

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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|-------------------------|---|------------------|
| AMEREN ENERGY RESOURCES |) | |
| |) | |
| Petitioner, |) | |
| |) | |
| v. |) | PCB 12-126 |
| |) | (Variance – Air) |
| ILLINOIS ENVIRONMENTAL |) | |
| PROTECTION AGENCY, |) | |
| |) | |
| Respondent. |) | |

NOTICE OF FILING

TO: SEE ATTACHED SERVICE LIST

PLEASE TAKE NOTICE that I have electronically filed today with the Illinois Pollution Control Board the Post-Hearing Comments of the Illinois Attorney General’s Office, a copy of which is hereby served upon you.

Dated: August 10, 2012

Respectfully submitted,

PEOPLE OF THE STATE OF ILLINOIS
by LISA MADIGAN, Attorney
General of the State of Illinois



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POST-HEARING COMMENTS OF THE ILLINOIS ATTORNEY GENERAL’S OFFICE

The Illinois Attorney General’s Office, on behalf of the People of the State of Illinois (the “People”), hereby submits its post-hearing comments in this matter, pursuant to 415 ILCS 5/32, 35 Ill. Adm. Code § 104.224(d), and the comment deadline set forth in the Hearing Report dated August 2, 2012. These comments supplement the People’s initial comments dated July 23, 2012 (PC #249) and the oral statements offered at the August 1, 2012 public hearing.

For the reasons set forth below, the People continue to believe that the Board should require Ameren to submit a comprehensive analysis of the various compliance alternatives and to deny the petition if Ameren is unable or unwilling to do so. Detailed information on options to reduce sulfur dioxide (“SO₂”) pollution is needed to assist the Board in evaluating conditions that could or should be attached to the variance that will help minimize deviations from the Multi-Pollutant Standard (“MPS”). The People urge the Board to give careful consideration to these potential conditions and, to the extent the Board determines that a variance is warranted, consider limiting the term to two years to allow for reassessment of the rapidly changing energy landscape we confront today.

I. Ameren Must Submit More Information on Alternative Compliance Strategies.

The People asserted in its initial comments that Ameren's petition had failed to properly articulate and document the alleged hardship that it would face if required to comply with the MPS. PC #249 at 6-7. Ameren has since provided additional information in response to written questions from the Board (*see* AER's Responses to the Illinois Pollution Control Board Technical Unit's Questions (July 30, 2012) and AER's Responses to the Illinois Pollution Control Board Technical Unit's Second Set of Questions (July 30, 2012)) and in verbal testimony provided at the August 1, 2012 public hearing (Tr. 12-56). The additional information, however, is still not sufficient to determine whether various pollution control strategies, either alone or in combination with one another, are available to reach compliance or to minimize the gap of non-compliance.

Indeed, Ameren is still not quite clear on what exactly it would have to do if the variance request is unsuccessful. As pointed out in the People's initial comments, the affidavits submitted to verify the claims in the petition do not match Ameren's assertion that it would have to close two entire plants if it is unable to receive a variance. *See* PC #249 at 6. At the public hearing, Ameren witness Michael Menne testified only that "probably" anywhere from one to three plants could "very likely" need to shut down, Hearing Tr. 21:9-15, and went on to mention other pollution reduction strategies contemplated by the company to meet pending federal mandates that it has apparently chosen not to offer here to help reduce the departure from the MPS.¹ In order to get to the bottom of this, the Board should require that Ameren provide a comprehensive

¹ When asked by Member Zalewski about the company's compliance plan for the Cross-State Air Pollution Rule ("CSAPR") that is currently stayed on appeal, Ameren witness Michael Menne stated that operating at the proposed variance level of .35 lb/mmBtu would place the company "well on [its] way" to meeting CSAPR limits but that "we are anticipating that we are going to have to take some additional measures" including buying lower sulfur coal, using sorbent injection, and buying allowances to the extent available. Hearing Tr. 41-43.

analysis on its alternative compliance options—including those discussed below— before granting any variance to the company. If Ameren cannot or will not provide the analysis, then the petition should be denied.

