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STATE OF ILLINOIS  
ILLINOIS COMMERCE COMMISSION

COMMONWEALTH EDISON COMPANY )  
 )  
Petition to approve an Advanced Metering )  
Infrastructure Pilot Program and associated tariffs )

Docket No. 09-0263

Direct Testimony of

Barbara R. Alexander  
Consumer Affairs Consultant

ON BEHALF OF

AARP

and

THE PEOPLE OF THE STATE OF ILLINOIS

AG/AARP Exhibit 2.0

July 24, 2009

**OFFICIAL FILE**

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A.B./AARP Exhibit No. 2.0  
Witness \_\_\_\_\_  
Date 8/20/09 Reporter HA

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1 **I. EXECUTIVE SUMMARY AND INTRODUCTION**

2  
3 **A. *Witness Introduction***

4 **Q. PLEASE STATE YOUR NAME AND ADDRESS.**

5 A. My name is Barbara R. Alexander. I use the title of Consumer Affairs Consultant. I have  
6 an office at 83 Wedgewood Dr., Winthrop, ME 04364.

7  
8 **Q. ON WHOSE BEHALF ARE YOU PRESENTING TESTIMONY IN THIS**  
9 **PROCEEDING?**

10 Q. I am appearing as a witness on behalf of the AARP and the People of State of Illinois, as  
11 represented by the Attorney General of the State of Illinois.

12 AARP is a nonprofit, nonpartisan membership organization dedicated to making  
13 life better for people 50 and older. AARP Illinois has over 1.7 million members, with  
14 members representing all segments of the socio-economic scale. AARP and its members  
15 are a meaningful cross-section of the residential customers in Illinois and in the territory  
16 served by Commonwealth Edison Company (ComEd) which provides essential electric  
17 service in northern Illinois. Moreover, a substantial percentage of AARP's members live  
18 on fixed or limited incomes and have a direct interest in the prices charged for essential  
19 electricity service.

20 The Attorney General's Office intervenes in Illinois Commerce Commission  
21 proceedings on behalf of the People of the State of Illinois on matters relating to the  
22 provision, marketing, and sale of electric, natural gas, water, and telecommunications  
23 service "whenever the Attorney General determines that such action is necessary to

24 promote or protect the rights and interests of all Illinois citizens, classes of customers,  
25 and users of electric, natural gas, water, and telecommunications services.” 15 ILCS  
26 205/6.5.

27

28 **B. Purpose of Testimony**

29 Q. **WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

30 A. I was retained by AARP and the Attorney General’s office to evaluate ComEd’s filing in  
31 this proceeding and provides my recommendations based on my analysis of that filing.  
32 My testimony will provide recommendations to the Commission concerning ComEd’s  
33 proposed Advanced Metering Infrastructure (AMI) technology and its “Customer  
34 Applications” or pricing pilot proposals. My testimony will identify the concerns about  
35 the scope, scale, and cost of the proposed pilot programs. ~~I will address as well the  
36 connection between this AMI pilot program and the availability of federal funds for  
37 “smart grid” investments under Sections 1304 and 1306 of the Energy Independence and  
38 Security Act (EISA) and the funding appropriated for these programs under the American  
39 Recovery and Reinvestment Act (ARRA).~~

40

41 Q. **PLEASE SUMMARIZE YOUR CONCLUSIONS AND RECOMMENDATIONS  
42 WITH REGARD TO THE PROPOSED AMI TECHNOLOGY PILOT.**

43 A. With regard to the proposed AMI pilot, I recommend that the Commission order ComEd  
44 to (1) substantially reduce the size of the AMI installation; (2) provide an evaluation plan  
45 that identifies what technologies are being tested compared to other utility AMI  
46 installation and testing experiments; (3) demonstrate the minimum size of the AMI pilot

47 needed to test, in a statistically valid manner, the implementation of particular AMI  
48 technologies and their integration into ComEd's existing systems at the least cost to  
49 ratepayers; and (4) provide an evaluation of what investments could be considered to  
50 upgrade existing automated meter reading systems to achieve some if not all of the  
51 functionalities of the proposed AMI system. Based on pilot programs either completed or  
52 underway at other utilities, it should be possible to conduct a test of the operational  
53 characteristics of AMI technologies for 5,000 to 10,000 meters.

54 In addition, I recommend that the Commission require that any ComEd AMI pilot  
55 proposal identify the potential costs to ratepayers for a full-scale implementation of the  
56 AMI technologies and functionalities that it proposes to test in its pilot program. To date,  
57 ComEd has refused to estimate the full scale costs of AMI deployment based on its  
58 proposed pilot program. It would not be appropriate to consider a proposal for even a  
59 pilot AMI deployment without some consideration of the scale of investment or the  
60 impact on customer bills associated with the costs of this new technology if ramped up to  
61 a system-wide installation. This is particularly important in light of ComEd's apparent  
62 intent to study only how to deploy AMI and not whether AMI should be deployed at all.

63

64 Q. **PLEASE SUMMARIZE YOUR RECOMMENDATIONS FOR THE PROPOSED**  
65 **CUSTOMER APPLICATIONS PILOT.**

66 A. I recommend that the Commission order ComEd to design a much less expensive and  
67 more narrowly focused pricing and technology pilot. Most importantly, any pricing or  
68 technology pilot should incorporate the knowledge and experience gained from other  
69 pilots conducted in other states, and focus on those more likely to reflect customer

70 preferences as derived from other pilot programs. Furthermore, I recommend that the  
71 Commission order ComEd not to subsidize the costs of providing a variety of in-home  
72 display devices to participating customers, but instead allow ComEd to offer customers a  
73 variety of device and functional options from manufacturers who might therefore be  
74 willing to provide a reduced price on the equipment for this pilot program. It is highly  
75 unlikely and unrealistic that ComEd's ratepayers should subsidize these devices,  
76 particularly in the early years of their development. Most importantly, I recommend that  
77 the Commission order ComEd to compare the costs and benefits associated with AMI-  
78 enabled consumption reduction and demand response with non-AMI programs, such as  
79 the use of existing or upgraded direct load control equipment (and associated  
80 communication networks). Unlike the proposed ComEd approach, the Commission  
81 should require a true evaluation of AMI and non-AMI costs and benefits to achieve the  
82 same level of usage and demand response impacts prior to making any decisions on such  
83 an expensive investment for Illinois ratepayers.

84  
85 Q. ~~PLEASE SUMMARIZE YOUR RECOMMENDATIONS WITH RESPECT TO~~  
86 ~~COMED'S PROPOSAL IN LIGHT OF THE POTENTIAL FOR FEDERAL~~  
87 ~~STIMULUS FUNDING.~~

88 A. ~~The Commission should not assume that the application that ComEd has filed in this~~  
89 ~~docket on June 1, 2009 is a sufficient description of or notice of the implications for cost~~  
90 ~~recovery to ratepayers related to any federal stimulus projects. ComEd simply has failed~~  
91 ~~to demonstrate why any ratepayer funding is necessary to implement an approved DOE~~  
92 ~~project beyond that approved by the Commission in this proceeding for the more~~

93 ~~narrowly focused AMI pilot that I have recommended. I defer to the testimony of Mr.~~  
94 ~~Brosch concerning the proper type of costs that should be included in any approved cost~~  
95 ~~recovery mechanism. In general, ComEd and other utilities seeking Smart Grid grants~~  
96 ~~should fund their share of the costs as part of its ongoing investment and modernization~~  
97 ~~activities and seek recovery in a future base rate case that considers all of ComEd's~~  
98 ~~revenues and expenses and the prudence of its expenses.~~

99

100 **C. *Background and Qualifications***

101 **Q. PLEASE PROVIDE YOUR BACKGROUND AND QUALIFICATIONS.**

102 **A.** I opened my consulting practice in March 1996, after nearly ten years as the Director of  
103 the Consumer Assistance Division of the Maine Public Utilities Commission. While  
104 there, I managed the resolution of informal customer complaints for electric, gas,  
105 telephone, and water utility services, and testified as an expert witness on consumer  
106 protection, customer service and low-income issues in rate cases and other investigations  
107 before the Commission. My current consulting practice focuses on regulatory and  
108 statutory policies concerning consumer protection, service quality and reliability of  
109 service, customer service and low-income issues associated with both regulated utilities  
110 and retail competition markets. I have had more than 20 years of experience in  
111 representing residential customers in utility regulation.

112 Specifically, I have evaluated proposals and submitted testimony and/or  
113 comments to state regulatory commissions concerning Advanced Metering Infrastructure  
114 (AMI) in Maine (Central Maine Power Co.), the District of Columbia (Potomac Electric  
115 Power Co.), California (Southern California Gas), Michigan (Detroit Edison), Idaho

116 (Idaho Power Co.) and I am consultant to the Massachusetts Attorney General in the  
117 proceedings underway before the Massachusetts Department of Public Utilities to  
118 consider smart grid pilot proposals by the four investor-owned electric utilities. I  
119 published a paper that identifies issues and concerns about the move to dynamic pricing  
120 for low-income customers and made presentations on AMI and dynamic pricing policies  
121 at many national conferences.

122 In addition, I have also testified and published widely on policies that should  
123 govern the provision of default service (referred to as Standard Offer Service in several  
124 states) for residential customers in those states that have adopted retail competition for  
125 electricity and natural gas supply service.

126 My recent clients include the state public advocate offices in Pennsylvania,  
127 Washington, Maryland, Ohio, Maine, and Massachusetts, as well as AARP state offices  
128 (Montana, New Jersey, Maine, Ohio, Virginia, Idaho, Maryland, Mississippi, and the  
129 District of Columbia). I have testified before state regulatory commissions in more than  
130 15 states, including Illinois, and in Canada.

131 I am also an attorney, and a graduate of the University of Michigan (1968) and the  
132 University of Maine School of Law (1976).

