

STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

Illinois Commerce Commission	:	
On its Own Motion	:	
v.	:	Docket No. 14-0384
Commonwealth Edison Company	:	
Investigation of Commonwealth Edison	:	
Company's Cost of Service for Low-Use	:	
Customers In Each Residential Class	:	

Direct Testimony of
ROBERT GARCIA
Director,
Regulatory Strategies and Services
Commonwealth Edison Company

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1 **I. INTRODUCTION**

2 **A. Witness Identification**

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

4 A. My name is Robert Garcia. My business address is 440 S. LaSalle St., Chicago, Illinois
5 60605.

6 **Q. By what entity and in what position are you employed?**

7 A. I am employed by Commonwealth Edison Company (“ComEd”) in the position of
8 Director, Regulatory Strategies and Services.

9 **B. Purpose of Testimony**

10 **Q. What is the purpose of this proceeding?**

11 A. As set forth in Finding 5 of the Illinois Commerce Commission’s (“Commission” or
12 “ICC”) Order initiating the instant proceeding (*ICC v. Commonwealth Edison Co.*,
13 Docket No. 14-0384 (Order, May 20, 2014) (“Initiating Order”)), the purpose of this
14 proceeding is “to investigate the impact of a SFV [(a straight-fixed variable (“SFV”))] rate
15 design on low-use residential customers, and in which [ComEd] should provide evidence
16 regarding the cost of service for low-use customers.” *Id.* at 3. Ultimately, the question
17 before the Commission is whether and if so, to what extent, residential customers should be
18 expected to make a minimum contribution for the provision and maintenance of distribution
19 facilities.

20 It is my understanding that this case does not pertain to any non-residential
21 customer classes, such as the Watt-Hour Delivery Class, which have been included in
22 previous proposals concerning a movement toward a SFV rate design.

23 **Q. What are the purposes of your direct testimony?**

24 A. The purposes of my direct testimony are to:

25 (1) Provide background concerning SFV rate design and the history of such rate
26 design in Illinois;

27 (2) Address why the movement toward a SFV rate design should be restored for
28 ComEd's delivery service rates, the appropriateness of which was discussed at
29 length in the Order entered by the Commission in Docket No. 10-0467, and to
30 address some of the concerns raised by the Commission regarding the
31 continuation of the SFV rate design in its Order entered in Docket No. 13-0387
32 (*hereinafter*, "2013 Rate Design Investigation Case" or "2013 RDI Case");

33 (3) Present ComEd's position with respect to the creation of low-use subgroups under
34 a SFV rate design;

35 (4) Present ComEd's proposed timing of implementing subgroups, if the Commission
36 so orders; and

37 (5) Introduce the testimony of the other witnesses testifying on behalf of ComEd and
38 sponsoring the evidence regarding the cost of service for low-use customers.

39 **Q. Before continuing, does ComEd have any comments to offer concerning the**
40 **Commission's previous findings regarding non-compliance, as set forth in the**
41 **Initiating Order?**

42 A. Yes. ComEd appreciates the opportunity that the Commission has provided by initiating
43 this proceeding to revisit this important issue and to rectify any misunderstandings
44 concerning the analyses that the Commission had expected and the analyses that ComEd
45 presented in the 2013 RDI Case. I believe the analyses presented and prepared under my

46 direction will meet the Commission’s expectations, as they were articulated in the
47 Initiating Order and the Order in the 2013 RDI Case. In fact, not only has ComEd
48 prepared new supporting load studies employing supplemental usage data obtained from
49 Advanced Metering Infrastructure (“AMI”) meters and illustrative embedded cost-of-
50 service study (“ECOSS”) to prepare the illustrative delivery service charges for
51 incorporating potential low-use subgroups, ComEd has also prepared illustrative ECOSS
52 and associated delivery service charges for a low-use, medium-use, and high-use
53 subgroup rate structure for the Commission’s consideration.

54 **C. Summary of Conclusions**

55 **Q. What, in summary, are your conclusions?**

56 A. It is appropriate for all residential customers to make a minimum financial contribution
57 toward the provision and maintenance of ComEd’s distribution facilities. To that end,
58 ComEd proposes the restoration of a rate design that more appropriately reflects fixed
59 and variable delivery-service costs, providing for greater recovery of fixed costs through
60 fixed monthly charges. Specifically, ComEd proposes that for each of the four residential
61 delivery classes, the fixed charges, i.e., the Customer Charge (“CC”) and the Standard
62 Metering Service Charge (“SMSC”), should be set to recover at least 50% of the fixed
63 costs allocated to such class, including a portion of the distribution facilities costs, except
64 where the CC and the SMSC recover more than 50% of the fixed costs allocated to such
65 class without including a portion of the distribution-facilities costs. Such a rate design
66 would reestablish minimum levels of contributions toward the cost of distribution

67 facilities for some residential classes and restore the recovery of at least 50% of the fixed
68 costs through fixed monthly charges.

69 In light of the alternative subgroup structures presented for consideration, the
70 movement toward a SFV rate design should be restored with or without the creation of
71 subgroups. Based on the load studies performed, differences in load profiles do exist
72 between low-use and the other customers in some classes, which may warrant the
73 establishment of low-use subgroups if the Commission concludes the results reflect cost
74 causation principals and offset any concerns with regard to customer confusion and
75 dissatisfaction.

76 **D. Background and Qualifications**

77 **Q. What are your educational background and professional experience?**

78 A. I have an Artium Baccalaureus (Bachelor of Arts) degree in Political Science and French
79 from Wabash College (Crawfordsville, Indiana) and a Master of Public Administration
80 degree from the School of Public and Environmental Affairs at Indiana University
81 (Bloomington, Indiana) with concentrations in Policy (Quantitative) Analysis and
82 International Affairs. I also obtained a Certificat De Langue Et Civilisation Française
83 from the Université de Paris – Sorbonne (Paris, France) and, as part of my graduate
84 studies, studied French and European government at the École Nationale
85 D'Administration (Paris, France).

86 I have been employed by ComEd since April 2001. I began my employment with
87 ComEd in the Regulatory Department as a Regulatory Specialist and moved on to the
88 positions of Senior Regulatory Specialist and Manager of Regulatory Strategies and
89 Solutions before assuming my current position in January 2013.

90 Prior to joining ComEd, I worked for nearly nine years at the Commission,
91 beginning in 1992 as an intern in what was then the Office of Policy and Planning and
92 ending in 2001 as the senior policy advisor to a Commissioner. I initially joined the
93 Commission Staff through the James H. Dunn Memorial Fellowship program, a one-year
94 program sponsored by the Office of the Governor. Through this Fellowship, I also held
95 short-term positions in the Bureau of the Budget and the Governor's Legislative Office.