A. Use of Dry Scrubbing Systems

Pollution control of SO₂ emissions through flue gas desulfurization (FGD) can be accomplished through either wet or dry scrubber systems. Ameren is planning a wet FGD system at Newton. It had previously planned to utilize a dry scrubbing application—Dry Sorbent Injection or DSI—at both its Joppa and Edwards facilities.² Other types of dry scrubbing applications include Furnace Sorbent Injection (FSI), Spray Dry Absorption (SDA), Flash Dry Absorption (FDA), and Circulating Dry Scrubbers (CDS).³ Dynegy has recently installed or is in the processes of installing dry FGD systems at four units located at its Baldwin and Havanna facilities.⁴

A joint USEPA-CICA⁵ fact sheet offers the following succinct description of dry scrubbing applications: “Dry scrubbers have significantly lower capital and annual costs than wet systems because they are simpler, demand less water and waste disposal is less complex. Dry

² “We are now planning to use dry sorbent injection at Joppa” Ameren Corporation Q1 2010 Earnings Call Transcript (May 5, 2010), *available at* <http://bit.ly/QLMIp6>. “[W]e will use DSI at our Edwards energy center.” Ameren Corporation Q2 2011 Earnings Call Transcript (Aug. 4, 2011), *available at* <http://bit.ly/NduGIX>.

³ Dry Scrubber Fundamentals, WPCA/Duke Seminar (Sept. 3, 2008), *available at* <http://bit.ly/RAO3hw>.

⁴ Dynegy, Inc., Form 10-K for fiscal year ended December 31, 2011, *available at* <http://1.usa.gov/OMasnf>.

⁵ CICA is sponsored by USEPA's Clean Air Technology Center (CATC) and provides a variety of technical assistance on air pollutants and control strategies, emissions inventories and emissions factors, dispersion modeling, ambient monitoring, emission measurements, and risk analysis. http://www.epa.gov/ttnatc1/cica/about_e.html.

injection systems install easily and use less space[;] therefore, they are good candidates [for] retrofit applications.”⁶ While acknowledging that dry scrubbing applications typically have lower removal efficiencies than wet scrubbers, USEPA and CICA point out that “[n]ewer dry scrubber designs are capable of higher control efficiencies, on the order of 90%.”⁷ Indeed, the U.S. Energy Information Administration states that dry sorbent injection may serve as a key pollution control technology at power plants and that “DSI systems can [] significantly reduce sulfur dioxide (SO₂) emissions.”⁸ USEPA predicts that in coming years, 56 GW of coal-fired capacity will install DSI.⁹

Despite having announced previous plans to use DSI at the Edwards and Joppa plants to comply with the MPS, Ameren is now saying that it believes the use of sorbent has too much variability in the removal efficiency (supposedly anywhere from 10 to 90 percent) and would put too much strain on other equipment such as electrostatic precipitators. Response to Second Set of Questions, at 2; Hearing Tr. 23:3-24:12. Yet, at the same time, Ameren is also apparently contemplating the future use of DSI anyway, either if it does not get the variance levels it wants or if it needs to achieve additional reductions to comply with the Cross-State Air Pollution Rule (“CSAPR”). See Hearing Tr. 42:10-13 (“If we have to do some sort of additional sorbent injection [to comply with CSAPR], it wouldn’t be enough to get us to these MPS rates but we might have to enhance it some.”). This raises the obvious question as to why Ameren has not

⁶ See EPA-CICA, Air Pollution Control Technology Fact Sheet: Flue Gas Desulfurization, EPA-452/F-03-034 (2003), available at <http://www.epa.gov/ttnecatc1/dir1/ffdg.pdf>.

⁷ *Id.*

⁸ U.S. Energy Information Administration, Today in Energy (March 16, 2012), available at <http://www.eia.gov/todayinenergy/detail.cfm?id=5430>.

