

STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

COMMONWEALTH EDISON COMPANY :
 :
Annual formula rate update and revenue : Docket No. 16-0259
requirement reconciliation authorized by Section :
16-108.5 of the Public Utilities Act. :

Rebuttal Testimony of
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1 **I. INTRODUCTION**

2 **A. Witness Identification**

3 **Q. What is your name and prior participation in this docket?**

4 A. My name is Christine M. Brinkman. I am the Director, Rates and Revenue Policy of
5 Commonwealth Edison Company (“ComEd”). I previously submitted pre-filed direct
6 testimony in this Docket (ComEd Exhibit (“Ex.”) 1.0). My background, professional
7 qualifications, duties, and responsibilities are unchanged.

8 **B. Summary of Testimony**

9 **Q. What issues do you address in your rebuttal testimony?**

10 A. I respond to testimony submitted by the Illinois Attorney General’s Office (“AG”)
11 concerning voltage optimization (“VO”) and data analytics. I testify that:

12 • In this proceeding, ComEd seeks Illinois Commerce Commission (“ICC” or
13 “Commission”) approval of the updated costs and other formula rate inputs in
14 order to set charges for the 2017 rate year. The cost inputs include ComEd’s
15 actual 2015 costs and 2016 projected plant additions. Much of the testimony of
16 Messrs. Fagan and Chang (AG Ex. 2.0) do not relate to those costs or the 2017
17 rates. For reasons I explain and also legal reasons to be presented in ComEd’s
18 briefs, those issues have no place in this proceeding.

19 • The broad claims Messrs. Fagan and Chang make about the prudence of ComEd’s
20 long-term plans for VO and ComEd’s overall data analytics strategy are
21 unfounded and incorrect. ComEd does not intend to ask the Commission to take

22 those issues up here, in a proceeding where they are not at issue, and waives no
23 rights or arguments in that respect. Together with the testimony of ComEd
24 rebuttal witness Mr. John Prueitt (ComEd Ex. 10.0), my testimony also briefly
25 corrects the record.

26 • The Commission should reject criticisms of the specific VO validation project
27 now under development and which does account for about \$4 million of the total
28 revenue requirement at issue. That study is appropriate and cost-effective.
29 Mr. Prueitt also addresses aspects of the study.

30 **Q. What are the attachments to your rebuttal testimony?**

31 A. ComEd Exhibit Ex. 8.01 contains two of ComEd's responses to Data Requests from the
32 AG, discussing that the VO validation project is still under development.

33 **Q. What subjects are other ComEd witnesses presenting in their rebuttal testimony?**

34 A. ComEd is also presenting the rebuttal testimony of the following witnesses:

35 • Mr. Chad Newhouse, ComEd Ex. 9.0, reviews ComEd's overall revenue
36 requirement calculations, and responds to proposed disallowances presented by
37 ICC Staff and AG witnesses. He also summarizes the specific findings and
38 conclusions that the Commission should adopt concerning ComEd rate year
39 revenue requirement and original cost of plant.

- 40 • Mr. John Prueitt, ComEd Ex. 10.0, addresses the technical engineering aspects of
41 ComEd’s voltage optimization validation project in response to AG witnesses
42 Fagan and Chang’s proposals that ComEd has not designed a robust project.
- 43 • Ms. Anastasia Polek-O’Brien, ComEd Ex. 11.0, responds to AG witness
44 Mr. Michael L. Brosch concerning his proposal to disallow costs related to the
45 Telephone Consumer Protection Act (“TCPA”) class action lawsuit.

46 **II. THE EIMA RATEMAKING STRUCTURE GOVERNS THIS DOCKET AND**
47 **DEFINES ITS PURPOSE**

48 **Q. What is the role of this proceeding in the Energy Infrastructure Modernization Act**
49 **(“EIMA”) ratemaking process?**

50 A. This is an annual rate update and revenue requirement reconciliation proceeding. It is the
51 vehicle in which the Commission reviews ComEd’s updated costs and other cost and
52 related data that are inputs to the approved rate formula, reviews the reasonableness and
53 prudence of those costs, and verifies that the calculations resulting in updated rates are
54 correct.

