

STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

Central Illinois Light Company :
d/b/a AmerenCILCO, :
Central Illinois Public Service Company :
d/b/a AmerenCIPS and :
Illinois Power Company : **Docket No. 07-0539**
d/b/a AmerenIP :
: :
Approval of Energy Efficiency :
and Demand Response Plan :

Direct Testimony of

Robert R. Stephens

On Behalf of

Illinois Industrial Energy Consumers

December 14, 2007
Project 8861



BRUBAKER & ASSOCIATES, INC.
ST. LOUIS, MO 63141-2000

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Direct Testimony of Robert R. Stephens

1 **Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A My name is Robert R. Stephens. My business address is 1215 Fern Ridge Parkway,
3 Suite 208; St. Louis, Missouri 63141.

4 **Q PLEASE STATE YOUR OCCUPATION.**

5 A I am a consultant in the field of public utility regulation with Brubaker & Associates,
6 Inc. ("BAI"), energy, economic and regulatory consultants.

7 **Q PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.**

8 A This is summarized in Appendix A to my testimony.

9 **Q ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?**

10 A I am appearing on behalf of the Illinois Industrial Energy Consumers ("IIEC"). The
11 IIEC is an ad hoc group of industrial customers eligible to take power and energy or
12 delivery service from Central Illinois Light Company ("AmerenCILCO"), Central Illinois

13 Public Service Company (“AmerenCIPS”) and Illinois Power Company (“AmerenIP”),
14 collectively “Ameren Companies” or “Ameren.” IIEC members are generally
15 supportive of energy efficiency and demand response programs, but have serious
16 concerns with Ameren’s Energy Efficiency and Demand Response Plan (the “Ameren
17 Plan”).

18 **Q WHAT IS THE SUBJECT MATTER OF YOUR TESTIMONY?**

19 A In this testimony, I discuss the inequity of the Ameren Plan in terms of the mismatch
20 between the program incentives and implementation costs (collectively “program
21 costs”) and the proposed mechanism to recover from customers the costs of the
22 programs. In addition, I will propose a modified cost recovery mechanism which will
23 better match program costs and collections for affected customer classes, while
24 maintaining program design and deployment flexibility for Ameren.

25 **Q PLEASE SUMMARIZE YOUR RECOMMENDATIONS AND CONCLUSIONS.**

26 A My recommendations and conclusions can be summarized as follows:

- 27 1. The Ameren Plan recognizes three customer classes in the energy efficiency
28 measures used in the program design phase, but only one customer class,
29 i.e., all customers, for cost recovery. Ameren should also recognize three
30 customer classes for cost recovery.
- 31 2. A three customer class structure consisting of Residential, Small C&I and
32 Large C&I, at a minimum, should be used for cost recovery. The most logical
33 dividing point between Small C&I and Large C&I is 1 MW in demand, which is
34 the traditional dividing point between commercial and industrial customers and
35 has considerable precedent within Ameren rates, Commission Rules and
36 reporting requirements, and FERC reporting requirements. It also is
37 consistent with dividing points used by Commonwealth Edison Company
38 (“ComEd”).
- 39 3. Because of the mismatch between the target classes for programs and the
40 recovery mechanism proposed by Ameren, customers with demands of 1 MW
41 or more (“Large C&I” class) would be required to pay as much as double the

42 cost of programs directed to them. Equity dictates that the recovery
43 mechanism should be designed to recover amounts from the various classes
44 that are commensurate with energy efficiency program costs.

45 4. For the three year program cost recovery levels, IIEC has grouped expected
46 program costs to correspond with the three customer classes it recommends
47 for the determination of cost recovery rates. If participation experience or
48 program redeployment suggests that different program costs are attributable
49 to the classes in the second and subsequent years, the recovery rates should
50 be adjusted in accordance with new class-based program cost estimates.

51 5. The IIEC proposed recovery mechanism should not impact energy efficiency
52 and demand response program design and deployment. The cost recovery
53 mechanism should follow program implementation, not vice versa. The IIEC
54 proposed cost recovery mechanism will collect the same total funding as
55 Ameren's proposed mechanism and in no way will impair Ameren's ability to
56 implement or to recover the costs of its energy efficiency and demand
57 response programs.

