

STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

Illinois Commerce Commission)	
On Its Own Motion)	
)	
v.)	Docket 08-0532
)	
Commonwealth Edison Company)	
Investigation of Rate Design)	
Pursuant to Section 9-250 of)	
the Public Utilities Act.)	

DIRECT TESTIMONY OF EDWARD C. BODMER
ON BEHALF OF THE CITY OF CHICAGO

CITY EXHIBIT 1.0

MAY 22, 2009

1 **QUALIFICATIONS AND SUMMARY OF TESTIMONY**

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

3 A. My name is Edward C. Bodmer. I am testifying on behalf of the City of Chicago
4 ("City").

5 **Q. Do you have experience analyzing Commonwealth Edison Company's**
6 **("ComEd") cost of service and rate design issues?**

7 A. Yes. I have been involved in ComEd cost of studies and rate design issues for the
8 past twenty years. I have prepared testimony critiquing ComEd's marginal cost
9 and embedded cost studies in each rate case since 1994. I recount more of my
10 experience below where I discuss this case in the context of earlier rate cases,
11 workshops and negotiations involving ComEd and the City. In addition to my
12 work involving ComEd, much of my consulting work involves assignments
13 related to finance and valuation. This work ranges from delivering seminars
14 around the world to writing reports that quantify the massive transfer of wealth
15 that has taken place from consumers to shareholders because of the deregulation
16 of companies like Exelon. My resume is attached as City of Chicago Ex. 1.1.

17
18 **Q. How is your testimony organized, and what are your principal conclusions?**

19 A. The following list summarizes the general organization of this testimony as well
20 as my principal conclusions:

22 - To put this case in proper context, the first section of my testimony includes a
23 short history of residential cost of service disputes that have been discussed over
24 the past two decades. This history demonstrates that ComEd's response to the
25 Commission's initiating order with respect to residential cost of service issues is
26 disappointing, particularly given the opportunity in this case to take a serious look
27 at issues that have been debated for so many years. Regarding residential cost of
28 service issues, ComEd ignored certain subjects, performed the absolute minimum
29 analysis and work on others, and generally ignored the constructive spirit of the
30 Commission's order in the utility's last rate case (Docket 07-0566.). In this first
31 section of my testimony I describe why, when I read ComEd management make
32 statements like "...customer information costs include costs for market research,
33 demand management, and advertising. As a result, these costs vary according to
34 the number of customers, and are not dependent upon usage...", it is difficult to
35 describe ComEd's lack of logic and obstinance in the face of the Commission's
36 initiating order in this case as anything other than the behavior of a headstrong
37 teenager.

38

39 - The second section of my testimony addresses street lighting issues. Based on my
40 analysis of street lighting cost of service in general, and municipally owned street
41 lights in particular, I conclude that: (1) ComEd allocates more costs of secondary
42 wire to the street lighting class than to any other class, and allocates the cost of
43 service drops to this class even though the vast majority of City street lights
44 require only a minimal amount of secondary wire and no service drops; (2) the

manner in which ComEd allocates aggregated distribution line costs based on non-coincident peak (“NCP”) load is inappropriate and unfair to classes, such as the street lighting class, which have no diversity among ratepayers; (3) ComEd’s refusal to differentiate pole costs between municipalities that use ComEd poles and municipalities, like the City, that own their own poles, is contrary to the whole idea of allocating a portion of poles to secondary wire; and (4) ComEd did not address the crucial issue of the cost causation of primary distribution facilities and street lights. Distribution facilities are built to serve the peak load on a regional basis. Street lights do not turn on until 8:00 or 9:00 at night in the summer meaning that they do not cause nearly as much wire to be needed as other loads that use electricity during peak times in the afternoon. ComEd’s cost study failed to recognize this fact, as it assumes the street light load causes just as much need for primary facilities as other loads.

My street lighting analysis confirms the wisdom of the Commission’s statement in its 07-0566 order that “the rate for street lighting in the City and probably other municipalities that own all or part of their own lighting is likely higher by a significant but un-quantified amount than it should be.” I.C.C. Docket 07-0566, Order at 208 (Sep. 10, 2008) (“Rate Order”). Yet, despite the Commission’s explicit directive that ComEd “provide reports and studies, as directed herein, on ... street lighting costs ...” (Rate Order at 237, Ordering Paragraph 5), the best ComEd could muster was to “review the “terms and conditions” part of the street light tariff.” ComEd Ex. 1.0 at 26, LL 532-33. Absent a study by ComEd, I have

68 pieced together information that demonstrates that street lights rates should be cut
69 in half from their current levels.

70

71 - The third section of my testimony provides an overview of issues associated with
72 costs that ComEd reflexively allocates on the basis of the number of customers. I
73 demonstrate that the concept of allocating costs on the basis of something other
74 than the number of customers is not a radical concept by comparing ComEd's
75 customer charges to customer charges in the tariffs of other utility companies.
76 This comparison shows that the allocation of costs based on factors other than the
77 number of customers is consistent with the approach used by other regulatory
78 agencies.

79

80 My testimony in this section also provides some insight regarding the somewhat
81 misleading nature of ComEd's account titles. For example, as used by ComEd,
82 the phrase "customer installation expense" means outage costs; "billing and data
83 management expense" includes lobbying and software costs; and "customer
84 information expenses" include expenditures for attempting to change the way they
85 use electricity.

86

87 - The fourth section of my testimony reviews the adjustment to uncollectible
88 expense ordered by the Commission. Rate Order at 211-12. This is the only issue
89 in its pre-filed testimony that ComEd remotely complied with the Commission's
90 directives with respect to the residential and street lighting issues set forth in the

91 Initiating Order in this case. Maybe ComEd felt trapped because the Commission
92 specifically ordered the utility to make an adjustment, and there was no room for
93 interpretation when it comes to the direct cost of uncollectible expenses.
94 However, in making the uncollectible adjustment, ComEd did the absolute
95 minimum that it was told to do. The impact of the adjustment ComEd was willing
96 to make is minor, resulting in less than a 1% change to single-family and multi-
97 family cost of service.

98
99 ComEd's minimalist approach ignores the important philosophy stated by the
100 Commission with respect to uncollectible costs in its Rate Order. In particular,
101 the Commission noted that certain costs (such as people not paying their bills)
102 cannot be logically allocated to one ratepayer group (such as neighbors who do
103 pay their bills). In those situations, the Commission concluded that such costs
104 should not simply be allocated by default -- as ComEd recommended -- on the
105 basis of the number of customers. If ComEd had put a little more thought into the
106 matter -- and adhered to the spirit of the Commission's conclusion -- it would have
107 included not only the direct costs of uncollectible accounts in the adjustment, but
108 also the costs of associated credit work, notifying customers in default, the cost of
109 disconnecting meters, and so forth. There is no reason to exclude such associated,
110 indirect costs in the uncollectible adjustment.

111
112 - The fifth section of my testimony discusses expenses that are comparable to
113 uncollectible expenses in terms of cost of service philosophy and should have the

114 same rate treatment. These expenses include, but are not limited to, costs
115 associated with ratepayers who move, ratepayers who register complaints,
116 correcting billing errors, requests for changes in service. Such costs do not fit into
117 a particular customer class category. I explain why these should be allocated
118 using the same rate treatment philosophy I applied with respect to direct and
119 indirect uncollectible costs. Costs of upper management salaries are similar to
120 these costs because they do not fit neatly into a particular cost category.

121

122 - The sixth section of my testimony discusses allocation of expenses that ComEd
123 labels “customer information costs.” The Commission’s Initiating Order directed
124 ComEd to analyze “the extent to which usage contributes to ... customer
125 information costs and whether factors other than the number of customers in a
126 class should be taken into account in the assignment of these costs to rate
127 classes.” I.C.C. Docket 08-0532, Initiating Order at 2, (Sep. 10, 2008). ComEd’s
128 so-called “analysis” consisted mainly of conclusory statements that expenses such
129 as demand management are related to the number of customers and do not vary
130 with usage. ComEd Ex. 2.0 at 28, LL 600-03. In this section I begin with the
131 rationale that expenditures for demand management, advertising and market
132 research can only be justified if they are made to improve efficiency in the usage
133 of energy, and then proceed to the obvious point that an expense made to improve
134 energy use must be allocated on basis of energy use. As I will show, working
135 through the individual expense items makes it obvious that factors other than the
136 number of customers should be the basis for allocating these costs – and not

137 ComEd's default position which has the effect of allocating as many costs as
138 possible to low income/low use ratepayers.

139

140 - The seventh section of my testimony discusses the largest category of costs
141 allocated by ComEd based on the number of customers – costs labeled by the
142 utility as “billing and data management.” Given the title of this account, one
143 would think the assigned costs are related to the number of bills, and not the size
144 of a ratepayer in terms of revenues, energy demand or other metrics. One would
145 not think that this account includes costs related to implementing open access
146 legislation, notification of outages, providing delivery service, and call centers
147 related to uncollectible accounts. After working through the tedious details of
148 what is included in the account, I show that the majority of cost items are, in fact,
149 not related to processing and sending of ratepayer bills, or to metering. My
150 analysis shows that ComEd has given this account a misleading name – one that
151 makes one think that the costs are associated with billing and metering and
152 therefore should be allocated based on the number of customers.

153

154 Much of my analysis in this section involves going through the pieces of costs in
155 this inappropriately- labeled “billing and data management” account, showing that
156 many of the expenses are not remotely related to billing and metering. I then
157 demonstrate that factors other than the number of customers should be the basis
158 for allocating many of the assigned costs in this category, and that ComEd's

159 default allocation methodology, which falls hardest on low income/low use
160 ratepayers, should be rejected.

161

162 - The eighth section discusses customer installation costs, which, as it turns out,
163 have nothing to do with installing new facilities. In ComEd's last rate case, I
164 made the silly assumption that this category of expenses is related to customer
165 installations, as the account title implies. In fact, the costs in this category
166 concern customer complaints, requests for changes in service and costs of
167 policing people and businesses who steal electricity. As with most other costs,
168 ComEd falls back to its default position that these costs should be allocated based
169 on the number of customers in its various customer classes. ComEd's preferred
170 allocation method is unfair and should be rejected. ComEd makes little effort to
171 explain why costs included in this account such as complaint costs, service
172 requests and stolen electricity should be allocated based on the number of
173 ratepayers. For example, with respect to customer complaints, ComEd witness
174 Michael J. Meehan stated that "These costs are independent of usage. ComEd's
175 experience has been that these costs do, however, vary with the number of
176 customers." ComEd Ex. 2.0 at 26, LL 550-51. The "logic" of this assertion
177 forces you to scratch your head. The "logic" apparently runs along the lines of
178 because complaints and service requests are obviously related to the number of
179 complaints and service requests, they must be allocated based on the number of
180 customers, the most regressive manner possible. I show that factors other than the

181 number of customers should be the basis for allocating so-called “installation
182 costs.”

183

184 - The ninth section discusses the cost of service drops which the Commission’s
185 Initiating Order directed ComEd to evaluate. In Docket 07-0566, the City noted
186 that within the single-family and multi-family class, customers that use more
187 electricity are likely to have more wire. It is also more likely that the wire used
188 for the service drop to high-use customers will be expensive underground wire
189 because many high use customers live in large homes in the suburbs where
190 underground service drops are prevalent. ComEd’s “analysis” of this cost in this
191 case consisted of to repeating an irrelevant statement in the rebuttal phase of the
192 prior docket that “these costs were direct-assigned to customer classes as reflected
193 in the ECOSS filed in the 2007 Rate Case.” ComEd Ex. 2.0 at 28, LL 593-95. In
194 preparing its analysis of customers served with primary and secondary wires,
195 ComEd used a mapping system that can identify equipment at a very precise
196 level. This indicates that the utility could easily take a few samples of the actual
197 cost of service drops and the actual usage of ratepayers. Unfortunately, ComEd
198 did not do this, thereby avoiding any sincere effort to analyze this issue and, in the
199 process, denying the Commission useful information in determining the proper
200 method for allocating service drop costs.

201

202 - The tenth and final section of my testimony discusses the allocation of primary
203 and secondary costs. In my direct testimony in Docket 07-0566 I observed that

ComEd tends to allocate as little cost as possible to businesses and large residential ratepayers, and as much cost as possible to low use/low income residential ratepayers. This tendency is evident by comparing the amount of effort ComEd put into working on the primary/secondary issue and how little effort it put into the residential issues. This section of my testimony demonstrates that the secondary wire used for residential ratepayers in the City has a much lower cost than the secondary cost to serve residential ratepayers in the suburbs because of factors such as age, building lines underground versus overhead and density. ComEd's rates should reflect cost differences in secondary wire due to density and housing stock as it should with primary facilities. The information provided by ComEd in this case demonstrates that it has the data to do a much better job in allocating residential costs.

I. THE HISTORY OF COMED RESIDENTIAL COST OF SERVICE DURING THE PAST 20 YEARS

Q. Why have you included a discussion of the last two decades of residential cost of service studies to introduce issues in this case?

A. In my opinion, recounting what has happened with respect to residential cost of service over the past twenty years is important because it puts this case into context. Review of past rate cases, workshops and negotiations demonstrates that the Commission's decision to open a separate docket to evaluate issues such as uncollectible accounts, street lights and whether expense items should be allocated based on the number of customers represents a breakthrough. Unfortunately, ComEd's pre-filed direct testimony does not share that same

constructive spirit. At least with respect to residential and street lighting cost of service issues, ComEd rejected the opportunity to engage in a fresh examination of the topics. Instead, ComEd obstinately adhered to its old arguments; its witnesses provided minimal substance and analysis and, despite the Commission's direction to the contrary, mostly failed to present anything new on these issues.

Q. In your introductory statements you made a rather provocative statement that ComEd's attitude reminds you of a stubborn teenager. Why did you feel the need to make such a statement?

A. Unfortunately, in addition to being frustrated by ComEd over the past couple of decades, I have also attempted to parent teenagers. Reading the testimony of ComEd management kept making me remember experiences I had when my teenage son "learned" to drive. At first, I tried to explain to him in a logical manner that it is in his best interest to drive safely. He simply ignored my advice and suggestions. As explained below this is just like the way ComEd ignored the logic of City presentations when we initially explained our residential rate design concerns to the utility in the 1989-1990 City-ComEd franchise renegotiation process.

After driving with my son and seeing him speed and tailgate, I expressed my positions in a more forceful manner. His response was that I drive like an old lady and that he is simply driving with the flow of traffic. In a similar way, once

the City made more forceful presentations by presenting testimony in front of the Commission, ComEd's response typically has been dismissive and reactionary.

Finally, after receiving a couple of speeding tickets, my son drove exactly at the speed limit, but he still tailgated, rolled through stop signs and his driving was still unsafe. When I pointed this out, he insisted that he was complying with the law. In the same way, although the Commission, in its Rate Order in Docket 07-0566 and its Initiating Order in this case, told ComEd that its cost of service study is inadequate, ComEd insists that by making an extremely minor 0.5% change in multifamily rates for direct uncollectible expense, it has complied with the letter of the Commission's "law." ComEd missed the point that it could have changed the underlying way it addresses residential cost of service issues.

Q. In the above answer you referred to the City-ComEd franchise renegotiation process. What do you mean by this?

A. The City has a unique provision in its franchise with Commonwealth Edison Company dating from the days when Chicago Edison was run by Sam Insull. This provision allows to City to purchase the utility's assets at original cost rather than condemning the assets and paying fair value. After a series of ComEd rate increases, Mayor Harold Washington took the position that the City would seriously investigate the potential for exercising the option. Though changes in federal tax laws made exercise of the option less financially viable, the City believed that simply signing a new franchise agreement without gaining any

concessions from the utility was not an acceptable alternative. One concession the City sought was to ask that ComEd rethink its residential rate structure and its cost of service methodology.

Q. What residential rate design and cost of service alternatives did the City discuss with ComEd in 1989 and 1990?

A. The City studied a wide range of alternatives to purchasing ComEd's assets within City limits, from getting ComEd to agree to an overall revenue requirement reduction, to changing inter-class allocation, to very aggressive DSM programs targeted to City consumers. We realized that these alternatives would directly affect the bottom line to ComEd's shareholders and would be very difficult to accomplish in franchise negotiations. In considering alternatives, my then colleague Ross Hemphill and I observed that because of ComEd's very high customer charge and the steep declining block in its energy charges, ComEd's rates were far more regressive than the rates in any other large U.S. metropolitan area. Further we understood that because of lower income levels, older housing stock, higher percentage of apartments and low air conditioning saturation, City residential consumers use less energy per customer than suburban consumers. This meant that by simply making ComEd's rates less regressive and consistent with those of other large cities, large dollar benefits would accrue to people who live in the City. The combination of ComEd's declining block rates and lower usage by City ratepayers meant that typical City residents paid much higher prices in terms of revenue per kWh than suburban ratepayers – a situation that remains

298 true today. We thought that modifying residential rates was a fair thing to do; it
299 had no real costs to ComEd shareholders, and it was beneficial to low income
300 people who live in the City and elsewhere in the service territory. Therefore, we
301 pursued rate structure options in the renegotiation process.

302

303 **Q. Why did the City attempt to work with ComEd on rate matters as a part of**
304 **franchise negotiations rather than directly dealing with the issue in front of**
305 **the Commission?**

306 A. We believed that for significant changes in residential rate structure to occur,
307 ComEd must directly advocate for the changes at the Commission. Rate cases at
308 the time involved large additions of nuclear capacity to rate base, and many other
309 revenue requirement issues. Because of the focus on these other issues, we
310 thought that it would be difficult to succeed in challenging ComEd's residential
311 rate design, which involved esoteric issues with respect to measurement of
312 marginal cost. Up until Docket 07-0566 and this case, our judgment has turned
313 out to be right on the mark, as in prior cases the Commission has accepted -- in
314 very general terms -- ComEd's cost of service analysis even though many parties
315 demonstrated many different problems with the cost studies. That is why I wrote
316 above that the Commission's action to open in this docket is a breakthrough.

317

318 **Q. What was the result of the City's attempts to work directly with ComEd to**
319 **seek a revised residential rate structure in front of the Commission?**

320 A. We had many meetings with ComEd executives involving specific residential rate
321 structures, but we could not reach an agreement on having ComEd propose
322 different residential rates in front of the Commission. ComEd insisted it could not
323 advocate less regressive rates as there would be big impacts on high energy users
324 with big homes in the suburbs. In the end, all we ended up with was a provision
325 in the franchise agreement to engage in a cooperative study to evaluate residential
326 cost of service. Section 5 of the Supplemental Agreement to the Franchise
327 Agreement states:

328 [ComEd], in cooperation with the City, shall
329 conduct a cost-of-service study to reexamine the
330 potential for cost-justified reallocation of the
331 recovery-of-revenue requirements within the
332 [ComEd's] residential customer class. Among the
333 issues to be reexamined in such cost-of-service
334 study shall be the appropriate level for the
335 monthly customer charge and the appropriate
336 cost-of-service methodology. ... If the [ComEd]
337 determines that lower rates for low-use and
338 moderate-use residential customers are cost-
339 justified within the residential class, [ComEd]
340 shall file any rate changes so justified with the
341 [Commission] at the first time after the Effective
342 Date [of the franchise agreement] that [ComEd's]
343 residential rate structure is before the
344 [Commission]. [ComEd] shall use its best efforts
345 to support such filings with appropriate testimony
346 before the [Commission].
347

348 **Q. What was the ultimate result of the cooperative process between the City and**
349 **ComEd with respect to residential cost of service issues?**

350 A. We had a number of meetings and studied ComEd's cost study in great detail.
351 Our studies revealed that ComEd's cost study did not justify its regressive rate
352 structure, and also exposed a number of significant flaws in the rate structure. For

353 example, based on surveys that ComEd used to measure density, we discovered
354 that the data used in ComEd's final cost study was completely inconsistent with
355 individual surveys by ComEd engineers.