133 I attach my resume with a list of my publications and testimony as Exhibit No.  
134 AARP/AG Ex. 2.1.

135

136

137

138 **II. CRITIQUE OF COMED'S TECHNOLOGY PILOT**

139

140 **A. *Description Of ComEd's Proposed AMI Pilot***

141 **Q. PLEASE DESCRIBE THE SCOPE, SCALE AND ESTIMATED COSTS**

142 **ASSOCIATED WITH COMED'S PROPOSED AMI PILOT.**

143 A. ComEd is proposing to install 141,000 advanced or digital meters with the associated  
144 communication network and software for data management. This installation will also  
145 require the new metering and data systems to be integrated with ComEd's existing  
146 software and operational support systems. The Company proposes to install 100,500  
147 meters in the Maywood operating area ("I-290 Corridor"), 30,000 in the City of Chicago,  
148 10,000 in Elgin, and 500 in the Village of Tinley Park. The cost of the new equipment  
149 and associated implementation costs for evaluation, installation, and other related  
150 activities is estimated at \$55.8 million, of which \$47 million is labeled capital costs and  
151 \$8.9 million is labeled as operations and maintenance (O&M) expenses. These costs  
152 result in an average estimated cost per meter for those included in the AMI pilot of \$333.<sup>1</sup>  
153 Of course, this is not the cost being charged to participating customers, but a calculation  
154 that has implications for any full scale implementation. In addition, ComEd is proposing  
155 to collect the unrecovered value of the existing mechanical meters that will be replaced, a  
156 cost that is estimated at \$6.6 million. ComEd has also proposed a \$14.8 million  
157 Customer Applications pilot which I will discuss later in my testimony. As a result,  
158 ComEd is proposing an AMI pilot that will cost \$77.2 million, almost all of which

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<sup>1</sup> ComEd Response to AARP 1.23. This estimate does not include the cost of the Customer Applications pilot or the cost associated with recovering the costs of the existing meters that will be replaced.

159 ComEd wants to obtain from ratepayers within a relatively short recovery period by  
160 means of special Riders.<sup>2</sup>

161

162 Q. **WHAT DOES COMED STATE WILL BE LEARNED FROM THIS AMI PILOT?**

163 A. Dr. Hemphill on behalf of ComEd states that the pilot reflects the “objectives as stated by  
164 the Commission in the 07-0566 Order and will further the policies stated in EISA with  
165 respect to modernizing the nation’s transmission and distribution system through the  
166 deployment of smart metering devices.”<sup>3</sup> Dr. Hemphill also states that the pilot “will  
167 give us a ‘better grasp of costs and benefits’ of a full AMI deployment.”<sup>4</sup> ComEd will  
168 consider the pilot a success if “it allows ComEd to determine if and how to deploy AMI  
169 technology to ComEd’s customers in a cost-effective and cost-beneficial manner.”<sup>5</sup>

170

171 Q. **DO YOU AGREE WITH THE GOALS AS STATED BY COMED FOR THIS  
172 PILOT?**

173 A. No, I do not. These statements and the design and scope of this pilot suggest that ComEd  
174 is attempting to justify the full scale deployment of AMI without considering potentially  
175 less costly investments that may achieve many of the potential benefits identified by  
176 ComEd at a lesser cost. Nor is there any indication that ComEd has designed this pilot in  
177 a least cost or cost-effective manner. In my opinion, ComEd should be required to design

---

<sup>2</sup> ComEd seeks to recover all the capital costs of the AMI pilot and all the capital and O&M costs of the Customer Applications pilot through current and proposed Riders.

<sup>3</sup> ComEd Ex. 1.0 at 4-5.

<sup>4</sup> *Id.* at 5, quoting from the Commission’s 07-0566 Order.

<sup>5</sup> *Id.* at 17.

178 an AMI pilot that 1) builds on the research and technology pilots that have been  
179 conducted by other utilities, 2) evaluates the various technological options in light of its  
180 own existing investments in Automated Metering Reading technology and its current  
181 software and operational systems, and 3) creates a test of its recommended technology of  
182 a scale and scope that takes into account the costs that will be passed through to all  
183 customers for this pilot and, potentially, for a full scale implementation in the future.

184

185 ***B. The Commission's Guidance in ICC Docket No. 07-0566 Should***  
186 ***Not Be Read to Eliminate a Consideration of the Scope and Scale***  
187 ***of this AMI Pilot***

188

189 **Q. HAS THE ILLINOIS COMMISSION ADOPTED A POLICY TO PROMOTE**  
190 **SMART GRID INVESTMENTS, ADVANCED METERING, AND/OR DYNAMIC**  
191 **PRICING FOR RESIDENTIAL CUSTOMERS?**

192 A. No. The ICC has not adopted formal policies on these important matters. Furthermore,  
193 the Commission has clearly left these decisions for consideration after the Smart Grid  
194 Collaborative ordered in Docket No. 07-0566, which will take several years to complete.

195

196 **Q. HAS THE COMMISSION PROVIDED ANY GUIDANCE AS TO THE SIZE OF**  
197 **THE PILOT THAT IT AUTHORIZED IN ITS ORDER IN DOCKET NO. 07-**  
198 **0566?**

199 A. The Commission rejected the open-ended cost recovery rider proposed by ComEd in that  
200 rate investigation. The Commission did authorize "Phase 0" in order to have a "better  
201 grasp of costs and benefits."<sup>6</sup> Rider SMP (now AMP) was approved "for the very limited

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<sup>6</sup> This and following quotes are from the Commission's Order in Docket No. 07-0566, pages 138-140.

202 purpose of implementing Phase 0—a scaled deployment of AMI—as a pilot program.”  
203 The Commission authorized Phase 0 for “...the installation of up to 200,000 advanced  
204 meters and associated infrastructure.” The Commission intended that this pilot program  
205 be designed as a result of the AMI Workshops and that that effort would result in “the  
206 development of goals, timelines, evaluation criteria, etc.” The Commission stated that  
207 Phase 0 would allow ComEd to “quantify the costs and benefits of full AMI  
208 deployment.” However, the Commission expressed its concern that the method by which  
209 benefits would be quantified was unclear: “The AMI Workshops, described below, shall  
210 fully investigate the measure of benefits from the utility side of the meter.”<sup>7</sup> ComEd was  
211 also expected to analyze “certain aspects of AMI’s performance and operation.”<sup>8</sup> The  
212 Commission also limited its authorization of rider cost recovery to the carrying costs  
213 associated with the AMI investment.

214

215 **Q. DID THE COMMISSION ESTABLISH A TIMELINE FOR THE WORKSHOP**  
216 **AND IMPLEMENTATION OF THE AMI PILOT?**

217 A. While the ICC provided a timeline of sorts, the Commission specifically stated that if  
218 more time was necessary, a request for more time could be brought to the Commission.<sup>9</sup>

219

220 **Q. DID THE COMMISSION DISCUSS THE COSTS OF THE AMI PILOT OR THE**  
221 **IMPLICATIONS FOR RECOVERY OF ITS COSTS FROM RATEPAYERS IN**  
222 **ITS ORDER?**

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<sup>7</sup> Order at 139, ICC Docket No. 07-0566.

<sup>8</sup> *Id.*

<sup>9</sup> *Id.*

223 A. No. The Commission’s discussion about the potential scope of the pilot—up to 200,000  
224 meters—was not accompanied by any specific discussion of the estimated costs for a  
225 pilot of this or any other size. The only testimony in the record for the cost of the “Phase  
226 0” pilot was provided by the testimony of ComEd witness Ms. Sally Clair, who stated in  
227 her rebuttal testimony that the cost of the pilot would be “under \$60,000,000.”<sup>10</sup> This  
228 contrasts with the estimated cost of this proposed pilot program which exceeds \$70  
229 million (plus an unidentified amount necessary to pay for the cost associated with the  
230 early retirement of the existing meters). As I discuss further below, I recommend that the  
231 Commission reconsider its previous authority to conduct such a large AMI pilot program  
232 and require ComEd to scale down the size and cost of this proposed pilot program.

233

234 **C. *ComEd has Failed to Justify the Scope, Scale, and Cost of this***  
235 ***Pilot Proposal***

236  
237 **Q. HAS COMED JUSTIFIED THE SCOPE AND SCALE OF THIS PILOT AS**  
238 **NECESSARY TO DETERMINE WHETHER THE TECHNOLOGY WORKS AS**  
239 **PROMISED AND THE LEVEL OF IMPACT ON OPERATIONAL EXPENSES**  
240 **AS A RESULT OF AMI DEPLOYMENT?**

241 A. No. ComEd has proposed a very large pilot program and has not justified why the AMI  
242 pilot must reflect such a large deployment to determine the cost effectiveness of the  
243 technology and its operational characteristics. In fact, ComEd’s Application fails to  
244 provide any analysis of other AMI pilot or full scale implementations that have occurred  
245 or that are in the process of occurring in the U.S. and Canada that it considered in

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<sup>10</sup> ComEd Ex. 23.0 at 8, ICC Docket No. 07-0566.

246 designing this pilot program. The Company has also failed to provide any evidence that a  
247 pilot of this size is necessary to obtain important, statistically valid information about the  
248 costs and benefits of AMI deployment.

249

250 Q. **IS THERE A BODY OF WORK AVAILABLE TO COMED CONCERNING AMI**  
251 **TECHNOLOGY AND ITS IMPACTS ON UTILITY OPERATIONAL COSTS**  
252 **THAT SHOULD HAVE BEEN TAKEN INTO ACCOUNT TO REDUCE THE**  
253 **SIZE AND COST OF THIS PILOT?**

254 A. Yes. Utilities have been installing and testing a variety of AMI technologies for several  
255 years. PPL Electric Co. in Pennsylvania installed an AMI system several years ago in  
256 stages, sought recovery for its costs in regular base rate cases, and justified its investment  
257 based on the operational savings, primarily in the form of reduced costs associated with  
258 meter reading and field visits associated with metering testing and replacements.<sup>11</sup> All of  
259 the California electric utilities obtained approval for full-scale implementation of AMI  
260 and are in the process of installing these systems. One California utility, PG&E,  
261 encountered operational and technological difficulties with their original project design  
262 and has returned to the California PUC for authority to change its AMI systems, at an  
263 additional net present value cost to ratepayer of over \$900 million, resulting in a total cost

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<sup>11</sup> PPL Electric installed advanced metering with two-way communications during a period in which its distribution rates were capped as a result of a restructuring settlement. Following the expiration of that rate cap, PPL Electric filed a distribution base rate case that included their advanced metering investment, alleging that the operational benefits exceeded the costs incurred. The 2004 rate case was resolved without any disallowance of that particular investment. Subsequently, PPL installed a meter data management system and sought to include those costs in its 2007 base rate case. The 2007 rate case was resolved in a settlement. See Pennsylvania PUC, Docket No. R-00072155.

