BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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IN THE MATTER OF:

PROPOSED NEW 35 ILL.ADM.CODE PART 225 CONTROL OF EMISSIONS FROM LARGE COMBUSTION SOURCES

PCB R06-25 Rulemaking - Air

NOTICE OF FILING

To:

Dorothy Gunn, Clerk Illinois Pollution Control Board James R. Thompson Center Suite 11-500 100 West Randolph Chicago, Illinois 60601 Persons included on the **ATTACHED SERVICE LIST**

PLEASE TAKE NOTICE that we have today filed with the Office of the Clerk of the Pollution Control Board the **DYNEGY AND MIDWEST GENERATION'S QUESTIONS FOR MICHAEL MENNE, C.J. SALADINO, ANNE SMITH, DIANNA TICKNER, AND ANDY YAROS AT THE HEARING COMMENCING AUGUST 14, 2006**.

/s/ Kathleen C. Bassi

Kathleen C. Bassi

Dated: August 7, 2006

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BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:) PROPOSED NEW 35 ILL.ADM.CODE PART 225) CONTROL OF EMISSIONS FROM) LARGE COMBUSTION SOURCES)

DYNEGY AND MIDWEST GENERATION'S QUESTIONS FOR MICHAEL MENNE, C.J. SALADINO, ANNE SMITH, DIANNA TICKNER, AND ANDY YAROS AT THE HEARING COMMENCING AUGUST 14, 2006

NOW COME Dynegy Midwest Generation, Inc., and Midwest Generation, LLC., by and through their attorneys, Schiff Hardin LLP, and submit the following questions based upon the written testimony of Michael Menne, C.J. Saladino, Anne Smith, Dianna Tickner, and Andy Yaros in this matter.

Questions Posed by Dynegy and Midwest Generation

Questions for Michael Menne

- 1. Has anyone outside of Ameren aided Ameren in preparing responses to these questions?
 - a. If so, who?
 - b. What form did the help take?
- 2. Who was involved in negotiating the Multi-Pollutant Standards ("MPS")?
- 3. Who drafted the MPS?
- 4. What persons and entities provided input or comments concerning the development of the MPS?
- 5. Who drafted the Joint Statement related to the MPS?
 - a. Have you read the Joint Statement?
 - b. Do you agree with the Joint Statement?
- 6. You state in your testimony that you are not speaking on behalf of the Agency. Who is?
- 7. Do you know why the Agency failed to offer any testimony in support of the MPS?
 - a. Was the possibility of the Agency's testifying discussed with the Agency?
 - b. Did anyone from the Agency indicate why no testimony would be offered?
 - c. If so, what were the reasons?
- 8. Is there a written formal agreement between Ameren and the Agency relative to the proposal of the MPS?
 - a. If so, please provide a copy of it.
- 9. In drafting the MPS, was any consideration given to the compliance issues of other companies subject to the proposed mercury rule?
 - a. If so, please describe what consideration was given to these issues.

- b. Please identify any provision or language of the MPS that was drafted to address such issues.
- 10. Based upon your and the Agency's analysis of the MPS, what other companies do you and the Agency believe could cost-effectively take advantage of the MPS?
- 11. At page 3 of your testimony, you state that Ameren will work with EPRI "to evaluate ways for continuously measuring mercury emissions."
 - a. Does Ameren have doubts about how to continuously measure mercury emissions, *i.e.*, that such measurements cannot be made now with reliable accuracy?
- 12. Your testimony states that "Ameren is determined to find out how effective this type of technology [activated carbon injection] will be on our generating units" and that "we do not believe Ameren's system can make the IEPA 90% reduction requirement with HCI [halogenated activated carbon injection] alone."
 - a. Does this mean that Ameren questions the Agency's assertion that nonhalogenated activated carbon injection ("ACI") or HCI will achieve a 90% reduction in mercury emissions reliably?
 - b. What additional controls would be required to reliably achieve 90% reduction?
 - c. Given the Agency's support for the MPS, which does not require a 90% reduction of mercury emissions in 2009, it appears that the Agency no longer views a 90% reduction of mercury emissions in 2009 to be necessary elements of an Illinois mercury rule. Is that correct?
- 13. Does Ameren intend to put all three of its Illinois companies into the MPS?
 - a. If so, does it have any commitment to do so?

- 14. On pages 3-4 of your testimony, you indicate that Ameren has reduced emissions of SO₂ and NOx by 60-70% over the past 15 years.
 - a. What has been the reduction over that period just for the Illinois units currently owned by Ameren?
 - b. Is the historic 60-70% reduction in SO_2 and NOx emissions across Ameren's fleet in Illinois a total amount of reduction of these two pollutants, combined?
 - c. If so, have the reductions achieved been primarily of NOx or SO₂?
 - d. Does that figure include or exclude EEI?
 - e. What are the percentage reductions just for Ameren's Illinois facilities?
 - f. How do the emission rates, in lb/mmBtu, of Ameren's Illinois facilities compare to those of other Illinois generators for both SO₂ and NOx?
- 15. On page 4 of your testimony, you state, "[W]e do not believe" Ameren can achieve 90% reduction with HCI alone because of the use of subbituminous coal and SO₃ conditions."Do you have any reason to think it would be different for other similar units?
 - a. What is Ameren's schedule for the installation of SO₂ and NOx control equipment?
 - b. Will Ameren continue to inject SO₃ until their installations are complete?
 - c. What is the quantitative effect of this SO₃ injection on mercury emissions?
- 16. What percentage of the coal Ameren burns in Illinois is from Illinois?
- 17. On page 6 of your testimony, you state that the MPS will result in SO_2 and NOx reductions above those required by CAIR.
 - a. Is this just considering Ameren utilizing the MPS?