96 **Q. What are your current duties and responsibilities?**

97 A. I am responsible for ComEd's Regulatory Strategies and Services department. I oversee
98 the activities of the Regulatory Strategies and Solutions as well as Regulatory
99 Compliance and Performance Standards. My department is responsible for the analysis
100 and development of strategic policy for ComEd's distribution business and for the
101 development of the cost of service study. These responsibilities give me a central role in
102 the development of many of ComEd's new tariffs, services and programs, as well as the
103 development of new regulated proposals, such as a SFV rate design.

104 **Q. Have you previously testified before the Commission?**

105 A. Yes. I have testified in support of ComEd's petition for approval of its on-bill financing
106 program in Docket No. 10-0091; ComEd's proposed tariff provisions for the purchase of
107 receivables with consolidated billing in Docket No. 10-0138; ComEd's 2010 general rate
108 case in Docket No. 10-0467 ("2010 Rate Case"); ComEd's proposed tariff for the
109 purchase of uncollectibles in Docket No. 11-0435; ComEd's proceedings to determine
110 the applicability of Section 16-125(e) of the Public Utilities Act to events caused by the
111 storms experienced on July 23, 2010 in Docket No. 11-0289, and on February 1, 2011 in

112 Docket No. 11-0662; the four-year evaluation of ComEd's residential real-time pricing
113 program in Docket 11-0546; Phases I and II of the proceedings to approve ComEd's
114 proposed peak time rebate program in Docket No. 12-0484; and most recently in the
115 proceedings to approve charges for the costs incurred due to customers refusing or
116 barring the deployment of AMI meters in Docket No. 13-0552. In addition, I have
117 testified on behalf of Staff in Docket No. 94-0094, a rulemaking proceeding to amend
118 Parts 415 and 425 of the Commission's rules to address the treatment of Clean Air Act
119 emission allowances.

120 **E. Introduction of Witnesses and Exhibits**

121 **Q. Who are the other witnesses testifying on behalf of ComEd?**

122 A. Charles S. Tenorio, Manager, Regulatory Strategies and Solutions, presents (1) general
123 information on how ComEd's ECOSS allocates costs and how ComEd revises its ECOSS
124 to include a low-use subgroup in each of the four residential delivery service classes; (2)
125 usage data to examine the electric usage characteristics of residential customers that may
126 be considered low-use customers, (3) how such a low-use subgroup may be defined, (4)
127 the illustrative ECOSSs and alternative rate design calculations; and (5) additional
128 calculations to show typical bill impacts.

129 Sherman J. Elliott, Principal Consultant with SJE Consulting and former ICC
130 Commissioner provides additional policy context in support of a movement toward a
131 SFV rate design, including a view of Illinois' experience with SFV rate design as well as
132 decoupling mechanisms and analyses demonstrating why such a rate design is beneficial
133 to both customers and ComEd.

134 **Q. Are there any attachments to your direct testimony?**

135 A. Yes. ComEd Exhibit (“Ex.”) 1.01 provides the energy usage distribution of residential
136 customers by delivery class and by three subgroups for total residential customers, low-
137 income residential customers, and low-income residential customers located in the City
138 of Chicago.

139 **II. LOW-USE CUSTOMERS**

140 **Q. For purposes of ComEd’s testimony, how is “low-use customers” defined?**

141 A. After months of consideration, ComEd defines low-use customers for each residential
142 delivery class as those customers with the maximum monthly energy usage for the
143 previous 12 monthly billing periods (“MMU”) at or below the threshold, which was
144 determined to be the highest MMU of the 25th percentile of customers in 2013 for that
145 class.

146 **Q. What is the rationale for defining low-use customers in this manner?**

147 A. By its very nature, the term “low-use” is a relative concept – not an absolute concept.
148 Therefore, defining such a group based on usage is inherently subjective. By definition,
149 the low-use subgroup could be defined for purposes of analysis to be as large as all
150 customers with usage in the lowest 50th percentiles, implicitly creating two equal size
151 subgroups of customers with half of the customers as high users and half of the customers
152 as low users, or as small as only those customers in a few of the lowest percentiles,
153 creating a more narrow definition of low-use customers. However, following the manner
154 in which ComEd has traditionally prepared rate impact analyses, ComEd settled upon a
155 high-use (76th through 100th percentile), medium-use (26th through 75th percentile) and

156 low-use (1st to 25th percentile) subgroups for purposes of our testimony. Please see the
157 direct testimony of Charles S. Tenorio, ComEd Ex. 2.0, for further detail concerning the
158 analyses performed in support of this conclusion and the proposed business process for
159 identifying low-use customers, in the event such subgroups are created.

160 **Q. Has ComEd sought the input of other parties on this matter?**

161 A. Yes. Since the issuance of the Proposed Order in the 2013 RDI Case, ComEd has sought
162 the input of, and met with, key parties concerning (1) the criteria by which low-use
163 customers should be defined and subsequently (2) the results of preliminary analyses
164 using cost and usage information for 2012 and 2013 to identify low-use customers from a
165 potential range of customer-usage levels from the 10th percentile to the 25th percentile.
166 However, ComEd did not receive any input from or reach any agreement with these
167 parties to support ComEd's proposed definition for low-use customers or the proposed
168 SFV rate design.

169 **III. SFV RATE DESIGN**

170 **Q. Can you expound upon your previous statement that “[u]ltimately, the question**
171 **before the Commission is whether and if so, to what extent, residential customers**
172 **should be expected to make a minimum contribution for the provision and**
173 **maintenance of distribution facilities[?]**”

174 A. Yes. As I will explain further in this section of my testimony, the proposed movement
175 (or restoration of the movement) toward a SFV rate design is to reflect the fact that
176 virtually none of the costs to provide delivery service are driven by energy usage, yet the
177 residential charges set to recover the cost of the distribution facilities – the wires, poles,

178 transformers, substations, tree trimming, storm restoration, *etc.* that are used to provide
179 delivery service – will begin to be recovered solely through a per-kilowatt-hour (“kWh”)
180 charge in January 2015, as a result of the Order entered in the 2013 RDI Case. Because
181 all the other costs of providing delivery services have been, and after January 2015 will
182 continue to be, recovered through the two fixed monthly charges, recovering more of
183 ComEd’s fixed costs through fixed charges under a SFV rate design means recovering at
184 least some portion of the distribution-facilities cost through fixed charges and, in turn,
185 establishing a minimum monthly charge for recovering distribution-facilities cost.

186 **A. Ratemaking Treatment of Fixed and Variable Costs**

187 **Q. What is a SFV rate design?**

188 A. A SFV rate design aligns the fixed and variable charges in ComEd’s delivery rates with
189 the fixed and variable costs of providing delivery service to customers. In essence, under
190 a SFV rate design, charges are set to recover all fixed costs through fixed charges and all
191 variable costs that are driven by usage through variable (or volumetric) charges.