58 **The Ameren Plan Fails to Properly Recognize**
59 **Commercial and Industrial Class Differences**

60 **Q DOES THE AMEREN PLAN PRESCRIBE DIFFERENT ENERGY EFFICIENCY**
61 **PROGRAMS FOR DIFFERENT CUSTOMER CLASSES?**

62 A Yes. As shown in Table 12 and described at pages 7 to 9 of the Ameren Plan,
63 Ameren directs distinct energy efficiency programs to the residential class and the
64 combined commercial and industrial customer classes. However, as discussed
65 below, for the purposes of program cost recovery, Ameren essentially treats all
66 customers as one class, in that it proposes a single per kWh charge to recover the
67 combined cost of all programs. That single charge would be applied uniformly to all
68 customer classes.

69 With respect to energy efficiency measures,¹ Ameren recognizes in Table 8,
70 on page 23 of the Ameren Plan, the differences between three customer classes:

¹ For a description of the difference between energy efficiency "programs" and "measures," see generally, the direct testimony of Ameren witness Val R. Jensen, Ameren Ex. 4.0, at 5-6, 17-18

71 residential, commercial and industrial, when identifying the different types of energy
72 efficiency measures for each.

73 **Q WHAT MEASURES DOES AMEREN ASSOCIATE WITH THESE THREE**
74 **CLASSES?**

75 A Residential energy efficiency measures include items such as compact fluorescent
76 light bulbs, energy efficient appliances and residential heating and air conditioning
77 measures. Commercial measures include fluorescent light replacements, exit signs,
78 and commercial heating, ventilating and air conditioning (HVAC) improvements. For
79 the industrial class, Ameren identifies items relating to compressed air, pumps,
80 process heating, machine drive, etc. These diverse categories of energy efficiency
81 measures generally reflect differences in how these three classes of customers use
82 electric energy.

83 **Q HAVE THE DIFFERENCES IN ELECTRICITY USAGE TRADITIONALLY BEEN**
84 **REFLECTED IN UTILITY RATES?**

85 A Yes. Prior to January 2, 2007, Ameren had separate bundled service rates for the
86 residential, commercial and industrial customer classes. Although there were multiple
87 rates within each of these customer classes, the predominant rates for residential
88 customers were Rate 1 (AmerenCILCO and AmerenCIPS) and Rate 2 (AmerenIP);
89 for commercial customers were Rate 13 (AmerenCILCO), Rate 2B (AmerenCIPS)
90 and Rate 11/19 (AmerenIP); and for industrial customers were Rate 21
91 (AmerenCILCO) Rate 9B (AmerenCIPS) and Rate 21/24 (AmerenIP). Using

and 21-23. To understand the target class of a program, it is often necessary to consider the measures within the program.

92 AmerenCILCO as an example, a primary distinction between Rate 13 and Rate 21
93 was that Rate 13 was generally used by non-residential customers smaller than 1
94 MW in demand and Rate 21 was generally used only by non-residential customers
95 larger than 1 MW. These various Ameren rates had different charges. The charges
96 reflected the different ways in which each customer class uses electricity and the
97 difference in costs they imposed on the system.

98 Currently, Ameren reflects these class differences in its delivery service rates
99 as well. Ameren has separate delivery service rates for residential and
100 non-residential customers. The non-residential customers are divided into multiple
101 classes, defined primarily by size, e.g., at demand levels such as 150 kW and 1 MW.

102 **Q DO ENERGY EFFICIENCY MEASURES PROPOSED BY AMEREN VARY AMONG**
103 **THE CLASSES?**

104 **A** Yes. Energy efficiency measures will vary to a large degree by class, recognizing the
105 different energy using equipment prevalent in each class. As suggested by the
106 commercial and industrial measure descriptions in Table 8, at page 23 of the Ameren
107 Plan, most energy efficiency measures directed to the commercial class have to do
108 with building improvements, such as lighting, HVAC, or the building shell. In contrast,
109 large industrial customers are more process oriented, i.e., the bulk of the energy is
110 used in the manufacture of a product, not in lighting, HVAC or the building shell.
111 Typical uses of power by large industrial customers are for items such as metal
112 melting, pumping, compressing, milling, and electrolytic processes. Lighting, HVAC
113 and building shell energy usage is typically a relatively low percentage of the overall
114 energy consumption for the industrial customer class.