- b. By how much will the reductions by Ameren exceed the reductions to be achieved under CAIR?
- c. Does this comparison exclude the possibility of purchasing allowances under CAIR?
- 18. On page 6 of your testimony, you state that the MPS will allow Ameren to take advantage of the "co-benefits that established NOx and SO₂" controls provide for mercury control.
 - a. What do you mean by "established controls"?
 - b. Without the MPS, would Ameren not be able to "take advantage" of co-benefits?
 - c. What do you mean by "take advantage"?
 - d. Would units not in the MPS and subject to the Illinois mercury rule also not be able to take advantage of co-benefits from NOx and SO₂ controls?
- 19. What is LADCO's Midwest Regional Planning Organization list that you refer to on page7 of your testimony? Please provide a copy.
- 20. Isn't it true that USEPA promulgated the CAIR and CAMR so as to allow states and companies to coordinate and synchronize the measures necessary to comply with both programs because of the potential co-benefits and inter-relationships that are recognized under the MPS?
- 21. You state that the MPS will "provide[] substantial beyond-CAIR NOx and SO₂ controls."
 - a. What is "beyond-CAIR"?
 - b. To your knowledge, is there any evidence in the record of this proceeding concerning SO₂ and/or NOx emissions, existing controls, or proposed regulations?

- c. To your knowledge, is there any evidence in the record of this proceeding concerning "beyond-CAIR" requirements?
- d. Is this statement limited to CAIR Phase II?
- e. Does the MPS provide controls beyond CAIR Phase I?
- f. How does the MPS affect compliance with CAIR Phase I, which has compliance dates of 2009 for NOx and 2010 for SO₂?
- g. Will Ameren have to trade to comply with CAIR Phase I?
- h. Is this similar to the position of other companies, to the best of your knowledge?
- 22. How many coal-fired units under 90 MW are in the Illinois portion of Ameren's system?
 - a. What is their aggregate capacity?
 - b. Isn't it true that two of the three coal units at Grand Tower would not have to have any mercury controls before January 1, 2013, and might never be required to meet a reduction or emissions rate requirement?
 - c. Isn't that also true for four of the five coal units at Meredosia?
 - d. Isn't that true for all of the units at Hutsonville?
- 23. How many coal-fired units under 90 MW are operating in the State of Illinois (including but not limited to Ameren's units)?
- 24. Why is 90 MW the threshold between "large" and "small" in the MPS?
- 25. Does the choice of 90 MW as the threshold provide additional relief for Ameren that would not be available to other companies?
- 26. What support is there in the record in this proceeding for your statement that participation in the MPS will contribute significantly towards attainment of the ozone and PM2.5 National Ambient Air Quality Standards?

- a. Has Ameren modeled the effect of the MPS?
- b. Has the Agency modeled the effect of the MPS?
- 27. Is this a "significant" contribution towards attainment if only Ameren opts in to the MPS?
 - a. If not, at what level of participation by the six (or seven, depending upon how EEI is characterized) coal-fired generation companies in Illinois is necessary for the "significant contribution" towards ozone and PM2.5 attainment reached?
- 28. What other sources does the provision in the Joint Statement that "any further reductions needed would first come from other sources" refer to?
- 29. What assurances can the Agency give regarding reductions beyond CAIR? That is, are sources that opt in to the MPS sheltered from additional reduction requirements beyond CAIR?
 - a. What form would such an assurance take?
 - b. Does Ameren's agreement with the Agency give such assurances to Ameren?
 - c. How will Ameren and the Agency obtain agreement of the Board and/or USEPA to such a commitment?
- 30. The economic analysis included in Anne Smith's testimony addressed only Ameren, yet the MPS is a rule of general applicability.
 - a. What evidence has been provided in this record that the MPS is technically feasible and economically reasonable as a generally-applicable rule?
 - Anne Smith's testimony indicates that for Ameren, compliance with the MPS will be five times more costly relative to SO₂ and ten times more costly relative to NOx than compliance with CAIR. Do you agree that the MPS is far less cost-effective than CAIR?

- c. Figure 4 at page 12 of Anne Smith's testimony indicates that the cost of complying with the proposed MPS is more expensive over time than compliance wit CAIR/CAMR or the proposed Illinois mercury rule without the MPS. Please explain why Ameren supports the MPS under these circumstances.
- 31. Will the MPS be submitted to USEPA for approval as part of a SIP?
 - a. If so, which SIP (*e.g.*, the attainment SIPs or the CAIR SIPs)?
 - b. As the mercury program will not be a SIP *per se* (as it is a Clean Air Act § 111(d) NSPS program), how can the Agency submit the MPS as part of a § 110 SIP?
 - c. If not, will it be submitted to USEPA for approval as part of Illinois' § 111(d) program requirement?
 - d. If the latter ((c) above) is true, how can a § 111(d) program for mercury even include a voluntary requirement for reductions of SO₂ and NOx?
 - e. Does Ameren believe that whatever form (SIP or § 111(d) program) the MPS takes that it is approvable by USEPA? Why do you think that?
 - f. To your knowledge, has the MPS been discussed with USEPA?
- 32. Is the TTBS as proposed just prior to the June hearing still available?
- 33. At page 7 of your testimony, you state that the TTBS "does not allow for multi-pollutant coordination and reductions, and it does not address Ameren's technical conclusions on the effectiveness of ACI or HCI at its plants"
 - a. Please explain what "technical conclusions" are referred to in this statement.
 - b. Please explain what "multi-pollutant coordination and reductions" are referred to in this statement.

