provided no substantive rebuttal to my
269 demonstration of the strong correlation between consumer usage levels and ComEd's
270 distribution costs, which ComEd admits are driven by demand.

271 Second, a large part of my cost of service analysis involved the cost responsibility
272 of different regions that is driven by density, age of equipment and undergrounding. I
273 spent much of my testimony discussing the fact that higher density, older equipment and
274 less undergrounding are correlated with low usage, using City consumers as a proxy for
275 low use consumers.¹ As an example of the cost drivers, I showed that the cost
276 responsibility in terms of miles of lines per ratepayer is 6.95 miles per 1000 consumers
277 inside the City and 25.96 miles per 1000 consumers outside the City. Since density, age
278 and overhead lines are correlated with lower cost, the cost per kWh increases with levels
279 of higher usage, irrespective of load factors.

280 Because of the cost impacts of high density, older equipment, and less
281 undergrounding, consumers with low demand and lower costs should still have lower
282 account charges, implemented on a tiered basis. Even if demand meters are deployed and
283 demand costs allocated on the basis of measured demand, those consumers' lower costs
284 will persist and should be recognized. Further, the cost of smart meters should be treated
285 as a demand related cost, since spending money on the more expensive meter is intended
286 to improve energy efficiency and lower distribution costs, by (among other things)

¹ My direct testimony (City-CUB Ex. 1.0 at 30) explained my use of this proxy.

287 measuring and displaying demand to consumers. If ComEd cannot recognize the cost
288 differences attributable to usage and demand differences in its rates, one wonders why
289 new meters are being installed, since without proper recognition of costs in rates,
290 sophisticated, hourly measurements and displays will not help consumers.

291 Third, a significant portion of my direct testimony discussed the unreasonableness
292 of ComEd's conclusion that customer related and metering costs add up to more than
293 50% of the total cost of serving multi-family ratepayers. ComEd achieves this result by
294 including the costs of market research, stolen electricity, reconnecting ratepayers,
295 providing technical services to ratepayers, relocating facilities, regulatory strategy, and
296 administrative costs, as well as costs associated with ratepayer moves, ratepayer
297 complaints, and billing system software bells and whistles in its calculation of customer
298 costs. ComEd then allocates these costs on the basis of the number of accounts, implying
299 that if a house is divided from a single family home into a duplex, all of these costs
300 would increase. With respect to (a) the cost effects of ratepayer density, equipment age,
301 and undergrounding or (b) actual cost causation for costs of consumer complaints,
302 ratepayer moves, stolen electricity etc., ComEd fails to address these important factors.

303 **RESPONSE TO REBUTTAL TESTIMONY OF MS. CHRISTINE BRINKMAN**

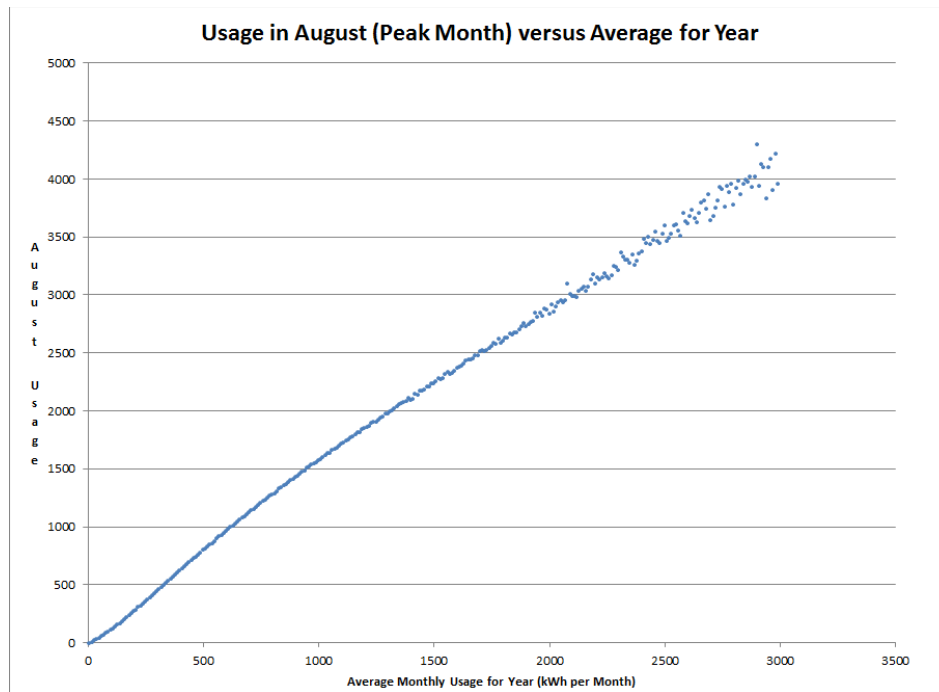
304 **Q. At lines 74-84 of her rebuttal, Ms. Brinkman defends the ComEd usage study**
305 **(ComEd Exhibit 2.33) because it uses “extensive data” and “includes four charts”**
306 **for “each of several hundred zip codes.” Is her defense of the study valid?**

307 **A.** No. It is true that ComEd presented a lot of data and charts in its Exhibit 2.33. However,
308 given the propositions the Company is attempting to support – e.g., that bigger homes do

not have both more usage and peak demand than smaller houses – the manner in which ComEd analyzed the data fails to support those propositions. ComEd has thrown together a lot of data, then asserted that there is no relationship between usage and demand, a conclusion supported only by anecdotal stories about vacation homes or people moving and leaving a house or apartment with low electricity usage during a vacancy period. ComEd offers such anecdotes about outliers (e.g. vacation homes) as proof of its propositions for a much larger universe of ratepayers. That approach cannot be accepted as an objective analysis.

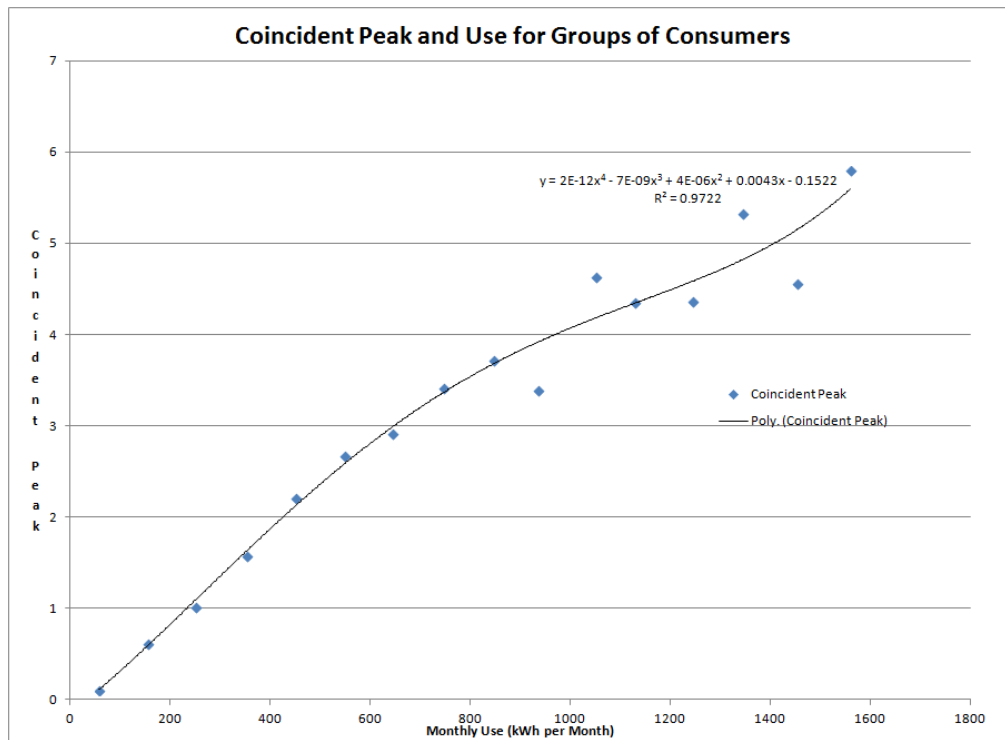
Since submitting my direct testimony, I have been able to analyze in detail a more complete collection of ComEd’s usage data and load research data. When objective statistical analyses rather than anecdotal anomalies are used, there is no empirical basis upon which it is possible to conclude that any actual usage or demand whatsoever is related to the presence of a customer account. That key conclusion of this report is illustrated in the two graphs below. (My analysis is described in detail in City/CUB Exhibit 2.1 titled **Correlation Between Usage and Demand**.) The first graph compares residential consumer usage over the year to usage in the peak month of August by small 10 kWh increments of usage. The graph illustrates two key facts that confirm no usage can be attributed to the presence consumer accounts. First, the correlation of 99% is very high, suggesting there is little to be explained by anything else. Second, usage does not cross the y-axis at a positive level, which would occur if some peak demand were correlated to the mere existence of a factor (like the number of consumer accounts) independent of usage. Exhibit 2.1 explains in detail how the analysis was developed and why the conclusions are appropriate.

332 **FIGURE - CORRELATION OF USAGE AND PEAK MONTH DEMAND**



333 The second graph below applies load research data to compare usage during the
334 coincident peak hour for the ComEd system to average usage for larger, 100 kWh
335 increments of usage. As with the above graph, this second graph shows a very high
336 correlation of 97%, suggesting there is little to be explained by factors other than usage.
337 Further, the second graph also does not cross the y-axis at a positive level, which would
338 occur if some of the coincident peak demand was correlated to the mere existence of a
339 consumer account, independent of usage.

