EXHIBIT LIST

IN THE MATTER OF:	)	
	)	
AMENDMENTS TO 35 ILL. ADM. CODE	)	R18-20
225.233, MULTI-POLLUTANT	)	(Rulemaking - Air)
STANDARDS (MPS)	)	

1. Prefiled testimony of Rory Davis on behalf of the Illinois Environmental Protection Agency (IEPA)

2. Prefiled questions for Rory Davis by the Environmental Groups

3. Prefiled questions for Rory Davis by Dynegy Midwest Generation *et al.*

4. Prefiled questions for Rory Davis by People of the State of Illinois (People)

5. Prefiled questions for Rory Davis by Illinois Pollution Control Board

6. Prefiled answers to all prefiled questions by IEPA

7. Letter dated February 24, 2017 to Ms. Yasmine Keppner-Bauman, Unit Manager IEPA Re: IPH, LLC

8. Letter dated February 24, 2017 to Ms. Yasmine Keppner-Bauman, Unit Manager IEPA Re: 2016 NOX and SO2 MPS Compliance Report

9. Prefiled testimony of James P. Gignac on behalf of the People

10. Excel Spread Sheet included as separate exhibit to Mr. Gignac's testimony

11. Prefiled questions for James P. Gignac by IEPA

12. Prefiled Answers to question by IEPA for James P. Gignac James P. Gignac James P. Gignac

13. Email from Douglas Aburano to David Bloomberg dated August 22, 2017

14. Prefiled testimony of Rick Diericx on behalf of Dynegy Midwest Generation *et al.*

15 Prefiled testimony of Dean Ellis on behalf of Dynegy Midwest Generation *et al.*

16. Prefiled answers by Dynegy Midwest Generation *et al.* to Board prefiled questions

17. Prefiled answers by Dynegy Midwest Generation *et al.* to IEPA prefiled questions

18. Answers by Dynegy Midwest Generation *et al*. to questions by the People

19. Prefiled questions for Rick Diericx and Dean Ellis by IEPA

20. Prefiled questions for Rick Diericx by the Environmental Groups

21. Prefiled questions for Dean Ellis by the Environmental Groups

22. Prefiled questions for Dynegy Midwest Generation *et al.* by the People

23. Prefiled questions for Dynegy Midwest Generation *et al.* by the Board

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IPH, LLC
1500 Eastport Plaza Drive
Collinsville, IL 62234
Phone 618-343-7837

February 24, 2017

Ms. Yasmine Keppner-Bauman, Unit Manager
Illinois Environmental Protection Agency
Bureau of Air, Compliance Section #40
1021 North Grand Avenue East
Springfield, Illinois 62794-9276

Re: IPH, LLC
2016 Allowance Surrender Compliance Report
35 IAC 225.233(f)(5)

Dear Ms. Keppner-Bauman:

IPH, LLC (IPH) is responding to 35 Ill Adm. Code 225.233(f)(5) which requires a submittal each year of a report that demonstrates compliance with the requirements of Section 225.233(f). During 2016, no vintage 2016 or later NOx allowances (annual and ozone season) were sold, gifted, exchanged, traded or surrendered by IPH. During 2016, no vintage 2016 or later SO_2 allowances were sold, gifted, exchanged, or traded by IPH. Extra allowances generated by operating below the MPS rate limit do not have restrictions on their use. The numbers of these allowances are listed in Table 1. Allowances were used for emission compliance. The emission compliance use is shown in the table below for SO2, NOx Annual and NOx Ozone Season (OS).

The allowances identified for surrender are listed in the table. Confirmation of the surrender will be included in the August version of this compliance report and will be completed by 30 days following the deduction for emissions. The values used to calculate the surrender are in Table 2 (Calculation Table).

Table 1: Emission Summary Table showing Allowances Used in 2016

Facility (ID)	ARP SO2 Allowances Used	CSAPR SO2 Allowances Used	NOx Annual Allowances Used	NOx OS Allowances Used
Coffeen (135803AAA)	33	33	1,697	809
Duck Creek (057801AAA)	10	10	1,071	535
Edwards (143805AAG)	5,890	5,890	1,762	781
Joppa (127855AAC)	7,635	7,635	1,895	880
Newton (079808AAA)	7,743	7,743	1,619	847
IPH Allowances Total Used	21,311	21,311	8,043	3,852
Allowances to Surrender	86,760	47,002	3,843	988
Allowances generated by operating below the MPS limit (Super Compliant)	134	134	1,392	499

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RP-20
1/19/2018
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Table 2: Calculation Table

	System Heat Input (mmBtu)	CAP (Tons)	Actual Emission (Tons)	Allocation	Surrender	Super Compliant Allowances
SO2 (ARP)	171,568,351	21,446	21,311	108,205	86,759	134
SO2 (CSAPR)	171,568,351	21,446	21,311	68,447	47,001	134
NOx Annual	171,568,351	9,436	8,043	12,936	3,500	1,393
NOx Ozone Season	83,093,125	4,570	3,852	5,558	988	718

SO2 Rate Limit = 0.25 lb/mmBtu
NOx Annual and Ozone Season Rate Limit = 0.11 lb/mmBtu
CAP (Tons) = Rate * Heat Input/2000
Surrender = Allocation – CAP
Super Compliant Allowances = CAP – Actual Emissions (Tons)

Please contact Wendell Watson at 618.343.7837 or via email at wendell.watson@dynegy.com if there are any questions regarding this submittal.