⁹ Regulatory Impact Analysis of the Proposed Toxics Rule: Final Report (March 2011), at 8-13, available at <http://www.epa.gov/ttnecas1/regdata/RIAs/ToxicsRuleRIA.pdf>.

considered or proposed some kind of partial use of sorbent application to reduce the size of MPS deviation now when it is already considering using the technology to meet pending federal standards.

Ameren should be required to submit the details of its evaluation of DSI (including partial applications rather than what it would need to install for full MPS compliance) and any other dry scrubbing technologies for the Board's review. The emergence of DSI and other dry scrubbing applications as cheaper, faster ways to reduce SO₂ emissions means that Ameren must demonstrate that it has thoroughly analyzed the viability of using these approaches to comply with the MPS or to minimize deviation from it.

B. Generation Management

Ameren states that it investigated curtailment of plant operations as a compliance alternative and that the evaluation revealed the following: “[I]n order to comply with the proposed MSP SO₂ emission rates, AER would need to lower capacity factors on such units [Edwards, Joppa, Newton] to between 22% and 38%.” Response to Questions, at 2. Ameren witness Michael Menne also addressed this topic at the public hearing, stating that the curtailment of plants to comply with the MPS would exacerbate the company's financial problems as it would mean less revenue from those plants without a concomitant reduction in the fixed costs that are necessary to operate a plant at any level of output. Hearing Tr. at 22:9-20.

Ameren should provide its evaluation and analysis on unit curtailments or deratings to the Board. While it may indeed prove too much of a financial hardship to require Ameren to rely on curtailment as a single compliance strategy, there could be cost effective pollution reductions through partial curtailment that, when combined with other compliance strategies, would bring the company closer to complying with the MPS and should therefore be considered as potential

conditions to a variance. Indeed, Ameren is already planning to use “generation utilization” to comply with its proposed emission rate. Response to Second Set of Questions, at 2; Hearing Tr. 26:1-5. The company should be required to submit the information necessary for the Board to discern whether additional generation utilization should in fact be included as a condition to help minimize departure from the MPS.

C. Maximization of Existing Pollution Control Equipment

It appears that Ameren is committing to run the Duck Creek and Coffeen scrubbers at a 98-99 percent SO₂ removal rate. See Response 2 at 2 (stating that “the operation of FGD systems at the Duck Creek and Coffeen Energy Centers will be fully maximized . . . The removal efficiencies for the FGD systems will range between 98-99%”); Hearing Tr. 25:15-17 (“The removal efficiencies for the scrubber system will range between 98 and 99 percent.”). This commitment should be incorporated as a condition to any variance that may be granted.

D. Procurement of Low-Sulfur Coal

Ameren has stated its intent to procure low-sulfur coal as an operational step to meet its proposed emission rate under the variance. Response to Second Set of Questions, at 2. In fact, 99 percent of Ameren’s coal supply for its Illinois plants already comes from the western low-sulfur coal region called the Powder River Basin (PRB).¹⁰ But the sulfur content in coal from the PRB can vary from mine to mine with the lowest content sometimes being referred to as “ultra low-sulfur” or “super-compliant” coal.¹¹ Indeed, Ameren’s counterpart subsidiary in Missouri,

¹⁰ Ameren Corporation, Form 10-K for fiscal year ending Dec. 31, 2011, at 12, *available at* <http://www.sec.gov/Archives/edgar/data/18654/000119312512085489/d260990d10k.htm>. Unfortunately, even during its highest revenue years, Ameren has never taken steps to equip all its Illinois plants to use Illinois coal and continue to meet emission standards.