340 **FIGURE - CORRELATION OF USAGE AND COINCIDENT PEAK DEMAND**



341 **Q. When commenting on your testimony at lines 152-157 Ms. Brinkman implies that**
 342 **your proposals are not cost based. Is this characterization of your testimony**
 343 **correct?**

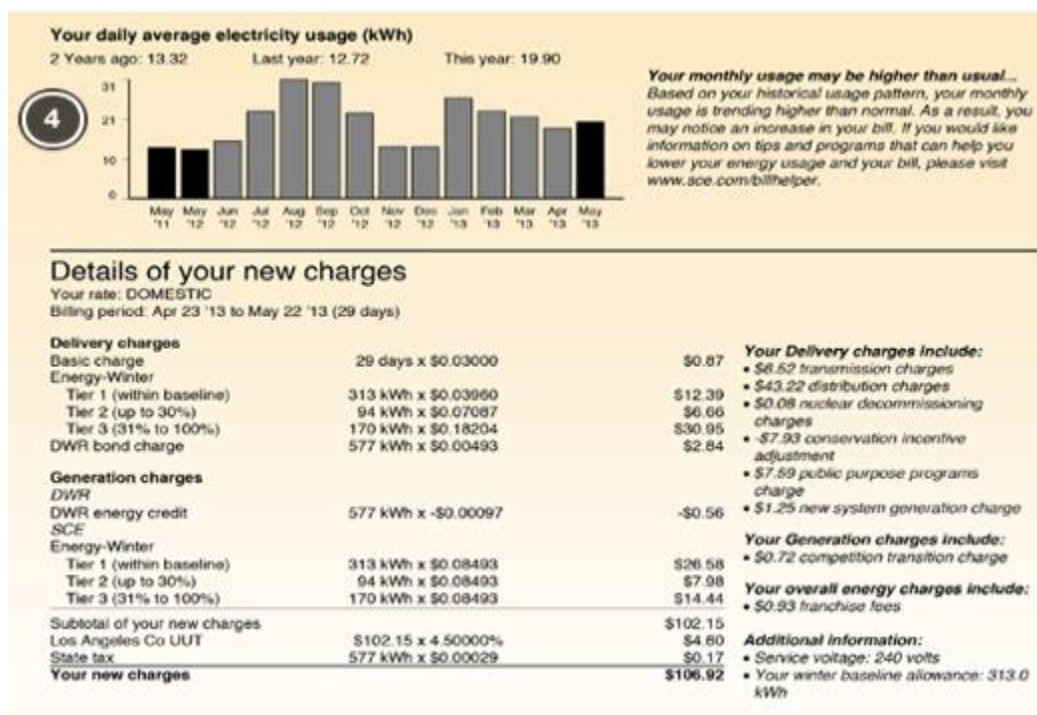
344 **A.** No, this characterization is completely false. I repeatedly testified that low use
 345 residential consumers have lower costs than high use consumers. That testimony
 346 included an illustrative recounting of observations made with my Uncle Gerald, an
 347 analysis (using ComEd's own data) correlating distribution cost responsibility with usage
 348 (sometimes using City/non-City costs to show the relationship of costs for low/high usage
 349 ratepayers), and a demonstration that because of the density of City of Chicago ratepayers
 350 (compared to other regions) the miles of lines per ratepayer (a portion of their cost
 351 responsibility) are dramatically lower in the City than outside of the City. One of the

numbers that demonstrated the dramatic, lower cost is cost responsibility in terms of cost per ratepayer. That cost responsibility is only 6.95 miles per 1000 ratepayers for distribution lines inside the City while it is 25.96 miles per ratepayer outside of the City; those lower costs should result in lower prices for low users. In terms of the cost responsibility of poles, the numbers are similar. There are .81 poles per ratepayer in the City while there are 2.85 poles per ratepayer outside of the City, even though there is more undergrounding in the outside City regions. These cost differences are reflected in my tiered customer charge proposal.

Q. Even though your proposal is cost based, could there be factors that could over-ride the results of a cost analysis when designing rates?

A. Yes. It is clear from a review of rate designs for other utility companies in the U.S. that policy considerations involving encouragement of energy efficiency and distributed generation sometimes take a front seat. For example, the excerpt of a consumer bill on the website of Southern California Edison² shows that if you use higher amounts of electricity your bill dramatically increases – much more than in my tiered customer charge proposal. In the delivery charges section of that bill, the account charge is only .67 cents per month. The energy charge for the first 313 kWh per month is \$.0390 per kWh. It then jumps to \$.07087 per kWh for the next 94 kWh and it leaps to \$.18204 per kWh for the remaining kWh used. If I had this rate structure I would be obsessive about turning off the lights, keeping the air conditioner off as much as possible, buying appliances that do not waste electricity, and efficiently using my clothes dryer.

² <https://www.sce.com/wps/portal/home/residential/rates/!ut/p/b1/p>

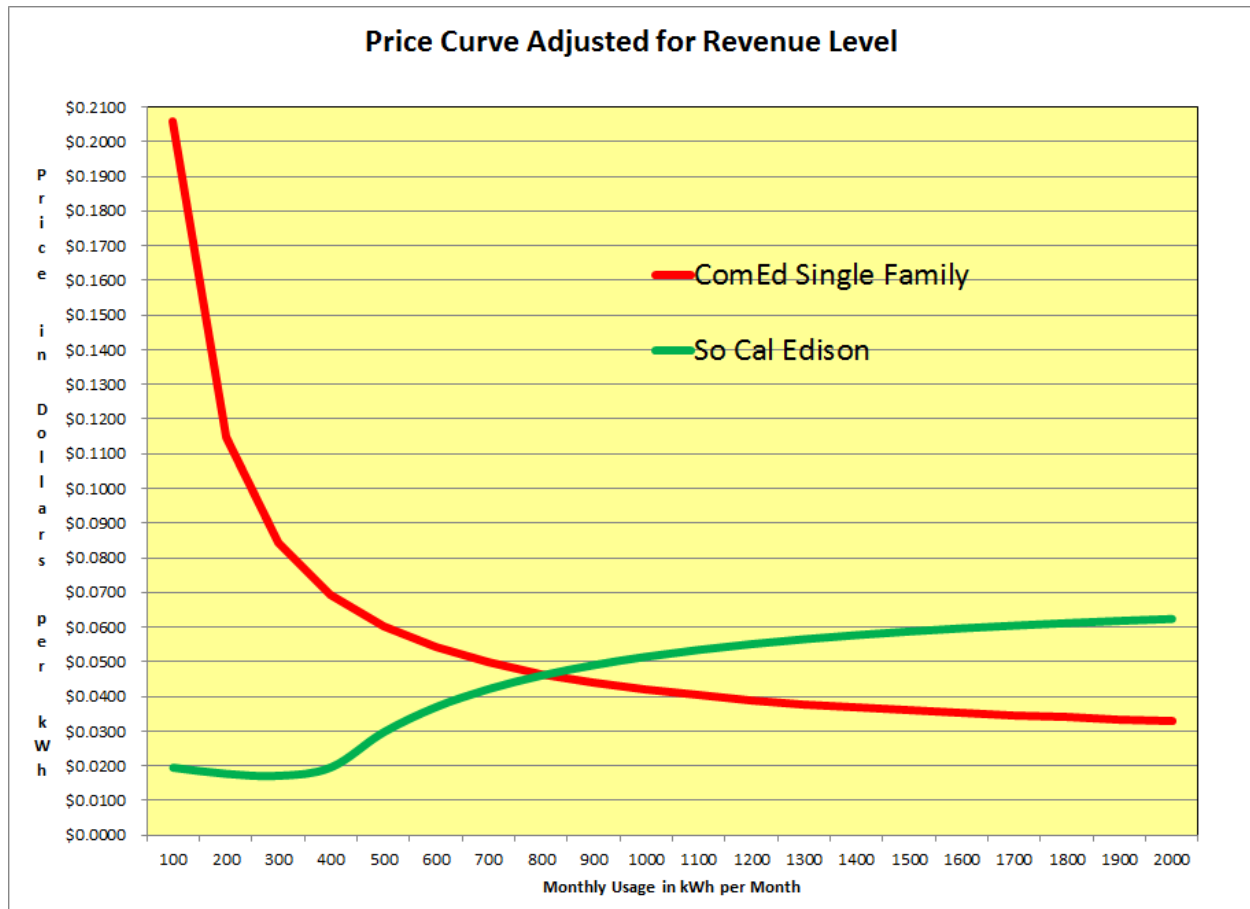


374 **Q. Can you compare the rate design for Southern California Edison delivery service**
 375 **rates to ComEd's rate design, in terms of encouragement of energy efficiency and**
 376 **regressiveness?**

377 **A. Yes. To evaluate the structure of rates for different utilities, compared to ComEd's, I**
 378 **have computed the electric bill per kWh for various levels of usage. I made this**
 379 **calculation for the ComEd single family rate and for the corresponding residential rate of**
 380 **the comparison companies. After computing the average price per kWh at various levels**
 381 **of usage, I evaluated the total level of revenues generated by the rate design of the**
 382 **comparison company and compared it to the level of revenues generated by ComEd's**
 383 **rate design. The delivery service tariff components of the comparison company (in this**

case Southern California Edison) were then increased or decreased so that I could present graphs that focus on the slope of the price curve. Further details of my calculations are described in City/CUB Exhibit 2.2

The graph below compares the rate designs for ComEd and for Southern California Edison. It shows that while ComEd has a very steep downward sloping curve (lower price at higher usage), the Southern California Edison curve is upward sloping (higher price at higher usage). The curve for Southern California Edison strongly encourages energy conservation, roof-top solar power installation and other energy efficiency measures, while the ComEd rate design does the opposite. Given the detrimental effects on the environment from generation, transmission, and distribution of electricity, as well as the mandates on energy efficiency from the State Legislature, there is little doubt that most serious policy makers would support the Southern California Edison structure rather than the ComEd structure. Finally, the shape of the Southern California Edison structure corresponds to cost of service patterns for ComEd, as shown by the usage to density, age, overhead lines, and cost correlations discussed above.



400 City/CUB Exhibit 2.2 includes a similar graph for each utility company that serves one of
 401 the largest 20 metropolitan areas in the U.S. Comparing the slope of the ComEd single
 402 family rate to that of each of the other companies, not one utility company has a steeper
 403 downward sloping price curve than ComEd. In each and every case shown in City/CUB
 404 Exhibit2.2, the red line for ComEd has a steeper downward slope than the comparison
 405 utility. It is from this consistently steeper downward slope that I conclude that ComEd
 406 should receive a solid “F” grade in terms of encouraging energy efficiency. This
 407 certainly conflicts with the energy efficiency objectives of the State Legislature. Further,

given the fact that income is closely correlated with usage, one can also state that ComEd has the most regressive rate structure.

Q. At lines 164-179 of her testimony Ms. Brinkman complains that ComEd's revenues are not absolutely fixed and guaranteed. What does her statement signify to you?

A. Ms. Brinkman's statement reveals why ComEd would design rates that have the effect of making electric bills to low income and low use ratepayers as high as possible. Given how her statement reveals ComEd's objectives, I have repeated it below.

EIMA in no way assures ComEd's full revenue requirement will be recovered. An appropriate cost allocation and rate design [i.e. SFV] will provide ComEd with a better opportunity to recover its Commission approved revenue requirement....Mr. Bodmer's claim fails to acknowledge that EIMA, by its own terms, contains sunset provisions. Consequently, even if EIMA ensured *revenue stability* – and it does not – EIMA does not provide the *long-term revenue stability* that Mr. Bodmer claims. (emphasis added)

This statement is very informative; it allows the Commission to understand the Company's motivations in rate design and cost allocation. First, ComEd's ratepayers should not have to endure unjust and unreasonable rates for a decade simply because of ComEd's fear that its formula rates will not be extended. Second, any pretense about rate design being a "zero sum game" about which ComEd is neutral is false. Similarly, any statement that ComEd is indifferent to various rate designs as long as it can collect its revenues is also false. (See the direct testimonies of Ms. Brinkman and Mr. Tenorio.)