115 Q SHOULD THERE BE MULTIPLE CLASSES FOR ENERGY EFFICIENCY AND
116 DEMAND RESPONSE COST RECOVERY?

117 A Yes.

118 Q WHAT IS YOUR RECOMMENDATION REGARDING ESTABLISHMENT OF
119 CUSTOMER CLASSES FOR ENERGY EFFICIENCY PROGRAMS AND COST
120 RECOVERY?

121 A While multiple approaches could be used for establishing customer classes for these
122 purposes, I am recommending a moderate approach. Specifically, I recommend that
123 there be a Residential class and two C&I classes, namely a "Small C&I" class and a
124 "Large C&I" class, corresponding to customer sizes generally associated with
125 commercial and industrial customers, respectively. Specifically, I recommend that the
126 Small C&I class be defined as non-residential customers with demands below 1 MW.
127 Customers with demands 1 MW and above would be in the Large C&I class. This is
128 a reasonable delineation between classes and has considerable precedent within
129 Ameren rate structures and within Illinois Commerce Commission ("Commission")
130 reporting requirements. Further, as I mention below, this is the industry standard
131 distinction between commercial and industrial customers used by the Federal Energy
132 Regulatory Commission (FERC) in its Uniform System of Accounts.

133 Q TO WHAT RATE PRECEDENT ARE YOU REFERRING?

134 A For example, as mentioned earlier in my testimony, some of the Ameren Companies'
135 traditional bundled service rates had a breakpoint at 1 MW. For example,
136 AmerenCILCO Rate 13 was generally used by customers below 1 MW while Rate 21
137 was generally used by customers 1 MW and larger. Indeed, AmerenIP Rate 19 was

138 only available to customers below 1 MW, while Rate 21 was only available to
139 customers 1 MW and larger. Also, in Ameren's current delivery service rate structure,
140 Ameren has a breakpoint at 1 MW between its DS-3 and its DS-4 customer classes.

141 In terms of Commission reporting requirements, the 1 MW breakpoint was
142 generally used to distinguish between commercial and industrial customers for
143 electric utilities in their annual reports to the Commission. This distinction is also
144 present in the FERC's Uniform System of Accounts, 18 CFR 101, which is used by
145 the Illinois Commission for its own reporting requirements.²

146 In addition, in Ameren's reports to the Commission regarding customer
147 switching to third-party suppliers, Ameren reports on customers below and above
148 1 MW as the "Small C&I" and "Large C&I" customer classes.

149 **Q IS A BREAKPOINT OF 1 MW EFFICIENT FOR BILLING PURPOSES?**

150 **A** Yes. Because Ameren bills customers above 1 MW separately from the customers
151 below 1 MW for delivery service, there is an existing billing system capability that can
152 be utilized for class-specific cost recovery for energy efficiency programs.³

153 **Inequity in Ameren Cost Recovery**

154 **Q USING THE THREE CUSTOMER CLASSES YOU HAVE OUTLINED ABOVE,**
155 **RESIDENTIAL, SMALL C&I AND LARGE C&I, IS IT POSSIBLE TO DETERMINE**

² The 1 MW commercial/industrial dividing line is used for reporting Operating Revenues in Account 442.

³ I would also note that the 1 MW breakpoint corresponds to a class definition in the ComEd tariffs (namely, between the "Large Load" and "Very Large Load" classes). Given the parallels between the Ameren and ComEd energy efficiency plans, and the fact that I am making a similar recommendation in the ComEd energy efficiency case, Docket No. 07-0740, the 1 MW threshold is an efficient breakpoint in that it readily applies to both utilities.

156 **THE ENERGY EFFICIENCY COST RECOVERY LEVELS PROPOSED BY**
 157 **AMEREN FOR EACH CLASS?**

158 A Yes, it is. It is relatively straightforward to determine the number of kilowatthours
 159 delivered to each of the three classes using information provided by Ameren. These
 160 are shown in Table 1, below. Because Ameren proposes a single per kWh charge as
 161 the recovery mechanism for the energy efficiency programs, the cost recovery from
 162 each class in any given year corresponds directly to the percentage of energy
 163 delivered to the customer class.