55 **Q. Does that role in the ratemaking process include review and prospective regulation**
56 **of future business strategies that have not affected inputs to the proposed rates?**

57 A. No. Under the EIMA ratemaking structure, the rates established here will ultimately
58 recover ComEd’s actual costs of providing delivery service in the rate year –here, 2017 –
59 and recover or return any reconciliation adjustment, with interest. The 2017 rates are in
60 this structure set based on the actual costs incurred in 2015 and a projection of capital

61 investments during 2016. Any difference from the actual 2017 costs is subject to later
62 reconciliation. In EIMA's own words (220 ILCS 5/16-108.5(d)):

63 Within 45 days after the utility files its annual update of cost inputs to the
64 performance-based formula rate, the Commission shall have the authority,
65 either upon complaint or its own initiative, but with reasonable notice, to
66 enter upon a hearing concerning the prudence and reasonableness of the
67 costs incurred by the utility to be recovered during the applicable rate year
68 that are reflected in the inputs to the performance-based formula rate
69 derived from the utility's FERC Form 1.

70 **Q. Does the direct testimony of any party or witness address other, unrelated issues?**

71 **A.** Yes. Messrs. Fagan and Chang devote the majority of their testimony to broad arguments
72 about two aspects of ComEd's business and future investments but that do not affect the
73 proposed delivery services rates at issue or any underlying cost or other input.

74 First, Messrs. Fagan and Chang claim that ComEd has thus far invested *too little*
75 in VO. (AG Ex. 2.0, 4:18-20). However, they do not argue for any increase (or
76 decrease) in the rates or revenue requirements at issue as a result. Instead, they ask the
77 Commission to direct ComEd to conduct a more "comprehensive and robust" validation
78 study of future VO deployment in the belief that the careful validation study ComEd
79 designed might limit future long-term investments in VO technology (AG Ex. 2.0, 5:10-
80 17).

81 Second, Messrs. Fagan and Chang ask the Commission to require ComEd to
82 develop a long-term plan to fully utilize certain data that is becoming available as a result
83 of the installation of smart meters and modern distribution infrastructure (AG Ex. 2.0,
84 24:5-7). Implicit in their recommendation is the incorrect belief that ComEd has no

85 adequate plan. But, regardless, they do not argue that ComEd’s costs or rates at issue are
86 excessive or somehow not fully recoverable.

87 Those arguments are outside the scope of this proceeding. They do not affect any
88 of the updated costs included in the 2017 Rate Year Net Revenue Requirement. A
89 formula rate update proceeding is not tasked with exploring future technology or business
90 strategies that have not affected the costs proposed to be recovered through the updated
91 rates being reviewed. It is not a long-term business planning docket.

92 **Q. How do Messrs. Fagan and Chang try to relate those arguments to the subject**
93 **matter of this proceeding?**

94 A. Messrs. Fagan and Chang appear to conceive of the issue as one of magnitude, stating
95 that “the actual dollar amounts that the Company has spent on the VO and data analytics
96 issues are small relative to the overall rate case. However, these investments have long-
97 term importance to prudent use of a modernized distribution system...” (AG Ex. 2.0,
98 6:20-23). In so doing, they do not address the fundamental point that they do not
99 conclude that ComEd’s updated costs are not reasonable, prudent, and recoverable.
100 Indeed, they acknowledge that they “have no basis to question the prudence of the
101 specific [data analytics] investments in this proceeding” (AG Ex. 2.0, 29:13-15). While
102 the legal points related to these issues will be discussed in briefs, their testimony about
103 long-term VO and data analytics strategies are unrelated to the costs and other inputs at
104 issue in this proceeding. Other issues, for example, relating to long-term technological or
105 business planning, are not properly addressed by the Commission here.