It is important that the Commission fully understand the implications of Ms. Brinkman's testimony and how the Company's revenue stability objective creeps into all areas of its cost of service study and rate design recommendations. ComEd's ECOSS has thousands of costs, allocation factors, functionalization routines, and other items. The

434 data come from many more thousands of detailed account entries in the ComEd books,
435 where classification of costs for accounting can be quite subjective. Given ComEd's
436 corporate objective to reduce risk, it is not at all surprising that so much of its cost of
437 service ends up in "customer related" items that are allocated to the customer charge. For
438 example, a lot of the consulting fee paid to ComEd's consultant Mr. Hanser to respond to
439 my testimony would end up in the customer charge. Similarly, the cost of preparing
440 ComEd's Exhibit 2.33, which attempts to prove that usage and demand are not correlated,
441 will also end up in the customer charge.

442 ComEd performs all of the accounting that produces costs that end up in the
443 ECOSS the company performs, and ComEd controls all of the data. Given Ms.
444 Brinkman's expression of the ComEd corporate perspective on revenue stability, the
445 Commission cannot reasonably assume that ComEd's subjective decisions in recording
446 and allocating costs will be objective. It is more likely (if one assumes ComEd will act in
447 its economic interests) that any time the Company can call a cost "customer related" it
448 will. When the Company's analysis suggests that 50% of the costs for multifamily
449 ratepayers are related to metering and "customer care," the Company's bias in favor of a
450 customer related designation for its costs becomes clear. Given ComEd's corporate
451 objective, it is not surprising that the company has such a regressive rate design. This
452 means that even if the SFV is rejected, ComEd will remain an outlier because of other
453 policies that push costs into the "fixed" category that it treats as "customer related."

454 Through Ms. Brinkman's statement, the Company has revealed a desire be
455 virtually risk free. From ComEd's perspective, allocating demand/distribution costs on
456 the basis of customer accounts (notwithstanding the absence of any correlation) allows the

457 utility to claim that its rates are cost based, while gaining more revenue assurance.
458 ComEd already earns a very hefty risk premium of about 6% in its formula rates, despite
459 the assurances of formula rates and revenue requirement reconciliations. The question
460 raised by Ms. Brinkman's testimony is whether the Commission must also adopt a rate
461 design policy that dramatically discourages energy efficiency to provide even more
462 certainty for ComEd. I hope that as a reasoned arbiter, the Commission will focus instead
463 on actual cost of service responsibility and policy considerations important to ratepayers
464 and society, rather than further assuring ComEd's revenue stream.

465 Before considering revenue stability objectives, I believe the Commission should
466 make sure that the rate structure (1) corresponds to cost of service (where cost of service
467 recognizes the effects of density, age and other factors); (2) does not discriminate against
468 low income consumers, and (3) does not discourage the energy efficiency mandated by
469 State Legislature policy. As demonstrated in my direct testimony, my tiered customer
470 charge proposal (which does not increase usage charges relative to ComEd's rate design)
471 advances these three objectives -- cost-based rates, non-regressive rate design, and
472 encouraging energy efficiency -- while accommodating ComEd's revenue stability
473 objective.

474 **RESPONSE TO REBUTTAL TESTIMONY OF MR. CHARLES TENORIO**

475 **Q. Does Mr. Tenorio seem to understand your proposal?**

476 A. No, it appears that he does not understand at all what I am proposing. One example of
477 his misunderstanding of my testimony occurs at lines 106-107 of his rebuttal, where Mr.
478 Tenorio wrote:

479 “[I]t appears that Mr. Bodmer proposes to significantly lower customer
480 charges for **all** residential customers.” (emphasis added)

481 Later, at lines 250-253, he makes this statement:

482 From his testimony, it appears that Mr. Bodmer opposes the use of the 50/50 SFV
483 rate design and favors a rate design with much lower fixed charges and higher
484 variable charges, which would result in overall unitized per kWh charges that are
485 lower for low use customers (City/CUB 45:672-673). (emphasis added)

486 Mr. Tenorio’s comments make me scratch my head. Over and over again, I stated that
487 my proposal involves restructuring the fixed account charges to address ComEd’s
488 revenue stability concerns while basically leaving energy charges alone. The only
489 change in the energy charge involved changes to reflect a re-allocation of costs that
490 ComEd’s defines as “customer related” Other than this minor change, which increased
491 the energy charge in the single family class and reduced the energy charge in the multi-
492 family class, my proposed changes were all in the structure of the fixed account charge. I
493 stated that my proposal changes the customer charge and not the energy charge at the
494 following places in my direct testimony:

495 Line 132: “I propose a cost-based, revenue neutral, set of tiered monthly
496 customer charges that vary to recognize the correlation between usage and
497 key cost drivers.”

498 Line 140: “The customer charge would continue to gradually increase for
499 each 100 kWh per month increment in prior year average monthly
500 usage.... The break-even occurs at a usage level of 750 kWh per month.”

Line 149: “The total dollar amount collected from customer charges in my proposal would be exactly the same as the amounts collected using the current rate design. The only differences are (1) that revenues from customer charges would be collected from graduated charges rather than a uniform charge and (2) the allocation of costs that ComEd treats as customer related is corrected.”

Line 1339: “The data and my analyses show that low-users have characteristics that make the simple structure of a single account charge and a single energy charge inequitable and demonstrate that ComEd’s rate design must be restructured to include a graduated account charge.”

Line 1359: “Use billing determinants separated by usage increment to derive a series of customer charges that produce the same level of revenues”

If Mr. Tenorio could not understand my proposal from the above references in my direct testimony, he could have looked at City/CUB Exhibit 1.1. There I showed that customer charges could rise to almost \$60 per month for the highest use ratepayers and that the energy charge would not change. I have included a couple of excerpts that demonstrate this below:

FIGURE - CUSTOMER CHARGE/ENERGY CHARGE REVENUES SPLIT

Step 4: Split Total Revenues Between Customer Charge and Energy Charge

		Single Family w/o Space Heat	Multi Family w/o Space Heat	Single Family w/ Space Heat	Multi Family w/ Space Heat	Total Residential
ComEd Desired Customer and Meter Charge	USD/Month	18.21	10.97	20.30	11.94	
Bills	Number	26,785,836	12,498,048	419,988	1,912,188	
Total	USD	487,770,074	137,103,587	8,525,756	22,831,525	656,230,941
Reduced from Re-allocation	USD		(54,725,949)			
Net Collections	USD	487,770,074	82,377,638	8,525,756	22,831,525	656,230,941
Collections from Energy Charge	USD	528,696,458	134,334,856	15,393,552	27,418,047	705,842,914
Energy	kWh	20,471,628,554	4,425,830,554	750,453,895	1,593,009,493	0
Energy Charge	USD/kWh	0.0258	0.0304	0.0205	0.0172	
ComEd Energy Charge	USD/kWh	0.0238	0.0310	0.0114	0.0143	

