

STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

Central Illinois Light Company,)	
d/b/a AmerenCILCO)	05-0160
)	(cons.)
Central Illinois Public Service Company,)	05-0161
d/b/a AmerenCIPS)	
)	
Illinois Power Company, d/b/a AmerenIP)	05-0162
)	
Proposals to implement a competitive)	
procurement process by establishing)	
Rider BGS, Rider BGS-L, Rider RTP,)	
Rider RTP-L, Rider D, and Rider MV.)	
(Tariffs filed on February 28, 2005))	
)	

**REBUTTAL TESTIMONY OF ROBERT M. FAGAN
ON BEHALF OF THE CITIZENS UTILITY BOARD**

CUB EXHIBIT 3.0

August 10, 2005

**REBUTTAL TESTIMONY OF
ROBERT M. FAGAN**

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1 **DOCKET NOS. 05-0160, 05-0161, 05-0162**
2 **BEFORE THE ILLINOIS COMMERCE COMMISSION**
3 **REBUTTAL TESTIMONY OF ROBERT M. FAGAN**
4 **ON BEHALF OF THE CITIZENS UTILITY BOARD**
5

6 **1. Introduction**

7 **Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS**
8 **ADDRESS.**

9 A. My name is Robert M. Fagan. I am a Senior Associate at Synapse Energy
10 Economics, Inc., 22 Pearl Street, Cambridge, Massachusetts, 02139.

11 **Q. ON WHOSE BEHALF DID YOU PREPARE THIS PREFILED**
12 **TESTIMONY?**

13 A. I prepared this testimony on behalf of the Illinois Citizens Utility Board.

14 **Q. ARE YOU THE SAME MR. FAGAN THAT PREVIOUSLY FILED**
15 **DIRECT TESTIMONY IN THIS PROCEEDING?**

16 A. Yes.

17 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

18 A. The purpose of my testimony is to rebut certain critiques of Ameren witnesses
19 Mr. Rodney Frame and Dr. Chantale LaCasse regarding my direct testimony in
20 this proceeding, and to comment on one rebuttal point made by Ameren witness
21 Mr. Wilbon Cooper concerning the exercise of market power in forward markets.

22 **Q. PLEASE BRIEFLY SUMMARIZE THE MAIN POINTS OF YOUR**
23 **DIRECT TESTIMONY.**

24 A. The relative immaturity of the MISO spot markets and the insufficient scope of
25 capacity and ancillary service market structures in MISO will result in a high
26 level of uncertainty concerning the competitiveness of the spot energy markets.
27 This will influence auction participants' expectations of prices in the MISO spot
28 market and be reflected in higher forward market prices, thus exerting upward
29 pressure on clearing prices in the proposed BGS auction. Also, the presence of
30 the MISO/PJM seam will negatively affect the ability of PJM-located supply
31 sources to serve as a source of competitive supply either directly in the proposed
32 BGS auction or as a source of forward supply for those participating in the
33 proposed auction. Lastly, the ability of the MISO or PJM market monitor to
34 sufficiently mitigate any potential exercise of market power in the MISO or PJM
35 regions is limited.

36

37 **2. Summary of Rebuttal Testimony**

38 **Q. PLEASE SUMMARIZE YOUR REBUTTAL TESTIMONY**

39 A. The degree of competitiveness of the MISO spot energy markets is directly
40 relevant to Ameren's proposal to supply BGS customers. Contrary to Mr.
41 Frame's claim of irrelevance, the level of MISO market maturity, the existence of
42 the PJM-MISO seam, the lack of structured ancillary and capacity markets, and
43 any potential for the exercise of market power will have an influence on the prices
44 that would result from the proposed competitive procurement auction. Each of

45 these concerns could lead to higher spot or forward market prices, and thus could
46 translate into higher BGS auction pricing. The factors influencing the prices that
47 will result from the proposed auction are indeed relevant, especially if, as Ameren
48 argues, after-the-fact review of auction results is limited. Neither the applicants
49 nor Mr. Frame have submitted any analysis addressing the likely extent of
50 competitiveness of the MISO spot markets or related forward markets in the
51 2007-2009 time frame.

