STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

COMMONWEALTH EDISON COMPANY	:	
	:	
Proposed general increase in electric rates	:	No. 07-0566
	:	

2nd Corrected Rebuttal Testimony of

GEORGE A. WILLIAMS

Senior Vice President,
Operations

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Q. Please state your name and business address.

A. My name is George A. Williams. My business address is 2 Lincoln Centre, 10th Floor, Oakbrook Terrace, Illinois 60181.

Q. Are you the same Mr. Williams who submitted direct testimony on behalf of Commonwealth Edison Company ("ComEd")?

A. Yes, I am.

Q. What is the purpose of your rebuttal testimony?

A. There are four purposes:

- I will respond to Staff witness Mr. Lazare with respect to the cost of underground lines and service connections.
- I will respond to the arguments of Mr. Linkenback and Mr. Luth of Staff regarding storm expenses.
- I will respond to Mr. Ostrander's proposal to normalize materials and supplies inventory balance.
- Finally, I will also respond to Mr. Lazare's suggestion that the background information on ComEd's system that I presented in my direct testimony was incorrect.

Q. Please summarize your testimony and conclusions.

A. *First,* I review the change in materials costs as part of the overall cost of underground lines and of service lines. I conclude that Mr. Lazare is incorrect that the increases in the

21 per-unit costs of these items are unexplained, and therefore Mr. Lazare's proposed
22 disallowance is not justified. *Second,* I examine from an operations perspective Mr.
23 Linkenback's concern that ComEd's proposed Rider SEA will result in under-investment
24 in preventative maintenance programs, concluding that Mr. Linkenback is incorrect. I
25 also demonstrate that ComEd's proposed definition of a storm event in the rider is
26 appropriate, and that the rider would address a significant area of expenses. *Third,* I
27 consider Mr. Ostrander's suggestion that ComEd's materials and supplies expenses be
28 normalized. Given the rising prices faced by ComEd for materials and supplies, and
29 given ComEd's actual experience during 2007, the December 31, 2006 inventory levels
30 are representative and appropriate. *Finally,* I revisit a number of background facts from
31 my direct testimony, which Mr. Lazare has stated were incorrect. Except as subsequently
32 corrected in testimony, Mr. Lazare has misinterpreted ComEd's figures and drawn
33 incorrect conclusions as a result.

34 <u>Underground Lines and Service Lines</u>

35 Q. What portion of Mr. Lazare's testimony are you responding to in this section?

36 A. At page 24 of his direct testimony, Mr. Lazare proposes a disallowance of $110,950,000
37 of ComEd's proposed rate base. Mr. Lazare takes the position that the disallowance is
38 appropriate because, based on his calculations, the "per-unit cost" of ComEd's
39 underground lines and service lines has increased, and the increased cost has not been
40 "explained."

41 Q. Do you have any general response to Mr. Lazare's discussion regarding the per-unit costs
42 of additions to distribution plant?

A. Yes. Mr. Lazare's analysis is not valid. ComEd has demonstrated the amounts that it has invested in additional plant. Those amounts were actually spent, and Mr. Lazare does not dispute that. While Mr. Lazare's exercise is apparently intended to suggest that ComEd has spent too much for the plant it has acquired, there is no evidence to suggest that this is actually the case. Indeed, there is no evidence at all, in either Mr. Lazare's testimony or in Staff's engineering testimony, that the installation of any of ComEd's plant cost more than it should have.

Q. What is Mr. Lazare's analysis?

A. Mr. Lazare has divided the additional dollars added to FERC Accounts 366 (underground conduit) and 367 (underground conductors and devices) during a year by the number of miles of primary underground conductors installed that year. In so doing, Mr. Lazare divides the dollars associated with several different items by the number of new additions of just one of those items. He erroneously labels this calculation the "dollars per mile" of new underground lines. The resulting figure is not a correct "average" as he intends it, and, in any event, the "average" cost of a mile of underground line is not a good way to evaluate a utility's additions to plant.

Q. Why do you say that the average cost is not a good way to evaluate plant additions?

A. The "average" cost of an underground line, is not a good metric in the utility business. We are much more interested in the "typical" cost of an underground line. That is the cost that a utility expects to pay. The average, a simple mathematical mean, does not necessarily represent the typical cost. A simple average can be skewed by particularly expensive or inexpensive projects.