520 **FIGURE - RANGE OF POSSIBLE TIERED CUSTOMER CHARGES**

Single Family Non-Space Heat Usage Increment Calculations

kWh Increment	Evaluated Charge	Customer Charge	Rate Counter	Rate Adjustment	Customer Orig Rev Single Family w/o Space Heat	kWh Single Family w/o Space Heat	kWh Single Family w/o Space Heat	Usage Increment	Revenue per kWh
30	FA1M	1.00	-	FA1M	1.00	1,120,113.00	32,029,320.51	1,340,441.10	10.00
130	FA1M	1.00	-	FA1M	1.00	1,280,111.24	37,980,286.24	4,820,130.45	130.00
230	FA1M	1.00	-	FA1M	1.00	1,394,190.64	46,066,728.49	11,806,900.00	230.00
330	FA1M	1.00	-	FA1M	1.00	1,466,960.90	48,400,866.39	20,815,687.66	330.00
430	FA1M	5.21	1.00	1.31	1.00	15,379,188.68	5,090,012,071.25	15,475,184.75	430.00
530	FA1M	9.29	3.00	1.31	1.00	20,213,160.28	6,378,111,520.11	11,388,317.65	530.00
630	FA1M	13.87	3.00	1.38	1.00	25,418,110.58	8,016,096,303.46	14,302,911.15	630.00
730	FA1M	18.78	4.00	1.35	1.00	30,653,170.78	9,349,186,230.13	14,846,096.00	730.00
830	FA1M	29.41	5.00	1.33	1.00	35,796,164.28	1,070,215,400.64	15,634,540.01	830.00
930	FA1M	35.98	6.00	1.38	1.00	40,444,169.84	1,235,611,957.30	11,638,475.12	930.00
1030	FA1M	37.49	7.00	1.49	1.00	45,477,164.84	1,389,912,358.41	21,807,846.15	1,030.00
1130	FA1M	38.96	8.00	1.81	1.00	50,616,163.18	1,599,166,848.76	24,807,388.70	1,130.00
1230	FA1M	38.96	9.00	1.86	1.00	55,331,170.10	1,800,415,161.09	21,870,811.16	1,230.00
1330	FA1M	37.79	10.00	1.89	1.00	59,791,181.79	1,993,132,580.47	21,846,168.01	1,330.00
1430	FA1M	35.12	11.00	1.84	1.00	63,981,110.11	2,178,000,420.21	21,806,800.06	1,430.00
1530	FA1M	35.09	12.00	1.83	1.00	67,811,128.28	2,344,911,228.28	11,805,141.18	1,530.00
1630	FA1M	35.79	13.00	1.81	1.00	71,301,118.28	2,498,628,884.93	11,870,718.11	1,630.00
1730	FA1M	34.31	14.00	1.81	1.00	73,889,168.77	2,639,611,109.41	11,838,677.13	1,730.00
1830	FA1M	34.28	15.00	1.81	1.00	75,113,117.78	2,768,146,496.30	11,837,881.04	1,830.00
1930	FA1M	33.52	16.00	1.88	1.00	75,821,160.64	2,882,128,550.77	11,870,651.26	1,930.00
2030	FA1M	33.52	17.00	FA1M	1.00	75,821,160.64	2,982,128,550.77	11,870,651.26	2,030.00
2130	FA1M	33.52	18.00	FA1M	1.00	75,821,160.64	3,078,979,899.82	1,298,970.10	2,130.00
2230	FA1M	33.52	19.00	FA1M	1.00	75,821,160.64	3,162,107,104.14	1,348,877.66	2,230.00
2330	FA1M	33.52	20.00	FA1M	1.00	75,821,160.64	3,231,911,280.29	1,405,141.78	2,330.00
2430	FA1M	33.52	21.00	FA1M	1.00	75,821,160.64	3,288,647,124.11	1,458,540.01	2,430.00
2530	FA1M	33.52	22.00	FA1M	1.00	75,821,160.64	3,332,177,946.11	1,500,517.01	2,530.00
2630	FA1M	33.52	23.00	FA1M	1.00	75,821,160.64	3,362,177,946.11	1,532,177.94	2,630.00
2730	FA1M	33.52	24.00	FA1M	1.00	75,821,160.64	3,379,177,946.11	1,558,491.48	2,730.00
2830	FA1M	33.52	25.00	FA1M	1.00	75,821,160.64	3,383,688,109.64	1,568,688.11	2,830.00
2930	FA1M	33.52	26.00	FA1M	1.00	75,821,160.64	3,375,177,946.11	1,568,111.00	2,930.00
3030	FA1M	33.52	27.00	FA1M	1.00	75,821,160.64	3,352,177,946.11	1,552,177.94	3,030.00
3130	FA1M	33.52	28.00	FA1M	1.00	75,821,160.64	3,315,177,946.11	1,528,177.94	3,130.00
3230	FA1M	33.52	29.00	FA1M	1.00	75,821,160.64	3,262,177,946.11	1,495,177.94	3,230.00
3330	FA1M	33.52	30.00	FA1M	1.00	75,821,160.64	3,182,177,946.11	1,452,177.94	3,330.00
3430	FA1M	33.52	31.00	FA1M	1.00	75,821,160.64	3,082,177,946.11	1,392,177.94	3,430.00
3530	FA1M	33.52	32.00	FA1M	1.00	75,821,160.64	2,952,177,946.11	1,312,177.94	3,530.00
3630	FA1M	33.52	33.00	FA1M	1.00	75,821,160.64	2,792,177,946.11	1,212,177.94	3,630.00
3730	FA1M	33.52	34.00	FA1M	1.00	75,821,160.64	2,602,177,946.11	1,092,177.94	3,730.00
3830	FA1M	33.52	35.00	FA1M	1.00	75,821,160.64	2,382,177,946.11	962,177.94	3,830.00
3930	FA1M	33.52	36.00	FA1M	1.00	75,821,160.64	2,132,177,946.11	822,177.94	3,930.00
4030	FA1M	33.52	37.00	FA1M	1.00	75,821,160.64	1,852,177,946.11	672,177.94	4,030.00
4130	FA1M	33.52	38.00	FA1M	1.00	75,821,160.64	1,542,177,946.11	512,177.94	4,130.00
4230	FA1M	33.52	39.00	FA1M	1.00	75,821,160.64	1,202,177,946.11	352,177.94	4,230.00
4330	FA1M	33.52	40.00	FA1M	1.00	75,821,160.64	842,177,946.11	192,177.94	4,330.00
4430	FA1M	33.52	41.00	FA1M	1.00	75,821,160.64	472,177,946.11	32,177.94	4,430.00
4530	FA1M	33.52	42.00	FA1M	1.00	75,821,160.64	102,177,946.11	-328,177.94	4,530.00
4630	FA1M	33.52	43.00	FA1M	1.00	75,821,160.64	-122,177,946.11	-688,177.94	4,630.00
4730	FA1M	33.52	44.00	FA1M	1.00	75,821,160.64	-242,177,946.11	-1,048,177.94	4,730.00
4830	FA1M	33.52	45.00	FA1M	1.00	75,821,160.64	-362,177,946.11	-1,408,177.94	4,830.00
4930	FA1M	33.52	46.00	FA1M	1.00	75,821,160.64	-482,177,946.11	-1,768,177.94	4,930.00
5030	FA1M	33.52	47.00	FA1M	1.00	75,821,160.64	-602,177,946.11	-2,128,177.94	5,030.00
5130	FA1M	33.52	48.00	FA1M	1.00	75,821,160.64	-722,177,946.11	-2,488,177.94	5,130.00
5230	FA1M	33.52	49.00	FA1M	1.00	75,821,160.64	-842,177,946.11	-2,848,177.94	5,230.00
5330	FA1M	33.52	50.00	FA1M	1.00	75,821,160.64	-962,177,946.11	-3,208,177.94	5,330.00
5430	FA1M	33.52	51.00	FA1M	1.00	75,821,160.64	-1,082,177,946.11	-3,568,177.94	5,430.00
5530	FA1M	33.52	52.00	FA1M	1.00	75,821,160.64	-1,202,177,946.11	-3,928,177.94	5,530.00
5630	FA1M	33.52	53.00	FA1M	1.00	75,821,160.64	-1,322,177,946.11	-4,288,177.94	5,630.00
5730	FA1M	33.52	54.00	FA1M	1.00	75,821,160.64	-1,442,177,946.11	-4,648,177.94	5,730.00
5830	FA1M	33.52	55.00	FA1M	1.00	75,821,160.64	-1,562,177,946.11	-5,008,177.94	5,830.00
5930	FA1M	33.52	56.00	FA1M	1.00	75,821,160.64	-1,682,177,946.11	-5,368,177.94	5,930.00
6030	FA1M	33.52	57.00	FA1M	1.00	75,821,160.64	-1,802,177,946.11	-5,728,177.94	6,030.00
6130	FA1M	33.52	58.00	FA1M	1.00	75,821,160.64	-1,922,177,946.11	-6,088,177.94	6,130.00
6230	FA1M	33.52	59.00	FA1M	1.00	75,821,160.64	-2,042,177,946.11	-6,448,177.94	6,230.00
6330	FA1M	33.52	60.00	FA1M	1.00	75,821,160.64	-2,162,177,946.11	-6,808,177.94	6,330.00
6430	FA1M	33.52	61.00	FA1M	1.00	75,821,160.64	-2,282,177,946.11	-7,168,177.94	6,430.00
6530	FA1M	33.52	62.00	FA1M	1.00	75,821,160.64	-2,402,177,946.11	-7,528,177.94	6,530.00
6630	FA1M	33.52	63.00	FA1M	1.00	75,821,160.64	-2,522,177,946.11	-7,888,177.94	6,630.00
6730	FA1M	33.52	64.00	FA1M	1.00	75,821,160.64	-2,642,177,946.11	-8,248,177.94	6,730.00
6830	FA1M	33.52	65.00	FA1M	1.00	75,821,160.64	-2,762,177,946.11	-8,608,177.94	6,830.00
6930	FA1M	33.52	66.00	FA1M	1.00	75,821,160.64	-2,882,177,946.11	-8,968,177.94	6,930.00
7030	FA1M	33.52	67.00	FA1M	1.00	75,821,160.64	-3,002,177,946.11	-9,328,177.94	7,030.00
7130	FA1M	33.52	68.00	FA1M	1.00	75,821,160.64	-3,122,177,946.11	-9,688,177.94	7,130.00
7230	FA1M	33.52	69.00	FA1M	1.00	75,821,160.64	-3,242,177,946.11	-10,048,177.94	7,230.00
7330	FA1M	33.52	70.00	FA1M	1.00	75,821,160.64	-3,362,177,946.11	-10,408,177.94	7,330.00
7430	FA1M	33.52	71.00	FA1M	1.00	75,821,160.64	-3,482,177,946.11	-10,768,177.94	7,430.00
7530	FA1M	33.52	72.00	FA1M	1.00	75,821,160.64	-3,602,177,946.11	-11,128,177.94	7,530.00
7630	FA1M	33.52	73.00	FA1M	1.00	75,821,160.64	-3,722,177,946.11	-11,488,177.94	7,630.00
7730	FA1M	33.52	74.00	FA1M	1.00	75,821,160.64	-3,842,177,946.11	-11,848,177.94	7,730.00
7830	FA1M	33.52	75.00	FA1M	1.00	75,821,160.64	-3,962,177,946.11	-12,208,177.94	7,830.00
7930	FA1M	33.52	76.00	FA1M	1.00	75,821,160.64	-4,082,177,946.11	-12,568,177.94	7,930.00
8030	FA1M	33.52	77.00	FA1M	1.00	75,821,160.64	-4,202,177,946.11	-12,928,177.94	8,030.00
8130	FA1M	33.52	78.00	FA1M	1.00	75,821,160.64	-4,322,177,946.11	-13,288,177.94	8,130.00
8230	FA1M	33.52	79.00	FA1M	1.00	75,821,160.64	-4,442,177,946.11	-13,648,177.94	8,230.00
8330	FA1M	33.52	80.00	FA1M	1.00	75,821,160.64	-4,562,177,946.11	-14,008,177.94	8,330.00
8430	FA1M	33.52	81.00	FA1M	1.00	75,821,160.64	-4,682,177,946.11	-14,368,177.94	8,430.00
8530	FA1M	33.52	82.00	FA1M	1.00	75,821,160.64	-4,802,177,946.11	-14,728,177.94	8,530.00
8630	FA1M	33.52	83.00	FA1M	1.00	75,821,160.64	-4,922,177,946.11	-15,088,177.94	8,630.00
8730	FA1M	33.52	84.00	FA1M	1.00	75,821,160.64	-5,042,177,946.11	-15,448,177.94	8,730.00
8830	FA1M	33.52	85.00	FA1M	1.00	75,821,160.64	-5,162,177,946.11	-15,808,177.94	8,830.00
8930	FA1M	33.52	86.00	FA1M	1.00	75,821,160.64	-5,282,177,946.11	-16,168,177.94	8,930.00
9030	FA1M	33.52	87.00	FA1M	1.00	75,821,160.64	-5,402,177,946.11	-16,528,177.94	9,030.00
9130	FA1M	33.52	88.00	FA1M	1.00	75,821,160.64	-5,522,177,946.11	-16,888,177.94	9,130.00
9230	FA1M	33.52	89.00	FA1M	1.00	75,821,160.64	-5,642,177,946.11	-17,248,177.94	9,230.00
9330	FA1M	33.52	90.00	FA1M	1.00	75,821,160.64	-5,762,177,946.11	-17,608,177.94	9,330.00
9430	FA1M	33.52	91.00	FA1M	1.00	75,821,160.64	-5,882,177,946.11	-17,968,177.94	9,430.00
9530	FA1M	33.52	92.00	FA1M	1.00</				

this finding surprising or important, with respect to whether distribution costs should be priced on the basis of the number of accounts?

A. Not at all. Much of the residential usage study presents tables and charts that show that zip codes can have both high and low usage accounts in a particular month. Mr. Tenorio apparently thinks this is so important that he has copied and pasted statements and tables related to the variation in usage from Exhibit 2.33 into his rebuttal testimony. Among the statements that he copied were the following (lines 329 to 334):

“[I]n comparing the lowest to the highest percentile customers . . . there were numerous instances in which the address for a customer in Percentile 1 was in the same hundred block and street as the address for a customer in Percentile 100. For some multi-family accounts there were Percentile 1 customers literally either across the hall or next door to Percentile 100 customers.”