192 **Q. What do you mean by a “fixed cost” and “variable cost”?**

193 A. A fixed cost for the purpose of this rate design is a cost that does not vary in the short run
194 with the use of electricity by a customer or class of customers for which rates are being
195 set. For this purpose, the “short run” means the shorter of the time period in which rates
196 can be expected to be in effect or the expected period for which any distribution facilities
197 in question are to be in service given the level of usage evident at the time the rates are
198 designed. Many delivery-service costs fall into this category, including many types not
199 traditionally recovered through ComEd’s customer charges. For example, the costs of

200 major distribution supply transformers do not vary with periodic changes in customers'
201 use. Only if demand rises so much that facility additions are required, or if permanent
202 demand falls so much that equipment can be economically downsized or retired, do these
203 costs change.

204 In contrast, a variable cost is one that does change from billing period to billing
205 period as a function of volumes used, like kWh of energy or, in some cases, kilowatts
206 ("kW") of demand. The only variable cost in providing delivery service is the Illinois
207 Electricity Distribution Tax ("IEDT").

208 **Q. Are the principle cost drivers of ComEd's delivery service rates fixed or variable in**
209 **the short run?**

210 A. ComEd's delivery-service costs are for the most part fixed in nature, as the costs of
211 building and maintaining particular lines, substations, and other equipment generally do
212 not change with the quantity of energy delivered over them. With the exception of IEDT,
213 those costs are not dependent on the number of kWh of energy or kW of demand
214 delivered in any given billing period. For example, when ComEd installs a new feeder or
215 a new distribution substation, ComEd determines the capacity of that system component
216 based on the projected peak load requirement on that component over the long term. The
217 system is thereby designed and sized to be able to serve long-term peak demands. This
218 fact was explored at length during cross-examination of ComEd's engineering witness,
219 Mr. Michael McMahan in ComEd's 2010 Rate Case, and has been recognized by the
220 Commission in its Orders in Docket No. 07-0566, ComEd's 2007 Rate Case
221 ("[D]istribution facilities must be planned and built to meet customers' maximum

222 loads[.]”) and the 2013 RDI Case (“ComEd designs its delivery system for aggregate
223 demand within an area[.]”)

224 In the short run, once distribution facilities are installed, the capital cost of those
225 facilities is fixed (putting aside changes in the associated cost of debt and equity).
226 ComEd does not go back and add or remove equipment based on period-to-period
227 variations in customer use, and neither the subsequent kWh of usage nor the kW of
228 demand change this cost. Moreover, in the short run it is no more expensive to operate
229 and maintain equipment loaded to the peak demand level for which it is designed than
230 lightly-loaded equipment, making the operation and maintenance expense related to
231 equipment highly insensitive to load. Thus, the cost of providing and maintaining
232 distribution facilities are sunk costs.

233 **B. ComEd’s Experience with SFV Rate Design**

234 **Q. Does ComEd currently have a SFV rate design?**

235 A. No. Historically, ComEd has had a rate design that recovered varying degrees of its fixed
236 costs through fixed charges, such as the CC and SMSC. In ComEd’s 2010 Rate Case, the
237 Commission decided in favor of moving towards a SFV rate design by allowing the
238 recovery of more of its fixed costs through fixed, monthly charges on a percentage basis:

239 The Commission has recognized the importance of recovering fixed costs
240 predominantly through fixed charges and the Commission finds that one
241 of the most important steps in bringing ComEd’s rate design in line with
242 its costs is to properly align the fixed and variable portions of ComEd’s
243 delivery rates with the fixed and variable costs ComEd incurs to provide
244 delivery service. ... The Commission also believes that it is important to
245 design rates that reflect cost causation.”

246 However, in the 2013 RDI Case, the Commission essentially reversed the
247 movement toward SFV, concluding:

248 ComEd's argument that system design cannot tolerate equating low usage
249 with low demand is really not the issue. ComEd designs its delivery
250 system for aggregate demand within an area. It is perfectly true that a
251 location or a customer may be low use one year and high use another.
252 However, it is not reasonable or consistent with public policy to structure
253 rates so that the poor, the frugal and the energy efficient are required to
254 subsidize those who are not, when a more equitable method of allocation
255 exists. A more reasonable policy allocates the same aggregate costs so
256 that individual customer costs are reasonably proportionate to the demands
257 that their use places on the system.

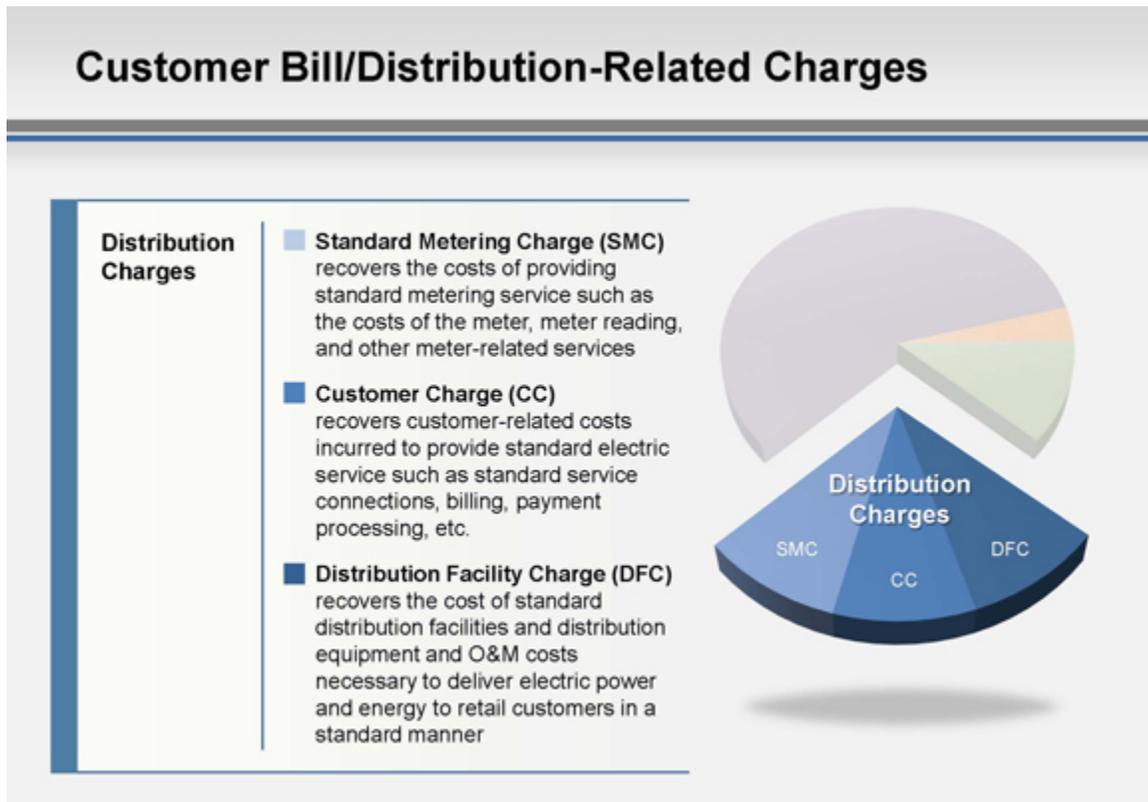
258 **Q. So, how did the Commission's approval and subsequent reversal of the movement**
259 **toward a SFV rate design change the recovery of fixed costs through fixed charges?**

260 A. In essence, these Orders changed the portion of distribution facilities costs recovered
261 through fixed monthly charges, allowing some recovery through adjustments to the CC in
262 2011 and subsequently eliminating such recovery effective January 2015.

