

**BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

In the Matter of: )  
)  
AMENDMENTS TO ) **R18-20**  
35 ILL. ADM. CODE 225.233, ) **(Rulemaking – Air)**  
MULTI-POLLUTANT STANDARDS (MPS) )

**NOTICE OF FILING**

To: ALL PARTIES ON THE ATTACHED SERVICE LIST

PLEASE TAKE NOTICE that I have today electronically filed with the Office of the Clerk of the Illinois Pollution Control Board the attached **DYNEGY'S PREFILED ANSWERS TO QUESTIONS FROM THE ILLINOIS POLLUTION CONTROL BOARD AND ILLINOIS ENVIRONMENTAL PROTECTION AGENCY**, copies of which are herewith served upon you.

\_\_\_\_\_  
/s/ Ryan Granholm

Ryan Granholm

Dated: January 12, 2018

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<b>AMENDMENTS TO</b>	)	<b>R18-20</b>
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<b>MULTI-POLLUTANT STANDARDS (MPS)</b>	)	

**RESPONSES TO ILLINOIS POLLUTION CONTROL BOARD’S PREFILED QUESTIONS FOR RICK DIERICX AND DEAN ELLIS**

NOW COME Dynegy Midwest Generation, LLC, Illinois Power Generating Company, Illinois Power Resources Generating, LLC and Electric Energy, Inc. (collectively, “Dynegy” or the “Companies”), by their attorneys, Schiff Hardin LLP, and hereby submit prefiled answers to questions prefiled by the Illinois Pollution Control Board (the “Board”) in Attachment A to the January 2, 2018 hearing officer order.

**Pre-filed Hearing Questions for Dynegy Witness**

**Rick Diericx**

1. On pages 9 and 10, you note that the “fleet” burns low sulfur coal. Please clarify whether all EGUs in the proposed MPS Group burn low sulfur coal. If so, does Dynegy plan to continue burning low sulfur coal at all MPS units. Please comment on including a requirement to burn low sulfur coal at all MPS units.

**ANSWER: Yes, except in very limited circumstances, all of the MPS units currently burn low-sulfur Powder River Basin coal and Dynegy currently plans to continue to do so. The limited exception concerns certain stations that previously received high sulfur coal and may still have limited residual amounts of such coal in their coal storage piles that may, at times, be combusted. While our coal contracts for the MPS units currently are for low sulfur coal and we currently plan to continue to burn low sulfur coal, Dynegy would oppose a requirement to burn low sulfur coal at all MPS units. Such a requirement would unnecessarily restrain operational flexibility and is unnecessary for air quality compliance purposes. An MPS unit should be allowed to continue to combust any coal so long as the unit utilizes air pollution controls adequate to maintain compliance with its applicable short-term and annual SO<sub>2</sub> emission limits, which are sufficient to protect air quality.**

2. On page 11, you assert that reduction in mass emissions “is an appropriate metric for evaluating the benefit of the rule because it represents the potential impact and stringency

of a rule before and after a proposed change.” Please comment on whether this fleet-wide metric is appropriate for evaluating any local impacts given that there are no mass emissions limits proposed for individual MPS power stations. In this regard, comment on whether the proposed regulations should include mass emissions limits for individual MPS power stations based on the allowable emissions under the current MPS or the proposed transfer allocations to assure protection of public from any localized impacts.

**ANSWER: To clarify, the proposal does include a mass emission cap for Joppa. Joppa units 1-6 must not emit combined annual SO<sub>2</sub> emissions in excess of 19,860 tons. This mass emission cap for Joppa was to limit emissions below a level that would require Illinois EPA to perform additional SO<sub>2</sub> NAAQS modeling and it also serves as an additional layer of protection to air quality and ensures that Massac County does not become nonattainment for SO<sub>2</sub>.**

**To answer your question, neither the current nor proposed MPS emission limits are the best metrics for regulating local impacts. The current MPS and the proposal set annual limits. When setting limits intended to provide local protection, it has been my experience that U.S. EPA and Illinois EPA set limits that are expressed as 30-day or less averages. For example, MATS requirements and Illinois SO<sub>2</sub> limits for stationary sources, such as the Memorandum of Understanding SO<sub>2</sub> limits agreed to for Edwards that are quantified in pounds per hour and were developed to address the 1-hour SO<sub>2</sub> NAAQS and local air quality. Since the numerous short-term non-MPS limits will remain unchanged, the public remains protected from any localized impacts.**