106 **III. VOLTAGE OPTIMIZATION**

107 **Q. Please turn first to VO. Do Messrs. Fagan and Chang challenge ComEd's actual**
108 **2015 VO costs or its projected 2016 plant additions relating to VO?**

109 A. No. They do not recommend that any of the costs or investments included in ComEd's
110 revenue requirement should be disallowed as imprudent or unreasonable, or that rates
111 recovering those costs should be reduced. To the contrary, they recommend that ComEd
112 spend more money on voltage optimization initiatives and recover those costs as well
113 through the formula rate. Moreover, while Messrs. Fagan and Chang (AG Ex. 2.0, 10: 5-
114 6) claim that "finding the appropriate technologies and investments to implement voltage
115 optimization where prudent on the Company's system" is part of this case, that is only
116 accurate to the extent their claims relate to the costs and rates at issue.

117 As I explained in Section II above, the Commission has before it ComEd's actual-
118 cost revenue requirement for 2015 and an initial projection of the 2017 revenue
119 requirement based by law on those same actual 2015 costs plus projected 2016 capital
120 additions. The prudence and reasonableness of those costs, and the other formula rate
121 inputs, are at issue, but the scope, speed, and nature of ComEd's strategy for long-term
122 investment in VO are not. Those decisions are not inputs that affect the costs and rates
123 before the Commission and this proceeding is not a policy inquiry into VO.

124 **Q. Do Messrs. Fagan and Chang present any evidence that ComEd acted imprudently**
125 **or unreasonably, including with respect to any cost or rate at issue?**

126 A. No. A prudent utility action is one that a reasonable utility manager or executive could
127 take based on the information reasonably known to that person at the time the decision

128 was made. Messrs. Fagan and Chang attempt to argue that based on what they now claim
129 to be “known,” that ComEd should have made *greater* investments in VO. However,
130 they don’t address the information known at the time past investment decisions were
131 made. Further, they don’t make a case that the decision to conduct studies in advance of
132 full-scale investment, as ComEd is doing, is a strategy outside of the scope of reasonable
133 decisions. This type of strategy is important considering, as they acknowledge, that the
134 increased costs would have translated to increased delivery services rates for customers.
135 Much of their testimony simply states a subjective view that, in their opinion, VO
136 investment should be accelerated, and does not focus on the prudence of specific
137 decisions or ComEd costs, nor the specific costs in the relevant revenue requirements.

138 **Q. Messrs. Fagan and Chang claim “that the investments proposed by [ComEd] and**
139 **the amount of money that has been spent thus far on voltage optimization have been**
140 **unreasonably small.” AG Ex. 2.0, 4:18-20. Is this conclusion valid?**

141 **A.** Their conclusion is unfounded. ComEd has invested and continues to invest in
142 understanding VO, the technologies and tools that are available to implement it, and how
143 best to implement a full scale deployment most reliably and cost-effectively. A review of
144 the history shows that ComEd is accomplishing this through a reasonable, staged process,
145 and there is no basis for concluding that ComEd’s investments have been unreasonably
146 small or that process could have been prudently sped up by spending more. Mr. Prueitt
147 (ComEd Ex. 10.0) explains why ComEd’s process is reasonable and prudent from an
148 engineering and planning perspective, and points out errors and omissions in Messrs.

149 Fagan and Chang’s conclusions, including with respect to ComEd’s existing investments
150 and activities.

151 There has been Commission review and input throughout. The Commission, in
152 Docket No. 13-0495¹, stated that a review of the record leads the Commission to believe
153 that a VO feasibility study should be pursued and could in fact result in many direct and
154 indirect benefits. In accordance with ComEd’s 2014 Smart Grid Advanced Metering
155 Annual Implementation Progress Report (“AIPR”), a VO Feasibility study was
156 completed by Applied Energy Group (“AEG”) in December 2014. This Study was
157 submitted as part of the 2015 AIPR filing².

