

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

LAZ Parking LTD, LLC )  
 )  
 -vs- )  
 )  
 Commonwealth Edison Company ) Docket No. 12-0324  
 )  
 Complaint pursuant to Sections 9-250 and 10-108 )  
 of the Illinois Public Utilities Act and Section )  
 200.170 of the Rules of Practice of the Illinois )  
 Commerce Commission. )

Direct Testimony of  
**THOMAS R. RUMSEY**  
Retired Meter Mechanic Special  
On behalf of  
Commonwealth Edison Company

February 18, 2016

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1 **I. Introduction and Purpose**

2 **A. Identification of Witness**

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

4 A. Thomas R. Rumsey. I no longer have a business address as I am retired.

5 **Q. By whom were you employed and in what capacity?**

6 A. I was employed by Commonwealth Edison Company (“ComEd”) as a Meter Mechanic  
7 Special for 23 years. I worked for ComEd for a total of 34 years.

8 **B. Purpose of Testimony**

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

10 A. The purpose of my direct testimony is to explain: (1) ComEd’s policies and procedures  
11 regarding pre-installation testing and post-installation inspection of meters and associated  
12 equipment and the errors that testing and inspection will detect; (2) the details of certain  
13 equipment in use at the LAZ Parking LTD, LLC (“LAZ”) facility at 25 N. Michigan Ave.  
14 in Chicago, IL (“LAZ Facility”); and (3) ComEd’s pre-installation testing and post-  
15 installation inspection of that equipment, as well as the performance of that equipment.

16 **C. Summary of Conclusions**

17 **Q. Please summarize the conclusions of your direct testimony.**

18 A. First, I conclude that ComEd’s policies and procedures regarding pre-installation testing  
19 and post-installation inspection of meters and associated equipment are technically sound  
20 and will prevent, detect, and/or allow for correction of incorrect usage registration due to  
21 meter and associated equipment error. These policies and procedures will not prevent  
22 and/or detect under-billing or mis-billing due to other error.

23           Second, I conclude that the meter and associated equipment in use at the LAZ  
24 Facility and at issue in this case was Meter No. 141362866 (“LAZ Meter”) and its three  
25 associated Current Transformers (“LAZ CTs”). This equipment required the use of a  
26 numerical value known as a constant that ComEd inputs into its billing system, known as  
27 the Customer Information & Marketing System (“CIMS”). Unlike the LAZ meter and its  
28 associated CTs, the constant and CIMS are not physical equipment and are not located at  
29 the LAZ Facility.

30           Third, I conclude that ComEd completed pre-installation testing of the LAZ Meter  
31 and LAZ CTs in accordance with ComEd’s policies and procedures. I also conclude that  
32 ComEd’s pattern and practice would have been to conduct a post-installation inspection  
33 when it installed the LAZ Meter. Moreover, this pre-installation testing and post-  
34 installation inspection was not designed to uncover, and would not have uncovered, a  
35 billing error, as happened here.

36           **D. Identification of Exhibits**

37           **Q. Are you sponsoring any attachments to your direct testimony?**

38           A. Yes. I have attached the following exhibits to my testimony:

- 39           • **ComEd Exhibit (“Ex.”) 1.01** is a true and correct copy of my June 6, 2013  
40 affidavit in support of Respondent’s Motion to Dismiss the Complaint on the  
41 Merits.
- 42           • **ComEd Ex. 1.02** is a true and correct copy of my June 29, 2015 affidavit in  
43 support of Respondent’s Motion for Summary Judgment.