**This position was supported by testimony in the previous MPS variance proceeding, docket PCB 14-10. The Board previously noted in its opinion the findings of Dr. Bradley, a senior toxicologist, which include: (1) there is no causal relationship between long-term SO<sub>2</sub> exposure and respiratory morbidity; (2) epidemiological studies failed to find a statistically significant association between SO<sub>2</sub> and health effects; and (3) exposure to outdoor pollution is probably the least plausible explanation given for a rise in reported asthma cases and suggests other factors for the increase in reports (e.g. healthcare access, physician perception, diagnostic coding and diagnoses). These findings are found on page 23 of the Board’s November 21, 2013 opinion and order.**

**Except for the MPS rule, annual SO<sub>2</sub> emissions from the MPS units are currently limited based on mass (i.e., tons) instead of an emission rate. Since the applicable federal regulations and consent decree have deemed mass as the appropriate metric for annual emissions limits, we believe it is also appropriate for the MPS to use that same metric.**

**There are three reasons why the proposed regulations should not include mass emissions limits for individual MPS power stations. First, imposing station-based limits would be inconsistent with the fleet-wide approach of the original MPS rule that determined fleet-wide rather than station-specific limits were appropriate. Second, as demonstrated in Attachment A to these responses, the applicable non-**

**MPS emission limits already impose numerous rate limits and tonnage caps on individual stations and sub-groups of stations. Finally, Illinois EPA has conducted a thorough analysis and/or performed air quality modeling for the areas in and around the MPS plants as part of its SO<sub>2</sub> NAAQS SIP requirements. The Agency has concluded that no additional SO<sub>2</sub> limits or requirements are necessary to maintain and/or attain the local SO<sub>2</sub> NAAQS.**

3. On page 15, you state, “even if emissions were to increase, each MPS unit is subject to multiple emission standards for both NO<sub>x</sub> and SO<sub>2</sub> that are intended to maintain and attain the NAAQS. The proposal will not affect any of those requirements. Therefore, the total emissions, regardless of the proposal, will remain below levels protective of human health and the environment.”
- a. Please list the emissions standards for SO<sub>2</sub> and NO<sub>x</sub> applicable to each MPS unit/power station in the proposed combined MPS Group.

**ANSWER: Please refer to Attachment A (tables of SO<sub>2</sub> and NO<sub>x</sub> standards other than the MPS which apply to each unit). Perhaps more so than any other source category, coal-fired units are subject to numerous overlapping requirements for SO<sub>2</sub> and NO<sub>x</sub>.**

- b. Please comment on whether these emission standards place any permit limits in terms of mass or rate on the MPS units.

**ANSWER: The mass and rate-based emissions standards identified in Attachment A are included in enforceable Clean Air Act Permit Program (CAAPP)/Title V permits for those plants that already have been issued such permits. For the remaining plants, the emissions standards are federally enforceable and will be in their CAAPP permits by the end of 2018.**

# **ATTACHMENT A**

**TABLE 1**

<b>Baldwin NOx Limits other than the MPS</b>				
<b>Individual Unit Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
<b>Baldwin 1</b>	0.86	lbs/mmbtu	annual	Acid Rain
	0.100	lbs/mmbtu	30-day rolling	Consent Decree
	0.25	lbs/mmbtu	ozone season	35 IAC Part 217 Subpart V
<b>Baldwin 2</b>	0.86	lbs/mmbtu	annual	Acid Rain
	0.100	lbs/mmbtu	30-day rolling	Consent Decree
	0.25	lbs/mmbtu	ozone season	35 IAC Part 217 Subpart V
<b>Baldwin 3</b>	0.45	lbs/mmbtu	annual	Acid Rain
	0.100	lbs/mmbtu	30-day rolling	Consent Decree
	0.25	lbs/mmbtu	ozone season	35 IAC Part 217 Subpart V
<b>Plant-wide Requirements (Aggregate all Baldwin units)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	13,800	tons	annual	Consent Decree
	5,407	tons	annual	CSAPR
	1,663	tons	ozone season	CSAPR
	4,000	tons	annual	39.5 ILAct, Permitted for Fees
<b>DMG-wide Requirements (Aggregate Baldwin, Havana, Hennepin plants)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	9,519	tons	annual	CSAPR
	2,776	tons	ozone season	CSAPR
	13,800	tons	annual	Consent Decree
<b>System-wide Requirements (Aggregate DMG + IPH units)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	22,455	tons	annual	CSAPR
	6,345	tons	ozone season	CSAPR

Note that CSAPR allows for the trading of allowances.