- c. Does the CAIR/CAMR combination address Ameren's "multi-pollutant coordination and reduction" concerns?
- d. Do you agree that the cost of compliance with the MPS by other companies may be greater because, for instance, they have lower SO₂ or NOx emissions during the baseline period and, therefore, the effective emissions limitations are more stringent for them?
- e. In developing the MPS, did Ameren or the Agency consider whether the MPS would be an attractive or viable alternative to any other company?
- f. If so, who participated in that consideration?
- g. What was the result of that consideration?
- 34. The MPS appears to require units with hot-side electrostatic precipitators ("HS ESPs") to install baghouses. Is that correct?
 - a. Does Ameren have any Illinois units 90 MW or greater with HS ESPs?
 - b. Do Midwest Generation and/or Dynegy have any units with HS ESPs?
 - c. If so, doesn't that have the effect of increasing the costs for Midwest Generation or Dynegy to participate in the MPS?
- 35. Is EEI included as part of Ameren's Illinois fleet?
- 36. If Ameren chooses to opt in to the MPS, does that mean that EEI is automatically opted in to the MPS as well?
 - a. If not, will EEI voluntarily opt in?
- 37. Are other companies faced with the same problems as Ameren with respect to the management of financing, massive equipment procurement and construction, and coordination of the numerous regulatory requirements applicable to them?

- 38. You state in your testimony that you do not believe that the Ameren system can comply with the 90% mercury reduction requirement relying on HCI alone.
 - a. Does the Agency agree with your conclusion?
 - b. If so, how does this affect the Agency's economic analysis of the rule generally?
 - c. Is it your opinion that reliance on HCI alone will not yield compliance with the
 90% mercury reduction requirement also true for all or most of the other EGUs in
 Illinois?
- 39. If the Agency is confident that HCI will produce a 90% reduction in mercury, would the Agency support a technology-based standard, *i.e.*, the MPS without the provisions that apply to SO₂ and NOx?
- 40. How much of the \$2 billion necessary for Ameren to comply under the MPS is related to actual mercury control equipment?
 - a. Ameren's press release concerning the MPS states that the "proposed agreement with Illinois will add to [Ameren's total planned control costs of \$1.0 to \$1.4 billion by 2016] a projected \$600 million, the majority of which is an acceleration of emission-related capital expenditures that would have been spent beyond 2016." How much of that \$600 million would be spent on controls that were already planned by Ameren regardless of whether the MPS is adopted?
 - b. Please identify those controls that would be installed and the associated costs that would be incurred by Ameren solely to comply with the MPS.
- 41. It is not apparent what advantages Ameren has gained with this proposal other than elimination of the 25% generation capacity limitation of the TTBS. Please describe what those advantages are that Ameren would gain from complying with the MPS.

- 42. What other NOx and SO₂ requirements were requested by the Agency and not included in the MPS?
- 43. Why would Ameren agree to give up its regulatory and statutory right to trade emission allowances?
 - a. Has Ameren or the Agency assessed whether a prohibition on the trading of SO₂ and/or NOx allowances is unlawful?
 - b. If so, who performed such analyses?
 - c. What were the results?
- 44. Is the preclusion on trading emission allowances absolute? That is, before a participant in the MPS can trade emission allowances for whatever reason, including participation in the business of allowance trading (as opposed to surrendering allowances for compliance), must it demonstrate to some entity that the available allowances were not created because of its use of the MPS?
 - a. How would the participant make such a demonstration?
 - b. Who would review the demonstration?
 - c. Must every trading transaction be approved by the Agency?
 - d. What turnaround does Ameren expect on such approvals?
 - e. Does the participant risk losing the deal because of the requirement for some type of approval?
 - f. Would disapproval by the Agency be subject to Board or judicial review?
 - g. What role does USEPA play in approving trades?

- How will the Agency determine if an allowance is generated as a "result of actions taken to comply with the standards in" the MPS for SO₂ and NOx (*see* Section 225.233(f)), and thus cannot be traded?
- For Ameren in particular, if Ameren were otherwise planning to install a control for NOx or SO₂ but the installation of such control has the effect of assisting Ameren's compliance with the MPS, is any allowance generated by such control "a result of actions taken to comply with the standards" in the MPS and thus an allowance that cannot be traded?
- j. Is there anything that prevents a company that may opt in to the MPS from selling prior to the opt-in deadline all of the SO₂ or NOx allowances it currently has been or will be allocated for future years?
- 45. Why is the baseline for seasonal NOx only two years, 2004 and 2005, while the baseline for annual NOx is three years, 2003 through 2005?
 - a. Why were these particular years chosen as the baselines?
 - b. Who selected these baseline periods?
 - c. Would the selection of different baseline periods increase Ameren's compliance costs?
 - d. Was any consideration given in the development of the MPS to the impact that the use of these baselines would have on other companies?
 - e. Is Ameren aware of any environmental significance to using 2003-2005 as the baseline period from which percent reductions are determined?
 - f. Is Ameren aware if the 2001-2003 averaging period was considered?
 - g. Is Ameren aware if the 2001-2004 averaging period was considered?