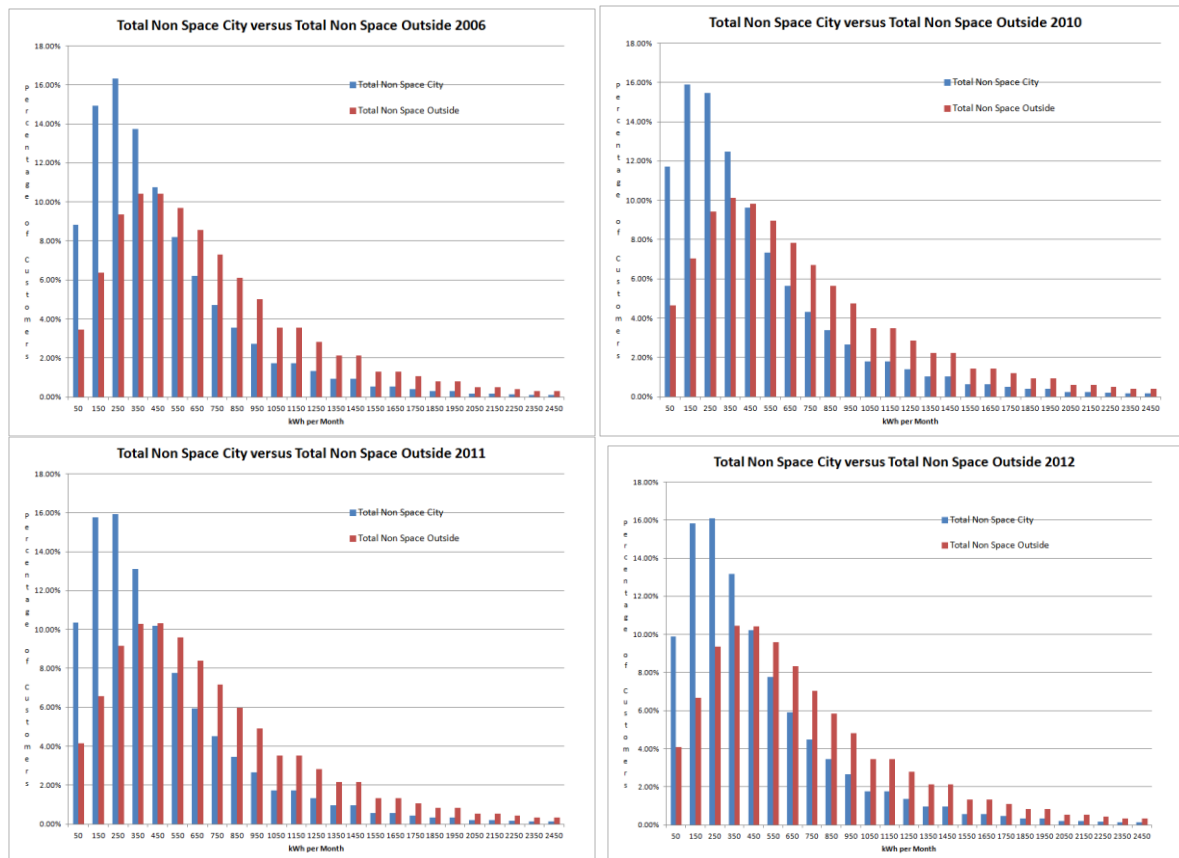
After copying this statement from the usage study, Mr. Tenorio presents a table showing that many zip codes had consumers in both the lowest percentile and the highest percentile.

When looking at the table and reading the ComEd statements, one would think that it is common in the Chicago area to see mansions located next to apartment buildings where low-income/low use consumers live. Alternatively, ComEd seems to imply that a studio apartment in the City can suddenly use as much electricity as a large home in Kenilworth and ComEd needs to prepare for that possibility. Because he believes a studio apartment can suddenly use as much energy as a large mansion, Mr. Tenorio asserts that energy usage does not drive distribution cost. In fact, ComEd’s analysis of variation in usage does not really demonstrate anything at all. ComEd has misinterpreted its own data and derived incorrect conclusions.

- 550 ➤ The probable reason that usage varies in the way ComEd reports is that people take
551 vacations and people move. When the neighbor of a high user living in a large
552 mansion in Lake Forest moves or the home-owning family takes a trip to Paris, the
553 usage next door can suddenly fall to almost nothing. City/CUB Exhibit 2.1, in the
554 section titled “Sudden Changes in Usage and Demand from Consumer Vacancies and
555 the Load Research Data,” examines the load research data to demonstrate how the
556 load of a single family home or an apartment can suddenly fall because of moving
557 and/or vacations.
- 558 ➤ When people move or take vacations and the usage at an address declines for a
559 particular month, this in no way implies that peak demand and distribution costs can
560 be correlated with the presence of a ratepayer account rather than usage. If a family
561 living in a large mansion takes a vacation, that home still requires more distribution
562 equipment than a studio apartment that is vacant because the former renter has moved
563 out. I discuss this point in a more formal way in City/CUB Exhibit 2.1 and present a
564 proof that vacation homes and vacancies from residents moving do not affect the
565 basic correlation and relationship between usage and demand.
- 566 ➤ In discussing its finding that zip codes can have both high and low usage residents,
567 ComEd suggests that usage in a particular region can vary dramatically. Data
568 provided by ComEd demonstrate that this is not the case for the City and outside
569 regions of the service territory. The four graphs below that compare the City and
570 outside City usage distributions for 2006, 2010, 2011 and 2012 (years of data
571 provided by ComEd). Data for the four different years demonstrate that the
572 relationship between usage and regions is very stable and that the City has a

consistent pattern relative to other parts of the service territory. The City consistently has lower usage than the outside City (of course there are some high users in the City which seems to be a big deal for ComEd). As with the other points, the stability of usage is discussed in City/CUB Exhibit 2.1.

FIGURE - REGIONAL USAGE COMPARISONS



➤ Finally and most importantly, if ComEd truly wants to assess the relationship between usage and demand, ComEd does not have to go further than directly performing a correlation analysis. It does not need any of the percentile analysis presented by Mr. Tenorio. A proper correlation analysis, which is fully described in City/CUB Exhibit 2.1 and summarized in the two correlation graphs above,

583 demonstrates that ComEd's finding regarding variation in use does not have any
584 meaningful effect on the larger issue of the relationship between usage and peak
585 demand.

586 **Q. The main focus of Mr. Tenorio's rebuttal to your direct testimony regarding the**
587 **usage-demand correlation appears to center on load factors. Is that testimony**
588 **relevant to the cost allocation and recovery issues you raised?**

589 A. No, it is not. Mr. Tenorio computes the load factors used in his analysis and testimony on
590 an individual consumer basis (where, for example, the peak load of a particular consumer
591 may occur in April or December). But peak loads for individual consumers have nothing
592 at all to do with the class cost of service approach ComEd uses to set its rates. In
593 ComEd's cost of service study, all primary facilities costs are allocated on the basis of
594 coincident peak and certain other costs are allocated on the basis of load measured on a
595 non-coincident, class-wide basis. These latter measures of peak load capture the effects
596 of the diversity of ratepayer usage within a class. The peak loads of individual
597 consumers are not comparable. Yet, Mr. Tenorio asserts that his analysis somehow
598 invalidates my conclusions about the relationship between distribution cost of service and
599 residential ratepayer usage. When Mr. Tenorio's analysis is corrected to reflect the
600 coincident peak load factor or non-coincident peak load factors used in the study used to
601 set its rate, the results provide no basis for his assertion that load factor increases with

usage. In fact, the coincident peak load factor for City residential ratepayers is 23% better than the outside City load factor, even though City rates are 18% higher.³

Q. Please comment on Mr. Tenorio's load factor graphs, which seem to suggest that load factor improves (or usage becomes more efficient) as usage becomes larger?

A. Those charts show a load factor trend line that increases with usage. In introducing his load factor charts, Mr. Tenorio presents a formula for the load factor. What Mr. Tenorio does not tell us is whether his load factor is computed on the basis of individual billing demand, coincident peak demand, or class demand. That choice is crucial in the definition and the interpretation of a load factor for rate design and rate setting purposes.

After going through Mr. Tenorio's workpapers, I have verified that he uses the demand of an individual consumer (no matter when her highest demand occurs) as the basis for defining peak load. This means that for one consumer the peak demand could occur in April, while for another the peak demand could occur in October. The relevant peak demand for purposes of cost causation, however, is only that occurring when the system (on a regional basis) reaches its peak. The peak demand used in allocating most costs in ComEd's ECOSS is the system peak. In City/CUB Exhibit 2.1, I explain that the load factors computed by Mr. Tenorio using individual instead of system or class peaks has no relevance whatsoever in the ComEd cost of service analysis. In that exhibit, I show the different dates of the individual peaks Mr. Tenorio uses to produce his graphs.

When the relevant load factors -- computed from coincident peak or from class peak -- are used in computing the load factor, the results are very different from those

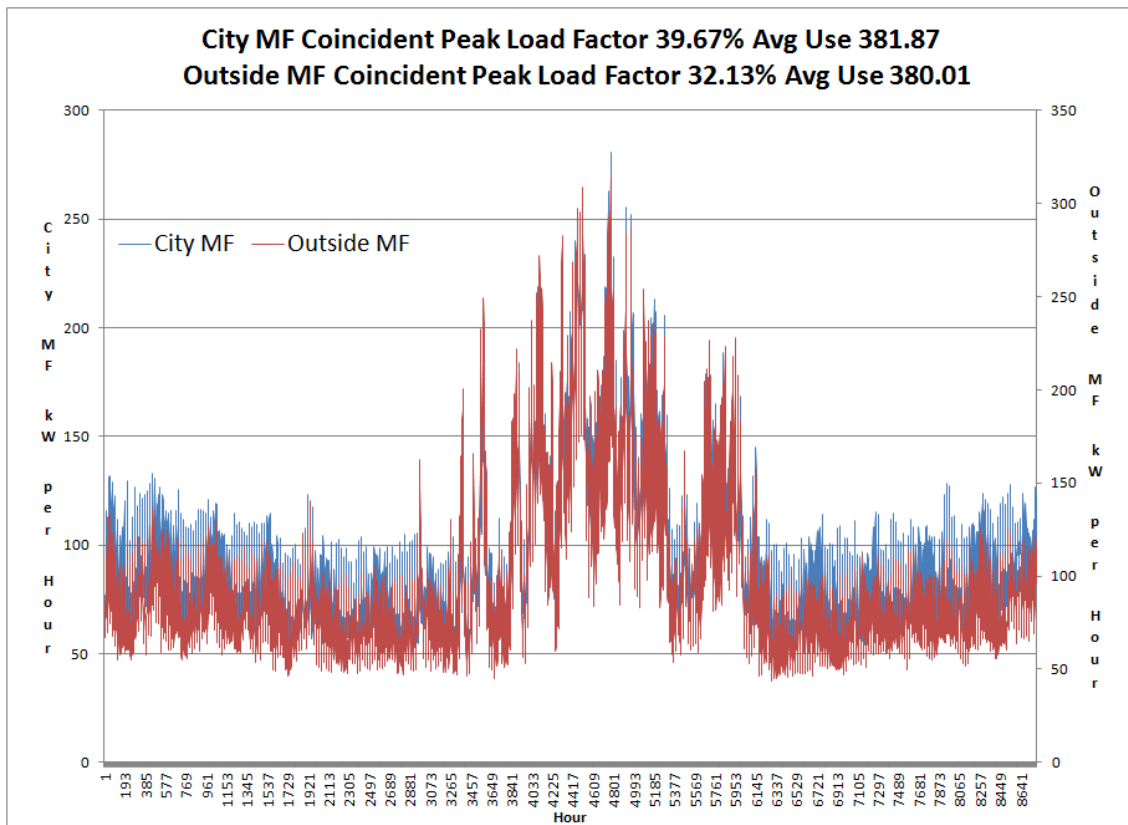
³ As I explained in my direct testimony, given the available data, using the City as a proxy is an effective way to look at the cost characteristics of low use consumers.