356

357 When we met with ComEd, we had a number of theoretical discussions with
358 respect to the economic appropriate theory underlying cost studies. As with the
359 franchise negotiations, we were not able to agree on cost study revisions and
360 ComEd did not modify its cost study in the subsequent rate case.

361

362 **Q. After the City failed to obtain rate design changes through franchise**
363 **negotiations or the cooperative process, what was its experience when it**
364 **attempted to achieve less regressive rates as part of a contested hearing?**

365 A. ComEd did make a couple of changes in its customer charge and in the magnitude
366 of its declining block, but its rates remained more regressive than those in most
367 large cities. In an attempt to attain more reasonable rates, we presented testimony
368 before the Commission in the 1994-1995 rate case, Docket 94-0065. Our
369 testimony included very detailed cost of service support for a less regressive rate
370 structure, even accepting ComEd's flawed cost study. However despite all of that
371 work, and extensive cost of service comments from other parties, the Commission
372 simply found that ComEd's presentation was generally reasonable. ComEd's
373 rates remained amongst the most regressive in the nation.

374

375 **Q. What happened to residential rates after ComEd's 1994 rate case, Docket 94-**
376 **0065?**

377 A. After rates were established in that case, ComEd's overall levels of residential
378 rates were effectively set for ten years by the State Legislature because of the
379 deregulation act of 1997. Part of the act involved a reduction in residential rates
380 first by 15% and then by another 5%, but the structure of individual components
381 in the rates, such as the customer charge and the declining block energy charge,
382 remained unchanged.

383

384 **Q. Did the City participate in the cost of service and rate design portion of**
385 **delivery services rate cases that occurred after the deregulation act?**

386 A. Yes. Because of the deregulation act, the Commission had to set separate rates
387 for distribution costs. The ICC staff and other parties advocated use of an
388 embedded cost study which was very harmful to the street lighting class. The
389 City succeeded in assuring that transformers were not allocated to the railroad
390 class and we managed to get language in a rate order that mandated ComEd to
391 allocate costs of setting up systems for deregulation of commercial customers.
392 We have repeatedly stated that ComEd's embedded cost study was very crude as
393 compared to the marginal cost study in that it did not consider density and other
394 cost regional cost differentiating factors.

395

396 **Q. When the City asked you to work on cost of service issues in the last rate**
397 **case, Docket 07-0566, what was your general attitude?**

398 A. It was generally negative. I was quite happy to work again with my friends at the
399 City, but I dreaded writing many pages of direct and rebuttal testimony,
400 submitting hundreds of data requests that would yield few, if any useful
401 responses, and staying up late nights working on cost of service spreadsheets only
402 to have our efforts lost in the myriad issues decided in the final Commission
403 order. Despite my personal misgivings, given the dramatic costs associated with
404 suburban sprawl that drove the rate increase request, I met with City
405 representatives and agreed to work on the cost of service and rate design portion
406 of the case.

407

408 **Q. What was your reaction to the proposed order in docket 07-0566?**

409 A. Sometime after the proposed order was written, I received an e-mail from my
410 friend Conrad Reddick with a caption "Proposed Order." On the day I received
411 the e-mail, I could not have been further away from ComEd issues – both in terms
412 of distance and spirit. I had finished teaching a project finance class in
413 Windhoek, Namibia and we had a nice day working through case studies of
414 famous financial failures. When I saw the e-mail caption, I read all of my other e-
415 mails and decided not to read Conrad's e-mail because I did not want to ruin a
416 generally good day. The next day, I mustered the courage to read the e-mail after
417 I had responded to all of my other e-mails, and I was pleasantly surprised by
418 thoughtful manner in which the cost of service and rate design parts of the order
419 was written. I celebrated by ordering a glass of red wine with my dinner.

420

421 **Q. Explain which provisions of the proposed order that you thought were**
422 **particularly constructive.**

423 A. Some of my favorite comments included:

424 - "The Commission directs ComEd to *perform an audit* to determine the
425 cost of providing service to all of the street lights in the City of Chicago
426 for its next case."

427
428 - "The Commission agrees...that imposing costs on customers who use less
429 energy is, at best, inconsistent with the General Assembly's mandate that
430 reducing energy use is a vital policy objective of the State."

431
432 - "Because the allocation of customer costs, installation costs, and customer
433 information costs were assigned on the number of customers, residential
434 customers pay 80% of them. These costs should be based as far as is
435 practical to the cost causers rather than disproportionately to ComEd's
436 residential customer base. Under proposed rates the residential customer
437 charge alone will be about \$10 per month regardless of usage. The
438 Commission directs ComEd to incorporate usage in the assignment of
439 these costs to all rate classes in the next rate case."

440
441 - "It is ironic that ComEd objects to allocating new facilities expenses on a
442 geographic basis to customers in areas driving the request for a rate
443 increase, but finds it appropriate that multi-family non-space heat
444 customers should be charged for unpaid bills attributable to other
445 delinquent multi-family customers."

446
447 - "We find that uncollectible debt expense costs in future rate cases should
448 allocated across all residential classes rather than restricting the allocation
449 of uncollectible expense by subclass."

450
451 - "ComEd's contentions about plant investment ... seem to contradict
452 ComEd witnesses' testimony who repeatedly stated that it is the cost of
453 installing new outlying suburban facilities that justifies this rate increase.
454 ComEd also described in detail that the costs of installing new facilities,
455 especially underground cables, has risen dramatically."

456
457 I.C.C. Docket 07-0566, Proposed Order at 244, 224, 249, 247.

458

II. STREET LIGHTING ANALYSIS

Q. How have you structured the discussion of street lighting cost of service issues?

A. My analysis of street lighting issues is separated into the following sections:

1. I first review the Commission's direction with respect to street lights in its Initiating Order. I also look at ComEd's claim that the cost to serve street lights has increased 99%. This almost doubling of the utility's estimate in the cost of serving street lights occurred when ComEd switched from a marginal cost of service study to an embedded cost of service study. During the same period costs to other non-residential classes declined by about 20%.

2. In the second section I present background on the structure of street lights in the City and the suburbs. This includes information obtained during discussions I had with City employees and photographs of City and suburban street light facilities. It shows how little information ComEd provided in the discovery process.

3. The third section explains how, although street lights use virtually no secondary wire, ComEd's embedded cost methodology allocates more equipment to this class than to any other class, including the residential class. Using ComEd data, I show that the utility's allocation of secondary wire to City street lights overstates real costs by more than 800%.

4. The fourth section of my street lighting analysis shows how ComEd's method of computing non-coincident peak load is uniquely unfair to the

street lighting class, whether they be in the City or in the suburbs. The discussion of street lighting allocation factors reveals problems in the entire study.

5. The fifth section describes how ComEd's failure to account for regional demands that cause stress on – and require expansion of – ComEd's distribution system makes no sense for any rate class, but is particularly unfair to the street lighting class. Accounting for such regional stresses on the system would reduce the costs of primary wires allocated to City street lights by a minimum of 75%.

6. The sixth section describes how the City's ownership of street light poles affects the cost of serving those facilities. In addition, I explain why it is appropriate to differentiate costs of serving street lighting accounts based on who owns the poles. Ownership of street lighting poles also affects operation and maintenance costs.

7. The final section summarizes my recommendations with respect to street lighting, and my conclusion that there are so many problems with ComEd's embedded cost study that City street lighting rates should be, at a minimum, cut in half.

A. The Dramatic Increase in ComEd's Cost Estimate to Serve City Street Lights; the Commission's Initiating Order.

Q. How has ComEd's cost of measurement for City street lights changed in the past few years?

506 A. When ComEd first unbundled distribution rates in 1999, it calculated street
507 lighting cost of service for the dusk to dawn class, which is the rate class in which
508 the City's street lighting account falls, to be \$.00729 per kWh. Now, the cost of
509 service for the same street lights is estimated to be \$0.01576 per kWh -- an
510 increase of 116% in less than ten years. ComEd Response to COC 1.04,
511 attachment 3. The increase is even more dramatic when compared to other rate
512 classes. The table below shows that embedded costs per the amount of non-
513 coincident load has fallen between 28% and 17% for non-residential classes other
514 than street lights. In contrast, the embedded costs for dusk to dawn street lights
515 have **increased** by a whopping 99%.
516

	Marginal Cost Study			Embedded Cost Study			Percent Difference
	NCP (MW)	Cost (\$)	Cost/NCP	NCP (kW)	Cost (\$)	Cost/NCP	
Watt Hour	169	12,687,885	75.08	162,747	10,178,544	62.54	-17%
0-25	753	64,530,405	85.70				
25-100	1,659	146,868,259	88.52				
Total 0 - 100	2,412	211,398,664	87.64	2,921,029	183,766,574	62.91	-28%
100-400	1881.8	139,689,503	74.23	2,663,481	149,357,685	56.08	-24%
400-800	1,421	88,823,398	62.50				
800-1000	407	26,738,426	65.63				
Total 400-800	1,829	115,561,824	63.20	2,663,481	120,623,405	45.29	-28%
1000-3000	1776.2	117,554,647	66.18				
3000-6000	989.7	70,740,831	71.48				
6000-10,000	498.8	34,048,899	68.26				
Total 1,000-10,000	3264.7	222,344,377	68.11	3,475,295	194,258,808	55.90	-18%
Over 10,000	1555.7	73,988,854	47.56	1555700	54,036,505	34.73	-27%
Dusk to dawn	121	3,088,034	25.44	136,359	6,902,123	50.62	99%

517
518
519 **Q. Was the increase in costs caused by some kind of real increase in the cost of**
520 **providing electricity to street lights?**

521 A. Of course not. The increase reflected a change in the way ComEd measured its
522 costs to serve street lights when it switched from marginal cost studies to
523 embedded cost studies. When ComEd measured street light cost in the marginal
524 cost of service study, it correctly accounted for the fact that additional distribution
525 wires are needed when they are at or near capacity – that is, when peak load is
526 highest. This occurs in the afternoon on hot summer days -- a time when street
527 lights are turned off. Thus, street lights do not put strain on the system and,
528 therefore, do not add to the need to install additional primary equipment.

529

530 **Q. What was your testimony with respect to street lights in Docket 07-0566 and**
531 **what was the Commission's response?**

532 A. Among other things, I stated that ComEd should be ordered to prepare an audit of
533 street lighting costs that takes into account the fact that (1) the City owns the
534 secondary lines between the lights and (2) that the City owns the poles upon
535 which the street lights are placed. The Commission generally agreed with our
536 position and stated that:

537 Thus, contrary to the assumptions in the ECOSS,
538 Chicago owns and maintains most of the light
539 poles, secondary wire and other components of
540 street lights throughout the City. The ECOSS
541 fails to take into account this division in
542 ownership and maintenance responsibilities.
543 Therefore, the rate for street lighting in the City
544 and probably other municipalities that own all or
545 part of their own lighting is likely higher by a
546 significant but un-quantified amount than it
547 should be.
548

549 Rate Order at 208. Accordingly, based on this conclusion, the Commission
550 ordered ComEd to “provide reports and studies [on] ... street lighting costs”
551 *Id.* at 237.

552

553 **Q. Did ComEd comply with the Commission’s Initiating Order regarding**
554 **analysis of street lighting cost of service?**

555 A. In my opinion, no. The Commission ordered ComEd to prepare a cost study that
556 takes account of municipal ownership and maintenance responsibilities in the City
557 of Chicago and other municipalities. ComEd’s efforts to “comply” with the
558 Commission’s directive was set forth in the following language submitted by
559 ComEd witness Lawrence S. Alongi:

560 Under my direction and supervision, ComEd
561 reviewed the "Terms and Conditions" portion of
562 its tariffs as it relates to street lighting. In addition,
563 ComEd re-examined the ECOSS from the 2007
564 rate case to determine whether ComEd included
565 any street lighting costs that were not costs that
566 ComEd incurs in serving its street lighting
567 customers. We determined that the ECOSS does
568 not include such costs. Instead, the ECOSS
569 includes only ComEd's costs for serving street
570 lighting customers.
571

572 ComEd Ex. 1.0 at 26, LL 532-37. Clearly, ComEd did not study the question at
573 all. ComEd did not use its mapping software to see how much secondary wire is
574 used by street lights; it did not evaluate whether the manner in which street lights
575 use distribution facilities should result in different allocation factors; it did not
576 evaluate whether the fact that some municipalities own their own poles and others
577 use ComEd poles causes it to incur differences in operating and capital costs; and

578 it did not evaluate whether the lack of diversity in computing street lights' non-
579 coincident peak ("NCP") load affects cost measurement. Asking underlings to
580 review tariff terms and conditions in no way, shape or form constitutes a study of
581 the complex issues associated with different types of municipal ownership of
582 street lights. In fact, describing ComEd's "analysis" as cursory is generous.

583
584 In the paragraphs below I show that there are many problems regarding the way
585 ComEd allocates street lighting costs. Some issues involve the overall cost of
586 service for City and suburban street lights in general – for example, the demand
587 allocation and peak usage issues. Other questions involve the difference between
588 different configurations of street lights in City and non-City locales.

589
590 **Q. Does anybody suggest that street lighting facilities owned by the City or other**
591 **municipalities are included as ComEd costs in the ComEd's cost of service**
592 **study?**

593 **A.** No. ComEd alleged that the reason it has been ordered to take a closer look at
594 street lights was because the City and the Commission do not understand that
595 municipality owned facilities are excluded from the cost study as shown by the
596 following excerpts from ComEd's testimony.

597 The manner in which ComEd allocated its costs to
598 the lighting sector in the ECOSS it presented in
599 the 2007 Rate Case was appropriate. The costs of
600 street lighting facilities owned by the City of
601 Chicago and other municipalities are not, and
602 should not, be included in ComEd's ECOSS
603 because the purpose of the study is to assign
604 ComEd's costs, not the costs of other entities.

605
606 *Id.* at 4, LL. 93-97.
607

608 Meanwhile, for dusk to dawn and general lighting
609 customers, the costs of customer owned facilities
610 for the lighting system itself and customer-
611 supplied service cable connecting the lighting
612 system to ComEd's distribution system are not
613 included in the ECOSS, as these are not costs that
614 ComEd incurs for the dusk to dawn and general
615 lighting customers. Within the ECOSS, ComEd
616 does not include or assign the costs for customer-
617 supplied service cable, customer-installed poles,
618 or any other customer-owned electrical equipment
619 for any ComEd customer.
620

621 *Id.* at 25, LL 520-26. Nobody claims that ComEd should include the City's costs
622 of purchasing and maintaining its street light facilities in its cost study. That is
623 silly. Rather, the point is that in calculating City street light rates, ComEd
624 assumes that the City, like most other municipalities uses ComEd-owned and
625 supplied facilities and, most importantly, charges the City for using facilities that
626 ComEd does not provide. ComEd's response is simply insulting.
627

628 **B. The Configuration of Street Lights in the City and in the Suburbs.**

629 **Q. How have you investigated the general structure of street lights?**

630 A. I have discussed the structure of street lights with City engineers; I have taken
631 photographs of street lights in the City and the suburbs; I have simply looked at
632 street lights whenever I take a walk or drive in a car. I also submitted data
633 requests to ComEd, but that was not the least bit effective. I learned, among other
634 things, that a fifteen minute phone call with a City engineer is dramatically more
635 useful than twenty data requests to ComEd.

636

637 **Q. Compare the description of street lighting configuration provided by ComEd**
638 **in a data request response with the explanation given by a City engineer.**

639 A. The difference was night and day. After first objecting to the data request,
640 ComEd provided an incomprehensible description of in its response to City
641 request 1.06 (attached as City of Chicago Ex. 1.2). (It seems that ComEd objects
642 to virtually all data requests, especially those submitted by the City. ComEd
643 reflexively objects that City data requests are “vague.” In ComEd’s view,
644 apparently the City is not capable of drafting a coherent question.)

645

646 In sharp contrast, a short conversation with a City engineer was very helpful.
647 From my simple chat with City staff, it became very clear that ComEd is
648 dramatically overcharging the City in its street lighting cost of service study by
649 double counting secondary service and service drops.

650

651 **Q. Describe your general understanding of the way in which City street lights**
652 **work.**

653 A. The vast majority of City street lighting can be divided into three categories --
654 alley lights, lights for residential streets, and arterial lights (less than 2% of the
655 electricity is used by flood lighting and pedestrian lighting.) The manner in which
656 these different types of lighting configurations are connected to the ComEd
657 system is as follows:

658

- Alley lighting

- Alley lights account for about 25% of the street light electricity used by the City. Alley lights, like other street lights in the City, are owned by the City, and are directly connected to ComEd's 120 volt secondary wire which goes from pole to pole. The City's alley lights are similar to many suburban street light configurations in that ComEd owns all of the secondary wire that goes from lamp to lamp (although higher density in the City means that less wire is used per pole). A sensor located on the top of each alley light switches the light on when it gets dark, meaning that each light is controlled individually. There are no service drops for the City's alley lights because the wires to the lights are directly connected to ComEd's 120 volt wires. There are no meters for alley lights, and no underground wire is used for alley lights. Maintenance of alley lights is done by City of Chicago personnel. Two pictures of alley lights in Chicago are shown below – there is little piece of wire between the light and the secondary wire that is below the three primary wires on the top of the pole. In the picture on the right hand side, one can see the sensor on the top of the light.



- Residential Street Lighting

- Residential street lighting includes the lights on non-major streets.

Unlike alley lights, these lights are not directly tied to ComEd secondary wires. Instead, the City owns all of the wires that go from one light to another. The City also owns all of the poles, lamps and other equipment. Operation of residential street lights is driven by a City owned controller, rather than a sensor on the top of the light. The controller is a box about 18" x 14" x 10" wide that is typically mounted on a ComEd pole at or near the mouth of an alley (although it is sometimes located on a City pole.) Each controller generally serves anywhere from 10 to 20 street lights. The significance of the controller from a cost of service perspective is that all of the wire that goes into the controller is owned by ComEd, while all the wire and equipment on the other side of the controller is owned by the City. The ComEd wire comes to the controller directly from a transformer. Sometimes the

transformer and controller are on the same pole, meaning that the amount of ComEd wire between the transformer and the controller is less than the service drop, typically less than or equal to about 10 feet. In other cases, the controller is on an adjacent pole, meaning that the amount of wire is somewhat longer, although still less than the length of a typical service drop to a residential ratepayer. The two pictures below show residential street controllers. The picture on the left depicts a case where the controller is on a City pole while the picture on the right depicts one on a ComEd pole. In both pictures, the wire above the controller leads directly to a ComEd transformer.