- 46. Section 225.233(a)(3)(A) of the proposed amendment to the proposed rule establishes July 1, 2006, as a cut-off date for determining which EGUs would be included in an MPS group. The subsection says, "all EGUs it [a participating company] owns in Illinois as of July 1, 2006, . . . shall be thereafter subject to the standards and control requirements of this Section. . . ."
 - a. Does this mean that each of Ameren's three Illinois operating companies can separately opt in or out of the MPS?
 - b. Is Ameren's agreement with the Agency premised on all three companies opting in?
 - c. What happens if a non-MPS company purchases EGUs that are subject to the MPS after July 1, 2006?
 - Assuming installation of the requisite control equipment prior to the purchase, do the MPS requirements applicable to the MPS unit prior to the purchase continue to apply?
 - ii. Assuming that the control equipment had not been installed prior to the purchase, do the MPS requirements applicable to the MPS unit prior to the purchase continue to apply?
 - iii. Must the purchasing company place all of its other units into the MPS as well?
 - d. What happens if an MPS company purchases existing non-MPS units after July 1, 2006? What would be the requirements applicable to that newly purchased existing non-MPS EGU?
 - e. If Ameren opts into the MPS, will it be required to include the EEI units?

- f. Why must the MPS require inclusion of all of a company's units rather than merely some of them?
- g. An eligible unit under the MPS is one that commenced commercial operation on or before December 31, 2000. Does this applicability threshold, then, exclude Southern Illinois Power Cooperative from participating in the MPS, since Unit 123 commenced operation in mid-2001?
- h. Or does this mean that only SIPC's Unit 4 is eligible for participation in the MPS?
- i. Was SIPC's Unit 123 intentionally excluded?
- j. If so, why?
- 47. Please explain the meaning of Section 225.233(b)(1). This subsection states that the applicant must submit "[i]dentification of each of the EGUs that will be complying with this Subpart," which suggests that not all of the EGUs belonging to a company must be included in an MPS, but then goes on to say, "with evidence that the owner has identified all EGUs that its [sic] owns in Illinois. . . ." This last part of the sentence contradicts the first part, particularly when considered with subsection (b)(5), which says, "Identification of any EGU or EGUs that are scheduled for permanent shut down [sic]. . . ."
- 48. If Ameren were to opt in to the MPS, would that mean that there are entire generating stations owned or operated by the Ameren family of companies in Illinois that would install no mercury reduction equipment prior to 2013?
 - a. At which of Ameren's stations would there be no mercury reduction equipment prior to 2013?
 - b. What would be the coal-fired capacity at each of Ameren's stations that would not be subject to mercury reduction requirements prior to 2013 under the MPS?

- 49. Under Section 225.233(c)(1), what applies to units that blend coal?
- 50. How many Ameren units blend coal?
- 51. Section 225.233(c)(2)(A) includes the following phrase: "Use of an injection system designed for effective absorption of mercury, considering the configuration of the EGU and its ductwork."
 - a. Please explain the meaning of "designed for effective absorption of mercury."
 - b. Please explain the role of the configuration of the EGU and its ductwork in the design for "effective absorption of mercury."
- 52. Are all of the three subsections of Section 225.233(c)(2) (*i.e.*, subsections (2)(A), (B), and (C)) necessary to achieve an "optimum manner" of HCI? That is, should there be an "and" or an "or" following subsection (B)?
- 53. Why is Section 225.233(c)(3)(C) necessary?
 - a. Is it not the case that any permit decision of the Agency is appealable under the Environmental Protection Act?
- 54. Is it the case that the provision for an evaluation of the effectiveness of various sorbents or other mercury-reduction techniques in Section 225.233(c)(4) is not a requirement of the rule but rather that Section 225.233(c)(4) sets forth the provisions that apply <u>if</u> a source chooses to perform an evaluation?
- 55. Under what circumstances might a company participating in the MPS notify the Agency that it will comply with the generally applicable mercury emission standards prior to January 1, 2015?
- 56. What is 50% of Ameren's annual NOx base rate?
 - a. Does this average rate include EEI?

- 57. What is 80% of Ameren's seasonal NOx base rate?
 - a. Does this average rate include EEI?
- 58. What is 35% of Ameren's SO_2 base rate?
 - a. Does this average rate include EEI?
- 59. What is 30% of Ameren's SO₂ base rate?
 - a. Does this average rate include EEI?
- 60. Are the current emission rates for EEI for SO₂ and NOx greater or less than the rates for Ameren's (other, if applicable) Illinois coal-fired units?
- 61. Please compare Ameren's applicable SO₂ and NOx emissions rates to the SO₂ and NOx emissions rates that would be applicable to other companies after applying the percentage reductions to each of the other five (or six, depending upon where EEI is calculated) companies' base rates.
- 62. It appears that the structure of the baseline and required reductions for SO₂ under the MPS merely brings Ameren's emissions into alignment with what everyone else's emissions are already. Is that correct?
 - a. The MPS requires a further ratchet downward for those companies who are already low emitters. Do Ameren and the Agency realize this?
 - b. Doesn't this approach penalize historically low emitters?
- 63. Why must the MPS be based upon the <u>more stringent of</u> the percent reduction from the baseline rate or the rate that happens to equate to that percentage reduction of Ameren's exiting emissions?
 - a. For NOx, are the prescribed rates or the percentage reductions the more stringent for Ameren?