presented by Mr. Tenorio. The most important load factor is calculated using coincident peak load, as it is the primary driver of cost allocations in ComEd's cost of service study. Implications of the different load factors are discussed in Exhibit 2.1, which explains why the coincident peak load factor is most relevant. Another possible load factor uses the class peak, but that load factor has much less to do with how actual demand/distribution costs are incurred, since they are driven by regional demand from all rate classes. ComEd's data show that, for the single family non space heat class, the class peak is virtually the same as the coincident peak -- it occurs one hour later. (The class load factor is used as a basis to allocate secondary costs in the ECOSS).

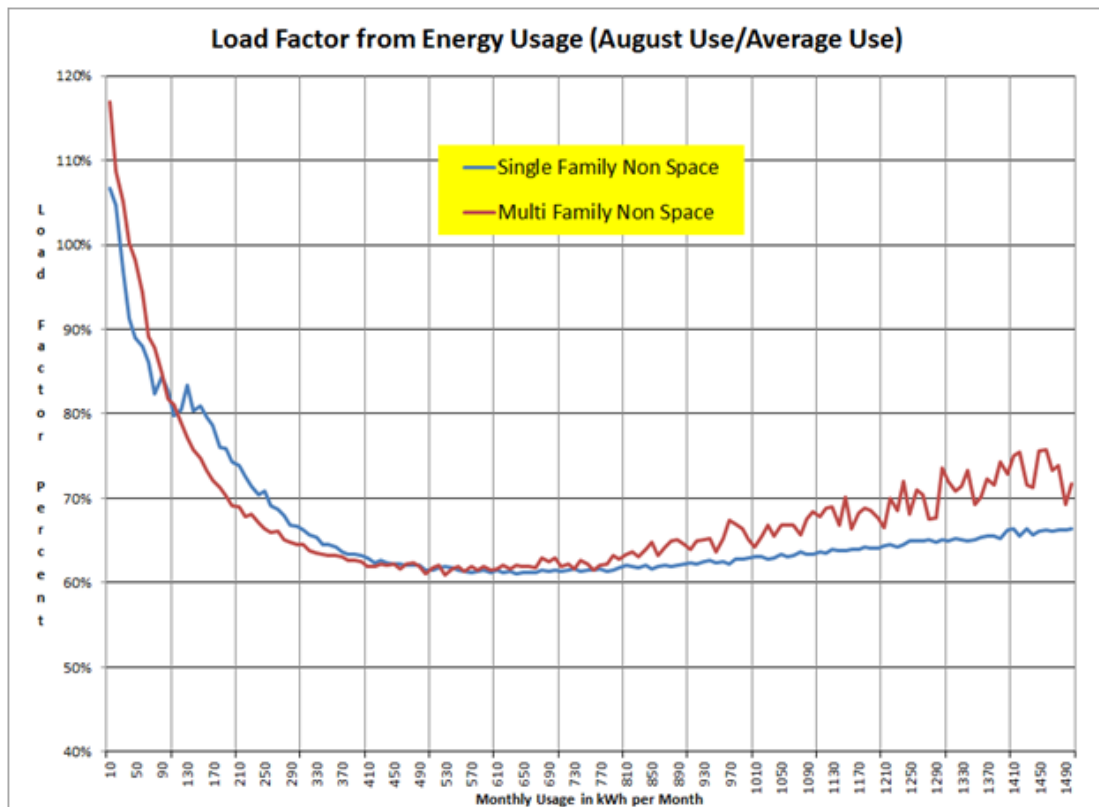
The least relevant load factor is the load factor computed by comparing the average usage of a consumer to his own peak use. This load factor ignores load diversity and any effect of diversity on ComEd's costs. Diversity is crucial in measuring costs for any ratepayer class, and it has always been a standard part of a cost of service analysis. The individual load factor is not used at all in ComEd's cost study. Yet, it is the one Mr. Tenorio chose to support his criticisms of my analysis. Using individual load factors in the context of this case serves no meaningful purpose. Mr. Tenorio's calculation merely diverts attention from the relevant facts, distorts the analysis of ComEd's cost and rates, and is irrelevant to the ECOSS and ComEd's rates.

In Exhibit 2.1, I present my computations of coincident peak load factors. In contrast to Mr. Tenorio's presentation, I explain (explicitly) the methodology for computing the load factors in City/CUB Exhibit 2.1. Load factor graphs shown in Exhibit 2.1 (and repeated below) demonstrate the following facts.

1. The coincident peak load factor for non-space heat consumers is higher inside the City of Chicago than outside the City of Chicago (in 2012 the coincident peak occurred at 5:00 PM on July 6th). For multi-family non-space heat consumers in the City it was 39.7% while it was 32.1% outside of the City. (Though ComEd did not have a reasonable sample of City consumers in the single family non-space heat class, the available data indicate that this City load factor also was higher.) The graph below illustrates the better load factor for multi-family consumers inside and outside the City of Chicago, as shown by the 2012 load research data provided by ComEd. A comprehensive set of graphs is included in City/CUB Exhibit 2.1. If one accepts the notion that distribution costs are driven by coincident peak demand -- as ComEd maintains -- this implies that rates should be 23% lower in the City of Chicago than outside city regions. Instead, actual residential prices for non-space consumers are 18% higher in the City than outside the City.

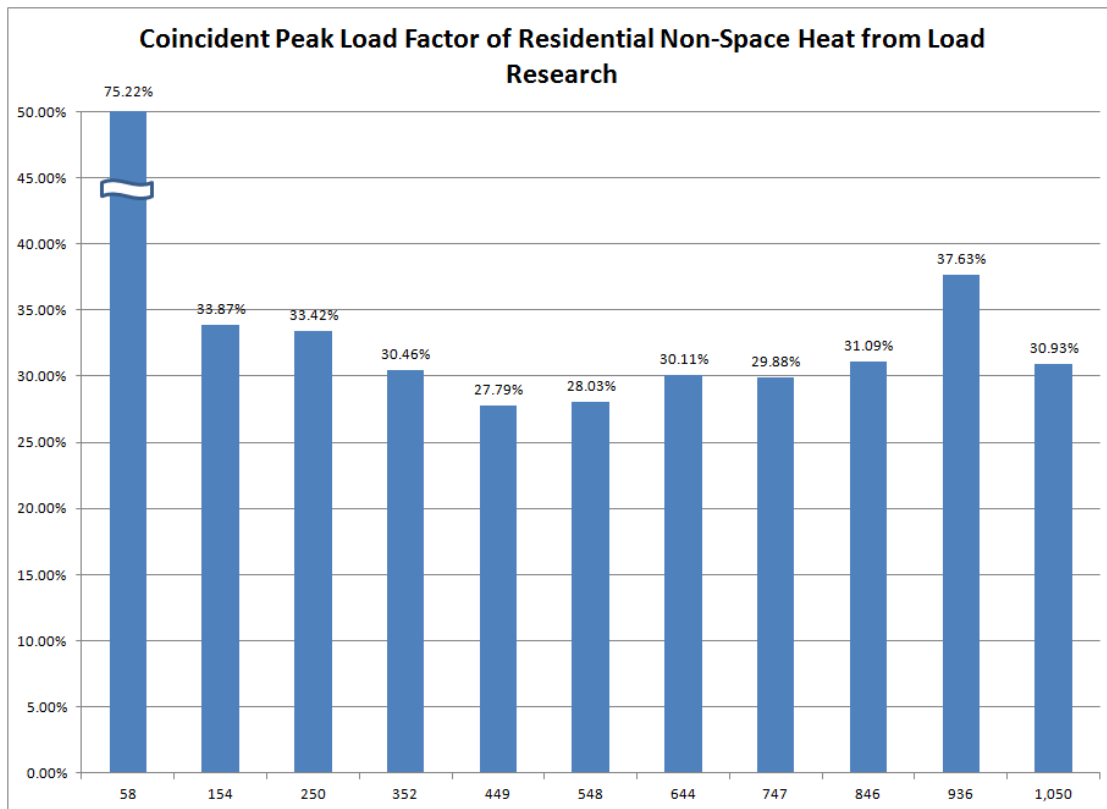


660 2. Based on the detailed 2010 usage data of more than a million accounts that was
661 provided in response to an AG data request at the same time as the load research
662 data, the load factor, as measured by highest monthly use relative to average use
663 over the year, is better for low use consumers until the use reaches about 500 kWh
664 per month. For monthly use above 800 kWh the load factor improves somewhat.
665 Although this load factor uses usage for the entire peak month to represent pea
666 load, it gives a much better indication of load factor than the statistic used by Mr.
667 Tenorio.



669 3. The load factor measured using coincident peak load for groups of non-space heat
670 residential consumers in ComEd's residential load research sample demonstrates
671 that coincident peak load factor is high for very low users. The load factor
672 declines until a usage level of about of 450 kWh per month and then increases
673 somewhat. The difference in the two graphs is explained by use of a single peak
674 number in the graph below and the sampling problems in ComEd's load research
675 data. The serious problems with ComEd's sampling are described in detail in
676 City/CUB Exhibit 2.1. The graph has a break for the lowest use category because
677 its load factor is so much higher than the other load factors and exceeds the
678 maximum vertical axis value.