264 of its AMI deployment of \$3.2 billion.<sup>12</sup> Potomac Electric Power Co. is field testing a  
265 10,000 AMI metering system in Delaware.<sup>13</sup> Detroit Edison in Michigan is testing  
266 10,000 AMI meters as part of a larger deployment of AMI meters that is scheduled to  
267 occur over the next four years to 4 million homes and businesses.<sup>14</sup> Clearly, there is a  
268 body of work and actual implementation and testing experiences that should have been  
269 consulted by ComEd in proposing its AMI pilot, if for no other reason than to design a  
270 pilot that would provide the necessary information on a lesser scale and lesser cost to  
271 ratepayers.

272

273 **Q. PLEASE DISCUSS THE RECENT PILOT PROGRAM RESULTS FROM**  
274 **CONNECTICUT THAT SUPPORTS YOUR SUGGESTION THAT A SMALLER**  
275 **SCALE PILOT WILL PROVIDE VALUABLE INFORMATION.**

276 **A.** Connecticut Light and Power (CL&P) conducted a technical test of an AMI system and  
277 filed a report on its results with the Connecticut Department of Public Utility Control  
278 (DPUC) in July 2008. CL&P conducted a test of approximately 500 smart meters and  
279 meter-to-meter mesh communications technology. The CL&P report found that AMI

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<sup>12</sup> California PUC, Docket No. A.07-12-009, Decision 09-03-026 March 12, 2009, available at:  
[http://docs.cpuc.ca.gov/PUBLISHED/FINAL\\_DECISION/98486.htm](http://docs.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/98486.htm)

<sup>13</sup> Testimony of William Potts on behalf of Potomac Electric Power Co. (Pepco) before the District of Columbia Public Service Commission, Case No. 1056, May 22, 2009, at page 19. This testimony is available from the PSC's website under this Case Number at <http://www.dcpsc.org/>

<sup>14</sup> See, "Smart Meters help electrical grids get connected," The Detroit News, Tuesday, July 7, 2009. This news report also stated that Consumers Energy in Michigan was testing 4,500 advanced meters and that by 2015 the company hopes to install 4,000 new meters daily through 2011 at a cost of \$800 million. Detroit Edison sought rate recovery approval for AMI metering in its most base rate case and alleged that the benefits in the form of reduced operational costs justified the cost of the new metering system. However, the Michigan Public Service Commission eliminated the costs of a full scale AMI and allowed recovery of only the costs of an AMI pilot because of the lack of information about system wide costs and benefits. In the matter of the application of the Detroit Edison Co. for authority to increase its rates, amend its rate schedules and rules governing the distribution and supply of electric energy, and for miscellaneous accounting authority, Case No. U-15244, Opinion and Order, December 23, 2008.

280 technologies are evolving rapidly and that while the mesh-to-mesh communications  
281 worked as designed, there were a number of technical issues and concerns about the costs  
282 involved in such a communication network. Following a workshop with interested  
283 parties and the DPUC, CL&P revised its proposed smart meter pilot from a 10,000 meter  
284 system with mesh communications to a 4,000 meter system with a modern radio  
285 frequency (RF) communication system. This proposal was made in part to reduce costs  
286 and allow for the testing of CL&P's proposed pricing options. Relying on CL&P's  
287 recommendation that advances in meter technology suggested that a modern RF  
288 communication system could be implemented without the geographic saturation  
289 requirements associated with mesh communication technology, the DPUC approved the  
290 revised pilot proposal on the grounds that the utility could deploy fewer meters and  
291 obtain satisfactory pilot results.<sup>15</sup> There is no evidence that ComEd has considered these  
292 developments and options in the design of its AMI pilot.

293

294 **Q. BASED ON YOUR KNOWLEDGE OF AMI PROPOSALS IN OTHER STATES,**  
295 **IS IT NECESSARY TO INSTALL 100,000 NEW METERS TO DETERMINE THE**  
296 **OPERATIONAL IMPACTS OF AMI?**

297 A. No. I interpret ComEd's proposal as a phased installation of AMI and not a small scale  
298 and least cost pilot program to determine if the technologies work with ComEd's legacy  
299 systems and identify the costs and benefits of a full scale deployment of AMI.  
300 Furthermore, ComEd's Application does not contain any evidence to support its assertion

---

<sup>15</sup> Connecticut Department of Public Utility Control, Letter, Docket No. 05-10-03RE01 (May 2, 2008). The CL&P pricing pilot is testing four time-based options: Critical Peak Pricing, Peak Time Rebate, and TOU rates with an 8-hour on peak TOU rate. This pilot program is currently being conducted and will be evaluated in a final report issued in December 2009.

301 that such a large scale investment is necessary to gain the necessary information on  
302 system-wide costs and benefits.

303

304 Q. **HAS COMED PRESENTED ANY EVIDENCE THAT WOULD SHOW THAT ITS**  
305 **PROPOSED TECHNOLOGY CHOICES AND SYSTEM DESIGN WOULD BE**  
306 **THE LEAST COST MEANS TO ACHIEVE THE FUNCTIONALITIES**  
307 **ASSOCIATED WITH ADVANCED METERING?**

308 A. No. At no point has ComEd evaluated the functionality of its current system, which is  
309 equipped with Automated Meter Reading (AMR) for a substantial portion of its service  
310 territory, or documented the least cost means by which that existing system could be  
311 upgraded or modernized to achieve interval usage information and establish two-way  
312 communication systems with customer meters. Nor has ComEd revealed in this  
313 application the stranded costs that would be incurred if its proposed AMI system was  
314 installed on a system-wide basis and the existing AMR technology was essentially  
315 abandoned. The New York Public Service Commission considered this same issue with  
316 regard to AMI proposals by New York electric utilities and stated:

317 Electric utilities should explain in their plans the future options available for modifying and  
318 upgrading their selected systems for future advanced metering needs and avoidance of early  
319 obsolescence and stranded costs that can be anticipated and prevented. It would be beneficial to  
320 customers if utility advanced metering systems, including automated meter reading, did not  
321 restrict future use of sophisticated pricing and load management programs due to prohibitive  
322 incremental costs or technological impediments.

323

324 And:

325

326 Based on the comments, it appears possible to upgrade automated meter reading to accommodate  
327 advanced meter reading technology. In fact, automated meter reading may provide an  
328 economical method of pulling interval readings from meters, either through built-in intelligence  
329 in solid state electronic meters or use of intelligent network communications technology that  
330 performs data accumulation and time tagging to produce the required interval data.

331

332 We encourage electric utilities to plan for deployment of cost effective automated meter reading  
333 and, as noted above, to incorporate any automated meter reading proposals in their advanced  
334 metering plans, together with an analysis of all potential cost savings and other customer  
335 benefits.<sup>16</sup>

336  
337 The New York Commission's conclusions and guidance to electric utilities  
338 recognize the importance of maintaining least cost rates in any AMI deployment, pilot or  
339 otherwise.

340

341 **Q. ARE YOU SUGGESTING THAT A PILOT PROGRAM IS NOT NECESSARY?**

342 A. No. I understand that the Commission has authorized a pilot program and I do not  
343 question that decision. There are important issues relating to costs, technology choices,  
344 policy implications, and consumer protections associated with AMI deployment that have  
345 not yet been considered or evaluated by the Illinois Commission. I do, however, question  
346 the scale and cost of this proposed pilot program as necessary, and it is far too costly to  
347 ratepayers.

348

349 **Q. WHAT DO YOU RECOMMEND WITH RESPECT TO THE PROPOSED**  
350 **PILOT?**

351 A. I recommend that the pilot program be scaled to ensure the least cost approach and that  
352 the design of the pilot be demonstrated by ComEd to reflect the impact of the pilot and  
353 the potential full scale implementation of any technology or functionality on ratepayers.  
354 In that regard, I recommend that the Commission dramatically reduce the size of the pilot  
355 program to that necessary to determine the operational implications and the costs and

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<sup>16</sup> New York Public Service Commission, Order Relating to Electric and Gas Metering Service, CASE 94-E-0952 – In the Matter of Competitive Opportunities Regarding Electric Service (August 1, 2006), at 15 and 23.

356 benefits of AMI deployment in terms of ComEd's existing operational systems.  
357 Furthermore, I recommend that the Commission order ComEd to evaluate the option of  
358 upgrading its existing AMR system to achieve some or all of the functionality associated  
359 with its proposed AMI proposal and compare and contrast these options as part of any  
360 pilot program, similar to the approach required by the New York Commission.

361

362 ***D. ComEd has Not Proposed the Proper Evaluation Criteria***

363 **Q. WHAT IS YOUR OPINION OF THE EVALUATION CRITERIA THAT COMED**  
364 **HAS PROPOSED TO GOVERN THE ANALYSIS OF ITS PROPOSED AMI**  
365 **DEPLOYMENT?**

366 **A.** Mr. Richard O'Toole, on behalf of ComEd, identifies the process and measures that will  
367 be used to evaluate the AMI technology pilot. I have several high level concerns with the  
368 proposed evaluation approach, as well as comments on specific metrics that ComEd has  
369 proposed to track.