263 As noted above, before the 2010 Rate Case, the total delivery services revenue
264 requirement allocated to each of the four residential rate classes was recovered through
265 two fixed monthly charges, CC and SMSC, and a variable (per-kWh) Distribution
266 Facilities Charge ("DFC"). The costs recovered through such charges are summarized in
267 Figure RG-D1.

268

Figure RG-D1: Customer Bill/Distribution-Related Charges¹



269

270 As shown in Figure RG-D1, the fixed monthly SMSC and CC were set to recover
271 only the metering and customer-related costs. None of the distribution facilities costs
272 were recovered through fixed charges. Rather, charges were set such that residential (and
273 non-residential watt-hour-metered) customers incurred no minimum obligation to
274 contribute to the cost of providing and maintaining distribution facilities, as recovery of
275 fixed costs through fixed charges stopped just after the customers' connection to the
276 distribution grid. That is, for the right to impose demands on the distribution system at
277 any time of day, customers were charged only for the kWh of energy delivered.

¹ The pie chart is an illustration of a customer's bill. It includes charges for supply, delivery, and taxes and others. The delivery-service portion of the charges is listed as "Distribution Charges" in the chart.

278 **Q. Was a per-kWh charge appropriate as the sole means of recovering distribution**
279 **facilities costs?**

280 A. No. It was not appropriate before the 2010 Rate Case – and as I will discuss further, is
281 not appropriate now – because costs and cost recovery are inherently mismatched under
282 such a rate design. As noted in the National Association of Regulatory Utility
283 Commissioners Electric Utility Cost Allocation Manual (“NARUC Manual”), “there is
284 no energy component of distribution-related costs” (NARUC Manual, issued January
285 1992, at 89). Yet, for the four residential delivery classes (and the Watt-Hour Delivery
286 Class), the DFC revenues billed for these customers were based on monthly kWh usage,
287 while the corresponding distribution facilities costs that ComEd incurred were (and
288 continue to be) associated with long-term maximum peak demands – not on usage from
289 month to month. The percentage of total delivery service cost recovery through fixed and
290 variable charges from each residential class before the 2010 Rate Case is set forth in
291 Table RG-D1:

292 **Table BG-D1: Delivery Service Revenue from Fixed and Variable Charges as**
293 **a Percentage of Total Delivery Service Revenue by Residential Delivery Class**

Class	Revenue from Charges	% of Delivery Service Revenue for Class
Single Family Without Electric Space Heat (“SFNH”)	Fixed Charges	34%
	Variable Charges	66%
Multi Family Without Electric Space Heat (“MFNH”)	Fixed Charges	50%
	Variable Charges	50%

Class	Revenue from Charges	% of Delivery Service Revenue for Class
Single Family With Electric Space Heat (“SFH”)	Fixed Charges	20%
	Variable Charges	80%
Multi Family With Electric Space Heat (“MFH”)	Fixed Charges	32%
	Variable Charges	68%
Total Residential	Fixed Charges	37%
	Variable Charges	63%

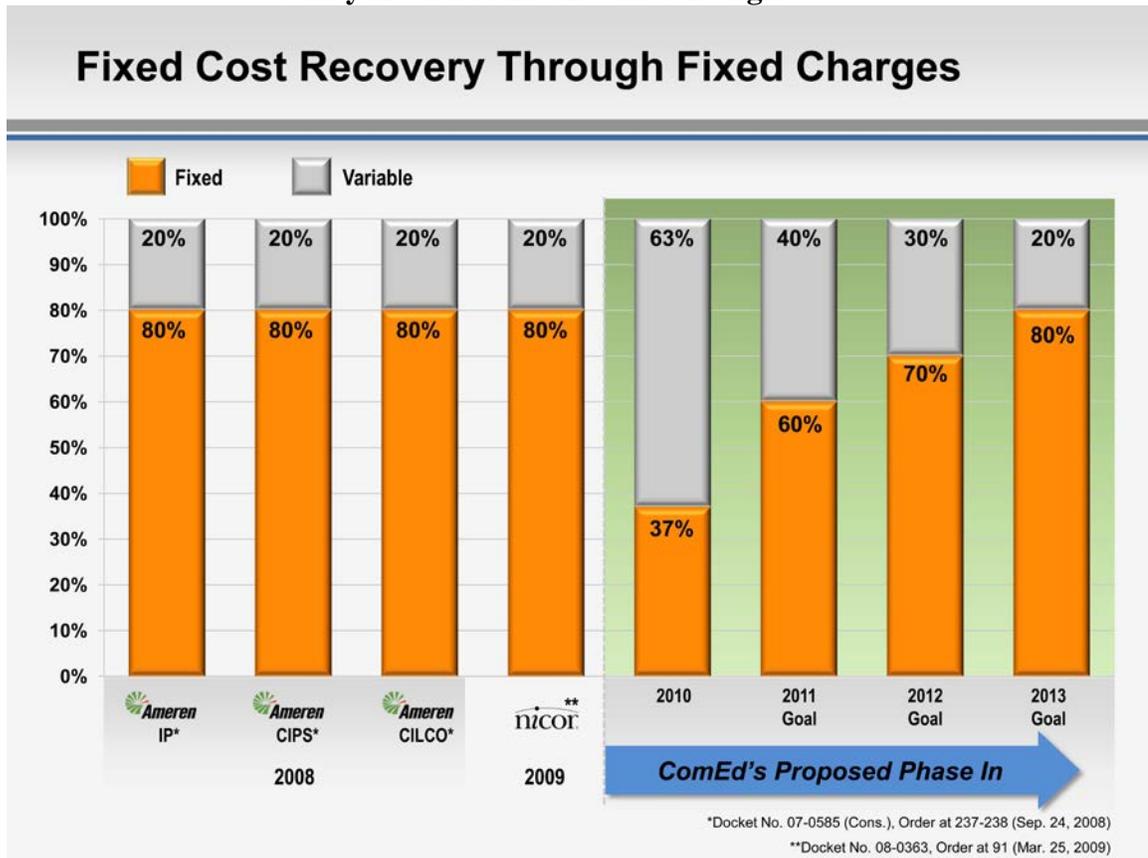
294 Fixed costs are far more than 37% of ComEd’s total delivery service costs.
 295 Indeed, in 2010, the distribution-facilities costs alone represented nearly 60% of the total
 296 \$1.2 billion total residential delivery service cost. In 2014, distribution-facilities costs
 297 represent more than 57% of the total \$1.5 billion total residential delivery service cost.