In accordance with 35 IAC 225.290(d)(3), *"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".*

Sincerely,

James Kipp
Vice President
IPH, LLC

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USA

DYNEGY

DYNEGY MIDWEST GENERATION, LLC
1500 Eastport Plaza Drive
Collinsville, IL 62234

February 24, 2017

Ms. Yasmine Keppner-Bauman, Section Manager
Illinois Environmental Protection Agency
Bureau of Air, Compliance Section #40
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Springfield, IL 62794-9276

Re: 2016 MPS Group NOx and SO2 Allowance Surrender Report
Dynegy Midwest Generation MPS Group
35 IAC 225.233(f)(5)

Dear Ms. Keppner-Bauman:

Dynegy Midwest Generation, LLC. (DMG) is responding to 35 Ill Adm. Code 225.233(f)(5) which requires a submittal each year of a report that demonstrates compliance with the requirements of Section 225.233(f). During 2016, no vintage 2016 or later NO_x allowances ozone season were sold, gifted, exchanged, traded or surrendered by DMG. During 2016, 563 super compliant vintage 2016 annual NO_x allowances were transferred by DMG to other Dynegy facilities. The allowances were generated by retiring Vermilion and Wood River Power Station. The facilities and quantities are in an attachment to this letter. No other annual NOx allowances were sold, gifted, exchanged or traded by DMG. During 2016 no vintage 2016 or later SO_2 allowances were sold, gifted, exchanged, or traded by DMG. DMG did surrender 30,000 vintage 2016 SO_2 allowances to the USEPA surrender account, in accordance with the Consent Decree. Allowances were used for emission compliance. Final allowance deductions, to cover the annual emissions, are shown in Table 1 below for SO_2, NO_x annual and NO_x ozone season (OS). Extra allowances generated by operating below the MPS rate limit do not have restrictions on their use. The numbers of these allowances are listed in Table 1. Table 2 shows the values used to calculate the quantity of allowances for surrender in accordance with the requirements of the MPS.

The allowances identified for surrender are listed in the table. Confirmation of the surrender will be included in the August version of this compliance report and will be completed by 30 days following the deduction for emissions. The values used to calculate the surrender are in Table 2 (Calculation Table).

Table 1: Emission Summary showing Allowances Deducted for 2016

Facility	(ID)	ARP SO_2 Allowances Used	CSAPR SO2 Allowances Used	NO_x Annual Allowances Used	NO_x OS Allowances Used
* Baldwin	(157851AAA)	4,020	4,020	4,039	2,074
Havana	(125804AAB)	1,141	1,141	1,188	514
Hennepin	(155010AAA)	4,065	4,065	1,203	491
Wood River	(119020AAE)	2,172	2,172	603	154
DMG Total Deducted		11,398	11,398	7,033	3,233
Allowances to Surrender		38,776*	31,829	1,320	81
Allowances generated by operating below the MPS limit		10,315	5,785	1,166	853

* 30,000 allowances surrendered as part of Consent Decree - total surrender 68,776

Table 2: Allowance Surrender Calculation Values

	System Heat Input (mmBtu)	CAP (Tons)	Actual Emission (Tons)	Allocation	Surrender	Super Compliant Allowances
SO2 (ARP)	157,448,011	21,713	11,398	90,489	68,776*	10,315
SO2 (CSAPR)	157,448,011	21,713	11,398	46,865	25,152	5,785
NOx Annual	157,448,011	8,199	7,033	9,519	1,320	1,166
NOx Ozone Season	73,743,093	3,908	3,232	4,166	258	853

* Actual MPS surrender is 45,453 since 30,000 surrendered as per Consent Decree.
SO2 Rate Limit = 0.191 lb/mmBtu
NOx Annual Rate Limit = 0.099 lb/mmBtu
Ozone Season Rate Limit = 0.106 lb/mmBtu
CAP (Tons) = Rate * Heat Input/2000
Surrender = Allocation – CAP
Super Compliant Allowances = CAP – Actual Emissions (Tons)

If you have questions regarding this submittal, please contact Wendell Watson at 618.343.7837 or via email at Wendell.Watson@dynegy.com .

In accordance with 35 IAC 225.290(d)(3), *"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".*

Sincerely,

James Kipp
Vice President
Dynegy Midwest Generation, LLC

Enclosure

Attachment

Allowances transferred from Wood River to other Dynegy Facilities

Facility Name	Quantity of NOx Annual Allowances Received
Dynegy Dicks Creek, LLC	20
Dynegy Fayette II, LLC	45
Dynegy Hanging Rock II, LLC	212
Dynegy Washington II, LLC	99
Independence	24
Kendall Energy Center	81
Liberty Electric Power Plant	32
Ontelaunee Energy Center	43
Richland Peaking Station	7
TOTAL Transferred	563

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DYNEGY

DYNEGY MIDWEST GENERATION, LLC
1500 Eastport Plaza Drive
Collinsville, IL 62234

February 24, 2017

Ms. Yasmine Keppner-Bauman, Section Manager
Illinois Environmental Protection Agency
Bureau of Air, Compliance Section #40
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Springfield, IL 62794-9276

Re: 2016 NOx and SO2 MPS Compliance Report
Dynegy Midwest Generation MPS Group
35 IAC 225.233 (e)(4)

Dear Ms. Keppner-Bauman:

Dynegy Midwest Generation, LLC (DMG) submitted a Notice of Intent (NOI) to participate in the Multi-Pollutant Standards of 35 IAC 225.233 (MPS) on November 26, 2007. This NOI identified the individual units making up DMG's MPS Group, and also included base emission rate data indicating that the Annual NOx emission limit applicable to the group was 0.099 lb/mmBtu and the SO2 limit is 0.191 lb/mmBtu.

The following data is submitted for 2016, in order to satisfy the compliance report requirement specified at 35 IAC 225.233(e)(4).