370 First, ComEd does not provide any baseline information or even discuss how or  
371 when the baseline information for each of these metrics will be developed and made  
372 public. In other words, it is not reasonable to track newly acquired information on  
373 metrics or performance areas that are not already tracked by ComEd or that would not be  
374 possible to compare to historical performance data to determine the incremental impact of  
375 the AMI pilot program. Just because the operation of a pilot program has a measurable  
376 impact on any of these metrics compared to non-AMI equipped customers is not a  
377 sufficient basis for concluding that the AMI installation is the cause of this differential.

378 Mr. O'Toole's metrics categories include (1) meter reading; (2) field and meter  
379 operations; (3) avoided energy purchases and uncollectibles; (4) billing; (5) Care Center;  
380 (6) outage management; (7) "value of the AMI infrastructure to other Smart Grid  
381 applications;" and (8) safety incidences and responsible vehicle accidents.<sup>17</sup>

382 With regard to meter reading, there is no question that the installation of AMI will  
383 have a direct impact on the costs associated with meter reading. In other words, jobs will  
384 be eliminated by the installation of AMI. To the extent that ComEd has already installed  
385 Automated Meter Reading (AMR) systems (and it appears from Mr. O'Toole's list of  
386 avoided costs that will be tracked, ComEd has already experienced cost savings due to its  
387 installation of AMR), the savings will be less than if AMR has not already been installed.  
388 Nonetheless, every utility that I am familiar with that has installed AMI has pointed to the  
389 loss of these jobs and the elimination of the labor and vehicle costs associated with meter  
390 reading as the primary source of any operational savings due to AMI installation. This is  
391 likely to be difficult for ComEd to estimate once an AMI technology for a full scale  
392 deployment is implemented.

393 With regard to field and meter operations, ComEd will be tracking the avoided  
394 costs associated with the elimination of manual disconnection and reconnection of  
395 service. In other words, ComEd will be remotely disconnecting service for nonpayment  
396 of the customer's electricity service without a premise visit.<sup>18</sup> ComEd does not highlight  
397 or discuss in any detail this important change in its current procedures associated with the

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<sup>17</sup> ComEd Ex. 3.0 at 1-14.

<sup>18</sup> ComEd response to AARP 1.30 confirms that ComEd will use the remote disconnection functionality associated with its proposed new metering system and that, "While not planned for in the pilot, this meter feature may also support future needs such as pre-payment programs or curtailment programs as examples." Both of these options are highly controversial and opposed by AARP and the Attorney General as discriminatory to lower income and payment-troubled customers.

398 disconnection of residential utility service for nonpayment or other involuntary  
399 disconnections. While the current Illinois regulations in Part 280 do not require that the  
400 utility attempt contact prior to disconnection of service, the fact that a utility premise visit  
401 is required to disconnect service is an important consumer protection. This change in  
402 current policy has important consumer health and safety implications that have not yet  
403 been evaluated or considered by the Commission. ComEd's reliance on remote  
404 disconnection of service is likely to result in a higher level of disconnection compared to  
405 the current disconnection process. It appears, too, that ComEd would not be leaving a  
406 conspicuous notice of its disconnection of service at the premises if this "reform" is  
407 allowed to occur. Furthermore, by this feature, ComEd appears to be relying on its  
408 ability to change its current policies to visit the dwelling at the time of disconnection  
409 without any further Commission review or approval of such a dramatic change.  
410 ComEd's current premise visit to the customer's dwelling at the time of disconnection  
411 allows the utility to attempt customer contact, detection of medical emergency, or other  
412 conditions that may result in forbearance by ComEd from disconnecting service. A  
413 recent decision of the New York Public Service Commission explicitly provided that  
414 current consumer protections relating to disconnection would be retained in the event that  
415 AMI was implemented, thus preventing New York utilities from relying on any savings  
416 associated with remote disconnection of service.<sup>19</sup> I recommend that ComEd not be  
417 allowed to implement this feature associated with the AMI pilot program.

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<sup>19</sup> The New York Commission stated, "Finally, we remind the companies that termination of service for nonpayment is subject to Home Energy Fair Practices Act (HEFPA) regardless of whether that disconnection is performed by physical (on site) or electronic (remote) service shut off. No utility may utilize AMI for remote disconnection of service for nonpayment unless it has taken all of the prerequisite steps required by HEFPA, including the requirement of 16 NYCRR §11.4(a)(7) that customers must be afforded the opportunity to make payment to utility personnel at the time of termination. This process requires a site visit, even where a remote device is utilized." See

418                   With regard to the metrics associated with the Customer Care Center,  
419                   conspicuously missing is the tracking of new and additional calls to the Call Center that  
420                   will be associated with this proposal. It is highly likely that pilot customers will call  
421                   ComEd to discuss the installation of the new meter and its functionality. Finally, the new  
422                   usage information available from these meters may result in longer and more frequent  
423                   calls from customers concerning their usage and how to obtain information about their  
424                   usage from ComEd's website or other means.<sup>20</sup> Therefore, ComEd should not only track  
425                   indicia of reduced calls, but the type, frequency, and length of all calls from AMI  
426                   participants in this pilot program.

427                   In the category of "other operational benefits," ComEd proposes to track how the  
428                   AMI infrastructure will provide value to "other Smart Grid applications."<sup>21</sup> These  
429                   metrics reflect ComEd's linkage of the AMI pilot to its system-wide infrastructure plans  
430                   for smart grid technologies and customer information applications that are the subject of  
431                   its Customer Applications pilot. While I do not object to ComEd's analysis of the  
432                   effectiveness of its proposed communication network, this proposal exceeds the narrower  
433                   Phase 0 pilot that the Commission anticipated and greatly drives up the costs of the  
434                   proposed pilot program. Such an evaluation also fails to take into account the multi-year  
435                   Smart Grid Collaborative Workshops that are underway and that the Commission

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Order Requiring Filing of Supplemental Plan, Case Nos. 94-E-0952, 00-E-0165, and 02-M-0454 (December 17, 2007).

<sup>20</sup> A recent industry newsletter contains an article that points out the potential for increased calls and lengthier calls to utility customer call centers as a result of the pricing options and functionality available through smart metering. As a result, it may be that costs will increase and not decrease for customer care and customer calling functions, contrary to what many utilities have alleged. See, "Call Center Impacts of Smart Metering," (July 10, 2009), available at <http://www.utilipoint.com/issuealert/article.asp?id=3174>

<sup>21</sup> ComEd Ex. 3.0 at 12.

436 intended would evaluate and consider system-wide investments in the distribution and  
437 transmission systems, as well as potential home area network implications of AMI.

438

439 ***E. Recommendations***

440 Q. **WHAT ARE YOUR RECOMMENDATIONS WITH RESPECT TO COMED'S**  
441 **PROPOSED AMI PILOT?**

442 A. I recommend that the Commission order ComEd to substantially reduce the size of the  
443 AMI installation and provide (1) an evaluation plan that identifies what technologies are  
444 being tested compared to other utility AMI installation and testing experiments; (2)  
445 evidence of the minimum size of the AMI pilot that is needed to test the implementation  
446 of particular AMI technologies and their integration into ComEd's existing systems at the  
447 least cost to ratepayers; and (3) an evaluation of what investments could be considered to  
448 upgrade existing automated meter reading systems to achieve some if not all of the  
449 functionalities of the proposed AMI system. Based on pilot programs either completed or  
450 underway at other utilities, it should be possible to conduct a test of the operational  
451 characteristics of AMI technologies for 5,000 to 10,000 meters.

452

453 Q. **DO YOU HAVE ANOTHER RECOMMENDATION THAT RELATES TO THE**  
454 **AMI PILOT THAT WILL ALLOW FOR FUTURE CONSIDERATION OF FULL**  
455 **SCALE AMI DEPLOYMENT?**

456 A. Yes. I recommend that the Commission require any ComEd AMI pilot proposal identify  
457 the potential costs to ratepayers from a full-scale implementation of the AMI  
458 technologies and functionalities that it proposes to test in its pilot program. To date,

459 ComEd has refused to estimate the full scale costs of AMI deployment based on its  
460 proposed pilot program.<sup>22</sup> It would not be appropriate to consider a proposal for even a  
461 pilot AMI deployment without some consideration of the scale of investment or the  
462 impact on customer bills associated with the costs of this new technology if ramped up to  
463 a system wide installation. This is particularly important if this pilot is designed to  
464 study only how to deploy AMI and not whether AMI should be deployed at all.

465

466 **III. CRITIQUE OF COMED'S PROPOSED CUSTOMER APPLICATIONS PILOT**  
467 **PROPOSAL**  
468

469 **A. *Description of ComEd's Customer Applications Pilot***

470 **Q. PLEASE DESCRIBE COMED'S PROPOSED CUSTOMER APPLICATIONS**  
471 **PILOT.**

472 **A.** ComEd has proposed a separate aspect of its proposed AMI pilot that will test a variety of  
473 pricing and rebate options for a smaller group of about 8,000 AMI customers. The  
474 Customer Applications pilot is estimated to cost \$2,190,000 in additional capital costs  
475 and \$12,649,000 in additional O&M costs, for a total of \$14.8 million in addition to the  
476 costs of the AMI pilot itself.<sup>23</sup> These estimated expenses result in a cost of \$105 per  
477 meter for the Customer Applications pilot, beyond the estimated cost of \$333 per meter

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<sup>22</sup> ComEd response to AARP 1.07 and IIEC 2.07. In these responses, ComEd claims that it has not yet estimated the costs associated with a full scale implementation of AMI, stating that it can only provide such estimates after the conclusion of the pilot programs it has recommended in this filing. However, other utilities have calculated such estimates as part of their pilot program proposals and of course, other utilities have sought approval for AMI without conducting any technology pilot program at all.

<sup>23</sup> ComEd Ex. 4.0, Table 5, page 27.