679 **FIGURE - RESIDENTIAL LOAD FACTORS BY USAGE LEVEL**



680 **Q. Is Mr. Tenorio’s assertion that you rely on load factors to make the argument that**
 681 **low users have lower cost a correct?**

682 A. Not at all. Mr. Tenorio states that I “appear to rely heavily on [my] often repeated
 683 opinion that ‘low usage is closely correlated with... better load factors.’” Once again,
 684 this statement suggests that Mr. Tenorio did not read or understand my testimony. Load
 685 factor was only one of the items I examined that drive ComEd’s distribution costs.
 686 Immediately after discussing load factor in my direct testimony, I presented statistical
 687 data on the correlations between density, age and undergrounding relative to usage. The
 688 data demonstrated that distribution cost responsibility per residential consumer for
 689 overhead lines and underground lines is less for low use regions than for high use
 690 regions. In measuring the cost responsibility per region for distribution facilities, the

691 level of peak demand and load factor does not come into the equation. Peak demand is
692 used only for allocating costs among rate classes.

693 For years over the course of a number of rate cases, the City has tried to acquire
694 data on the distribution costs per ratepayer for residential regions in the City of Chicago
695 and analogous regions outside of the City. I understand from attending workshops that
696 data on the age, quantity and cost of distribution facilities is available for very small
697 regions of the service territory from the CGIS system. With this data we could measure,
698 for example, the cost of serving consumers in Lake Forest and in Engelwood (using City
699 of Chicago statistics on an aggregate basis is not useful for certain analyses because of
700 distortions created by the Central Business District). If we could get this data – which is
701 fully controlled by ComEd -- we could perform a detailed analysis of cost and usage and
702 derive the cost per kWh for different usage level increments. This analysis would not
703 require any information about ratepayer peak load, load factor or anything other than the
704 cost and the usage. Unfortunately, ComEd once again refused to cooperate in such an
705 analysis in this case as demonstrated by its non-response to data requests that attempted
706 to obtain such data (see ComEd’s response to COC 3.03).

707 **Q. Mr. Tenorio states that your proposal is too complicated and “could cause confusion**
708 **and consternation” for ratepayers. Can we compare your proposal to other**
709 **proposals to evaluate whether his assertion is true?**

710 **A.** Mr. Tenorio’s claim is not true. Utilities frequently claim that any proposal other than
711 their own will cause customer confusion and outrageous IT costs. Their own proposals
712 are not scrutinized for similar effects. Here, my proposal would cause much less

713 consternation, at least among low use and low income ratepayers, than ComEd's Docket
714 10-0467 proposal to increase customer charges to more than \$30 per month, which meant
715 that rates for low use consumers would go up by 78%. That rate increase was on top of a
716 big customer charge rate increase in the previous (2007) rate case. Before the 2007 case
717 ComEd's multi-family customer charge was \$2.94 per month City Exhibit 1.0 --
718 Corrected (Docket No. 07-0566 line 128). While a 78% increase would not cause much
719 confusion for ratepayers, in my opinion it would certainly create consternation. As I
720 wrote in my direct testimony, the actual increase in account charges caused an increase of
721 54% in delivery charges of low use City ratepayers. A graduated account charge, on the
722 other hand, has an understandable tie to a consumer's cost-causing demand, and the tiers
723 would create an understandable mechanism by which consumers could clearly see the
724 effects of their energy efficiency activities.

725 Mr. Tenorio also suggests that under my proposal customer charges would jump
726 around and that there would be wide variations in delivery charges to ensure revenue
727 neutrality. (Lines 305 to 307). One would have to read less than ten pages of my
728 testimony to see the words on line 141, page 9 which make it clear that a moving average
729 of usage is used, in part, to minimize fluctuations in bills:

730 'The customer charge would continue to gradually increase for
731 each 100 kWh per month increment in **prior year average**
732 **monthly usage.**' (emphasis added)

733 I also stated that the prior year moving average of usage could be weather
734 normalized to address ComEd's revenue stability focus (see lines 1000-1001, 1081, 1097,
735 1102 of my direct testimony). Using a 12-month rolling average will avoid peripatetic
736 movement among tiers, and the tiers are graduated (every 100 kWh), so moving from one

737 tier to the next would not mean a dramatic change in charges. In addition, since the tiers
738 are cost based, the signals to consumers will not spur excessive conservation or energy
739 efficiency, which appears to be the pre-occupation of Mr. Hanser.

740 Mr. Tenorio's comment about the supposed difficulty of designing revenue
741 neutral rates is needless hand wringing. Using ComEd billing determinants, I created a
742 revenue neutral rate design, which was presented in my direct testimony. In City/CUB
743 Exhibit 1.1, I used the ComEd provided billing determinants to assure that my proposal
744 generates the same revenues as those produced by its own rate design. I have no doubt
745 that the Company – which has hundreds, if not thousands, of rate elements in its tariffs
746 for which it calculates charges and taxes -- could work out the relatively simple
747 calculations necessary to implement my proposal.

748 **Q. Mr. Tenorio presents a number of charts and graphs that seem to suggest that**
749 **implementation of the SFV system would lower customer charges for multi-family**
750 **consumers. Does this make sense?**

751 **A.** Of course not. The whole idea of the SFV was to increase customer charges and reduce
752 energy charges by moving distribution costs from the energy charge to the customer
753 charge. If implementation of the SFV somehow reduces customer charges, then either
754 (a) ComEd's "fixed" costs are not really fixed at low usage levels, (b) there was
755 something wrong with the way in which ComEd implemented the SVF after the last case,
756 or (c) both. Instead of presenting a whole lot of tables and charts, Mr. Tenorio should
757 explain the odd result from the multi-family class. As shown in my direct testimony, the
758 multi-family energy charge is lower than the single family energy charge and the

customer charge did not increase much for multi-family consumers after the 2010 case. This does not mean there is something mysterious about the multi-family class. Rather it means that ComEd chose (either purposefully or by accident) not to implement its SFV scheme to multi-family consumers. The current multi-family rates are therefore not representative of a 50/50 SFV rate design but of the pre-2010 rate design.

Q. Mr. Tenorio finds it “interesting” that Mr. Rubin and I did not mention application of the SFV to the business classes. Can you comment on such an application of the SFV rate design?

A. Thinking about how ComEd’s SFV would be applied to business ratepayers demonstrates flaws in the company logic. If the SFV were applied to non-residential consumers in the manner ComEd proposes for residential consumers, then Argonne National Laboratory and the local 7-11 should pay the same enormous customer charge and a minimal energy charge. If the demand and usage of a small (or large) residence does not affect the “fixed” costs ComEd would recover through the customer charge, then demand and usage should also not affect the recovery of “fixed” costs from the business classes. It is possible that a factory could be shut down after an economic downturn and that a small store in a strip mall is also vacant because the tenant has gone bankrupt. Under the logic used in ComEd’s testimony, ComEd would classify both of these as 1 percentile low users, conclude that distribution requirements for the strip mall building are the same as for the factory, and propose the same fixed monthly charge for both.

In fact, for most business consumers ComEd concedes that its distribution costs are related to size of demand, it measures that demand, and it allocates (and recovers)

781 distribution costs on the basis of that demand. The mere absence of residential meters
782 that measure demand does not transform residential demand costs into customer account
783 costs. The un-rebutted demonstration of the strong correlation of consumer usage and
784 demand (and the lack of evidence of a correlation between accounts and demand) makes
785 usage the only appropriate proxy for demand in allocating and recovering
786 demand/distribution costs for ratepayers that do not have demand meters like businesses.

787 **Q. Mr. Tenorio copies and pastes the conclusions from ComEd Exhibit 2.33 into his**
788 **rebuttal testimony. Do you have comments on these conclusions?**

789 A. Yes. I responded at length to each of the conclusions in my direct testimony (LL 1168-
790 1334.) However, Mr. Tenorio did not rebut my criticisms of those conclusions, critiques
791 in which I showed that each of the conclusions is highly flawed.

792 **Q. In his rebuttal testimony (LL 192-196) Mr. Tenorio again refers to vacation homes**
793 **as constituting some unspecified fraction of low users and implies that support of**
794 **low users is support of vacation homes. What is your reaction to his statements?**

795 A. My reaction is: “please, enough is enough already.” ComEd admits that it does not
796 record the number of vacation homes in the City of Chicago or anywhere else in its
797 service territory. Setting rates on the basis of vacation homes is an extreme case of a tail
798 wagging the dog, and it has grown tiresome. So here is my proposal. The Commission
799 should establish a separate vacation home rate, so millions of low use and low income
800 apartment dwellers will not have their cost-based rates skewed by consumers who can
801 afford two homes. Then all the ordinary residential billing determinants, load research

data, usage data and other items would apply only to non-vacation homes and we will not have to waste time discussing vacation homes in future cases.

RESPONSE TO REBUTTAL TESTIMONY OF MR. BRADLEY BJERNING

Q. Mr. Bjerning suggests that you made errors in interpreting ComEd's cost of service study and that the customer related costs are only 38% (LL 278-285) rather than the 51% you computed. Is Mr. Bjerning correct?

A. No. Mr. Bjerning uses a different categorization of costs than mine for comparing customer costs to total costs. In my direct testimony my objective was to define specific costs that can be attributed to the existence of a ratepayer account. My complaint with ComEd in this regard is that anything that is not explicitly defined as a usage cost (including costs ComEd admits are caused by demand) ends up by default in the customer cost bucket. Instead, it is my position that costs actually caused by an account can be defined by splitting a house or an apartment building meaning that many costs are left over and cannot be directly allocated using distribution cost billing determinants or the number of accounts. I include in costs that are caused by a ratepayer account costs associated with putting a meter in a residence and costs related to getting a bill out to the consumer. My position is that the left over costs (most of which are attributable to demand) must be allocated on the basis of energy or revenue. The correlations shown by ComEd's usage and research data support that result.

Given my definition of what costs are caused by a ratepayer account, I endeavored to find out just how many of the ComEd costs are attributed to the basic metering and billing functions that change when a house is split into a duplex or an

apartment is subdivided into smaller units. I do not include the cost of service lines in my calculation as I count these as distribution related and maintain that, because larger homes have more wire, services should be allocated on the basis of usage. I do count the cost of metering in my calculation, as this is a cost that is charged on the basis of a ratepayer account and because metering costs actually change when a house or an apartment building is divided. I also count the costs in an account that ComEd labels “customer installation,” which includes items such as the costs associated with consumer complaints, stolen electricity, and relocation of facilities. The costs in this account are charged on the basis of ratepayer accounts just like billing and metering costs.

Given that ComEd does not like the way I have classified their accounts, the table below presents ComEd’s total pre-tax cost of service divided into various categories. I include this table so that the Commission can see how many costs are allocated to the single family non-space heat class and the multi-family non-space heat class and we do not have to worry about alternative definitions of what gets labeled a “customer related” cost in the ComEd ECOSS.

The Commission can easily see the elements that comprise the different percentages Mr. Tenorio and I present. The table demonstrates that for multi-family ratepayers, pure distribution cost represents 45.7% of the total bill. With the exception of services, I continue to insist that the vast majority of the remaining 54.3% of costs are not created when a single family home is split into a duplex or when an apartment building is divided into smaller units.