158 The AEG study, in turn, recommended that ComEd then conduct a VO validation
159 project to demonstrate the proposed VO implementation strategies, verify estimated VO
160 factors, and develop simplified VO Measurement & Verification procedures on ComEd’s
161 distribution system. As indicated in the 2015 AIPR filing³, ComEd is planning to conduct
162 just such a VO validation project. As noted in ComEd’s discovery responses and
163 included in ComEd Ex. 8.01, the design of the validation project is preliminary as
164 ComEd is at this time completing the Request for Proposal process in order to select a
165 vendor. Once a vendor is selected, ComEd will finalize the details of the project with an
166 anticipated completion by the end of the year.

167 **Q. Are there opportunities for the Commission to properly review VO policies and**
168 **long-term plans outside of a formula rate update?**

¹ Docket No. 13-0495, Approval of ComEd’s Energy Efficiency and Demand Response Plan, Order at 95.

² ComEd’s 2015 AIPR, Appendix A, pages A-10 through A-140.

³ ComEd’s 2015 AIPR, Appendix A, page A-13.

169 A. Yes. Most notably, ComEd annually files with the Commission an AIPR. In its 2016
170 report, ComEd discussed its voltage optimization validation project and indicated that it
171 would address the costs of that program in the annual formula rate update. My
172 understanding is that neither the AG, nor any other party, sought to challenge or
173 commented on ComEd's 2016 AIPR during the applicable time period.

174 Q. **Finally, Messrs. Fagan and Chang also criticize ComEd, concluding that ComEd's**
175 **proposal to recover \$4M of validation project costs in 2017 rates is somehow**
176 **inconsistent with supporting a broader strategy requiring a \$500M investment for**
177 **full implementation (AG Ex. 2.0, 14:3-10). Is this a fair conclusion?**

178 A. No. While it is not the role of this proceeding to inquire into the substance of legislative
179 proposals, ComEd's legislative proposals concerning VO reflect a belief that the public
180 can benefit if ComEd can make significant long-term investments in VO on the terms
181 proposed. But, the proposed legislation does not address ComEd's actual 2015 costs or
182 the 2016 projected plant additions at issue. Nothing in the proposed legislation suggests
183 that costs at issue here are anything other than the costs of prudent current steps. And,
184 supporting legislation authorizing investment, does not call into question the value of
185 validating technologies. Real-world examples confirm that. For example, ComEd
186 performed an AMI pilot before supporting EIMA's provision for investment in a full
187 scale deployment. Also, the EIMA legislation passed in late 2011, although ComEd did
188 not file its Infrastructure Investment Plan until January 2012.

189 I also note that the AEG report, whose recommendations are among those to be
190 validated, describes the broader and longer-term strategy for full scale deployment, and

191 the \$500M of investment stated in the proposed legislation is based on the findings of
192 that study. Witnesses for the AG seem to be aware of this report as they note it and the
193 different options in their testimony (AG Ex 2.0, 14:19-21), however they give no credit to
194 the study itself. The AEG report recommends performing a validation project and that is
195 what ComEd is doing. And, as EIMA itself successfully illustrated, obtaining legislative
196 authorization for investment in promising technologies need not await the completion of
197 detailed plans identifying the investments.

198 **IV. DATA ANALYTICS**

199 **Q. Messrs. Fagan and Chang state that ComEd does not “appear to” have an overall**
200 **data strategy (AG Ex. 2.0, 23:16-17). Does ComEd lack any such strategy?**

201 **A.** No, and their claim that it appears so is unfounded. ComEd carefully considers present
202 and developing technologies as part of its planning process. Moreover, it is evident that
203 ComEd has a data analytics strategy from the data responses ComEd provided to the AG
204 including the response and materials provided to the AG that Messrs. Fagan and Chang
205 attach to their testimony (AG Ex. 2.4). AG Ex. 2.4 confirms that “Potential business
206 intelligence and data analytics opportunities and initiatives have been, and remain today,
207 under study across multiple departments at ComEd” and other Exelon Utilities, and
208 identifies work in Business Intelligence and Data Analytics, AMI Operations, and
209 Revenue Protection. Nothing in that response suggests that ComEd in any way lacks a
210 strategy. Indeed, the attachment included in AG Ex. 2.4 is a presentation given by Carol
211 Bartucci, ComEd’s Chief Information Officer and Vice President, Information
212 Technologies of Exelon, at an IEEE Conference. The presentation entitled “Data

