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IEPA ATTACHMENT NO. KR

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Memorandum of Understanding By and Between Midwest Generation LLC and Illinois Environmental Protection Agency Revised 12/10/2006 3:21:06 PM

Midwest Generation LLC ("MWGen") and the Illinois Environmental Protection Agency ("IEPA") have reached an Agreement that will achieve deep and sustained reductions in emissions of mercury, sulfur dioxide ("SO₂"), and nitrogen oxide ("NOX") from MWGen's coal-fired Illinois electric generating units ("EGUs"). The terms of the Agreement are as follows:

1. Mercury Emissions Requirements.

- a. By July 1, 2008, MWGen will install and have operational halogenated activated carbon injection ("ACI") equipment on the following EGUs:
 - i. Crawford Station EGUs 7 & 8;
 - ii. Waukegan Station EGUs 7 & 8; and
 - iii. Fisk Station EGU 19.
 - b. By July 1, 2009, MWGen will install and have operational ACI equipment on all of the remaining MWGen EGUs, both hot and cold side electrostatic precipitators ("ESPs"), except those EGUs that will be permanently shut down by December 31, 2010 and for which IEPA has been provided proper notice as set forth in the proposed Illinois mercury rule at 35 IAC Section 225.
 - c. MWGen will either shut down, convert to a cold-side ESP, or install fabric filter bag houses on the two EGUs that operate hot side ESPs on the following dates:
 - i. By December 31, 2013, Waukegan Station EGU 7;
 - ii. By December 31, 2015, Will County Station EGU 3.
 - d. Beginning on January 1, 2015 and measured on a rolling twelve month basis (e.g., for the period Jan. 1, 2015 through Jan. 1, 2016, and for every 12-month period after Jan. 1, 2015), each MWGen Illinois EGU, except Will County Station EGU 3, shall achieve the following mercury emissions standards:
 - i. An emission standard of 0.0080 lb mercury/GWh gross electrical output; or
 - ii. A minimum 90% reduction of input mercury.
 - e. MWGen's Will County Station EGU 3 shall achieve the mercury emissions standards of Paragraph 1(d) above beginning on January 1, 2016, as measured on a rolling twelve month basis (e.g., for the

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period Jan. 1, 2016 through Jan. 1, 2017, and for every 12-month period after Jan. 1, 2017).

f. For each EGU operating ACI equipment, MWGen shall inject halogenated activated carbon at a rate of 5.0 lbs per million actual cubic feet or at a rate or rates set lower by the Agency based upon a showing by MWGen that (a) the EGU can achieve an emission standard of 0.0080 lb Hg/GWh gross electrical output or a minimum 90-percent reduction of input mercury at a lower injection rate or (b) such rates or rates are needed so that carbon injection will not increase particulate matter emissions or opacity so as to threaten noncompliance with the applicable requirements for particulate matter or opacity, as provided in 35 Ill. Admin. Code Section 225.233(c).

g. Compliance by MWGen with the mercury emissions standards set forth in this Agreement shall be deemed to be full and complete compliance by MWGen with the mercury emissions standards included within the proposed 35 Ill Admin. Code Section 225.

2. NO_x Emissions Requirements.

- a. By December 31, 2011, MWGen shall permanently shut down Illinois EGUs or install NOx emissions reduction equipment on its Illinois EGUs so that for calendar year 2012 and beyond, MWGen will achieve and maintain a fleet wide average annual NO_x emission rate of 0.11 lbs/mm btu and will achieve and maintain a fleet-wide average ozone season NOx emission rate of 0.11 lbs/mm btu.
- b. IEPA intends to monitor the NOx emissions reductions that MWGen is able to obtain from selective non-catalytic NOx reduction ("SNCR") equipment. To facilitate that purpose, MWGen shall file, no later than one year after startup of each SNCR, a report with the IEPA describing the NOx emissions reductions that the SNCR has been able to achieve.

