

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))	
)	

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

CUB EXHIBIT 1.0

June 15, 2005

**DIRECT TESTIMONY OF
ROBERT M. FAGAN**

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EXHIBITS

1.1	Robert M. Fagan Resume
1.2	PJM-MISO Seam

23 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE ILLINOIS**
24 **COMMERCE COMMISSION?**

25 A. I have not appeared before the Commission. However, I submitted pre-filed
26 testimony in the ComEd procurement docket No. 05-0159 on June 8, 2005. My
27 testimony in this proceeding includes elements of my testimony in 05-0159 that
28 pertain to Central and Central and Southern Illinois wholesale markets.

29 **Q. HAVE YOU TESTIFIED BEFORE OTHER REGULATORY BODIES OR**
30 **LEGISLATIVE COMMITTEES ON RELATED WHOLESALE MARKET**
31 **ISSUES?**

32 A. Yes. I testified before the Texas Public Utilities Commission on stranded cost issues,
33 which encompassed both wholesale and retail market considerations during the
34 transition to a competitive market. I have submitted testimony on Open Access
35 Transmission Tariff issues in Nova Scotia, and I have submitted joint testimony in
36 Maine on transmission capacity reservation needs. I testified on transmission tariff
37 and transmission system code issues in Ontario and Alberta. In all of those
38 jurisdictions, the structure of the impending (Ontario, Nova Scotia) and existing
39 (Texas, Alberta, Maine) competitive wholesale and retail markets was germane to my
40 testimony.

41 I also testified orally before the Illinois House Electric Utility Oversight
42 Committee on May 3, 2005 on issues similar to those as I address in this testimony,
43 although my focus during that testimony was on the Northern Illinois region.

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

45 A. The purpose of my testimony is to examine the wholesale electricity market
46 environment in which the proposed AmerenIP, AmerenCIPS, and AmerenCILCO
47 (“Ameren”) basic generation service (“BGS”) competitive procurement auctions
48 (“CPA”) would take place, recognizing that the foundation for a successful
49 procurement requires a well-functioning, fully competitive wholesale market. I
50 identify the shortcomings of the post-2006-period wholesale market structure in
51 MISO affecting Central and Southern Illinois, and highlight the many price-
52 influencing uncertainties that exist.

53 **Q. HOW IS YOUR TESTIMONY ORGANIZED?**

54 A. The introductory section includes a brief statement of my qualifications and a purpose
55 statement. I then summarize the major points of my testimony. I next address the
56 immaturity of the Midwest Regional Transmission Organization’s (“MISO RTO” or
57 “MISO”) spot energy markets, and describe the impact of the PJM-MISO “seam.”
58 Lastly, I describe the role of the PJM and MISO RTOs in mitigation of the exercise of
59 market power and recommend strengthening the mitigation policies of each.

60 **II. SUMMARY**

61 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

62 A. First, I describe how the relative immaturity of the MISO spot energy markets and the
63 insufficient scope of capacity and ancillary service structures in MISO result in a high
64 level of uncertainty concerning the competitiveness of the MISO spot energy markets.
65 This affects the ability of potential auction participants to secure competitively priced

66 supplies from the MISO region, in the spot market itself and also in forward bilateral
67 markets, thereby exerting upward pressure on prices in the proposed competitive
68 procurement auction (“CPA”).

69 Second, I show how the “seam” between MISO and PJM presents a barrier to
70 effective trade between the regions, illustrating that the seam runs directly across
71 Illinois, separating the wholesale electric markets in Northern Illinois from those in
72 Central and Southern Illinois, and thereby denying Central and Southern Illinois
73 residents the benefits of a cohesive, integrated wholesale marketplace for electricity
74 purchase by prospective retail suppliers.

75 Third, I point out why existing market monitoring and mitigation rules in
76 place in MISO and PJM are insufficient to address the potential exercise of wholesale
77 market power in the Illinois region and the resulting increase in prices likely to be
78 seen in the proposed competitive procurement auction.

79 Finally, I state here that I support the recommendations made by William
80 Steinhurst in his testimony in this proceeding.