- b. For SO₂, are the prescribed rates or the percentage reductions the more stringent for Ameren?
- c. How, why, and by whom were the emission rates included in the MPS selected?
- d. How, why, and by whom were the percentage reductions selected?
- 64. In previous rules where a not-to-be-exceeded emission rate was necessary to demonstrate attainment with a National Ambient Air Quality Standard, the Board did not attempt to inhibit trading. Why is trading inhibited and even precluded as a prerequisite for participation in the MPS?
- 65. Notwithstanding the general preclusion of trading, the MPS appears to allow trading among affiliated parties. Is this correct?
 - a. Must those affiliated parties all be located within the State of Illinois?
 - b. Is the purpose of the trading among affiliates to allow Ameren Illinois to transfer
 SO₂ and NOx allowances created by these reductions to Ameren Missouri?
 - c. Could a unit in the MPS transfer all its SO_2 and/or NOx allowances to a unit that will not be installing controls and therefore not generating excess allowances through compliance with the MPS and thereby not have to surrender any allowances to the Agency?
- 66. Is Missouri generally upwind of Illinois?
- 67. Is there anything that prevents the Agency from re-selling allowances surrendered to it?
- 68. What percentage reduction of SO₂ emissions has Ameren's Illinois plants, excluding EEI, achieved since 1998?
 - a. What percentage reduction of SO₂ emissions has Ameren's Illinois plants,
 including EEI, achieved since 1998?

- Have other Illinois systems achieved greater percentage SO₂ reductions since 1998?
- 69. Does Ameren burn high sulfur or other bituminous coal in any of its Illinois units?
 - a. Did Ameren burn such coal during the 2003-2005 baseline period of the MPS?
 - b. Will Ameren continue to burn such coal if it opts in to the MPS?
 - c. How many tons of SO_2 could be emitted by Ameren's Illinois plants each year under the terms of the proposed MPS?
 - d. Is that annual tonnage greater than the annual tonnage Dynegy would emit if it opted in to the MPS?
 - e. In fact, wouldn't Ameren emit approximately twice as much SO₂ as Dynegy under the MPS?
 - f. Isn't it true that Dynegy has approximately 2/3 of the generating capacity of Ameren's Illinois facilities?
- 70. Will Ameren be able to recover its capital costs for compliance with the MPS through electricity rates it charges its Illinois customers?
 - a. Are wholesale electricity providers in Illinois guaranteed recovery of their capital expenditures for pollution control equipment?
- 71. Ameren claims it would make SO₂ and NOx reductions above those required by the CAIR. Would these reductions be beyond those required under Illinois' CAIR proposal, which is more stringent than the federal requirement?
- 72. In reaching the MPS agreement with Ameren, did the Agency conclude that postponing the effective date of the mercury standard from July 2009 until January 2015 was acceptable for control of mercury from a public health perspective?

- 73. Isn't it true that if each of the generators in Illinois elected to take advantage of the MPS, the mandatory mercury standard, 90% reduction or 0.0080 lbs mercury/GWh, would not take effect in Illinois until January 2015?
- 74. The MPS does not impose the mandatory 90% reduction or 0.0080 lbs mercury/GWh standard on electric generating units that are less than 90 MW?
- 75. Isn't it true that the imposition of the percentage reduction from base bate emissions if that leads to a more stringent emission limit does not substantially effect Ameren, given its base rate?
 - Isn't it true that given Ameren's base rate emissions, under the MPS the percentage reduction of SO₂ emissions and the SO₂ emission rate beginning January 2013 are essentially equivalent?
 - Isn't it true that given Ameren's base rate emissions, under the MPS the percentage reduction of SO₂ emissions and the SO₂ emission rate beginning January 2015 are essentially equivalent?
- 76. Isn't it true that by postponing controlling emissions of SO_2 until late in or after the years used to determine the base rate, a company would be allowed to emit more SO_2 in the future than if it had controlled SO_2 during the years used to determine the base rate?
- 77. Isn't it true that a company that had reduced emissions of SO₂ during the years used to determine the base rate would be more likely to have a more stringent SO₂ emission rate limit under the MPS than a company that did not reduce SO₂ emissions during those years?

- a. Isn't it true that the provision of the MPS that imposes a percent reduction of the SO_2 base rate would generally grant a higher future emission rate to a company if it did not control SO_2 emissions during the years used to determine the base rate?
- b. Isn't it true that the provision of the MPS that imposes a percent reduction of the SO_2 base rate rewards companies with high emissions of SO_2 during the years used to determine the base rate relative to companies with low emissions of SO_2 during that period?
- c. Isn't it true that the provision of the MPS that imposes a percent reduction of the SO_2 base rate would impose a lower future emission rate on a company that did control SO_2 emissions during the years used to determine the base rate?
- d. Would you agree that the provision of the MPS that imposes a percentage reduction of the SO_2 base rate punishes companies with low emissions of SO_2 during the years used to determine the base rate relative to companies with high emissions of SO_2 during that period?

Questions Posed by Dynegy and Midwest Generation

Questions for C.J. Saladino

- Why will annual operation of the SCRs result in such an increase in operational costs of that equipment?
- 2. Would adoption of the mercury rule as proposed inhibit any of Kincaid's other environmental operations at the plant?
- 3. How do you define "commercially available"?
- 4. If EEI were considered part of Ameren's Illinois fleet or system and City Water Light & Power in Springfield was not available for averaging because of its pending deal with Sierra Club, what impact would this have on Kincaid's ability to effectively average with other single-facility companies in order to comply with Phase I of the Illinois mercury rule? Who would be left for Kincaid to average with?
 - a. Is such an out-of-system averaging plan a viable alternative for Kincaid?
 - b. Why or why not?
- 5. Why would other companies have no incentive to enter into an Averaging Demonstration with Kincaid other than to generate revenue?
- 6. In your opinion, does the TTBS truly offer flexibility?
- Have you had the opportunity to review the Multi-Pollutant Strategy ("MPS") proposed by Ameren on July 28?
 - a. If so, in your opinion, does the MPS offer Kincaid opportunities for flexibility?