717 The pictures demonstrate that if one calls the wire between the
718 transformer and the controller a service drop, then there is no
719 secondary wire at all for residential street lights. If one would call
720 the wire between the transformer and the controller secondary
721 wire, then there is no service drop. ComEd's cost study includes
722 both secondary wire costs and service drops for the dusk to dawn
723 lighting class. ComEd's cost study also includes maintenance of
724 secondary wires even though City crews perform all of the
725 maintenance on wires from the controller to the street lights.
726

727 - Arterial Lighting

728 The third category of City street lights are lights serving major
729 roads in the City. These are named arterial street lights. From the
730 standpoint of cost of service analysis, arterial street lights are
731 similar to the residential street lights category. There is a line
732 between the transformer and a box like the controller box that is
733 served from the mouth of an alley. (The box serving arterial
734 lighting is referred to as a Milbank and is used to disconnect
735 electricity from all of the connected lamps rather than controlling
736 when the lights turn on and off. There is a controller determining
737 when lights are turned on and off, but it is on the City owned side
738 of the wire.) The amount of secondary wire serving arterial
739 lighting depends on whether the transformer is on the pole at the

end of the alley, as with residential street lights or if the transformer and the box are on the same pole. In the latter case, the amount of secondary wire would be 10 to 15 feet. The wire from the box often goes underground, but this underground wire is owned, operated and maintained by the City. About 30 to 40 arterial lights are served from a single ComEd connection. Even though the configuration for arterial lights is quite different than for alley lights, ComEd's cost of service treats them the same and the utility lumps them into the same rate class. The two pictures below show the configuration of arterial street lights. The picture on the left shows how City street lights are separate from the ComEd system. The picture on the right shows the connection between ComEd and the arterial lights box. The line on the ComEd pole from the transformer goes straight to the Millbank which are the two black boxes on the stands next to the pole (which come up to the top of the parked truck).



760

761 **Q. How does the City street light structure compare to street light**
762 **configurations in the suburbs?**

763 A. My understanding is that there are two general types of suburban street light
764 configurations. In one configuration, ComEd owns and maintains all of the
765 lighting equipment, including bulbs, poles and other equipment. Street lighting
766 accounts that have this configuration are in a street lighting class named fixture
767 included lighting. I do not address the fixture included rate class in this
768 testimony.

769

770 In the second suburban configuration, the municipality owns the lamps. Those
771 street lighting accounts are in the same rate class as the City – the dusk to dawn
772 class. They are in the same class even though street lights outside of the City are
773 typically directly connected to the secondary distribution system and the suburbs
774 do not own or maintain their own secondary wire.

775

776 **C. Secondary Service Costs ComEd Allocates to the City's Street Lights**

777 **Q. What costs does ComEd allocate to street lights in its cost of service study?**

778 A. According to ComEd, in 2007, City street lights used 57% of the total energy in
779 the dusk to dawn rate class. Based on this statistic, and as shown in the table
780 below, ComEd allocates to City street lights more than \$4.5 million dollars of the
781 approximately \$7.9 million total in annual costs the utility estimates it incurs to

serve the dusk to dawn street lighting class.. Of this total, 17% or \$755,802 is for secondary wire and another 3.5% or \$156,658 is for service drops.

Dusk to Dawn Street Lighting Cost of Service in ComEd ECOSS			
	Total (\$)	City (\$)	Percent of Total
Primary	4,734,577	2,708,593	59.69%
Secondary	1,321,129	755,802	16.66%
Service Drops	273,835	156,658	3.45%
Other	1,601,830	916,387	20.20%
Total	7,931,370	4,537,439	100.00%

	Total (\$)	City (\$)	Percent of Total
Primary	4,734,577	2,708,593	59.69%
Secondary	1,321,129	755,802	16.66%
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Total	7,931,370	4,537,439	100.00%

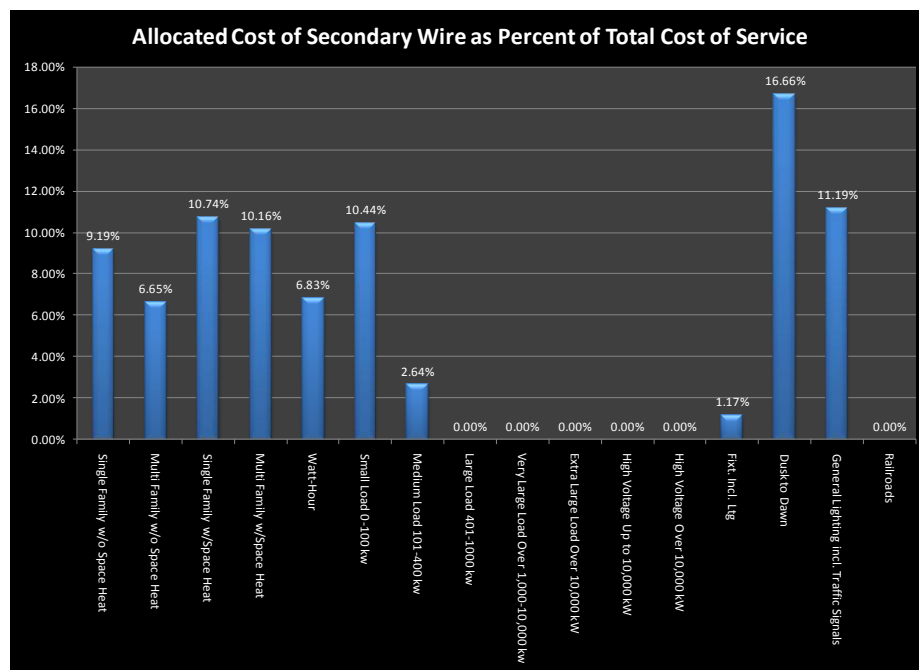
The preceding discussion regarding the configuration of City street lights makes clear that there is a double counting of secondary wire and service drops. The table below quantifies the amount by which ComEd over-charges the dusk to dawn class for these items and illustrates why the allocation of primary and other costs is even more unfair. As shown therein, out of the more than \$4.5 million in costs allocated to City street lights, \$1.4 million is attributed to operation and maintenance (“O&M”) expenses. This table shows that the City is being charged almost \$248,000 per year for the O&M associated with secondary wire even though, as explained above, the work is done by City crews.

Dusk to Dawn Street Lighting Operating Expenses			
	Total (\$)	City (\$)	Percent of Total
O&M Expenses Primary	1,460,832	835,724	59.65%
O&M Expenses Secondary	432,989	247,708	17.68%
O&M Expenses Service Drops	16,733	9,573	0.68%
O&M Expenses Other	538,304	307,957	21.98%
Total	2,448,859	1,400,962	100.00%

	Total (\$)	City (\$)	Percent of Total
O&M Expenses Primary	1,460,832	835,724	59.65%
O&M Expenses Secondary	432,989	247,708	17.68%
O&M Expenses Service Drops	16,733	9,573	0.68%
O&M Expenses Other	538,304	307,957	21.98%
Total	2,448,859	1,400,962	100.00%

799 **Q. How does the allocation of secondary service for street lights compare to the**
800 **cost allocation to other rate classes?**

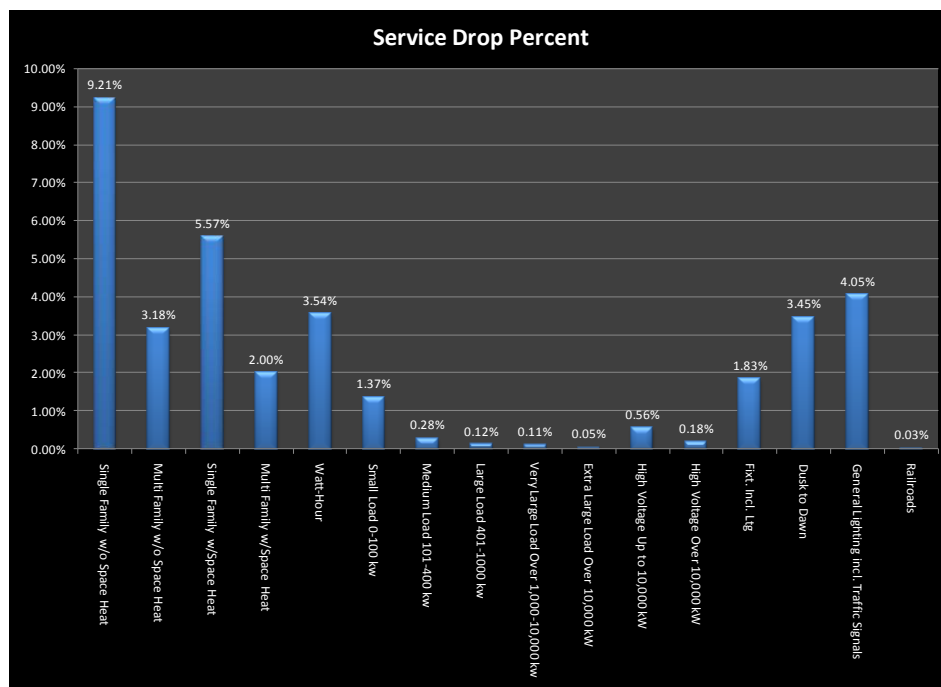
801 A. Given the fact that the City owns and maintains all of the secondary wire between
802 street lights, one would not expect the dusk to dawn lighting class to be allocated
803 more secondary costs than any other class. But making a simple graph from
804 ComEd's cost of service study shows that, remarkably, this is the case.



806
807
808 **Q. How does the allocation of service drops for street lights compare to the cost**
809 **allocation to other rate classes?**

810 A. As explained above, City street lights either take service directly from the
811 secondary wire or they are served by a little bit of secondary wire that goes from
812 the transformer to the City-owned box. If the small amount of wire between the
813 transformer and the City box is counted as secondary wire, then there should be

no service drop costs allocated to the class. Yet, as shown in the graph below, the dusk to dawn class is allocated a great deal of service drop costs – more than all the business classes except the watt hour class and the general lighting class . I discuss these issues in more detail below, but the graph above and the one below show that ComEd’s embedded cost of service study has no credibility with respect to the City’s street lights.



Q. Using information provided in ComEd’s workpapers, is it possible to estimate the amount of secondary service used to serve City street lights?

A. Yes, there is enough information to compute the City’s overhead cost of secondary wire per foot. Once the cost per foot is established, information on the number and type of City street lights can be used to derive the amount of wire that is used for residential street lights and arterial street lights. With data on the

amount of wire and the cost per foot of wire, reasonable ranges in the total cost of the wire for residential and arterial lights can be established. After the total original cost of the wire is calculated, depreciation, rate of return and other adjustments can be made to convert the costs to revenue requirements. Finally, this total cost can be compared to the existing cost of service in ComEd's embedded study to see if the costs are reasonable. My calculation of secondary wire used to serve City street lights is set forth below.

Q. Describe how you computed the cost per foot of overhead secondary wire in the City?

A. ComEd provided the cost of overhead secondary wire in its Exhibit 1.5. I have extracted all of the accounts for distribution lines in the City along with the feet of wire. The total cost of wire in the City was \$73,562,203. The amount of feet associated with these lines 133,969,728 resulting in a cost per foot of \$ 1.82 per foot.

Q. How did you compute the total amount of wire associated with arterial and residential street lights?

A. The number of wire feet can be estimated from the number of street lights. The first step is to use the number of lights to compute the number of City owned controllers. I have computed this by dividing the number of lamps by the lamps per controller resulting in 10,015 controllers. (I verified this number with the estimated number of controllers from City engineers.) Next, I estimated the

approximate feet of secondary wire from the transformer to each controller. As stated above and shown in the picture of the controller for the arterial lights, sometimes the length of the wire spans little more than a pole. In other cases, the wire is longer because transformers are located on adjacent poles. City engineers estimate that the amount of wire can range from 15 feet to 100 feet. I have used an estimate of 40 feet for arterial lights and 50 feet for residential lights from my walks in City alleys. The table below shows that the total amount of estimated feet of ComEd wire after the transformers is 472,120 feet. Note that none of the data in the table came from ComEd data requests; as is often the case, ComEd did not provide much of anything useful in their data request responses. Instead, the data come from City of Chicago records:

Feet of Wire After the Transformer for Residential and Arterial Street Lights						
	Number of Lamps	Percent of Total	Lights per Controller	No of Controllers Lamps/Lights per Controller	Estimated Feet of Wire Per Controller (ft)	Total Feet of Wire Dedicated to City Street Lights (ft)
Arterial	85,902	17.2%	30	2,863	40	114,520
Alley	62,230	12.4%				
Residential	96,547	19.3%	13.5	7,152	50	357,600
Total	244,679			10,015		472,120

Q. Once the amount of secondary wire is computed, how do the actual costs of secondary/service drops compare to the costs used in ComEd's embedded cost study?

A. My calculation demonstrates that the actual costs of ComEd wire after the transformer to be 10.8% of the amount that ComEd includes in its cost of service study as shown in the table below. The table shows that actual costs for secondary wire associated with residential and arterial street lights is about

873 \$74,000. The ComEd cost study allocates about \$684,000 to the City arterial and
 874 residential lights for secondary wire and service drops. This means that the
 875 ComEd cost of service study allocates more than 800% more of secondary wire to
 876 these components of the street lights than it should.
 877

Estimated Actual Cost of Arterial and Residential		
Item	Source	Amount
Cost per Foot of Wire	ComEd Exhibit 1.5	\$1.82
Total Feet from Above Table	Above Table	472,120
Total Cost	Feet x Cost/Foot	\$859,813.67
Accumulted Depreciation and ADIT Pct	ComEd ECOSS - Secondary	48%
Rate Base (Total Cost x (1-Acc Dep & ADIT)	Cost x (1-Acc Dep & ADIT)	\$447,103.11
Rate Base and Gross Up Percent	ComEd ECOSS	11.84%
Return on Rate Base	Rate Base x Gross Up	\$52,937.01
Depreciation Percent	ComEd ECOSS	2.45%
Depreciation Expense	Cost x Dep Pct	\$21,065.43
Total Cost of Service	Dep + Return on Rate Base	\$74,002.44
ComEd Secondary and Service Drop Cost in ECOSS		
Secondary and Serive Cost of Service in ECOSS	ComEd ECOSS	\$1,594,964.30
City Percent	ComEd DR 2.22 and 2.21	57%
City Cost	Total x City Percent	\$912,459.46
City Non Alley	75% x City Percent	43%
City Cost of Service Drops and Secondary	ComEd Cost x 43%	\$684,344.59
Actual Cost as Percent of ComEd Cost	Cost of Service/City Cost	825%

878

879

880

881 **D. ComEd's Inappropriate Use of the Non-Coincident Peak**
882 **Methodology.**

883
884 **Q. Turning to primary wires, is there a problem with the way in which ComEd**
885 **allocates primary wire to the street lighting class?**

886 A. Yes, a substantial problem. In recent years, ComEd has changed dramatically the
887 way in which primary wires are allocated to the various rate classes. When it
888 conducted marginal cost studies, ComEd correctly insisted that primary facilities
889 should be allocated on the basis of system-wide coincident peak because this
890 corresponds to the way in which new facilities are built. Later, ComEd reversed
891 course because the rules of embedded cost studies, as presented by ComEd
892 witness Alan C. Heintz, say that non-coincident peak should be used.
893 Accordingly, ComEd now claims that distribution facilities are constructed on the
894 basis of class non-coincident peak or NCP. ComEd's current position is
895 nonsensical.

896

897 **Q. How is non-coincident peak load computed for each class?**

898 A. Distribution lines are built on a regional basis – that is, distribution lines are
899 added in those places where they are needed to serve new load or to relieve
900 existing lines that are at or near capacity. Recall the outages at Wrigleyville a few
901 years ago. The problem was that ComEd had not built distribution lines to keep
902 up with demand. The outage occurred when the system was overloaded from
903 high use on a series of hot summer days. ComEd's cost of service study assumes
904 that the driver causing new lines to be built is customer class load in diverse
905 regions of the service territory.

906

907 To explain, assume that a rate class has two ratepayers: one in Lake Forest and
908 one in Peotone. The NCP is computed by adding the billing load of the ratepayers
909 in Lake Forest and Peotone and then computing the maximum load after
910 computing the sum. ComEd's cost study assumes that this NCP load drives the
911 amount of lines and poles for the class. It is obvious that the ratepayer in Lake
912 Forest has nothing to do with lines built in Peotone, and the ratepayer in Peotone
913 has nothing to do with lines built in Lake Forest. If you add the outages in
914 Wrigleyville to the Lake Forest-Peotone hypothetical, ComEd's NCP method
915 would require that the ratepayers in Lake Forest and Peotone be punished because
916 of the need to add distribution facilities in Wrigleyville to relieve overloaded lines
917 there. This is patently unfair.

918

919 To further demonstrate that ComEd's NCP approach is illogical, assume that the
920 ratepayer in Lake Forest uses almost all of its electricity during the morning – say
921 it is a restaurant that only serves breakfast, while the ratepayer in Peotone uses
922 almost all of its electricity during the evening – say it is a night club. Further
923 assume that each ratepayer has the same peak load. In this scenario, the load of
924 ratepayer in Lake Forest is assumed to offset the load of the ratepayer in Peotone.
925 That assumption is silly, but ComEd's embedded cost study insists that it
926 somehow makes sense.

927

928 **Q. Does the ComEd method favor ratepayers with load diversity within a class?**

929 A. Yes. Returning to the above example, assume that the two ratepayers were both
930 grocery stores that used the same amount of power, but they used it at the same
931 time -- *e.g.*, from 8:00 to 5:00 p.m. In that case, the NCP for their rate class
932 would be double what it would be under the original scenario.

933

934 The problem with giving credit for artificial within-class diversity in the NCP
935 calculation is that such diversity provides no benefit at all in terms of building the
936 distribution system. Whether the two ratepayers are two grocery stores, or
937 whether one is a night club and the other is a breakfast restaurant, the amount of
938 distribution lines required to serve them remains the same. The example in the
939 table below demonstrates this point.

940

941 Assume that each ratepayer has an individual load of 100 and that the cost per
942 load of the lines is \$2.00. If the rate class has within-class diversity, it is allocated
943 half of the cost as the class without within-class diversity, even though the costs
944 are exactly the same.

945

Allocation of Cost with Diverse Loads Using NCP		
	Load	Cost/Load
Breakfast Resturant in Lake Forest	100	2
Nigthclub in Peatone	100	2
Non-coincident Peak Load	100	
Total Required Cost		400
Allocated Cost		200

Allocation of Cost with Non-Diverse Loads Using NCP		
	Load	Cost/Load
Grocery Store in Lake Forest	100	200
Grocery Store in Peatone	100	200
Non-coincident Peak Load	200	
Total Required Cost		400
Allocated Cost		400

946

947

948 **Q. Why is this method unfair to street lighting consumers?**

949 A. There is no artificial diversity in the street lighting class: the lack of within-class
950 diversity does not mean that street lights are more costly to serve. In real world
951 configurations, the same lines are used for street light consumers, residential
952 consumers, small business consumers and large business consumers within a
953 relatively small region. The requirement for primary distribution equipment is
954 driven by the maximum load for the region -- not by the maximum load for one
955 widely distributed class. At the time of maximum load, lines can become
956 overheated, line losses are highest and the risk of breakdown is greatest. The
957 benefit provided by diversity in load depends on how different consumers within
958 the region contribute to the peak load of the region, not how different consumers
959 contribute to the peak load of their rate class.

960

961 **Q. Given the wide area of ComEd's service territory, what would be a better**
962 **method for allocating these costs?**

963 A. It would be better to simply add up the loads and not recognize artificial within-
964 class diversity. If ratepayers have meters that record demand, then this is simply a
965 matter of adding up the billing demand. In the above example, the cost would be
966 appropriately measured as 400 in both cases.

967

968 **Q. Is this issue important for the street lighting class?**

969 A. Yes, it is more important for the street lighting class than for any other rate class.
970 First, there is virtually no within-class diversity in the class, because street lights
971 turn on when it gets dark, whether in Lake Forest or Peotone. They also turn off
972 when the sun rises, which occurs at about the same time in Lake Forest and
973 Peotone. Second, because the street lighting class does not use power during peak
974 times – *i.e.* hot summer afternoons – it provides the true diversity benefits that
975 matter and that are not available from any other class.