81 **III. MISO SPOT ENERGY MARKET IMMATURITY**

82 **Q. WHAT ISSUES ARE ADDRESSED IN THIS SECTION OF YOUR**
83 **TESTIMONY?**

84 A. I address MISO energy spot market immaturity and how it will affect the pricing
85 outcomes of the proposed CPA.

86 **Q. ARE THE MISO ELECTRICITY SPOT MARKETS IMMATURE?**

87 A. Yes. The Midwest RTO commenced day-ahead and real-time spot electricity market
88 operations on April 1, 2005. For the first two months, all supplier offers into this
89 market were cost-based.¹ Beginning June 1, 2005, all offers into this market will be
90 market-based. Thus at the time of this filing, there will have been just fifteen days of
91 operation of MISO spot electricity markets using market-based offers from generation
92 suppliers.

93 **Q. WHAT SIGNIFICANCE WILL MISO SPOT MARKET IMMATURITY**
94 **HAVE ON THE PRICING OUTCOMES IN THE PROPOSED BGS**
95 **COMPETITIVE PROCUREMENT AUCTION?**

96 A. An immature MISO spot market will result in greater unpredictability and volatility
97 of prices relative to the prices expected from a more mature market. The pricing
98 outcomes of the proposed CPA will be influenced by participants' perceptions of the
99 maturity of the MISO spot market. Winning auction participants will likely use the
100 MISO spot market for at least some portion of their supply, and will value energy in

¹ 108 FERC ¶ 61,163, August 6, 2004, P. 63. MISO Energy Market Tariff Approval in Docket ER04-691.

101 the region in part based on expectations of the MISO spot price. Therefore, auction
102 participants are likely bid at higher prices to the CPA in order to address the financial
103 risk they face in needing to rely at least in part on the MISO spot market for a portion
104 of their supply, if they win at auction. Thus, the CPA clearing prices will reflect
105 these higher price offerings and will clear at prices higher than would be expected
106 after the MISO markets are more mature.

107 **Q. WILL THE MISO SPOT ENERGY MARKETS BE MATURE ENOUGH TO**
108 **ENSURE COMPETITIVE PRICING OUTCOMES BY THE TIME THE**
109 **PROPOSED CPA WOULD BE HELD?**

110 A. No. At the conclusion of this proceeding, which I understand to be in early 2006, it
111 will likely be too soon to confirm that even the fundamental MISO systems and
112 software will function as expected throughout all seasonal load and capacity
113 conditions. For example, the accuracy and stability of the locational marginal price
114 (“LMP”) pricing outcomes arising from the complex security-constrained economic
115 dispatch algorithms are not readily confirmable, and the programmatic inputs used by
116 MISO to compute LMPs are updated frequently. This is but one reason that at
117 present, the MISO RTO spot energy markets are too immature to draw any
118 conclusions regarding the extent to which they do or do not, and in post-2006 will or
119 will not, reflect competitive pricing outcomes. There are several additional reasons
120 that uncertainty of pricing outcomes is to be expected.

121 **Q. WHAT ARE THE OTHER REASONS THE MISO MARKET IS TOO**
122 **IMMATURE TO ENSURE COMPETITIVE PRICING OUTCOMES?**

123 A. There are two additional substantive reasons why the MISO spot markets can not be
124 sufficiently relied upon to produce competitive pricing outcomes: i) centralized
125 dispatch operations at the MISO RTO are brand new and cover a wide geographic
126 scope; and ii) the MISO energy markets lack a complementary ancillary service
127 market structure and a comprehensive, MISO-wide approach to resource adequacy
128 concerns.

129 **Q. PLEASE EXPLAIN WHY THE NEWNESS OF THE MISO CENTRALIZED**
130 **DISPATCH IS A CONCERN.**

131 A. Unlike PJM, New York, and New England, the Midwest ISO has commenced
132 centralized generation unit commitment and dispatch operations with no prior
133 experience, and is doing so in an environment where 35 control areas remain (PJM,
134 New York and New England are each a single control area). While I understand that
135 the Midwest RTO as an institution has apparently made laudable strides in
136 establishing the systems required to operate spot wholesale electric markets, that does
137 not imply that the pricing outcomes in the early years of operation can be predictably
138 free from concern, nor that bidders in any proposed BGS auction would expect those
139 spot markets to so operate.