**TABLE 2**

<b>Baldwin SO<sub>2</sub> Limits other than the MPS</b>				
<b>Individual Unit Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
<b>Baldwin 1</b>	0.100	lbs/mmbtu	30-day rolling	Consent Decree
	0.20	lbs/mmbtu	30-day rolling	MATS
	18,146	annual	tons	Acid Rain
<b>Baldwin 2</b>	0.100	lbs/mmbtu	30-day rolling	Consent Decree
	0.20	lbs/mmbtu	30-day rolling	MATS
	19,186	annual	tons	Acid Rain
<b>Baldwin 3</b>	0.100	lbs/mmbtu	30-day rolling	Consent Decree
	0.20	lbs/mmbtu	30-day rolling	MATS
	18,380	annual	tons	Acid Rain
<b>Plant-wide Requirements (Aggregate all 3 Baldwin units)</b>				
	101,966	lbs/hr	3-hour block	35 IAC 214.185, IPCB 79-7
	6	lbs/mmbtu	3-hour block	35 IAC 214.185, IPCB 79-7
	14,914	tons	annual	CSAPR
	55,712	tons	annual	Acid Rain
	4,214	tons	annual	39.5 ILAct, Permitted for Fees
<b>DMG-wide Requirements (Aggregate Baldwin, Hennepin, Havana plants)</b>				
	26,256	tons	annual	CSAPR
	29,000	tons	annual	Consent Decree
	90,489	tons	annual	Acid Rain
<b>System-wide Requirements (Aggregate DMG + IPH units)</b>				
	61,936	tons	annual	CSAPR
	198,694	tons	annual	Acid Rain

Note that CSAPR and Acid Rain Programs are trading rules that allow for the trading of allowances as a compliance option.

**TABLE 3**

<b>Coffeen NOx Limits other than the MPS</b>				
<b>Individual Unit Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
<b>Coffeen 1</b>	0.64*	lbs/mmbtu	annual	Acid Rain
	0.86	lbs/mmbtu	annual	Acid Rain
	0.25	lbs/mmbtu	ozone season	35 IAC Part 217.706(a) Subpart V
<b>Coffeen 2</b>	0.64*	lbs/mmbtu	annual	Acid Rain
	0.86	lbs/mmbtu	annual	Acid Rain
	0.25	lbs/mmbtu	ozone season	35 IAC Part 217.706(a) Subpart V
<b>Plant-wide Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	2,525	tons	annual	39.5 ILAct, Permitted for Fees
	2,600	tons	annual	CSAPR
	753	tons	ozone season	CSAPR
<b>IPH-wide Requirements (Aggregate Coffeen, Duck Creek, Edwards, Joppa, and Newton plants)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	12,936	tons	annual	CSAPR
	3,569	tons	ozone season	CSAPR
<b>System-wide Requirements (Aggregate DMG + IPH units)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	22,455	tons	annual	CSAPR
	6,345	tons	ozone season	CSAPR

Note that CSAPR allows for the trading of allowances.

\*Coffeen is allowed to average with Newton for compliance with Acid Rain Program.

**TABLE 4**

<b>Coffeen SO<sub>2</sub> Limits other than the MPS</b>				
<b>Individual Unit Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
<b>Coffeen 1</b>	0.20	lbs/mmbtu	30-day rolling	MATS
	5,094	tons	annual	Acid Rain
<b>Coffeen 2</b>	0.20	lbs/mmbtu	30-day rolling	MATS
	15,406	tons	annual	Acid Rain
<b>Plant-wide Requirements (Aggregate of units 1 and 2)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	660	tons	annual	39.5 ILAct, Permitted for Fees
	55,555	lbs/hr	3-hour block	35 IAC 214.143, 214.182, and 214.184
	7,172	tons	annual	CSAPR
	20,500	tons	annual	Acid Rain
<b>IPH-wide Requirements (Aggregate Coffeen, Duck Creek, Edwards, Joppa, and Newton plants)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	35,680	tons	annual	CSAPR
	108,205	tons	annual	Acid Rain
<b>System-wide Requirements (Aggregate DMG + IPH units)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	61,936	tons	annual	CSAPR
	198,694	tons	annual	Acid Rain

Note that CSAPR and Acid Rain Programs are trading rules that allow for the trading of allowances as a compliance option.