478 for the AMI pilot.<sup>24</sup> ComEd states that this approach was supported by AMI Workshop  
479 participants in order to determine the energy-related benefits associated with AMI. The  
480 Customer Applications pilot will consist of six rate designs and four technologies, most  
481 of which are associated with in-home devices or in-home displays. The various pricing  
482 and technology options, as well as 2 control groups, will result in 24 separate tracks or  
483 “cells” for the pilot program. The Company outlines five “hypotheses” that they will  
484 evaluate, all of which require the AMI metering system and some form of time-based  
485 pricing or peak time rebate accompanied by in-home technologies and devices. The  
486 overall intent is to find out whether customers in these pricing and technology options  
487 will use less electricity, reduce usage during peak usage hours, and/or shift usage to lower  
488 peak hours. ComEd’s pilot also involves a significant level and expense associated with  
489 marketing, education, and communications with customers to, as described by ComEd,  
490 “nudge” (a term used by ComEd) customers into investing in energy saving equipment,  
491 conserve energy, and shifting energy to other times of day.<sup>25</sup>

492 Participants will be randomly assigned to the Customer Applications options (i.e.,  
493 the 24 cells or variables), with 2 control groups composed of customers outside the AMI  
494 footprint. The selected customers will be notified of their selection, informed of the  
495 specific Customer Applications pricing and technology plan to which they are assigned,  
496 and provided an opportunity to “opt out” of the program. As a result, the Customer  
497 Applications pilot will not solicit participation from willing volunteers, but rely on  
498 customers failing to opt out to obtain the statistically valid number of customers for each  
499 Customer Applications option.

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<sup>24</sup> ComEd Response to AARP 1.23.

<sup>25</sup> ComEd Ex 4.0 at 5.

500 **B. *ComEd Has Failed To Justify The Scope And Scale Of This Pilot***  
501 ***Based On Any Evaluation Or Analysis Of Other Pricing Or***  
502 ***Technology Pilots.***

503  
504 Q. **DOES COMED'S PROPOSED CUSTOMER APPLICATIONS PILOT REFLECT**  
505 **ANY INFORMATION THAT COULD BE OBTAINED FROM THE DESIGN OR**  
506 **RESULTS OF OTHER AMI PRICING PILOTS?**

507 A. No. ComEd's pricing proposals duplicate the pilot programs conducted in other states  
508 and fails to incorporate recent findings and customer preferences. ComEd's Customer  
509 Applications Pilot proposal does not inform the Commission on what exactly will be  
510 learned in this expensive and complex pricing pilot compared to other experiments and  
511 experience. Nor has ComEd done any preliminary evaluation of what range of results  
512 would be expected from its proposed pricing and technology options compared to the  
513 results in other pilot programs.<sup>26</sup> Mr. Jensen on behalf of ComEd claims research on  
514 customer pricing options has not been conducted in the Midwest<sup>27</sup>, but there is no basis  
515 for the suggestion that pilots conducted in other jurisdictions would be not useful to the  
516 Illinois experience, at least in testing pricing options that reflect the current state of the  
517 research into residential customer preferences. He also testifies that the proposed  
518 Customer Applications pilot will position Illinois as the "leading state in developing a  
519 customer-centered research model of AMI and smart grid deployment."<sup>28</sup> But that  
520 statement is primarily a matter of the cost and size of the proposed pilot program and

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<sup>26</sup> When asked to identify the customer data and technologies that ComEd has proposed in its pilot that have not otherwise already been tested and evaluated in other pilot programs, the Company objected to the data request and stated, "ComEd has not reviewed, compared and contrasted its AMI Customer Applications Plan with all of the other pilot programs in the world." ComEd Response to AARP 1.03.

<sup>27</sup> ComEd Ex. 7.0 at 4.

<sup>28</sup> *Id.*

521 does not identify how Illinois ratepayers benefit from paying for the one of most  
522 expansive pilots in the country.

523 ComEd's "AMI Assessment Customer Applications Plan", referenced by Mr.  
524 Jensen, promises that the proposed assessment will be the "most comprehensive" in terms  
525 of numbers of subjects and , using a randomized controlled field trial (RCFT), will be the  
526 "first assessment to test six different types of rates, the "first assessment" to test four  
527 types of enabling technology for customer feedback and demand response information,  
528 the "first AMI assessment" to test the effects of free versus purchased enabling  
529 technologies, the effects of customer education, and how the customer experience  
530 impacts the adoption of the AMI system.<sup>29</sup>

531

532 Q. **DO YOU AGREE WITH MR. JENSEN'S STATEMENTS ABOUT THE UNIQUE**  
533 **NATURE OF COMED'S PROPOSED CUSTOMER APPLICATIONS PILOT?**

534 A. No. Most importantly, Mr. Jensen does not tell us why the size of the proposed Customer  
535 Applications pilot is necessary or why the complexity of the pilot's pricing and  
536 technology options are necessary. There have been many other AMI pricing pilot  
537 programs. There have also been several technology and in-home device pilot programs.  
538 Simply because ComEd proposes to include all these options in one pilot program is not a  
539 sufficient reason to duplicate or start anew in an analysis of customer responsiveness to  
540 various dynamic pricing options or the use of in-home display technologies. There is no  
541 basis for ComEd's suggestion that the size and complexity of this proposed pilot program

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<sup>29</sup> ComEd's AMI Assessment Customer Applications Plan, Attachment 4 to Petition at 3-4.

542 will provide data that is not otherwise available or that cannot be relied upon in Illinois,  
543 at least to guide the development of the most likely price or demand response options.

544 I provide the following information to support my statements that other AMI  
545 pricing pilots have been conducted or are underway in other jurisdictions that are likely to  
546 provide valuable information in designing an Illinois pilot that will build on and not  
547 duplicate other results:

548 • The California Statewide Pilot program is considered the original dynamic pricing  
549 pilot that most utilities and consultants have relied upon to predict customer interest  
550 in, response to, and price elasticities due to customer response to dynamic pricing.

551 These pilot programs tested a variety of dynamic pricing options, including Critical  
552 Peak Pricing, Peak Time Rebates, direct load control using smart thermostats, and  
553 more traditional Time of Use rate structures. This pilot also specifically tested low  
554 income customer responses to various dynamic pricing options and found that the  
555 price elasticity of this customer group was essentially zero.<sup>30</sup>

556 • Relying on more updated research with respect to customer reaction to peak time  
557 rebates as opposed to critical peak pricing, the California Commission has approved a

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<sup>30</sup> The California pilot program final report [Charles River Associates, *Impact Evaluation of the California Statewide Pricing Pilot (CRR CA SPP Final Report)*, March 16, 2005. The evaluation of these pricing programs for residential customers found that the use of traditional Time of Use (TOU) prices (such as those already available from ComEd using its existing interval metering system) alone reduced consumption by 6%, but the authors noted that this may be due in part to the “modest” nature of the differential in the California pilot TOU prices between peak and off peak periods. Indeed, the impact of time of use rates on residential consumption in general “almost completely disappeared” by the second year. However, the use of CPP or critical peak pricing reduced usage on Critical Peak days by 13-16%, thus showing that those customers with the largest energy usage (particularly those with central air conditioning) could have a potentially significant impact on usage during expensive peak periods. Finally, the pilot programs found that usage reduction (27%) significantly improved with installation of “smart thermostat,” that is, the use of a module in the customer’s home that enabled the customer or the utility to program cooling usage based on network conditions. Most importantly for the implications of such pricing methods for limited income customers, the impact evaluation of the California Statewide Pricing Pilot<sup>9</sup> found that “the elasticity of substitution for CARE [low-income discount] customers is essentially zero.” Report at 75. [Note: This Report is no longer available at the California Energy Commission website.]

558 reliance on peak time rebates or credits as the basis for calculating the potential for  
559 demand response savings in the AMI applications of Southern California Edison and  
560 San Diego Electric & Gas.<sup>31</sup>

- 561 • Baltimore Gas & Electric just issued the results of its first year AMI pricing pilot.<sup>32</sup>  
562 That report documents that residential customers respond to the offer of peak time  
563 rebates as well as to the more punitive notion of imposing high critical peak prices.  
564 As a result, BGE has abandoned any further testing of critical peak pricing and has  
565 proposed that its second AMI pricing pilot in 2010 rely solely on peak time rebates.

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<sup>31</sup> See *Application of San Diego Gas & Electric Co. (U-902-E) for Adoption of an Advanced Metering Infrastructure Deployment Scenario and Associated Cost Recovery and Rate Design*, California Public Utilities Commission, Decision 07-04-043, p. 54 (Apr. 12, 2007).