140 **Q. PLEASE EXPLAIN WHY THE LACK OF STRUCTURED ANCILLARY**
141 **SERVICE MARKETS IS A CONCERN.**

142 A. The Midwest RTO markets lack centralized operating reserve markets and a capacity
143 market structure, which are features of the PJM RTO markets. The presence or
144 absence of these ancillary markets affects the pricing outcomes in the spot energy
145 market because of the relationship between the value of regulating resources,
146 spinning and near-term non-spinning operating reserves, and the pricing of energy.

147 **Q. HOW WILL THE ABSENCE OF MISO-ADMINISTRED ANCILLARY**
148 **SERVICE MARKETS FOR REGULATING AND OPERATING RESERVE**
149 **RESOURCES AFFECT THE PRICING OUTCOMES IN THE MISO SPOT**
150 **ENERGY MARKET?**

151 A. Economic dispatch and unit commitment efficiency in the MISO region is likely to be
152 lower when regulating and operating reserves are committed and dispatched
153 separately from those generation units committed and dispatched by MISO for
154 energy. When dispatch and unit commitment is less efficient, overall production
155 costs to supply load in a region are higher. Such higher production costs result from
156 “guarantee payments”² made to generation to ensure availability to meet reliability
157 needs. Any load purchasing from the spot energy market incurs an allocation of these
158 costs. Currently, regulating and operating reserve resources are provided on a
159 control-area basis, rather than under a common MISO-administered market approach.
160 This can lead to overcommitment of generating resources, and loss of potential gains

² For example, MISO has instituted “revenue sufficiency guarantees” (“RSG”) to ensure that generators committed in the day-ahead timeframe recover their start-up and running costs.

161 from regional load diversity and the potential for greater operating reserve or
162 regulation sharing across the MISO region.

163 Also, increased dispatch efficiency can result if resources used for regulation
164 and spinning reserves are “jointly optimized” with dispatch of energy resources.

165 While MISO does not have such features in its spot energy market dispatch, such a
166 mechanism has been established in the PJM RTO.³ Increased dispatch efficiency can
167 result in lower spot prices, as a more optimal selection of units for regulation and
168 spinning requirements can lead to clearing prices based on units or unit output
169 segments that are lower on the supply curve.

170 **Q. HOW WILL THE ABSENCE OF A MISO-ADMINISTERED INSTALLED**
171 **CAPACITY MARKET AFFECT THE PRICING OF ENERGY IN THE MISO**
172 **SPOT MARKET?**

173 A. Generation units recover their fixed costs in part through revenues earned by
174 providing energy, and where applicable through revenues earned through provision of
175 ancillary service and installed capacity. In MISO, there is no centrally-administered
176 capacity market, and some generation units must rely solely on energy and ancillary
177 service provision revenues to recover fixed costs. This can lead to higher energy
178 market prices, since there is no source of revenue from a capacity market.

3 “PJM simultaneously optimizes energy, Regulation and Spinning Reserve, and assigns both Regulation and Spinning to the most cost-effective set of units each hour of the operating day”. PJM Manual 11, Scheduling Operations, page 48. Available at <http://www.pjm.com/contributions/pjm-manuals/pdf/m11v22.pdf>

179 **Q. WHEN WILL THERE BE STRUCTURED ANCILLARY SERVICE**
180 **MARKETS IN THE MISO REGION?**

181 A. It is very difficult to say when structured ancillary service markets will be operational
182 in MISO. MISO has just this spring established an ancillary services task force
183 reporting to the markets subcommittee. One startup document states that a regulation
184 market is planned for the end of 2005 and an operating reserves market is planned for
185 the first quarter of 2006.⁴ Another document states that the ancillary services task
186 force will sunset when the ancillary service markets are operational in 2007.⁵

187 **Q. WHEN WILL THERE BE STRUCTURED CAPACITY MARKETS IN THE**
188 **MISO REGION?**

189 A. Last year, MISO indicated to FERC that it expects to have a long-term resource
190 adequacy plan in place by June 1, 2006.⁶ Based on discussions at the June 13, 2005
191 MISO Supply Adequacy Working Group meeting, I understand that MISO currently
192 plans for a resource adequacy construct to be in place by June 1, 2007.⁷ It is
193 understandable that the estimated date can shift forward, as developing a long-term
194 plan for a capacity construct is a complex undertaking.