**TABLE 5**

**Duck Creek  
NO<sub>x</sub> Limits other than the MPS**

<b>Individual Unit Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
<b>Duck Creek</b>	0.46*	lbs/mmbtu	annual	Acid Rain
	0.45	lbs/mmbtu	annual	Acid Rain
	0.25	lbs/mmbtu	ozone season	35 IAC Part 217 Subpart V, 35 IAC 217.706(a)
	2,200	lbs/hr	3 hour block	Permit 06070048, 40 CFR Subpart Da
	0.7	lbs/mmbtu	annual	35 IAC 217.121(d)
<b>Plant-wide Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	2,025	tons	annual	39.5 ILAct, Permitted for Fees
	1,019	tons	annual	CSAPR
	326	tons	ozone season	CSAPR
<b>IPH-wide Requirements (Aggregate Coffeen, Duck Creek, Edwards, Joppa, and Newton plants)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	12,936	tons	annual	CSAPR
	3,569	tons	ozone season	CSAPR
<b>System-wide Requirements (Aggregate DMG + IPH units)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	22,455	tons	annual	CSAPR
	6,345	tons	ozone season	CSAPR

Note that CSAPR allows for the trading of allowances.

\*Duck Creek is allowed to average with Edwards for compliance with Acid Rain Program.

**TABLE 6**

**Duck Creek  
SO<sub>2</sub> Limits other than the MPS**

<b>Individual Unit Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
<b>Duck Creek</b>	0.20	lbs/mmbtu	30-day rolling	MATS
	5,400	lbs/hr	3-hour block	Permit 06070048, 40 CFR Subpart Da
	11,220	tons	annual	Acid Rain
<b>Plant-wide Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	510	tons	annual	39.5 ILAct, Permitted for Fees
	2,810	tons	annual	CSAPR
	11,220	tons	annual	Acid Rain
<b>IPH-wide Requirements (Aggregate Coffeen, Duck Creek, Edwards, Joppa, and Newton plants)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	35,680	tons	annual	CSAPR
	108,205	tons	annual	Acid Rain
<b>System-wide Requirements (Aggregate DMG + IPH units)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	61,936	tons	annual	CSAPR
	198,694	tons	annual	Acid Rain

Note that CSAPR and Acid Rain Programs are trading rules that allow for the trading of allowances as a compliance option.

**TABLE 7**

**Edwards  
NO<sub>x</sub> Limits other than the MPS**

<b>Edwards NO<sub>x</sub> Limits other than the MPS</b>				
<b>Individual Unit Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
<b>Edwards 2</b>	0.46*	lbs/mmbtu	annual	Acid Rain
	0.25	lbs/mmbtu	ozone season	35 IAC Part 217 Subpart V
<b>Edwards 3</b>	0.46*	lbs/mmbtu	annual	Acid Rain
	0.25	lbs/mmbtu	ozone season	35 IAC Part 217 Subpart V
<b>Plant-wide Requirements (Aggregate of both units)</b>				
	2,191	tons	annual	CSAPR
	604	tons	ozone season	CSAPR
<b>IPH-wide Requirements (Aggregate Coffeen, Duck Creek, Edwards, Joppa, and Newton plants)</b>				
	12,936	tons	annual	CSAPR
	3,569	tons	ozone season	CSAPR
<b>System-wide Requirements (Aggregate DMG + IPH units)</b>				
	22,455	tons	annual	CSAPR
	6,345	tons	ozone season	CSAPR

Note that CSAPR allows for the trading of allowances.

\*Edwards is allowed to average with Duck Creek for compliance with Acid Rain Program.

**TABLE 8**

<b>Edwards SO<sub>2</sub> Limits other than the MPS</b>				
<b>Individual Unit Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
<b>Edwards 2</b>	6.6	lbs/mmbtu	24-hour average	35 IAC 214.561
	2,100	lbs/hr	hourly average	35 IAC 214.603(b) Subpart AA, MOA
	6,760	tons	annual	Acid Rain
<b>Edwards 3</b>				
	6.6	lbs/mmbtu	24-hour average	35 IAC 214.561
	2,756	lbs/hr	hourly average	35 IAC 214.603(b) Subpart AA, MOA
	8,663	tons	annual	Acid Rain
<b>Plant-wide Requirements (aggregate of units 2 and 3)</b>				
	4.71	lbs/mmbtu	24-hour average	35 IAC 214.561
	34,613	lbs/hr	24-hour average	35 IAC 214.561
	6,041	tons	annual	CSAPR
	17,837	tons	annual	Acid Rain
<b>IPH-wide Requirements (Aggregate Coffeen, Duck Creek, Edwards, Joppa, and Newton plants)</b>				
	35,680	tons	annual	CSAPR
	108,205	tons	annual	Acid Rain
<b>System-wide Requirements (Aggregate DMG + IPH units)</b>				
	61,936	tons	annual	CSAPR
	198,694	tons	annual	Acid Rain