- 44           • **ComEd Ex. 1.03** is a true and correct copy of an “Aux Inspection Form” utilized  
45           by Field & Meter Services (“F&MS”) technicians during post-installation  
46           inspections.
- 47           • **ComEd Ex. 1.04** is a true and correct copy of a picture that fairly and accurately  
48           depicts a meter that is the same size and type as the LAZ Meter.
- 49           • **ComEd Ex. 1.05** is a true and correct copy of a picture that fairly and accurately  
50           depicts a three CT installation like the LAZ Facility utilized, but using different  
51           size and type CTs.
- 52           • **ComEd Ex. 1.06** is a true and correct copy of a screen print from ComEd’s pre-  
53           2014 meter shop database, known as Automated Micro Systems (“AMS”),  
54           showing the results of Elster Manufacturing’s testing of the LAZ Meter on  
55           October 25, 2007.
- 56           • **ComEd Ex. 1.07** is a true and correct copy of a screen print from AMS showing  
57           ComEd’s sample testing of the batch of meters containing the LAZ Meter.
- 58           • **ComEd Ex. 1.08** is a true and correct copy of information downloaded from  
59           CIMS showing that ComEd sample tested the batch of CTs containing the LAZ  
60           CTs.
- 61           • **ComEd Ex. 1.09** is a true and correct copy of a screen print from CIMS showing  
62           that LAZ installed the CTs on August 9, 2000.

63 **E. Background and Experience**

64 **Q. Mr. Rumsey, please summarize your duties and responsibilities in your past**  
65 **position.**

66 A. In my past position as Meter Mechanic Special, I was responsible for testing meters and  
67 associated equipment such as CTs, including meters and equipment that were the subject  
68 of customer complaints and theft of service. I am knowledgeable and experienced with  
69 all types of ComEd meters and associated equipment, including but not limited to CTs.  
70 In addition, I provided a significant amount of training to employees in the F&MS  
71 department as well as other ComEd departments. I also served as the Chairman of the  
72 safety council, a company-wide working group, for six years. Prior to my position as a  
73 Meter Mechanic Special, I was a Meter Mechanic from 1987- 1990, and before that I was  
74 a Meter Mechanic Jr. from 1985-1987. I began my career at ComEd as a meter reader,  
75 and I held that position from 1979-1985. With each successive position I took on more  
76 responsibility and was able to perform more tasks associated with my ultimate position as  
77 a Meter Mechanic Special.

78 **II. ComEd's Policies and Procedures Regarding Pre-Installation Testing, Installation,**  
79 **and Post-Installation Inspection of Meters and Associated Equipment**

80 **A. Pre-Installation Testing**

81 **Q. Does ComEd test its meters before installing them?**

82 A. Yes. Pre-installation testing is governed by specific Commission Rules: 83 Ill. Admin.  
83 Code Section 410.140 *et seq.* These Commission Rules detail the protocol for meter  
84 testing, including sample testing procedures. *See, e.g.,* 83 Ill. Admin. Code § 410.180.

85 **Q. Does ComEd sample test its meters?**

86 A. Yes. As a preliminary matter, ComEd requires that its manufacturers test all new meters  
87 prior to shipment to ComEd. Each shipment contains an electronic list of meters with  
88 serial numbers, types, sizes, and test results for each meter. ComEd loads that  
89 information into its Automated Metering Infrastructure (“AMI”) Device Management  
90 database (“ADM”). Then, ComEd sample tests its meters according to 83 Ill. Admin.  
91 Code Section 410.180.

92 **Q. Can you provide details about the sample testing procedure?**

93 A. Yes. ComEd uses the ANSI/ASQC Z1.4-1993 sampling procedure as provided in 83 Ill.  
94 Admin. Code Section 410.180(a)(1). In brief, ComEd selects a specific number of meters  
95 in the shipment to test based on a New Equipment Sample Test Chart. For example, if  
96 the shipment contains between 26 and 50 meters, ComEd will test 5 of the meters. If the  
97 shipment contains between 51 and 90 meters, ComEd will test 8 of the meters. If a  
98 certain percentage of this sample pass ComEd’s accuracy test, then ComEd accepts the  
99 whole shipment. If a certain percentage does not pass ComEd’s accuracy test, then  
100 ComEd takes a larger sample, referred to as a first attribute. If a certain percentage of  
101 this first attribute pass ComEd’s accuracy test, then ComEd accepts the whole shipment.  
102 If a certain percentage does not pass ComEd’s accuracy test, then ComEd takes another  
103 larger sample, referred to as a second attribute. If a certain percentage of this sample pass  
104 ComEd’s accuracy test, then ComEd accepts the whole shipment. If a certain percentage  
105 does not pass ComEd’s accuracy test, then ComEd rejects the whole shipment. In any  
106 event, ComEd rejects individual meters that do not pass inspection.

