INDIANA COAL COUNCIL'S COMMENTS ON
VECTREN 2016 INTEGRATED RESOURCE PLAN

A. INTRODUCTION. The Indiana Coal Council ("ICC") conducted a review of the Integrated Resource Plan ("IRP") that Southern Indiana Gas and Electric Company d/b/a Vectren Energy Delivery of Indiana, Inc. ("Vectren") prepared and submitted to the Indiana Utility Regulatory Commission ("IURC") on December 16, 2016. In response to Vectren's IRP, ICC submits the comments below.

B. GENERAL COMMENTS. Indiana's electric utilities are required to furnish reasonably adequate service and facilities at a reasonable and just cost. Ind. Code § 8-1-2-4. To do so, utilities must strategically plan on both a short-term and long-term basis. The IRP requirement is found in Title 170 Indiana Administrative Code (IAC) 4-7 and commonly referred to as "Rule 7."

In 2010, the IURC ordered that Rule 7 be updated to reflect market changes. *In the Matter of the 1Comm'ns Investigation into any and all Matters Related to the Comm'ns Guidelines for Integrated Resource Planning*, Cause No. 43643, 2010 Ind. PUC LEXIS 353 (IURC Oct. 10, 2010). Subsequently, several draft rules have been proposed, but none have been finalized. The utilities preparing IRPs in 2016 elected which Draft Proposed Rule upon which to base their IRPs. Vectren chose the October 4, 2012 draft rule.

Vectren ultimately analyzed the 15 portfolios listed in Exhibit 1 below, which vary considerably with respect to composition of the generation. Vectren, in an 8-K filing on November 29, 2016, **stated that it was compliance costs "with a slate of federal mandates over the next several years" which drove "the IRP process to consider alternative fuel sources."**[1] All 15 portfolios share key assumptions including implementation of the Clean Power Plan (CPP), implementation of Effluent Limitation Guidelines (ELGs) and Vectren's exit from the Warrick #4 station that is jointly-owned with Alcoa.

For its analysis, Vectren used a single "consensus" price forecast for each of its commodity price assumptions. The modeling, which was performed by a third party, incorporated stochastic modeling of 10 variables: total and peak Vectren load, delivered coal and natural gas prices, carbon prices, Indiana Hub on- and off-peak power prices, gas-fired capital costs, solar and wind capital costs, and battery capital costs.

Vectren calculated a Net Present Value of Revenue Requirements (NPVRR) for each portfolio. Vectren selected its Preferred Portfolio, which it estimated to be $60 million less expensive on a NPVRR basis than the Existing Portfolio. The Preferred Portfolio includes the retirement of the two coal units at Brown and one coal unit at Culley and the construction of a new combined cycle gas-fired plant at the Brown site.

[1] http://investors.vectren.com/Doc/Index?did=38533437

The $60 million NPVRR difference is less than two percent of the total NPVRR and well within the margin of error of Vectren's analysis. Further the Existing Portfolio on a NPVRR-basis is effectively the same for the last 15 years of the analysis period when compared to the NPVRR of the Preferred Portfolio. This is likely due to the forecast increase in gas prices over time that restores the competitiveness of coal.

ICC notes numerous issues with Vectren's analysis.

- All of the scenarios analyzed by Vectren assumed the CPP (with a start ranging from 2021 to 2026) and ELGs. After Vectren prepared its IRP analyses, Donald Trump was elected president and Scott Pruitt was confirmed as EPA Administrator. President Trump campaigned on reducing regulatory requirements and now EPA Administrator Pruitt was involved in the CPP appeal. On March 28, 2017, President Trump signed an Executive Order (Attachment A) that includes a specific mandate for EPA to review the CPP and, "if appropriate ... publish for notice and comment proposed rules suspending, revising, or rescinding those rules." **Vectren's failure** to include scenarios without the CPPs is a serious flaw of its analyses.

- Vectren recognized that the CPP may go away because of the change in administration but dismissed the impact stating that its Preferred Portfolio was driven more by ELG compliance than CPP compliance. ICC's analysis concludes otherwise. ICC found that removing the cost of carbon from the Existing Portfolio reduces the NPVRR for the Existing Portfolio by almost $54 million. ICC further found that eliminating the revenue assumed by Vectren for the sale of excess carbon allocations increases the cost of the Preferred Portfolio by over $15 million. Therefore, without the CPP, ICC estimates the Existing Portfolio is lower in cost than the Preferred Portfolio on a NPVRR basis.

- Vectren states in its IRP that it does not matter what happens to CPP as it is ELGs which are determinative. ICC disagrees in two respects. First, ICCs analysis shows without the CPP, the Existing Portfolio is cheaper. Second, Vectren argues that ELGs are final rules and an extended rulemaking process would be required to make changes. ICC disagrees. Vectren appears to conflate "final rule" with "final rule which has exhausted all appeals." Only after a rule is final can it be appealed so Vectren's position is without merit. The ELG appeals were filed in a timely manner and are on-going. Final EPA rules have previously been vacated by the Courts or have been remanded to the agency. Either scenario is possible for the ELGs and it is inappropriate to assume that will not be the case.

- The previously mentioned Executive Order is also likely to result in a review of ELGs. ICC believes ELGS are at a specific risk due to the inadequate support provided for these rules and their "burdensome" impact on coal generation. EPA has indicated it intends to reconsider certain substantive portions of the rule. The

moderation or elimination of ELGs will further reduce the costs of the **Existing Portfolio compared to Vectren's** Preferred Portfolio.

- Vectren made what it referred to as a "non-optimized" assumption regarding the future of Warrick #4, which is jointly owned by Alcoa and Vectren. Vectren assumed all four Warrick units would be closed (Units #1-#3 are Alcoa only units) and the load remaining at the Warrick facility would be assumed by Vectren. ICC believes this is one of several possible outcomes and Vectren erred in assuming only one of the possible outcomes in its IRP.

- Vectren failed to consider explicitly the impact of the closure of Brown and Culley #2 under a high gas price environment. Vectren utilized a single "consensus" price forecast for each of its commodity price assumptions with a probability distribution to perform stochastic modeling. This approach while important did not address the threshold question for coal plant retirements, i.e., what happens if gas prices rise to levels previously experienced?

- Vectren also failed to consider the impact of the closure of Brown and Culley #2 on the Indiana economy beyond the closure of the power plants themselves. As Vectren acknowledges, the power plants have been exclusively supplied by Indiana coal and the coal is delivered by a combination of rail and truck. Vectren does not discuss that the likely origin of the gas is out-of-state. ICC estimates the plant closures would result in at least $20 million in lost mining payroll, over $6 million in lost local royalty payments, and about $0.6 million in lost property taxes. There would be additional losses in direct employment in transportation and mining services and supply. Additional and larger indirect losses would occur due to the multiplier effects of the lost jobs on the economy.

Since Vectren intends to seek approval from the IURC for implementation of its Preferred Portfolio, ICC believes that Vectren must re-evaluate at least its Existing Portfolio and Preferred Portfolio given the stale regulatory assumptions in its IRP, its lack of consideration of the impact of a scenario with high gas prices with moderate coal pricing, its treatment of Warrick #4, and its lack of consideration of the impact of the plant closures on the full Indiana economy. The deadlines provided in the March 28th Executive Order make likely that clarity as to the Administration's plans will be available within six months.

Vectren in its 2016 Annual Report committed to reconsidering its plans **based upon "changes to any existing regulations and assess any material**

impact these modifications could have on our plans."[2] Based on Vectren's representation, ICC believes Vectren will move forward with a re-evaluation particularly if supported by the IURC.

Exhibit 1. Summary of Vectren IRP Portfolios

		2016-2022		2023-2029		2026-2036		NPVRR
Portfolio	Description	Retirement	New	Retirement	New	Retirement	New	($ Billion)
A	Base Case	Northeast 1&2, Exit Warrick 4	EE. 4MW Solar, MC, 12MW DR	BAGS	8MW DR, MC, 220MW CTs		MC	3.21
B	Base Gas Heavy	Northeast 1&2, Exit Warrick 4	EE, 4MW Solar, MC	BAGS, Brown 1/2, FBC 2/3	MC, CCGT, 200MW CT		MC, 36MW Solar	3.03
C	Base Large Load	Northeast 1&2, Exit Warrick 4	EE, 4MW Solar, MC, EE, 12MW DR	BAGS, Brown 1/2, FBC 2/3	8MW DR, MC, 220MW CTs, EE		MC, 68MW Solar, EE	3.16
D	High Regulatory Scenarios	Northeast 1&2, Exit Warrick 4	EE, 4MW Solar, MC	BAGS, Brown 1/2, FBC 2/3	CCGT, MC, EC		MC, 400MW Wind, EE	3.07
E	Low Regulatory Scenario	Northeast 1&2, Exit Warrick 4	EE, 4MW Solar, MC, 220MW CT, 12MW DR	BAGS, Brown 1/2, FBC 2/3	8MW DR, CCGT, 220MW CT, EE		EE	3.10
F	High Economy	Northeast 1&2, Exit Warrick 4	EE, 4MW Solar, 8MW DR, MC, EE, 220MW CT	BAGS, Brown 1/2, FBC 2/3	22MW DR, CCGT, 9MW Solar, EE		400MW Wind, EE	3.17
G	Low Economy	Northeast 1&2, Exit Warrick 4	EE, 4MW Solar, MC	BAGS, Brown 1/2, FBC 2/3	MC, 20MW DR, CCGT		MC, 59MW Solar	3.06
H	High Technology	Northeast 1&2, Exit Warrick 4	EE, 4MW Solar, MC	BAGS, Brown 1/2, FBC 2/3	MC, CCGT, 220MW CT		MC, 10MW Battery, 9MW Solar	3.02
I	Stakeholder Portfolio	Northeast 1&2, Exit Warrick 4	EE, 4MW Solar, MC, 12MW DR	BAGS, Brown 1/2	CCGT, 8MW DR, EE, 500MW Solar, 800MW Wind, 30MW CHP	FBC 2/3	CCGT, EE, 400MW Solar, 200 MW Wind, 100MW Battery	3.86
J	Cease Coal	Northeast 1&2, Exit Warrick 4	EE, 4MW Solar, MC, 12MW DR	BAGS, Brown 1/2, FBC 2/3	CCGT, 8MW DR, EE, 500MW Solar, 800MW Wind, 30MW CHP, 100MW Battery			4.21
K	FBC3, Fired Gas & Renewables	Northeast 1&2, Exit Warrick 4	EE, Solar 4 MW, MC, EE	BAGS, Brown 1/2, FBC2	4MW DR, CCGT, MC, 50MW Wind, 9MW Solar, EE		EE	3.12
L	FBC3, Fired Gas, Early Solar & EE	Northeast 1&2, Exit Warrick 4	EE, 54MW Solar, MC, EE	BAGS, Brown 1/2, FBC2	CCGT, EE, MC		EE	3.15
M	FBC3, Unfired Gas, Early Solar, EE and Renewables	Northeast 1&2, Exit Warrick 4	12MW DR, EE, 54MW Solar, MC	BAGS, Brown 1/2, FBC2	8MW DR, MC, CCGT, EE		118MW Solar, MC, EE	3.16
N	Unfired Gas, 50MW Solar in 2019	Northeast 1&2, Exit Warrick 4	12MW DR, EE, 54MW Solar, MC	BAGS, Brown 1/2, FBC 2/3	MC, 8MW DR, CCGT, 220MW CT, 118MW Solar, EE		MC, 100MW Solar, EE	3.12
O	Gas with Renewables	Northeast 1&2, Exit Warrick 4	12MW DR, EE, 54MW Solar, MC	BAGS, Brown 1/2, FBC 2/3	MC, 8MW DR, CCGT, 168MW Solar, EE		MC, 105MW Solar, EE	3.12

DR - Demand Response; EE - Energy Efficiency; MC - Market Capacity; BAGS - Broadway Avenue Gas; FBC - FB Culley; CT - Combustion Turbine; CCGT - Combined Cycle Gas Turbine; CHP - Combined Heat and Power

Existing Portfolio

Preferred Portfolio

C. DETAILED COMMENTS

COMMENT 1. VECTREN FAILED TO CONSIDER ANY PORTFOLIOS WITHOUT THE CLEAN POWER PLAN OR EFFLUENT LIMITATION GUIDELINES.