Note that CSAPR and Acid Rain Programs are trading rules that allow for the trading of allowances as a compliance option.

**TABLE 9**

<b>Havana NO<sub>x</sub> Limits other than the MPS</b>				
<b>Individual Unit Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
<b>Havana 6</b>	0.70	lbs/mmbtu	3-hour average	40 CFR 60.44(a)(3) - NSPS
	0.7	lbs/mmbtu	hourly	35 IAC 217.121(d)
	0.46	lbs/mmbtu	annual	Acid Rain
	0.100	lbs/mmbtu	30-day rolling	Consent Decree
	0.25	lbs/mmbtu	ozone season	35 IAC Part 217 Subpart V
<b>Plant-wide Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	1,700	tons	annual	39.5 ILAct, Permitted for Fees
	1,343	tons	annual	CSAPR
	421	tons	ozone season	CSAPR
<b>DMG-wide Requirements (Aggregate Baldwin, Havana, Hennepin plants)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	13,800	tons	annual	Consent Decree
	9,519	tons	annual	CSAPR
	2,776	tons	ozone season	CSAPR
<b>System-wide Requirements (Aggregate DMG + IPH units)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	22,455	tons	annual	CSAPR
	6,345	tons	ozone season	CSAPR

Note that CSAPR allows for the trading of allowances.

**TABLE 10**

<b>Havana SO<sub>2</sub> Limits other than the MPS</b>				
<b>Individual Unit Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
<b>Havana 6</b>	0.100	lbs/mmbtu	30-day rolling	Consent Decree
	1.2	lbs/hr	3- hour block average	40 CFR 60.42(a)(1) - NSPS
	0.20	lbs/mmbtu	30-day rolling	MATS
	7,021	tons	annual	Acid Rain
<b>Plant-wide Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	3,704	tons	annual	CSAPR
	7,021	tons	annual	Acid Rain
	2,125	tons	annual	39.5 ILAct, Permitted for Fees
<b>DMG-wide Requirements (Aggregate Baldwin, Hennepin, Havana plants)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	26,256	tons	annual	CSAPR
	29,000	tons	annual	Consent Decree
	90,489	tons	annual	Acid Rain
<b>System-wide Requirements (Aggregate DMG + IPH units)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	61,936	tons	annual	CSAPR
	198,694	tons	annual	Acid Rain

Note that CSAPR and Acid Rain Programs are trading rules that allow for the trading of allowances as a compliance option.

**TABLE 11**

**Hennepin  
NO<sub>x</sub> Limits other than the MPS**

<b>Individual Unit Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
<b>Hennepin 1</b>	0.40	lbs/mmbtu	annual	Acid Rain
	0.100	lbs/mmbtu	30-day rolling	Consent Decree
	0.25	lbs/mmbtu	ozone season	35 IAC Part 217 Subpart V
<b>Hennepin2</b>	0.45	lbs/mmbtu	annual	Acid Rain
	0.100	lbs/mmbtu	30-day rolling	Consent Decree
	0.25	lbs/mmbtu	ozone season	35 IAC Part 217 Subpart V
<b>Plant-wide Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	1,617	tons	annual	39.5 ILAct, Permitted for Fees
	940	tons	annual	CSAPR
	270	tons	ozone season	CSAPR
	2,650	tons	annual	Consent Decree
<b>DMG-wide Requirements (Aggregate Baldwin, Havana, Hennepin plants)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	13,800	tons	annual	Consent Decree
	9,519	tons	annual	CSAPR
	2,776	tons	ozone season	CSAPR
<b>System-wide Requirements (Aggregate DMG + IPH units)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	22,455	tons	annual	CSAPR
	6,345	tons	ozone season	CSAPR

Note that CSAPR allows for the trading of allowances.