976

977 **Q. Did you request that ComEd provide billing demand data for the street lights**
978 **and other classes to evaluate the bias created by giving credit to diversity in**
979 **NCP that does not exist?**

980 A. Yes, ComEd provided the data for every class (after objecting to the data request),
981 except for the street light class. Nonetheless, comparison of NCP with billing
982 demand illuminates the magnitude of ComEd's bias. The table below shows that
983 diversity helps the smaller business classes most as those classes include many
984 ratepayers and include diverse business activities. The class which is hurt the
985 most, other than the street light class, is the railroad class because, as with street
986 lights, there is little within-class diversity.

987

Billing Versus NCP for Non-Residential Classes				
	NCP	Billing Demand	Ratio: Billing Demand to NCP	Advantage (Disadvantage) from Use of Billing Demand
Watt-Hour	162,747	425,986	262%	-113%
0-100 kw	2,921,029	4,286,660	147%	2%
101-400 kw	2,663,481	3,689,501	139%	11%
401-1000 kw	2,158,224	3,488,439	162%	-13%
Over 1,000-10,000 kw	3,475,295	5,308,342	153%	-4%
Over 10,000 kW	791,480	1,008,243	127%	22%
Railroad	146,513	162,006	111%	39%
Total	12,318,769	18,369,177	149%	

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401-1000 kw	2,158,224	3,488,439	162%	-13%
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Over 10,000 kW	791,480	1,008,243	127%	22%
Railroad	146,513	162,006	111%	39%
Total	12,318,769	18,369,177	149%	

If there is no diversity within the street light class, which is almost certainly the case, then the allocated cost should be reduced by about 50%. To be conservative, I assume there may be a little diversity in the class, and the allocation will be reduced by 40%.

Q. Does not this method conflict with the way Ameren and other utilities have traditionally allocated costs in embedded cost studies?

A. Maybe, but so what? I view the Commission's decision to open this docket as a mandate to take a fresh look at cost of service issues for a company that has a very large and diverse service territory.

E. The Cost Impact of ComEd's Use of the NCP Methodology.

Q. Is the NCP bias the most important problem with respect to how ComEd allocates costs to the City's street lights?

A. No. The major problems with the way in which ComEd allocates costs to City street lights are that (1) ComEd ignores the fact that street lights do not cause ComEd to incur distribution system expansion costs because street lights do not

1007 use electricity at peak load times and (2) the utility wrongly assumes that
1008 underground facilities are used to serve the City's street light load. These issues
1009 are discussed in turn.

1010

1011 **Q. In past cost studies, did ComEd account for the fact that street lights do not**
1012 **use electricity during the highest peak times?**

1013 A. Yes. For many years, ComEd insisted that most distribution costs should be
1014 allocated on the basis of coincident peak for the entire system. Their argument,
1015 which was logical, was that if load does not occur during the system peak when
1016 the distribution system is stressed, that load does not cause the company to incur
1017 costs for primary equipment. As a result, relatively little distribution equipment
1018 was allocated to street lights, as illustrated in the cost of service summary below.

1019

1998 MARGINAL DISTRIBUTION CAPACITY COSTS

	BILLING DETERMINANTS kWh or Ratchet kW Demand (C)	SOLD MW		MARGINAL DISTRIBUTION COST (\$/kW)		ANNUAL TOTAL \$: (E) (A)*(C) + (B)*(D)	DISTRIBUTION
		COINCIDENT WITH SYSTEM PEAK (A)	NON-COINC CLASS PEAK (B)	COINCIDENT PORTION (C)	NON-COINCIDENT PORTION (D)		CAPACITY COST UNIT CHARGE
							(E)/(C)
Residential							
Single Family-NO SP HT		4875.1	6531.5	73.55	25.92	\$527,857,788	
Single Family-SP HT		125.8	290.7	105.72	26.04	\$20,870,795	
Multi-Family-NO SP HT		755.5	926.4	74.53	24.22	\$78,746,863	
Multi-Family-SP HT		200.3	491.2	73.43	22.76	\$25,887,822	
Fixture Included Lighting - Residential		0.0	2.1	72.1	26.04	\$54,684	
Non-Residential							
Watt-hour Only Meter	577,599,402 kWh	108.1	169.0	\$66.64	\$32.47	\$12,687,885	0.02197 \$/kWh
0-25 kW	14,825,823 kW	701.2	735.3	\$66.76	\$24.10	\$64,530,405	4.35 \$/kW
25-100 kW	26,806,838 kW	1,479.9	1,659.2	\$66.64	\$29.08	\$146,868,259	5.48 \$/kW
100-400 kW	34,278,036 kW	1,881.8	1,881.8	\$54.26	\$19.97	\$139,689,503	4.08 \$/kW
400-800 kW	23,495,199 kW	1,202.9	1,421.1	\$51.10	\$19.25	\$88,823,398	3.78 \$/kW
800-1000 kW	6,765,268 kW	374.3	407.4	\$51.95	\$17.91	\$26,738,426	3.95 \$/kW
1,000-3,000 kW	26,590,565 kW	1,632.6	1,776.2	\$53.04	\$17.43	\$117,554,647	4.42 \$/kW
3,000-6,000 kW	14,324,388 kW	913.2	989.7	\$30.83	\$43.03	\$70,740,831	4.94 \$/kW
6,000-10,000 kW	6,979,910 kW	473.0	498.8	\$30.83	\$39.03	\$34,048,899	4.88 \$/kW
OVER 10,000 kW	23,076,737 kW	1,268.1	1,555.7	\$0.00	\$47.56	\$73,988,854	3.21 \$/kW
Fixture-Included Lighting Non-Residential		0.0	30.7	\$72.10	\$26.04	\$799,480	see st. lt page
Dusk to Dawn Street Lighting	423,564,071 kWh	0.0	121.4	\$75.98	\$25.44	\$3,088,034	0.00729 \$/kWh
Other Street Lighting	63,172,923 kWh	18.9	18.9	\$75.98	\$25.44	\$1,916,838	0.03034 \$/kWh
Railroad	1,699,302 kW	60.7	110.7	\$13.59	\$32.96	\$4,473,600	2.63 \$/kW
Pumping	672,684,504 kWh	105.1	127.6	\$43.57	\$19.85	\$7,112,548	0.01057 \$/kWh
SOURCE:	Billing Determinants	Load Analysis	Load Analysis	(Page 11)	(Page 11)		

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On this table, note that the coincident peak portion of the distribution cost is more than the non-coincident peak portion for just about every rate class. The most extreme difference is for the dusk to dawn street lighting class, where the coincident peak portion was zero. If the non-coincident peak were used instead of the coincident peak for many of the costs as shown in the table above, the cost allocated to the street lighting class would be increased by 300%.

Q. Is there anything about a marginal cost study versus an embedded cost study that causes allocation factors to be different for primary and secondary equipment?

1031 A. No. In both marginal cost and embedded cost studies, costs should be allocated
1032 according to what causes the costs to occur. ComEd should not be able to say one
1033 day that costs are caused by coincident peak, and turn around the next day and say
1034 that the same costs are caused by class NCP.

1035

1036 More importantly, ComEd was right when it allocated costs according to
1037 coincident peak and it is wrong now. The issue of coincident versus non-
1038 coincident peak does not make much of a difference for most classes but it
1039 drastically overstates costs for the dusk to dawn street lighting class. Using the
1040 data from ComEd's marginal cost study, about 75% of the costs would be
1041 removed from the street lighting class if coincident peak was used relative to the
1042 amount of costs allocated to that class by its embedded cost study.

1043

1044 **Q. Is it appropriate to allocate total primary distribution costs to City street**
1045 **lights using the allocation factors discussed above?**

1046 A. No. The discussion above covered the way in which costs are allocated – the
1047 ratios applied to total costs, but did not cover the important issue of the cost base
1048 for the allocation. Virtually all of the City street lights are served from overhead
1049 lines, except for the underground lines used to serve street lights in the central
1050 business district. ComEd's cost study does not account for this fact.

1051

1052 ComEd made a big effort in this case to accommodate large business ratepayers
1053 by differentiating costs according to whether such customers are served at

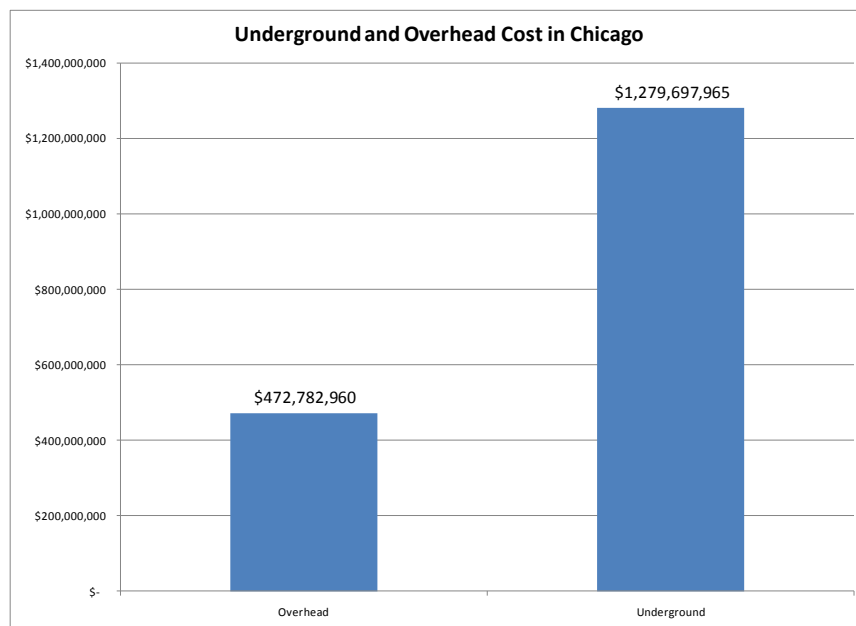
1054 primary or secondary voltages. A bigger cost difference than primary versus
1055 secondary voltage service exists between serving ratepayers using underground or
1056 overhead facilities. However, ComEd, as it has in many past cases, does not
1057 explicitly account for overhead and underground cost differences in its cost study.

1058

1059 **Q. What is the cost difference between underground and overhead costs in the**
1060 **City of Chicago?**

1061 A. The graph and the table below show that within the City of Chicago, underground
1062 equipment has a far higher cost than overhead equipment. A true picture of the
1063 actual cost to serve the City street lights would need to account for the fact that
1064 the lights are served by overhead lines (including both City-owned lines and
1065 ComEd lines). It is ironic that so much effort is being spent on analyzing how
1066 much wire is primary and secondary, while the large cost difference between
1067 overhead and underground wire is completely ignored.

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The graph above, which is derived from ComEd's Exhibit 1.5, shows that 73% of the City distribution costs are underground. Of course, the vast majority of underground only serves the central business district. Only 27% of the costs are overhead, which, anybody who has walked around the City knows, serve most of the geographic area of the City.

The table below also extracted from ComEd Exhibit 1.5 shows that in terms of cost per foot, the overhead cost is dramatically less than the cost of underground wire. This explains why most of the City's geographic area is served by overhead lines, but most of the cost is for underground facilities serving the central business district. Given that the majority of City street lights are served from overhead wire, ComEd's cost study should reflect the lower cost basis in addition to the allocation factor that reflects true cost causation.

Cost per Unit of Underground and Overhead Wires and Poles			
Poles	Cost	Quantity	Cost per Unit
City	\$223,998,110	841,946	\$266.05
Outside	\$908,898,906	6,254,853	\$145.31
Overhead Wire			
City	\$133,969,728	73,562,203	\$1.82
Outside	\$699,247,132	616,428,406	\$1.13
Underground Conduit			
City	\$188,913,895	10,479,942	\$18.03
Outside	\$208,818,011	13,072,055	\$15.97
Underground Conductors			
City	\$827,292,738	38,523,135	\$21.48
Outside	\$2,317,500,494	230,404,359	\$10.06

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Underground Conductors			
City	\$827,292,738	38,523,135	\$21.48
Outside	\$2,317,500,494	230,404,359	\$10.06

F. Cost Effects of Municipal-Owned Street Poles.

Q. If ComEd differentiates costs according to primary and secondary facilities, should the street lights located on ComEd poles also be differentiated from street lights that are located on municipally owned poles?

A. Yes. When ComEd allocates part of a pole to secondary wire, it does not consider the fact that the pole would exist anyway to hold the primary wires. If the ratepayer owns the secondary wire, it is not included in the cost study because it is not owned by ComEd – just as an extension cord in your house should not be included in the cost study.

For example, assume that a factory is served by secondary wire. In such a case, the factory would pay a portion of the cost of the poles allocated to secondary service. If a second factory took service at a primary service level, but had its own poles with secondary service located on its property, that factory should not pay ComEd for these poles and secondary wire. Under the theory used in this case, there should be differentiation in cost of service for the two ratepayers.

1102

1103 In the case of City street lights, the issue is the same. In the case of arterial and
1104 residential lights, where the City owns all the poles and secondary wire, there
1105 should be a differentiation in cost from situations where municipalities use
1106 ComEd poles and secondary wire.

1107

1108 **Q. Can you provide a hypothetical example to demonstrate why there should be**
1109 **a differentiation in pole costs between situations where a municipality owns**
1110 **the pole and other situations where ComEd owns the pole upon which the**
1111 **street light is placed?**

1112 A. Yes. Pretend we are in older times when street lighting was one of the main uses
1113 of electricity. Assume that the utility company has no ratepayers other than two
1114 municipalities that use electricity for street lights. Municipality A is named
1115 “Street Light Poles and Lamps Owner” and municipality B is named “ComEd
1116 Owns Street Light Poles and Lamps.” To provide electricity to Street Light Poles
1117 and Lamps Owner, ComEd would only have to install enough distribution poles
1118 (but not street light poles) and wire to move power from the transmission system
1119 to the street lighting connection points. For Municipality B, ComEd Owns Street
1120 Light Poles and Lamps, ComEd would have to build all of the poles to
1121 accommodate the street lighting needs, including the individual street lamps and
1122 the poles upon which the lamps would be placed. There would obviously be a
1123 dramatic difference in the capital cost and the operating cost of serving the two
1124 towns. ComEd would have the build much less equipment and provide much less

1125 maintenance for Street Light Poles and Lamps Owner than for ComEd Owns
1126 Street Light Poles and Lamps. While obviously simplistic, this example
1127 demonstrates that there should be a cost differentiation between ratepayers in the
1128 street lighting class based on ownership of the light poles.

1129

1130 **Q. Are capital costs the only costs that should be differentiated between**
1131 **municipalities that own poles and those that use ComEd poles?**

1132 A. No. The cost study should also differentiate maintenance costs. In the above
1133 hypothetical example, Municipality A -- Street Light Poles and Lamps Owner --
1134 would maintain its own poles and secondary lines, while ComEd would maintain
1135 the poles and equipment in ComEd Owns Street Light Poles and Lamps.

1136

1137 **Q. Is it possible that the street lights placed on ComEd poles are simply a by-**
1138 **product of the fact that the poles exist, meaning that the street lights should**
1139 **not be allocated any cost?**

1140 A. There may be cases in which suburbs place street lights only on ComEd poles that
1141 already exist, and from a marginal cost perspective, such lights should not be
1142 allocated any pole-related cost. If this principle is applied, the same principle
1143 should be applied to secondary wire. That being said, the poles were constructed
1144 to hold primary wires and the secondary wire is a by-product with no marginal
1145 cost. If the Commission does not differentiate pole costs between municipality-
1146 owned poles for street lights and ComEd-owned poles used for street lights, then
1147 it should not allocate any secondary wire to the poles.

1148

1149 However it is also possible that the lights located on ComEd poles on arterial
1150 streets in the suburbs are not by-products. It may be that the reason ComEd could
1151 build a more cost effective and efficient distribution system in the City is because
1152 it did not have to build poles along the street to hold street lights. If the street
1153 lights need to be on ComEd poles, then the company does not have the luxury of
1154 concentrating its facilities in alleyways. If this is the case, the argument for
1155 differentiating costs between municipally owned poles and ComEd poles is even
1156 more extreme.

1157

1158 **Q. Given that the City owns lights on ComEd poles in alleys, would your**
1159 **suggestion not increase the cost allocation for City street lights as well as**
1160 **suburban street lights?**

1161 A. Differentiating the effects of pole usage would increase City costs to some extent
1162 (for the alley lights), although it would result in a more pronounced differentiation
1163 between City owned lights and situations in which lights are placed on ComEd
1164 poles. The amount by which costs would be increase is minor in comparison to
1165 all of the other far more dramatic cost reductions discussed above.

1166

1167 **G. Summary of Cost Impacts of Errors In ComEd's Cost Study on the**
1168 **City's Street Lighting Account.**

1169

1170 **Q. Please summarize your analysis of street lighting cost of service in ComEd's**
1171 **embedded cost study.**

1172 A. My analysis shows that the Commission was right on the mark when it wrote that
1173 “the rate for street lighting in the City and probably other municipalities that own
1174 all or part of their own lighting is likely higher by a significant but un-quantified
1175 amount than it should be.” A little investigation into street lighting costs
1176 demonstrates that:

- 1177 - City street lighting costs for secondary wire and service drops are
1178 overstated by about 800% because ComEd ignores the actual
1179 configurations of City residential and arterial lights;
- 1180 - The costs of secondary lines associated with alley lights in the City
1181 and street lights in the suburbs is too high by about 40% because of
1182 the manner in which within-class diversity is not included in the
1183 street light class relative to the within-class diversity that is
1184 reflected in the allocation factors for other classes;
- 1185 - The costs of primary facilities allocated to the street lighting class
1186 should be reduced by at least 75% to reflect the fact that ratepayers
1187 in the class use electricity in a manner that does not cause ComEd
1188 to increase its usage of facilities;
- 1189 - The costs of primary and secondary facilities should be reduced to
1190 differentiate the cost between underground and overhead facilities;
1191 and,
- 1192 - The cost of pole use should be differentiated for cases in which the
1193 ratepayer owns poles and cases in which ComEd owns the pole.

1194

1195 **Q. Have you been able to quantify the precise effects of all of these problems**
1196 **with the manner in which ComEd computes its cost of service for street**
1197 **lights?**

1198 A. I have not quantified all of the items, but I do estimate the effect of some of them
1199 in the table below. The table includes the adjustments to secondary service, and
1200 an adjustment for allocation of primary facilities to reflect cost causation. It does
1201 not include the difference in costs driven by density or overhead versus
1202 underground facilities. It also does not include differentiation of costs due to City
1203 ownership of poles for arterial and residential street lights. I recommend that the
1204 Commission cut rates for City street light rates by half because of the substantial
1205 errors in ComEd's cost study.

1206

Summary of Adjustments to Street Lighting Cost of Service							
	City Street Light Cost in ComEd ECOSS	Residential and Arterial Secondary Adjustment	Alley Secondary Adjustment	Primary Adjustment	Total Adjustments	City Adjusted Cost	Percent of ComEd Cost
Primary	2,708,593			(2,031,445)	(2,031,445)	677,148	25.0%
Secondary	755,802	(505,554)	(75,580)		(581,134)	174,667	23.1%
Service Drops	156,658	(104,788)	(39,164)		(143,953)	12,705	8.1%
Other	916,387				-	916,387	100.0%
Total	4,537,439				(2,756,532)	1,780,908	39.2%

1207

1208

1209

1210 **III. OVERVIEW OF CUSTOMER COST ISSUES**

1211 **Q. In general how much effort did ComEd put into analysis of whether costs**
1212 **that the company defines as customer costs should be allocated on the basis**
1213 **of the number of ratepayers?**

1214 A. Virtually none. The manner in which ComEd ignored the Commission's
1215 directives in its Initiating Order is demonstrated by statements made by ComEd
1216 witnesses. For example, Mr. Heintz explicitly stated that the only issues
1217 incorporated in the cost of service study related to residential or customer cost
1218 issues was the allocation of uncollectible expenses:

1219 I have recalculated the Original ECOSS to
1220 accommodate and demonstrate the changes in the
1221 inter-class allocation of embedded costs associated
1222 with item (1), above, the differentiation between
1223 primary and secondary distribution lines and item (4),
1224 the reallocation of uncollectible expense among
1225 residential classes.