<sup>32</sup> BGE's AMI pricing pilot is a separate endeavor from its current Peak Rewards program that I discuss later in my testimony. BGE's Smart Energy Pricing Pilot Summer 2008 Impact Evaluation (April 28, 2009), available at the Maryland PSC website under [http://webapp.psc.state.md.us/Intranet/CaseNum/NewIndex3\\_VOpenFile.cfm?filepath=\\Coldfusion\EWorkingGroups\DRDG\BGE%20AMI-DR-Conservation\AMI%5C2\\_FINAL%20BGE%20SEP%20Summer%202008%20Report%20\(05\\_05\\_09\).pdf](http://webapp.psc.state.md.us/Intranet/CaseNum/NewIndex3_VOpenFile.cfm?filepath=\\Coldfusion\EWorkingGroups\DRDG\BGE%20AMI-DR-Conservation\AMI%5C2_FINAL%20BGE%20SEP%20Summer%202008%20Report%20(05_05_09).pdf)

566           • Several Massachusetts utilities<sup>33</sup> and a large Canadian utility<sup>34</sup> have looked at the use  
567           of in-home devices and their impact on usage and demand reduction for residential  
568           customers. Both of these studies have documented findings that suggest that (1)  
569           ComEd's extensive plans to test these devices is not necessary, certainly not on the  
570           scale that ComEd proposes, and (2) ComEd's proposed investments in these in-home  
571           display devices carry risks associated with failed devices, failed batteries, customer  
572           disinterest after a reasonable period of time, and difficulties with maintaining a  
573           working device and working connection with the utility's meter. It is not my intent to  
574           suggest that customers may not value these devices or make use of them. However,  
575           the plethora of devices, the rapid nature of technological developments, and the lack  
576           of uniform interoperability and communication standards that govern the connection  
577           of these devices and the customer's appliances and the utility's meter suggest a more  
578           cautious approach. This is particularly the case because it is not clear what role the  
579           utility itself should play in promoting particular devices, installing and maintaining

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<sup>33</sup> The Massachusetts PowerCost Monitor Pilot Program was implemented in 2007 by three Massachusetts utilities to test customer reaction to a wireless in-home display device which enabled the participants to see their electricity usage and costs in real time. Some customers were offered the device for free; others who agreed to purchase the monitor were given a \$120 rebate toward the total cost of \$149.95. Over 3,500 monitors were purchased. The evaluation determined that those customers who actually used the device saved on average 2.5 to 3% of annual usage. However, the evaluation also documented that only 76% actually installed the device with many describing difficulties with installation. More importantly, only 35% were using the device after 8-12 months for reasons that ranged from failed batteries to device failure to lack of continuing interest in using the device after the customer obtained useful information. Ms. Alexander's information on this pilot program was obtained as an attachment to the testimony of Ms. Sarah Darby, a witness on behalf of Southern California Gas Co. in a California PUC proceeding, A-08-09-023 [Exhibit 25-A]. The presentation of this pilot result was done by Opinion Dynamics Corp.

<sup>34</sup> Mountain, DC (2006), The Impact of Real-Time Feedback on Residential Electricity Consumption: The Hydro One Pilot, Mountain Economic Consulting and Associates, Inc., Ontario, CA. Hydro One in Canada undertook a Real Time Monitoring Pilot in the summer of 2004 and followed customer response over a two-year period. This study documented that exposure to real time usage information on electricity usage through an in-home monitor results in usage reduction. The most significant usage reduction was measured for non-electrically heated homes (8.2%), but that customers with electric heat did not response in any significant manner, which the authors concluded was due to the lack of granularity in usage information to such customers in which the electric heat usage overwhelmed the non-electric heat usage information.

580 such devices, and incurring the significant expense associated with subsidizing the  
581 costs of these devices.<sup>35</sup>

582

583 **Q. DID COMED'S PROPOSAL TAKE INTO ACCOUNT CURRENT COMED**  
584 **DYNAMIC PRICING AND DEMAND RESPONSE PROGRAMS?**

585 A. No. ComEd's proposal fails to discuss or compare and contrast the costs and benefits of  
586 any of its current dynamic pricing and direct load control programs.

587 Illinois has experimented with hourly pricing for residential customers for several  
588 years. Furthermore, ComEd has offered time-of-use rates to residential customers for  
589 many years. Neither rate option has proven to be popular with residential customers.  
590 The lack of any attention by ComEd to its own hourly pricing program offered to its  
591 residential customers in this filing is particularly disturbing and a glaring omission.  
592 According to the most recent report on the 2008 operation of this hourly pricing  
593 program<sup>36</sup>, very few residential customers have elected to participate in this program. As  
594 of the end of 2008, only 6,000 customers had enrolled in this program after several years  
595 of operation. Furthermore, the level of customer savings on their annual bill was very  
596 small (an average of 2.3% for those who had participated in the entire 2008 calendar  
597 year). Finally, volatile commodity prices in the wholesale market increased dramatically  
598 in 2008 and participating customers began to experience "negative savings" in 2008,  
599 resulting in a halt to the marketing of this program for several months. This experience

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<sup>35</sup> I also note that ComEd's promotion of these devices as an integral part of its AMI deployment could result in the potential for a profit center for the utility.

<sup>36</sup> Comverge, Inc., ComEd's Residential Real-Time Pricing Program 2008 Revised Annual Report, April 28, 2009. This Report is posted on the Commission's website under Docket No. 06-0617.

600 clearly documents my concerns about the notion that residential customers can or should  
601 be “nudged” into dynamic or time-based prices that reflect volatile wholesale market  
602 conditions.

603 In addition, ComEd has for several years also operated a direct load control  
604 program targeting central air conditioning usage at peak hours. This program is funded  
605 through Rider AC which allows the Company to remotely control the duty cycle of  
606 central air conditioning compressors and provides participating customers with either a  
607 \$5 or a \$10 credit for each of the four summer months. Yet, there is no analysis in this  
608 proposal of the costs and benefits of that program or how those costs and benefits might  
609 compare to this expensive AMI approach which will offer customers rewards for  
610 allowing ComEd to control a new smart thermostat.<sup>37</sup>

611

612 **C. Comed’s Customer Applications Pilot Design Is Flawed.**

613

614 Q. PLEASE DISCUSS YOUR VIEW OF THE ACTUAL CUSTOMER

615 APPLICATIONS PILOT DESIGN.

616 A. Based on my review of the dynamic pricing pilots and programs in other states, as well as  
617 the experience to date in Illinois, it is my opinion that residential customers with average  
618 or below average usage profiles are not interested in and will likely not see any  
619 significant benefit in the form of bill savings from dynamic pricing, particularly when  
620 presented as volatile hourly or extremely high critical peak pricing. These customers  
621 exposed to these pricing options who cannot shift usage off peak can be expected to

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<sup>37</sup> ComEd acknowledges that this Rider AC program will remain in effect during the various pilot programs. ComEd refused to perform any analysis of the costs and benefits of this or a similar program operated by Baltimore Gas & Electric [Peak Rewards} which has achieved significant success at a very low cost. ComEd Response to AARP 1.11.

622 experience higher bills, particularly when the costs of an expensive AMI deployment as  
623 reflected in ComEd's Application is taken into account. Furthermore, the move to  
624 dynamic pricing (particularly when accompanied by the significant marketing efforts that  
625 ComEd proposes here to "nudge" customers into participating in and reacting to these  
626 various Customer Applications pricing and technology options), carry concerns about the  
627 impact on customer health and safety. Some customers should not be discouraged from  
628 using their electricity during critical peak hours for cooling in particular, such as persons  
629 aged 65 and older, those with young children, and customers who are medically  
630 vulnerable or infirm.<sup>38</sup> As Illinois knows only too painfully, the combination of high  
631 summer temperatures, which are likely to conform to periods of very high wholesale  
632 market prices, and the lack of access to cooling through fans or air conditioning units  
633 because of the fear of higher and potentially unaffordable electric bills is a recipe for  
634 disaster.<sup>39</sup> As a result, I recommend that the Commission not focus on punitive critical  
635 peak or high peak prices to induce low and average use residential customers to shift  
636 usage or use less electricity.

637 While various pilot programs have documented that many residential customers  
638 will respond to opportunities to reduce peak load usage in return for rewards or credits, in  
639 most cases those programs were targeted to customers with a central air conditioning  
640 system that can be remotely operated through utility communication with smart  
641 thermostats (with and without AMI). However, ComEd's proposal does not identify any

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<sup>38</sup> [http://www.epa.gov/aging/pdfs/resources/ehe\\_guide\\_lo\\_2006\\_0619.pdf](http://www.epa.gov/aging/pdfs/resources/ehe_guide_lo_2006_0619.pdf)

<sup>39</sup> A seminal study of the July 1995 heat wave in Chicago, Illinois that resulted in 739 excess deaths documented that many elderly residents refused to use fans or air conditioners in part because of their fear of higher electric bills that would be unaffordable in the future. Almost ¾ of the victims were over age 65. See, Klinenberg, Eric, Heat Wave: A Social Autopsy of Disaster in Chicago, University of Chicago Press (2002).

642 goals or objectives for usage reduction and demand response targeted to customer usage  
643 profiles or ability to shift or reduce usage on a persistent and long term basis. Since  
644 almost 50% of ComEd's residential customers without electric heat use less than 500  
645 kWh per month and 65.5% of ComEd's residential customers without electric heat use  
646 less than 700 kWh per month<sup>40</sup>, it would appear highly unlikely that these customers  
647 could shift usage or reduce usage in a significant manner, particularly in light of the  
648 proposed costs of AMI and this Customer Applications pilot should it be replicated on a  
649 system-wide basis. It would be far more likely to be cost effective if ComEd sought to  
650 focus on higher usage residential customers and craft AMI and pricing or technology  
651 based programs that targeted those with the most opportunity to reduce usage or  
652 participate in direct load control programs.

653

654 **Q. HAS COMED INCLUDED AN EVALUATION OF THE POTENTIALLY MOST**  
655 **COST EFFECTIVE APPROACHES TO ACHIEVE USAGE REDUCTION**  
656 **AND/OR DEMAND RESPONSE FROM RESIDENTIAL CUSTOMERS IN THIS**  
657 **PILOT PROGRAM?**

658 **A.** No. In fact, ComEd has stated that it has not done any analysis of the most cost effective  
659 or least cost means to achieve usage reduction, deliver energy efficiency, or design and  
660 implement demand response programs.<sup>41</sup> Rather, ComEd has proposed an AMI pilot and

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<sup>40</sup> ComEd response to AARP 1.13, Attachment 1.

<sup>41</sup> ComEd responses to IPA 1.06, 1.07, 1.08, 1.09 confirm that ComEd has not conducted any analysis of the most cost effective or least cost efficiency or demand response programs in proposing its Customer Applications Plan or that it has estimated or established any objectives or goals associated with efficiency, usage reduction, or demand response results to guide its analysis of its proposed pilot program. See, also, ComEd Response to AARP 1.25, 1.26, 1.27 and 1.28 which reflect this same approach.

661 a Customer Applications pilot that fails to evaluate potential AMI technologies and  
662 implementation strategies that would result in a least cost approach to achieve the  
663 functionalities that it has identified as important to ratepayers. Furthermore, ComEd has  
664 not done any analysis of a full-scale implementation of AMI based on its proposal or any  
665 other technology options. Given its size and cost of its proposals, ComEd appears to be  
666 seeking data to justify a predetermined objective of installing AMI on a full scale basis  
667 and appears intent on embarking on expensive and potentially dangerous pricing  
668 programs that will make essential electricity service more volatile and less stable for the  
669 average residential customer.