<u>Class</u>	<u>2008 Percentage of Energy Delivered⁴</u>	<u>2008 Cost Recovery (\$M)</u>	<u>2009 Cost Recovery (\$M)</u>	<u>2010 Cost Recovery (\$M)</u>
Residential	31.8%	\$ 4.2	\$ 8.9	\$ 13.8
Small C&I	27.0%	3.6	7.5	11.5
Large C&I	41.2%	<u>5.5</u>	<u>11.3</u>	<u>17.4</u>
Total		\$ 13.3	\$ 27.7	\$ 42.7

164 The total cost recovery figures above match those shown in Table 12 on page 36 of
 165 the Ameren Plan.

⁴ Although only the 2008 percentage of energy delivered is shown above, 2009 and 2010 percentage are very similar and are used in determining the 2009 and 2010 cost recovery levels shown.

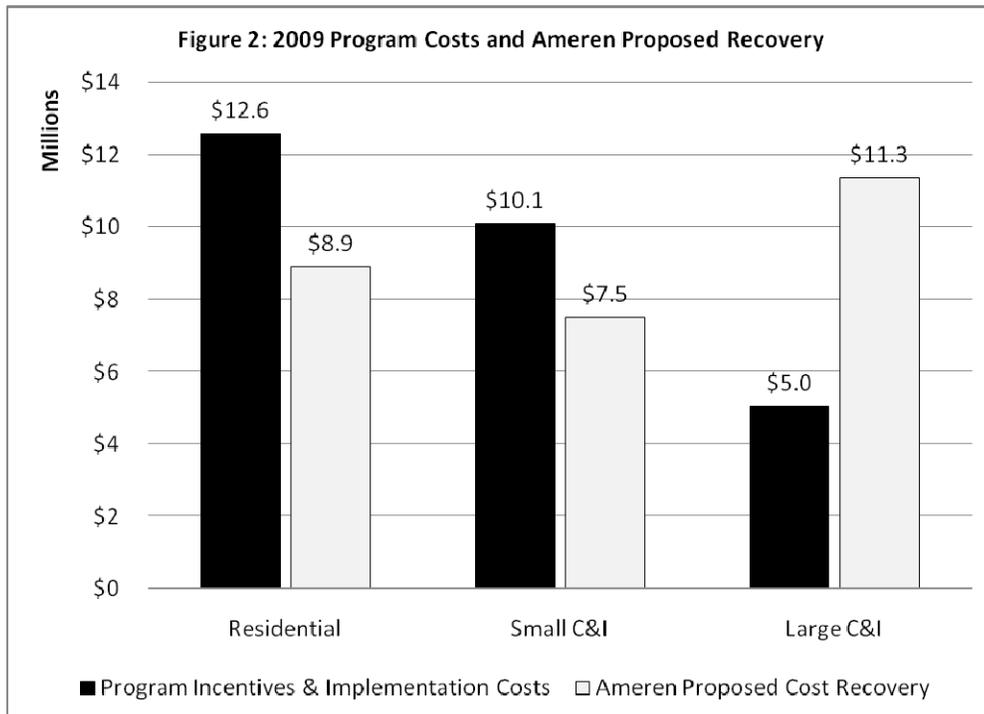
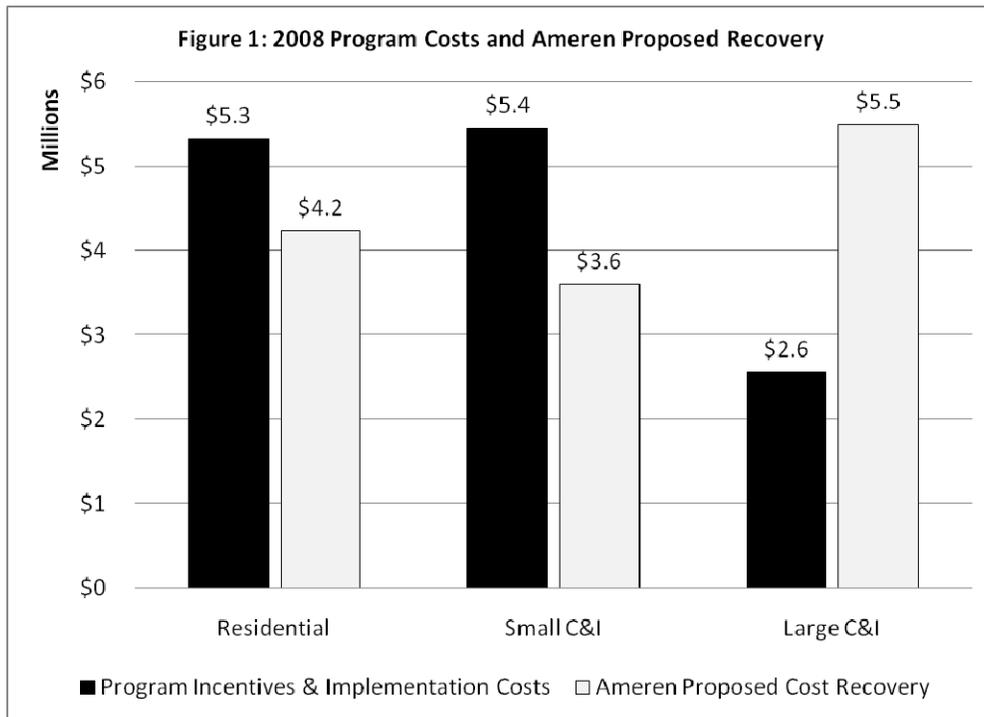
166 **Q IS IT POSSIBLE TO ESTIMATE THE PROGRAM COSTS ATTRIBUTABLE TO THE**
167 **DIFFERENT CUSTOMER CLASSES?**