107 **Q. What is ComEd looking at when it tests the meters?**

108 A. ComEd is trying to ensure that the meter is accurate, *i.e.* that electric usage registers  
109 correctly on the physical meter. Meter error occurs when a meter is tested and found to  
110 be malfunctioning because it is running too fast (over-registering), too slow (under-  
111 registering), non-registering, or on analog meters exhibiting “creep” as that term is  
112 defined in the Commission Rules. *See* 83 Ill. Admin. Code §§ 410.200(c)-(e), (g).  
113 Specifically, meter error exists “whenever any test by any entity or by the Commission  
114 shows a meter to have an average error of more than 2%.” *See* 83 Ill. Admin. Code §§  
115 410.200(a) and (b). Section 410.10 defines “average error” as “the difference between  
116 100% and the average percent registration as defined in Section 410.150(d).” 83 Ill.  
117 Admin. Code § 410.10.

118 **Q. What technical standard does ComEd use to test these samples?**

119 A. ComEd uses Section 410.150, titled “Meter Accuracy Requirements,” which outlines test  
120 criteria for determining the accuracy of service meters as well as providing the limits of  
121 accuracy for the tests. *See* 83 Ill. Admin. Code §§ 410.150(a) and (b). If a meter can  
122 pass the tests presented in Section 410.150(a), within the limits identified in 410.150(b),  
123 it is considered to be accurately recording power usage. *See id.*

124 **Q. What does ComEd do when it encounters average error in excess of 2%, also known**  
125 **as meter error?**

126 A. If the meter is not in service yet, ComEd rejects the meter and sends it back to the  
127 manufacturer. If the meter is in service, ComEd removes the faulty meter from service  
128 and notifies the billing department of the percentage of error.

129 **Q. Does ComEd perform similar sample testing on associated equipment such as CTs?**

130 A. Yes.

131 **Q. Why do certain facilities utilize CTs?**

132 A. Certain customer facilities use more amps – electrical current – than any of ComEd’s  
133 meters can handle. In this type of situation, ComEd utilizes between one and three  
134 identical CTs in conjunction with a certain type of meter, a transformer rated meter, one  
135 CT for each of the meter’s phases or hot wires. The electrical current flows through the  
136 CTs and is “stepped down” to a level the meter can handle.

137 **Q. If the customer utilizes a CT, how does ComEd bill for all of the customer’s usage as  
138 opposed to only the stepped down usage that the meter recorded?**

139 A. In order to properly bill for the customer’s usage, CIMS uses information about the CT:  
140 its size and type, to multiply the meter data to bill for actual usage. This multiplier is  
141 known as a constant.

142 **Q. There seems to be some confusion about the term constant in this case. Can you  
143 provide clarification?**

144 A. Yes. In the context of this case, ComEd witnesses have referred to the billing multiplier I  
145 describe above as a constant, multiplier, meter constant, or billing constant. LAZ has  
146 also referenced a constant that is internal to the meter and is something completely  
147 different and not at issue in this case. This internal meter constant is also called a Kh.

148 **Q. Would it be possible for ComEd to enter the billing constant directly into the meter**  
149 **instead of in CIMS?**

150 A. While entering a billing constant directly into a meter may be theoretically possible, it  
151 would not be practicable for ComEd to do so.

152 **Q. Why is it impracticable for ComEd to enter the billing constant directly into the**  
153 **meter?**

154 A. If ComEd entered billing constants directly into the meters, it would severely limit where  
155 specific meters could be used and/or repurposed and would create supply difficulties for a  
156 utility of ComEd's large size.