⁴ MISO ancillary services task force presentation, March 15, 2005.

⁵ MISO Ancillary Services Task Force Charter Document, dated April 1, 2005, page 1, "Sunset Provisions." Part of meeting materials of April 4, 2005 MISO Market Subcommittee meeting.

⁶ FERC ¶ 109 61,285 (2004) paragraph 330. FERC Order on MISO Transmission and Energy Markets Tariff ("TEMT") Compliance Filing, December 20, 2004.

⁷ Personal communication with Michael Robinson of Midwest ISO, June 14, 2005.

195 **Q. WHAT IS REQUIRED TO ESTABLISH CONFIDENCE THAT THE MISO**
196 **SPOT MARKETS WILL PRODUCE COMPETITIVE WHOLESALE**
197 **MARKET PRICING OUTCOMES?**

198 A. In short, time -- on the order of years. At least two threshold milestones should be
199 met before the MISO spot market pricing outcomes can be considered competitive.
200 First, an independent evaluation of the pricing outcomes of the market over all
201 seasons and the most common load/supply conditions is required. For example, such
202 an evaluation could determine the price-cost markup present in the market as a
203 measure of its competitiveness. Second, given the impact of local ancillary service
204 markets on unit commitment and dispatch, it would be preferable to have at least one
205 year of energy market operation after incorporation of ancillary service features into
206 the MISO markets structure.

207 **IV. PJM-MISO SEAM CONCERNS**

208 **Q. WHAT IS THE PJM-MISO SEAM?**

209 A. The PJM-MISO seam consists of the physical transmission interconnections between
210 the two RTOs. This seam spans over one hundred interconnection points with a
211 nominal non-simultaneous transfer capability on the order of at least 60,000 MW.⁸
212 Exhibit 1.2 visually depicts the boundaries of the Midwest RTO and the PJM RTO in

⁸ FERC Docket EL02-65-000, Affidavit of Ronald R. Jackups, filed July 9, 2002. An affidavit by Mr. Ronald Jackups of Cinergy, filed on behalf of certain MISO transmission owners, stated that the seam between MISO and PJM (when Illinois Power was still planning on joining PJM) consisted of 139 interconnections totally 72,400 MVA of capacity (paragraph 15, page 3). Illinois Power has since been acquired by Ameren and is part of MISO. Subtracting out the direct interconnections between Illinois Power and MISO will conservatively leave at least 60,000 MW of nominal interconnection capacity across the seam.

213 the Illinois region, and the thick solid black line shows the complex and
214 discontinuous seam between the RTOs.

215 Notionally, however, the seam consists of any impediments buyers or sellers
216 face in trying to purchase or sell energy, capacity, or ancillary services across the
217 boundary. These impediments prevent a seamless integration of wholesale energy
218 markets between northern Illinois (PJM region) and Central and Southern Illinois
219 (MISO region). The impediments include the day-to-day operational hurdles the
220 RTOs must overcome to allow efficient transactions between the regions, and that
221 generators and power purchasers must overcome to make the most cost-effective
222 purchase and sale transactions for both spot and term arrangements. They also
223 include the existence of different energy, capacity, and ancillary service market
224 structures between the regions.

225 **Q. HOW DOES THIS SEAM IMPACT ILLINOIS' ELECTRICITY**
226 **CONSUMERS?**

227 A. Illinois consumers will be impacted by any wholesale market attributes that arise due
228 to the presence of this seam. As shown in Exhibit 1.2, the seam particularly impacts
229 Illinois, as it slices through the state and leaves approximately two-thirds of the
230 consumers on one side (Northern Illinois) and the remaining third on the other side
231 (Central and Southern Illinois). Thus, two-thirds of the customers will be impacted
232 by wholesale market activity in the western portion of PJM, and one-third of the
233 customers will be impacted by wholesale market activities in central MISO.

234 **Q. HOW DID THIS SEAM ARISE?**

235 A. The seam arose due to the RTO choices made by ComEd, AEP, and Dayton Power
236 and Light to join PJM rather than MISO. It has been argued that if these companies
237 had chosen to join MISO instead of PJM, the electrical seam would have been much
238 smaller between the two regions.⁹ If ComEd had joined MISO, all of Illinois would
239 have been included under the umbrella of a single RTO.