Q. Why do you say that Mr. Lazare's calculation is incorrect?

A. Turning to the actual calculation Mr. Lazare makes, the items included in these two FERC accounts are not the same as the denominator, the miles of underground primary lines. FERC account 366 (underground conduit) includes conduit, manholes, concrete, ventilation equipment, sump pumps, temporary installations for the permanent installation of conduit, permits, municipal inspections, and other things. FERC account 367 (underground conductors and devices) includes insulated, submarine, and lead cables (that is, secondary lines), circuit breakers, insulators, tie wires and clamps associated with the racking of cables, lightning arrestors, railroad or highway crossing guards, splices, switches, tree trimming, permits, and other line devices. So dividing the value of all of the things accounted for in these two utility accounts by the miles of primary underground conductors only does not, as Mr. Lazare has attempted to suggest, produce an accurate figure for the average cost of installing a mile of underground line.

Q. Have ComEd's costs to install new underground lines and new services been increasing?

A. Yes, they have.

Q. Why is that?

A. The increased cost is partly due to the higher cost of materials, and partly due to the higher cost of labor. Our experience from 2005 to the present is that both materials and non-materials costs have been rising. The cost of materials, notably copper, silicon-core steel, aluminum, and mineral oil, have increased due to higher worldwide demand for these items, coupled with production shortfalls. The increased non-materials costs are primarily the increased cost of labor.

87 Q. Had Mr. Lazare wanted the real "cost per mile" figure, is that available?

88 A. Yes, it can be derived from the data in ComEd's annual Distribution System Data Book.

89 We provided it to Mr. Lazare in discovery. That data is as follows:

	12/31/2000	12/31/2001	12/31/2002	12/31/2003	12/31/2004	12/3/2005	12/31/2006
Underground Cable in Duct	$78,953	$75,535	$79,398	$85,988	$91,368	$99,250	$105,022
Underground Cable, Buried	$32,634	$37,235	$40,959	$44,155	$45,693	$46,785	$48,095

90 The data, inflated to 2006 dollars, is as follows:

	12/31/2000	12/31/2001	12/31/2002	12/31/2003	12/31/2004	12/31/2005	12/31/2006
Underground Cable in Duct-Inflated to 2006 Dollars	$90,083	$84,008	$86,891	$94,420	$96,067	$101,293	$105,022
Underground Cable, Buried-Inflated to 2006 Dollars	$37,234	$41,412	$44,825	$47,457	$48,043	$47,748	$48,095

91 Q. What do these tables show?

92 A. It shows the dollars spent on underground primary cable, divided by the miles of such
93 cable. (Note that this is miles of cable, not circuit miles.) While the costs of the
94 underground cable are certainly increasing, they do not show the large and, to use
95 Mr. Lazare's term, "unexplained" variations that the statistics he calculated appear to
96 show. Mr. Lazare states that there has been a 48.9% increase in the cost of underground
97 lines when comparing 2000-2004 to 2005-2006. The actual increase is about 14.76% for
98 underground cable in duct and about 9.42% for direct buried underground cable when
99 comparing 2000-2004 to 2005-2006 and correcting for normal inflation. In light of the
100 increased cost of the materials used in connection with the installation of new
101 underground lines, the actual increase is reasonable and is not "unexplained."

102 Q. What is Mr. Lazare's calculation for the cost of services lines?

A. His calculation is similar to the one I just discussed. Mr. Lazare divides the dollars in FERC account 369 (service lines) by the number of service lines installed. He notes an upward trend in this ratio that he says is "unexplained."

Q. Is that a valid calculation?

A. It is not, for similar reasons. For the numerator of his calculation, Mr. Lazare has used FERC account 369, which includes not just new service lines, but also brackets, cable and wire, conduit, insulators, municipal inspection, pavement cutting and replacement, permits, protection of street openings, service switching, etc. The dollars associated with these items do not match the number of service lines installed, which is what Mr. Lazare used for the denominator in his calculation. So dividing the value of all the things accounted for in this utility account only by the number of service lines installed during the year does not, as Mr. Lazare has attempted to suggest, produce an accurate figure for the average cost of installing a service line. In addition, as before, the simple mathematical average does not necessarily represent the typical cost of a new service line.