157 **B. Installation**

158 **Q. What is ComEd's protocol for installation of meters with associated instrument**  
159 **transformers such as the LAZ Meter and LAZ CTs?**

160 A. ComEd supplies but does not install the type of CTs at issue here. ComEd therefore  
161 brings the CT to the customer's facility for the customer's electrician to install. After the  
162 customer installs the CT, a ComEd technician will come out to the facility to install the  
163 meter. The ComEd technician then enters the CT size and type into CIMS.

164 **C. Post-Installation Inspection**

165 **Q. Does ComEd inspect its meters and associated equipment post-installation?**

166 A. Yes. For meters with associated instrument transformers – such as CTs – post-  
167 installation inspection under load is required by Commission Rule. 83 Ill. Admin. Code  
168 § 410.155.

169 **Q. What does ComEd do during this inspection?**

170 A. A ComEd F&MS technician fills out the “Aux Inspection Form” attached hereto as  
171 ComEd Ex. 1.03. The technician makes sure that the current and voltage wiring from the  
172 affiliated equipment to the meter fitting is correct. Because the inspection is under load,  
173 the technician is able to ensure that the current flowing through the meter is forward as  
174 opposed to backward or reverse. The point of this is to determine – as far as is possible  
175 without actually testing the meter – that the meter is accurately measuring customer  
176 energy consumption.

177 **Q. Does ComEd test its meters post-installation?**

178 A. No.

179 **Q. Why does ComEd not test its meters again, post-installation?**

180 A. Although I am not a lawyer, the plain language of the Commission Rules require a post-  
181 installation *inspection*, not a *test*. 83 Ill. Admin. Code § 410.155. In addition, the  
182 Commission has specific limitations on how often ComEd should be required to test  
183 meters – no more than once every 12 months. *See, e.g.*, 83 Ill. Admin. Code §§ 410.190,  
184 410.195. Requiring back-to-back pre and post installation testing would conflict with this  
185 policy. Moreover, if ComEd has just tested the meter pre-installation, it would be a waste  
186 of time and money to immediately test the meter again post-installation.

187 **D. Error Prevention, Detection, and/or Correction**

188 **Q. Are the rules, policies, and procedures that you discuss above technically sound?**

189 A. Yes. From my perspective as a long-time ComEd F&MS employee, while some of these  
190 rules have not kept pace with available technology, in general the Commission rules

191 provide utilities like ComEd with a framework that strikes the appropriate balance  
192 between accuracy and practicality. Likewise, ComEd's policies and procedures  
193 appropriately implement those Commission rules.

194 **Q. Does that mean that these rules, policies, and procedures prevent, detect, and/or**  
195 **correct for every possible type of error involving a meter?**

196 A. No. Almost every error that results in a change to a customer bill will in some way  
197 involve a meter. But that does not mean that every error is a meter error. Although I am  
198 not a lawyer, it is clear to me that the Commission Rules narrowly and purposefully  
199 define meter error. *See generally* 83 Ill. Admin. Code § 410.10 *et seq.*, *specifically* 83 Ill.  
200 Admin. Code §§ 410.140 - 410.200. In turn, ComEd's policies and procedures regarding  
201 meter testing and inspection are only geared toward preventing, detecting, and correcting  
202 for meter error. They will not detect, prevent, or correct for error related to something  
203 other than a malfunctioning meter and/or its associated equipment.

204 **Q. What other types of error are there?**

205 A. There are two types of errors that result in changes to customers' bills: (1) meter errors,  
206 as discussed above; and (2) unbilled or mis-billed errors, as regulated by Part 280 of the  
207 Commission Rules. *Compare* 83 Ill. Admin. Code § 410.200 *with* § 280.100.