MPS Group Station		NOx Emissions (tons)	Heat Input (mmBtu)	NOx Rate (lb/mmBtu)
Baldwin	(ID No. 157851AAA)	4039	102,132,534	
Havana	(ID No. 125804AAB)	1,188	30,279,146	
Hennepin	(ID No. 155010AAA)	1,203	16,513,451	
Vermilion	(ID No. 183814AAA)	0	0	
Wood River	(ID No. 119020AAE)	603	8,522,880	
DMG MPS Group		7,033	157,448,011	0.089

Exhibit 8
RF-20
11/7/2018
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MPS Group Station		SO2 Emissions (tons)	Heat Input (mmBtu)	SO2 Rate (lb/mmBtu)
Baldwin	(ID No. 157851AAA)	4,020	102,132,534	
Havana	(ID No. 125804AAB)	1,141	30,279,146	
Hennepin	(ID No. 155010AAA)	4,065	16,513,451	
Vermilion	(ID No. 183814AAA)	0	0	
Wood River	(ID No. 119020AAE)	2,172	8,522,880	
DMG MPS Group		11,398	157,448,011	0.145

Please note that Units 1 and 2 at Vermilion Power Station, which were initially included in the DMG MPS Group, were permanently retired from service in 2011 and thus had no NOx or SO2 emissions or heat input in this compliance year. Additionally, Wood River Units 4 and 5 were permanently retired from service in June of 2016.

If you have questions regarding this submittal, please contact Wendell Watson at 618.343.7837.

In accordance with 35 IAC 225.290(d)(3), *"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".*

Sincerely,

James Kipp
Vice President
Dynegy Midwest Generation, LLC

Enclosure

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IPH

135803AAA
10K

IPH, LLC
1500 Eastport Plaza Drive
Collinsville, IL 62234
618.343.7837

February 24, 2017

Ms. Yasmine Keppner-Bauman, Unit Manager
Illinois Environmental Protection Agency
Bureau of Air, Compliance Section #40
1021 North Grand Avenue East
Springfield, Illinois 62794-9276

Re: 2016 NOx and SO2 MPS Rate Compliance Report
IPH, LLC MPS Group
35 IAC 225.233(e)(4)

Dear Ms. Keppner-Bauman:

IPH, LLC submits the following data for 2016, in order to satisfy the MPS compliance report requirement specified at 35 IAC 225.233(e)(4).

MPS Group Station	NOx Emissions (tons)	Heat Input (mmBtu)	NOx Rate (lb/mmBtu)
* Coffeen (135803AAA)	1,697	48,562,150	
Duck Creek (057801AAA)	1,071	23,470,382	
E. D. Edwards (143805AAG)	1,762	28,192,301	
Joppa (127855AAC)	1,895	35,325,514	
Newton (079808AAA)	1,619	36,018,004	
IPH MPS Group	8,043	171,568,351	0.094

MPS Group Station	SO2 Emissions (tons)	Heat Input (mmBtu)	SO2 Rate (lb/mmBtu)
Coffeen (135803AAA)	33	48,562,150	
Duck Creek (057801AAA)	10	23,470,382	
E. D. Edwards (143805AAG)	5,890	28,192,301	
Joppa (127855AAC)	7,635	35,325,514	
Newton (079808AAA)	7,743	36,018,004	
IPH MPS Group	21,311	171,568,351	0.248

The IPH MPS Group limit for NOx is 0.11 lb/mmBtu and for SO2 is 0.25 lb/mmBtu.

In accordance with 35 IAC 225.290(d)(3), *"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".*

Sincerely,

James Kipp
Vice President
IPH, LLC

From: Aburano, Douglas [mailto:aburano.douglas@epa.gov]
Sent: Tuesday, August 22, 2017 2:03 PM
To: Bloomberg, David E. <David.Bloomberg@Illinois.gov>
Subject: [External] RE: Clean Fuel Fleet?

Yes, we think we can work with what you sent. Because this is a pretty straightforward reduction in emissions, this is pretty easy and not a lot of info is needed. It could be bolstered by a NAAQS-by-NAAQS description of how each isn't going to be affected by these changes. Something to keep in mind for future 110(l) analyses.

From: Bloomberg, David E. [mailto:David.Bloomberg@Illinois.gov]
Sent: Tuesday, August 22, 2017 1:56 PM
To: Aburano, Douglas <aburano.douglas@epa.gov>
Subject: RE: Clean Fuel Fleet?

OK, thanks. I already have some news for you on that front.

Also unrelated – have you & Carolyn had a chance to look at the 110(l) stuff I sent for the MPS changes?

Exhibit 13
R18-20
1/18/2018
MLT

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 PRE-FILED QUESTIONS OF THE ILLINOIS ATTORNEY GENERAL'S OFFICE FOR DYNEGY'S WITNESSES

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 answers to questions by the Illinois Attorney General's Office.

I. Rick Diericx Testimony

1. Will the first notice proposal reduce actual emissions of air pollution? Please explain the rationale for your answer.

ANSWER: The question presented cannot be answered. It fails to identify what it is comparing the first notice proposal to. As discussed in IEPA's TSD on pages 11-12, numerous factors independent of the MPS determine actual emissions. Thus, the appropriate comparison is whether the proposal will increase the allowable emissions. This represents the potential impact and stringency of a rule before and after a proposed change. Due to the uncertainty in electric generating unit operations and in turn emissions, IEPA proposed mass emission limits that are lower than calculated allowable emission limits from the current MPS. The proposal also imposes new and additional requirements on the Dynegy fleet (*e.g.*, mandatory operation of existing Selective Catalytic Reduction equipment year round; a lower NOx emission rate for the Baldwin, Edwards, Duck Creek, Havana, and Coffeen facilities during the ozone season; and a specific annual SO_2 tonnage cap for the Joppa Power Station).

Exhibits 18
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1/18/2018
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2. During development of the MPS in *In the Matter of Proposed New 35 Ill. Adm. Code 225, Control of Emissions from Large Combustion Sources (Mercury)*, R06-25, was Dynegy anticipating compliance with upcoming federal requirements to regulate mercury and other hazardous air pollutants from coal plants and SO2 and NOx emissions under the transport rule? If so, how did that anticipation inform the company's approach to negotiating the terms of the MPS?