1.1 Vectren assumed Clean Power Plan (CPP) and Effluent Limitation Guidelines (ELGs) in every portfolio.

1.2 Vectren states that once a rule is "a final regulation … it must be rescinded/modified through a supplemental notice and comment rulemaking." ICC believes that Vectren's fundamental position applies only to "final rules after the appeals process has been exhausted", not "final rules" per se.

1.3 Since a rule is appealable *only* once it is final, Vectren's position ignores the fact that final rules have been appealed and vacated. [3] A relevant example is the Supreme Court's June 23, 2014 decision that vacated EPA's Tailoring Rule.[4] *Util. Air Reg. Group v. EPA*, 134 S.Ct. 2427 (2014). That Court reasoned that "EPA's

[2] http://investors.vectren.com/Cache/1001221798.PDF?O=PDF&T=&Y=&D=&FID=1001221798&iid=4057065

[3] The State of Indiana is a party to the appeal.

[4] https://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf

interpretation is … unreasonable because it would bring about an enormous and transformative expansion in EPA's regulatory authority without clear congressional authorization." *Id*. at 2444. A similar argument is raised in the CPP appeal.

1.4 With respect to the CPP, Vectren acknowledges that the U.S. Supreme Court issued a Stay but fails to acknowledge the significance of this. A Stay is a relatively rare event and requires at least two findings. One is that the appeal is *likely* to prevail based upon its merits. Two is that absent a Stay there is likely to be irreparable harm. This means t**hat Vectren's primary assumption** should have been no CPP.

1.5 Rather Vectren's primary assumption effectively was that the CPP appeal would be denied, that Indiana will develop a State Implementation Plan (SIP) thereafter, and that implementation would proceed in 2024. In other words, the only consequence of the Appeal would be a two-year delay in implementation.

1.6 The implementation dates of the carbon regime assumed by Vectren range from 2022 (in the high regulatory scenario) to 2026 (in the low regulatory scenario[5]) but no cases assume no carbon regime. Most portfolios assume implementation in 2024. Given the Stay and a 2022 implementation date in the Final Rule, there does not seem to be any scenario in which a 2022 implementation would occur. Given the D.C. Circuit Court did not hear the appeal until September 2016[6], a 2017 resolution of the CPP appeal with only a two-year delay is unlikely given the expected appeal to the Supreme Court.

1.7 Vectren indicated it developed the IRP with the "best available information for a point in time."[7] ICC questions this statement given that at the time Vectren was preparing its IRP the CPP had been Stayed by the Supreme Court (February 2016) and the DC Circuit Court had delayed oral arguments to September 2016 (May 2016).

1.8 After Vectren completed its analysis, Donald Trump was elected President, an outcome that was largely unexpected. President Trump campaigned on reducing the regulatory burden on industry and mining. President Trump selected Scott Pruitt to be EPA Administrator. Pruitt as the Attorney General for the State of Oklahoma had pursued the appeal of the CPP related to the CPP's legality. The

[5] The Low Regulatory Scenario description states "Although absolute emissions begin to rise again, as the economy grows, per capita energy intensity declines, and a s result the CPP remains the only significant piece of regulation to move forward during this timeframe." (Page 187)
[6] The decision to hear the appeal en banc was made in May 2016 at which time the hearing was moved from June to September. http://www.utilitydive.com/news/dc-circuit-to-skip-3-judge-panel-hear-clean-power-plan-en-banc-in-septem/419348/
[7] IRP, page 52.

election results increased the likelihood that the CPP will not be implemented in its existing form.

1.9 On March 28, 2017, President Trump signed an Executive Order which among other things directs the EPA specifically to revisit the CPP and determine what actions should be taken to reduce the burden on development or use of domestically produced energy resources including coal. The complete Executive Order is provided in Attachment A.

1.10 Within a relatively short period of time, EPA's strategy to undo the CPP will become apparent. In the meantime, the Department of Justice (DOJ) has filed motions with the U.S. Court of Appeals for the District of Columbia Circuit advising the Court of these actions and requesting the Court hold in abeyance the cases challenging the CPP. The DOJ motion is provided in Attachment B.

1.11 The net effect is there will likely be no carbon regime for at least 15 years even if assuming a one-term presidency and the restart of a new rulemaking thereafter.[8] Vectren's failure to consider the consequences of a no carbon regime or a significantly delayed carbon regime has a huge consequence on the overall economics of the alternatives as shown under Finding #2.

1.12 Vectren states in its IRP that the CPP does not affect its results.[9] Rather it is Coal Combustion Residuals (CCRs) and ELGs which are determinative. As described above, Vectren appears to have conflated a "final rule" with a "final rule that has exhausted all avenues of appeal". The final ELG rules were published in the Federal Register on November 3, 2015.[10] This date established when appeals could be filed.

1.13 Several timely appeals were filed. The appeals were consolidated at the U.S. Court of Appeals for the Fifth Circuit. The initial arguments were filed with the Fifth Circuit in December 2016. Oral arguments are expected in 2017.

1.14 Multiple outcomes are possible for the ELG appeals including a remand by the Fifth Circuit to EPA to address the industry challenges. The Trump Administration is likely to support such a remand. Any remand could result in an EPA withdrawal of the current rule with or without a revised plan going forward.

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[8] In the IRP, Vectren argues that the "Endangerment Finding" will result in a mandate to regulate CO2 from existing coal plants. In response to an information request, Vectren conceded that an achievable efficiency standard for coal plants could comply with the Endangerment Finding without a carbon regime.
[9] "Vectren's decision on continuing operation of its coal-fired fleet is more heavily influenced by the CCR and ELG rules, the primary driver of near-term environmental compliance expenditures modeled in the IRP." (IRP, page 56)
[10] https://www.federalregister.gov/documents/2015/11/03/2015-25663/effluent-limitations-guidelines-and-standards-for-the-steam-electric-power-generating-point-source

1.15 On March 24, 2017, the Utility Water Act Group (UWAG) petitioned the U.S. EPA for a rulemaking to reconsider the ELG rule. The petition also requested an administrative stay of the Rule. (Attachment C)

1.16 ELGs, while not specifically named in the March 28, 2017 Executive Order, are likely to be classified as among the burdensome regulations that will be reviewed.

1.17 Given that Vectren has indicated that the ELG compliance is driving Vectren's IRP, a concern about customer costs would appropriately include a deferral of any plant closure decisions until there is some clarity regarding the future of the ELG rules.

1.18 Vectren indicated it performed its IRP under the October 4, 2012 draft Section 7. This draft, like all the other drafts, added a new section to allow for updates subsequent to the preparation of an IRP for substantial unexpected changes. The specific language in the October 7, 2012 draft states:

> Sec. 10. (a) The utility may provide an update regarding substantial unexpected changes that occur between IRP filings.
> (b) Upon the request of the commission or its staff, the utility shall provide the requested updated IRP information.

ICC believes that each of many reasons, including the unexpected election outcome, the confirmation of Scott Pruitt as EPA Administrator, and the March 28 Executive Order, and certainly the combined total of these reasons, qualify as a substantial unexpected change. Therefore, it is only reasonable that Vectren should update or be directed to update its IRP.

COMMENT 2. VECTREN DID NOT EVALUATE ANY PORTFOLIO WITHOUT THE CLEAN POWER PLAN. THIS RESULTED IN AN OVER-STATEMENT OF THE NPVRR FOR THE EXISTING PORTFOLIO AND AN UNDERSTATMENT OF THE NPVRR FOR THE PREFERRED PORTFOLIOS. THE NET RESULT IS THAT THE EXISTING PORTFOLIO IS LOWER IN COST THAN THE PREFERRED PORTFOLIO.

2.1 As noted above, Vectren dismisses the likely withdrawal of the CPP as relevant, stating that the CPP is not determinative of its outcome.

2.2 Vectren includes the CPP in two ways in its analysis. The first way is to add the carbon price forecast to the cost of fossil generation to determine annual generation costs which form the NPVRR. The carbon price is one of the commodity assumptions in Vectren's analysis.

2.3 The second way is to include revenue associated with the sale of excess carbon credits.[11] According to the IRP, Vectren assumed "(a)llowances were allocated based on Vectren's historical portion of CO2 emissions relative to the state of Indiana totals for 2012. Vectren decreased the mass-based targets over time to reflect the interim and final targets of the rule."[12]

2.4 ICC estimated both parts of the impact on the NPVRR under the Preferred Portfolio.

2.5 The impact of removing the carbon cost from generation costs is shown below. The analysis translates the base carbon price forecast into nominal dollars, assumes a coal burn of 1.6 million tons in the Existing Portfolio, assumes a coal burn of 500,000 tons in the Preferred Portfolio, and assumes that all the coal generation is replaced with natural gas generation with an appropriate heat rate adjustment.[13]

		NPV	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Vectren CO2 Forecast (Nominal$/Ton)		10.09% Rate	$ 2.40	$ 3.48	$ 6.11	$ 10.18	$ 13.24	$ 18.54	$ 20.94	$ 22.74	$ 25.29	$ 25.51	$ 26.75	$ 28.61	$ 30.70
Existing	Coal Tons		1,600,000	1,600,000	1,600,000	1,600,000	1,600,000	1,600,000	1,600,000	1,600,000	1,600,000	1,600,000	1,600,000	1,600,000	1,600,000
Portfolio	Coal MMBtu @ 22.5 MMBtu/Ton		36,000,000	36,000,000	36,000,000	36,000,000	36,000,000	36,000,000	36,000,000	36,000,000	36,000,000	36,000,000	36,000,000	36,000,000	36,000,000
	CO2 # @ 205#/MMBtu		7,380,000,000	7,380,000,000	7,380,000,000	7,380,000,000	7,380,000,000	7,380,000,000	7,380,000,000	7,380,000,000	7,380,000,000	7,380,000,000	7,380,000,000	7,380,000,000	7,380,000,000
	CO2 Tons Coal		3,690,000	3,690,000	3,690,000	3,690,000	3,690,000	3,690,000	3,690,000	3,690,000	3,690,000	3,690,000	3,690,000	3,690,000	3,690,000
	CO2 $ Coal	$143,773,881	8,848,620	12,851,163	22,547,007	37,549,440	48,854,124	68,397,840	77,270,445	83,899,530	93,320,100	94,122,306	98,724,474	105,563,520	113,297,760
Preferred	Tons Cayuga 3 Only		500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000
	Cayuga MMBtu		11,250,000	11,250,000	11,250,000	11,250,000	11,250,000	11,250,000	11,250,000	11,250,000	11,250,000	11,250,000	11,250,000	11,250,000	11,250,000
	Cayuga CO2 #		2,306,250,000	2,306,250,000	2,306,250,000	2,306,250,000	2,306,250,000	2,306,250,000	2,306,250,000	2,306,250,000	2,306,250,000	2,306,250,000	2,306,250,000	2,306,250,000	2,306,250,000
	Cayuga CO2 Tons		1,153,125	1,153,125	1,153,125	1,153,125	1,153,125	1,153,125	1,153,125	1,153,125	1,153,125	1,153,125	1,153,125	1,153,125	1,153,125
	BAU Btu - Cayuga Btu		24,750,000	24,750,000	24,750,000	24,750,000	24,750,000	24,750,000	24,750,000	24,750,000	24,750,000	24,750,000	24,750,000	24,750,000	24,750,000
	Adjusted NG Btu		16,500,000	16,500,000	16,500,000	16,500,000	16,500,000	16,500,000	16,500,000	16,500,000	16,500,000	16,500,000	16,500,000	16,500,000	16,500,000
	NG CO2 # @ 118#/MMBtu		1,947,000,000	1,947,000,000	1,947,000,000	1,947,000,000	1,947,000,000	1,947,000,000	1,947,000,000	1,947,000,000	1,947,000,000	1,947,000,000	1,947,000,000	1,947,000,000	1,947,000,000
	CO2 Tons NG		973,500	973,500	973,500	973,500	973,500	973,500	973,500	973,500	973,500	973,500	973,500	973,500	973,500
	Total CO2 Tons		2,126,625	2,126,625	2,126,625	2,126,625	2,126,625	2,126,625	2,126,625	2,126,625	2,126,625	2,126,625	2,126,625	2,126,625	2,126,625
	Total CO2 $ in Preferred Case	$82,859,927	5,099,647	7,406,397	12,994,317	21,640,536	28,155,664	39,419,121	44,532,591	48,353,073	53,782,346	54,244,675	56,897,001	60,838,488	65,295,894
Difference in CO2 $		**$53,466,041**	**3,748,973**	**5,444,766**	**9,552,690**	**15,908,904**	**20,698,460**	**28,978,719**	**32,737,854**	**35,546,457**	**39,537,754**	**39,877,631**	**41,827,473**	**44,725,032**	**48,001,866**

2.6 The elimination of the carbon price on fossil generation under the assumptions noted above reduces the Existing Portfolio NPVRR by almost $54 million.[14] Using

[11] Vectren confirmed in response to an ICC data request that "in scenarios that reduced carbon **emissions below what was required to comply with Vectren's assumptions** about how the Clean Power Plan would be implement in Indiana, the model credited sales of carbon credits." (emphasis added)

[12] IRP, page 180.