3. SO₂ Emissions Requirements.

- a. MWGen will achieve the following fleet wide average annual SO_2 emissions rates beginning in the calendar years set forth below:
 - i. Beginning with calendar year 2013, MWGen will achieve a fleet wide average annual SO₂ emission rate of 0.44 lbs/mm btu;
 - ii. Beginning with calendar year 2014, MWGen will achieve a fleet wide average annual SO_2 emission rate of .41 lbs/mm btu;
 - iii. Beginning with calendar year 2015, MWGen will achieve a fleet wide average annual SO₂ emission rate of .28 lbs/mm btu;

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- iv. Beginning with calendar year 2016, MWGen will achieve a fleet wide average annual SO₂ emission rate of .195 lbs/mm btu;
- v. Beginning with calendar year 2017, MWGen will achieve a fleet wide average annual SO₂ emission rate of 0.15 lbs/mm btu;
- vi. Beginning with calendar year 2018, MWGen will achieve a fleet wide average annual SO₂ emission rate of 0.13 lbs/mm btu;
- vii. Beginning with calendar year 2019, MWGen will achieve a fleet wide average annual SO₂ emission rate of 0.11 lbs/mm btu;
- b. By December 31, 2018, MWGen will either permanently shut down or install FGD equipment on each EGU, except Joliet EGU 6, at every MWGen Illinois Electric Generating Station (i.e., the Fisk, Crawford, Waukegan, Joliet, Powerton, and Will County Stations) such that on or before January 1, 2019, MWGen's Illinois coal-fired generating fleet will achieve a fleet wide average annual SO2 emission rate of 0.11 lbs/mm btu.

4. MWGen EGUs Scheduled for Permanent Shutdown.

- a. MWGen will permanently shut down the following EGUs on or before the dates set forth below:
 - i. December 31, 2007 Waukegan EGU 6.
 - ii. December 31, 2010 Will County EGUs 1 and 2.
- 5. MWGen EGUs Scheduled for Permanent Shutdown or Installation of Emissions Controls.

a. Waukegan Station EGUs 7 and 8.

- i. Waukegan Station EGU 7.
 - 1. By December 31, 2013, MWGen will either permanently shut down EGU 7 at the Waukegan Station or install and have operational FGD equipment on EGU 7 at the Waukegan Station.
- ii. Waukegan EGU 8.
 - 1. By December 31, 2014, MWGen will either permanently shut down EGU 8 at the Waukegan Station or install and have operational FGD equipment on EGU 8 at the Waukegan Station.

b. Fisk Station.

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- i. By December 31, 2015, MWGen will either permanently shut down its Fisk Generating Station or install and have operational flue gas desulphurization ("FGD") equipment on EGU 19 located at the Fisk Station.
 - 1. Beginning on December 31, 2008, and annually thereafter up to and including December 31, 2015, MWGen shall provide IEPA with a report on any technology or equipment designed to affect air quality that has been considered or explored for the Fisk Station in the preceding 12 months, understanding that such report shall in no way obligate or be implied to obligate MWGen to install any such equipment described in the report.

c. Crawford Station.

i. MWGen shall either install emissions controls on or permanently shut down the two EGUs at the Crawford Station according to the following dates:

1. Crawford EGU 7.

- a. If MWGen, in its sole discretion, decides to operate Crawford EGU 7 after December 31, 2018, then
 - i. by December 31, 2015, MWGen shall install and have operational on EGU 7 SNCR or equipment capable of delivering essentially equivalent NOx emissions reductions, and
 - ii. by December 31, 2018, MWGen shall install and have operational FGD equipment on Unit 7.
- b. MWGen may elect, in its sole discretion, not to install SNCR or FGD equipment on Crawford EGU
 7. In that case, MWGen shall permanently shut down EGU 7 by no later than December 31, 2018.
- 2. Crawford EGU 8.
 - a. If MWGen, in its sole discretion, decides to operate Crawford EGU 8 after December 31, 2017, then

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- i. by December 31, 2015, MWGen shall install and have operational on EGU 8 SNCR or equipment capable of delivering essentially equivalent NOx emissions reductions, and
- ii. by December 31, 2017, MWGen shall install and have operational FGD equipment on EGU 8.
- b. MWGen may, in its sole discretion, elect not to install SNCR or FGD equipment on Crawford EGU
 8. In that case, MWGen shall permanently shut down EGU 8 by no later than December 31, 2017.