ANSWER: Yes, compliance with anticipated federal requirements to regulate mercury, hazardous air pollutants, and SO_2 and NOx from coal-fired EGUs, informed Dynegy's decision to agree to a multi-pollutant approach. Requiring pollutant-specific controls could have led to stranded costs and a piecemeal approach. Given the enormous capital costs required to implement pollution control technology, a holistic approach to capital improvements and environmental compliance made financial sense at that time.

3. With respect to your statement on page 3, which states have more stringent emission rate limits than Illinois?

ANSWER: On page 3 of my testimony I state that the MPS imposes rate limits that are far more stringent than almost every other state. As far as my understanding of emissions rates in surrounding states, only Wisconsin has adopted a Multi-Pollutant Standard similar in stringency as Illinois. All other states bordering Illinois have less stringent emission rate limits than Illinois.

4. If Dynegy operated pollution controls for SO_2 and NOx at more of its units, would the structure of the MPS need to be changed? Please explain the rationale for your answer.

ANSWER: I simply cannot answer the question presented. It is a hypothetical. The installation of pollution controls are dependent upon numerous factors. As discussed in my testimony, the proposal provides smart regulation through consistency, certainty, and clarity, and restores some operational flexibility that was inherent in the original MPS. The need for the proposal is independent of whether additional SO_2 or NOx controls are installed.

5. Did Dynegy assume that the Ameren plants would remain in their own MPS group when Dynegy decided to acquire the plants in 2013?

ANSWER: At the time of the acquisition, Dynegy understood that the MPS required the Ameren plants to remain in their own MPS group.

6. How much did Dynegy pay for the Ameren plants?

ANSWER: This information is not relevant to my testimony or the proposal, but as part of the transaction Dynegy was transferred approximately $386 million in cash and absorbed approximately $825 million in debt from Ameren.

7. What is the status of Dynegy's compliance with the Mercury and Air Toxics Standards (MATS) at its Illinois plants? If MATS were to be vacated, would Dynegy reverse or turn off its compliance measures?

ANSWER: Dynegy is in compliance with the Mercury and Air Toxics Standards ("MATS") at its Illinois plants. If MATS were vacated, Dynegy would assess at that time whether, if at all, the vacatur would affect the operation of any of its units as to MATS-only requirements, given that the units would still be required to meet other air compliance programs, including the mercury limits of the MPS.

8. What portions of the Cross-State Air Pollution Rule (CSAPR) are in flux such that they "further complicate Dynegy's compliance strategy?" (Diericx Testimony at 7-8.)

ANSWER: My testimony refers to how over the course of the last 11 years since promulgation of the MPS a number of federal and state regulations have been in flux, which makes it difficult to develop and implement a long-term compliance strategy for any coal-fired power plant.

9. Does the phrase "operational flexibility" include the ability to operate less-controlled units more frequently and cleaner units less frequently? Please explain your answer.

ANSWER: The phrase "operational flexibility," as discussed in Mr. Ellis' testimony, refers to the ability to operate the units based on economics. The question cannot be answered because it fails to articulate a basis for comparing operational frequency.

10. Why did the MPS not include a mass-based cap? Did Dynegy and Ameren oppose a mass-based cap in R06-25?

ANSWER: The original MPS was proposed by Ameren, neither I nor Dynegy can speak for Ameren.

11. Is Dynegy unable to calculate and report compliance under the current MPS?

ANSWER: Dynegy is in compliance with the current MPS and is able to demonstrate compliance in accordance with the MPS.

12. Has IEPA ever expressed confusion or inability to comprehend Dynegy's MPS compliance filings?

ANSWER: Not that I am aware of.

13. On pages 9-10 of your testimony, you discuss the sulfur content of coal:

a. Does the importance of the sulfur content of coal decrease if a unit has SO_2 pollution controls, such as flue gas desulfurization (FGD)?

ANSWER: Dynegy is unable to answer this question because it does not know what the author means by "importance." A unit with SO_2

pollution controls can burn coals with a wider range of sulfur content with less change in actual emissions from the stack compared to the change in emissions that would occur from a similar unit that does not have SO_2 pollution controls.

b. How much does the sulfur content of coal delivered to Dynegy's MPS units vary, and where does the coal come from?

ANSWER: In 2017, all of the coal delivered to Dynegy's MPS units came from mines in the Powder River Basin coal region located near Gillette, Wyoming. In 2017, the sulfur content of the coal received at these plants varied from 0.16% to 0.37% sulfur. The average sulfur content was 0.21%.

c. Are Dynegy's coal contracts for MPS units expiring soon?

ANSWER: Dynegy's coal supply contracts for the MPS plants expire at different times, depending on the terms and conditions of each contract. Some of these contracts extend through 2022.

d. Is Dynegy considering a switch to higher-sulfur coal providers for the MPS units?

ANSWER: At this time, Dynegy plans to continue burning Powder River Basin coal.

14. On page 10 of your testimony, you describe a situation where an increase in coal sulfur content causes an increase in emission rates. Does Dynegy specify the maximum sulfur content of delivered coal in its coal procurement contracts?

ANSWER: Yes. Dynegy's coal supply contracts specify a "typical" sulfur content, financial penalties, and a rejection limit (a specified maximum) tied to the sulfur content of fuel procured.

15. Also on page 10 of your testimony, you describe a scenario in which a forced outage brings a scrubbed unit offline, which then requires Dynegy to reduce operations at an un-scrubbed unit to maintain compliance with emission rates. If Dynegy chose to invest in pollution controls at more units, wouldn't this provide "operational flexibility" to run the units purely on an economic basis and maintain compliance with the MPS? Please explain the rationale for your answer.

ANSWER: The question presented cannot be answered. It is a hypothetical. The installation of pollution controls are dependent upon numerous factors. The proposal provides smart regulation through consistency, certainty, and clarity, and restores some operational flexibility that was inherent in the original MPS. The need for the proposal is independent of whether additional SO_2 or NO_X controls are installed.