52 While Mr. Frame claims that these issues are irrelevant, the auction
53 proponents have provided no analysis to show this is the case. I aver that the
54 foundation to any successful market-based procurement approach is at least a
55 demonstrably workably competitive wholesale market. Instead, the auction
56 proponents rely on a presumption of success because of the similarity of market
57 *design* between MISO and PJM, giving little attention to the relatively small but
58 important spot market design differences (e.g., lack of jointly optimized energy
59 and reserve market, or 35 MISO control areas versus a single PJM control area)
60 and giving no attention at all to the dramatic implementation difference that exists
61 between MISO and PJM. Specifically, Mr. Frame ignores that PJM moved to
62 LMP-based markets after years of centralized dispatch operation, while MISO
63 exists within an entirely different historical framework of bilateral market activity
64 and individualized control area dispatch.

65

3. MISO Market Immaturity

66

67 **Q. WHAT DOES MR. FRAME STATE CONCERNING THE MISO MARKET**
68 **IMMATURITY?**

69 A. Mr. Frame claims that I have “overstated [my] concern about the relative maturity
70 of the MISO markets.” (Ameren Ex. 13.0, lines 138-39). He states that MISO is
71 not implementing “an untried system,” (*Id.* at line142), and compares MISO’s
72 market to PJM, New York and New England’s use of LMP-based markets, and
73 minimizes any start-up concerns that may arise. He also notes that the MISO spot
74 markets are not the only trading option for competitive procurement auction
75 (“CPA”) bidders.

76 **Q. PLEASE COMMENT ON THIS CHARACTERIZATION OF MISO**
77 **MARKET MATURITY.**

78 A. Mr. Frame characterizes the MISO spot market startup as almost routine, and
79 states that even if there are “some minor and temporary problems during the
80 initial operation period,” all will be fine by January 1, 2007. (*Id.* at line 147-48).
81 However, he provides no support for this presumption of smoothness, and his
82 only response to my stated concerns about the newness of MISO undertaking
83 centralized unit commitment and dispatch is to note that MISO is not
84 implementing “an untried system.”

85 In fact, MISO is implementing an untried system. Only the broad, LMP-
86 based market *design* is not untried. It is a distinction that makes a difference, as I
87 noted in my direct testimony: MISO does not have the history that PJM, New
88 York and New England had with centralized operations; MISO is operating across

89 35 control areas; and MISO is not operating any operating reserve or regulation
90 markets. These characteristics of MISO operation make it quite different from the
91 start-up and evolutionary periods undergone by the other ISOs noted. As I noted
92 in my direct testimony, this is not to say that MISO has not made laudable strides
93 in establishing the systems required to operate spot wholesale markets. However,
94 it is presumptuous to reject out of hand, as Mr. Frame does, concerns with the
95 newness of such a complex venture as a new large-scale spot market start-up. I
96 note that the problems with the California market design and implementation did
97 not reveal themselves until well after market start-up in 1998. This is not to say
98 that MISO will face similar problems, since its overall *design* is better, but it does
99 underscore the fact that competitiveness concerns with the MISO market may not
100 be immediately apparent.

101 Mr. Frame also notes that bilateral market options exist for CPA
102 participants. (*Id.* at lines 155-58). He characterizes this as if bilateral forward
103 alternatives are not related to pricing outcomes in the spot market, yet this is
104 untrue. Price patterns in forward markets likely will reflect, at least partially,
105 expectations of spot price outcomes.