Questions Posed by Dynegy and Midwest Generation

Questions for Anne Smith

- Did anyone assist you with the preparation of your written testimony on behalf of Ameren or the responses to these questions?
 - a. If so, who?
 - Did you receive any guidance from or have any conversation with the Illinois
 Environmental Protection Agency (the "Agency") concerning your testimony or responses to these questions?
 - Were you instructed by anyone to include or exclude any analyses or discussion from your testimony or responses to these questions due to input by or concerns of the Agency, any other state agency or employee, or any environmental group?
 - d. Did the Agency, any other state agency or employee, or any environmental group review a draft of or provide comments on your testimony or the responses to these questions?
 - e. If so, who?
 - f. Did you perform any analyses or studies for Ameren in connection with this proceeding not discussed or referred to in your testimony?
 - g. If so, please describe all such analyses or studies.
- 2. At page 3 of your testimony you state that to "simulate the IL Rule with the MCS [sic], I assumed that only Ameren would make use of the MCS provision," and that "I did not attempt to evaluate whether other companies would also find the MCS provision to be a preferred alternative." Does this mean that:

- a. You are not offering any testimony concerning whether the MPS¹ would be a beneficial alternative for any company other than Ameren?
- All of your comparisons of costs and emission levels associated with the proposed Illinois mercury rule with and without the MPS assume that only Ameren participates in the MPS?
- c. Other companies may in fact find that the MPS creates disadvantages for them because, for instance, they have lower NOx or SO₂ emissions during the baseline period and the MPS, if adopted, would require them to reduce baseline emissions by specified percentages?
- On page 3 of your testimony, you describe three simulations you performed using NEEM.
 - a. The first was CAIR/CAMR.
 - i. Did that include co-benefits Ameren would obtain from CAIR for complying with CAMR?
 - ii. Did the first simulation include co-benefits that other Illinois generators would realize under the CAIR/CAMR program?
 - b. You describe your second simulation as "the effects of Illinois imposing the IEPA's mercury rule" while the rest of the country implements CAIR/CAMR.
 - i. Did the cost to Illinois generators for CAIR compliance increase in this simulation?
 - ii. If so, why?

¹ Note: Ms. Smith used the term "MCS." We believe that refers to the Multi-Pollutant Strategy, called the "MPS." Although Ms. Smith uses the term "MCS" in her testimony, our questions regarding it will use the term "MPS" that is used consistently elsewhere.

- iii. Did you quantify those increased costs?
- iv. If so, how much were those increased costs?
- c. Was your third simulation the same as the second except you included the MPS with only Ameren utilizing the MPS?
 - i. What was the cost difference between this simulation and the second simulation?
 - ii. What were the causes of this difference?
 - iii. What was the cost difference to Illinois generators between your first and third simulations?
 - iv. What were the causes of this difference?
- d. You indicated for Ameren that you included the multi-pollutant controls for meeting the MPS requirements. Did you do any analysis of the increase in costs to other Illinois generators for meeting beyond CAIR SO₂ and NOx requirements if Ameren does not have to meet any such requirements?
- 4. You state that you assumed only Ameren would make use of the MPS provision.
 - a. What are the reasons or bases for that assumption?
 - a. Did you have any inputs from or discussions with anyone from Ameren concerning this assumption?
 - b. With whom and when?
 - c. Please describe the nature and content of these inputs or discussions.
 - d. Did you have any inputs from or discussions with anyone from the Agency concerning that assumption?
 - e. If so, please describe.

- f. To your knowledge, did Ameren have any inputs from or discussions with anyonefrom the Agency concerning that assumption?
- g. If so, please describe.
- 5. On page 6 of your testimony, you state that regional haze will be improved by the proposed MPS.
 - a. What is the basis for this assertion?
 - b. Did you perform or have you reviewed any haze modeling that both includes and excludes the MPS?
 - c. Have you ever performed haze modeling?
- 6. On page 6 of your testimony you state that SO₂ emissions are a "precursor" to "ambient concentrations of fine particulate matter" and that "the additional reductions of Illinois SO₂ emissions would be helpful to Illinois in achieving attainment with the . . ." PM2.5 National Ambient Air Quality Standards ("NAAQS").
 - a. Will the Agency require reductions of SO₂ beyond the SO₂ reductions by Ameren under the MPS, if adopted, and CAIR to achieve attainment with the PM2.5 NAAQS?
 - Has the Agency identified electric generating units as a source of such additional SO₂ reductions?
 - c. Is Ameren exempt from any such additional SO₂ reductions if the MPS were to be adopted and Ameren opted in to the MPS?
 - d. To determine what additional SO₂ reductions are needed to achieve attainment with the PM2.5 NAAQS, do you need to know what reductions in Illinois would occur as a result of the state's adoption of rules to implement CAIR?