As discussed in Dean Ellis' testimony, some MPS units are required to run in certain situations when they otherwise would not run. In some scenarios, units are actually losing money when they run, however, they must run in order for Dynegy to be in compliance with the MPS. This situation results in an increase in the emissions of all pollutants above that which would occur absent the MPS, which is contrary to the design of the original MPS and the intent of any environmental regulation.

For example, if the average fleet-wide MPS emission rate is exceeded or forecasted to be exceeded, then in order to ensure compliance with the MPS, units that have a sufficiently low emission rate must run, or run at higher capacity factors, in order to once again have the average fleet-wide emission rate at a level that ensures compliance with the required MPS rate. This scenario results in units that would perhaps not otherwise run, or not otherwise run as much absent the MPS, running regardless of whether they are profitable or not. Under this scenario, substantial mass emissions can be emitted that otherwise would not occur were it not for the MPS rate limits. In other words, mass emission levels of all pollutants, not just NOx and SO_2, are greater than they would be if the MPS did not exist.

Running units that would not otherwise run for the purpose of complying with the MPS is an absurd consequence of the current MPS.

16. Please elaborate and provide specific data on the extent to which units are operating "solely" to meet the current rate-based limits. Which units are these and how much are they operating for this reason?

ANSWER: Dynegy is unable to answer the question presented because the author failed to identify the period which it would like data from. As discussed in Mr. Ellis' testimony, Dynegy has run lower-emitting but higher-cost units at the Coffeen and Duck Creek energy centers at a loss in order to maintain the former Ameren MPS Group SO_2 rate of 0.23. That situation is expected to continue if the MPS remains an emissions-rate-based rule.

17. Regarding the tonnage emissions on page 11 of your testimony, can the Dynegy MPS units actually emit that much today (*i.e.*, 66,354 tons of SO_2 per year and 32,841 tons of NOx per year) without making physical or operational changes at the plants? If not, what *would* need to change to produce those results? Please explain the bases for your answer.

ANSWER: The units are capable of emitting 66,354 tons of SO_2 per year and 32,841 tons of NOx per year without making any physical or operational changes.

18. On page 12 of your testimony, you state: "And since the proposal also imposes new and additional requirements on the Dynegy fleet . . . it will achieve an even ***greater*** reduction in allowable emissions." (Emphasis in original.) How much is "***greater***"? Please explain the bases for your answer.

ANSWER: The proposal imposes three new requirements that are expected to reduce allowable emissions. The proposal requires for the first time year round operation of existing Selective Catalytic Reduction. It imposes a lower NOx emission rate for the Baldwin, Edwards, Duck Creek, Havana, and Coffeen facilities during the ozone season than what is currently required. It also sets a new specific annual SO_2 tonnage cap for the Joppa Power Station. These additional requirements are expected to further reduce allowable emissions.

Dynegy has not determined with specificity the "greater reduction in allowable emissions."

19. You state that Dynegy could return to prior historic levels of emissions. What were those levels and what does Dynegy estimate as the likely percentage of that happening (*e.g.* 10% chance? 1% chance? Less than 1%)?

ANSWER: There are a number of factors that affect emission levels and utilization. As such, Dynegy has not, and cannot (given the information presented in the question), assess the likely percentage that the units' emissions will return at some point in the future to prior historic levels.

20. On page 15 of your testimony, where you reference 2014 tonnage numbers, does that include units that are now retired? If so, what would the tonnage numbers be with retired units removed? Assuming the ten year average SO2 emissions number and the 2011 NOx emissions number also includes units that are retired, please also update those similarly and provide a unit-by-unit table.

ANSWER: Yes, the 2014 tonnage numbers include all MPS units in operation and emitting in 2014. Because the information you seek is publically available, we have not prepared the requested table.

21. Why did Dynegy not address transfer of units in the original MPS rulemaking R06-25?

ANSWER: Unit transfers were not contemplated at the time when developing the MPS. See, IEPA Testimony (J. Ross), Hearing, R06-25, p. 343 (Aug. 15, 2006).

22. Where and when has USEPA agreed that there will be a reduction in "future allowable emissions" from the proposed rule? If you refer to any specific documents, the People request that you supplement the record with any such documents or communications.

ANSWER: See August 22, 2017 email from Douglas Aburano, U.S. EPA, to David Bloomberg, IEPA, produced to the environmental groups in response to a Freedom of Information Request.

II. Dean Ellis Testimony

1. Why did Dynegy switch to low-sulfur coal in the late 1990s/early 2000s?

ANSWER: To comply with various Clean Air Act requirements, including the Acid Rain program.

2. How much of Dynegy's emission reductions discussed on pages 2 and 3 of your testimony were due to: 1) items required by consent decree, and 2) plants Dynegy closed due to age or economic factors?

ANSWER: The emission reductions discussed on pgs. 2-4 of my testimony illustrate the fact that emissions have been reducing over time. These reductions are a result of a number of factors many of which cannot be isolated or evaluated in insolation. They include switching to low sulfur coal, installation of pollution controls, retirements, and declining demand for electricity.

3. What pollution controls has Dynegy installed in the past 10 years? Please identify the type of controls, the pollutant controlled and the specific units where the pollution controls were installed.

ANSWER: Approximately $2 billion has been invested in Dynegy's Illinois plants in the past 10 years for emissions controls and environmental upgrades. Dynegy spent over $1 billion in environmental capital expenditures at the Baldwin, Havana, Hennepin, Vermilion, and Wood River Energy Centers. That includes over $742 million on SO_2 emission reduction technology, $15 million on NO_X emission reduction technology, and $107 million on particulate controls. Dynegy spent nearly $11.5 million on mercury controls. Also, over $1 billion was spent on environmental improvements at the Coffeen, Duck Creek, Edwards and Newton Energy Centers in the past 10 years. That includes installation of SO_2 scrubbers on three units at a cost of over $813 million, installation of SCR systems to reduce NO_X emissions at three plants at a cost of over $177 million, and installation of activated carbon injection ("ACI") technology on 12 units at a cost of over $20 million. A review of O&M expenditures over the past two years shows Dynegy spends between $25 and $30 million per year to operate these emission controls.