106 4. MISO-PJM Seam

107 **Q. WHAT DOES MR. FRAME STATE CONCERNING THE MISO-PJM**
108 **SEAM?**

109 A. Mr. Frame claims that I have “overstated the significance of the PJM-MISO
110 seam.” (*Id.* at lines 236-37). He references the existence of 121,000 MW of
111 generation capacity within MISO, the elimination of pancaking of transmission

112 charges between the regions, the existence of a Joint Operating Agreement (JOA)
113 between MISO and PJM, and the fact that I have not quantified the significance of
114 the problem.

115 **Q. PLEASE COMMENT ON THESE SEAM ISSUES.**

116 A. The existence of the seam reduces the ability of generation located in PJM to
117 compete as effectively in physically serving the MISO load as the generation
118 located in MISO. Thus the existence of 121,000 MW of MISO-region generation
119 capacity, as noted by Mr. Frame, is not a seams issue, except as it impacts the
120 ability of this generation to participate effectively in PJM markets.

121 The seam is important because it prevents other generation in PJM from
122 participating as effectively in the MISO market as MISO generation is able to do
123 (and vice versa, for MISO generation participating in the PJM market). Thus, the
124 net result is a reduced competitive environment for both PJM and MISO because
125 of the existence of the seam.

126 The elimination of pancaked transmission charges on December 1, 2004
127 has reduced the impact of the seam, but it does not mean that the seam is no
128 longer a barrier to effective competition by suppliers on either side of the seam.
129 The remaining barriers include the existence of two separate sets of dispatches
130 and unit commitments, two different processes for supplying or buying ancillary
131 services, and two separate sets of market rules. All of these have an impact on the
132 extent of competitiveness in the MISO region, and in general result in upward
133 pressure on wholesale market prices, especially for those regions relatively close
134 to the seam.

157 **Q. DOES MR. FRAME PROVIDE ANY ANALYSIS SUPPORTING THIS**
158 **CONTENTION?**

159 A. No. Neither Mr. Frame nor the applicants have provided any market power
160 analysis supporting the contention. Instead, Mr. Frame relies on Dr. Hieronymus’
161 pricing analysis, which I address in the following section, and notes that the
162 mitigation under MISO’s “broad constrained area” (“BCA”) policy would apply if
163 market power concerns arose because of transmission constraints in BCAs.
164 (Ameren Ex. 13.0, lines 305-08). However, the BCA mitigation policy, as I noted
165 in my direct testimony, contains relatively high thresholds for mitigation (price
166 offers at \$100/MWh higher or 300% higher than “reference levels,” or marginal
167 costs). Mr. Frame also notes that FTRs are available to hedge against effects of
168 local price disruptions. However, he fails to acknowledge that the prices for such
169 hedges could themselves reflect the potential impact of the market power Mr.
170 Frame claims is abetted by the existence of these hedges.

171 **6. Price Data from PJM and MISO**

172 **Q. WHAT DOES MR. FRAME STATE CONCERNING PRICE DATA FROM**
173 **THE MISO AND PJM REGIONS?**

174 A. Mr. Frame references the testimony of Dr. Hieronymus in docket 05-0159, the
175 ongoing ComEd auction proposal proceeding. He states that the data contained in
176 Dr. Hieronymus’ rebuttal testimony “is also inconsistent with the view that
177 market power concerns are likely.” (Ameren Ex. 13.0 at lines 328-29).

178 **Q. DO THE PRICE DATA REPORTED BY DR. HIERONYMUS AND**
179 **REFERENCED BY MR. FRAME SUPPORT A VIEW THAT MARKET**
180 **POWER CONCERNS ARE NOT LIKELY?**

181 A. No, they don't. Mr. Frame claims, "Dr. Hieronymus' pricing information
182 suggests that the geographic market in which CPA participants can buy their
183 requirements is relatively broad and market power concerns are simply much less
184 likely in broader as opposed to narrower markets." (*Id.* at lines 340-43). Yet Mr.
185 Frame fails to explain how Dr. Hieronymus' average pricing information leads to
186 any such conclusion. Mr. Frame states, "that these average prices are relatively
187 close also is inconsistent with the notion that market power over generation
188 supplies available to CPA participants is likely to be a problem." (*Id.* at lines
189 337-39). In actuality, a profitable exercise of market power in the hourly energy
190 markets could easily be masked by average monthly or 3-month prices. Mr.
191 Frame does not address this fundamental characteristic of the hourly markets.