298 **Q. In the 2010 Rate Case, did ComEd propose the recovery of 100% of the costs of**
 299 **delivering electricity to these classes be recovered through fixed charges?**

300 A. No. ComEd sought a gradual movement toward a SFV rate design that would ultimately
 301 recover approximately 80% of ComEd’s delivery service revenue requirement assigned
 302 to these classes through fixed charges by the summer of 2013. As shown in Figure RG –
 303 D2 below, the portion of ComEd’s fixed costs that it proposed to recover through
 304 increases to fixed charges in the 2010 Rate Case was what had been approved by the
 305 Commission for Ameren Illinois Utilities’ gas utilities and for Nicor Gas. Such a rate
 306 design was granted in lieu of a decoupling mechanism, which had been granted to
 307 Peoples Gas. Both the higher fixed cost recovery through fixed charges and decoupling

308 mechanism remain in place for those utilities today. Mr. Elliott discusses the Illinois gas
309 utilities' experience with SFV rate design further in his direct testimony, ComEd Ex. 3.0.

310 **Figure BG-D2: ComEd's 2010 Rate Case SFV Phase in Proposal and Gas**
311 **Utility Actual 80/20 SFV Rate Design**



312
313 **Q. Did the Commission approve a movement toward SFV rate design in its Order in**
314 **the 2010 Rate Case?**

315 **A.** Yes. While it reached conclusions largely in line with this testimony, it approved only a
316 modest first step toward SFV rate design, allowing recovery of just 50% of fixed costs
317 through the fixed charges, deferring future movements toward an 80% recovery through
318 fixed charges to be addressed in future rate cases:

319 The Commission further concludes that a SFV design that more accurately
320 reflects a consumer's actual costs does not impede conservation. The

321 Commission has decided to either decouple or move towards a SFV in rate
322 cases filed by North Shore/Peoples Gas, the Ameren Illinois Companies
323 (“Ameren”), and Nicor Gas Company (“Nicor Gas”). ... Because electric
324 and natural gas distribution utilities must have the capacity in place to
325 serve peak loads whenever they occur, it is logical to apply pricing
326 policies for both types of industries because they have similar underlying
327 cost structures. ...

328 The Commission has recognized the importance of recovering
329 fixed costs predominantly through fixed charges and the Commission
330 finds that one of the most important steps in bringing ComEd’s rate design
331 in line with its costs is to properly align the fixed and variable portions of
332 ComEd’s delivery rates with the fixed and variable costs ComEd incurs to
333 provide delivery service. The Commission also believes that it is
334 important to design rates that reflect cost causation. It is undisputed in this
335 proceeding that ComEd recovers 37% of its fixed charges. In an effort to
336 gradually move towards more realistic cost causation and to avoid rate
337 shock, the Commission concludes that the use of volumetric charges be
338 reduced so that they recover 50% of fixed delivery service costs. This
339 conclusion applies only to residential customers and nonresidential
340 customers in the Watt-Hour Delivery Class. The Commission will not
341 determine whether changes need to be addressed in future year’s rates; this
342 is an issue to be addressed in future rate cases.

343 This Order established a small amount of recovery of distribution facilities costs
344 through fixed charges.

345 **Q. What changes were made to ComEd’s rate design as a result of the 2013 RDI Case?**

346 A. As the result of the 2013 RDI Case, the Commission removed the movement towards a
347 SFV rate design. Charges reflecting this rate design that will take effect in January 2015
348 are part of ComEd’s 2014 formula rate proceeding (“2014 FRU Case”) and are further
349 discussed by Mr. Tenorio in ComEd Ex. 2.0. Based on Table CST-D14 of ComEd Ex.
350 2.0, the percentage of fixed costs recovered through fixed charges is less than 50% for all
351 but the MFSH Delivery Class. Therefore, as the result of the 2013 RDI Case, compared
352 to the 50% SFV rate design, the Commission reduces the CCs and increases the per-kWh

353 DFCs for customers in the SFNH, SFH, and the MFH Delivery Classes and increases the
354 CC and reduces the per-kWh DFC for customers in MFSH Delivery Class.

355 **C. Proposal to Restore Movement Towards SFV**

356 **Q. What rate design does ComEd propose be implemented at the end of this**
357 **proceeding?**

358 A. Effective with the January 2016 monthly billing period, ComEd proposes to reinstate a
359 movement toward a SFV rate design for each of the residential delivery class that (1) for
360 those residential classes whose customer-related and standard metering related costs
361 resulting from the 2015 FRU Case are less than 50% of the total fixed costs allocated to
362 such class, the CC be adjusted upward to bring the combined recovery under the CC and
363 SMSC to 50%, and (2) for those classes whose customer-related and standard metering
364 related costs resulting from the 2015 FRU Case are at least 50% of the total fixed costs
365 allocated to such class, the combined ratio of fixed costs recovered under the CC and
366 SMSC should remain unchanged. From the analysis results based on the 2014 FRU Case
367 presented in the direct testimony of Mr. Tenorio, for the SFNH, SFH, and MFH delivery
368 classes, this proposal would likely result in an increase in the recovery of fixed costs
369 through fixed charges. More specifically, it is likely to result in the recovery of a portion
370 of the distribution facilities costs through fixed charges and a minimum customer
371 contribution to the cost of those facilities. With respect to the MFNH Delivery Class, this
372 proposal would likely recover the customer and meter related costs through fixed charges
373 as shown in ComEd Ex. 2.0 because these costs are more than 50% of the total fixed
374 costs. The specific impacts will depend on the outcome of the 2015 FRU Case.

375 **Q. Is ComEd still seeking to achieve a recovery of 80% of its fixed costs through fixed**
376 **charges?**

377 A. No. In the 2010 Rate Case, ComEd proposed a movement toward SFV ending in
378 recovery of 80% of its delivery-service costs through fixed charges, similar to what had
379 been approved for Illinois gas utilities. However, at this point in time, ComEd seeks to
380 explore the possibility of utilizing the new interval data that will become available for all
381 residential customers by 2018 to craft an alternative rate structure employing kW – not
382 kWh – as the billing determinants. ComEd believes that a properly crafted demand-based
383 DFC, coupled with an additional, albeit more modest, movement toward SFV, may strike
384 a reasonable balance between the need to recognize the fixed nature of delivery service
385 costs and the desire to allocate and recover such costs from perceived cost causers based
386 on current usage levels. A customer’s peak demand is the closest approximation of the
387 long-term demand that distribution facilities are designed to serve and has been an
388 accepted means of assessing distribution facilities costs to non-residential customers for
389 over a decade. However, factors such as the weather sensitivity of residential loads, the
390 impact of energy efficiency and distributed generation complicate the transition to
391 demand-based charges for residential customers and require further consideration.
392 Nevertheless, ComEd believes that no less than 50% of the fixed costs allocated to the
393 residential classes should be recovered through fixed charges as a starting point and that a
394 minimum customer contribution to the cost of the distribution facilities should be
395 expected of all customers.