670

671 Q. **WHAT HAVE OTHER DYNAMIC PRICING PILOTS SHOWN REGARDING**  
672 **CUSTOMER REACTION TO VARIOUS DYNAMIC PRICING OPTIONS?**

673 A. Previous pilot programs in California<sup>42</sup> and Maryland clearly indicate that customers are  
674 more motivated or just as motivated to shift usage or reduce usage during peak hours  
675 with a rebate or credit approach rather than the potentially punitive approach of very high  
676 critical peak pricing. For example, Baltimore Gas & Electric's ("BGE") Peak Rewards  
677 Program<sup>43</sup> in Maryland initiated a successful Smart Grid program that relied on the use of  
678 "smart thermostats" installed in customers' homes with central air conditioning or a heat  
679 pump system. The Peak Rewards Program utilized a two-way communication system

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<sup>42</sup> See *Application of San Diego Gas & Electric Co. (U-902-E) for Adoption of an Advanced Metering Infrastructure Deployment Scenario and Associated Cost Recovery and Rate Design*, California Public Utilities Commission, Decision 07-04-043, p. 54 (Apr. 12, 2007). See also footnote 30, *infra*.

<sup>43</sup> BG&E's Peak Rewards program provides participating residential customers with a bill credit up to \$100 each summer, depending on the level of participation selected by the customer, i.e., the level of control allowed on the customer's thermostat. For further details on this program, see: <http://peakrewards.bgesmartenergy.com/what-is-peakrewards>

680 between the utility and the thermostats, but did not require new metering infrastructure or  
681 time-of-use pricing models. The Maryland Public Service Commission (“PSC”)  
682 discussed the Peak Rewards Program in its report to the Maryland Legislature<sup>44</sup>:

683  
684 The greatest success from the pre-EmPower Act period came from a BGE  
685 program, now called Peak Rewards. Peak Rewards is a voluntary program in  
686 which customers can agree, in exchange for bill credits, to allow BGE to install a  
687 device through which BGE can turn down the customer’s air conditioning on peak  
688 demand days. As approved, Peak Rewards is surcharge-neutral, even to non-  
689 participants, because BGE can fund it with the proceeds from bidding the  
690 resulting demand response into the RPM capacity auctions. As a result of Peak  
691 Rewards, BGE bid 495 MW of demand response into the May 2008 auction –  
692 effectively a power plant’s worth of demand response that substitutes for an  
693 equivalent amount of new generation. Having approved Peak Rewards, the  
694 Commission directed Pepco, Delmarva, Allegheny and SMECO on January 3,  
695 2008 to file similar demand response programs and, with the exception of  
696 Allegheny, all of them now have programs of their own.

697  
698 In testimony presented before the Maine Public Utilities Commission in 2007, Dr.  
699 Stephen S. George<sup>45</sup> also supported the reliance on peak time rebate approaches for most  
700 residential customers as opposed to CPP:

701  
702 A PTR [Peak Time Rebate] incentive is similar to a critical peak price (CPP),  
703 except that it is a "carrot-only" option rather than a "carrot-and-stick" option like a  
704 CPP rate. With a CPP program, customers with "peakier" load shapes may see bill  
705 increases if they do not reduce usage on critical days, and market research  
706 indicates that customers often focus more on this downside risk than the upside  
707 potential when considering whether or not to accept a CPP rate. With a PTR  
708 program, if customers do not change their energy use during peak periods, their  
709 bills remain the same—if they reduce energy use, their bills fall. As such, it is not  
710 necessary to enroll customers in a PTR program *per se*, but simply to inform them  
711 that an opportunity to reduce their bills is available. Market research and pricing

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<sup>44</sup> See *Final Report of the Maryland PSC to the Maryland Legislature, Options for Re-Regulation and New Generation*, December 10, 2008, at 6 and 23. Report available at: [http://webapp.psc.state.md.us/Intranet/psc/Reports\\_new.cfm](http://webapp.psc.state.md.us/Intranet/psc/Reports_new.cfm) .

<sup>45</sup> Rebuttal Testimony of Stephen S. George, Ph. D., November 9, 2007, Maine Public Utilities Commission, *Central Maine Power Company, Request for New Alternative Rate Plan*, Docket No. 2007-215, p. 21 (2007). This testimony is available on the Maine PUC’s website under this docket number: <http://www.state.me.us/mpuc/>

712 pilots indicate that the average demand reduction per customer is similar for PTR  
713 and CPP options. However, because of the risk-free nature of a PTR program,  
714 more customers are likely to take advantage of a PTR rebate than to volunteer for  
715 a CPP program. Consequently, total demand response is likely to be greater for a  
716 PTR incentive than for a CPP program. [Emphasis added]  
717  
718

719 As a result of these findings, I recommend that ComEd's Customer Applications  
720 pilot focus on Peak Rewards and abandon further testing of critical peak or other hourly  
721 or dynamic pricing for residential customers.

722  
723 Q. **DO YOU HAVE OTHER CONCERNS ABOUT THE DESIGN OF THE**  
724 **CUSTOMER APPLICATIONS PILOT AND ITS IMPLICATIONS FOR FULL**  
725 **SCALE DEPLOYMENT?**

726 A. Yes. I am particularly concerned about two aspects of this proposed Customer  
727 Applications pilot.

728 First, the costs associated with the marketing and "educational" expenses for this  
729 pilot are very high and unlikely to be replicated on a system wide basis. Of the total \$12  
730 million O&M costs that ComEd has estimated for this Customer Applications pilot, \$2.2  
731 million is for "public information-community outreach," and \$1 million is for "customer-  
732 direct communications" (27% of the entire budget). The attempt by ComEd to "nudge"  
733 customers into this program and to push customers into taking actions in response to a  
734 marketing campaign, the exact nature of which is not revealed in this proposal, puts  
735 ComEd into the position that is not in keeping with its role as a distribution company in a  
736 state that has adopted electric restructuring. A constant barrage of communications for a  
737 pilot program is unlikely to provide any meaningful information when considering the  
738 potential impact of any aspect of these pricing and technology pilots on a full scale basis.

739                   Second, I am concerned about the technology proposals associated with this  
740                   proposed pilot. ComEd has proposed to purchase \$2.16 million in hardware for in-home  
741                   display devices and another \$.5 million for installing such devices. Having the utility  
742                   take such a proactive role in the promotion and installation of in-home devices has been  
743                   controversial in other states and is problematic for a number of reasons. The market for  
744                   and design and functionality of these devices is in its infancy. Furthermore, ComEd  
745                   seeks to subsidize the cost and installation of these in-home devices,<sup>46</sup> which is again  
746                   unlikely to be replicated in any full scale implementation due to the costs for such an  
747                   approach and the potential for stranded costs due to the rapidly developing technology  
748                   and functionality of these devices in the next several years. In fact, ComEd's approach  
749                   demonstrates clearly that the installation of new metering is only the beginning of the  
750                   ratepayer investment in smart grid technologies since the meter itself does nothing but  
751                   record usage in smaller increments and it requires a dedicated wireless or wired  
752                   communication to the customer's side of the meter or a presentation of this information  
753                   through the internet to actually communicate with customers on usage and pricing  
754                   information. Relying on in-home devices to transmit this information in a format that  
755                   customers can easily access and make use of is potentially significant. While ComEd  
756                   apparently recognizes this barrier, the Commission should proceed more carefully prior  
757                   to inserting the distribution utility into this new function. Any such approach should only  
758                   occur after a consideration of attendant issues of customer privacy in the gathering and

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<sup>46</sup> In ComEd's response to DLH 3.02 (Supplemental), it states that the charges to customer for these technologies are not going to be cost based. ComEd estimates that the basic in home display device will cost \$105 per unit and the advanced in home display device will cost \$750 per unit. The cost of the programmable thermostat is estimated at \$1,300 per unit. While ComEd is proposing to charge customers some fee for these devices, at least for some participants, it has not yet identified what fee it will charge.

759 use of such granular usage data about household activities and appliances, costs and cost  
760 recovery, and the relationship of the utility's role in promoting various rate options to the  
761 retail market model in effect in Illinois. Finally, I again point out that prior studies of  
762 customer usage and reliance on in-home devices suggest significant operational problems  
763 and lack of persistent customer interest in and use of such devices in several pilot  
764 programs conducted by both U.S. and other utilities. As a result of these concerns, I  
765 recommend that the Commission reject ratepayer funding to subsidize these in-home  
766 devices for this Customer Applications pilot. Rather, ComEd should arrange for the  
767 manufacturers of a wide range of devices to provide an optional purchase (perhaps at a  
768 discount from the manufacturer to test or promote their device) for customers in this  
769 pilot.

770

771 **Q. HAS COMED EVEN PROPOSED FINAL PRICES FOR ALL OF ITS VARIOUS**  
772 **PRICING OPTIONS PROPOSED FOR THIS PILOT?**

773 A. No. According to ComEd's response to DAB 2.06, values have not yet been determined  
774 for what ComEd will charge customers for in-home technologies and the times and  
775 values associated with the proposed Time of Use rate option. Therefore, it is not even  
776 possible for the parties in this proceeding to fully evaluate the prices that ComEd  
777 proposes to charge customers for all the pricing and technology options that it has  
778 proposed in this pilot program.