Q. Can the average cost per service line be calculated?

A. Although it is not a good metric, the "average" cost of a service line can be calculated. I note, however, that ComEd does not maintain this data because it does not serve a business purpose for us. Our plant accounting system tracks the number of dollars invested in service lines, not the number of service lines themselves.

Q. Why does ComEd not track the number of service lines?

124 A. It is not a metric that is important to us. Our focus is providing service to new customers,
125 not the "service line" itself. A work order, that is, the job of installing the specific
126 facilities needed to serve a new customer, is what we track. Connecting the new
127 customer to the system may involve running a new line (overhead, underground, or a
128 combination) to a transformer, the installation of the transformer, and a service line from
129 the transformer to the customer. Technically, only that last piece is the "service line."

130 Q. How does this affect the calculation of an average cost of a service line?

131 A. The cost to serve different types of customers may vary greatly. For this reason we
132 consider the "typical" cost to serve a new customer of a particular type. The cost to serve
133 a major new customer is much more than the cost to serve a typical new residential
134 customer. Some large projects can skew the average cost, even though the typical cost
135 may not have significantly changed. As an example, we are currently working to connect
136 a large new downtown office building now under construction in the City of Chicago.
137 We currently expect that this new customer service will cost over $3 million. That is
138 much higher than the typical cost, but it would be included in a system-wide average.

139 Q. Can you further explain the breakdown between service lines to residential and
140 commercial customers?

141 A. The following chart shows the cost per residential service and cost per commercial
142 service for the years 2005 through 2007. It shows that, over the past few years,
143 residential services are increasing steadily in cost, as is expected. The average cost of
144 commercial services, however, varies considerably, going up or down from year to year

145 depending on the scope and expense of the particular projects ComEd is called upon to
146 perform.

	2005	2006	2007
New Business — Residential	$125,127,948	$119,427,912	$104,774,187
Residential Services	52,328	46,220	35,055
Cost per Service	**$2,391**	**$2,584**	**$2,989**
	2005	**2006**	**2007**
New Business — Commercial	$97,255,411	$101,398,089	$134,370,303
Commercial Services	11,250	15,376	17,482
Cost per Service	**$8,645**	**$6,595**	**$7,686**

147 Q. Do you have any other response to Mr. Lazare's calculations and whether or not the
148 increases are "explained?"
149 A. Regardless of Mr. Lazare's particular calculations, the amounts we show on our books, as
150 additions to rate base are amounts that were actually added for items of plant that are
151 used and useful in serving customers, and that were acquired at a reasonable cost.

152 Q. Based on your analysis, is Mr. Lazare's suggestion that the Commission disallow some of
153 ComEd's additions to distribution plant appropriate?
154 A. No, that would not be appropriate. ComEd's additions to plant are correct. Their failure
155 to be "explained" by Mr. Lazare's calculations does not disqualify them.

156 <u>Operational Issues Related to Rider SEA</u>
157 Q. Mr. Linkenback of Staff suggests that ComEd will lose its incentive to maintain its
158 preventative maintenance programs if Rider SEA is approved. Do you agree?
159 A. No, I do not.

160 Q. Why not?

161 A. First, preventative maintenance is not aimed at protection from the damage inherent in a
162 serious storm. Preventative maintenance avoids problems under normal operations,
163 including normal weather events. Storms create problems for us that preventative
164 maintenance does not and is not designed to prevent. No reasonable amount of
165 preventative maintenance will keep poles from snapping off, for example. In other
166 words, we could be doing perfectly adequate preventative maintenance, and still incur
167 very significant costs when a major storm hits.

168 Second, to the extent that any preventative maintenance would protect the system
169 from storms, it would be vegetation management. Our vegetation management activities
170 and budgets are highly regulated and monitored, particularly at the state level. We would
171 not be free to cut back our activities in this area without the Commission knowing about
172 it and reacting.

173 Q. Mr. Luth and Mr. Brosch argue that Rider SEA does not qualify for rider treatment
174 because storm expenses are not large compared to total revenue. Is that true?