- e. At this point, Illinois has not adopted any CAIR implementation rule; is that correct?
- f. Is CAIR implementation the subject of an entirely different rulemaking?
- 7. On page 6 of your testimony, you state that "five of the FGD projects assumed under the MCS scenario would cost between \$3,600/ton and \$4,800/ton SO₂ removed, which is four to five times higher than the range of SO₂ allowance prices that is projected by EPA and others."
 - a. In what document or documents does EPA project such allowance prices?
 - b. Who are the "others"?
 - c. Does this statement mean that the proposed Illinois rule with the MPS is significantly less cost-effective than CAIR in reducing SO₂ emissions?
 - d. Do you agree that the projected SO_2 reduction costs under the MPS are not costeffective as compared to the SO_2 reductions required by CAIR?
 - e. Does this mean that Ameren's customers and/or stockholders will be subject to costs for SO₂ control four to five times higher than Ameren might otherwise have incurred?
- 8. On pages 7-8 of your testimony you state that the "two SCR projects at Newton assumed under the MCS scenario would cost between \$20,000/ton and \$26,000/ton removed, which is about ten times higher than the range of NOx allowance prices that is projected by EPA and others."
 - a. In what document or documents does EPA project such allowance prices?
 - b. Who are the "others"?

- c. Does this mean that the proposed Illinois rule with the MPS is significantly less cost effective than CAIR in reducing NOx emissions?
- d. Do you agree that the projected NOx reduction costs under the MPS are not cost effective as compared to the NOx reductions required by CAIR?
- e. Does this mean Ameren's customers and/or stockholders will be subject to costs for NOx control about 10 times higher than Ameren might otherwise have incurred?
- 9. On page 6 of your testimony, you indicate the SO₂ reduction resulting from Ameren's compliance with the MPS would be unlikely to occur under CAIR/CAMR or CAIR/CAMR with the Illinois mercury rule in place.
 - a. How much of this reduction would occur if Ameren simply reduced its existing average SO₂ emission rate to the existing average of the other coal-fired electric generators in Illinois?
 - Did you analyze what level of SO₂ emission reductions would be required in Illinois beyond CAIR?
 - c. Would these reductions be greater than just the reductions from Ameren under the MPS?
 - d. Wouldn't these greater reductions result in a line ultimately lower than either of those shown on Figure 1 in your testimony?
 - e. Wouldn't these greater reductions have to be achieved by the sources in Illinois other than Ameren because Ameren would not be required to make any reductions beyond those in the MPS?

- 10. On page 7 of your testimony, you indicate the NOx reductions resulting from Ameren's compliance with the MPS would be unlikely to occur under CAIR/CAMR alone or CAIR/CAMR with the Illinois mercury rule in place.
 - a. Did you analyze what level of NOx emission reductions would be required beyond CAIR?
 - b. Would these reductions be greater than just the reductions obtained from Ameren under the MPS?
 - c. Wouldn't these greater reductions result in a line ultimately lower than either shown on Figure 2 in your testimony?
 - d. Wouldn't these greater reductions have to be achieved by all the sources in the state other than Ameren because Ameren would not be required to make further reductions?
- 11. Regarding Figure 3 at page 9 of your testimony:
 - a. Is it correct that this figure shows that in 2009, mercury emissions from existing coal-fired power plants in Illinois would be about 500 pounds higher under the proposed Illinois mercury rule with the MPS as compared to the proposed Illinois mercury rule without the MPS?
 - Please explain why mercury emissions are projected to be higher in 2009 under the MPS scenario.
 - c. To generate the results shown on this figure, what company or companies did you assume would opt in to the MPS?
 - d. If this figure assumes that only Ameren would opt in to the MPS, does that mean:

- That the higher mercury emissions in 2009 under the MPS scenario are attributable solely to lesser reductions of mercury emissions by Ameren?
- ii. That if other companies were to opt into the MPS, then the difference between the projected mercury emission levels in 2009 would be even greater?
- e. Do you have an understanding as to whether the higher levels of mercury emissions under the MPS scenario is acceptable to the Agency?
 - i. What is that understanding?
 - ii. What is the basis of that understanding?
- f. In projecting mercury emissions under the MPS scenario:
 - i. What mercury controls did you assume would be installed at each unit subject to the MPS?
 - ii. What level of mercury reduction did you assume for each such unit?
 - iii. What are the bases for each of these assumptions?
- g. Do you agree that ACI without a baghouse will not achieve a 90% mercury emission reduction level at some or all of Ameren's units?
- h. If you believe that ACI without a baghouse will not achieve 90% reduction at some Ameren units, which ones and why?
- i. Do you believe this is also true for other, non-Ameren units in Illinois?
- 12. Regarding page 8 of your testimony where you state that "Illinois mercury emissions with the MCS provision still achieve 83 percent of the reduction that would occur under the IL Rule without the MCS in 2009, rising to 87 percent of the IL Rule's reduction in 2010, and 94 percent by 2013":

- a. Please explain how you calculated the 83%, 87% and 94% figures.
- b. Do the percentages in this statement refer to reductions only from Ameren units, or do they refer to reductions from other units that also would be subject to the proposed Illinois rule if adopted?
- c. Does your statement assume that the proposed Illinois mercury rule without the MPS would achieve a 90% reduction in mercury emissions in Illinois from units subject to the mercury proposal?
- d. Is each of the percentages listed in this sentence a percentage of 90% (*e.g.*, 83% of 90%)?
- e. If so, then does this statement mean that, if the MPS were adopted, in 2009 mercury emissions from units subject to the proposed Illinois mercury rule would be reduced by about 75%?
- f. Are these calculations based on the assumption that only Ameren opts in to the MPS?
- g. Would the percentages be lower if others opted in?
- h. Do these percentages consider any units complying with the TTBS?
- Do you understand that this level of mercury emission reductions is satisfactory to the Agency?
- j. At page 10 of your testimony, you state that the lesser level of mercury emission reductions under the proposed Illinois rule with the MPS is not "meaningful."What is the basis for this statement?
- k. Have you had any discussions with or are you otherwise aware of whether the Agency agrees with that statement?