845 **TABLE – COMPARISON OF CUSTOMER COST COMPONENTS**

TOTAL COST OF SERVICE	Single Family w/o Space Heat	Percent of Total Pre-Tax Cost	Multi Family w/o Space Heat	Percent of Total Pre-Tax Cost
High Voltage Dist. Substations	91,823,383	9.42%	19,368,532	7.14%
High Voltage Dist. Lines	22,247,941	2.28%	4,692,813	1.73%
Shared Distribution Substations	12,368,874	1.27%	2,608,997	0.96%
Secondary Voltage Dist. Substations	18,929,003	1.94%	4,336,406	1.60%
Shared Distribution Lines	357,546,950	36.69%	75,418,257	27.78%
Secondary Voltage Dist. Lines	63,676,570	6.53%	12,213,512	4.50%
Secondary Voltage Transformers	35,200,380	3.61%	8,063,982	2.97%
Revenue-Related (Distribution)	(12,017,356)	-1.23%	(2,701,284)	-1.00%
Sub-total - Distribution Cost	589,775,745	60.53%	124,001,214	45.68%
Services	67,113,488	6.89%	7,139,728	2.63%
Metering Services	90,596,947	9.30%	42,329,655	15.59%
Customer Install. Other	38,771,575	3.98%	18,090,494	6.66%
Billing -- Computation & Data Mang.	138,230,974	14.19%	65,206,893	24.02%
Indirect Uncollectibles	21,972,727	2.25%	6,102,191	2.25%
Bill Issue & Processing	14,065,357	1.44%	6,562,778	2.42%
Customer Information	19,867,346	2.04%	4,295,189	1.58%
Revenue-Related (Customer)	(5,991,203)	-0.61%	(2,289,698)	-0.84%
Sub-total ComEd Customer Related	188,145,200	19.31%	79,877,352	29.43%
Total Pre-tax Cost	974,402,955	100.00%	271,438,442	100.00%
ComEd Customer Related + Meter + Customer Installation	317,513,722	32.59%	140,297,501	51.69%

846 **Q. Mr. Bjerning states that you have not properly verified the carrying cost of a meter.**

847 **Can you describe how you made your calculation?**

848 **A.** Yes. I made my calculation directly from the functionalization page of ComEd's ECOSS,
849 and the calculation was provided to ComEd as part of my workpapers. In addition, the
850 calculation was included in a data request response. I consciously did not include
851 overhead costs as I am trying to focus only on the cost of a meter and not on the cost
852 associated with overheads like the salary of Exelon's CEO. The reason I concentrate on
853 the pure cost of a meter is because this is the only cost that is created when a single
854 family home is divided into a duplex or when an apartment building house is divided into
855 smaller units. The cost caused when additional customer accounts are created does not

856 include additional salaries to ComEd or Exelon management or other overhead costs, like
857 the cost of consultants hired for this rate case.

858 **RESPONSE TO REBUTTAL TESTIMONY OF MR. RONALD DONOVAN**

859 **Q. Mr. Donovan discusses some of the activities that he manages in the introduction of**
860 **his testimony. Are these costs caused by a ratepayer account, as defined by the**
861 **separation of a single family home into a duplex or the separation of an apartment**
862 **building into smaller units?**

863 A. No. Mr. Donovan explains that he manages ComEd's "call center, the eChannel strategy,
864 voice response technologies, automated and electronic billing, e-services, and social
865 media" as well as "the transformation of our customer service interface model through
866 the identification, development, and application of technology to enhance our customer
867 experience." While I admit I have no idea what the last phrase means, I cannot imagine
868 that any of these costs vary when a single family home splits into a duplex, which is the
869 best definition of cost causation driven by a ratepayer account.

870 **Q. Mr. Donovan mentions a study performed in Docket No. 08-0532 that analyzed the**
871 **extent to which usage contributes to "customer care" costs (LL 380-383). Is it**
872 **appropriate to label what ComEd did in that case as a study?**

873 A. Not in any way shape or form. In his testimony in Docket No. 08-0532, Mr. Donovan
874 simply repeated conclusory statements such as:

875 [C]ustomer information costs include costs for market research, demand
876 management, and advertising. As a result, these costs vary according to the
877 number of customers, and are not dependent upon usage. ComEd Ex. 2.0 at 28,
878 lines 600-03.

879 This statement comprised the entirety of ComEd's "study" of the relationship between
880 customer information costs and usage. Virtually identical statements represented the rest
881 of what ComEd now labels as a study. There was no detailed analysis of costs by
882 ComEd; there was no statistical analysis; there was no discussion of what really
883 constitutes a ratepayer account. To serve its own objectives, ComEd simply declared that
884 if a cost cannot be directly tied to usage, it must be related to an account. To now call
885 these statements from Docket No. 08-0532 a study and pretend that the issue has been
886 resolved is unsupported and incorrect.

887 When I analyzed the accounts in Docket No. 08-0532 and demonstrated that the
888 majority of the costs could not be correlated to ratepayer accounts, ComEd's primary
889 response was that my testimony was too long. An analysis of accounts is a very tedious
890 process; it is perhaps even more tedious for judges or Commissioners to decipher the
891 results. Because such analyses tend to get forgotten in the myriad of other issues that
892 must be resolved in cost of service and rate design proceedings, in this case I have
893 approached the issue by starting from a different point. Instead of a review of pages of
894 numbers, I have identified which costs are, in fact, caused by the addition of a ratepayer
895 account, independent of usage and demand. Given the ComEd revenue stability
896 objectives discussed by Ms. Brinkman, one can see why ComEd does not want to study
897 the issue, and why the Company's default position is to call a cost "fixed" or "customer
898 related" whenever possible.

899 **Q. Comment on Mr. Donovan’s assertion that implementation of tiered customer**
900 **charges would be very difficult to implement and require “large and sweeping IT**
901 **infrastructure changes” (LL 400-403).**

902 A. This seems surprising. While I am not privy to the workings of ComEd’s billing system,
903 I note that the company has been able to incorporate a tiered distribution tax in its rates
904 without complaints; in the past it had summer-winter differentiated rates; in the past it
905 had declining block rates; it provides historic usage on each ratepayer’s bill; it is able to
906 differentiate between a duplex and a three flat apartment with respect to customer
907 charges. Other utility companies have implemented tiered customer charges (e.g.
908 Arizona Public Service) and far more complicated schemes where baseline usage is
909 computed for each ratepayer and varies according to the number of people in a
910 household. I wonder whether ComEd would have the same complaints for a rate design
911 that it favored. Finally, if ComEd cannot implement such a tiered proposal, the company
912 must inform the Commission what is possible – e.g., a low customer charge of \$1.00 per
913 month along with an inverted energy charge (something that I did not recommend, but
914 which would be equitable to low-use/low-income consumers).

915 **RESPONSE TO REBUTTAL TESTIMONY OF MR. PHILIP HANSER**

916 **Q. Do you respond to ComEd consultant Mr. Hanser in your testimony?**

917 A. The major portion of my response to Mr. Hanser is presented in City/CUB Ex. 2.3.
918 There, in addition to the points summarized below, I address a number of additional
919 assertions Mr. Hanser made. The analyses and discussions presented in City/CUB Ex.
920 2.3 demonstrate the following.

- 921 ➤ My proposal to keep energy charges at ComEd's current low levels and to implement
922 tiered account charges is much more consistent with the 1988 Bonbright principles
923 (which have limited relevance in this context) than ComEd's desire to implement a
924 customer charge above \$30 per month for low use and low income consumers.
- 925 ➤ Mr. Hanser's attempts to equate account charges to up-front charges in various
926 competitive industries are flawed. The flawed analogies he offers include:
927 (a) marketing related loyalty payments in the case of Costco and Sam's Club, though
928 ComEd does not need loyalty schemes or a marketing strategy since it is a monopoly
929 utility; (b) the fixed charges of taxi meters, though they correspond to the load factor
930 of taxi cabs and not to general overhead costs like those ComEd recovers through its
931 fixed charge -- such as the costs of market research, stolen electricity, reconnecting
932 ratepayers, providing technical services to ratepayers, relocating facilities, regulatory
933 strategy, administrative costs and other costs discussed earlier in my testimony;
934 (c) varying fixed charges of cable companies, which are directly comparable to my
935 tiered customer charge proposal, where fixed charges vary with increasing levels of
936 use; and (d) up-front loyalty fees for health clubs, which are not universal and are
937 pricing strategies to create habits. These poor comparisons are not analogous in any
938 meaningful way to ComEd's customer and meter charge. More important, Mr.
939 Hanser ignores the overwhelming number of other products or services that do not
940 have fixed charges, in industries without ComEd's captive revenue base.
- 941 ➤ Mr. Hanser's dismissal of my fundamental test of cost causation for a customer
942 account (dividing a house into a duplex or dividing an apartment building into smaller
943 units) is wrong and reflects a pre-determined conclusion. The examples of splitting a

944 house and an apartment building precisely define the costs that arise from a customer
945 account. Usage is easy to define by the metered energy of a ratepayer. Mr. Hanser
946 and his client would like to define every cost that is not directly related to energy as
947 directly related to the existence of a consumer account, even though Mr. Hanser
948 acknowledges that many of the problematic costs are directly related to demand. This
949 rejection of fundamental cost allocation logic allows the company to accomplish its
950 financial objective, to reduce risk through collecting revenues from fixed charges.

951 ➤ Mr. Hanser's comments about a new connection being unrelated to the size of the
952 consumer completely contradict ComEd's oft stated position that distribution plant is
953 caused by demand and are illogical.

954 ➤ ComEd's rate structure should not be designed to discourage ratepayer installations of
955 solar power, as Mr. Hanser would like. Mr. Hanser's comments on solar power
956 installations behind the meter amount to arguments that ComEd should recover
957 stranded investment from consumers who decide to implement energy efficiency
958 measures. Mr. Hanser's comments are way off the mark (in terms of Commission
959 policy), for many reasons. First, ComEd's formula rates make it unnecessary to
960 create inequitable regressive rates to collect (non-existent) stranded investment from
961 solar power. ComEd's reconciled formula rates assure it has no stranded costs.
962 Second, even if ComEd had stranded investment, it should not be collected by default
963 through fixed account charges. Third, the entire issue is simply a distraction that
964 confuses stranded investment with cost of service. Fourth, Mr. Hanser makes the
965 surprising argument that high customer charges and a regressive rate structure are
966 good things, because they make the economics of solar power (and other energy

967 efficiency activities that are good for the planet) worse for consumers. Mr. Hanser
968 believes this will save consumers from over-investing in such measures. Solar power
969 installations are good for the environment, and making the economics fairer for
970 consumers is not a bad thing.

971 **Q. Does this conclude your rebuttal testimony?**

972 **A.** Yes.