4. Regarding the bullet points on page 5 of your testimony, how are potential regulatory determinations such as Best Available Retrofit Technology (BART) and 1-hour SO_2 NAAQS compliance relevant to the actions taken? Which of Dynegy's actions, described as being taken "voluntarily," were done in combination with the state's need to comply with the Regional Haze Rule and to achieve attainment with the 1-hour SO_2 standard?

ANSWER: Dynegy is uncertain on what is meant by "potential regulatory determinations." In the actions presented in the testimony, Dynegy worked closely with the Agency to address emissions of both NO_X and SO_2 in order to assist the Agency in meeting its goals, which included the Agency Regional Haze/BART and SO_2 NAAQS requirements.

5. With respect to the expenditures on page 5 of your testimony, how much of this was required under the consent decree where Dynegy settled allegations of New Source Review (NSR) violations under the Clean Air Act?

ANSWER: The expenditures were made as part of an overall compliance strategy for several environmental regulatory requirements, which included the consent decree, federal NO_X and SO_2 emissions trading rules, the Illinois mercury rule, and the MPS.

6. What is your understanding of the Eastern Interconnection and how it functions?

ANSWER: How the Eastern Interconnection functions is not relevant to this rulemaking. My testimony discusses MISO and how the energy market operates to illustrate the economic conditions and how the MPS affects how these units are dispatched. I understand that the Eastern Interconnection is an alternating-current electrical grid in the continental United States. All of the electric utilities in the Eastern Interconnection are electrically tied together during normal system conditions and operate at a synchronized frequency at an average of 60 Hz.

7. What is your understanding of the North American Electric Reliability Corporation (NERC) and what it does?

ANSWER: What NERC does is not relevant to this rulemaking. I discussed MISO and how the energy market operates to illustrate the economic conditions and how the MPS affects how these units are dispatched. I understand that NERC is an organization that oversees and regulates the reliability of the North American electrical grids.

8. Please explain your understanding of why the Federal Energy Regulatory Commission (FERC) created regional transmission organizations (RTOs) and independent system operators (ISOs).

ANSWER: This question is also not relevant to this rulemaking. The scope of my testimony referencing MISO is to demonstrate how the market has changed in Illinois since the MPS was promulgated, not how NERC functions or why. But, generally, I understand that these regional oversight entities, RTOs and ISOs, were created in response to FERC's orders 2000 and 888, respectively, to manage and provide a clearinghouse for transmission and generation.

9. What is your understanding of the roles and obligations of the Mid-Continent Independent System Operator (MISO)?

ANSWER: This question is also not relevant to this rulemaking. The scope of my testimony referencing MISO is to demonstrate how the market has changed in Illinois since the MPS was promulgated, not to opine on the roles and obligations of MISO. I understand that MISO is an independent, not-for-profit regional transmission organization responsible for maintaining reliable transmission of power within its footprint.

10. Are you familiar with FERC Order 1000? If so, please explain your understanding of it.

ANSWER: This question is not relevant to this rulemaking. Nonetheless, I understand FERC Order 1000 generally requires grid operators to consider transmission alternatives in its regional transmission planning processes, produce a regional transmission plan, and implement a fair cost allocation methodology.

11. What is your understanding of the trend for electricity demand in Downstate Illinois, the MISO region, and the United States generally?

ANSWER: Growth rates are varying state-by-state, generally tied to the gross domestic product (GDP) and economic health of a particular state, region or the country as a whole. According to the MISO 2016 Independent Load Forecast, published in November 2016, the compound annual growth rates (CAGR) of the MISO load zones are forecasted between one-half a percent to two percent.

12. What is your understanding of the results of the most recent MISO capacity auction in terms of total megawatts procured versus total megawatts available?

ANSWER: According to the MISO 2017-2018 Planning Resource Auction (PRA) results published on May 10, 2017, the Planning Reserve Margin Requirement (PRMR) was 134,753 MW and the total offers submitted were 142,146 MW.

13. Does Dynegy believe that the Clinton nuclear plant is needed to address a capacity shortage in MISO Zone 4? Please explain the rationale for your answer.

ANSWER: Whether a capacity shortage exists or the Clinton nuclear plant is needed to address a shortage is irrelevant to this rulemaking and beyond the scope of my testimony. I discuss the capacity market price to illustrate the economic condition of the MPS units. I do not discuss whether shortages in capacity exist or how those shortages could or should be addressed.

14. Your statement on page 8 of your testimony regarding fuel costs driving the offer prices submitted by a generator applies only to fossil fuel-based generators, correct?

ANSWER: Generally speaking, yes. It's possible that other generators, such as nuclear owners, could submit an offer based on their cost of fuel (uranium). Also, while hydroelectric facilities don't have a cost of a fuel, they do have variable costs associated with that fuel, so they could include those costs.

15. Do coal plants, generally, and the MPS plants in particular, sometimes suffer unexpected outages such as breakdowns, malfunctions, or fuel supply interruptions?

ANSWER: Yes.

16. Could you please define what "marginal cost of generation" means?

ANSWER: Marginal cost of generation is the increase or decrease in the total cost a generator will incur by producing one more unit of electricity.

17. Currently, which is a more economical fuel for generating power, coal or natural gas? Please explain the rationale for your answer.

ANSWER: There is no one answer to this question, the dispatch of units is dependent on a number of factors, fuel costs being one. For example, dispatch may be complicated by other factors such as wind generation or congestion. Currently, a number of gas-fired electric generating units are being dispatched before coal-fired generating units because the decreasing fuel costs of natural gas-fired generation enable these plants to be bid into the energy markets at lower prices.