¹¹ See, e.g., PRB Coal Makes the Grade, Platts Power (Oct. 2003), at 31, *available at* <http://www.prbcoals.com/pdf/PRBCoalInformation/Power-Oct03-PRBCoal.pdf>.

the regulated utility Ameren Missouri, has recently entered in to a five-year contract for ultra low-sulfur coal as its strategy to achieve compliance with the pending Cross-State Air Pollution Rule.¹²

Given Ameren's intent to rely on procuring low-sulfur coal to meet its proposed emission rate, the Board should ensure that Ameren maximizes this operational step to reduce emissions as much as possible. To do this, the Board should require Ameren to certify on an ongoing basis that it has procured the lowest sulfur coal to the greatest extent possible and that it has fully exhausted this strategy to reduce emissions. Indeed, it appears there may be additional room to leverage fuel procurement, as Ameren is already contemplating further improvements it could make on the fuel side to comply with potential federal regulations that are apparently not part of its current variance request. *See* Hearing Tr. 43:3-5 ("On the SO₂ side, we will still have to be able to take some additional measures [to comply with CSAPR], and we're looking at possibly . . . bringing in more low sulfur coal or lower sulfur coal."). This action would be consistent with what the Ameren Missouri subsidiary has already done and should be considered here to assist with the MPS.

II. Ameren's Proposed Conditions are Inadequate.

In evaluating whether Ameren has satisfied its burden of showing that its hardship outweighs harm to public health and the environment, the Board should consider conditions that would attach to a variance if the Board decides to grant one. Some of which have already been mentioned above, these should or could include:

¹² "In July 2011, Ameren Missouri entered into a coal contract for the purchase of approximately 90 million tons of ultra low-sulfur coal to be delivered between 2012 and 2017." Ameren Corporation, Form 10-Q Quarterly Report (Aug. 9, 2011), *available at* <http://biz.yahoo.com/e/110809/ace10-q.html>.

- Setting of a revised SO₂ emission rate based on additional measures Ameren might take to limit excess pollution;
- The Hutsonville and Meredosia stations remain non-operational;¹³
- Require the use of dry sorbent injection or other dry scrubbing applications as a partial if not full compliance measure;
- Require the partial curtailment or derating of certain units to assist with compliance;
- Require Ameren to operate the Duck Creek and Coffeen scrubbers at 98-99% SO₂ removal efficiencies;
- If Ameren continues to procure low-sulfur coal as an operational step to meet emission rates, require Ameren to procure the lowest sulfur coal available and to submit regular verified certifications; and
- Any other conditions as determined by the Board that would minimize deviation from the MPS and provide a more proper balance between the hardship to Ameren and the harm to public health and the environment that the variance would allow.

III. If Granted, the Variance Should be Limited to Two Years with the Ability of Ameren to Petition for Extension.

As stated in the petition, the reason Ameren is seeking relief now (in 2012) from 2015 and 2017 standards is that it would have to resume normal construction of the Newton scrubbers in early 2013 (which Ameren says it cannot due to lack of financing) or begin the process of mothballing units around the same time (which it does not want to do) in order to be ready for the 2015 standard.¹⁴ The People respectfully suggest that a two-year variance¹⁵ would provide the company with the relief it needs now but provide the added benefit of allowing the Board and

¹³ Ameren asks that the proposed FutureGen project at its Meredosia facility be exempt from this restriction. Response to Questions at 11. The People have no objection to that request.

¹⁴ “One of the main drivers for AER’s petition for relief now is that if mothballing of facilities must occur, AER must have the necessary time to make and effectuate these critical decisions in the best possible way.” Petition at 23.

¹⁵ In keeping with the proposals that Ameren has made, the Board could grant a variance of the 2015 standard to 2017 and the 2017 standard to 2018.

the Illinois Environmental Protection Agency an opportunity for reassessment if, two years from now, Ameren still believes it needs more time under a variance.

There are many factors currently at play in the power sector, factors that are discussed throughout Ameren's petition. A two year variance—with a strict emissions limit and set of conditions such as those discussed above—would allow Ameren to maintain the decelerated status of the Newton scrubber project and to hold off on making any decisions about placing plants in cold standby. But it would also preserve the chance for the Board to keep the MPS on track to the fullest extent possible and to keep excess pollution to a minimum.