240 **Q. WAS FERC’S APPROVAL OF COMED JOINING THE PJM RTO**
241 **CONDITIONED ON RESOLUTION OF TRANSACTION ISSUES ACROSS**
242 **THIS SEAM?**

243 A. Yes. FERC explicitly called for the formation of a “joint and common market” in its
244 order conditionally approving ComEd’s joining of PJM.¹⁰ FERC recognized the
245 importance to regional wholesale market development of resolving the problems
246 created by the existence of this seam. Notwithstanding FERC’s condition, PJM and
247 MISO currently still have separate energy markets (and separate provisions for
248 ancillary services and capacity requirements). There is no joint and common market.

249 FERC’s call for a joint and common market was and is aimed at allowing free
250 flowing competition between generators on one side of these lines and load on the
251 other side of these lines, and at resolving the complex dispatch and commitment
252 issues that effect each RTO due to the presence of transmission line electricity flows
253 created by suppliers and load in the adjacent region (i.e., “loop flows”).

⁹Jackups affidavit, paragraphs 15 and 27, for example. See also the “RTO Configuration Letter” from MISO Market Monitor David Patton to MISO CEO James Torgerson, July 10, 2002.

¹⁰ 100 FERC ¶ 61,137 (July 31, 2002), P. 37-41.

254 The way in which increased wholesale market competition is projected to
255 come about is through greatly improved dispatch coordination mechanisms used by
256 each of the RTOs on a daily basis. If or when these coordination mechanisms are
257 perfected, in theory each RTO can serve as another source of generation (possibly
258 less expensive) that can be used to relieve transmission constraints in the neighboring
259 RTO. While the RTOs claim that much progress has been made towards
260 implementing the required data, communications, and modeling capabilities to put
261 this coordination in action, it nonetheless is projected that the earliest a joint and
262 common market would be ready is September 2007.¹¹ Given the history of initiating
263 complex RTO coordination mechanisms, and the unprecedented scale of the seams
264 coordination proposed for this seam, I believe it is unlikely that the joint and common
265 market that FERC predicated ComEd’s PJM RTO participation on will be in place at
266 that time. FERC initially required PJM and MISO to operate a joint and common
267 market commencing October 1, 2004. It has taken a significant amount of time and
268 resources to come to agreement on a “Joint Operating Agreement,” let alone
269 implement the systems required to create a joint and common market. Thus, well
270 after the date of the proposed CPA, it is likely that major seams issues will remain
271 unresolved, negatively impacting the competitiveness of the wholesale markets on
272 either side of the seam.

¹¹ FERC Order in Dockets No. ER04-375-17 and ER04-375-18, Order Modifying and Accepting Tariff Filing, Paragraph 64, March 3, 2005.

273 **Q. WHAT IS THE IMPACT ON THE WHOLESALE MARKET OF**
274 **UNRESOLVED SEAMS ISSUES?**

275 A. The main impact is less efficient energy transactions between the two RTO regions,
276 resulting in greater overall production costs for energy than would be required if a
277 single common market was in place, and likely “distorted” LMPs, or deviations from
278 LMPs that would be expected if a common market were functioning and coordination
279 between RTOs was comprehensive. While PJM and MISO will likely eventually
280 resolve the technical issues to ensure such coordination, it may well be 2008 or
281 beyond before such resolution is assured.

282 **Q. WHAT OTHER IMPACTS ARISE FROM THE EXISTENCE OF THE**
283 **SEAM?**

284 A. The presence of two sets of rules and practices for ancillary services and for installed
285 capacity leads to additional inefficiencies in the wholesale market. Absent the seam,
286 installed capacity and ancillary services would be available from both Northern and
287 Central and Southern Illinois to compete in a single wholesale market, likely resulting
288 in lower prices due to greater supply availability and load diversity benefits. The
289 fractured nature of the wholesale market in Illinois leads to missed opportunities for
290 suppliers to provide and loads to access capacity and ancillary services available
291 across the seam.