18. Do nuclear plants emit greenhouse gases, SO_2, NOx, or particulate matter (PM)?

ANSWER: The emissions from nuclear plants is irrelevant to this rulemaking and beyond the scope of my testimony. The MPS and the proposal govern coal-fired units.

19. Does Dynegy have any projections of how much the decline in energy prices over the last several years has saved Illinois consumers on their electricity bills? If not, would you agree that the decline in energy prices over the last several years has saved Illinois consumers money on their electric bills? Please explain the bases for your answer.

ANSWER: While we are sensitive to retail energy prices, and have the shared interest with consumers and the state leadership to keep the state competitive regionally and globally, retail energy prices of Illinois' consumers are irrelevant to this rulemaking and beyond the scope of my testimony.

20. Regarding "selective bidding" described in the testimony: please elaborate on which units Dynegy has done this for and how many times.

ANSWER: Dynegy has run lower-emitting but higher-cost units at the Coffeen and Duck Creek energy centers at a loss in order to maintain the former Ameren MPS Group SO_2 rate of 0.23 lbs/mmBtu.

21. If Dynegy chose to install pollution controls at other units, could "selective bidding" become unnecessary? Please explain the bases for your answer.

ANSWER: This question poses an incomplete hypothetical. It does not provide enough facts on which to form an opinion. As discussed in Rick Diericx's testimony, the proposal provides smart regulation through consistency, certainty, and clarity, and restores some operational flexibility that was inherent in the original MPS. The need for the proposal is independent of whether additional SO_2 or NO_X controls are installed.

22. How do the average locational marginal prices for Coffeen and Duck Creek compare to E.D. Edwards, Joppa, and Newton?

ANSWER: For 2017, LMPs for Coffeen and Duck Creek were slightly below those for Edwards, Joppa and Newton. Specifically, the average annual 2017 LMPs for Coffeen and Duck Creek were $25.50 and $26.15/MWHr, respectively, compared to Edwards, Joppa and Newton at $27.21, $25.61 and $26.82/MWhr, respectively.

23. How do the average locational marginal prices for Baldwin compare to Havana and Hennepin?

ANSWER: For 2017, LMPs for Baldwin and Havana were about equal, at $25.29, 25.27 and 27.21, respectively, with Hennepin slightly higher at $27.21/MWhr.

24. On page 11, you state that "Dynegy's fleet operat[es] on a negative cash flow basis, that is, revenues received are less than the fuel and other operating costs incurred to operate the unit."

a. Is the entity that directly owns the Baldwin, Havana, and Hennepin plants profitable?

ANSWER: For the nine months ending September 30, 2017, the "MISO" segment operating loss was $90M. This excludes any capital expenditures.

b. Is the entity that directly owns the Coffeen, Duck Creek, E.D. Edwards, and Newton plants profitable?

ANSWER: For the nine months ending September 30, 2017, the "IPH" segment operating income was $40M. This excludes any capital expenditures.

c. Is Electric Energy, Inc. profitable?

ANSWER: Electric Energy, Inc. is included in the "IPH" segment.

c. Is the entity that directly owns the entities described in a., b., and c. above a profitable business unit?

ANSWER: The "MISO" and "IPH" business segments had a net operating loss for the nine months ending September 30, 2017 of ($50M).

d. For the most recent fiscal year, how much in profits did each of the entities above produce?

ANSWER: The reference to profits is unclear, but the "MISO" and "IPH" business segments had a net operating loss for the nine months ending September 30, 2017 of $50 million.

25. Is it true that Dynegy may proceed to shut down additional units in the MPS group, even if the proposal is adopted (due to the fundamental market forces described in your testimony)? Please explain the bases for your answer.

ANSWER: Dynegy's objective is to keep all plants operating and is constantly evaluating whether to keep units operating. Dynegy can say that overall, the likelihood of additional plant and unit retirements increases if the MPS rule revision is rejected.

26. Does Dynegy ever seek to reduce the amount of property taxes it pays to local communities in Illinois via negotiation or litigation?

ANSWER: This is beyond the scope of my testimony and not relevant to the rulemaking proposal. But to answer your question, yes, Dynegy has negotiated property taxes, commensurate with the value of the plant in question.

27. How has coal plant automation generally reduced the number of employees per plant at Dynegy's MPS facilities from when they were opened to today?

ANSWER: This is beyond the scope of my testimony and not relevant to the rulemaking proposal. But to answer your question, there are several factors that affect the number of employees at each plant. We strive to optimize the number of employees, taking into account safety, reliability and economics. In general, automation itself has not significantly affected the number of employees at each plant, relative to other initiatives such as improving work flows and work processes. For example, McKinsey & Company is working with us on comprehensive earnings and cost initiative, which will help us optimize the number of employees based on those factors previously mentioned.

28. When Dynegy decides to retire or mothball a unit, please describe the process MISO goes through to review implications for electric grid reliability.

ANSWER: The details of that process are best answered by reference to Attachment Y of the MISO Tariff, but I understand the process generally to include a deterministic assessment of the security of the transmission system without the unit in service. This deterministic assessment includes a review of several reliability metrics, including thermal overloads, voltage limitations and dynamic stability.

29. If Dynegy were to actually attempt to retire 3,000 MWs of coal-fired capacity, which you describe on page 13 as being "at risk of shutdown," is it possible that MISO could designate a subset of such capacity as System Support Resources (SSR)? What is your understanding of what it means for a unit to be SSR?

ANSWER: It is possible MISO could designate some of the facilities as SSRs during their review; the determination would depend on the timing and location of the shutdowns, and solutions available to replace the retiring units. A SSR is a power plant that must be available for MISO to operate to ensure electric system reliability. The SSR designation is a temporary, last resort measure requiring the electric generating unit(s) to keep operating until an alternative is identified. SSR agreements define the terms of the arrangement, including compensation. SSRs receive compensation for the costs resulting from remaining online and available. The parties determine the costs based on actual historical plant costs, and submits to FERC for approval. Agreements have initial terms of 12 months and require annual reassessment of continued need.