208 **Q. Can you provide more detail about unbilled or mis-billed errors?**

209 A. Yes. Human error related to the billing process may result in billing mistakes. Again,  
210 although I am not a lawyer, Section 280.100, titled "Unbilled Services," applies to  
211 situations where something other than a meter error has caused a customer to be billed  
212 incorrectly, *i.e.*, over-billed or unbilled. Section 280.100 provides in relevant part, that:

- 213 a) A utility may render a bill for services or commodities provided to:  
214  
215 1) A residential customer only if such bill is presented within  
216 one year from the date the services or commodities were  
217 supplied, or  
218  
219 2) A non-residential customer only if such bill is presented  
220 within two years from the date the services or commodities  
221 were supplied.  
222  
223 b) No customer shall be liable for unbilled or mis-billed service after  
224 expiration of the applicable period except in those instances to  
225 which 83 Ill. Adm. Code 500.240(a), 83 Ill. Adm. Code  
226 410.260(c), or the following subsections of this Section apply.  
227

228 83 Ill. Admin. Code § 280.100 (West 1992).<sup>1</sup>

229 **Q. Does ComEd have other policies or procedures in place to detect unbilled or mis-**  
230 **billed errors?**

231 A. Yes. As discussed in detail by ComEd witness Ms. Marisa Spitz (ComEd Ex. 3.0),  
232 ComEd utilizes other procedures, such as reports generated by CIMS, to detect and  
233 correct unbilled or mis-billed errors.

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<sup>1</sup> This section was subsequently amended in 2014. As amended, Section 280.100 is now titled “Previously Unbilled Service” and provides in relevant part:

- a) Intent: This Section provides for the billing and payment of previously unbilled service caused by errors in measuring or calculating a customer's bills.
- b) Time Limits:
- 1) Bills for any utility service, including previously unbilled service, supplied to a residential customer shall be issued to the customer within 12 months after the provision of that service to the customer.
- 2) Bills for any utility service, including previously unbilled service, supplied to a non-residential customer shall be issued to the customer within 24 months after the provision of that service to the customer.

234 **Q. Why does this matter?**

235 A. This is important because Part 410 contains the pre-installation testing and post-  
236 installation inspection requirements that a utility must meet before the utility can issue a  
237 billing adjustment due to meter error. 83 Ill. Admin. Code § 410.200(h)(1) (“in no case  
238 shall an adjustment to a customer’s billing be made for under-registration if all testing  
239 and accuracy requirements of this Part have not been met.”). Part 280 does not contain  
240 those testing and accuracy requirements. So whether ComEd met the requirements  
241 discussed in sections II.A. and II.C. of my testimony above is only directly relevant if the  
242 error at issue here is a meter error as opposed to an unbilled or mis-billed error.

243 **III. The LAZ Meter and Associated Equipment**

244 **Q. What equipment was in use at the LAZ facility?**

245 A. The LAZ Meter and the LAZ CTs, among other equipment, were in use at the LAZ  
246 Facility. I have attached hereto as ComEd Ex. 1.04 a picture of a meter that is the same  
247 size and type as the LAZ Meter. I have also attached hereto as ComEd Ex. 1.05 a picture  
248 of a three CT installation like the LAZ Facility utilized, but using different size and type  
249 CTs.

250 **Q. Why did the LAZ Facility utilize CTs?**

251 A. The LAZ Facility was using more amps than any of ComEd’s meters could handle.

252 **Q. What was the ratio of energy flowing through the LAZ CTs and the LAZ Meter?**

253 A. For every 3,000 amps that flowed through the LAZ CTs, only 5 amps flowed through to  
254 the LAZ Meter. Thus, ComEd should have taken the actual usage registered on the LAZ

255 Meter and multiplied it by 600 (3,000 divided by 5) to generate a bill for the correct  
256 usage.

257 **Q. How would you express this ratio as a constant?**

258 A. This ratio would be expressed as a constant of 600 kilowatt hours (“kWh”). The constant  
259 also has a second component for the commercial demand charge of 0.18 kilowatts  
260 (“kW”). This 0.18 kW figure is determined using the 600 kWh figure. Ms. Spitz  
261 explains this formula in more detail.

262 **Q. Can you provide a picture of a constant like you did with the meter and the CTs?**

263 A. No, the constant is not a tangible piece of equipment. It is a piece of information  
264 generated by CIMS, completely separate from the meter.