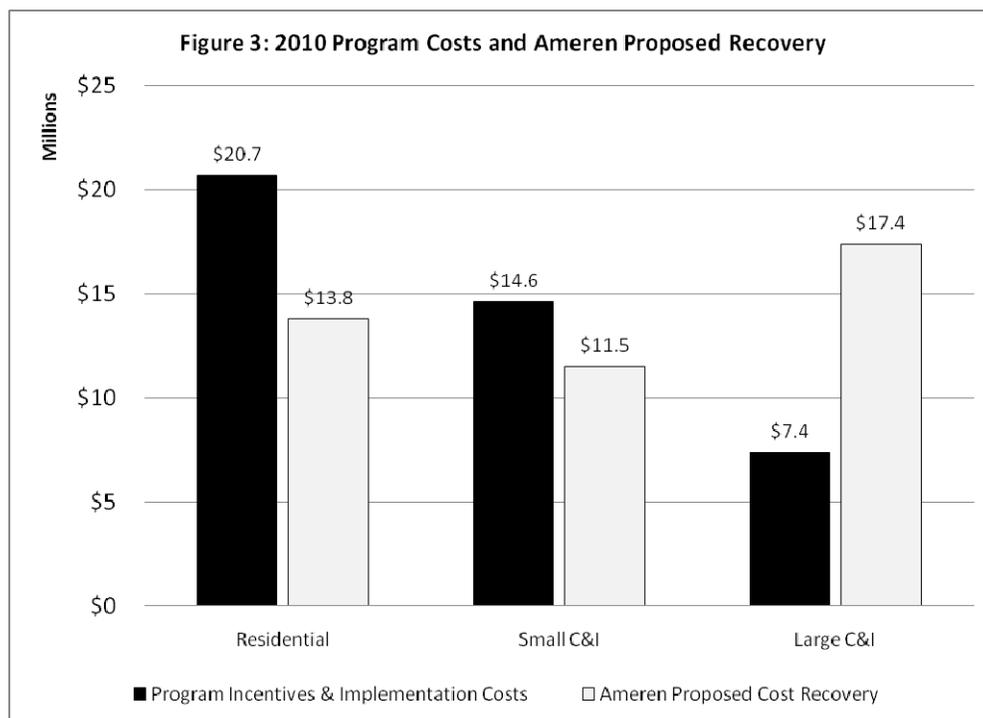
168 A Yes. Because Ameren has already defined separately programs for the residential
169 class, it is relatively straightforward to determine the costs of the programs for
170 residential customers, based on information in the Ameren Plan. For the C&I
171 customers, it is somewhat more involved. Of the five C&I programs administered by
172 Ameren, some appear to be designed such that likely participants will come
173 exclusively from the Small C&I or Large C&I class, while others appear to have
174 potential participants in both classes. The DCEO⁵ programs for C&I customers are
175 similar in this regard. At my request, IIEC witness David Stowe examined the various
176 programs and, in consultation with me, has estimated the program costs associated
177 with the likely participation by members of each class and determined the total
178 program costs by class which we believe to be reasonable and reflective of the nature
179 of the programs.