396 **IV. CONCLUSIONS REACHED IN DOCKET NO. 13-0387**

397 **A. The Poor, the Frugal and the Energy Efficient**

398 **Q. In its 2013 RDI Case Order, the Commission concluded that “it is not reasonable or**
399 **consistent with public policy to structure rates so that the poor, the frugal and the**
400 **energy efficient are required to subsidize those who are not, when a more equitable**
401 **method of allocation exists.” If the movement toward a SFV rate design is restored,**
402 **would the “poor, the frugal and the energy efficient” be required to subsidize those**
403 **who are not?**

404 **A.** No. First, to characterize the expectation that all customers should have a minimum
405 obligation to contribute to the cost of providing and maintaining distribution facilities as
406 a subsidy is inaccurate and predicated on the erroneous notion that a per-kWh charge
407 applied to varying monthly usage levels is more equitable from an intra-class ratemaking
408 perspective. As I will discuss later in my testimony, a per-kWh charge is likely the least
409 appropriate means of recovering distribution facilities costs.

410 Second, the customers impacted by a movement toward SFV rate design are low-
411 use customers, the impact on whom depends on how much of the distribution facilities
412 costs are recovered through fixed charges and how little the customers use. However,
413 this conclusion reached in the Order reflects the inherent assumption that poor, frugal and
414 energy efficient customers are all low-use customers. As discussed further later, ComEd
415 does not believe that this is the case. Being poor, frugal, or energy efficient does not
416 necessarily make a customer a low-use customer, however low use may be defined.

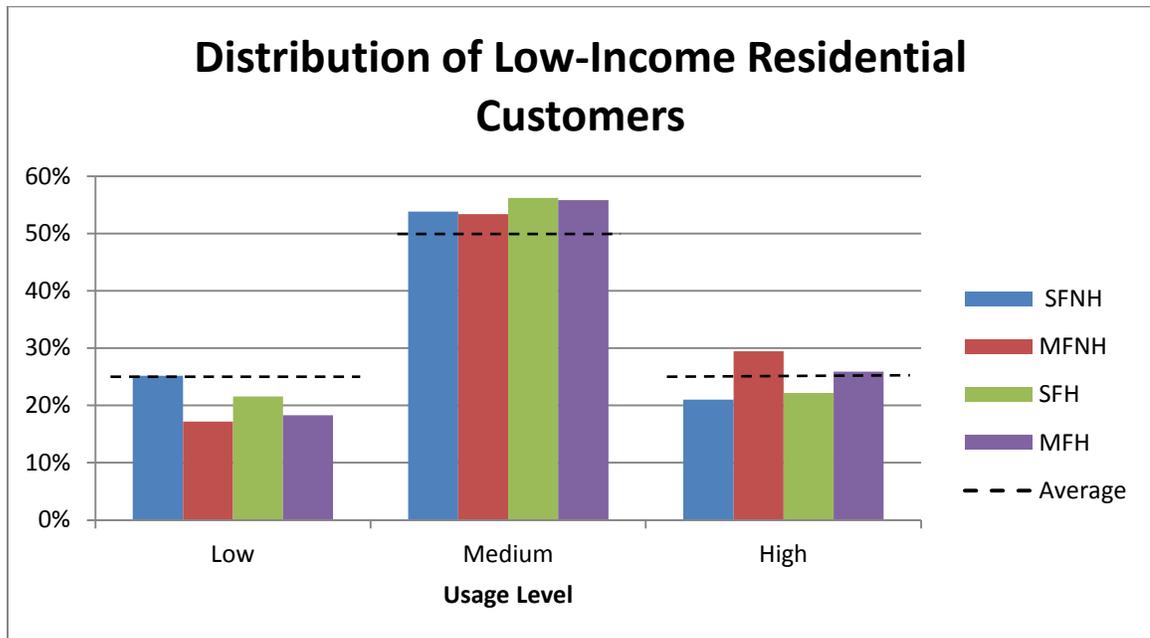
417 **Q. Why would not the “poor” be negatively impacted by the restoration of a SFV rate**
418 **design?**

419 A. Equating low use with low-income customers runs contrary to the evidence that is
420 available regarding low-income customers. While there is no information available to
421 identify all low-income customers, ComEd examined the data it does have for certain
422 low-income customers, namely those who participated in the Low Income Home Energy
423 Assistance Program (“LIHEAP”), the Percentage of Income Payment Plan (“PIPP”), the
424 Residential Special Hardship Program established by Energy Infrastructure
425 Modernization Act (“EIMA”) and the Chicago Housing Authority (“CHA”) All Clear
426 Program, as a proxy for what is arguably a broader universe of low-income customers in
427 ComEd’s service area, in general, and the City of Chicago, in particular. All customers,
428 including the low-income proxy group, were ordinally ranked from lowest (1st percentile)
429 to highest (100th percentile) users based on the MMU for 2013.

430 The results of ComEd’s analysis are set forth in full detail in ComEd Ex. 1.01,
431 attached to my direct testimony and summarized in Figures RG-D3 and RG-D4. To
432 summarize the results of that analysis, ComEd found that low-income customers in each
433 class have usage levels that generally mirror those of the customer base of each class.
434 They are not disproportionately concentrated on the low-use end of the spectrum, which
435 ComEd has defined as the 25th percentile or lower. Rather, as shown in the two figures
436 below, low-income customers are roughly proportionately spread over the low-use, high-
437 use (76th percentile and above) and medium-use (26th percentile to 75th) customers. In
438 fact, for the MFNH class, low-income customers are slightly more concentrated among
439 medium- to high-use customers.