**TABLE 12**

**Hennepin  
SO<sub>2</sub> Limits other than the MPS**

<b>Individual Unit Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
<b>Hennepin 1</b>	1.2	lbs/mmbtu	30-day rolling	Consent Decree
	2,023	tons	annual	Acid Rain
<b>Hennepin 2</b>	1.2	lbs/mmbtu	30-day rolling	Consent Decree
	7,953	tons	annual	Acid Rain
<b>Plant-wide Requirements (Aggregate both Hennepin units)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	17,050	lbs/hr	3-hour block	35 IAC 214.143, 214.182, 214.184
	2,592	tons	annual	CSAPR
	9,811	tons	annual	Acid Rain
	6,588	tons	annual	39.5 ILAct, Permitted for Fees
	9,050	tons	annual	Consent Decree
<b>DMG-wide Requirements (Aggregate Baldwin, Hennepin, Havana plants)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	26,256	tons	annual	CSAPR
	29,000	tons	annual	Consent Decree
	90,489	tons	annual	Acid Rain
<b>System-wide Requirements (Aggregate DMG + IPH units)</b>	<b>Allocation</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	61,936	tons	annual	CSAPR
	198,694	tons	annual	Acid Rain

Note that CSAPR and Acid Rain Programs are trading rules that allow for the trading of allowances as a compliance option.

<b>Joppa NOx Limits other than the MPS</b>				
<b>Individual Unit Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
<b>Joppa 1</b>	0.45	lbs/mmbtu	annual	Acid Rain
	0.25	lbs/mmbtu	ozone season	35 IAC Part 217 Subpart V
<b>Joppa 2</b>	0.45	lbs/mmbtu	annual	Acid Rain
	0.25	lbs/mmbtu	ozone season	35 IAC Part 217 Subpart V
<b>Joppa 3</b>	0.45	lbs/mmbtu	annual	Acid Rain
	0.25	lbs/mmbtu	ozone season	35 IAC Part 217 Subpart V
<b>Joppa 4</b>	0.45	lbs/mmbtu	annual	Acid Rain
	0.25	lbs/mmbtu	ozone season	35 IAC Part 217 Subpart V
<b>Joppa 5</b>	0.45	lbs/mmbtu	annual	Acid Rain
	0.25	lbs/mmbtu	ozone season	35 IAC Part 217 Subpart V
	2,976	tons	12-month running	Permit 99100060
<b>Joppa 6</b>	0.45	lbs/mmbtu	annual	Acid Rain
	0.25	lbs/mmbtu	ozone season	35 IAC Part 217 Subpart V
<b>Plant-wide Requirements (Aggregate all 6 Joppa units)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	11,506	tons	12-month running total	Permit 99100060
	3,590	tons	annual	CSAPR
	947	tons	ozone season	CSAPR
<b>IPH-wide Requirements (Aggregate Coffeen, Duck Creek, Edwards, Joppa, and Newton plants)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	12,936	tons	annual	CSAPR
	3,569	tons	ozone season	CSAPR
<b>System-wide Requirements (Aggregate DMG + IPH units)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	22,455	tons	annual	CSAPR
	6,345	tons	ozone season	CSAPR

Note that CSAPR allows for the trading of allowances.

**TABLE 14**

<b>Joppa SO<sub>2</sub> Limits other than the MPS</b>				
<b>Individual Unit Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
<b>Joppa 1</b>	5,297	tons	annual	Acid Rain
<b>Joppa 2</b>	4,530	tons	annual	Acid Rain
<b>Joppa 3</b>	5,162	tons	annual	Acid Rain
<b>Joppa 4</b>	4,781	tons	annual	Acid Rain
<b>Joppa 5</b>	4,803	tons	annual	Acid Rain
<b>Joppa 6</b>	4,467	tons	annual	Acid Rain
<b>Plant-wide Requirements (Aggregate all 6 Joppa units)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	36,865	lbs/hr	3-hour block	35 IAC 214.143, 214.182, and 214.184
	9,903	tons	annual	CSAPR
	29,040	tons	annual	Acid Rain
<b>IPH-wide Requirements (Aggregate Coffeen, Duck Creek, Edwards, Joppa, and Newton plants)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	35,680	tons	annual	CSAPR
	108,205	tons	annual	Acid Rain
<b>System-wide Requirements (Aggregate DMG + IPH units)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	61,936	tons	annual	CSAPR
	198,694	tons	annual	Acid Rain

Note that CSAPR and Acid Rain Programs are trading rules that allow for the trading of allowances as a compliance option.