180 **Q BASED ON THE PROGRAM COST DETERMINATIONS BY MR. STOWE, HOW DO**
181 **THE CLASS PROGRAM COSTS COMPARE TO THE PROPOSED CLASS COST**
182 **RECOVERY BY AMEREN?**

183 A As is shown in Figures 1, 2 and 3 below, the program costs and cost recovery do not
184 match well for any of the three classes, but especially for Large C&I class.

⁵ DCEO is the Illinois Department of Commerce and Economic Opportunity.





185 **As can be seen from the charts above, there is a significant disparity between**
186 **the costs of planned energy efficiency programs and the cost recovery**
187 **proposed by Ameren, in each of the program years.** It is fundamentally unfair for
188 some customer classes to be required to pay disproportionate amounts in excess of
189 the costs they cause, for programs that do not directly benefit them or for which they
190 are not eligible, when a more appropriate allocation of costs to cost-causers is easily
191 accomplished.

192 **Q WHY IS THIS IMPORTANT?**

193 **A**The customers who benefit most from the energy efficiency and demand response
194 programs are those who see direct energy or demand cost savings through
195 participation in the programs. However, other members of the same class see
196 significant benefits in the fact that they are eligible for such programs and because

197 significant changes in the class usage profile can affect the regulated rates for the
198 classes. This is especially true for customers who purchase power from the utility, as
199 the price for such power could be impacted by the new class load profiles.

200 **IIEC Proposed Cost Recovery**

201 **Q PLEASE DESCRIBE THE OBJECTIVES OF THE COST RECOVERY MECHANISM**
202 **THAT YOU PROPOSE.**

203 A My proposal seeks to balance the program costs with the cost recovery responsibility,
204 by class, for each year. On a year-by-year basis, cost recovery from a class should
205 recover the costs of the programs directed to that class. If a particular class receives
206 25% of the program costs, for example, that class should be responsible for 25% of
207 the cost recovery.

208 **Q WHAT ARE THE ESTIMATED PROGRAM COSTS BY CLASS FOR EACH YEAR**
209 **IN THE THREE YEARS COVERED UNDER THE AMEREN PLAN?**

210 A These program costs have been determined by IIEC witness Stowe, as previously
211 mentioned. Figures 1 through 3, above, show the program costs by class in the dark
212 shaded bars.

213 **Q WHAT ARE THE ESTIMATED CHARGES TO RECOVER THE PROGRAM COSTS**
214 **UNDER YOUR PROPOSED RECOVERY MECHANISM?**

215 A As previously mentioned, the charges can change over time, as program changes
216 occur and as the utilities gain information on participation levels and program results.⁶

⁶ See Ameren witness Richard A. Voytas' direct testimony, Ameren Ex. 2.0, at pages 40-41 for a discussion of Ameren's proposed flexibility in program management in the initial three year period.

217 However, using Ameren's proposed program spending estimates and expected
218 consumption levels, the estimated charges are shown in Table 2 below.

<u>Class</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
Residential	0.043	0.101	0.163
Small C&I	0.050	0.091	0.130
Large C&I	0.017	0.035	0.051

219 The derivation of the charges above is discussed by IIEC witness Stowe.

220 **Q ARE THE COST RECOVERY NUMBERS ABOVE INTENDED TO BE FIXED**
221 **THROUGHOUT THE COURSE OF THE THREE-YEAR PLAN?**

222 **A** Not necessarily. To the extent Ameren utilizes its requested flexibility to shift program
223 focus over time, it would be appropriate to modify the cost recovery charges in
224 accordance with updated program costs. Also, if the initial assumptions as to C&I
225 participation levels can be refined based on experience, it would be appropriate to
226 change the program recovery percentages described by Mr. Stowe. For example, if
227 Ameren determines that the Small C&I customers are actually utilizing the C&I
228 Prescriptive program at a level greater than the 75% estimated by Mr. Stowe, it would
229 be appropriate to change the cost recovery responsibility associated with that
230 program between the Small C&I and Large C&I classes going forward.