292 **Q. WILL THE NORTHERN REGION AND THE CENTRAL AND SOUTHERN**
293 **ILLINOIS REGION SPOT MARKETS BE LESS COMPETITIVE BECAUSE**
294 **OF THE EXISTENCE OF THIS SEAM?**

295 A. Yes, considerably so. The presence of the seam prevents dispatch coordination that
296 would give rise to load diversity gains, production cost improvements, increased unit
297 commitment economies, better ancillary service coordination and greater supply
298 competition. All of those features of broader markets result in reduced prices for any
299 consumer depending on market pricing outcomes.

300 **Q. HAVE YOU QUANTIFIED THE IMPACT THE SEAM WILL HAVE ON**
301 **PRICING OUTCOME?**

302 A. No. It is very difficult to model such impacts.

303 **V. RTO MARKET POWER MITIGATION CONCERNS**

304 **Q. DO MARKET POWER MITIGATION STRUCTURES IN PLACE IN MISO**
305 **AND PJM AFFECT THE WHOLESALE MARKETS THAT IN TURN**
306 **INFLUENCE THE PRICE OUTCOMES OF THE PROPOSED CPA?**

307 A. Yes. Both MISO and PJM regions are potential sources of wholesale power for
308 suppliers participating in the CPA. Thus, even though the CPA is for load wholly in
309 the MISO region, the market mitigation construct in both regions will impact CPA
310 suppliers. For this reason, I address both MISO and PJM market mitigation in this
311 section of my testimony.

312 **Q. PLEASE SUMMARIZE THE SALIENT ASPECTS OF THE MARKET**
313 **POWER MITIGATION STRUCTURE IN PLACE IN PJM AND MISO.**

314 A. PJM and MISO each have separate market power mitigation protocols in place.
315 PJM’s market power mitigation consists primarily of the ability to “offer price cap”
316 generation suppliers to one of four possible levels when local transmission constraints
317 are binding and an insufficient number of suppliers exist to relieve the constraint.¹² A
318 commonly understood offer-cap level is 110% of the incremental operating cost of
319 the resource; alternatively, the level could be equal to a weighted LMP, or an agreed-
320 upon level between the owner and PJM. If a resource is considered “frequently
321 mitigated”, or offer-capped for more than 80% of its run hours, then the offer cap
322 consists of incremental costs plus the higher of \$40/MWh or an agreed-upon amount
323 between the owner and PJM.

324 The mitigation protocol in MISO is different from that in PJM. MISO
325 imposes offer-price mitigation only if offer price and market impact thresholds are
326 violated. MISO defines two areas: broadly constrained area (BCA) and narrowly-
327 constrained area (NCA) within which its mitigation protocols apply. Within BCAs, if
328 a transmission constraint is binding, MISO will screen offer prices and if they are
329 below the threshold of 300% of the “reference level” offer price (a marginal cost
330 based metric) or \$100/MWh, whichever is lower, then no action is taken. Within

¹² Currently, the PJM tariff states “Offer price caps shall be suspended for any transmission limit(s) for any hour in which there are not three or fewer generation suppliers available for re-dispatch under subsection (a) that are jointly pivotal with respect to such transmission limit(s). Notwithstanding the number of jointly pivotal suppliers in any hour, if the Market Monitoring Unit determines that a reasonable level of competition will not exist based on an evaluation of all facts and circumstances, it may propose to the Commission the removal of offer-capping suspensions otherwise authorized by this section.” PJM Open Access Transmission Tariff, Attachment K Appendix, Market Operations, Section 6.4, Tariff Sheet 401.

331 NCAs, the threshold is lower; it is tied to the cost of a new peaking unit in the area.
332 At present, for market-based price offerings commencing June 1, 2005 in MISO, the
333 NCA threshold above reference level is approximately \$37/MWh.¹³

334 **Q. WHAT ARE THE WEAKNESSES AND LIMITATIONS OF THE PJM**
335 **MARKET MONITORING AND MITIGATION TOOLS AND**
336 **CAPABILITIES?**

337 A. Primarily, PJM is limited to offer-capping suppliers at 110% of marginal costs, even
338 if such an offer cap results in a greater return to the supplier than would be expected
339 in a fully competitive market. The ten percent adder is somewhat arbitrary and it has
340 not been definitively shown that a lower level would not result in outcomes more
341 closely approximating fully competitive markets. Also, there is currently uncertainty
342 as to whether or not an additional offer capping exemption will be granted for any
343 major constraints in the PJM West region, which consists of the ComEd, AEP,
344 Dayton Power and Light and Allegheny Power areas. This would result in a reduced
345 ability for the PJM market monitor to impose mitigation in the PJM West region
346 when certain transmission constraints are binding. Also, there is uncertainty around
347 the extent to which PJM can use its “no three pivotal suppliers” test to determine if
348 mitigation can be used when certain transmission constraints bind.