6. Trading of SO2 and NOx Emissions

- a. MWGen will be permitted to sell, trade, or transfer SO2 and NOx emissions allowances of any vintage owned, allocated to, or earned by MWGen's Illinois EGUs (the "Illinois Allowances") to its Homer City, Pennsylvania generating station ("Homer City Station") for as long as the Homer City Station needs the Illinois Allowances to comply with federal or state emissions regulations. When and if the Homer City Station no longer requires all of the Illinois Allowances, MWGen may sell any and all remaining Illinois Allowances, without restriction, to any person or entity located anywhere except that MWGen may not directly sell, trade, or transfer Illinois Allowances to an NOx or SO2 emission source located in Ohio, Indiana, Illinois, Wisconsin, Michigan, Kentucky, Missouri, Iowa, Minnesota, and Texas. In no event shall this Agreement or any resulting rule, regulation, or adjusted standard require or be interpreted to require any restriction whatsoever on the sale, trade, or exchange of the Illinois Allowances by persons or entities who have acquired the Illinois Allowances from MWGen.
- b. MWGen shall be prohibited from purchasing or using SO2 or NOx allowances for the purpose of meeting the SO2 and NOx emissions standards set forth in paragraphs 2 and 3 of this Agreement.

7. Future Illinois Emissions Regulations.

a. The SO2 emissions rates set forth in this Agreement shall be deemed to be best available retrofit technology ("BART") under the Visibility Protection provisions of the Clean Air Act, 42 U.S.C. § 7491, reasonably available control technology ("RACT") and reasonably available control measures ("RACM") for achieving fine particulate matter ("PM 2.5"), requirements under NAAQs in effect on the date of the date of this Agreement, as required by the Clean Air Act, 42 U.S.C. § 7502. IEPA may use the SO2 and NOx emissions reductions required under this Agreement in developing attainment demonstrations and demonstrating reasonable further progress for PM 2.5 and 8 hour ozone standards, as required under the Clean Air Furthermore, in developing rules, regulations, or state Act. implementation plans designed to comply with current NAAQs, IEPA, taking into account all emission reduction efforts and other appropriate factors, will use best efforts to seek SO2 and NOx emissions rates from other EGUs that are equal to or less than the rates agreed to here by MWGen and will seek SO2 and NOx reductions from other sources before seeking additional emissions reductions from MWGen.

8. Assistance with Permit Approvals.

a. IEPA will use best efforts to process and approve quickly MWGen's requests for the Illinois permits and regulatory approvals that are required for the economically timely installation and operation of the emissions control equipment that MWGen must install to meet the emissions requirements of this Agreement.

9. Clean Coal and Wind Generation.

- a. MWGen is exploring the possibility of developing one or more integrated gasification combined-cycle ("IGCC") electric generating stations to fire Illinois coal with gross electrical output of up to 1,200 MW in Illinois. MWGen is also exploring the possibility of developing Illinois-based wind electric generating projects with gross electrical output of up to 400 MW.
- b. Should MWGen decide to pursue IGCC or wind generation projects, or both, IEPA will use its best efforts to work with and assist MWGen in obtaining commercially reasonable long term (i.e. 20year) contracts for all of the electrical output of the generating units and will work with and assist MWGen in obtaining Illinois regulatory approvals for construction and operation of the generating units.
- 10. Joint Undertaking with City of Chicago and IEPA Focused on Local Environmental Issues Related to Fisk and Crawford Stations.

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a. MWGen currently manages a substantial community involvement program which supports numerous organizations and initiatives in the Pilsen and Little Village neighborhoods around the Fisk and Crawford Stations. The emphasis of the program is on projects designed to improve educational opportunities and the local environment. Building on this program and starting in 2007, MWGen will establish a regular process with the City of Chicago and the IEPA to explore the technical and financial feasibility of projects that would fit within the current MWGen community involvement budget and would potentially benefit the environment in the communities surrounding the Fisk and Crawford Stations.

11. Rules and Regulations Relating to Water Temperature in Illinois Rivers and Waterways.

a. IEPA will use its best efforts to work with MWGen to explore the benefits of increasing the Des Plaines River temperature excursion hours, especially those affecting MWGen's Joliet Station, to relieve electric reliability and electric constraint problems during the Summer and Winter peak periods.

12. Adoption of Terms as Regulation.

 a. MWGen's commitments and obligations under this Agreement are subject to and conditioned upon the adoption and sustained validity through an appropriate regulation incorporating Paragraphs 1 through 7 of this Agreement. IEPA and MWGen shall mutually support and use best efforts to obtain the appropriate regulation based on this Agreement.

Signed and executed this ll day of December, 2006,

Midwest Generation, LLC By: Theby 7 am Its CHAIEMAN & CED of ETUSON MISSION ENERGY

Illinois Environmental Protection Agency
BV: Naulas Dikott
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