[13] Natural gas-fired combined cycle plants have a lower heat rate meaning fewer Btu's are needed to produce the same generation.

[14] The modeling used by Vectren is more complex and would likely produce different results. It is likely that the impact of assuming no carbon regime would be higher as some coal generation would be replaced

Vectren's models, the impact is likely to be greater as coal generation will be higher and cheaper without the carbon price in the Existing Portfolio and not all coal generation in the Preferred Portfolio is likely to be replaced by natural gas generation.

2.7 As noted above, Vectren also assumed it would be allocated more carbon credits that it would require under its generation plans and that it would sell the "excess". Vectren credited the revenue associated with the sale carbon credits against its costs. Vectren's assumptions as to carbon emission reductions from 2012 levels are shown below.[15]

Portfolio	Description	Carbon Emissions from 2012
A	Base Case	-35%
B	Base Gas Heavy	-62%
C	Base Large Load	-62%
D	High Regulatory Scenarios	-67%
E	Low Regulatory Scenario	-57%
F	High Economy	-62%
G	Low Economy	-67%
H	High Technology	-62%
I	Stakeholder Portfolio	-62%
J	Cease Coal	-86%
K	FBC3, Fired Gas & Renewables	-46%
L	FBC3, Fired Gas, Early Solar & EE	-46%
M	FBC3, Unfired Gas, Early Solar, EE and Renewables	-50%
N	Unfired Gas, 50MW Solar in 2019	-66%
O	Gas with Renewables	-67%

2.8 There are several problems with Vectren's position on this matter.

- Indiana stopped working on its State Implementation Plan (SIP) when the Stay was issued by the Supreme Court. Vectren acknowledges a SIP has not been developed.[16] Therefore, there is no state road map for determining allocations.

- In October 2015, EPA published its proposed Federal Implementation Plan (FIP) which would control if states either failed to develop an acceptable SIP or chose not to develop a SIP. EPA recognized "that a state may choose to replace the federal plan allowance-distribution provisions with its own allowance-distribution provisions) ... using a state allowance-distribution methodology. State allowance distribution can have important advantages, because it allows a state to design and

with renewables, Distributed Generations (DG), or Energy Efficiency (EE) making the Existing Portfolio even lower in cost.

[15] Slide 63 from final stakeholder meeting presentation, November 29, 2016.

[16] "In the event the CPP is upheld, the state of Indiana will likely develop a State Implementation Plan (SIP)." (IRP Page 54)

shape allowance allocation to its specific goals and characteristics, and because states may have additional flexibility on allocation approaches, including auctions.[17]

- Vectren has no basis for assuming any allocation methodology as the state of Indiana would have considerable flexibility including an allocation based upon future expected emissions not historic generation.

- The only road map that could have arguably be used absent a SIP is the Federal Plan.[18] Notably, Vectren did not make this argument. EPA's memo, which is provided in Attachment E describes the methodology for individual generators in the Federal plan.

- Under the Federal Plan, Vectren generally would have a higher emission reduction requirement than the other utilities in Indiana as shown below.

	2012 Carbon Dioxide Emissions (tons)	Unit's First Period Allocation (short tons per year)	Unit's Second Period Allocation (short tons per year)	Unit's Third Period Allocation (short tons per year)	Unit's Final Allocation (short tons per year)	% Reduction-1st	% Reduction-2nd	% Reduction-3rd	% Reduction-Final
Vectren	6,079,091	3,444,187	3,307,231	3,114,945	3,003,241	43%	46%	49%	51%
Total Indiana	107,299,591	81,656,170	78,408,970	73,850,343	71,201,996	24%	27%	31%	34%
Non Vectren	101,220,501	78,211,984	75,101,739	70,735,398	68,198,756	23%	26%	30%	33%
Other Utilities									
State Line Energy LLC	607,368	1,965,408	1,887,255	1,777,527	1,713,783	-224%	-211%	-193%	-182%
Indiana-Kentucky Electric Corp	6,271,075	5,087,091	4,884,806	4,600,795	4,435,808	19%	22%	27%	29%
Indiana Michigan Power Co	22,537,778	14,809,303	14,220,422	13,393,624	12,913,315	34%	37%	41%	43%
Indianapolis Power & Light Co	14,751,029	10,412,258	9,998,221	9,416,910	9,079,210	29%	32%	36%	38%
Northern Indiana Pub Serv Co	13,844,512	10,264,171	9,856,023	9,282,979	8,950,082	26%	29%	33%	35%
Duke Energy Indiana Inc	26,893,373	23,061,489	22,144,266	20,856,953	20,108,998	14%	18%	22%	25%
City of Richmond - (IN)	35,188	108,868	104,539	98,461	94,931	-209%	-197%	-180%	-170%
Hoosier Energy R E C, Inc	6,637,239	5,129,864	4,925,878	4,639,481	4,473,104	23%	26%	30%	33%
AGC Division of APG Inc	5,230,883	3,104,534	2,981,085	2,807,759	2,707,071	41%	43%	46%	48%
Portside Energy Corp	181,652	204,882	196,735	185,297	178,652	-13%	-8%	-2%	2%
BP Alternative Energy	1,404,480	1,231,536	1,182,565	1,113,808	1,073,866	12%	16%	21%	24%
AEP Generating Company	2,825,923	2,832,580	2,719,944	2,561,804	2,469,936	0%	4%	9%	13%

- Vectren's calculation of excess carbon credits appears to assume a reduction requirement of 32 percent, i.e., the national target, and not Vectren's allocations per the EPA guidance. This means even if the CPP was upheld, Vectren has overstated the revenue offsets to the NPVRR associated with the sale of carbon credits as its reduction obligations are expected to be greater than the state average.

- There is also no indication that Vectren's calculations are adjusted for the set-asides required by EPA. Set-asides are deductions from each state's allocations for the Clean Energy Incentive Program, renewable energy, and output.

[17] https://www.federalregister.gov/documents/2015/10/23/2015-22848/federal-plan-requirements-for-greenhouse-gas-emissions-from-electric-utility-generating-units

[18] EPA withdrew the Federal Implementation Plan on April 3, 2017. (Attachment D)

- The IRP is also silent as to how the carbon credit allocations to Warrick #4 are handled. As discussed below, Vectren simply assumes it exits from that relationship and the plans for the plant are "unclear".

- Even if generators had excess carbon credits, generators are unlikely to monetize all of the carbon credits. Generators are more likely to "build" a stockpile due to volatile demand and fossil fuel burn.

- Vectren included revenue from the sale of "excess" carbon allocation as an offset to costs. The availability of carbon credits to sell is very speculative.

- Vectren has no basis for crediting revenue from the sales of carbon credits to costs in its NPVRR analyses.

2.9 ICC estimated that the NPVRR of the sale of "excess" carbon credits to be $18.3 million.[19] As this revenue is credited against the cost of the Preferred Portfolio, it offsets costs of the Preferred Portfolio compared to the Existing Portfolio, thereby making the cost of the Preferred Portfolio cheaper.

2.10 The effective combined cost of the CPP to the Existing Portfolio is therefore the $53.5 million overstatement in the Existing Portfolio costs plus the $18.3 million understatement in the Preferred Portfolio costs or $71.4 million. The $71.7 million exceeds the $60 million difference between the Preferred Portfolio and Existing Portfolio cases. Therefore, without carbon, the Existing Portfolio has a distinct cost advantage.

		NPV	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Vectren CO2 Forecast (Nominal$/Ton)		10.09% Rate	$ 2.40	$ 3.48	$ 6.11	$ 10.18	$ 13.24	$ 18.54	$ 20.94	$ 22.74	$ 25.29	$ 25.51	$ 26.75	$ 28.61	$ 30.70
Preferred Case	Estimated CO2 Tons		2,126,625	2,126,625	2,126,625	2,126,625	2,126,625	2,126,625	2,126,625	2,126,625	2,126,625	2,126,625	2,126,625	2,126,625	2,126,625
	Estimated Vectren Credits*		3,444,187	3,444,187	3,444,187	2,613,005	2,613,005	2,613,005	2,461,082	2,461,082	2,461,082	2,372,826	2,372,826	2,372,826	2,372,826
	Carbon Credits Available for Sale		1,317,562	1,317,562	1,317,562	486,380	486,380	486,380	334,457	334,457	334,457	246,201	246,201	246,201	246,201
	Revenue from Sale of Carbon Credits		3,159,512	4,588,671	8,050,696	4,949,403	6,439,477	9,015,540	7,003,697	7,604,549	8,458,418	6,279,947	6,587,009	7,043,318	7,559,356
	NPV from Sale of Carbon Credits	$18,247,981													
	NPV from Elimiation of Carbon Tax	$53,466,041													
	Total NPVRR from CPP Assumptions	$71,714,022													

2.11 ICC disagrees with Vectren that the impact of CPP is not determinative. Without the CPP, the Existing Portfolio would be lower in cost than the Preferred Portfolio.

[19] This amount was based upon ICC's estimate of Vectren's "excess" credits and the associated carbon price. Given the use of stochastic modeling for the carbon price, the actual revenues associated with the sale of carbon credits is best determined by Vectren's model.

2.12 Vectren needs to re-evaluate at least its Existing Portfolio and its Preferred Portfolio without carbon prices prior to any capacity decisions being made.

COMMENT 3. VECTREN DID NOT EVALUATE EITHER THE EXISTING OR PREFERRED PORTFOLIOS WITHOUT EFFLUENT LIMITATION GUIDELINES.

3.1 As noted above, Vectren states in the IRP that it is CCR and ELG rules which are determinative. Given that ICC finds the removal of the CPP results in the Existing Portfolio being lower cost that the Preferred Portfolio, the elimination, or moderation, of ELGs would further improve the cost advantages for the Existing Portfolio.

3.2 As described above, Vectren appears to have conflated a "final rule" with a "final rule that has exhausted all avenues of appeal". The final ELG rules were published in the Federal Register on November 3, 2015.[20] This date *established* when appeals could be filed.

3.3 Several timely appeals were filed. The appeals were consolidated at the U.S. Court of Appeals for the Fifth Circuit. The initial arguments were filed with the Fifth Circuit in December 2016. The industry appeal is provided in Attachment F. Oral arguments are expected in 2017.