175 A. It is true that, compared to total revenue, storm costs are relatively small. However, that
176 is not a meaningful comparison. A better comparison would be to the cost of ComEd's
177 distribution corrective maintenance expense. ComEd has to set aside an amount of
178 money for corrective maintenance issues that may come up during any year. Corrective
179 maintenance includes ComEd's emergent work such as storm repairs. If more money
180 than expected is spent on storm or other emergent work, it would not be spent on other
181 projects and programs. Comparing ComEd's cost of storm repairs to all of its
182 distribution corrective maintenance expenses, the storm repair costs are approximately

183 18.8% of the total. In other words, storm repairs are a substantial part of ComEd's
184 distribution corrective maintenance work.

185 Q. Staff has suggested that the concept of a "storm" needs definition, and suggests that it
186 should be based on criteria of the National Weather Service. Do you agree?
187 A. No. Although I understand Mr. Linkenback's desire that the storm events be tied to
188 something that is not open to interpretation, if Rider SEA is to perform its function, it
189 needs to coincide with the events that drive ComEd's response costs. The National
190 Weather Service, when deciding what constitutes a storm event, does not specifically
191 consider the number of customers who will lose power or what may damage ComEd's
192 distribution facilities. It is possible that a "scientific" definition will invoke the rider
193 when few customers lose power, or not invoke it when many customers lose power.
194 ComEd's suggested definition invokes the rider exactly when it needs to: when, due an
195 act of nature, ComEd needs to open the storm center, and it is anticipated that 10,000 or
196 more customers will lose power for three or more hours. That is normally when ComEd
197 incurs significant cost.

198 Q. Will these storms, as ComEd identifies them, be documented?
199 A. Yes, of course. ComEd already documents all storms that cause power outages to 10,000
200 or more customers for three or more hours.

201 Q. Staff says that, if Rider SEA is approved, it should be subject to termination if ComEd's
202 SAIFI and CAIDI numbers rise above certain levels. Is that reasonable?
203 A. No, Mr. Linkenback's proposal would not be appropriate. The events that Rider SEA is
204 meant to address – widespread outages from a major event not in ComEd's control – will

205 tend to increase the CAIDI and SAIFI reliability statistics. Under Mr. Linkenback's
206 proposal, a year with several bad storms would cause Rider SEA to be terminated. That
207 does not make good policy. If ComEd were hit with several bad storms, that is when
208 Rider SEA would be the most needed and the most beneficial.

209 Materials and Supplies

210 Q. Mr. Ostrander points out that ComEd's year-end materials and supplies inventories were
211 at relatively high levels, and suggests normalizing them. How do you respond?

212 A. Mr. Ostrander is correct that the year-end figures were high compared to the rest of 2006.
213 This was due, in part, to an increase in inventory levels toward the end of 2006.

214 However, contrary to what Mr. Ostrander would apparently predict, those levels,
215 during 2007, did not return to the lower levels experienced in 2006. As also discussed in
216 the testimony of Ms. Frank and Ms. Houtsma, the year-end 2006 number is more
217 representative of what ComEd has been experiencing since that time than the average of
218 2006.

219 Q. Please explain what caused the 2006 inventory levels, in dollars, to increase over the
220 course of that year.

221 A. There were three main reasons why the levels of inventory increased. The first was an
222 increase in the price of major raw materials, such as copper, aluminum, and core steel.
223 These prices all rose significantly, and have not subsided.

224 Second, as prices were rising, there were shortages in the market. One of
225 ComEd's key suppliers had a strike at their plant in Canada. The supplier terminated its
226 purchase order with Exelon Business Services Company under which ComEd is supplied.

227 As a result, ComEd needed extra material, particularly in wire and cable. Wire and cable
228 are absolutely essential for ComEd's field operations, repairs, and installations.
229 Third, ComEd increased its inventory of job-specific materials and supplies,
230 particularly substation equipment and parts. Generally, ComEd expects third party
231 contractors to acquire their own inventory for jobs they do for us. However, due to the
232 shortage situation discussed above, the third party contractors were facing problems
233 obtaining materials on a timely basis and at reasonable prices. ComEd therefore began to
234 buy materials, as necessary, for jobs to be completed by third party contractors.