1226
1227 ComEd Ex. 3.0 at 2, LL 31-34.
1228

1229 The dismissive attitude of ComEd toward customer cost issues is further
1230 illustrated by the following simplistic statement made by ComEd's witness
1231 Meehan when he describes how the utility addressed the issue of whether
1232 customer service costs should be allocated on the basis of the number of
1233 ratepayers:

1234 ComEd's analysis shows that usage does not
1235 contribute to ComEd's customer services costs.
1236 Instead, ComEd's experience has been that the
1237 number of customers determines the level of these
1238 costs.
1239

1240 ComEd Ex. 2.0 at 3, LL 49-51. ComEd's dismissive attitude toward customer
1241 cost issues is contrary to the spirit of the Commission's Rate Case Order and its
1242 Initiating Order in this case.

1243

1244 **Q. What did the Commission say about customer cost issues in its Order in**
1245 **Docket 07-0566?**

1246 A. The Commission recognized that ComEd's allocation could be deficient and that
1247 the policy encourages inefficient consumption:

1248 The City argues that imposing costs on customers
1249 who use less energy is, at best, inconsistent with the
1250 General Assembly's mandate that reducing energy
1251 use is a vital policy objective of the State.

1252
1253 *The Commission agrees.* Customer costs are about
1254 20% of the total cost of service. Because the
1255 allocation of customer billing costs, data
1256 management costs, installation costs, service drops,
1257 and customer information costs are assigned on the
1258 number of customers, residential customers
1259 currently pay 80% of them. These costs should be
1260 attributed as far as is practical to the cost causers.

1261

1262 Rate Case Order at 211 (emphasis added).

1263

1264

1265 **Q. Please explain how customer costs fit in the general context of the business**
1266 **functions that ComEd provides to consumers.**

1267 A. To do so, we first must remember just what business ComEd is in. While I am
1268 sure ComEd's mission statement refers to about making peoples lives better and
1269 generating returns to its one shareholder (Exelon), in the end, the company is a
1270 regulated monopoly that moves power over lines. Other than billing and meter

1271 reading, any cost that ComEd incurs should have something to do with moving
1272 power over lines. If cost does not help power being moved over lines, from a
1273 consumer perspective the cost is a waste of money. With that said, the company
1274 spends money on things related to earning returns above its cost of capital, such
1275 as lawyers, consultants, signs at White Sox Park and lobbyists. From a consumer
1276 perspective, such expenses are a waste of money; but I suppose they must be
1277 incurred to get power moved over lines under the current system. Thus, they must
1278 be allocated on the same basis as other capital items.

1279
1280 To demonstrate this point, consider the example of expenditures by ComEd to
1281 attempt to persuade consumers to use electricity more efficiently. The only
1282 reason for ComEd to make such expenditures is so that future costs of power lines
1283 and poles will be reduced. Similarly, presumably ComEd spends money on
1284 market research and managing curtailment because they should lower future costs
1285 to move power over lines; otherwise such costs should not be allowed in revenue
1286 requirements. The point is that costs that are not related to sending out bills or
1287 reading meters are, by default, in some way related to moving power over lines,
1288 otherwise ratepayers should not pay for such costs. Furthermore, the costs of the
1289 distribution system in general are driven by demand and not the number of
1290 ratepayers. Instead of understanding this basic and simple concept that the
1291 function of the company is to move power over lines, whenever ComEd doesn't
1292 know what to do with a cost, the company allocates it in the most regressive
1293 manner possible; that is, on the basis of the number of ratepayers.

1294

1295 **Q. Does your discussion of customer costs implicate any other charges imposed**
1296 **by ComEd?**

1297 A. Yes. A discussion of ComEd's customer costs implicates ComEd's customer
1298 charge. Comparing ComEd's customer charge and the customer charges imposed
1299 by other utility companies is helpful to this discussion. As set forth below, I show
1300 that ComEd incurs costs that should not be classified as customer charge items,
1301 thereby reducing ComEd's customer charge. In reviewing my recommendations,
1302 it is useful to see that the result of my analysis is not radical in the context of
1303 customer charges imposed by other companies.

1304

1305 To demonstrate how much the ComEd customer charges are out of line with other
1306 companies, I have replicated a table that I included in my direct testimony in
1307 Docket 07-0566. The data was compiled in 2007 and the comparison base is from
1308 companies used by ComEd in its 2001 rate case that it used in attempting to show
1309 that its overall distribution rates were reasonable. This table shows that ComEd's
1310 customer charges are dramatically higher than those charged by other companies.
1311 Including companies that use minimum bills in lieu of customer charges
1312 (effectively meaning that the customer charge is zero for low use ratepayers that
1313 occupy their homes and use some energy), ComEd's \$10 customer charge is
1314 many times the average customer charge of \$2.73. If my recommendations below
1315 were accepted and reflected in the customer charge, ComEd's customer charge
1316 would be more in line with those of other utility companies.

1317

Customer Charges and Minimum Bills for Comparison Companies in 2001 Case (\$/Ratepayer/Month)			
Company	Customer Charge	Minimum Bill	
ComEd - Proposed Single-Family	\$ 10.31		
AmerenCIPS - Illinois Company	\$ 9.37		
ComEd - Proposed Multi-Family	\$ 9.36		
ComEd - Present Single-Family	\$ 8.80		
ComEd - Present Multi-Family	\$ 7.05		
NSTAR	\$ 6.43		
PECO - ComEd Sister Company	\$ 5.18		
Reliant	\$ 5.12		
First Energy (CEI)	\$ 4.75		
PSE&G	\$ 2.43		
Southern Cal. Edison	\$ 0.67	\$ 1.34	
SDG&E	\$ -	\$ 5.17	
PG&E	\$ -	\$ 4.50	
Detroit Edison	\$ -	\$ 2.57	
Average without Min Bill Companies	\$ 4.10		
Average with Min Bill Companies	\$ 2.73		
ComEd SF/Average w/o Min	2.52		
ComEd MF/Average w/o Min	2.28		

1318

1319

1320 **Q. Do the labels that ComEd uses in its customer classifications accurately**
1321 **reflect the activities that are performed?**

1322 A. No. One of the themes throughout the discussion of customer cost items is that
1323 none of us must be fooled again by the manner in which ComEd labels its
1324 accounts. For example, customer installation expense means outage costs; billing
1325 and data management expense includes items ranging from lobbying costs to
1326 costs of software; and customer information expenses include expenditures for
1327 attempting to change the way they use electricity.

1328

1329 **IV. UNCOLLECTIBLE EXPENSE ACCOUNTS**

1330 **Q. How have you organized your discussion of the issue of uncollectible**
1331 **allocation?**

1332 A. I first review my comments in the last case and the Commission's discussion in its
1333 Rate Order. Next, I comment on the type of costs that should be included in the
1334 uncollectible expense adjustment. I have added a separate section below to
1335 address costs which are very similar to uncollectible costs, such as treatment of
1336 the costs of ratepayers who move residence.

1337

1338 **Q. What did the Commission write in its order in Docket 07-0566 with respect**
1339 **to the allocation of uncollectible expenses?**

1340 A. The Commission contrasted ComEd's arguments against tracing the billions of
1341 dollars associated with spending for suburban sprawl to its arguments in support
1342 of tracing the costs of uncollectible accounts to customer classes in which
1343 delinquent accounts happen to occur. The Commission stated:

1344 The City next points out that the ECOSSE allocates 38.4% of
1345 its uncollectible costs to low use, non-space heat,
1346 multifamily customers who account for 5% of energy sales,
1347 rather than spreading the cost across the board to all
1348 residential classes. A large proportion of City customers
1349 are in this class. The City argues that the theory behind this
1350 allocation is apparently that the Company has determined
1351 that a larger portion of uncollectible costs should be
1352 attributed to that class of customers who in the future may
1353 be most likely not to pay their bills based on past
1354 experience. It is ironic that ComEd objects to allocating
1355 new facilities expenses on a geographic basis to the
1356 customers in the areas driving the request for a rate
1357 increase, but finds it appropriate that multi-family non-
1358 space heat customers should be charged for unpaid bills
1359 attributable to other delinquent multi-family customers. In
1360 any event, the Commission finds that this allocation
1361 method is unfair and inconsistent with the allocation of
1362 other residential customer costs. We agree with the City in
1363 this instance.
1364

1365 Rate Order at 211-12.

1366

1367 **Q. What is your interpretation of the philosophy behind the Commission's**
1368 **order?**

1369 A. The Commission correctly recognized that not all costs can be placed in a box and
1370 allocated either on the basis of the number of ratepayers or on the basis of
1371 electricity demand. If somebody does not pay his bill, one cannot put that cost
1372 into any of the ComEd classifications because there are no billing determinants
1373 for non-paying consumers. There are no billing determinants for these consumers
1374 because a billing determinant, by definition, comes from a bill that is actually
1375 paid. While ComEd would like to put everything into a box for allocation, the
1376 Commission recognized – at least implicitly -- that there is no such box that
1377 customers who do not pay their bills can be put into. Costs for things like
1378 ratepayers not paying their bills must be socialized similar to a tax.

1379

1380 **Q. How did ComEd interpret the Commission's order?**

1381 A. It was not easy to discern. I had to work through ComEd's workpapers to see that
1382 ComEd allocated the direct cost of uncollectible expenses according to the
1383 relative revenue collected from each rate class. Then it classified the
1384 uncollectible expense as a customer cost, meaning it still is allocated more to low
1385 use/low income ratepayers within the residential rate class. ComEd's approach
1386 means that rate classes which have the highest revenue per kWh – *i.e.*, multi-

1387 family ratepayers -- are allocated more uncollectible cost relative to the amount of
1388 electricity they use.

1389

1390 There are a number of ways to allocate costs that do not fit into a box and,
1391 therefore, must be socialized. The most regressive way is to allocate costs on the
1392 basis of the number of customers; the second most regressive way is allocating
1393 the costs on the basis of class revenues; and the least regressive allocation
1394 approach is to allocate the costs based on how much electricity is purchased from
1395 ComEd. In addition to the question of the basis upon which the costs should be
1396 allocated, there is the question of whether the costs should be allocated to
1397 business as well as residential consumers. As to direct uncollectible costs,
1398 ComEd chose the second most regressive allocation method possible, by
1399 allocating the cost on a revenue basis across only ratepayers in the residential
1400 class. Allocation of costs on this basis is very regressive because multi-family
1401 customers pay such high rates relative to the other classes.

1402

1403 **Q. Is ComEd's allocation method appropriate?**

1404 A. No. While I consider this a policy question for the Commission to decide and I
1405 recognize that there is no definitive answer, I encourage the Commission to think
1406 about allocating the cost on the basis of how much electricity is used in the same
1407 manner as the electricity distribution tax. This approach is consistent with the
1408 legislature's directive that "investment in cost-effective energy efficiency and
1409 demand-response measures will reduce direct and indirect costs to consumers by

1410 decreasing environmental impacts and by avoiding or delaying the need for new
1411 generation, transmission, and distribution infrastructure.” 220 ILCS 5/12-103(a).
1412 ComEd’s rate structure is already very favorable to large residential ratepayers
1413 and business ratepayers because it does not consider underground versus overhead
1414 facilities, because it does not account for density, because it does not recognize
1415 the age of equipment, because it neglects to differentiate the very high costs of
1416 suburban sprawl and because it inappropriately allocates many costs on the basis
1417 of the number of ratepayers. When there is a choice for a cost that does not easily
1418 fit into a particular cost box, the most regressive approach should not be chosen.
1419

1420 **Q. Why is allocation of tax type costs that do not fit into a neat box on the basis**
1421 **of electricity used consistent with the General Assembly’s directive regarding**
1422 **energy efficiency and demand response measures?**

1423 A. When costs are allocated on the basis of the number of ratepayers, or its close
1424 cousin, the amount of revenue, much of the costs invariably end up in the
1425 customer charge. To give ratepayers greater incentive to save energy, more costs
1426 need to be included in energy charges so that consumers actually realize savings
1427 from reducing their energy use.
1428

1429 **Q. Do you agree with the base of uncollectible costs that ComEd used in**
1430 **attempting to comply with the Commission’s order?**

1431 A. No. ComEd changed its cost of service study by revising the way it allocated
1432 uncollectible expenses for distribution costs. However when making the

1433 adjustment, ComEd ignored all of the indirect costs associated with uncollectible
1434 accounts such as contacting delinquent ratepayers, physically disconnecting
1435 ratepayers, monitoring the credit of ratepayers and other items. The sum of these
1436 costs is higher than the very narrow definition of uncollectible accounts made by
1437 ComEd.

1438

1439 **Q. Should these indirect costs be included in the uncollectible adjustment?**

1440 A. Of course they should. If a bank is measuring the loss it takes when a homeowner
1441 does not pay his mortgage and it must foreclose on his house, the bank's loss
1442 includes the amount by which the home value is less than the amount owed on the
1443 loan. But it also includes the costs of sending people out to the house, the
1444 brokering fees for selling the house, cleaning swimming pools, legal costs
1445 associated with the foreclosure and a multitude of other costs. Similarly, in the
1446 case of ComEd, the costs of uncollectible accounts must include all of the credit
1447 analyses, costs of disconnecting ratepayers, costs of re-connecting ratepayers, and
1448 so forth.

1449

1450 **Q. Did ComEd describe the indirect costs related to uncollectible accounts in its**
1451 **testimony?**

1452 A. Yes. ComEd discussed the large costs it incurs for managing uncollectible
1453 accounts in the context of another issue, but it did not connect the dots and see
1454 that the same costs clearly apply to the uncollectible adjustment. For example,
1455 ComEd witness Meehan stated that: "ComEd's Revenue Management department

1456 incurs costs relating to the disconnection of approximately 20-25% of customers
1457 who fall behind in their payments.” ComEd Ex. 2.0 at 13, LL 263-65. Later he
1458 states: “...ComEd's Field and Meter Services department reviewed \$5,446,392 of
1459 its costs relating to the physical disconnection of meters as a result of non-
1460 payment, or uncollectible accounts, as well as restoration of meters. The primary
1461 costs relating to these activities are labor costs.” *Id.* at 13, LL 279-81.

1462

1463 **Q. Besides the costs of uncollectible expenses, what are some of the other direct**
1464 **costs associated with consumers who do not pay their bills?**

1465 A. Some, but not all of the costs include:

- 1466 - monitoring accounts for non-payment;
- 1467 - making phone calls to ratepayers related to collecting past due amounts;
- 1468 - receiving phone calls from ratepayers;
- 1469 - tracking the level of uncollectible accounts;
- 1470 - preparing reports for uncollectible accounts;
- 1471 - disconnecting customers;
- 1472 - reconnecting customers; and
- 1473 - monitoring payments for customers that have been re-connected.

1474

1475 **Q. Did you ask ComEd to provide the dollar magnitude of these costs?**

1476 A. Yes, but as usual, the data request process was frustrating. Keeping to its script,
1477 ComEd first objected that the questions were vague; then the company provided
1478 an “answer,” which provided no useful information whatsoever.

1479

1480 **Q. Have you been able to compute some of the uncollectible costs that ComEd**
1481 **did not include in its adjustment?**

1482 A. Yes. The process of classifying costs is described in section seven of my
1483 testimony below. This process included the following four steps:

1484 - I first used the project descriptions for FERC accounts 901-903 and
1485 identified projects with names including “cut outs for non-payment”, “cut
1486 in for non-payment accounts” that were included in ComEd workpapers
1487 related to its analysis of how many costs would be avoidable with
1488 competition. Including overhead costs, this amounted to about \$9 million
1489 in costs.

1490 - Second, I added the added administrative costs and general plant
1491 allocation using methods consistent with that used by ComEd in its cost of
1492 service study. This yielded additional costs of \$20 million which should
1493 be allocated to the uncollectible expenses.

1494 - Third, using information on the allocation of ComEd’s call center activity
1495 provided by ComEd one of its workpapers, I allocated 29.2% of ComEd’s
1496 call center costs to uncollectible accounts,. This resulted in an additional
1497 \$16.2 million in costs.

1498 - Fourth, I summed the indirect uncollectible costs together which yielded a
1499 total of \$37 million.

1500

1501 **Q. What is the appropriate rate treatment of the total uncollectible costs?**

1502 A. Once the total uncollectible costs are tabulated -- which includes the direct cost of
1503 the uncollectible expenses plus the \$37 million in indirect costs -- the total costs
1504 should first be allocated among business and residential classes according to the
1505 uncollectible amounts for business and residential ratepayers. Then, within the
1506 residential class, the costs should be further allocated on the basis of the amount
1507 of energy within the class. This allocation method is fair; it encourages energy
1508 conservation and it does not penalize low use/low income ratepayers who pay
1509 their bills.

1510

1511 **V. COSTS SIMILAR TO UNCOLLECTIBLE ACCOUNTS**

1512 **Q. Are there other costs which are very similar to uncollectible accounts and**
1513 **should be afforded the same cost of service and rate treatment?**

1514 A. Yes. The Commission recognized that when there is no billing determinant for a
1515 cost that ComEd incurs -- namely, costs caused by people who do not pay their
1516 bills -- ComEd should not allocate that cost on the basis of the number of similar,
1517 but unrelated, customers. There are a number of cost of service items which,
1518 similar to uncollectible expenses, do not fit into a easily identifiable box.

1519

1520 Consider, for example, customers who move. About 30% of phone calls received
1521 in ComEd's call center relate to handling customers who move, and the costs
1522 associated with such calls are currently allocated on the basis of the number of
1523 customers. This means that customers who stay in one place pay, an amount for
1524 the costs of customers who move, through their monthly customer charge.

1525 ComEd surely also incurs other costs related to ratepayers who move, but these
1526 costs are impossible to find, given the opaque manner in which ComEd provided
1527 cost data.

1528

1529 **Q. Other than costs incurred for ratepayers who move, what are some other**
1530 **costs that do not fit neatly into a box and should be treated similar to**
1531 **uncollectible accounts?**

1532 A. Such other costs include the costs of ratepayers who register complaints; costs
1533 that ComEd incurs for fixing billing errors; costs associated with ratepayers who
1534 ask for changes in the nature of their service; and costs of upper management
1535 salaries. Issues associated with each of these costs are described below.

1536

1537 **Q. What do all of these costs have in common?**

1538 A. For all of the costs, one could theoretically create a billing determinant. For
1539 example, after a customer calls ComEd to complain, the company could send him
1540 a bill for costs associated with the complaint. (I don't think this would be very
1541 popular.) Similarly, ComEd could accumulate all of the costs associated with
1542 people who move residences, or ask for changes in service, and then charge them
1543 a fee. When a ratepayer finds a billing error, ComEd could also, in theory, charge
1544 the customer for costs associated with correcting its own error. (That also would
1545 not be very popular.) Unless, and until ComEd initiates these billing
1546 determinants, from a ratemaking perspective the costs associated with these items
1547 are similar to a tax and must be socialized in some manner. As with uncollectible

1548 accounts, it is reasonable to allocate the costs to ratepayer classes by first splitting
1549 the costs between residential and non-residential classes. Then, within the
1550 residential class, the costs should be allocated on the basis of energy used and not
1551 on the basis of the number of ratepayers.