3.4 On March 24, 2017, the Utility Water Act Group (UWAG) petitioned the EPA pursuant to 5 U.S.C. §553(3) for a rulemaking to reconsider ELGs. UWAG also requested an administrative stay for the Rule pursuant to 5 U.S.C. §705.

3.5 On March 28, President Trump signed an Executive Order which mandates that EPA review regulations that are burdensome to energy production.

3.6 On April 12, 2017, EPA issued a signed pre-publication Federal Register notice to issue an administrative stay of the compliance dates that have not yet passed contained in the ELG rule. The compliance dates are to remain stayed pending judicial review. The notice also states EPA will file a motion in the Fifth Circuit to hold the litigation challenging the rule in abeyance while the Agency reconsiders the rule. The pre-publication Federal Register notice signed by Administrator Pruitt is provided in Attachment G.

3.7 Multiple outcomes are possible for ELGs including a remand by the Fifth Circuit to EPA to address the industry challenges, an administrative stay pending a review of the rules, and an EPA reconsideration of the rules. A remand from the Court or an EPA reconsideration will likely result in either the withdrawal or moderation of the current rule.

[20] https://www.federalregister.gov/documents/2015/11/03/2015-25663/effluent-limitations-guidelines-and-standards-for-the-steam-electric-power-generating-point-source

3.8 Interestingly, Vectren explained in its IRP that it believed it would not be affected by the ELG rules initially based upon the draft rules. According to Vectren: "*In the draft proposal, EPA listed eight possible options, with four identified as "preferred." Within the group of preferred options were exemptions for smaller scrubbers and generating units that could have exempted* ***Vectren's units from certain requirements****. However, in the final regulations EPA chose to bypass the preferred options and went with a hybrid of the most stringent options for fly ash transport water, bottom ash transport water, and the flue-gas desulfurization (FGD) waste water*."[21] (emphasis added)

3.9 Despite the unexpected and adverse impact of the final rule on customers and rates, Vectren did not participate in the industry appeal of the final rule.

3.10 Given the significance of the ELG rules to Vectren's Preferred Portfolio, a concern about costs would appropriately include a deferral of any plant closure decisions until there is some clarity regarding the future of the ELG rules.

COMMENT 4. **VECTREN'S** COMMODITY PRICE FORECASTS ARE PROBLEMATIC IN TWO RESPECTS. VECTREN FAILS TO PROVIDE ADEQUATE INFORMATION ABOUT THE FORECASTS AND THE ASSOCIATED PROBABILITY ANALYSES TO ALLOW SUFFICIENT REVIEW. **VECTREN'S** USE OF ONLY **SINGLE "CONSENSUS" FORECASTS** WITH STOCHASTIC MODELING DOES NOT PRODUCE SUFFICIENTLY ROBUST RESULTS TO EVALUATE THE RISK OF CLOSING THE EXISTING COAL PLANTS

4.1 Vectren indicated that its fuel price forecasts are consensus forecasts in that they are averages of forecasts from multiple sources. Vectren acquired forecasts from several consultancies and then averaged the numbers.

4.2 Vectren in response to an ICC data request as to how Vectren knew it was an average of "like" coal price forecasts, Vectren indicated all the forecasts assumed CPP compliance. There was no indication whether the price forecasts had other comparable assumptions such as electricity demand growth, regulations, retirements, natural gas price forecasts, etc. Vectren provides little information about the assumptions behind its consensus forecasts which limit the ability for review.

[21] IRP, Page 54

4.3 Of particular concern is the lack of discussion about the natural gas price forecast as the economics of the proposed natural gas combined cycle hinge on future gas prices. Vectren notes that "(i)t is impossible to predict price fluctuations in commodity prices such as coal and natural gas" but notes that "coal contract strategies … even out short term price fluctuations." No discussion is provided as how gas price fluctuations will be handled other than to say it plans to "utilize firm pipeline supply contracts" which does not address the commodity risk.[22,23]

4.4 Vectren provides insufficient information about the probability distributions related to how the price forecast are used in the stochastic analysis. The probability weightings, in particular, are critical to any review of the price forecasts.

4.5 ICC has similar issues related to the carbon price forecast.

4.6 ICC in general supports Vectren's use of stochastic modeling but does not believe that stochastic modeling can be used as a substitute for the modeling which is needed to address certain scenarios, particularly those with binary outcomes.

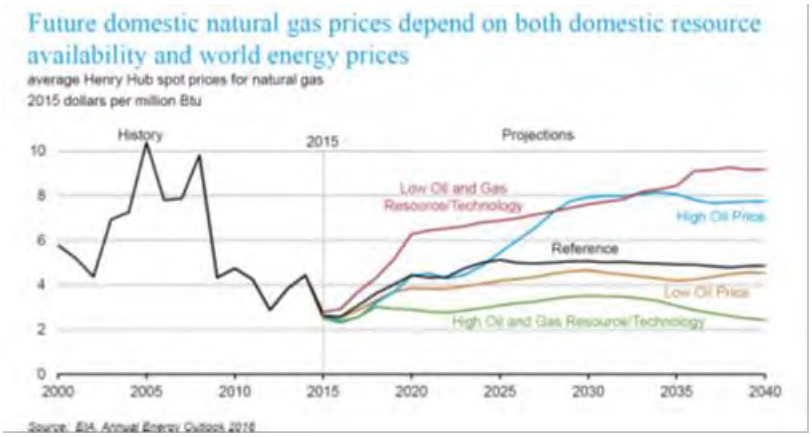
4.7 For example, the outlook for carbon pricing is uncertain in a carbon regime. Therefore, a stochastic analysis of carbon prices is appropriate for evaluating the cost of carbon in the cases in which a carbon regime is assumed. The stochastic analysis of carbon prices, however, is not sufficient for analyzing no carbon requirements. This is a binary outcome; there is either a cost of carbon or there is not. Hence, a scenario without any carbon pricing needs to be evaluated explicitly.[24]

4.8 Stochastic modeling is also not helpful in analyzing specific scenarios of concern. Given Vectren's historic reliance on coal generation is due to coal's historic competitiveness, it is important to evaluate what happens to power prices if natural gas prices rise while coal prices remain low. ICC believes that absent such a deliberate scenario, Vectren cannot evaluate the risk to ratepayers of increasing its reliance on natural gas. This risk analysis was not performed.

4.9 The need for individual scenario analysis for gas can also be seen by looking at the Energy Information Administration's 2016 Annual Energy Outlook for natural gas prices.[25] As shown below, EIA believes that there is a significant range

[22] IRP, Page 242
[23] Gas would likely be delivered to the Brown site via a Vectren-owned lateral from the Texas Gas Transmission interstate pipeline system.
[24] Given the current outlook for the CPP, the no carbon scenario should be the primary assumption considered. Variants could include the introduction of a carbon regime in year 15 or so.
[25] Vectren included EIA's historic gas price exhibit in the IRP. Vectren pointed out how shale gas has led to a large decline in natural gas prices with an implication that low prices were here to stay. Vectren did not provide EIA's forecasts which show EIA's belief that current prices are not believed to be sustainable and there is a wide range of outcomes with respect to future natural gas prices.

in price outlooks for natural gas. A single forecast even with stochastic modeling will not capture the impacts (or risks) of high gas prices.



COMMENT 5. VECTREN'S HANDLING OF ITS SHARE OF WARRICK #4 IS INAPPROPRIATE FOR VECTREN'S IRP

5.1 Vectren acknowledges its owns 50 percent of the Warrick #4 generating station and its share of Warrick has been a component of Vectren's generation since the plant was built in 1970.

5.2 Vectren acknowledges the status of this plant is unclear due to the decision by Alcoa to close the smelter at the Warrick Operations.[26] While the smelter accounts for the majority of the power demand at the complex, it is not the only power demand.

5.3 In the IRP, Vectren indicated it made "a number of non-optimized portfolio shutdown decisions" which included exiting Warrick #4 joint operations by mid-2020 in all portfolios without explanation or consideration.[27] Vectren states only "Alcoa's interest in continuing to operate the jointly owned Warrick #4 300 MW electric generating unit is unclear."[28]

5.4 Vectren indicated that this was a "a conservative planning approach" with respect to Warrick. The conservative approach assumed that all four Warrick generating units were retired and that Vectren served Warrick operations remaining load.[29] While this is one possible outcome, it is unclear why Vectren referred to this outcome as conservative or limited its analysis to only this one approach.

[26] ICC is aware that Alcoa is reconsidering its decision to close the smelter which explains the lack of clarity on Alcoa's plans for Warrick #4. It also supports why it was inappropriate to assume closure of all of the Alcoa units in all cases.
[27] IRP, Page 202.
[28] IRP, Page 58
[29] IRP, Page 163

5.5 Other potential outcomes include continued operation of Warrick #4 with continued shared ownership; continued operation of Warrick #4 with either owner buying out the other owner's share; a sale of all or half of Warrick #4 to a third party[30]; and the closure of Warrick #4 without the closure of the Alcoa owned Units #1 - #3.

5.6 ICC believes Vectren's failure to consider other possible scenarios for Warrick #4 in the IRP a serious omission. Not only has Vectren assumed a loss of capacity, it has also assumed a gain in load. Vectren also may have assumed that it would receive carbon credits for its share of Warrick #4.[31] As discussed under Finding #2, any carbon allocation assumptions are highly speculative.

5.7 Absent greater clarity with respect to Warrick #4, ICC believes that Vectren should expand its analysis to include other possible outcomes with respect to Warrick #4 before initiating any proceeding with the IURC.

COMMENT 6. THERE ARE A NUMBER OF MISCELLANEOUS ASSUMPTIONS IN THE VECTREN IRP THAT RESULT IN INADEQUATE CONSIDERATION OF COAL.

6.1 The Draft Proposed Rule requires utilities "consider a range of supply-side resources". To comply with this requirement, Vectren engaged Burns and McDonnell to provide Vectren with detailed information on each of the generating resources. The list of resources considered did not include the state-of-the-art in the coal combustion technology, namely advanced supercritical pulverized coal plants. The list only considered two supercritical boilers with heat rates (i.e., 10,500 and 10,200 Btu/KWh) well above where the industry is currently performing.

The two newest pulverized coal plants in the U.S., Longview Power/ Longview and SWEPCO/Turk, are both advanced supercritical plants and enjoy heat rates below 9,000 Btu per kilowatt-hour.

- *Longview Power utilizes state-of-the-art technology to safely and economically produce reliable energy with exceptional environmental performance. Longview's technology includes: an advanced supercritical pulverized coal-fired boiler, a high efficiency turbine-generator, a cutting edge distributed control system and a full complement of Air Quality Control Systems (AQCS) that meet or exceed Best Available Control Technology (BACT). Longview's modern, clean coal technology design enables best-in-class energy and environmental performance with industry leading reliability.*[32]

[30] This is believed to be under consideration.
[31] This is not explicitly stated but surmised from Vectren's approach.
[32] http://longviewpower.com/our-technology

- *The John W. Turk, Jr. Power Plant is one of the cleanest, most efficient coal-fueled plants in the United States. The 600-megawatt facility began operation in December 2012 as the first "ultra-supercritical" unit in operation in the United States. Its advanced coal combustion technology uses less coal and produces fewer emissions, including carbon dioxide, than traditional pulverized coal plants. State-of-the art emission control technologies and the use of low-sulfur coal enable the Turk Plant to meet emission limits that are among the most stringent ever required for a pulverized coal unit.* [33]

In 2014, an article in Power Engineering stated "New coal plants would include ultra-supercritical cycles, with advanced air pollution control equipment that will achieve near zero emissions. Coal is domestic."[34]

The New Source Performance Standard (NSPS) for Greenhouse Gases (GHG), finalized in August 3, 2015, set emission standards for newly constructed fossil fuel-fired generation units at 1,400 pounds of CO_2 per megawatt-hour. This new limit is based upon EPA's finding that the Best System of Emission Reduction to be either a highly efficient super-critical boiler with partial carbon capture and sequestration (CCS) or integrated gasification combined cycle with natural gas co-firing. This NSPS is being challenged on several grounds including whether CCS is commercial. If the NSPS is remanded, the likely alternative would be simply highly efficient super-critical boilers.