192 **Q. WHAT DOES DR. HIERONYMUS LOOK AT IN THE REFERENCED**
193 **"PRICING DATA"?**

194 A. Dr. Hieronymus looks at three months worth of average prices at four hub pricing
195 points in MISO and PJM. The monthly average and the 3-month average
196 granularity he uses is insufficient to determine whether or not the MISO markets
197 are "broad" or "narrow", in particular whether those markets are likely to be
198 broad or narrow during the period 2007-2009. Dr. Hieronymus uses his results to
199 suggest commonality of prices across the hubs. I disagree that Dr. Hieronymus'
200 price aggregation summary (reported by Mr. Frame in his rebuttal at lines 327-

201 336) provides enough of an indication to draw any conclusions about the price
202 similarity or dissimilarity between PJM and MISO prices in the Illinois area. It
203 does not provide information on the extent of “broadness” or “narrowness” of the
204 MISO markets, and certainly provides no information that indicates that
205 conditions in 2007-2009 might reflect any pattern discerned from this limited
206 dataset. I also note that the price information does not even contain a full set of
207 summer peak period prices – it contains April, May, and June 2005 average
208 prices, and does not separate peak from off-peak periods. Also, the months of
209 April and May of 2005 reflect MISO prices arising from “cost-based” offers
210 mandated by FERC. There is no information in those months to suggest how
211 market-based pricing trends may unfold.

212 **Q. WHAT DO YOU CONCLUDE ABOUT MR. FRAME’S CONTENTION**
213 **THAT THE PRICE DATA REPORTED BY DR. HIERONYMUS IS**
214 **“INCONSISTENT WITH THE VIEW THAT MARKET POWER**
215 **CONCERNS ARE LIKELY”**

216 A. His contention is unsupported. The pricing analysis Mr. Frame relies upon in
217 drawing his conclusion is insufficient to gauge the extent to which MISO markets
218 are, in general, “broad” or “narrow,” and specifically the pricing analysis contains
219 no information about projections of prices in the MISO region in 2007-2009.

220 **7. Claims of Lack of Competitiveness without Structural Analysis**

221 **Q. WHAT CLAIM DOES DR. LACASSE MAKE CONCERNING THE LACK**
222 **OF A STRUCTURAL ANALYSIS OF THE MISO MARKETS?**

223 A. Dr. LaCasse states the following at lines 434 – 440 of her rebuttal testimony:

224 It is my understanding that these witnesses draw unwarranted
225 statements as to the lack of maturity and competitiveness of the
226 MISO electricity markets without a structural analysis of a relevant
227 market from a wholesale energy perspective. These witnesses
228 appear to dismiss market mitigation procedures that have been
229 approved by the Federal Energy Regulatory Commission
230 (“FERC”). These witnesses believe that the Auction Process
231 should not be used because it cannot be yet shown that the
232 wholesale market is competitive.

233
234 Ameren Ex. 12.0 at lines 434-40.

235 **Q. PLEASE COMMENT ON HER CLAIM.**

236 A. A structural analysis of a relevant market is not required to highlight fundamental
237 concerns as to the lack of maturity of the MISO market. A structural analysis
238 would not capture very real implementation concerns present in the start-up of a
239 large regional LMP-based system such as MISO’s, especially given MISO’s lack
240 of history with centralized dispatch.

241 A simple structural analysis may also not be adequate to assess the degree
242 of competitiveness the MISO market may exhibit. A structural analysis could
243 reveal the presence of high concentration that would generate a concern regarding
244 potential market power. However, a simple structural analysis of supplier
245 concentration would not necessarily rule out the potential for exercise of market
246 power. *See, for example*, Potomac Economics’ comments on market
247 concentration at pages 9-11 of the 2004 MISO State of the Market Report (noting

248 that additional analyses beyond a concentration calculation, i.e., structural
249 assessment of supplier ownership concentration must be conducted to establish
250 competitiveness of particular market area).