**TABLE 15**

<b>Newton NOx Limits other than the MPS</b>				
<b>Individual Unit Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
<b>Newton</b>	0.64*	lbs/mmbtu	annual	Acid Rain
	0.45	lbs/mmbtu	annual	Acid Rain
	0.25	lbs/mmbtu	ozone season	35 IAC Part 217.706(a) Subpart V
	0.70	lbs/mmbtu	3-hour block	NSPS 40 CFR 60.44(a)(3)
	0.7	lbs/mmbtu	hourly	35 IAC 217.121(d)
<b>Plant-wide Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	2,000	tons	annual	39.5 ILAct, Permitted for Fees
	3,536	tons	annual	CSAPR
	939	tons	ozone season	CSAPR
<b>IPH-wide Requirements (Aggregate Coffeen, Duck Creek, Edwards, Joppa, and Newton plants)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	12,936	tons	annual	CSAPR
	3,569	tons	ozone season	CSAPR
<b>System-wide Requirements (Aggregate DMG + IPH units)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	22,455	tons	annual	CSAPR
	6,345	tons	ozone season	CSAPR

Note that CSAPR allows for the trading of allowances.

\*Newton is allowed to average with Coffeen for compliance with Acid Rain Program.

**TABLE 16**

<b>Newton SO<sub>2</sub> Limits other than the MPS</b>				
<b>Individual Unit Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
<b>Newton 1</b>	1.2	lbs/mmbtu	3-hour block	40 CFR 60.43 (a)(2) - NSPS
	15,625	tons	annual	Acid Rain
<b>Plant-wide Requirements</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	9,754	tons	annual	CSAPR
	29,608	tons	annual	Acid Rain
	10,000	tons	annual	39.5 ILAct, Permitted for Fees
<b>IPH-wide Requirements (Aggregate Coffeen, Duck Creek, Edwards, Joppa, and Newton plants)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	35,680	tons	annual	CSAPR
	108,205	tons	annual	Acid Rain
<b>System-wide Requirements (Aggregate DMG + IPH units)</b>	<b>Limit</b>	<b>Basis</b>	<b>Compliance Period</b>	<b>Authority</b>
	61,936	tons	annual	CSAPR
	198,694	tons	annual	Acid Rain

Note that CSAPR and Acid Rain Programs are trading rules that allow for the trading of allowances as a compliance option.

**BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

**In the Matter of:** )  
 )  
**AMENDMENTS TO** ) **R18-20**  
**35 ILL. ADM. CODE 225.233,** ) **(Rulemaking – Air)**  
**MULTI-POLLUTANT STANDARDS (MPS)** )

**RESPONSES TO ILLINOIS ENVIRONMENTAL PROTECTION AGENCY'S  
PREFILED QUESTIONS FOR RICK DIERICX AND DEAN ELLIS**

NOW COME Dynegy Midwest Generation, LLC, Illinois Power Generating Company, Illinois Power Resources Generating, LLC and Electric Energy, Inc. (collectively, “Dynegy” or the “Companies”), by their attorneys, Schiff Hardin LLP, and hereby submit prefiled answers to questions prefiled by the Illinois Environmental Protection Agency (the “Agency”).

**Questions for Rick Diericx and Dean Ellis**

1. On page 3 of Mr. Gignac’s prefiled testimony, he states, “At the time the MPS was promulgated, Ameren, Dynegy, Illinois EPA, and the Board agreed that the MPS was both technically feasible and economically reasonable.” What has changed since 2006 in terms of the economics of power generation as it relates to the MPS?

**ANSWER: Please see pages 6 through 8 of Rick Diericx’s prefiled testimony and pages 6 through 11 of Dean Ellis’ prefiled testimony. All of the changes discussed therein affect current compliance with the MPS.**

2. On page 8 of Mr. Gignac’s prefiled testimony, he describes a query performed using the USEPA Air Markets Program Data tool, and on page 15, discusses capacity factors. Both rely on 2016 data. Was 2016 a representative year for operations of the Dynegy and original Ameren fleets?

**ANSWER: No, 2016 was not a representative year, the fleet average capacity factor was the lowest it has been in the last 10 years.**

3. Mr. Gignac’s prefiled testimony suggests that Dynegy should just run all its cleanest plants at the maximum possible capacity. What factors besides emissions come into play in determining which plants run?