There are a number of factors that could lead to an increase in power prices and an improvement in Ameren's financial position and therefore its compliance strategy:

- **Rise in natural gas prices.** There is currently a glut of natural gas because of over-production and the very warm 2011-2012 winter that resulted in lesser amounts of gas being used for heating. This has led to extremely low prices for gas in 2012. However, many analysts expect prices to rise once the gas market has a chance to rebalance (although gas prices could dip even lower if storage capacity maxes out this summer and early fall). Demand is continuing to go up as utilities switch from coal to gas, and producers have started to scale back supply.¹⁶ Once the balance between supply and demand shift, it is possible that gas will price out between \$4/mmBtu and \$6/mmBtu or perhaps even higher in the next couple of years.¹⁷ This would ease the downward pressure that cheap gas is currently exerting on power prices.
- **Compliance with CSAPR and MATS.** As noted by Ameren witnesses at the public hearing, the Cross-State Air Pollution Rule ("CSAPR") or some version of it is likely to be in place and require compliance from coal-fired power plants, perhaps in 2014. In addition, the federal Mercury and Air Toxics Standard ("MATS"), assuming it survives pending legal challenges, has compliance dates beginning in 2015. The effective dates of these rules may mean that coal plant owners will choose to retire additional older, smaller, inefficient coal plants to avoid the cost of making investments in them. This will

¹⁶ "Natural gas prices surge 70%," CNN Money (July 25, 2012), available at <http://money.cnn.com/2012/07/24/investing/natural-gas-prices/index.htm>; "Chesapeake to throttle back on gas, bank on oil," Platts (Aug. 7, 2012), available at <http://www.platts.com/RSSFeedDetailedNews/RSSFeed/NaturalGas/6534891>.

¹⁷ See here for a discussion of some of the trends and dynamics affecting the price of gas: http://www.cleveland.com/business/index.ssf/2012/07/natural_gas_prices_for_winter.html.

remove some of the cheapest units from the generation stack and reduce the current oversupply of generation capacity, two factors that will likely contribute to an uptick in power prices.

- **Economic improvement.** Of course, no one knows for sure what our economy will look like in two years. If industrial, manufacturing, and other types of activity pick up, demand for electricity will pick up and power prices will rise along with it.
- **Weather patterns, price of coal, renewable energy policy.** Various other factors can also influence energy prices, such as whether we experience particularly warm summers or cold summers or whether the seasons are milder and require less load for air conditioning and heating. Just like the price of natural gas, the price of coal can vary depending on demand both domestically and overseas and the contracts that utilities are able to negotiate with railroads and coal suppliers. In terms of renewable energy policy, decisions that are made about things such as the Production Tax Credit (PTC) can influence how quickly renewable energy like wind is entering the market and exerting pressure on incumbent generators and power prices.

Depending on how all of these factors trend and interact with each other—for good or for worse in terms of power prices—Ameren's financial position could improve and re-acceleration of the Newton scrubber project could become feasible in the company's eyes or perhaps justify the investment in additional controls at Edwards or Joppa. On the other hand, Ameren's position could erode further and it could be forced to mothball additional units with our without a variance from the MPS. The point is that no one can know for sure how all of these dynamics will play out. A two-year variance would provide Ameren with the relief it needs now (*i.e.*, a delay from having to make a compliance route decision in 2013). It would simultaneously preserve the opportunity for the Board to reevaluate the situation assuming more clarity emerges on the price of gas, the status of the federal rules, etc., while also allowing for Ameren to make its case for an extension of the variance if it feels it is necessary when the time comes.


In conclusion, a two-year variance would be a more narrowly tailored approach for the Board to take and would keep the option open for maintaining the MPS as close as possible to the original framework. This, coupled with a strict emission limit and set of conditions required

during the two-year variance term, will help to minimize the amount of excess pollution permitted by a variance.

Dated: August 10, 2012

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, James P. Gignac, an Assistant Attorney General in this case, do certify that I caused to be served this 10th day of August, 2012, the foregoing Post-Hearing Comments of the Illinois Attorney General's Office upon the persons listed on the Service List by depositing same in an envelope, first class postage prepaid, with the United States Postal Service at 69 W. Washington St., Chicago, Illinois, at or before the hour of 5:00 p.m.



JAMES P. GIGNAC