30. What is Dynegy's conception of "grid resiliency?" Are there any technical standards for what constitutes "grid resiliency?"

ANSWER: The concept of grid resiliency is an evolving one, but is generally considered to relate to the preparation for, operation through, and ability to recover from high-risk, low-frequency events and continue to deliver to the customer.

31. Is one of the primary purposes of spinning reserves to replace large centralized power stations, such as coal plants, when they suddenly drop off the grid? Please explain the bases for your answer.

ANSWER: Spinning reserves are employed for a number of primary purposes, including the loss of large generators, the loss of transmission elements, sudden changes in demand for electricity, errors in demand forecasting, and to account for sudden changes in intermittent renewable electricity production.

32. You state that "[l]arge rotating mass units such as the Dynegy units provide voltage support (reactive power) and frequency response support to the bulk power system, and can provide spinning reserve, all of which are important attributes of grid resiliency and reliability."

a. What is your understanding of synchronous condensers and is Dynegy aware of any coal plants being repurposed into these?

ANSWER: This question is not relevant to this rulemaking. However, yes, we are generally aware that on limited occasions coal plants have been converted to synchronous condensers. Our general understanding is also that these are very expensive conversions and have only been undertaken in regions where captive rate payers can be charged the costs.

b. Can gas-fired power plants be equipped with clutches that decouple their turbines from their generators, allowing the generator to temporarily serve as a condenser? Please explain the bases for your answer.

ANSWER: This question is not relevant to this rulemaking. However, it's my understanding that this could be employed but I'm not aware of any installations nor is it a common practice, mostly due to its high cost.

c. Can wind farms also supply reactive power? Please explain the bases for your answer.

ANSWER: This question is not relevant to this rulemaking. However, a wind turbine itself cannot supply reactive power. Typically, a static capacitor bank, similar to a static capacitor bank installed at any point in the power grid, is installed with a collection of wind turbines to provide reactive power. This static capacitor bank is not the same as the dynamic reactive control that a rotating machine can provide.

d. Please describe your understanding of the various processes underway at FERC, PJM, and MISO related to concerns expressed about coal plant retirements and electric grid reliability.

ANSWER: This question is not relevant to this rulemaking. Nonetheless, in response to a directive of the U.S. Department of Energy, FERC recently issued an order to each of the ISOs asking them to address the issue of grid resiliency. Each regional transmission organization must submit the required information within 60 days of issuance of the order.

33. What are the average startup durations for Dynegy's MPS units?

ANSWER: In general, startup duration can vary by unit with a typical range for a "cold" start estimated to be between 15 to 25 hours. Startup durations for "warm" and "hot" start-ups are significantly less.

34. What is your understanding of the potential adverse consequences of human beings breathing SO2 and smog?

ANSWER: I am not a toxicologist, nor am I qualified to testify regarding potential adverse consequences of human beings breathing SO_2 and smog.

35. Is it possible that Vistra Energy may have a different corporate outlook than Dynegy on the merits of owning coal-fired power plants in Illinois?

ANSWER: I cannot speculate on what Vistra Energy's corporate outlook may be.

36. With respect to your testimony on page 14 that other Dynegy MPS units may be called upon when Dynegy retires a MPS unit, how does Dynegy know what type of generating resource will be dispatched to replace that unit? Is it possible the retired unit could be replaced by generating resources owned by entities other than Dynegy?

ANSWER: No one can be certain of which units will be dispatched. Regarding the second question, given the limited number of generating sources available and market factors, Dynegy believes it is possible.

37. Could the first notice proposal result in Dynegy emitting more pollution than it did in 2016 and 2017? Please explain the bases for your answer.

ANSWER: Not because of the first notice proposal. Emissions could be substantially higher in future years under the current MPS. Independent of the MPS, emissions from the Illinois fleet and units may fluctuate due to the economy, weather, natural gas prices, scheduled and unscheduled unit outages and other factors.

38. Is part of the "operational flexibility" that Dynegy is seeking the ability to mothball or retire Baldwin Unit 2 once it would no longer be needed to support MPS compliance of the Hennepin and Havana facilities? Please explain the bases for your answer.

ANSWER: In addition to the items Mr. Diercx discusses in his testimony, the operational flexibility that Dynegy seeks is the ability to make economically rational decisions on how to run the plants while complying with the MPS, which will help to ensure the viability of the entire Illinois fleet.

39. Would Dynegy obtain the "operational flexibility" it seeks if the two MPS groups were combined under one MPS group using a fleet-wide rate-based emission standard for SO2 and NOx? Please explain the bases for your answer.

ANSWER: Grouping the units would allow consistency with the original rule no matter which approach you take, but Dynegy supports the mass cap approach because it offers additional benefits while still providing environmental protections. As explained on pgs. 8-9 of Rick Diericx's written testimony, one advantage of the mass cap limit is eliminating the complexity inherent in the emission rate approach. Determining compliance with an emission rate requires gathering data on multiple parameters (flow, emissions, heat input, etc.) and then performing complex compliance calculations for each individual unit which then have to be averaged for each rate limit. Compliance with a single mass limit is more readily demonstrated and verified as mass emissions of both NO_X and SO_2 are continually monitored for each unit with Continuous Emissions Monitoring Systems (CEMS) and the data is already periodically reported to both the USEPA and IEPA. Determination of mass emissions directly with the use of CEMS is also considered more reliable as fewer variables are involved and the CEMS data is routinely quality controlled and assured.

40. Did Dynegy have plans in place to comply with the first notice proposal if it were approved as of January 1, 2018? At what point did Dynegy begin formulating its MPS compliance strategy for 2018?

ANSWER: Dynegy is and has been prepared to fully comply with the current MPS. On a daily basis Dynegy evaluates its compliance status and strategy with the MPS.