Both Indianapolis Power & Light and Northern Indiana Public Service considered advanced supercritical pulverized coal plants to be the appropriate coal combustion option for new plants. Vectren should have done the same.[35]

6.2 Vectren did not consider in its IRP the sale of the Brown station and/or Culley #2 to a third party. It is understandable that a sale of these units would not be in Vectren's interest given Vectren's revenues are in part through returns on invested capital. Without the existing capacity (e.g., Brown and Culley #2) and without the need for new capacity (e.g., capacity to replace this generation), the potential earnings for Vectren would be diminished. However, the question for the IURC and in theory any regulated utility is not the utility's return on investment, but what generates the lowest cost of power for the utility's customers.

[33] https://www.swepco.com/info/projects/turkplant/
[34] http://dpue.energ.pub.ro/files/reviste/PEI/PEI_Jan_2014.pdf
[35] Vectren defended its choice of coal combustion technology based upon its conclusion that highly-efficient plants would not have been economic given the alternatives. This is not relevant as the NSPS would require a highly efficient plant.

There have been multiple sales (and resales) of coal generating capacity. For example, Dominion Resources sold its Brayton Point and Kincaid power plants to Equipower in 2013. These plants were sold to Dynegy in 2015. AEP recently sold its coal-fired Gavin power plant to Lightstone Generation, LLC, a joint venture between Blackstone and ArcLight Capital Partners, LLC. JP Morgan was hired to sell Eversource's New Hampshire plants which includes two coal stations.

The question remains absent a bona fide sale process how can Vectren confirm such a sale would not produce lower costs to costumers. The answer is Vectren cannot.

There are several reasons why a third party may believe that Brown and Culley #2 may have more value than Vectren is ascribing to these units.

- Vectren has not considered the scenario in which gas prices are high while coal prices are low. A third party may have a different market view regarding these differentials which would result in higher generation assumptions for the coal units and hence higher value.

- Vectren is assuming a number of environmental regulations that because of the most recent election have become speculative. If these regulations are either vacated or moderated, coal generation is likely to be lower cost.

- Coal producers and transporters are increasingly flexible with respect to their pricing structure to improve the dispatch of coal plants. Such pricing could alter the dispatch costs for coal units if the fixed component is not included in the Variable O & M. In other markets, coal producers have been known to provide discounts and premiums to the coal price based upon real-time power pricing. Depending upon the discounts, this could reduce the fuel cost to very low levels during off-peak periods allowing plants to dispatch ahead of gas. Vectren is not believed to have talked to its coal suppliers about alternative pricing options or the IURC about changing dispatch policy.

- Coal producers are concerned about maintaining market. With increased numbers of plant retirements, they are looking to maintain the demand for their coal through plant acquisitions.

- Third parties may be more optimistic than Vectren regarding future changes to MISO pricing that allow coal generators to realize higher values.

Should Vectren decide (because of third party interest) or an IURC order (that requires a bona fide sale process be conducted to determine a least cost strategy) that prior to any plant closure/retirement there must be a process to determine whether the market value of the asset being retired can reasonably be expected to

reduce ratepayer costs, the IURC and its staff need to be involved in this process. The reason is simple. It is not in Vectren's corporate interest to sell these plants.

6.3 Vectren ignored the economic impact of the diminished role of Indiana coal on the Indiana economy in its IRP. The only mention of Indiana coal is in the description of Vectren's plants all of which are supplied exclusively by Indiana coal. The impact extends beyond the miners and mining companies themselves to parties that provide goods and services to the mining companies to the multipler benefits to the economy to the state and local tax contributions. In addition, the coal that Vectren consumes is produced in Indiana while the gas that Vectren consumes will come from out-of-state.

6.4 ICC estimates that the plant closures would result in at least $20 million in lost mining payroll, over $6 million in local royalty payments and about $0.6 million in lost property taxes related to mining.[36] There would be additional losses in direct employment in transportation and mining services and supply. The multiplier costs to the economy would be even greater.

6.5 Vectren did not solicit input from the Indiana coal industry and related parties during the development of the IRP until very late in the process despite knowing what the preliminary results were suggesting.

6.4 Vectren did not discuss flexible coal pricing strategies with representatives of the coal industry which would improve the dispatchability of the coal units thereby improving their relative economics vis-à-vis gas. It was not reasonable to conclude with the narrowest of margins that shuttering coal plants is economic without this consideration.

6.5 Vectren does not appear to appreciate the reason shale gas has driven price lowers. It is not because shale gas is so cheap to produce. It is because gas cannot be stockpiled like coal. As a result, the price of the shale gas was reduced to the level necessary to displace coal generation. At the low prices which Vectren seems to imply to be the market price, there were over 80 bankruptcies in the gas supply chain demonstrating that the realizations were inadequate to cover costs.

[36] It is not at all clear that the sales from the Indiana coal mines supplying Vectren can be replaced due to contraction in the power industry.

ATTACHMENT A.

EXECUTIVE ORDER

THE WHITE HOUSE
Office of the Press Secretary

FOR IMMEDIATE RELEASE
March 28, 2017

EXECUTIVE ORDER

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PROMOTING ENERGY INDEPENDENCE AND ECONOMIC GROWTH

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1. Policy. (a) It is in the national interest to promote clean and safe development of our Nation's vast energy resources, while at the same time avoiding regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation. Moreover, the prudent development of these natural resources is essential to ensuring the Nation's geopolitical security.

(b) It is further in the national interest to ensure that the Nation's electricity is affordable, reliable, safe, secure, and clean, and that it can be produced from coal, natural gas, nuclear material, flowing water, and other domestic sources, including renewable sources.

(c) Accordingly, it is the policy of the United States that executive departments and agencies (agencies) immediately review existing regulations that potentially burden the development or use of domestically produced energy resources and appropriately suspend, revise, or rescind those that unduly burden the development of domestic energy resources beyond the degree necessary to protect the public interest or otherwise comply with the law.

(d) It further is the policy of the United States that, to the extent permitted by law, all agencies should take appropriate actions to promote clean air and clean water for the American people, while also respecting the proper roles of the Congress and the States concerning these matters in our constitutional republic.

(e) It is also the policy of the United States that necessary and appropriate environmental regulations comply with the law, are of greater benefit than cost, when permissible, achieve environmental improvements for the American people, and are developed through transparent processes that employ the best available peer-reviewed science and economics.

Sec. 2. Immediate Review of All Agency Actions that Potentially Burden the Safe, Efficient Development of Domestic Energy Resources. (a) The heads of agencies shall review all existing regulations, orders, guidance documents, policies, and any other similar agency actions (collectively, agency actions) that potentially burden the development or use of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear energy resources. Such review shall not include agency actions that are mandated by law, necessary for the public interest, and consistent with the policy set forth in section 1 of this order.

(b) For purposes of this order, "burden" means to unnecessarily obstruct, delay, curtail, or otherwise impose significant costs on the siting, permitting, production, utilization, transmission, or delivery of energy resources.

(c) Within 45 days of the date of this order, the head of each agency with agency actions described in subsection (a) of this section shall develop and submit to the Director of the Office of Management and Budget (OMB Director) a plan to carry out the review required by subsection (a) of this section. The plans shall also be sent to the Vice President, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the Council on Environmental Quality. The head of any agency who determines that such agency does not have agency actions described in subsection (a) of this section shall submit to the OMB Director a written statement to that effect and, absent a determination by the OMB Director that such agency does have agency actions described in subsection (a) of this section, shall have no further responsibilities under this section.

(d) Within 120 days of the date of this order, the head of each agency shall submit a draft final report detailing the agency actions described in subsection (a) of this section to the Vice President, the OMB Director, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the Council on Environmental Quality. The report shall include specific recommendations that, to the extent permitted by law, could alleviate or eliminate aspects of agency actions that burden domestic energy production.

(e) The report shall be finalized within 180 days of the date of this order, unless the OMB Director, in consultation with the other officials who receive the draft final reports, extends that deadline.

(f) The OMB Director, in consultation with the Assistant to the President for Economic Policy, shall be responsible for coordinating the recommended actions included in the agency final reports within the Executive Office of the President.

(g) With respect to any agency action for which specific recommendations are made in a final report pursuant to subsection (e) of this section, the head of the relevant agency shall, as soon as practicable, suspend, revise, or rescind, or publish for notice and comment proposed rules suspending, revising, or rescinding, those actions, as appropriate and consistent with law. Agencies shall endeavor to coordinate such regulatory reforms with their activities undertaken in compliance with Executive Order 13771 of January 30, 2017 (Reducing Regulation and Controlling Regulatory Costs).

Sec. 3. Rescission of Certain Energy and Climate-Related Presidential and Regulatory Actions. (a) The following Presidential actions are hereby revoked:

(i) Executive Order 13653 of November 1, 2013 (Preparing the United States for the Impacts of Climate Change);

(ii) The Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards);

(iii) The Presidential Memorandum of November 3, 2015 (Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment); and

(iv) The Presidential Memorandum of September 21, 2016 (Climate Change and National Security).

(b) The following reports shall be rescinded:

(i) The Report of the Executive Office of the President of June 2013 (The President's Climate Action Plan); and

(ii) The Report of the Executive Office of the President of March 2014 (Climate Action Plan Strategy to Reduce Methane Emissions).

(c) The Council on Environmental Quality shall rescind its final guidance entitled "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews," which is referred to in "Notice of Availability," 81 *Fed. Reg.* 51866 (August 5, 2016).

(d) The heads of all agencies shall identify existing agency actions related to or arising from the Presidential actions listed in subsection (a) of this section, the reports listed in subsection (b) of this section, or the final guidance listed in subsection (c) of this section. Each agency shall, as soon as practicable, suspend, revise, or rescind, or publish for notice and comment proposed rules suspending, revising, or rescinding any such actions, as appropriate and consistent with law and with the policies set forth in section 1 of this order.

Sec. 4. Review of the Environmental Protection Agency's "Clean Power Plan" and Related Rules and Agency Actions. (a) The Administrator of the Environmental Protection Agency (Administrator) shall immediately take all steps necessary to review the final rules set forth in subsections (b)(i) and (b)(ii) of this section, and any rules and guidance issued pursuant to them, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules. In addition, the Administrator shall immediately take all steps necessary to review the proposed rule set forth in subsection (b)(iii) of this section, and, if appropriate, shall, as soon as practicable, determine whether to revise or withdraw the proposed rule.

(b) This section applies to the following final or proposed rules:

(i) The final rule entitled "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," 80 *Fed. Reg.* 64661 (October 23, 2015) (Clean Power Plan);

(ii) The final rule entitled "Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units," 80 *Fed. Reg.* 64509 (October 23, 2015); and

(iii) The proposed rule entitled "Federal Plan Requirements for Greenhouse Gas Emissions From Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations; Proposed Rule," 80 *Fed. Reg.* 64966 (October 23, 2015).

(c) The Administrator shall review and, if appropriate, as soon as practicable, take lawful action to suspend, revise, or rescind, as appropriate and consistent with law, the "Legal Memorandum Accompanying Clean Power Plan for Certain Issues," which was published in conjunction with the Clean Power Plan.

(d) The Administrator shall promptly notify the Attorney General of any actions taken by the Administrator pursuant to this order related to the rules identified in subsection (b) of this section so that the Attorney General may, as appropriate, provide notice of this order and any such action to any court with jurisdiction over pending litigation related to those rules, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this

order, pending the completion of the administrative actions described in subsection (a) of this section.

Sec. 5. Review of Estimates of the Social Cost of Carbon, Nitrous Oxide, and Methane for Regulatory Impact Analysis. (a) In order to ensure sound regulatory decision making, it is essential that agencies use estimates of costs and benefits in their regulatory analyses that are based on the best available science and economics.