231 **Impact of Cost Recovery Mechanism on Program Design**

232 **Q DOES THE COST RECOVERY MECHANISM YOU PROPOSE DICTATE WHICH**
233 **PROGRAMS ARE DEPLOYED OVER THE THREE-YEAR PLAN?**

234 A No. Deployment decisions are left to the utility, with the Commission's oversight. I
235 assume such decisions will be based on factors such as kWh reduction targets, cost
236 effectiveness of programs and expected participation rates. The cost recovery should
237 follow program implementation, not vice versa. Once Ameren knows which types of
238 programs are to be funded for a particular year, that should determine the recovery
239 charges. In this way, Ameren retains the flexibility to meet the mandated MWh target
240 reductions as it sees fit, with Commission approval.

241 Similarly, the proposed cost recovery mechanism will have no impact on the
242 total funding level; that is, it should collect the same amount as the Ameren proposed
243 mechanism. Importantly, however, it will bring greater equity in the recovery of
244 program costs because the cost recovery will more closely align with the cost causers
245 and direct benefit recipients.

246 **Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

247 A Yes, it does.

Qualifications of Robert R. Stephens

248 **Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

249 A Robert R. Stephens. My business address is 1215 Fern Ridge Parkway, Suite 208,
250 St. Louis, Missouri 63141.

251 **Q PLEASE STATE YOUR OCCUPATION.**

252 A I am a consultant in the field of public utility regulation and a principal in the firm of
253 Brubaker & Associates, Inc., energy, economic and regulatory consultants.

254 **Q PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.**

255 A I graduated from Southern Illinois University at Carbondale in 1984 with a Bachelor of
256 Science degree in Engineering. During college, I was employed by Central Illinois
257 Public Service Company in the Gas Department. Upon graduation, I accepted a
258 position as a Mechanical Engineer at the Illinois Department of Energy and Natural
259 Resources. In the summer of 1986, I accepted a position as Energy Planner with City
260 Water, Light and Power, a municipal electric and water utility in Springfield, Illinois.
261 My duties centered on integrated resource planning and the design and
262 administration of load management programs.

263 From July 1989 to June 1994, I was employed as a Senior Economic Analyst
264 in the Planning and Operations Department of the Staff of the Illinois Commerce
265 Commission. In this position, I reviewed utility filings and prepared various reports
266 and testimony for use by the Commission. From June 1994 to August 1997, I worked
267 directly with a Commissioner as an Executive Assistant. In this role, I provided

268 technical and policy analyses on a broad spectrum of issues related to the electric,
269 gas, telecommunications and water utility industries.

270 In May 1996, I graduated from the University of Illinois at Springfield with a
271 Master of Business Administration degree.

272 In August 1997, I joined Brubaker & Associates, Inc. as a Consultant. Since
273 that time, I have participated in the analysis of various utility rate and restructuring
274 matters in several states and the evaluation of power supply proposals for clients. I
275 am currently a Principal in the firm.

276 The firm of Brubaker & Associates, Inc. provides consulting services in the
277 field of energy procurement and public utility regulation to many clients, including
278 large industrial and institutional customers, some utilities, and on occasion, state
279 regulatory agencies. More specifically, we provide analysis of energy procurement
280 options based on consideration of prices and reliability as related to the needs of the
281 client; prepare rate, feasibility, economic and cost of service studies relating to energy
282 and utility services; prepare depreciation and feasibility studies relating to utility
283 service; assist in contract negotiations for utility services; and provide technical
284 support to legislative activities.

285 In addition to our main office in St. Louis, the firm also has branch offices in
286 Phoenix, Arizona and Corpus Christi, Texas.

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AFFIDAVIT

STATE OF MISSOURI :
: SS
COUNTY OF ST. LOUIS :

Robert R. Stephens, being duly sworn, deposes and states as follows:

1. Affiant is Robert R. Stephens. He is employed as a consultant by Brubaker & Associates, Inc., St. Louis, Missouri.
2. Affiant is a witness for the Illinois Industrial Energy Consumers ("IIEC") in the subject proceeding.
3. Affiant caused to be prepared direct testimony (IIEC Ex.1.0) for submission in this proceeding, on behalf of IIEC. The direct testimony was prepared by him and is his sworn testimony in this proceeding. The direct testimony is true and accurate in all respects.

Robert R. Stephens

Robert R. Stephens
Brubaker & Associates, Inc.
P. O. Box 412000
St. Louis, MO 63141

SUBSCRIBED AND SWORN to before me, a Notary Public, on this 14th day of December, 2007.

Maria E. Decker
NOTARY PUBLIC/62128.3