440

Figure RG-D3: Distribution of Low-Income Residential Customers



441

442

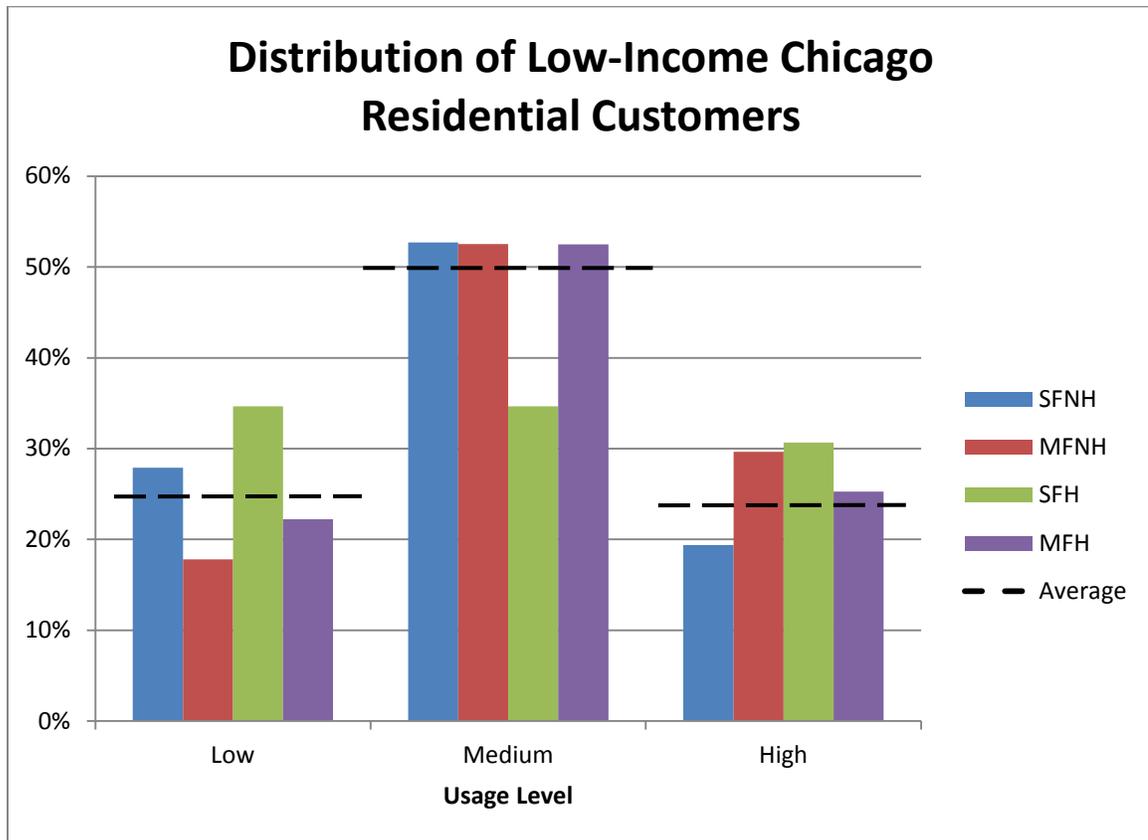
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With respect to the City of Chicago, a slightly higher concentration of SFNH low-income customers exist in the low-use and medium-use subgroups, while MFNH low-income customers are slightly more concentrated in the medium-use to high-use subgroups.

445

Figure RG-D4: Distribution of Low-Income Chicago Residential Customers



446

447 **Q. From a rate making perspective, does it matter that an “energy efficient” or**
448 **“frugal” customer uses less energy on a monthly basis than others?**

449 **A.** No. The term “energy efficient” connotes a lower energy usage to perform the same or
450 equal amount of work, which may be achieved through investments in efficient
451 appliances or the usage of such appliances. In my view, a “frugal” customer is one that
452 may generally seek to reduce energy usage, whether through conservation (avoidance of
453 usage) efforts or energy efficiency investments. Nevertheless, looking solely at how
454 much energy is used by such customers over a period of time is not relevant from a cost
455 allocation and rate design perspective because it is not how much energy is consumed,

456 but when such customers use energy – that is, the customer’s contribution to peak
457 demand – that matters.

458 **Q. Why is peak demand relevant for cost allocation and ratemaking purposes?**

459 A. As I noted previously, distribution facilities are built to meet expected long-term peak
460 demands. Accordingly, the ECOSS allocates distribution facility costs to customer
461 classes based on their respective coincident peak demands (*i.e.*, demand during the time
462 of the highest ComEd system loading, which typically occurs during the hour of 4:00 pm
463 to 5:00 pm in the months of July or August, “CP”) and the non-coincident peak demands
464 (*i.e.*, the highest demand during the highest hourly load of a class, “NCP”). For
465 residential delivery classes, roughly 80% of the distribution facilities costs are allocated
466 based on CP, while the other 20% or so is allocated based on the NCP as presented in the
467 ECOSSs attached to the direct testimony of Mr. Tenorio (ComEd Exs. 2.05, 2.06, and
468 2.08). Thus, the class CP is the primary driver of how much of the distribution-facilities
469 costs are assigned to a class. While energy efficiency and general efforts to conserve
470 energy may result in a general reduction in energy usage throughout the year and energy
471 efficiency certainly does have an impact on peak demand, it does not necessarily translate
472 into a lower cost of service on a per-kWh basis.

473 For example, if a subgroup of energy efficient customers could be identified, the
474 per-kWh DFC charge set for such customers would be determined based on the peak
475 demand of such subgroup. If their ENERGY STAR-rated washers, dryers, dishwashing
476 machines or more importantly air conditioning (“AC”) units were all running at the time
477 of the CP and NCP, yet reduced the overall amount of energy used relative to less

478 efficient classes, the per-kWh DFC for a subgroup consisting of these customers would
479 actually be higher than if they were left in a larger class with less efficient customers.
480 Conversely, if a hypothetical subgroup of inefficient customers could be identified that
481 used large amounts of energy but, for whatever reason, did not use significantly larger
482 amounts of energy at time of the CP and NCP, the per-kWh DFC for a subgroup of such
483 customers actually could be lower than that of the energy efficient subgroup.

484 While the foregoing examples are solely intended to explain the factors that drive
485 differences in the calculation of DFCs set on a per-kWh basis, they do underscore why
486 usage levels are not a valid means of judging the justness of rates set for the recovery of
487 distribution facilities costs.

488 **Q. Do energy efficient and frugal customers exhibit the potential to contribute to**
489 **ComEd’s peak demand?**

490 A. Yes. In fact, almost all residential customers do and the degree of contribution is driven
491 by weather – hot summer temperatures. Based on the data presented in the report
492 “ComEd Residential Saturation/End-use Market Penetration & Behavioral Study”
493 prepared by Opinion Dynamic Corporation for ComEd’s 2013 Energy Efficiency and
494 Demand Response Plan approval proceeding, nearly all ComEd customers own the
495 electrical appliance that is designed and intended to be used at the time of hot, peak-
496 making weather –AC units:

497 ➤ 94% of all residential customers have either Window AC units, Central AC units, or
498 both (6% have no cooling);

499 ➤ 98% of all single family customers have either Window AC units, Central AC units,
500 or both (2% have no cooling); and

501 ➤ 86% of all multi-family customers have either Window AC units, Central AC units,
502 or both (14% have no cooling).

503 While cooling represents just 14% of total residential kWh usage, it is a major contributor
504 to peak demand. But, few customers are energy efficient with respect to this appliance.
505 In fact, the mean age of the AC units is 10 years and the vast majority of central AC units
506 (93%) are under an efficiency level of 14 SEER, the current ENERGY STAR standard,
507 while just a third (35%) of window units are ENERGY STAR-rated. Moreover, a frugal
508 customer may endure most of the summer using fans and/or opening windows to cool
509 their residences or even years doing so, but the real question is whether they eventually
510 succumb to the heat of the hottest days of summer and turn on their AC units, which
511 almost all residential customers have. Indeed, it is the load on such days in such years for
512 which the distribution system was built and stands ready to serve – which begs the
513 question of whether such customers should be charged for the usage of the distribution
514 system only in such months in such years when the heat becomes unbearable for even the
515 most energy efficient or frugal customers.