(b) The Interagency Working Group on Social Cost of Greenhouse Gases (IWG), which was convened by the Council of Economic Advisers and the OMB Director, shall be disbanded, and the following documents issued by the IWG shall be withdrawn as no longer representative of governmental policy:

(i) Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866 (February 2010);

(ii) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (May 2013);

(iii) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (November 2013);

(iv) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (July 2015);

(v) Addendum to the Technical Support Document for Social Cost of Carbon: Application of the Methodology to Estimate the Social Cost of Methane and the Social Cost of Nitrous Oxide (August 2016); and

(vi) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (August 2016).

(c) Effective immediately, when monetizing the value of changes in greenhouse gas emissions resulting from regulations, including with respect to the consideration of domestic versus international impacts and the consideration of appropriate discount rates, agencies shall ensure, to the extent permitted by law, that any such estimates are consistent with the guidance contained in OMB Circular A-4 of September 17, 2003 (Regulatory Analysis), which was issued after peer review and public comment and has been widely accepted for more than a decade as embodying the best practices for conducting regulatory cost-benefit analysis.

Sec. 6. Federal Land Coal Leasing Moratorium. The Secretary of the Interior shall take all steps necessary and appropriate to amend or withdraw Secretary's Order 3338 dated January 15, 2016 (Discretionary Programmatic Environmental Impact Statement (PEIS) to

Modernize the Federal Coal Program), and to lift any and all moratoria on Federal land coal leasing activities related to Order 3338. The Secretary shall commence Federal coal leasing activities consistent with all applicable laws and regulations.

Sec. 7. Review of Regulations Related to United States Oil and Gas Development. (a) The Administrator shall review the final rule entitled "Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources," 81 *Fed. Reg.* 35824 (June 3, 2016), and any rules and guidance issued pursuant to it, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules.

(b) The Secretary of the Interior shall review the following final rules, and any rules and guidance issued pursuant to them, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules:

(i) The final rule entitled "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 *Fed. Reg.* 16128 (March 26, 2015);

(ii) The final rule entitled "General Provisions and Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 77972 (November 4, 2016);

(iii) The final rule entitled "Management of Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 79948 (November 14, 2016); and

(iv) The final rule entitled "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 *Fed. Reg.* 83008 (November 18, 2016).

(c) The Administrator or the Secretary of the Interior, as applicable, shall promptly notify the Attorney General of any actions taken by them related to the rules identified in subsections (a) and (b) of this section so that the Attorney General may, as appropriate, provide notice of this order and any such action to any court with jurisdiction over pending litigation related to those rules, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this order, until the completion of the administrative actions described in subsections (a) and (b) of this section.

Sec. 8. General Provisions. (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

DONALD J. TRUMP

THE WHITE HOUSE,
March 28, 2017.

# # #

ATTACHMENT B.

DEPARTMENT OF JUSTICE MOTION

ORAL ARGUMENT HELD SEPTEMBER 27, 2016

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

STATE OF WEST VIRGINIA, ET AL., Petitioners, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, ET AL. Respondents.	No. 15-1363 (and consolidated cases)

NOTICE OF EXECUTIVE ORDER, EPA REVIEW OF CLEAN POWER PLAN AND FORTHCOMING RULEMAKING, AND MOTION TO HOLD CASES IN ABEYANCE

Respondents United States Environmental Protection Agency, et al. (collectively "EPA"), hereby provide notice of (1) an Executive Order from the President of United States titled "Promoting Energy Independence and Economic Growth" and directing EPA to review the Clean Power Plan – the Rule at issue in this case; and (2) EPA's initiation of a review of the Clean Power Plan; and (3) if appropriate, a forthcoming rulemaking related to the Rule and consistent with the Executive Order. Pursuant to these developments, the Clean Power Plan is under close scrutiny by the EPA, and the prior positions taken by the agency with respect to the Rule do not necessarily reflect its ultimate conclusions. EPA should be afforded

the opportunity to fully review the Clean Power Plan and respond to the President's direction in a manner that is consistent with the terms of the Executive Order, the Clean Air Act, and the agency's inherent authority to reconsider past decisions. Deferral of further judicial proceedings is thus warranted.

Accordingly, EPA respectfully requests this Court to hold these cases in abeyance while the agency conducts its review of the Clean Power Plan, and that the abeyance remain in place until 30 days after the conclusion of review and any resulting forthcoming rulemaking, with motions to govern further proceedings due upon expiration of the abeyance period. As discussed further below, such abeyance will promote judicial economy by avoiding unnecessary adjudication and will support the integrity of the administrative process. Respondents contacted coordinating counsel for Petitioners, Petitioner-Intervenors, and Respondent-Intervenors regarding their positions on this motion. Petitioners and Petitioner-Intervenors do not oppose the motion. Respondent-Intervenors oppose the motion and intend to file responses in opposition, except that Respondent-Intervenor Next Era Energy Inc. takes no position on the motion.

BACKGROUND

The Executive Order and EPA's current review of the Clean Power Plan follow various proceedings undertaken during the prior Administration. These proceedings and the more recent developments under the new Administration are summarized below.

On October 23, 2015, EPA promulgated "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units" (the "Rule" or "the Clean Power Plan"). The Rule established "CO_2 [carbon dioxide] emission guidelines for existing fossil fuel-fired electric generating units." 80 Fed. Reg. 64,662, 64,663 (Oct. 23, 2015). EPA cited its authority under the Clean Air Act as the basis for the Rule. Id. at 64,707-10.

Numerous petitions for review of the Rule were filed in this Court and were subsequently consolidated under lead case West Virginia v. EPA, No. 15-1363 ("West Virginia"). The Supreme Court granted applications for a stay of the Rule pending judicial review on February 9, 2016. Order, West Virginia v. EPA, No. 15A773. Following full merits briefing, oral argument was held before this Court, sitting en banc, on September 27, 2016.

While the West Virginia litigation was proceeding, EPA received 38 petitions for administrative reconsideration of various aspects of the Rule. On January 11, 2017, shortly before the change in Administrations, EPA denied most of the petitions for reconsideration. See 82 Fed. Reg. 4864 (Jan. 17, 2017) (the "Denial Action"). To date, 17 petitions for review of the Denial Action have been filed in this Court and consolidated under lead case State of North Dakota v. EPA, No. 17-1014.[1]

[1] On February 24, 2017, petitioners Utility Air Regulatory Group, American Public Power Association and LG&E and KU Energy LLC filed a motion to sever their

On March 28, 2017, the President of the United States signed an Executive Order establishing the policy of the United States that executive departments and agencies (Agencies) "immediately review existing regulations that potentially burden the development or use of domestically produced energy resources and appropriately suspend, revise, or rescind those that unduly burden the development of domestic energy resources beyond the degree necessary to protect the public interest or otherwise comply with the law." Executive Order, "Promoting Energy Independence and Economic Growth," (Attachment 1 hereto), § 1(c). The Executive Order also sets forth the policy that "all agencies should take appropriate actions to promote clean air and clean water for the American people, while also respecting the proper roles of the Congress and the States concerning these matters in our constitutional republic." Id. § 1(d).

With respect to the Rule, the Executive Order directs the Administrator of EPA to "immediately take all steps necessary" to review it for consistency with these and other policies set forth in the Order. Id. at § 4. The Executive Order further

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petitions for review in North Dakota v. EPA, No. 17-1014, consolidate those petitions with the Movants' respective petitions in West Virginia v. EPA, No. 15-1363, and issue an order directing the parties in West Virginia v. EPA to submit a proposal to govern the scheduling of supplemental briefing. EPA filed a response to this motion in which it noted that while it did not oppose consolidation, "consolidation of all of the petitions for review of the Denial Action with the challenges to the Rule would be more appropriate than consolidating only two of the petitions for review of the Denial Action, so as to avoid having overlapping claims challenging the same Denial Action pursued within separate proceedings." No. 15-1363, DN1665820 (filed Mar. 13, 2017), at 2.

instructs the agency to "if appropriate [and] as soon as practicable . . . publish for notice and comment proposed rules suspending, revising, or rescinding" the Rule. Id.

In accordance with the Executive Order and his authority under the Clean Air Act, the EPA Administrator signed a Federal Register notice on March 28, 2017, announcing EPA's review of the Rule and providing advanced notice of forthcoming rulemaking proceedings. See Notice of Review of the Clean Power Plan (Attachment 2 hereto). Specifically, the Federal Register notice announces that EPA "is initiating its review of the [Clean Power Plan]," and "providing advanced notice of forthcoming rulemaking proceedings consistent with the President's policies." Id. at 3. The Federal Register notice further notes that if EPA's review "concludes that suspension, revision or rescission of this Rule may be appropriate, EPA's review will be followed by a rulemaking process that will be transparent, follow proper administrative procedures, include appropriate engagement with the public, employ sound science, and be firmly grounded in the law." Id.

SUMMARY OF ARGUMENT

The Executive Order, Clean Power Plan review, and potential rulemaking proceedings mark substantial new developments that warrant holding this litigation in abeyance. Consistent with the inherent authority of federal agencies to reconsider past decisions and EPA's statutory authority under the Clean Air Act, EPA should be afforded the opportunity to respond to the Executive Order by reviewing the Clean Power Plan in accordance with the new policies set forth in the Order.

Because the Rule is under agency review and may be significantly modified or rescinded through further rulemaking in accordance with the Executive Order, holding this case in abeyance is the most efficient and logical course of action here. Abeyance will further the Court's interests in avoiding unnecessary adjudication, support the integrity of the administrative process, and ensure due respect for the prerogative of the executive branch to reconsider the policy decisions of a prior Administration.

ARGUMENT

Agencies have inherent authority to reconsider past decisions and to revise, replace or repeal a decision to the extent permitted by law and supported by a reasoned explanation. FCC v. Fox Television Stations, Inc., 556 U.S. 502, 515 (2009); Motor Vehicle Mfrs. Ass'n v. State Farm Mutual Auto. Ins. Co., 463 U.S. 29, 42 (1983) ("State Farm"). EPA's interpretations of statutes it administers are not "carved in stone" but must be evaluated "on a continuing basis," for example, "in response to . . . a change in administrations." Nat'l Cable & Telecomm. Ass'n v. Brand X Internet Servs., 545 U.S. 967, 981 (2005) (internal quotation marks and citations omitted). See also Nat'l Ass'n of Home Builders v. EPA, 682 F.3d 1032, 1038 & 1043 (D.C. Cir. 2012) (a revised rulemaking based "on a reevaluation of which policy would be better in light of the facts" is "well within an agency's discretion," and "'[a] change in administration brought about by the people casting their votes is a perfectly reasonable basis for an executive agency's reappraisal of the costs and benefits of its

programs and regulations'") (quoting State Farm, 463 U.S. at 59 (Rehnquist, J., concurring in part and dissenting in part)). The Clean Air Act complements EPA's inherent authority to reconsider prior rulemakings by providing the agency with broad authority to prescribe regulations as necessary to carry out the Administrator's authorized functions under the statute. 42 USC § 7601(a).

Courts may defer judicial review of a final rule pending completion of reconsideration proceedings. See Am. Petroleum Inst. v. EPA ("API"), 683 F.3d 382 (D.C. Cir. 2012). And this Court has often held challenges to Clean Air Act rules, in particular, in abeyance pending completion of reconsideration proceedings. See, e.g., Sierra Club v. EPA, 551 F.3d 1019, 1023 (D.C. Cir. 2008); New York v. EPA, No. 02-1387, 2003 WL 22326398. at *1 (D.C. Cir. 2003) (same).