1552

1553 **Q. How did you compute the costs associated with people who move?**

1554 A. In providing rough descriptions of expenses incurred in FERC accounts 901-903
1555 (see Section seven) below, I first identified costs that were directly related to
1556 people who change residences. In addition, ComEd provided information on its
1557 call center activity (again, as a part of its discussion of the competitive supply
1558 costs, not in response to a City data request). The data provided by ComEd listed
1559 something called the “call group”, the “call category,” and the number of “offered
1560 calls,” as well as the number of “handled calls”. Some of the call groups and call
1561 categories in ComEd’s data were undefined or unidentified. Among the calls that
1562 were identified by ComEd, calls in the “call group” named “moving” included
1563 1,079,020 calls out of a total of 3,575,083 calls, or 30.5% of the total (the
1564 allocation is shown in detail below.) Costs ComEd included for the call center
1565 (including overhead costs and allocated administrative costs) total \$55 million.
1566 This means that about \$16.7 million of costs should be attributed to ratepayer
1567 moving costs.

1568

1569 **Q. How are costs associated with customers changing residences currently**
1570 **allocated and, if you disagree with ComEd's approach, what method should**
1571 **be used?**

1572 A. They are currently included in the call center cost that is part of what ComEd
1573 incorrectly labels "Billing – Computation and Data Management." They are
1574 allocated in the most regressive manner possible -- based upon the number of
1575 ratepayers. This means that somebody living on the South Side of Chicago who
1576 has remained in his residence for many years and is a low-use customer must pay
1577 a higher proportion of his bill for ratepayer moving costs than a high-use
1578 customer in St. Charles who moves every couple of years to buy larger and larger
1579 houses. It would be much fairer to split the moving costs first between residential
1580 and non-residential ratepayers, and then allocate the costs within the residential
1581 class on the basis of energy used.

1582

1583 **Q. Please discuss the appropriate treatment of costs associated with ComEd**
1584 **billing mistakes.**

1585 A. In its category incorrectly labeled "Billing – Computation and Data
1586 Management", ComEd includes \$4.8 million of costs related to correction of
1587 billing errors. After adding administrative costs and overhead, the billing error
1588 expenses total about \$11 million. Although ComEd did not provide the data,
1589 many of the billing error costs are surely associated with large non-residential
1590 ratepayers who have more complex and larger electric bills. Yet, ComEd
1591 allocates these costs on the most regressive possible basis, and consequently, most

1592 of these costs are paid by residential ratepayers. As with the other cost categories
1593 discussed above, these costs should first be split between residential and non-
1594 residential ratepayer classes, and then allocated within the residential class on the
1595 basis of the amount of electricity used.

1596

1597 **Q. Please discuss the appropriate treatment of costs associated with ratepayers**
1598 **who ask for a change in service.**

1599 A. This category is part of what ComEd incorrectly labels “Customer Installation
1600 Costs.” As with the other costs, ComEd currently allocates the costs in the most
1601 regressive and inefficient manner possible, meaning that low income/low use
1602 ratepayers pay a larger percent of their bills for ratepayers who ask for a change in
1603 service. A much fairer allocation method would be to first separate the costs
1604 between residential and non-residential ratepayers, and then allocate the costs
1605 within the residential class on the basis of energy.

1606

1607 **Q. Discuss the appropriate treatment of costs associated with ratepayer**
1608 **complaints?**

1609 A. This cost category is currently included as part of what ComEd incorrectly labels
1610 “Customer Installation Costs.” As explained below, many of the complaint costs
1611 are related to power quality issues that have nothing to do with residential
1612 ratepayers and most surely nothing to do with low-use residential ratepayers. Yet,
1613 as with the other costs, ComEd allocates them in the most regressive and
1614 inefficient manner possible, meaning that low income/low use ratepayers pay a

1615 larger relative share. In the same way that the other cost items must be allocated
1616 using a different approach, a much fairer allocation method would be to first
1617 separate the costs between residential and non-residential ratepayers and then
1618 allocate the costs within the residential class on the basis of energy.

1619

1620 **Q. Why have you included the cost of upper management salaries in this**
1621 **category?**

1622 A. Some administrative costs are properly added to the cost of labor, such as the cost
1623 of pensions and medical insurance for staff who read meters. On the other hand,
1624 the cost of upper management salaries should not be allocated in this manner. As
1625 with other costs – such as billing errors and uncollectible expenses -- the cost of
1626 compensation to upper management does not neatly fit into a box. Currently
1627 some of the compensation paid to John Rowe and other upper-level ComEd
1628 managers is allocated on a disproportionate basis to low-use and low-income
1629 consumers even though there is nothing to suggest upper management's daily
1630 activities benefit such customers more than other ratepayers. Given that the cost
1631 of salaries is a general cost of doing business and that utilities try to earn more
1632 than their cost of capital, these costs should be allocated on the basis of demand
1633 like other distribution costs.

1634

1635 **Q. Is this not a minor cost item?**

1636 A. No, there is an important point here. The cost of ComEd and Exelon upper
1637 management compensation is high (such as John Rowe's \$19.5 million

compensation in 2007), and in the case of Exelon, some of its costs are paid by ComEd ratepayers through the manner in which Exelon costs are attributed to ComEd as administrative expense. The first table below shows salaries that include Exelon administrative costs that are allocated to Illinois ratepayers: the second table shows the costs of ComEd salaries. This data comes from a filing by Exelon with the SEC.

Name	Year	Salary	Bonus	Stock Awards	Option Awards	Non-Equity Incentive	Pension	All Other	Total
Rowe ⁽¹⁾	2008	1,474,423	—	2,068,010	2,455,433	1,835,166	830,272	400,192	9,063,496
	2007	1,361,154	—	12,728,849	2,798,893	1,680,249	504,385	418,026	19,491,556
	2006	1,291,918	168,345	10,527,089	1,324,393	1,683,455	856,413	575,455	16,427,068
O'Brien ⁽²⁾	2008	495,538	—	1,049,732	367,184	428,934	105,978	175,687	2,623,053
	2007	450,154	—	1,283,926	236,185	468,642	99,320	96,339	2,634,566
	2006	395,959	20,786	1,063,147	201,293	207,868	118,966	91,324	2,099,343
Hilzinger ⁽³⁾	2008	408,627	—	556,237	141,429	318,750	57,492	143,916	1,626,451
Barnett ⁽⁴⁾	2008	297,308	(16,498)	353,882	106,884	148,477	35,808	561,590	1,487,451
	2007	283,969	50,000	552,877	99,003	221,075	33,065	80,037	1,320,026
Young ⁽⁵⁾	2008	60,750	—	-1,282,781	—	—	9,819	18,089	-1,194,123
	2007	578,538	—	2,787,570	383,148	562,960	74,623	125,378	4,512,217
	2006	546,767	—	2,174,945	310,360	498,575	77,622	158,808	3,767,077
Crane ⁽⁶⁾	2008	694,230	—	2,519,603	931,625	750,000	642,938	272,727	5,811,123
	2007	558,000	—	2,161,974	482,210	577,536	442,503	158,029	4,380,252
	2006	505,959	43,911	1,545,742	309,035	439,110	352,298	131,404	3,327,459
McLean ⁽⁷⁾	2008	561,538	—	1,125,928	670,842	510,416	95,727	216,544	3,180,995
	2007	482,500	—	2,593,306	473,898	403,276	53,160	96,874	4,103,014
	2006	442,575	—	1,811,526	407,167	383,145	62,625	102,602	3,209,640
Moler ⁽⁸⁾	2008	484,615	—	500,384	460,890	329,000	333,981	195,611	2,304,481
Pardee ⁽⁹⁾	2008	525,289	44,000	928,039	332,874	484,000	213,293	164,619	2,692,114
	2007	426,308	—	1,216,555	226,270	350,277	110,591	69,591	2,399,592
Adams ⁽¹⁰⁾	2008	320,000	—	382,105	174,543	175,973	72,722	86,772	1,212,115
	2007	305,008	—	608,872	154,635	222,621	74,219	10,602	1,375,957
Bonney ⁽¹¹⁾	2008	273,020	25,000	436,656	216,614	120,951	130,060	74,953	1,277,254
Galvanoni ⁽¹²⁾	2008	214,462	(4,854)	194,616	63,722	92,213	23,908	66,284	650,351
	2007	199,603	—	174,288	60,145	119,096	20,969	12,707	586,808

Name	Year	Salary	Bonus	Stock Awards	Option Awards	Non-Equity Incentive	Pension	All Other	Total
Clark ⁽¹³⁾	2008	546,692	—	(198,434	56,970	2,049,371	548,986	193,738	3,197,323
	2007	474,231	—	566,726	121,635	2,288,853	391,782	146,412	3,989,639
	2006	440,000	—	2,239,794	592,755	326,584	158,233	162,925	3,920,291
McDonald ⁽¹⁴⁾	2008	336,038	—	(51,745	22,155	789,747	304,534	144,201	1,544,930
	2007	310,600	100,000	322,790	43,710	887,688	225,879	74,566	1,965,233
	2006	300,000	83,565	846,087	205,980	171,285	231,287	90,596	1,928,800
Mitchell ⁽¹⁵⁾	2008	477,692	—	(13,373	33,233	1,402,448	571,280	197,955	2,669,235
	2007	437,477	—	573,100	69,158	1,592,848	736,464	138,596	3,547,643
	2006	415,000	14,217	1,457,599	374,958	284,334	719,747	167,546	3,433,401
Hooker ⁽¹⁶⁾	2008	307,692	9,007	58,129	20,573	666,142	474,488	128,861	1,664,892
	2007	277,231	150,000	293,558	40,930	695,830	283,124	65,433	1,806,106
Pramaggiore ⁽¹⁷⁾	2008	348,500	20,295	94,568	35,175	817,247	49,083	127,421	1,492,289
	2007	290,154	150,000	276,416	55,192	347,222	36,593	43,225	1,198,802

Q. Which classes are allocated the highest percentage of upper management salaries?

A. ComEd allocates many of the upper management salaries to costs that the company defines as “customer service costs” because the costs are attributed to various functions according to a labor allocator. Since a relatively high amount of ComEd labor is involved in meter reading, call center functions and billing, a lot of administrative salary cost is also allocated to these items which are subsequently allocated on the basis of the number of ratepayers. Thus, the ComEd study treats the salaries and other compensation paid to John Rowe and other upper management (who spend most of their time trying to make sure ComEd and Exelon earn more than their cost of capital) as if they spend a lot of their time on billing, metering and call center functions. This is so because the salaries are allocated as though upper management are manning the call center, reading meters and so forth, when we all know that is preposterous. The high amount of administrative salaries is illustrated in the graph below which shows

1665 the administrative salaries are allocated on a disproportionate basis to items that
1666 ComEd mislabels as “customer service costs.”

1667 B.

Allocation of Administrative and General Salaries in ComEd ECOSS

	Administrative & General Salaries (Dollars)	Percent
Transmission & Non-DST	2,557,126	11.24%
Supply Administration	0	0.00%
High Voltage ESS	90,444	0.40%
High Voltage Dist. Subs.	2,536,360	11.14%
High Voltage Dist. Lines	265,469	1.17%
Distribution Substations	812,135	3.57%
Primary Dist. Lines	5,282,107	23.21%
Secondary Dist. Lines	915,169	4.02%
Line Transformers	192,269	0.84%
Services	113,532	0.50%
Cust. Install Other	1,353,304	5.95%
Fixt. Inc. Ltg.	271,836	1.19%
Metering Services	3,000,470	13.18%
Billing --Comp. & Data Mang.	4,877,087	21.43%
Bill Issue & Processing	304,234	1.34%
Cust. Serv. & Informat.	188,172	0.83%
Total	22,759,712	100.00%

1668 C. ComEd Labeled Customer Cost Items 9,995,102 43.92%

1669

1670 Because of this bias towards “customer service costs,” ComEd ends up allocating
1671 a lot more of the costs of upper management salaries to residential and,
1672 particularly, low use/low income residential, consumers than to other groups. The
1673 relative proportion of costs that are paid for administrative salaries by different
1674 ratepayer classes is shown in the table below. This table shows that relative to
1675 energy usage, demand or revenue, residential ratepayers and, in particular, multi-
1676 family ratepayers, pay much more for administrative salaries than other classes.

1677 For example, multi-family ratepayers are allocated 15.58% of administrative
 1678 salaries even though they only use 4.74% of the electricity distributed by ComEd
 1679 and are only responsible for only 7.5% of the system demand.

1680

ComEd Allocation of Administrative Costs Compared to Allocation Factors				
	Single Family w/o Space Heat	Multi Family w/o Space Heat	Business	
Allocation of Administrative Salaries	44.48%	15.58%		33.87%
Energy Percent	23.49%	4.74%		67.59%
NCP Percent	34.92%	7.50%		52.03%
Revenue Percent	42.07%	10.94%		40.94%

1681

1682

1683 **Q. What is a more appropriate method for treating the salaries of upper**
 1684 **management salaries?**

1685 A. First, ComEd must be transparent as to how much the total compensation costs
 1686 are and how many are allocated to each ratepayer class. Costs for upper
 1687 management compensation are associated with expenditures for capital costs,
 1688 which in turn involve attempts to earn more than the cost of capital on assets that
 1689 are the source of the investment. As such, costs of these salaries should be
 1690 attributed to general distribution costs and allocated according to demand as are
 1691 other capital costs.

1692

1693 **VI. CUSTOMER INFORMATION EXPENSES**

1694 **Q. What costs do you include in this section of your testimony?**

1695 A. I discuss the category of costs that ComEd labels as “customer information,”
 1696 costs, which includes costs for providing technical services to ratepayers, market
 1697 research, management of curtailment, City of Chicago College training, Exelon

1698 environmental strategy costs, and Nature First, most of which have little to do
1699 with customer information. Many of these costs -- such as providing technical
1700 services, the energy cooperative, and managing curtailment -- are obviously
1701 related to business, and not residential, ratepayers. Other costs have nothing to do
1702 with sending a bill or reading a meter, and therefore they should be allocated on
1703 the basis of energy use or demand.

1704

1705 **Q. What is your response to ComEd's statement that costs for market research,**
1706 **demand management and marketing research "varies according to the**
1707 **number of customers?"**

1708 A. As I have already quoted, ComEd's testimony on this point, in its entirety, is as
1709 follows:

1710 ... customer information costs include costs for market research, demand
1711 management, and advertising. As a result, these costs vary according to
1712 the number of customers, and are not dependent upon usage.
1713

1714 ComEd Ex. 2.0 at 28, LL 600-03. That's it. Apparently, no further explanation
1715 required.

1716

1717 If one applies even minimal logic to ComEd's statement, it is apparent the
1718 assertion makes no sense whatsoever. Begin with an extreme example. If the
1719 demand management was enormously successful, load would be substantially
1720 reduced and future expenditures for distribution could be stopped. The same goes
1721 for advertising and market research. In reducing the future cost of poles and wire,
1722 these costs are like buying a new kind of pole that is less expensive, or a new kind

1723 of wire that is more productive. As such, the costs must clearly be allocated on
1724 the same basis as the costs of poles and wire. Therefore, to the extent that these
1725 so-called “customer information” functions are related to changing demand, they
1726 must be allocated using a demand, or an energy, allocator. In the worst case, if
1727 ComEd’s advertising and market research do no good for consumers, the costs
1728 should be part of the overall image boosting activities associated with earning
1729 more than the cost of capital. For ComEd’s statement to be valid, the costs would
1730 have to be related to reducing the cost billing and/or metering activity.
1731

1732 **Q. How have you evaluated the costs that ComEd defines as “customer**
1733 **information” costs?**

1734 A. I have worked through the project descriptions that the company provided for
1735 each expense included in the “customer assistance” account that ComEd used as a
1736 basis for the “customer information” label. (ComEd provided this as a workpaper
1737 in connection with its position that none of its costs can be reduced if more
1738 consumers take competitive supply; it did not provide the data as bearing on its
1739 analysis of whether costs vary by usage.) The table below shows the first step of
1740 my analysis which classifies costs. I used four categories according to whether
1741 (1) they should be allocated to business ratepayers, or (2) across all customer
1742 classes on the basis of demand, or (3) within the residential class, or finally (4) as
1743 overhead costs that should in turn be allocated to each of the items.
1744
1745

1746

1747

Classification of Costs that ComEd labels as Customer Information Costs

Project	Dollar Amount	Allocation
C&I II Rel & Serv Satisfaction	12,910	Business
Curtailment Communications	7,947	Business
Energy Cooperative	26,559	Business
Large C&I Cust Satisfaction	2,141	Business
Large C&I Customer Satisfactio	145,806	Business
Manage Curtailment	679,738	Business
Provide Customer Tech Services	850,583	Business
Small C&I Customer Satisfactio	201,112	Business
Voluntary Load Reduction	30,766	Business
American Customer Satis Index	64,000	General
City College of Chicago Training	341,070	General
Cogeneration	899	General
Data Mining/Analysis	231,712	General
Electrotechnologies Implement	28,654	General
Exelon Environmental Strategy	57,012	General
Manage tariff margin initiativ	823	General
Marketing Strategic Planning	88,566	General
Marketing Web Management	220,327	General
Municipality & CRM Satisfactio	8,000	General
Net Billing Programs	-9,360	General
Perform Marketing Research	316,897	General
Provide Customer Assist-CPS	51,278	General
Reclassify Lobbying Costs	-1,785	General
Service Install & Revise Satis	120,029	General
Trade Alley	17,306	General
C&MS EDSS Allocation - West	1,665,729	Overhead
Electronic Payment Option	126,137	Residential - Demand or Energy
Energy @ Home	117,693	Residential - Demand or Energy
Key Alert	62,146	Residential - Demand or Energy
Nature First	1,657,600	Residential - Demand or Energy
Res II Rel & Serv Satisfaction	19,365	Residential - Demand or Energy
Residential Customer Satisfact	155,862	Residential - Demand or Energy
Residential Phone Answerng Sat	217,800	Residential - Demand or Energy
Welcome Home Tariff	283,581	Residential - Demand or Energy

1748

1749

1750 **Q. Explain some of the larger cost items and how you made your allocation**

1751 **judgments.**

1752 A. The cost category entitled “Provide Customer Technical Services” is presumably
1753 for costs associated with ComEd customer representatives who are supposed to
1754 help business ratepayers. Other costs, such as “Manage Curtailment” are also
1755 clearly related to business consumers. The second cost allocation category,
1756 “General,” includes costs that cannot be associated with either business or
1757 residential consumers. For example, the cost of City College Training provides a
1758 workforce equipped to operate distribution lines, and thus, should be allocated on
1759 the basis of overall demand. The category “Perform Marketing Research” cannot
1760 be associated with any ratepayer group and is a general cost is like the cost of
1761 upper management that is incurred to increase the rate of return earned by
1762 ComEd. These costs should be allocated on the same basis as overall investment.
1763 Residential cost items such as “Nature First” are intended to reduce the future
1764 investment of ComEd and must be allocated on the basis of demand or energy.
1765 Even the cost of electronic payment option should be allocated on the basis of
1766 something related to the size of a ratepayer in terms of electricity use because
1767 wealthier consumers who use more electricity are more likely to use electronic
1768 payment.

1769

1770 **Q. After working through each account, what is the total amount of expense**
1771 **that should be allocated to different ratepayer groups?**

1772 A. The table below illustrates the results of my recommendations with respect to
1773 customer information costs including overheads. The table demonstrates that
1774 only 43% of the cost should be allocated to residential ratepayers.