779

780

781

**D. Comed Has Failed To Provide A Proper Evaluation Plan.**

782  
783  
784 Q. **DID COMED INCLUDE AN EVALUATION PLAN FOR ITS CUSTOMER**  
785 **APPLICATIONS PILOT?**

786 A. No. ComEd's Customer Applications Plan (Attachment 4 to ComEd's Petition) states at  
787 page 41 that it will use an RFP process to contract with an evaluation vendor to develop  
788 the evaluation data model and datastore. Furthermore, ComEd's proposed timeline for  
789 this part of its proposal does not contain any interactions with the AMI Workshop  
790 participants and reflects the lack of the development of the "evaluation data model" that  
791 is necessary to conduct this important evaluation.<sup>47</sup>

792 ComEd has identified its overall approach to this evaluation. In Section 3.3 of its  
793 Customer Application Plan, ComEd proposes to measure changes in consumption,  
794 measure customer "price elasticity," and measure the extent to which customers shift  
795 usage from peak hours to off peak and less expensive hours by means of various  
796 statistical and mathematical models. ComEd also identifies a wide range of data that it  
797 will collect on the Customer Applications participants [See Section 3.3.5 of the Customer  
798 Application Plan] and the various use of its models to "estimate customer response under  
799 a wide range of combinations of prices, technologies, and information" and then predict  
800 system-wide impacts of the various options.<sup>48</sup> ComEd acknowledges the need for a  
801 process evaluation to analyze the development and actual implementation of the program  
802 and whether the "expected outcome" was actually predicted. Such an evaluation will  
803 rely on interviews with ComEd staff and the results of customer surveys.

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<sup>47</sup> ComEd's AMI Assessment Customer Applications Plan, Attachment 4 to Petition, at 42.

<sup>48</sup> *Id.* at 36-37.

805 Q. **PLEASE DISCUSS YOUR OVERALL CONCERNS WITH COMED'S**  
806 **PROPOSED EVALUATION FOR ITS CUSTOMER APPLICATIONS PILOT.**

807 A. First, ComEd has not provided a formal evaluation plan that identifies exactly what it will  
808 measure and contains baseline data that will measure changes over the term of the pilot.  
809 This defect is particularly troubling because of the proposed scale and cost associated  
810 with this proposed pilot.

811 Second, ComEd's evaluation does not apparently include an analysis of the bill  
812 impacts on a wide range of customer usage and demographic profiles as a result of the  
813 total costs of the AMI investment, as well as the results of the proposed pricing programs.  
814 Assuming that dynamic pricing programs remain optional (which is a crucial policy  
815 decision that should be addressed promptly), those customers who do not participate in  
816 the optional pricing and peak time rebate programs will only see bill increases to pay for  
817 the expensive AMI investment and any bill savings they experience would come from the  
818 pricing of Basic Electric Service. Since the linkage between demand response programs  
819 and the impact on dynamic pricing on the cost of wholesale electricity for residential  
820 customers is not yet identified or documented in restructured states, the analysis of the  
821 impacts of any Customer Applications pilot must evaluate the impacts not only on the  
822 average customer and those that participate in the programs, but all other non-  
823 participating customers.

824 Third, ComEd does not identify how its proposed evaluation approach would rely  
825 on new methodologies or unique features compared to other AMI evaluations that have  
826 been done or that are underway in other states and jurisdictions.

827

828 **E. Recommendations**

829  
830 Q. **SHOULD THE COMMISSION APPROVE COMED'S PROPOSED CUSTOMER**  
831 **APPLICATIONS PILOT AS IT HAS PROPOSED IN THIS PROCEEDING?**

832 A. No. I recommend that the Commission order ComEd to design a much less expensive  
833 and more narrowly focused pricing and technology pilot. Most importantly, any pricing  
834 or technology pilot should incorporate the knowledge and experience gained from other  
835 pilots conducted in other states and focus on those more likely to reflect customer  
836 preferences as derived from other pilot programs. Furthermore, I recommend that the  
837 Commission order ComEd not to subsidize the costs of providing a variety of in-home  
838 display devices to participating customers, but instead offer customers a variety of device  
839 and functional options from manufacturers who might therefore be willing to provide a  
840 reduced price for this pilot program. It is highly unlikely and unrealistic that ComEd's  
841 ratepayers should subsidize these devices, particularly in the early years of their  
842 development. Most importantly, I recommend that the Commission order ComEd to  
843 compare the costs and benefits associated with AMI-enabled consumption reduction and  
844 demand response with non-AMI programs, such as the use of existing or upgraded direct  
845 load control equipment (and associated communication networks). Unlike the proposed  
846 ComEd approach, the Commission should require a true evaluation of AMI and non-AMI  
847 costs and benefits to achieve the same level of usage and demand response impacts prior  
848 to making any decisions on such an expensive investment for Illinois ratepayers.

849

850

851 ~~IV. COMED'S PROPOSAL TO SEEK FEDERAL SMART GRID FUNDING~~

852  
853 *A. ComEd Has Failed To Identify The Specific Nature Of Any DOE*  
854 *Grant Proposal It May Submit.*

855  
856 ~~Q. HAS COMED PROPOSED TO APPLY FOR SMART GRID FUNDING TO THE~~  
857 ~~DEPARTMENT OF ENERGY?~~

858 ~~A. Yes. ComEd has stated that it will seek federal Smart Grid grant funds for some part of~~  
859 ~~this proposal. According to its response to AARP1.17, the Company will seek a grant~~  
860 ~~pursuant to the DOE Grant Guidance for Section 1306 of EISA, stating, "The AMI Pilot,~~  
861 ~~which is under consideration in this docket, would be included in the application to DOE~~  
862 ~~for a grant." In a supplement to its petition filed on June 24, 2009, ComEd stated that it~~  
863 ~~is unlikely that it will be able to submit a specific ARRA project for formal approval in~~  
864 ~~this proceeding, given "material changes to the schedule and procedures for U.S.~~  
865 ~~Department of Energy acceptance, review, and approval, and funding of ARRA~~  
866 ~~projects."<sup>49</sup> Despite this admission, ComEd continues to seek approval of language in its~~  
867 ~~proposed Rider AMP that would permit recovery in rates for a return on and of~~  
868 ~~investment expenditures related to the Company's investment in federal stimulus projects~~  
869 ~~that are not specifically identified and the costs for which are unknown.~~

870  
871 ~~Q. HAS COMED IDENTIFIED EXACTLY WHAT IT WILL SEEK FROM DOE~~  
872 ~~AND HOW SUCH APPLICATION WILL BE INTEGRATED WITH THIS~~  
873 ~~PROPOSAL AS FILED WITH THE COMMISSION?~~

---

<sup>49</sup> Supplement to Petition at 2, filed June 24, 2009.

874 A. ~~No. ComEd has not identified exactly what it will seek from DOE in the nature of~~  
875 ~~proposals for Smart Grid grants. Nor has ComEd even identified whether this Pilot~~  
876 ~~proposal as filed with the Commission will be the subject of any DOE grant application~~  
877 ~~or whether some portion of this proposal or additional proposals will be the subject of~~  
878 ~~any future DOE grant applications.~~

879

880 **B. Recommendations**

881

882 Q. ~~IN LIGHT OF THE LACK OF INFORMATION PROVIDED BY COMED~~  
883 ~~CONCERNING THE RELATIONSHIP BETWEEN THIS FILING AND ANY~~  
884 ~~DOE APPLICATION, HOW SHOULD THE COMMISSION PROCEED?~~

885 A. ~~The Commission should not assume that the application that ComEd has filed in this~~  
886 ~~docket on June 1, 2009 is a sufficient description of or notice of the implications for cost~~  
887 ~~recovery to ratepayers related to any federal stimulus projects. ComEd simply has failed~~  
888 ~~to demonstrate why any ratepayer funding is necessary to implement an approved DOE~~  
889 ~~project beyond that approved by the Commission in this proceeding for the more~~  
890 ~~narrowly focused AMI pilot that I have recommended. I defer to the testimony of Mr.~~  
891 ~~Brosch concerning the proper type of costs that should be included in any approved cost~~  
892 ~~recovery mechanism. In general, ComEd and other utilities seeking Smart Grid grants~~  
893 ~~should fund their share of the costs as part of its ongoing investment and modernization~~  
894 ~~activities and seek recovery in a future base rate case that considers all of ComEd's~~  
895 ~~revenues and expenses and the prudence of its expenses.~~

896

897

898 Q. **DOES THIS COMPLETE YOUR TESTIMONY AT THIS TIME?**

899 A. Yes. I reserve the right to supplement my testimony based on late filed data responses

900 from ComEd.

STATE OF ILLINOIS  
ILLINOIS COMMERCE COMMISSION

COMMONWEALTH EDISON COMPANY )  
 )  
Petition to approve an Advanced Metering )  
Infrastructure Pilot Program and associated tariffs )

Docket No. 09-0263

Affidavit of Barbara R. Alexander

STATE OF MAINE )  
 ) SS.  
COUNTY OF KENNEBEC )

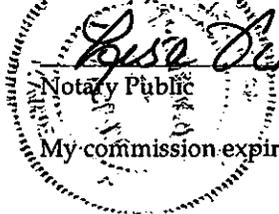
I, Barbara R. Alexander, being first duly sworn, declare under oath as follows:

1. I am a consumer affairs consultant focused on regulatory and statutory policies concerning consumer protection, service quality, and rate impacts.
2. I provided Direct Testimony, identified as AG/AARP Exhibit 2.0, and additional attachments to that testimony, identified as AG/AARP Exhibit 2.1, in this proceeding. That testimony, filed on July 24, 2009, was prepared by me or under my direction and control.
3. I swear and affirm that the testimony provided is true and correct, to the best of my knowledge and ability, and that there are no corrections or revisions to be made to my testimony. If I were asked the same questions today, my answers would be the same. It is my desire that my testimony and attachments be considered as evidence by the Administrative Law Judge and by the Illinois Commerce Commission in this Docket.

Further Affiant Sayeth Not.

  
Barbara R. Alexander

On this 27<sup>th</sup> day of July, 2009, before me, the undersigned notary public, personally appeared Barbara R. Alexander, who proved to me through personal knowledge to be the person whose name is signed above on this document in my presence.



LISA J. GILLIAM  
Notary Public, Maine  
My Commission Expires June 16, 2010