With these principles in mind, and based on recent developments, abeyance is warranted in this case. The President of the United States has directed EPA to immediately take all steps necessary to review the Rule and, if appropriate and as soon as practicable, initiate a new rulemaking relating to the Rule. In accordance with this directive, EPA has begun a review of the Rule. EPA has also announced that if the review concludes that suspension, revision, or rescission of the Rule may be appropriate, EPA's review will be followed by a rulemaking process. Thus, "[i]t would hardly be sound stewardship of judicial resources to decide this case now." API, 683 F.3d at 388. Abeyance would allow EPA to "apply its expertise and correct any errors, preserve[] the integrity of the administrative process, and prevent[]

piecemeal and unnecessary judicial review," id., while furthering the policy set forth in the Executive Order, as consistent with the Clean Air Act.

Abeyance is also warranted to avoid compelling the United States to represent the current Administration's position on the many substantive questions that are the subject of EPA's nascent review. A decision from the Court at this time would almost certainly generate a petition for writ of certiorari from some party to the litigation or another, thereby compelling further briefing on substantive questions prior to EPA's completion of its review. This could call into question the fairness and integrity of the ongoing administrative process.

Holding the present challenges in abeyance will preserve the status quo, in which the Rule is presently stayed pending judicial review by Order of the Supreme Court. None of the Petitioners challenging the Rule oppose the requested abeyance of proceedings. Respondent-Intervenors oppose abeyance, but they face no immediate harm arising from the postponement of judicial review. The requirements of the Rule, which have been stayed by the Supreme Court, would not become effective any time soon even were this litigation to proceed and the stay ultimately lifted. Indeed, no carbon dioxide emission reductions are required from sources under the Rule until 2022 at the earliest.

WHEREFORE, EPA requests that this Court hold these cases in abeyance while the agency conducts its review of the Clean Power Plan, and that the abeyance remain in place until 30 days after the conclusion of review and any resulting

forthcoming rulemaking, with motions to govern further proceedings due upon expiration of the abeyance period.[2]

Respectfully submitted,

BRUCE S. GELBER
Deputy Assistant Attorney General

DATED: March 28, 2017 BY: */s/ Eric G. Hostetler*

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[2] EPA is willing to provide status reports at regular intervals during the abeyance period (EPA suggests every 120 days) if the Court would find that useful.

CERTIFICATE OF COMPLIANCE

I hereby certify that this motion complies with the requirements of Fed. R. App. P. Rule 27(d)(2) because it contains approximately 1,950 words according to the count of Microsoft Word and therefore is within the word limit of 5,200 words.

Dated: March 28, 2017

/s/ *Eric G. Hostetler*
Counsel for Respondent

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing Notice of Executive Order, EPA Review of Clean Power Plan, and Forthcoming Rulemaking, and Motion to Hold Cases in Abeyance have been served through the Court's CM/ECF system on all registered counsel this 28th day of March, 2017.

/s/ *Eric G. Hostetler*
Counsel for Respondent

ATTACHMENT 1

THE WHITE HOUSE
Office of the Press Secretary

FOR IMMEDIATE RELEASE
March 28, 2017

EXECUTIVE ORDER

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PROMOTING ENERGY INDEPENDENCE AND ECONOMIC GROWTH

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1. Policy. (a) It is in the national interest to promote clean and safe development of our Nation's vast energy resources, while at the same time avoiding regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation. Moreover, the prudent development of these natural resources is essential to ensuring the Nation's geopolitical security.

(b) It is further in the national interest to ensure that the Nation's electricity is affordable, reliable, safe, secure, and clean, and that it can be produced from coal, natural gas, nuclear material, flowing water, and other domestic sources, including renewable sources.

(c) Accordingly, it is the policy of the United States that executive departments and agencies (agencies) immediately review existing regulations that potentially burden the development or use of domestically produced energy resources and appropriately suspend, revise, or rescind those that unduly burden the development of domestic energy resources beyond the degree necessary to protect the public interest or otherwise comply with the law.

(d) It further is the policy of the United States that, to the extent permitted by law, all agencies should take appropriate actions to promote clean air and clean water for the American people, while also respecting the proper roles of the Congress and the States concerning these matters in our constitutional republic.

(e) It is also the policy of the United States that necessary and appropriate environmental regulations comply with the law, are of greater benefit than cost, when permissible, achieve environmental improvements for the American people, and are developed through transparent processes that employ the best available peer-reviewed science and economics.

Sec. 2. Immediate Review of All Agency Actions that Potentially Burden the Safe, Efficient Development of Domestic Energy Resources. (a) The heads of agencies shall review all existing regulations, orders, guidance documents, policies, and any other similar agency actions (collectively, agency actions) that potentially burden the development or use of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear energy resources. Such review shall not include agency actions that are mandated by law, necessary for the public interest, and consistent with the policy set forth in section 1 of this order.

(b) For purposes of this order, "burden" means to unnecessarily obstruct, delay, curtail, or otherwise impose significant costs on the siting, permitting, production, utilization, transmission, or delivery of energy resources.

(c) Within 45 days of the date of this order, the head of each agency with agency actions described in subsection (a) of this section shall develop and submit to the Director of the Office of Management and Budget (OMB Director) a plan to carry out the review required by subsection (a) of this section. The plans shall also be sent to the Vice President, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the Council on Environmental Quality. The head of any agency who determines that such agency does not have agency actions described in subsection (a) of this section shall submit to the OMB Director a written statement to that effect and, absent a determination by the OMB Director that such agency does have agency actions described in subsection (a) of this section, shall have no further responsibilities under this section.

(d) Within 120 days of the date of this order, the head of each agency shall submit a draft final report detailing the agency actions described in subsection (a) of this section to the Vice President, the OMB Director, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the Council on Environmental Quality. The report shall include specific recommendations that, to the extent permitted by law, could alleviate or eliminate aspects of agency actions that burden domestic energy production.

(e) The report shall be finalized within 180 days of the date of this order, unless the OMB Director, in consultation with the other officials who receive the draft final reports, extends that deadline.

(f) The OMB Director, in consultation with the Assistant to the President for Economic Policy, shall be responsible for coordinating the recommended actions included in the agency final reports within the Executive Office of the President.

(g) With respect to any agency action for which specific recommendations are made in a final report pursuant to subsection (e) of this section, the head of the relevant agency shall, as soon as practicable, suspend, revise, or rescind, or publish for notice and comment proposed rules suspending, revising, or rescinding, those actions, as appropriate and consistent with law. Agencies shall endeavor to coordinate such regulatory reforms with their activities undertaken in compliance with Executive Order 13771 of January 30, 2017 (Reducing Regulation and Controlling Regulatory Costs).

Sec. 3. Rescission of Certain Energy and Climate-Related Presidential and Regulatory Actions. (a) The following Presidential actions are hereby revoked:

(i) Executive Order 13653 of November 1, 2013 (Preparing the United States for the Impacts of Climate Change);

(ii) The Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards);

(iii) The Presidential Memorandum of November 3, 2015 (Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment); and

(iv) The Presidential Memorandum of September 21, 2016 (Climate Change and National Security).

(b) The following reports shall be rescinded:

(i) The Report of the Executive Office of the President of June 2013 (The President's Climate Action Plan); and

(ii) The Report of the Executive Office of the President of March 2014 (Climate Action Plan Strategy to Reduce Methane Emissions).

(c) The Council on Environmental Quality shall rescind its final guidance entitled "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews," which is referred to in "Notice of Availability," 81 *Fed. Reg.* 51866 (August 5, 2016).

(d) The heads of all agencies shall identify existing agency actions related to or arising from the Presidential actions listed in subsection (a) of this section, the reports listed in subsection (b) of this section, or the final guidance listed in subsection (c) of this section. Each agency shall, as soon as practicable, suspend, revise, or rescind, or publish for notice and comment proposed rules suspending, revising, or rescinding any such actions, as appropriate and consistent with law and with the policies set forth in section 1 of this order.

Sec. 4. Review of the Environmental Protection Agency's "Clean Power Plan" and Related Rules and Agency Actions. (a) The Administrator of the Environmental Protection Agency (Administrator) shall immediately take all steps necessary to review the final rules set forth in subsections (b)(i) and (b)(ii) of this section, and any rules and guidance issued pursuant to them, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules. In addition, the Administrator shall immediately take all steps necessary to review the proposed rule set forth in subsection (b)(iii) of this section, and, if appropriate, shall, as soon as practicable, determine whether to revise or withdraw the proposed rule.

(b) This section applies to the following final or proposed rules:

(i) The final rule entitled "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," 80 *Fed. Reg.* 64661 (October 23, 2015) (Clean Power Plan);

(ii) The final rule entitled "Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units," 80 *Fed. Reg.* 64509 (October 23, 2015); and

(iii) The proposed rule entitled "Federal Plan Requirements for Greenhouse Gas Emissions From Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations; Proposed Rule," 80 *Fed. Reg.* 64966 (October 23, 2015).

(c) The Administrator shall review and, if appropriate, as soon as practicable, take lawful action to suspend, revise, or rescind, as appropriate and consistent with law, the "Legal Memorandum Accompanying Clean Power Plan for Certain Issues," which was published in conjunction with the Clean Power Plan.

(d) The Administrator shall promptly notify the Attorney General of any actions taken by the Administrator pursuant to this order related to the rules identified in subsection (b) of this section so that the Attorney General may, as appropriate, provide notice of this order and any such action to any court with jurisdiction over pending litigation related to those rules, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this

order, pending the completion of the administrative actions described in subsection (a) of this section.

Sec. 5. Review of Estimates of the Social Cost of Carbon, Nitrous Oxide, and Methane for Regulatory Impact Analysis. (a) In order to ensure sound regulatory decision making, it is essential that agencies use estimates of costs and benefits in their regulatory analyses that are based on the best available science and economics.

(b) The Interagency Working Group on Social Cost of Greenhouse Gases (IWG), which was convened by the Council of Economic Advisers and the OMB Director, shall be disbanded, and the following documents issued by the IWG shall be withdrawn as no longer representative of governmental policy:

(i) Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866 (February 2010);

(ii) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (May 2013);

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(vi) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (August 2016).

(c) Effective immediately, when monetizing the value of changes in greenhouse gas emissions resulting from regulations, including with respect to the consideration of domestic versus international impacts and the consideration of appropriate discount rates, agencies shall ensure, to the extent permitted by law, that any such estimates are consistent with the guidance contained in OMB Circular A-4 of September 17, 2003 (Regulatory Analysis), which was issued after peer review and public comment and has been widely accepted for more than a decade as embodying the best practices for conducting regulatory cost-benefit analysis.

Sec. 6. Federal Land Coal Leasing Moratorium. The Secretary of the Interior shall take all steps necessary and appropriate to amend or withdraw Secretary's Order 3338 dated January 15, 2016 (Discretionary Programmatic Environmental Impact Statement (PEIS) to

Modernize the Federal Coal Program), and to lift any and all moratoria on Federal land coal leasing activities related to Order 3338. The Secretary shall commence Federal coal leasing activities consistent with all applicable laws and regulations.

Sec. 7. Review of Regulations Related to United States Oil and Gas Development. (a) The Administrator shall review the final rule entitled "Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources," 81 *Fed. Reg.* 35824 (June 3, 2016), and any rules and guidance issued pursuant to it, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules.

(b) The Secretary of the Interior shall review the following final rules, and any rules and guidance issued pursuant to them, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules:

(i) The final rule entitled "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 *Fed. Reg.* 16128 (March 26, 2015);

(ii) The final rule entitled "General Provisions and Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 77972 (November 4, 2016);

(iii) The final rule entitled "Management of Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 79948 (November 14, 2016); and

(iv) The final rule entitled "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 *Fed. Reg.* 83008 (November 18, 2016).

(c) The Administrator or the Secretary of the Interior, as applicable, shall promptly notify the Attorney General of any actions taken by them related to the rules identified in subsections (a) and (b) of this section so that the Attorney General may, as appropriate, provide notice of this order and any such action to any court with jurisdiction over pending litigation related to those rules, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this order, until the completion of the administrative actions described in subsections (a) and (b) of this section.

Sec. 8. General Provisions. (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

DONALD J. TRUMP

THE WHITE HOUSE,
March 28, 2017.