Corrected Allocation of Customer Information Costs						
Allocation	Dollar Amount	Overhead Percent	Allocated Overhead	Total	Percent	
Business	1,957,563	27.2%	531,661	2,489,223	31.9%	
General	1,535,428	27.2%	417,012	1,952,440	25.0%	
Residential - Demand or Energy	2,640,184	27.2%	717,056	3,357,240	43.0%	
Total	6,133,175	27.2%	1,665,729	7,798,904	100.0%	

Overhead 1,665,729

1775 Overhead Percent 27.2%

1776

1777 **Q. Please comment on the transparency that must be used in allocating**
1778 **ComEd's so-called s "customer service costs."**

1779 A. One of the many frustrating things about the way ComEd performs its cost of
1780 service study is its lack of transparency. Mr. Meehan states that the company
1781 allocates some costs to business, but there is almost no way to determine how
1782 ComEd makes the allocation. One can try to use data requests, but they are
1783 hardly ever answered in a direct manner; the workpapers include percentages that
1784 are allocated without any documentation or explanation whatsoever; and, its
1785 testimony does not discuss the issue. I recommend that the Commission order
1786 ComEd to use the type of process that I described above so that one can see how
1787 individual cost items are allocated and parties have a reasonable basis upon which
1788 to discuss the issues.

1789

1790

1791 **VII. BILLING – COMPUTATION AND DATA MANAGEMENT COSTS**

1792 **Q. What costs do you evaluate in this section of your testimony?**

1793 A. I discuss costs that ComEd classifies into the three categories of metering
1794 services, bill issue and processing or billing – computation and data management.
1795 Including the administrative overheads and allocation of general plant, ratepayers
1796 pay more than \$324 million for these costs which represent just about 16% of the
1797 total cost of service.

1798

1799 **Q. How have you organized this section?**

1800 A. I have divided the discussion into the following sections:

1801

1802 - First, I discuss the sources of data made available by ComEd to evaluate precisely
1803 what types of activities are included the three cost categories and how ComEd's
1804 data request responses cannot be described as anything other than pointless.

1805 - Second, I review the couple of sentences that constitute ComEd's "analysis" of
1806 these costs – costs for a range of projects given such titles as "transmission and
1807 distribution general activities," "relay and protection engineering," "selling
1808 projects or services," "post 2006 transition projects," "implementing open access
1809 legislation" and "regulatory assets information and systems policy."

1810 - Third, I discuss the general nature of the costs included in the \$324 million,
1811 including the administrative allocations, intangible plant and the various types of
1812 operating expenses.

1813 - Fourth, I discuss the allocation of one of the largest cost components, the cost of
1814 ComEd's call centers.

1815 - Fifth, I discuss how the various operating expenses should be classified into
1816 categories that include billing, billing exceptions, call center costs, complaints,
1817 general distribution costs, meter reading costs, outage costs, software costs,
1818 uncollectible costs and overhead costs.

1819 - Sixth, I discuss the allocation of overhead costs, administrative costs and other
1820 costs to the various categories.

1821 - Seventh and finally, I discuss the appropriate allocation of the various costs to
1822 different ratepayer groups.

1823

1824 **Q. Is the 16% of total costs that ComEd assumes for billing and metering an**
1825 **intuitive number?**

1826 A. No. Recall that the function of ComEd is to move power over lines to homes and
1827 businesses. From the perspective of consumers, anything other than costs of
1828 moving power, reading a meter and sending a bill is a waste of money. This
1829 means that if costs are deemed appropriate by the Commission and they are not
1830 related to reading a meter or sending a bill, the costs are implicitly related to
1831 moving power over lines. Given the billions of dollars ComEd incurs for sending
1832 electricity to serve suburban sprawl; given all of the lines, transformers, poles,
1833 manhole covers and other items of distribution equipment owned by ComEd;
1834 given all of the costs that ComEd incurs for lawyers and consultants to try and
1835 earn more than its cost of capital; and given the increase in productivity that has
1836 occurred in areas like billing because of the decline in computing costs, it is not
1837 plausible that ComEd must spend \$324 million on metering and billing.

1838

1839 **Q. What conclusions do you derive from the analysis of ComEd's costs?**

1840 A. I conclude that costs in the three categories should be allocated on bases shown in
1841 the table below:

Summary of Recommended Allocation for Costs ComEd labels as Billing and Data Analysis, Bill Processing and Metering			
	Total with Call Center Allocation and Overhead	Percent of Total Operating Expenses	Allocation Method
BILLING	44,702,611	13.78%	Number of Ratepayers as per ComEd - No Change
METER READING	117,244,499	36.14%	Number of Ratepayers as per ComEd - No Change
BILLING EXCEPTIONS	10,945,583	3.37%	Split between Residential and Non-Residential; Allocate Residential
COMPLAINTS	1,839,056	0.57%	Split between Residential and Non-Residential; Allocate Residential
GENERAL DISTRIBUTION	39,353,443	12.13%	Across All Customer Classes using Demand Allocator
OUTAGE	9,361,554	2.89%	Across All Customer Classes using Demand Allocator
MOVING	16,690,672	5.15%	Split between Residential and Non-Residential; Allocate Residential
SOFTWARE COSTS	47,678,063	14.70%	Number of Customers Selecting Competitive Service
UNCOLLECTIBLE COSTS	36,575,081	11.28%	Split between Residential and Non-Residential; Allocate Residential
1842 Total	\$ 324,390,563	100.00%	

1843

1844 **Q. What data did ComEd provide in support of its position that all items in
1845 these accounts should be allocated on the basis of the number of ratepayers?**

1846 A. Nothing. However in responding to the question of whether certain costs are
1847 avoidable when ratepayers use a deregulated supplier, ComEd provided a list of
1848 activities in accounts FERC 901, 902 and 903 along with something ComEd
1849 names the "organization" and the "project." Accounts 901 to 903 include
1850 metering reading expenses and customer records and collection expenses. This
1851 list of activities had a similar format as the customer information list of accounts
1852 discussed earlier. Despite providing this list, some of the descriptions of the
1853 "organization" and the "project" did not include enough information to make a
1854 judgment about how the cost should be allocated.

1855

1856 **Q. Describe some of the opaque descriptions that ComEd provided in listing**
1857 **activities for FERC accounts 901-903 as part of its workpapers.**

1858 A. The table below shows a few of the opaque account titles that are virtually
1859 impossible to interpret. For these accounts, neither what ComEd called the
1860 “organization” nor what ComEd called the “project” provided any guidance as to
1861 what the actual cost was.

Selected Account Descriptions Provided in ComEd Workpapers		
FERC/ICC Account	Organization	Project
[903000] Customer records & collect exp	[01461] Customer Relations West	[CSSS0001] Respond to customer complaints
[903000] Customer records & collect exp	[01496] Project & Support West	[CSSS03] Provide End User Support
[903000] Customer records & collect exp	[07184] OES-Dixon/Freeport	[ITSBCSVC] SBC As Requested Services ComE
[903000] Customer records & collect exp	[08219] Director P&CM/Veg - ComEd	[ITSLACOM] ComEd Centrally held SLAs
[903000] Customer records & collect exp	[01490] System Meter	[ITTFPCST] Tools for People - Customer
[903000] Customer records & collect exp	[07352] SSC-Rockford	[ITSBCSVC] SBC As Requested Services ComE
[903000] Customer records & collect exp	[00189] Communications- ComEd	[ITSBCSVC] SBC As Requested Services ComE
[903000] Customer records & collect exp	[01475] Account Mngt Western Region	[ITSBCSVC] SBC As Requested Services ComE
[903000] Customer records & collect exp	[08554] Customer Svc & Mkt Trg.	[TCCUST] Customer Service Training G&A
[903000] Customer records & collect exp	[08208] Suburban & NB Proj. Mgmt.	[ITSBCSVC] SBC As Requested Services ComE
[903000] Customer records & collect exp	[00824] Controller - ComEd	[ITSBCSVC] SBC As Requested Services ComE
[903000] Customer records & collect exp	[06253] SSC-University Park	[ITSBCSVC] SBC As Requested Services ComE
[903000] Customer records & collect exp	[06258] SSC-Bolingbrook	[ITSBCSVC] SBC As Requested Services ComE
[903000] Customer records & collect exp	[03194] OES-Chicago North	[ITSBCSVC] SBC As Requested Services ComE
[903000] Customer records & collect exp	[00816] Finance - ComEd	[108536] Telephone Cost - ComEd
[903000] Customer records & collect exp	[07357] SSC-Elgin	[ITSBCSVC] SBC As Requested Services ComE
[903000] Customer records & collect exp	[03333] New Business Central - ComEd	[ITSBCSVC] SBC As Requested Services ComE
[901000] Supervision	[00395] IT Projects - COMED	[ITCS3200] EED PassPort Consolidation exp

1862

1863

1864 **Q. Given the non-transparent way in which ComEd presented the descriptions**
1865 **of accounts, what did you do?**

1866 A. We did what any intevenor would do. First we attended a meeting with ComEd in
1867 March in which data was discussed. We came prepared to walk through each
1868 account and ask what were the actual functions performed by employees for each
1869 activity description, and I was worried about the tedious nature of my questions.
1870 As it turned out, ComEd came only prepared to discuss the primary/secondary
1871 issue and did not bring staff prepared to answer any questions regarding the
1872 categories of cost ComEd labels as “customer service costs.” Instead, they told us
1873 to submit data requests. So, we submitted a number of data requests that asked

1874 ComEd to describe what specific activities correspond to the various accounts.

1875 For example, COC Data Request 1.21 states:

1876 ...the titles of the categories do not describe the
1877 functions that are performed in the organizations in
1878 an understandable manner and use acronyms that
1879 are not familiar to us. Please describe in as simple
1880 terms as possible the precise functions that are
1881 performed by employees in each organization. With
1882 respect to each category, please also provide:

- 1883
- 1884 a. Specific examples of what a typical
 - 1885 employee does in his or her daily activities;
 - 1886 b. Examples of non-employee expenses
 - 1887 for materials that are incurred;
 - 1888 c. The precise manner in which
 - 1889 expenses are charged to one organization
 - 1890 rather than other organizations; and
 - 1891 d. The typical professional background
 - 1892 of staff that perform work in each
 - 1893 organization.
- 1894

1895 After making its perfunctory and mildly irritating objection that the request was
1896 “vague,” “ambiguous,” and “burdensome,” ComEd provided an attachment,
1897 which is summarized in the table below. The first two columns are from the
1898 information provided by ComEd, and the third column explains the information
1899 ComEd provided.

1900

Organization (Original)	Organization (Updated)	Information Provided in ComEd DR Response
[01493] Billing - WEST	[01493] Billing - WEST	
[01451] Oak Brook Call Center	[01451] Oak Brook Call Center	
[07999] T&D General Co Activities	[07999] Transmission and Distribution General Company Activities	Spelled out Transmission and Distribution from T&D
[00314] EBSC IT Serv - CED	[00314] Exelon Business Services Company Information Technology Services - CED	Spelled out Exelon Business Services Company from EBSC
[01452] Chicago Reg Call Center	[01452] Chicago Region Call Center	Spelled the word Regions
[01492] Credit - West	[01492] Credit - West	No Change
[04766] CED EDSS Customer Servs	[04766] ComEd Exelon Delivery Support Services Customer Services	Spelled ComEd from CED and Exelon Delivery Support Services from EDSS
[03461] Field Service Chicago	[03461] Field Service Chicago	No Change
[00611] Remittance Processing	[00611] Remittance Processing	No Change
[00416] IT passthrough-ComEd	[00416] Information Technology passthrough - ComEd	Spelled out Information Technology from IT
[01473] Account Mgmt Chicago Region	[01473] Account Management Chicago Region	Spelled out the word Management
[06461] Field Service Joliet	[06461] Field Service Joliet	No Change
[01471] Account Mgmt Northern Region	[01471] Account Management Northern Region	Spelled out the word Management
[01475] Account Mngt Western Region	[01475] Account Management Western Region	Spelled out the word Management
[01454] Resource Management	[01454] Resource Management	No Change
[00311] IT Cust Serv Regulatory -CED	[00311] Information Technology Customer Services Regulatory - ComEd	Spelled out Information Technology from IT
[08570] Post 2006 Transition Projects	[08570] Post 2006 Transition Projects	No Change
[00419] Support Services West	[00419] Support Services West	No Change
[01472] Account Mgmt Southern Region	[01472] Account Management Southern Region	Spelled out the word Management
[01474] Account Mngt Multi-Site/IPP	[01474] Account Management Multi-Site / Independent Power Producer	Spelled out the word Management and Independent Power Producer
[01461] Customer Relations West	[01461] Customer Relations West	No Change
[00613] Mail Services	[00613] Mail Services	No Change
[01496] Project & Support West	[01496] Project and Support West	No Change
[00223] Electric Supplier Services	[00223] Electric Supplier Services	No Change
[01431] Account Management - OCC	[01431] Account Management - Outage Command Center	Spelled Outage Command Center
[01470] Director ESO West Account Mngt	[01470] Director Energy Services Organization West Account Management	Spelled Energy Services Organization
[00395] IT Projects - COMED	[00395] Information Technology Projects - ComEd	Spelled out Information Technology from IT
[04768] Universal Services - West	[04768] Universal Services - West	No Change
[03197] OES-Chicago South	[03197] Overhead Electric Service - Chicago South	Spelled out Overhead Electric Service

1901

1902

1903 ComEd's response to our data request number 21 was typical of its response to other

1904 data requests by the City.

1905

1906 **Q. How did ComEd "analyze" these accounts that make up 16% of the total cost**
1907 **of service?**

1908 **A.** The best ComEd could muster was the following question and answer included in
1909 Mr. Meehan's testimony:

1910 **Q.** Does customer usage drive or determine the
1911 level of costs incurred for billing and data
1912 management?

1913 **A.** No. These are largely fixed costs that do not
1914 vary with usage. Rather, ComEd's experience has
1915 been that these costs vary with the number of
1916 customers (or, more precisely, the number of bills
1917 and data elements that must be managed each
1918 month). In addition, it is my understanding that
1919 some of these costs were direct-assigned to
1920 customer classes as reflected in the ECOSS filed in
1921 the 2007 Rate Case and described in ComEd Ex.
1922 12.0 submitted in that proceeding. See
1923

1924 Commonwealth Edison Co., Docket No. 070566,
1925 ComEd Ex. 33.1 and Alongi/Jones Dir., ComEd Ex.
1926 12.0.
1927

1928 ComEd Ex. 2.0 at 25, LL 521-528.
1929

1930 **Q. Are there problems with Mr. Meehan's testimony on this point?**

1931 A. Yes. First, ComEd did nothing. Its analysis demonstrates that the utility has
1932 mastered the art of copy and paste, because its so-called "analysis" for all of the
1933 customer cost items – customer information cost, billing and data analysis,
1934 complaint costs, installation costs and service drop costs – use virtually the same
1935 language.

1936

1937 Second, and maybe more problematic is that Mr. Meehan's testimony displays an
1938 incredible lack of logic regarding what a fixed cost is in the context of cost
1939 allocation. In the business of moving power over lines, most, if not virtually all,
1940 costs are fixed in the sense that they do not fluctuate with energy output. For
1941 example, the cost of a pole is fixed, as is the cost of underground conduit. So are
1942 the costs of demand management, environmental programs and upper
1943 management salaries. ComEd's implication that fixed costs should all be
1944 allocated on the basis of the number of ratepayers would mean that the company
1945 should simply divide its total revenue requirement by the number of ratepayers –
1946 charging a low income ratepayer the same rate as Argonne National Laboratory.
1947 Contrary to ComEd's suggestion, except for metering and billing, costs are caused
1948 by the demand on the system and must be allocated accordingly.

1949

1950 Finally, Mr. Meehan's statement that he "understands" that some costs were
1951 "direct assigned" to customer classes indicates that he has not personally
1952 reviewed how costs have been actually allocated. This admission makes one
1953 wonder how someone who has not even reviewed the existing cost allocation
1954 procedures can come up with a new and better approach, as ordered by the
1955 Commission.

1956

1957 **Q. What does the fact that lobbying costs are among the costs categorized by**
1958 **ComEd as "billing and data management account" demonstrate?**

1959 A. When ComEd reads this question I am sure it will jump in to explain that
1960 lobbying costs are excluded from the revenue requirement. That has nothing to
1961 do with my point here. Had lobbying costs not been eliminated from the revenue
1962 requirement, some of ComEd's lobbying costs would be classified as part of the
1963 billing and data management account. Would Mr. Meehan really consider these
1964 costs to be classified in the billing category? How in the world does lobbying
1965 have anything to do with the computation or data analysis of the electric bill of a
1966 ratepayer (except of course to make the bill higher?).

1967

1968 **Q. Given ComEd's refusal to conduct any analysis whatsoever or to provide any**
1969 **meaningful data in response to data requests, how did you approach your**
1970 **analysis?**

1971 A. I first looked at each of the 533 accounts listed by ComEd and split them into one
1972 of eleven different categories. This process is demonstrated in the workpapers
1973 that will be provided to the parties to this case. These categories include billing,
1974 meter reading, billing exceptions, call center costs, cost related to customer
1975 complaints, general distribution costs, outage costs, costs related to ratepayers
1976 who move residences, costs associated with developing software for systems
1977 required to implement deregulation, uncollectible costs, and, finally, general
1978 overhead costs related to the other cost items. Although ComEd may nit pick
1979 some of my classifications, my process is far better than the method used by
1980 ComEd, which is nothing at all. While it is tedious, I discuss how I have assigned
1981 costs to each of these eleven classifications below.

1982

1983 **Q. What kind of costs are included in your billing and metering classification?**

1984 A. Any cost with the project names like “Mail Customer Billings”, “Process
1985 Customer Payments”, “Collect Customer Payment”, “Mail Customer Billings”,
1986 “Provide Billing Services”, “Bill Imaging” was given a tag of billing. Similarly,
1987 any project with names such as “Obtain Meter Readings”, “Support Meter
1988 Reading”, “Repair Meters and Equipment”, “Manage Meter Reading”, and
1989 “Periodic Exchanges” were tagged as metering expenses. There was little
1990 ambiguity as to these two categories.

1991

1992 **Q. What costs were tagged as billing exceptions?**

1993 A. There were four listings with projects named “Investigate Billing Exceptions.”
1994 This activity should not be allocated on the same basis as other billing costs
1995 because many of the costs are related to business ratepayers and because the
1996 theoretically correct way to allocate such accounts is to the individual ratepayers
1997 who caused the billing exceptions to occur. Since this is not reasonable they
1998 should be allocated in the same manner as my recommended uncollectible
1999 expenses allocation methodology.

2000

2001 **Q. How did you deal with call center costs?**

2002 A. Projects named “Call Center Employee Costs”, “Call Center Management”,
2003 “Interpreter Service-Call Ctr”, or “21st Century Costs-Call Center,” and
2004 departments named “Chicago Call Center” or “Oak Brook Call Center” were
2005 placed into the call center classification. These costs were in turn classified into
2006 five different cost categories according to the type of calls that are received by the
2007 call centers. These categories, listed in the table below, include uncollectible
2008 accounts, billing, moving, outage and general distribution costs. Further details of
2009 my phone call classification are included in my workpapers.