251 A more comprehensive strategic behavior simulation model would be
252 more likely to reveal the extent to which market power exercise may be possible.
253 The applicants have not submitted any such analysis that demonstrates the extent
254 to which the MISO market will be competitive in the 2007-2009 timeframe.
255 Instead, they assume that is the case without any evidence. While my direct
256 testimony does not contain a structural analysis of the MISO market, it does point
257 to two elements that call into question the applicant's presumption of competitive
258 market pricing results in MISO. First, the fact that the MISO spot markets are in
259 their infancy; and second, that a lengthy electrical seam exists between MISO and
260 PJM, directly adjacent to Ameren's service territory, which reduces the ability for
261 suppliers and loads on either side to fully participate in selling to or buying from
262 resources on the other side.

263 **Q. DO YOU “DISMISS MARKET MITIGATION PROCEDURES THAT**
264 **HAVE BEEN APPROVED BY THE FERC?”**

265 A. No, I don't dismiss them. I do note that the procedures are different from those in
266 place in PJM, and I also note that the thresholds for mitigation in MISO are quite
267 high. *See* CUB Ex. 1.0 at lines 324-33. While MISO has established only a single
268 “narrow constrained area” (“NCA”) at this time, in the Eastern Wisconsin region,
269 such establishment does not preclude the potential for market power to be
270 exercised in hourly markets in non-NCAs, which comprise the rest of the MISO

271 region. Given the dynamic nature of the MISO spot electricity markets, with
272 local transmission constraints outside of the NCA, it is likely that there will be
273 times when the potential for exercising market power will exist, and the current
274 BCA mitigation policy does not allow for mitigation in the same manner as, for
275 example, PJM's local market power policies.

276 **Q. IN REGARD TO DR. LACASSE'S QUOTE ABOVE, DID YOU STATE**
277 **ANYTHING TO THE EFFECT OF "BECAUSE IT CANNOT BE YET**
278 **SHOWN THAT THE WHOLESALE MARKET IS COMPETITIVE?"**

279 A. No. In fact, what I have said is that the applicants have not submitted any
280 analysis that demonstrates that the wholesale market is competitive, or likely will
281 be in 2007-2009. Indeed, if the market is competitive, as Dr. LaCasse appears to
282 claim, then contrary to Dr. LaCasse's statement, it should be possible to show just
283 that. However, the applicants are moving forward solely on a presumption of
284 competitiveness.

285

286 **8. Exercise of Market Power in Forward Markets**

287 **Q. WHAT DO YOU ADDRESS IN THIS SECTION?**

288 A. I address one particular aspect of the rebuttal testimony of Ameren witness Mr.
289 Wilbon Cooper. Mr. Cooper makes the following statement in his rebuttal
290 testimony, in reference to ICC staff witness Mr. Lazare's testimony on liquidity in
291 forward prices at the MISO Central Illinois Hub, "Thus, no attempted
292 manipulation of market forwards by a small number of participants would result
293 in higher overall prices to customers."

294 Ameren Ex. 15.0 at lines 251-52. Mr. Cooper is referencing the translation prism,
295 and notes that the direct use of forward prices is for a rate factor, and not to set
296 rates – those will be determined by the outcome of the proposed auction.

297 I note that while Mr. Cooper is technically correct about the translation
298 prism mechanism, it is not correct to say that forward market price manipulation
299 would not likely result in higher prices to customers. CPA participants likely will
300 use the forward market prices as inputs to their CPA bidding strategies, and thus
301 any manipulation of the forward markets could result in higher clearing prices in
302 the auction, and thus higher customer prices.

303 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

304 A. Yes.