265 **IV. Pre-Installation Testing, Installation, and Post-Installation Inspection of the LAZ**  
266 **Meter and Associated Equipment**

267 **A. Pre-Installation Testing**

268 **Q. Did ComEd perform pre-installation testing on the LAZ Meter?**

269 A. Yes. The manufacturer, Elster Manufacturing, tested the meter on October 25, 2007.  
270 ComEd entered that test data into AMS, and attached hereto as ComEd Ex. 1.06 is a  
271 screen print showing that testing information. As indicated on ComEd Ex. 1.06, the test  
272 results were: 100.01% in Full Load; 100.01% in Power Factor, and 100.00% in Light  
273 Load. In addition, as shown on ComEd Ex. 1.07, the LAZ Meter was part of a shipment  
274 that ComEd tested through its sampling procedure. Average percent registration results  
275 between 98% and 102% are considered accurate and acceptable by the Commission. *See*  
276 83 Ill. Admin. Code § 410.180(f).

277 **Q. What do these test results tell you?**

278 A. These test results indicate that the LAZ Meter was accurately registering power usage.  
279 Therefore, the LAZ Meter did not experience meter error.

280 **Q. Did ComEd perform pre-installation testing on the LAZ CTs?**

281 A. Yes. Similar to the LAZ meter, the manufacturer, General Electric, would have tested the  
282 CTs prior to shipping them to ComEd. In addition, as shown on ComEd Ex. 1.08, the  
283 LAZ CTs were part of a shipment that ComEd tested through its sampling procedure.  
284 ComEd would not have accepted this shipment otherwise.

285 **Q. What does this evidence tell you?**

286 A. This evidence indicates that the LAZ CTs were accurately stepping down power usage.  
287 Therefore, the LAZ CTs did not experience associated equipment error.

288 **Q. Is there anything else that supports your conclusions?**

289 A. Yes. After ComEd corrected the constant in CIMS, the LAZ Meter and LAZ CTs  
290 continued in service at the LAZ Facility. If there had been any ComEd equipment error,  
291 ComEd would have removed the equipment.

292 **B. Installation**

293 **Q. When did ComEd install the LAZ Meter?**

294 A. ComEd would have initially installed a meter at the LAZ Facility when LAZ installed the  
295 LAZ CTs. Subsequently, ComEd exchanged that meter and installed the LAZ Meter on  
296 December 14, 2007.

297 **Q. When did LAZ install the LAZ CTs?**

298 A. As indicated on the screen prints from CIMS attached hereto as ComEd Ex. 1.09, LAZ  
299 installed the LAZ CTs on August 9, 2000.

300 **C. Post-installation Inspection**

301 **Q. Did ComEd perform a post-installation inspection of the LAZ Meter and associated  
302 equipment?**

303 A. I have not been able to locate any records memorializing a post-installation inspection.  
304 However, it would have been ComEd's pattern and practice, as I detailed above, to  
305 perform such an inspection.

306 **D. Accuracy of LAZ Equipment**

307 **Q. Was the LAZ Meter experiencing meter error?**

308 A. No. The LAZ Meter accurately recorded the stepped-down usage flowing through the  
309 LAZ CTs to the LAZ Meter. There was no under-registration, over-registration, non-  
310 registration, or creep.

311 **Q. Were the LAZ CTs experiencing associated equipment error?**

312 A. No. The LAZ CTs were accurately stepping down the usage flowing through the LAZ  
313 CTs to the LAZ Meter. They did not cause under-registration, over-registration, non-  
314 registration, or creep.

315 **Q. If there was no equipment error, what was the error?**

316 A. As explained in detail by ComEd witness Ms. Spitz, the issue here is that LAZ was billed  
317 for only a fraction of its actual usage because ComEd used the wrong constant in CIMS.

318 No matter what constant is used, however, the registration of usage by the meter remains  
319 unaffected.

320 **Q. Does this conclude your direct testimony?**

321 A. Yes.