2010

Call Center Analysis		
Classification	Calls	Percent
UNCOLLECTIBLE	1,034,264	29.2%
BILLING	799,153	22.6%
MOVING	1,079,020	30.5%
OUTAGE	596,052	16.9%
DISTRIBUTION	28,594	0.8%
<u>Total Identified</u>	<u>3,537,083</u>	<u>100.0%</u>

2011

2012

2013 **Q. What costs were tagged as customer complaints and outage costs?**

2014 A. There were five listings with the project name of “Respond to Customer
2015 Complaints” that were classified as complaints and three had a name of “Planned
2016 Outage Notification.” I classified these into the category named complaints and
2017 into the category named outages. Outages are an inherent part of moving power
2018 over distribution lines and should be classified along with other distribution costs.
2019 As shown in the above table, 17% of the call center costs are allocated to the
2020 outage category. Complaints are analogous to uncollectible accounts and should
2021 be allocated on the basis of how many are associated with residential and business
2022 ratepayers unless ComEd would like to create a billing determinant and charge
2023 every ratepayer after they make a complaint. Once this residential/business
2024 differentiation is made, the amounts should be allocated on the basis of energy
2025 usage within the residential class.

2026

2027 **Q. How did you classify costs as moving costs and uncollectible costs?**

2028 A. There are a number of listings with names that indicate work on uncollectible
2029 accounts such as “Cut Outs for Non Payment”, “Manage Inactive Accounts”,
2030 “Cut In Non Payment Accounts”, “Collect Customer Payment”, “Perform
2031 Application Verification” that suggest activities related to credit and uncollectible
2032 management. There were no account names that I identified with people who
2033 change residences, but this category is included because much of the call center
2034 activity is related to people who move. Both of these costs should be allocated in

2035 the same manner as uncollectible expenses. That is, ComEd should first identify
2036 the amount of cost that is associated with business ratepayers; and then, within the
2037 residential class, the costs should be allocated on the basis of electricity used.

2038

2039 **Q. What costs did you classify as software costs and how should these costs be**
2040 **allocated?**

2041 A. I tagged eleven accounts as being related to providing software. These items were
2042 not related to any one of the other accounts (*e.g.*, metering or billing) and there
2043 was an identifier that included the abbreviation IT. Given the large investment in
2044 software to accommodate business consumers who select competitive service,
2045 these costs should not be primarily allocated to residential ratepayers. Instead, the
2046 costs should be allocated on the basis of the number of ratepayers in a class that
2047 selects competitive service.

2048

2049 **Q. What costs did you tag as general distribution costs or as overhead cost?**

2050 A. I classified the remaining costs that cannot be put in one of the above categories
2051 as either a general distribution cost that should be allocated on the same demand
2052 basis in the same manner as other distribution costs or as overhead costs that
2053 should be attributed to all of the other costs. Account listings with project names
2054 that include “Provide Service Delivery”, “Implement Open Access Legislation”,
2055 “IT Day 1 Merger ComEd Expense” were included in the general distribution
2056 category as these items relate to general distribution costs that should be allocated
2057 on the basis of relative demand. In addition, there were a number of accounts that

2058 had the vague project name of “SBC as Requested Services ComEd”, but had
2059 department titles that suggested the cost is related to a general distribution
2060 activity. These department titles included “T&D General Co Activities”,
2061 “Director P&CM/Veg – ComEd”, “Overhead Electric Service-Libertyville”,
2062 “Reliability Inspection – ComEd”, “Distribution Facilities-Sub”, “Field Services
2063 Support” and “Substation Ops-Glenbard/Mt Propect.” In my judgment, the
2064 account names and/or the project names for these items suggest activities
2065 associated with general distribution activities and should be allocated like other
2066 poles and wire.

2067

2068 The final set of functions that I categorized were the overhead items such as
2069 phone expenses and training expenses. These items were first aggregated and
2070 then attributed to the other functions on a percentage basis.

2071

2072 **Q. Does the attribution of costs to the various categories account for the total**
2073 **\$324 million of cost that you discussed at the outset of this section?**

2074 A. No. More than half of the costs are associated with the addition of administrative
2075 costs. In addition, the \$324 million includes return on rate base, depreciation and
2076 taxes associated with general plant, meters and intangible assets. I have added
2077 these costs to the various categories on a percent basis which differentiates for the
2078 cost of meters that should be allocated to metering costs and the administrative
2079 cost of billing, which is lower than the administrative costs that ComEd attributes
2080 to the wrongly-labeled account named “Billing - computation and data analysis”

account. The procedure that I used to attribute these costs is illustrated on the table below which also shows how I attributed the overhead costs and the call center costs.

Summary of Analysis of Costs that ComEd Labels as Billing and Data Analysis, Bill Processing and Metering									
	Expenses from Analysis of Accounts 901- 903	Overhead Pct	Subtotal with Overhead	General Plant And Other Expenses	Subtotal with A&G and Other Addrs	Total Allocated A&G and Other Costs	Call Center Allocation Percent	Call Center Allocation	Total with Call Center Allocation and Overhead
BILLING	\$ 23,289,392	4.67%	24,376,876	32.67%	32,341,022	7,964,147	22.59%	12,361,588	44,702,611
METER READING	\$ 29,613,043	4.67%	30,995,805	278.26%	117,244,499	86,248,694			117,244,499
BILLING EXCEPTIONS	\$ 4,835,120	4.67%	5,060,893	116.28%	10,945,583	5,884,690			10,945,583
CALL CENTER	\$ 24,168,959	4.67%	25,297,513	116.28%	54,712,882	29,415,369		-54,712,882	
COMPLAINTS	\$ 812,388	4.67%	850,322	116.28%	1,839,056	988,735			1,839,056
GENERAL DISTRIBUTION	\$ 17,188,672	4.67%	17,991,286	116.28%	38,911,141	20,919,855	0.81%	442,302	39,353,441
OUTAGE	\$ 62,553	4.67%	65,474	116.28%	141,605	76,131	16.85%	9,219,948	9,361,555
MOVING				116.28%	0	0	30.51%	16,690,672	16,690,672
SOFTWARE COSTS	\$ 15,517,054	4.67%	22,044,834	116.28%	47,678,063	25,633,229			47,678,063
UNCOLLECTIBLE COSTS	\$ 9,089,590	4.67%	9,514,023	116.28%	20,576,711	11,062,688	29.24%	15,998,370	36,575,081
Total	\$ 124,576,771		\$ 136,197,024		\$ 324,390,563	\$ 188,193,539	100.00%	\$ -	\$ 324,390,563
Overhead	\$ 5,817,033								
Total	\$ 130,393,804								

VIII. CUSTOMER INSTALLATION COSTS

Q. What information did ComEd provide about the category of costs it labels as “customer installation?”

A. The only real information provided by the company was that these costs have nothing to do with installing things for customers. Unlike the customer information costs and billing – computation and data management costs discussed above, ComEd did not provide a detailed list of activities. Instead, ComEd’s witness Meehan summarized the sorts of activities included in the accounts.

2098 **Q. Did the Commission express concern about the subsidization of suburban**
2099 **sprawl and costs associated with the housing bubble in the context of**
2100 **customer installation costs?**

2101 A. Yes. The quote for the Commission order below shows how the Commission
2102 (along with the City and certain ComEd witnesses in Docket 07-0566) thought
2103 that customer installation costs were related to growth in outlying suburban areas:

2104 The City notes that the ECOSS allocates “customer
2105 costs” based on the number of customers in a class
2106 rather than on usage. Some 80% of these customer
2107 costs are allocated to the residential customer class on
2108 a pro rata basis. ComEd witnesses have testified that
2109 growth in *customer installation costs* in outlying
2110 areas is the primary driver of this rate increase. The
2111 City argues that residential customers in areas
2112 experiencing low growth rates and those customers in
2113 densely populated areas with predominantly overhead
2114 lines (City residents and residents of older suburbs)
2115 are subsidizing *customer installation costs* in less
2116 densely populated, high growth areas serviced by
2117 more expensive underground service. The City
2118 argues that new residential *installations* tend to be for
2119 larger homes using more energy and that most of the
2120 *new installations* are taking place in the collar
2121 counties.

2122
2123 Rate Order at 210 (emphasis added).
2124

2125 **Q. Given that customer installation costs have nothing to do with installing**
2126 **facilities for ratepayers, is the issue of subsidization of suburban sprawl**
2127 **addressed anywhere in this case?**

2128 A. Unfortunately not. The Commission’s statements quoted above recognize the
2129 inherent problems associated with imposing the massive costs associated with
2130 suburban sprawl and the housing boom on low use/low income ratepayers. Given

2131 the customer installation has nothing to do with the cost of installing new poles
2132 and wire, this issue is not addressed in this case. It will have to be revisited in the
2133 next rate case.

2134

2135 **Q. If customer installation costs have nothing to do with installing facilities for**
2136 **ratepayers, what costs are included in this category?**

2137 A. The statement by Mr. Meehan quoted below shows that these costs include costs
2138 associated with ratepayer complaints, costs for accommodating relocations and
2139 costs of stealing electricity which it calls unmetered current:

2140 Customer installations services include
2141 investigating distribution customer complaints,
2142 investigating unmetered current conditions, and
2143 requests from customers for temporary services,
2144 relocation of facilities, and/or revision of current
2145 services. The direct costs of customer installations
2146 services are recorded in Account 587 - Customer
2147 Installations Expenses. A total of \$17.7 million was
2148 recorded in Account 587 for 2006, which includes
2149 \$12.1 million for the investigation of distribution
2150 service complaints, \$1.4 million for investigation of
2151 unmetered current, and \$4.1 million for other
2152 services such as relocations, revisions and
2153 temporary service.
2154

2155 ComEd Ex. 2.0 at 25, LL 532-39.

2156

2157 **Q. How does ComEd suggest allocating the cost of customer complaints?**

2158 A. Invoking its mantra, ComEd suggests that complaint costs should be allocated on
2159 the basis of the number of ratepayers – *i.e.* in the most regressive manner
2160 possible. Mr. Meehan explains that installation costs are largely associated with

2161 momentary interruptions of service, power quality, power surges, or flickering
2162 lights:

2163 Generally, distribution customer complaints fall
2164 within the following categories: momentary
2165 interruptions of service, power quality, power
2166 surges, flickering lights, arcing wires, cut for safety,
2167 tree on wire, and low hanging service. Results of
2168 ComEd's field investigation will determine the
2169 nature and extent of needed repairs.
2170

2171 *Id.* at 26, LL 543-47.

2172 Then, he adds that

2173 These costs are independent of usage. ComEd's
2174 experience has been that these costs do, however,
2175 vary with the number of customers. Investigations
2176 are neither more nor less likely simply because of
2177 the amount of electricity any particular customer
2178 uses.
2179

2180 *Id.* at 26, LL 550-52.

2181

2182 **Q. Do you agree with Mr. Meehan's "analysis"?**

2183 A. No. Other than having no logic and no support, the statement ignores the fact that
2184 customer complaints, at least for ComEd, are a part of the service it provides
2185 which is moving power over poles and wires. As such these costs should be
2186 allocated on the basis of the overall factors which cause the costs to arise in the
2187 first place.

2188

2189 **Q. How many residential ratepayers do you know who have made complaints**
2190 **about momentary interruptions of service, power quality, power surges, or**
2191 **flickering lights?**

2192 A. I don't know of any. In my experience (not of course as vast as ComEd's) people
2193 care about whether the lights are on, not whether they flicker. These complaints
2194 are obviously related to business ratepayers and should be allocated as such.

2195

2196 **Q. What does ComEd say about relocation costs?**

2197 A. As with costs of customer complaints, ComEd suggests that relocation costs
2198 should be allocated in the most regressive manner possible:

2199 The costs of these services are incurred as a result
2200 of a customer request for the service. For example,
2201 temporary services are provided in response to a
2202 customer's request for service to support new
2203 construction, remodeling projects, or seasonal needs
2204 where permanent service is not applicable.
2205 Relocations are provided in response to a customer's
2206 request to move an existing service, such as the
2207 conversion of an overhead service to an
2208 underground service. Revision services are provided
2209 upon a customer's request to change an existing
2210 service due to changes in their requirements such as
2211 the need for an alternate service point or service at
2212 an additional voltage.
2213

2214 *Id.* at 27, LL 571-78.

2215

2216 After making this statement, ComEd made its perfunctory statement that is
2217 supposed to constitute an analysis:

2218 ComEd's experience has been that usage does not
2219 contribute to these costs. Instead, as demonstrated

2220 above, ComEd's experience has been that the
2221 volume of requests and nature of work requested by
2222 the customers determines the level of these costs.

2223
2224 *Id.* at 27, LL 581-83.

2225

2226 **Q. Please comment on ComEd's "analysis".**

2227 A. Interestingly, mildly, this time ComEd says that the moving costs are related to
2228 the volume of requests and not the number of ratepayers. ComEd would, of
2229 course, still allocate the costs on the basis of the number of ratepayers, since it
2230 apparently knows of any other allocation method. As described above, the costs
2231 of moving are similar to uncollectible accounts with respect to the fact that there
2232 are no billing determinants. ComEd could charge people who move; but if it does
2233 not, it should first split the costs between residential and business ratepayers and
2234 then allocate the costs within the residential class on the basis of electricity used.

2235

2236 **Q. What does ComEd say about allocation of costs that the company incurs for**
2237 **stealing service?**

2238 A. As with costs of customer complaints, ComEd suggests that theft of service costs
2239 should be allocated in the most regressive manner possible:

2240 An unmetered current condition exists when service
2241 is provided through ComEd's distribution system
2242 without being metered. Examples of unmetered
2243 current conditions are when a meter has been
2244 removed from a meter fitting or some other form of
2245 meter bypass is installed by a customer. When
2246 ComEd suspects one of these situations at a
2247 customer's premises, ComEd's Field and Meter
2248 Services department investigates the situation and
2249 addresses it as appropriate. Certain staff in ComEd's

2250 Billing department would then bill the customer for
2251 the service not previously billed because of the
2252 unmetered current condition and any costs, if
2253 applicable, incurred for correcting the condition.
2254

2255 *Id.* at 26, LL 554-62.

2256

2257 Apparently copying and pasting from previous answers, Mr. Meehan stated the
2258 following with respect to the cost of policing stolen electricity:

2259 ComEd does not incur unmetered current costs
2260 based on the level of customer usage. Instead, the
2261 level of costs incurred relates to the number of
2262 unmetered current conditions investigated and the
2263 number of unmetered current conditions is related
2264 to the number of ComEd's customers.
2265

2266 *Id.* at 27, LL 565-68.

2267

2268 **Q. Is Mr. Meehan correct that the cost of policing ratepayers for stolen**
2269 **electricity is related to the number of ratepayers?**

2270 A. Not necessarily. Maybe more customers mean more theft, but that is irrelevant
2271 from a cost allocation perspective. As with costs of moving and other costs,
2272 analogous to uncollectible expenses, ComEd could directly bill customers who
2273 steal electricity, essentially establishing a separate rate class. If this is not done,
2274 the most equitable way to allocate costs is not in the most regressive manner
2275 possible, but to recognize that the policing costs are analogous to a tax and should
2276 be allocated on the basis of the amount of electricity used.

2277

2278 **IX. SERVICE DROPS**

2279 **Q. What point did you make about service drops in Docket 07-0566?**

2280 A. I testified that within the single-family and multi-family residential classes,
2281 service drops are most probably correlated to usage as larger homes tend to be
2282 much more likely to have newer equipment, underground equipment and longer
2283 wires. All of the other wire that ComEd owns is allocated on the basis of the size
2284 of demand meaning that service drops are the only wire that is not allocated on
2285 the basis of the size.

2286
2287 In response, ComEd essentially ignored my argument and made its usual simple
2288 statement that usage does not affect the size of service drops. In particular, Mr.
2289 Meehan stated:

2290 Usage does not contribute to these costs. Instead,
2291 ComEd's experience has been that the number of
2292 customers determines the level of these costs in any
2293 given year. In addition, it is my understanding that
2294 these costs were direct-assigned to customer classes
2295 as reflected in the ECOSS filed in the 2007 Rate
2296 Case and described in ComEd Ex. 12.0 submitted in
2297 that proceeding. See Commonwealth Edison Co.,
2298 Docket No. 07-0566, ComEd Ex. 33.1 and
2299 Alongi/Jones Dir., ComEd Ex. 12.0.

2300
2301 *Id.* at 28-29, LL 600-06.
2302

2303 **Q. Could ComEd have done more to comply with the Commission order with**
2304 **respect to analysis of service drops?**

2305 A. Yes, they could have easily done a lot more. Using its mapping system that
2306 apparently tracks virtually all equipment it owns, the company could have

2307 surveyed the length, age and type (underground versus overhead) of service drops
2308 for different sized single-family and multi-family ratepayers. Instead, as with
2309 other issues, ComEd chose not to assist the Commission and made its oft-repeated
2310 remark.

2311

2312 **X. PRIMARY AND SECONDARY**

2313 **Q. What does the amount of effort that ComEd put into the primary versus**
2314 **secondary issue as compared to the residential issues reveal about the**
2315 **company's attitude toward rate design and cost of service issues?**

2316 A. While I am sure business ratepayers will complain that ComEd did not do enough
2317 in studying the costs of primary and secondary service, the company obviously
2318 spent significantly more time distinguishing the cost of primary and secondary
2319 wires than it spent on issues that are of concern to residential customers.

2320

2321 **Q. Is the primary and secondary split comparable to other issues that you have**
2322 **been testifying about for years?**

2323 A. Yes. ComEd used to distinguish between primary and secondary service when it
2324 prepared its marginal cost of service study. The industrial ratepayer groups and
2325 Staff did not like the marginal cost concepts and were successful in having the
2326 Commission change to an embedded cost approach. When the company switched
2327 cost methodologies, it made many changes that lowered the quality of the study,
2328 including no longer acknowledging the primary/secondary split.

2329

2330 The embedded cost methodology also ignores density factors that were accounted
2331 for in the marginal cost study; it does not account for differences between
2332 overhead and underground service as did ComEd's marginal cost study; it uses a
2333 cruder and broader definition of multi-family ratepayers; it changes the way it
2334 demand is allocated -- from a coincident peak to a non-coincident peak approach;
2335 it allocates costs such as customer information expenses that were not included in
2336 the marginal cost approach; and, it made other changes that generally lowered the
2337 quality of the study.

2338

2339 It appears that ComEd is finally revising its embedded cost study's crude
2340 approach for allocating of primary and secondary wire. ComEd should also be
2341 ordered to make changes to its embedded cost study to make it a less crude and
2342 more useful tool.

2343

2344 **Q. Did data that ComEd provide in response to the primary and secondary**
2345 **issue demonstrate that other cost differentiating factors are even more**
2346 **important?**

2347 A. Yes. The data provided by ComEd shows that the cost of underground versus
2348 overhead service is dramatic. I already presented this data above in the context of
2349 my street lighting discussion and will not repeat it here. Just as one can work
2350 through the amount of primary and secondary service for different ratepayer
2351 groups, one could make similar allocations for underground and overhead service.

2352 Similar differentiations could be made for the age of equipment and the density in
2353 terms of line length per ratepayer.

2354

2355 **Q. In accounting for these cost differences is it possible that ComEd will have to**
2356 **change the way it defines different customer classes?**

2357 A. Yes. As ComEd has made provision for a high voltage ratepayer class, it could
2358 also distinguish between ratepayers who are served by underground versus
2359 overhead service and it could distinguish regions by the age of equipment and the
2360 density of lines. This would hopefully recognize in rates the fact that ComEd's
2361 distribution system in the alleys of Chicago resembles systems I see in developing
2362 countries in Africa, while the underground equipment serving prosperous suburbs
2363 is more like distribution systems in Europe.

2364

2365 **Q. What should be the treatment for multi-family buildings that take service**
2366 **directly at the primary level?**

2367 A. They should receive a direct credit on their bill rather than being blended within
2368 the residential class.

2369

2370 **Q. Does this complete your direct testimony?**

2371

2372 A. Yes.