- 13. At page 10 of your testimony, you state that modeling may suggest that "Illinois is better off (has 'lower costs') when its generators are harmed competitively by regulation."Please explain what is meant by the quoted phrase.
- 14. On page 10 of your testimony, you indicate a state could "seriously mislead itself" by relying on standard cost output models such as IPM without additional calculation. Has the Agency, in the TSD, seriously misled itself?
- 15. Regarding Figure 4 at page 12 of your testimony:
 - a. Does this figure show that the cost of complying with the proposed Illinois mercury rule, with or without the MPS, is substantially more than the cost of complying with both CAIR and CAMR?
 - b. Are there costs associated with being unable to trade NOx and SO₂ allowances under the MPS?
 - c. If so, what are those costs?
 - d. Are they reflected in Figure 4?
 - e. Will Illinois power companies that are subject to the proposed Illinois mercury rule (assuming that it is adopted) be at a competitive disadvantage if neighboring states, such as Missouri, Iowa, and Indiana, adopt CAMR?
- 16. Figure 5 on page 13 of your testimony is labeled "Overnight Capital Expense for Ameren Projected Using NEEM under CAIR/CAMR Alone, the IL Rule and the IL Rule with Ameren Using the MCS." What is meant by the phrase "Overnight Capital Expense"?
- 17. On page 13 of your testimony, you indicate the MPS is "a good environmental deal" for Illinois.

- a. Doesn't that "deal" include higher mercury emissions in the short term at least compared to the Illinois mercury rule without the MPS and no greater mercury reductions in the long-run?
- b. If reductions of NOx and SO₂ beyond those obtained under CAIR are required in Illinois, doesn't that "deal" mean those additional reductions will be borne disproportionately by Ameren's competitors?
- 18. On page 13 of your testimony, you indicate, for several reasons, the MPS is a "prudent trade-off" for Ameren.
 - a. Are you aware of any other reasons this was a prudent trade-off, a good deal, for Ameren?
 - b. Would being exempt from any beyond CAIR SO₂ and NOx requirements be a good deal for Ameren?
 - c. Are you aware of anything else Ameren received or would receive from the Agency and/or the state administration for agreeing to the MPS?

Questions Posed by Dynegy and Midwest Generation

Questions for Dianna Tickner

- What is the basis for Prairie State's general concerns with the feasibility of a 90% reduction in mercury emissions?
- 2. Why is it important that vendors provide guarantees for a 90% removal of mercury?
- 3. What is the typical sulfur content of the coal that Prairie State plans to burn?
- 4. Has there been any testing, to your knowledge, at units burning coal with a sulfur content higher than at the Conesville Power Plant?
- 5. Do you intend for your specific comments on the proposed rulemaking that are included in the attachments to your testimony to be considered by the Board as testimony, as opposed to comments?
- 6. Were any of your comments addressed by way of alterations to the proposed mercury rule before it was submitted to the Board or since then?
- 7. Is Prairie State subject to the federal Acid Rain Program?
 - a. If so, is Prairie State allocated allowances under Title IV?
 - b. If Prairie State is not allocated allowances under Title IV, will Prairie State be required to purchase allowances?
 - c. If Prairie State must purchase allowances for the Acid Rain Program, would it be the same for CAIR?
 - d. If all of the eligible EGUs in Illinois opted in to the MPS, would this have any effect on Prairie State's ability to obtain sufficient SO₂ allowances to operate?

Questions Posed by Dynegy and Midwest Generation

Questions for Andy Yaros

- On page 3 of your testimony, you quote from a DOE/NETL report. Just to clarify, is this document the report of the activities and conclusions of the Pleasant Prairie demonstration?
- 2. What is the source of your information regarding the Meramec demonstration?
- 3. What is a "full-scale" test demonstration?
- 4. With respect to the Monroe demonstration, what is "ADA-ES"?
- 5. With respect to the St. Clair demonstration, you state that the mercury capture rate averaged 93% over the first 25 days of the 30-day demonstration.
 - a. What were the averages for the other five days?
 - b. How do those averages affect the 30-day average? That is, what is the 30-day average?
- 6. Did the St. Clair demonstration include tests of 100% subbituminous coal in addition to the testing of the 85/15 blend of subbituminous and bituminous coals?
- 7. What is a "low-rank" coal?
- 8. In your opinion, how may the difference in speciation of the subbituminous coals burned at Kincaid (55% Hg⁰) compared to the speciation at Meramec (38% Hg⁰ and 62% Hg^{II}) affect mercury removal?

Questions Posed by Dynegy and Midwest Generation

Respectfully submitted,

DYNEGY MIDWEST GENERATION, INC. and MIDWEST GENERATION, LLC,

by:

/s/ Kathleen O. Bassi

One of Their Attorneys

Dated: August 7, 2006

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CERTIFICATE OF SERVICE

I, the undersigned, certify that on this 7th day of August, 2006, I have served electronically the attached **DYNEGY AND MIDWEST GENERATION'S QUESTIONS FOR MICHAEL MENNE, C.J. SALADINO, ANNE SMITH, DIANNA TICKNER, AND ANDY YAROS AT THE HEARING COMMENCING AUGUST 14, 2006**, upon the following persons:

Dorothy Gunn, Clerk Illinois Pollution Control Board James R. Thompson Center Suite 11-500 100 West Randolph Chicago, Illinois 60601

and electronically and by first-class mail with postage thereon fully prepaid and affixed to the persons listed on the **ATTACHED SERVICE LIST**.

/s/ Kathleen C. Bassi

Kathleen C. Bassi

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