235 Q. In the months subsequent to 2006, didn't those specific events go away?
236 A. Not entirely. The strike is over, but the price increases have not gone away. Commodity
237 prices for key materials, such as copper and core steel, remain today well above price
238 levels in effect throughout 2006, and that affects the price we pay for essential materials.
239 It is true that, in the subsequent months during 2007, inventory quantities resulting from
240 the one-time spot purchases of wire and cable have been reduced. However, emergency
241 reserve inventories necessary for timely customer service responses have remained at
242 levels similar to or above 2006 levels.

243 Q. Has ComEd analyzed the effect of volume versus price on its inventory of materials and
244 supplies?
245 A. Yes. Overall in 2006, inventory rose from $50.6M to $82.6M with 48% ($15.3M) of the
246 increase coming from escalating material costs and 52% ($16.6M) of the increase coming
247 from increases in inventory quantity. In 2007, ComEd reduced inventory quantities
248 resulting in a decrease in inventory quantities of $10.3M. This decrease was partially

249 offset by continued escalation of material costs ($3.2M) due in large part to the continued
250 escalation of commodity costs. The inventory value has not decreased to the levels seen
251 in late 2005 or early 2006.

252 Q. Given this background, what do you conclude regarding Mr. Ostrander's proposal to use
253 an average of 2006 inventory levels as a representative figure?
254 A. Our actual inventory levels, in dollars, are much closer to the year-end 2006 figure than
255 average 2006 levels. Mr. Ostrander's figure of approximately $61 million is
256 unrealistically low, and does not reflect our actual operations.

257 <u>ComEd System Background Information</u>
258 Q. Mr. Lazare points out a number of statements in your direct testimony that he says were
259 incorrect. Do you have a general response to this?
260 A. Yes. First, the numerical information on which Mr. Lazare focuses has no direct bearing
261 on the rate case itself. It is background information to give the Commission a feel for the
262 size and scope of ComEd's operations. For example, ComEd's system has over 700
263 substations. The point is not whether the precise number is 730 or 777 (depending on
264 what counts as a "substation"), it is that we have hundreds of substations. For Mr. Lazare
265 to say that these descriptive numbers were inaccurate, and to then imply that ComEd's
266 revenue requirement figures are somehow suspect is incorrect. Second, many of the
267 "errors" that Mr. Lazare reports are not errors at all, but accurate counts based on certain
268 assumptions, where alternate assumptions provide different numbers. Third, my
269 background section did contain a limited number of computational errors. These were

270 corrected in a subsequent filing, and ComEd will not be moving into evidence any
271 incorrect numbers.

272 Q. How many substations does ComEd have?

273 A. The precise count depends on what one counts as a "substation." When ComEd installs a
274 substation, the substation gets a unique number. 265 terminals are served by high voltage
275 lines, and 777 terminals by low voltage lines. In most cases, each of these terminals is
276 located within a separate fenced enclosure and constitutes a substation. Each has a
277 unique number on ComEd's system. However, ComEd has a number of fenced
278 enclosures that have facilities comprising two substations, separately numbered, within
279 them. As to their function in ComEd's distribution system, each numbered facility is a
280 substation, the same as if each were located in a separate fenced area, but, for real estate
281 or other reasons, some are located together.

282 So, the count of substations based on the functional substation numbers is 265
283 plus 777, or 1042. The number of fenced enclosures is 217 plus 513, or 730. Neither
284 number is "incorrect."

285 Q. Mr. Lazare states that you used data for substations, underground conductors and
286 transformers as of December 31, 2005. What is your response?

287 A. As discussed above, as of December 31, 2006, ComEd had a total of 730 substations with
288 a distribution function. As also discussed above, as per ComEd's Annual Distribution
289 System Data Book, which was last published as of December 31, 2005, ComEd had 265
290 major substations and 777 local substations, for a total of 1,042 substations. This count is
291 based on the number of terminals, which electrically perform the functions of a separate
292 substation, not the number of fenced enclosures.