**ANSWER: Independent of the MPS, determining what plants to run depends on the economy, weather, natural gas prices, scheduled and unscheduled unit outages and other factors. The key factor as to whether a unit runs is its energy market offer**

**(a.k.a. “bid”) relative to the locational marginal clearing price (LMP). Both a unit’s energy market offer and the LMP are driven by the factors listed above.**

**Another factor is local reliability need (e.g., voltage support). If a unit is needed to serve a local reliability need, the unit is dispatched by the Regional Transmission Organization without consideration of its cost relative to the LMP.**

4. On page 18 of Mr. Gignac’s prefiled testimony, he posits a scenario in which Dynegy could run “the cleanest plants with pollution controls as much as possible and then [run] less clean plants until reaching the maximum allowable rate.” Is this scenario realistic from Dynegy’s standpoint? If not, why not?

**ANSWER: The scenario is not realistic. Dynegy cannot simply run its most controlled plants more often. As discussed above, plants are dispatched by the Regional Transmission Organization based on market factors. As discussed in Mr. Ellis’ prefiled testimony, this is not a viable business strategy.**

5. In Tables 3 and 4 provided within Mr. Gignac’s prefiled testimony (page 10), he asserts that the Dynegy group emits at a rate below the current MPS rate. What factors have caused Dynegy to control emissions to a greater extent than the MPS regulations require?

**ANSWER: There are a number of factors that contribute to the Dynegy fleet emitting SO<sub>2</sub> in 2016 at a rate below the current MPS rate, including the mid-year 2016 retirement of Wood River, which had the highest SO<sub>2</sub> emission rate in the Dynegy fleet in 2016, the efficient operation of controlled units, and the burning of low sulfur coal.**

6. On page 13 of Mr. Gignac’s prefiled testimony, he claims, “the point of this rulemaking appears to be Dynegy’s desire to...allow it to operate more polluting plants like E.D. Edwards, Joppa, and Newton more intensively...” Does Dynegy intend to operate less well-controlled plants as Mr. Gignac asserts?

**ANSWER: No, that is not the intent. Dynegy plans to make economically rational decisions on how to run the plants while complying with the MPS.**

7. What is Dynegy’s highest annual capacity factor over the past ten years? Is there anything that restricts Dynegy from going above that capacity factor for its fleet?

**ANSWER: The highest annual capacity factor over the past 10 years was 96.7% achieved by unit 6 at Joppa Power Station in 2007. No, the MPS does not constrain operation of the units at either their potential or rated capacities.**

8. The Illinois Attorney General’s Office proposes simply combining the two MPS groups and determining an appropriate average rate-based emission standard. Would this allow Dynegy the operational flexibility it needs?

**ANSWER: No. The Illinois Attorney General’s Office suggests that a combined MPS Group should be subject to a rate that is the mid-point between the current**

**rates for the two groups. First, the Illinois Attorney General's Office errs in stating the emission limit would be 0.21 lbs/mmBtu, which it claimed was the midpoint between the current standard for the Dynegy Group and the Ameren Group. This is inaccurate because a true mid-point would use a weighted average and arrive at an emission limit of 0.22 lbs/mmBtu (6 out of 18 units at 0.19 mm/Btu SO<sub>2</sub> and 12 out of 18 units at 0.23 lbs/mBtu is 0.22 lbs/mmBtu).**

**Second, combining the two MPS groups and subjecting them to an emission rate that is the mid-point between the current rates would not provide the operational flexibility Dynegy seeks. Dynegy would continue to have to run units at a loss as discussed in Mr. Ellis' testimony. Furthermore, as discussed in Mr. Diericx's testimony, an emission cap provides greater compliance certainty and regulatory clarity.**

**CERTIFICATE OF SERVICE**

I, the undersigned, certify that on this 12<sup>th</sup> day of January, 2018, I have electronically served the attached **DYNEGY'S PREFILED ANSWERS TO QUESTIONS FROM THE ILLINOIS POLLUTION CONTROL BOARD AND ILLINOIS ENVIRONMENTAL PROTECTION AGENCY**, upon all parties on the attached service list.

My e-mail address is [rgranholm@schiffhardin.com](mailto:rgranholm@schiffhardin.com);

The number of pages in the e-mail transmission is 26.

The e-mail transmission took place before 5:00 p.m.

/s/ Ryan Granholm  
Ryan Granholm

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