¹³ MISO email on May 26, 2005 to all participants.

349 **Q. WHAT ARE THE WEAKNESSES AND LIMITATIONS OF THE MISO**
350 **MARKET MONITORING AND MITIGATION TOOLS AND**
351 **CAPABILITIES?**

352 A. The ability of the MISO market monitor to impose mitigation is even more limited
353 than the authority of the PJM market monitor. In most of the MISO region, there is
354 no mitigation at all unless the offer prices of a generation supplier exceed either 300%
355 of the “reference level” or \$100/MWh, whichever is lower.

356 **Q. WHAT IS THE IMPACT OF HAVING RELATIVELY WEAK AND LIMITED**
357 **MARKET POWER MITIGATION TOOLS AVAILABLE TO THE PJM AND**
358 **MISO MARKET MONITORS?**

359 A. The result is a reduced ability to ensure that market price outcomes are competitive.

360 **Q. IN WHAT WAYS SHOULD THE MARKET POWER MITIGATION TOOLS**
361 **BE STRENGTHENED IN THE PJM AND MISO REGIONS?**

362 A. The best way to address the presence of market power in wholesale markets is to
363 ensure a competitive market structure, which results in a reduced need to impose
364 mitigation solutions. However, absent a fully competitive structure – i.e., a structure
365 with reduced supplier ownership concentration – mitigation that results in market
366 prices that reflect a competitive outcome is required. To achieve this result, the 10%
367 adder used in PJM should be lowered, recognizing that an equitable return to
368 wholesale suppliers could result with mitigation that lowers the cap to values closer to
369 100% of marginal costs, since capacity markets exist in PJM to provide return to
370 fixed costs associated with generation assets.

371 In MISO, the imposition of mitigation should be triggered in a manner similar
372 to PJM – e.g., when transmission constraints bind and limit the available of suppliers,
373 offer capping at a level at least equal to PJM’s 110% protocol should be required if
374 there are less than four pivotal suppliers. As MISO develops a more uniform
375 approach to resource adequacy, then its mitigation protocol should be adjusted closer
376 to 100% of marginal costs.

377 **Q. WHAT IS THE RELEVANCE OF THESE RECOMMENDATIONS TO THIS**
378 **PROCEEDING?**

379 A. These recommendations are relevant because in my opinion, absent strengthened
380 mitigation authority the pricing outcomes of the CPA are vulnerable to potential
381 exercise of market power.

382 **Q. HOW ARE THE PRICING OUTCOMES OF THE CPA VULNERABLE TO**
383 **THE EXERCISE OF MARKET POWER?**

384 A. The potential for market power to be exercised in the MISO region will have an affect
385 on the expected prices in the MISO spot market. Such expectations on the part of
386 CPA suppliers will lead those suppliers to increase price offerings into the CPA to
387 reflect the perceived higher value of power in MISO spot markets. This is the same
388 mechanism I noted in Section III of my testimony, pertaining to the immaturity of the
389 MISO spot market.

390 **Q. PLEASE SUMMARIZE THE MAIN CONCLUSIONS YOU DRAW FROM**
391 **YOUR EXAMINATION OF WHOLESALE ELECTRICITY MARKETS**
392 **THAT AFFECT CENTRAL AND SOUTHERN ILLINOIS.**

393 A. Immature MISO markets and the presence of a market “seam” between the Northern
394 Illinois and Central and Southern Illinois regions will result in less than fully
395 competitive wholesale markets in Illinois. The proposed Ameren BGS competitive
396 procurement auction can only be successful if the foundation of a fully competitive
397 wholesale market exists. Thus, even if a superior auction mechanism was devised,
398 until the regional wholesale markets are competitive it is likely that resulting prices to
399 consumers will be higher than necessary.

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

401 A. Yes.