293 As to underground conductors, my testimony did cite a figure for December 31,
294 2005. The December 31, 2006 estimate is 48,000 miles of underground conductors.
295 As to non-substation transformers, we used the best numbers we had available to
296 give the Commission a picture of the size and scope of ComEd's system. In the case of
297 non-substation transformers, that is an estimate of the number of transformers actually in
298 operation at the beginning of the test year. This was explained fully in the data request
299 response cited by Mr. Lazare (PL 9.04).
300 Mr. Lazare states that more recent data on non-substation transformers was
301 "clearly available," but that is not true. ComEd has estimates of the number of non-
302 substation transformers on its system, but does not have or need precise counts. As noted
303 in my direct testimony, the approximate number, based on the beginning of the test year,
304 is 587,000. However, 435,856 transformers were shown in ComEd's plant accounting
305 records as of December 31, 2006. This number does not include the many transformers
306 that have been fully depreciated and do not contribute dollars to rate base, but do exist.

307 Q. Mr. Lazare points out that you stated ComEd had added 9 new substations in 2005 and
308 2006. Please explain why, in response to a data request, ComEd identified only 6 new
309 substations.
310 A. Two of the nine substations to which my direct testimony referred, substantial projects
311 involving significant upgrades to our plant, were confined to an existing substation site,
312 and depending on definitions that make no material difference here, could be seen as
313 expansions of existing substations. In addition, Madison TSS 36 was counted as one of
314 the nine substations. In fact, Madison TSS 36 was placed into service in December 2004,
315 not January 2005, and was included in rate base in ComEd's last rate case.

316 Q. How many new substation transformers has ComEd added in 2005 and 2006?

317 A. We have added a total of 82. My direct testimony indicated 75 new substation
318 transformers. That figure did not include three new transformers that replaced failed
319 transformers (Waukegan DCA70, Genoa DCB17, and Austin DCX39), another
320 transformer replaced due to a defect (Uptown DCX319), an unplanned transformer
321 upgrade (Forreston DCB37), and two more transformers not included in the previous
322 count (Hampshire DCB16 and Sycamore SS316).

323 Q. How many new substation transformers will ComEd add in 2007?

324 A. Again, this depends on how one interprets the word "new." As stated in my direct
325 testimony, we plan to install 20 new transformers as part of planned capacity upgrades.
326 However, counting all substation transformers installations, including those at new
327 substations and also upgrades and replacements, the total number is 51.

328 Q. Mr. Lazare says that although you stated in your direct testimony that ComEd has added
329 3,246 miles of overhead conductors since 2004, the real number is 370. Is that right?

330 A. No. We purchased 3,246 miles of our main overhead conductors (that is, not including
331 other wires we use such as guy wires, testing wires, building wires, and thermocouples).
332 The 3,246 miles represents our major wire usage items of both primary and low voltage
333 overhead conductor. That figure includes conductors that replace failing conductors,
334 even though the net increase on the system would not change. The 370 miles, on the
335 other hand, refers to the difference between the amount of overhead primary conductor in
336 ComEd's system on January 1, 2005 and November 8, 2007. So, the larger number is the
337 overhead conductors purchased for installation on the ComEd system for new primary

338 and replacement primary conductors, as well as the many conductors that are not primary
339 conductors. Mr. Lazare's statement that ComEd's numbers are inconsistent is not
340 accurate.

341 Q. Mr. Lazare says that although you stated in your direct testimony that ComEd has added
342 32,577 primary distribution transformers, in a data request you claimed it was
343 approximately 50,000. Can you explain?

344 A. Yes. Mr. Lazare is comparing two figures from different time periods. 32,577
345 transformers were issued from stock (and net of transformers returned to stock) during
346 2005 and 2006 only. The 50,000 figure includes all transformers issued from stock from
347 1/1/05 through 11/16/07, which was responsive to that particular data request.

348 Q. Now that you have clarified these figures, please explain what effect, if any, the
349 clarifications have on the dollar amount of rate base additions ComEd has made?

350 A. None. As I said, the purpose of my testimony on this subject was to give the
351 Commission information on the scope of ComEd's operations, and the scale of ComEd's
352 continuing investment in distribution plant. The dollar amount of ComEd's additions to
353 rate base is computed separately.

354 Q. Does this conclude your rebuttal testimony?

355 A. Yes.