516 **Q. Do “poor,” “frugal” or “energy efficient” customers have any incentives to reduce**
517 **their usage at times of system peaks?**

518 A. No. Unless a customer is one of the nearly 10,000 customers taking supply service under
519 ComEd’s Residential Real Time Pricing Program or a future customer of ComEd’s Peak
520 Time Savings program, residential customers generally have no general economic
521 incentives (price signals) to reduce demand at times of hot, peak-making weather.
522 Neither ComEd’s distribution nor default supply service rates are currently priced in a
523 manner that incents customers to reduce peak demand, because a kWh of consumption

524 from 4:00 to 5:00 pm on a hot summer day costs no more than it does at any other time
525 on such a day. Thus, only a few cents an hour separate the vast majority of customers,
526 whether energy efficient or frugal or not, from comfort on those hot, peak-making
527 summer days.

528 **B. Reasonableness of Usage-Based Charges**

529 **Q. In its Order in 2013 RDI Case, the Commission opined that “[a] more reasonable**
530 **policy allocates the same aggregate costs so that individual customer costs are**
531 **reasonably proportionate to the demands that their use places on the system.” Does**
532 **ComEd concur?**

533 A. No. At a high level, this conclusion from the 2013 RDI Case sets forth a laudable goal
534 for an equitable rate design. But, the issue is far more complicated than the solution
535 arrived at in that case. First, rates for customers without demand metering are currently
536 set to recover costs through energy-based (kWh) charges, not demand-based (kW)
537 charges. While in the future, with completion of the AMI deployment, it may be possible
538 to apply a more appropriate billing determinant for the equitable allocation of costs.
539 However, that is really only part of the issue. In light of weather sensitivity alone, neither
540 residential energy usage nor demand levels in any given year will result in revenues that
541 match the largely fixed distribution-facilities costs (*i.e.*, the actual kWh or kW billing
542 units match the weather adjusted kWh or kW billing units used in the design of rates).
543 Therefore, the notion that the same aggregate costs can be allocated and, presumably,
544 recovered solely through kWh DFCs now (or kW-based DFCs in the future) is simply
545 fallacy.

546 In order to break the unhealthy dependence that ComEd has on throughput for the
547 recovery of its costs, charges must be fixed in some manner and to some degree. This, in
548 turn, means a departure from the reliance on month-to-month usage levels as the sole
549 means of recovering fixed distribution-facility costs. Indeed, the old inside joke among
550 those familiar with utility rate design that utilities are “making money” on hot days and
551 “losing money” on cool days – a joke I learned over 20 years ago when I joined the ICC
552 Staff – is simply not funny anymore.

553 **C. Formula Rate**

554 **Q. In the 2013 RDI Case, the Commission, responding to claims that the formula rates**
555 **minimize the risk that electric utilities will not recover costs and a return on**
556 **investments, concluded that “ComEd’s financial integrity is not likely to be**
557 **impaired by the adjustments to rate design required by this section of this Order.”**
558 **Is this correct?**

559 **A.** No. While the performance-based formula rate does improve cost recovery, it actually
560 does not effectuate a full decoupling of revenues and kWh usage. Under the formula
561 rate, actual revenue requirements are reconciled to the approved revenue requirements –
562 not actual revenue to the approved revenue requirements. Nevertheless, this rate design
563 issue extends beyond the life of the performance-based formula rate mechanism which
564 expires in 2017. Therefore, it is important to look beyond the temporary formula rate
565 process created by the EIMA and to begin addressing the future of the Illinois utility
566 industry, where utility reliance on throughput to be made whole on its costs inherently
567 conflicts with the goals and objectives of Illinois energy policies to reduce energy usage.
568 Indeed, ComEd expects that any rate design changes resulting from the Commission’s

569 decision in the instant proceeding will not take effect until January 2016. Thus, the
570 future is really now.

571 **V. LOW-USE CUSTOMER-USAGE PATTERNS**

572 **Q. Do low-use customers peak in same proportion to their annual usage as other**
573 **customers do?**

574 A. Low-use customers in some classes peak in greater proportions to their usage than the
575 other customers, some do not, and others are about the same. Mr. Tenorio provides a
576 detailed analysis of the CP and NCP load factors (*i.e.*, annual usage / (peak * 8,760 hours
577 per year)) derived from AMI interval data for 2013 (ComEd Ex. 2.0). As a rule of
578 thumb, subgroups with higher load factors relative to other customer groups within a
579 class have a lower cost of service, while those with lower load factors relative to the
580 others in a class generally have a higher cost of service.

581 In the SFNH class, which is the largest residential class by far, the lowest 25% of
582 users have CP and NCP factors that were roughly equal to those of the other customers in
583 the class (mid to low 30% range), suggesting very little difference in the cost to serve
584 such customers relative to the others in that class.

585 What is noteworthy from this analysis of AMI interval data is that in the MFNH
586 class, the next largest residential class, low-use customers do have a somewhat higher CP
587 and NCP load factor, which translates into lower costs of service relative to other
588 customers within that subgroup.

589 The story for low-use SFH and MFH, however, is quite different. These
590 customers have relatively poor CP load factors compared to the other customers in those
591 classes, although their NCP load factors are comparable.

592 **Q. Would such differences be relevant in the Commission’s decision to establish**
593 **subgroups as part of a decision to restore a movement to a SFV rate design?**

594 A. Yes. Material differences in usage and load patterns between customer segments are
595 valid bases for establishing customer groups or subgroups. However, as discussed further
596 in the direct testimony of Mr. Tenorio, the results of the ECOSS analyses are quite
597 mixed. As the foregoing examination of CP and NCP load factors suggests, these
598 differences translate into modest differences for low-use customers in some classes and
599 significant and not entirely positive changes for low-use customers in other classes. In
600 light of such divergent impacts, careful consideration should be given to whether a low-
601 use subgroup should be created for any residential class, as it would seem to be highly
602 arbitrary to create a separate rate for some subgroups (*e.g.*, where rates would be lower
603 for such customers) and not others (*e.g.*, where rates would be higher for such
604 customers).

605 **VI. TIMING OF IMPLEMENTING A LOW-USE SUBGROUP RATE STRUCTURE**

606 **Q. When would the ECOSS and rate design changes necessary to implement residential**
607 **subgroups be first applicable to customers?**

608 A. ComEd expects that, if the Commission were to order changes to ComEd’s ECOSS and
609 rate design to implement residential subgroups and order ComEd to incorporate
610 movement to a SFV rate design for residential customers the resulting delivery service

611 charges would first appear on customer bills in January 2016. In order to provide ComEd
612 with enough time to make the technical changes in its billing and other related systems, a
613 final Order would need to be issued by April 2015. An order issued after that date would
614 not provide enough time for ComEd to design, test, and implement such monumental
615 changes to its billing and related systems until January 2017.

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

617 **A. Yes.**