213 Analytics: Putting Smart Grid Data to Work” addresses in greater detail the business
214 intelligence/data analytics strategy (“BI/DA”) that is being executed on at ComEd and the
215 other Exelon Utilities. That presentation discusses guiding principles, a data analytics
216 platform strategy and five functional domains within the strategy. It also lists a range of
217 high-level use cases the Exelon Utilities have considered.

218 **Q. Can you summarize ComEd’s overall data strategy?**

219 **A.** Yes. ComEd’s BI/DA strategy includes development of a common data management
220 layer. This layer functions like a bus and allows applications to easily connect to the
221 data. The applications or “domains” ComEd is evaluating to connect to the data
222 management layer consist of applications related to the customer, grid and business
223 support functions. Recognizing that data analytic needs constantly evolve with business
224 needs, ComEd is focused on these three main areas as they define the range of business
225 intelligence and data analytics needs we currently have, they will help us gain insight into
226 the types of business intelligence and data analytics applications that are available, and
227 they will help to determine as a whole how we can think about sequencing the solution
228 options.

229 **Q. Messrs. Fagan and Chang state that ComEd “merely implementing discrete projects**
230 **is not in and of itself a strategy” (AG Ex. 2.0, 23:18). Is this a valid conclusion?**

231 **A.** No. The data responses and attachments neither make such a statement nor describe
232 circumstances from which that conclusion could be drawn. In particular, nothing about
233 ComEd’s (and Exelon Utilities’) exploration of various technological options warrants
234 that conclusion. To the contrary, organizations test or pilot discrete solutions in order to

235 understand the technology, identify what specific benefits the organization may be
236 looking for or may receive from a tool, and highlight gaps in new technology both to help
237 pave the road for enhancements and to identify any areas which an additional
238 functionality may be required. ComEd has evaluated, piloted, and installed point to point
239 solutions in order to do just that. Based on the point solutions and pilot studies, ComEd
240 has gained a significant understanding of how to obtain value from data driving the
241 holistic approach to analytics.

242 The BCG Benchmarking study, attached to the AG testimony as AG Ex. 2.6, also
243 discusses (at page 5) the journey for data analytics from exploration to investment and
244 final maturation. It notes that, in the Exploring phase, companies evaluate and assess Big
245 Data opportunities. Just as with operational initiatives, like AMI, information technology
246 professionals also pilot technology to study it before moving forward with full
247 deployment.

248 **Q. Does the BCG Benchmarking study identify any other facts that undermine the**
249 **conclusion Messrs. Fagan and Chang seek to draw?**

250 **A.** Yes. On page 3 of the study, presented in April 2015, BCG discusses the overall
251 maturity of the industry with regard to data analytics and notes that the “majority of
252 utilities are in the very early stages of the BI/DA journey”. ComEd is not an outlier in
253 this. Moreover, as noted in AG Ex. 2.4, the BI/DA market is extremely fluid and, at the
254 present time, there are “no clear winning technologies or solutions across the utility
255 industry...” ComEd’s decision to proceed with care is consistent with just such a
256 situation that “places a premium on ... strategies that offer optionality.” (AG Ex. 2.4

257 at 6). ComEd's strategy therefore *includes* flexibility and careful evaluation of tools, a
258 feature that is particularly appropriate. That flexibility does not, as Messrs. Fagan and
259 Chang claim, suggest that ComEd lacks such a strategy.

260 V. **CONCLUSION**

261 Q. **Does this complete your rebuttal testimony?**

262 A. Yes.