# # #

ATTACHMENT 2

6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 60

[FRL–XXXX–XX–XXX]

Notice of Review of the Clean Power Plan

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: The U.S. Environmental Protection Agency (EPA) announces that it is reviewing and, if appropriate will initiate proceedings to suspend, revise or rescind the Clean Power Plan, found at 40 CFR Part 60 subpart UUUU.

DATES: This document is effective **[Insert date of publication in the Federal Register]**.

FOR FURTHER INFORMATION CONTACT: Mr. Peter Tsirigotis, Sector Policies and Programs Division (D205-01), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711; telephone number: (888) 627-7764; email address: *airaction@epa.gov*.

SUPPLEMENTARY INFORMATION: By this notice, EPA announces it is reviewing the Clean Power Plan, 80 FR 64662 (October 23, 2015) (CPP), including the accompanying Legal Memorandum, and, if appropriate, will as soon as practicable and consistent with law, initiate proceedings to suspend, revise or rescind this rule. The CPP established emission guidelines for state plans to limit carbon dioxide emissions from existing fossil fuel-fired power plants.

I. Background

The CPP was promulgated under Section 111 of the Clean Air Act. 42 U.S.C. 7411. Section 111 of the Clean Air Act authorizes the EPA to issue nationally applicable New Source Performance Standards (NSPS) limiting air pollution from "new sources" in source categories

that cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare. 42 U.S.C. Section 7411(b)(1). Under this authority, the EPA had long regulated new fossil fuel-fired power plants to limit air pollution other than carbon dioxide, including particulate matter (PM); nitrogen oxides (NOx) and sulfur dioxide (SO2). See 40 CFR Part 60 subparts D, Da. In 2015, the EPA issued a rule that for the first time set carbon dioxide emission limits for new fossil fuel-fired power plants. Standards of Performance for Greenhouse Gas Emissions From New, Modified, and Reconstructed Stationary Sources: Electric Generating Units, 80 FR 64510 (October 23, 2015). Under certain circumstances, when the EPA issues standards for new sources under Section 111(b), the EPA has the authority under Section 111(d), to prescribe regulations under which each State is to submit a plan to establish standards for existing sources in the same category. The EPA relied on that authority to issue the CPP, which, for the first time, required States to submit plans specifically designed to limit carbon dioxide emissions from existing fossil fuel-fired power plants. As part of the promulgation of the CPP, EPA prepared a legal memorandum that supplemented the legal analysis provided by the Agency in the preamble to the final CPP.

Due to concerns about EPA's legal authority and record, 27 States and a number of other parties sought judicial review of the CPP in the D.C. Circuit. *State of West Virginia v. EPA*, No. 15-1363 (and consolidated cases) (D.C. Cir.). On February 9, 2016, the Supreme Court stayed implementation of the CPP pending judicial review. Following full merits briefing, oral argument was held before the D.C. Circuit, sitting *en banc*, on September 27, 2016. That case is currently pending in the D.C. Circuit.

II. Initiation of Review of CPP

On March 28, 2017, President Trump issued an Executive Order establishing a national policy in favor of energy independence, economic growth, and the rule of law. The purpose of that Executive Order is to facilitate the development of U.S. energy resources—including oil and gas—and to reduce unnecessary regulatory burdens associated with the development of those resources. The President has directed agencies to review existing regulations that potentially burden the development of domestic energy resources, and appropriately suspend, revise, or rescind regulations that unduly burden the development of US energy resources beyond what is necessary to protect the public interest or otherwise comply with the law. The Executive Order also directs agencies to take appropriate actions, to the extent permitted by law, to promote clean air and clean water while also respecting the proper roles of Congress and the States. This Executive Order specifically directs EPA to review and, if appropriate, initiate reconsideration proceedings to suspend, revise or rescind this Rule, including the accompanying Legal Memorandum.

Pursuant to the Executive Order, EPA is initiating its review of the CPP, including the accompanying legal memorandum, and providing advanced notice of forthcoming rulemaking proceedings consistent with the President's policies. If EPA's review concludes that suspension, revision or rescission of this Rule may be appropriate, EPA's review will be followed by a rulemaking process that will be transparent, follow proper administrative procedures, include appropriate engagement with the public, employ sound science, and be firmly grounded in the law.

As part of the review of the CPP that EPA is initiating today, EPA will be reviewing the compliance dates that were set in the CPP. Under the Supreme Court's stay of the CPP, states and other interested parties have not been required nor expected to work towards meeting the

compliance dates set in the CPP. Indeed, some compliance dates have passed or will likely pass while the CPP continues to be stayed. For these reasons, the compliance dates in the CPP will need to be re-evaluated. Once EPA completes its review and decides what further action to take on the CPP, EPA will ensure that any and all remaining compliance dates will be reasonable and appropriate in light of the Supreme Court stay of the CPP and other factors.

EPA's ability to revisit existing regulations is well-grounded in the law. Specifically, the agency has inherent authority to reconsider past decisions and to rescind or revise a decision to the extent permitted by law when supported by a reasoned explanation. *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009) ("*Fox*"); *Motor Vehicle Manufacturers Ass'n of the United States, Inc., et al, v. State Farm Mutual Automobile Insurance Co., et al,* 463 U.S. 29, 42 (1983) ("*State Farm*"). Moreover, the Clean Air Act itself authorizes EPA to reconsider its rulemakings. 42 U.S.C. § 7607(b)(1), (d)(7)(B). The Clean Air Act complements the EPA's inherent authority to reconsider prior rulemakings by providing the agency with broad authority to prescribe regulations as necessary. 42 USC § 7601(a). The authority to reconsider prior decisions exists in part because EPA's interpretations of statutes it administers "are not carved in stone" but must be evaluated "on a continuing basis," *Chevron U.S.A. Inc. v. NRDC, Inc.*, 467 U.S. 837, 857-58 (1984). This is true when—as is the case here—review is undertaken "in response to . . . a change in administrations." *National Cable & Telecommunications Ass'n v. Brand X Internet Services*, 545 U.S. 967, 981 (2005). Importantly, such a revised decision need not be based upon a change of facts or circumstances. Rather, a revised rulemaking based "on a reevaluation of which policy would be better in light of the facts" is "well within an agency's discretion," and "[a] change in administration brought about by the people casting their votes is a perfectly reasonable basis for an executive agency's reappraisal of the costs and benefits of its

programs and regulations." *National Ass'n of Home Builders v. EPA*, 682 F.3d 1032, 1038 & 1043 (D.C. Cir. 2012) (citing *Fox*, 556 U.S. at 514-15; quoting *State Farm*, 463 U.S. at 59 (Rehnquist, J., concurring in part and dissenting in part)).

In conducting this review, EPA will follow each of the principles and policies set forth in the Executive Order, as consistent with EPA's statutory authority. The Agency will reevaluate whether this Rule and alternative approaches are appropriately grounded in EPA's statutory authority and consistent with the rule of law. EPA will assess whether this Rule or alternative approaches would appropriately promote cooperative federalism and respect the authority and powers that are reserved to the states. EPA will also examine whether this Rule and alternative approaches effect the Administration's dual goals of protecting public health and welfare while also supporting economic growth and job creation. EPA will review whether this Rule or alternative approaches appropriately maintain the diversity of reliable energy resources and encourage the production of domestic energy sources to achieve energy independence and security. Additionally, EPA will assess this Rule and alternative approaches to determine whether they will provide benefits that substantially exceed their costs. In taking any actions subsequent to this review, EPA will use its appropriated funds and agency resources wisely by firmly grounding in the statute its actions to protect public health and welfare.

Dated: March 28, 2017.

E. Scott Pruitt,
Administrator.

ATTACHMENT C.

UWAG FILING

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March 24, 2017

FILE NO: 29142.080072

By U.S. Mail and E-mail

Docket No. EPA-HQ-OW-2009-0819

Mr. Scott Pruitt, Administrator
Environmental Protection Agency
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 1101A
Washington, DC 20460

Re: **Utility Water Act Group Petition for Reconsideration of EPA's "Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category; Final Rule," 80 Fed. Reg. 67,838 (Nov. 3, 2015)**

Dear Administrator Pruitt:

Enclosed please find the Utility Water Act Group's Petition for Reconsideration of EPA's final rule titled "Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category," 80 Fed. Reg. 67,838 (Nov. 3, 2015). A copy of this petition has also been electronically mailed to the Office of Water Docket Center for filing in Docket No. EPA-HQ-OW-2009-0819.

Please contact me if you have any questions about the Petition.

Sincerely,

Pete Johnson /bhp

Harry M. ("Pete") Johnson III

Enclosure

HUNTON& WILLIAMS

cc by hand delivery and e-mail:
Mr. Michael H. Shapiro

Cc by e-mail:
Jessica O'Donnell, Esq.
Kevin S. Minoli, Esq.
EPA Docket Center

In the United States Environmental Protection Agency

Utility Water Act Group's Petition for Rulemaking to Reconsider and Administratively Stay the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category; Final Rule, 80 Fed. Reg. 67,838-903 (Nov. 3, 2015)

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Counsel for Petitioner Utility Water Act Group

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RELIEF SOUGHT

The Utility Water Act Group[1] ("UWAG") hereby petitions the United States Environmental Protection Agency ("EPA") pursuant to 5 U.S.C. § 553(e) for a rulemaking to reconsider the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category; Final Rule (the "ELG Rule," the "Final Rule," or "Rule").[2] UWAG also seeks an administrative stay of the Rule pursuant to 5 U.S.C. § 705 because the Rule is currently in litigation[3] and "justice so requires."[4] Furthermore, the EPA should take all other administrative

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[1] UWAG is a voluntary, *ad hoc*, non-profit, unincorporated group of 163 individual energy companies and three national trade associations of energy companies: the Edison Electric Institute, the National Rural Electric Cooperative Association, and the American Public Power Association. The individual energy companies operate power plants and other facilities that generate, transmit, and distribute electricity to residential, commercial, industrial, and institutional customers. The Edison Electric Institute is the association of U.S. shareholder-owned energy companies, international affiliates, and industry associates. EEI members serve 220 million Americans in all 50 states, approximately 70 percent of all retail electricity customers in the country. The National Rural Electric Cooperative Association is the association of not-for-profit energy cooperatives supplying central station service through generation, transmission, and distribution of electricity to rural areas of the United States. The American Public Power Association is the national service organization for the more than 2,000 not-for-profit, community-owned electric utilities in the U.S. APPA member utilities serve more than 48 million Americans in 49 states (all but Hawaii), representing 16 percent of the market. UWAG's purpose is to participate on behalf of its members in EPA's rulemakings under the Clean Water Act and in litigation arising from those rulemakings.

[2] Section 553(e) provides that interested persons have "the right to petition for the issuance, amendment, or repeal of a rule."

[3] *Southwestern Elec. Power Co. v. EPA*, et al, No. 15-60821(L) (5th Cir.) (consolidating seven separate Petitions for Review) ("ELG Litigation").

[4] The administrative stay under 5 U.S.C. § 705 should postpone all deadlines in the Rule. The length of the stay should be calculated based on the number of days between the date that the first Petition for Review was filed in a federal court of appeals (November 19, 2015) and the later of the conclusion of judicial review or any further rulemaking undertaken as a result of that litigation or reconsideration undertaken in response to this Petition.

actions that may be necessary to assure the immediate suspension or delay of the Rule's fast-approaching compliance deadlines while EPA works to reconsider and revise, as appropriate, the substantive requirements of the current Rule pursuant to notice and comment rulemaking.

INTRODUCTION

I. Overview of Reasons to Reconsider the Rule

UWAG petitions EPA to reconsider the Rule to address its numerous flaws. Some of those flaws are explained in detail in the pending ELG Litigation and others are demonstrated by new information and circumstances described in this petition. The Rule – which is the product of a settlement between environmental groups and EPA – is inconsistent with the President's regulatory reform agenda reflected in recent Executive Orders.

The Rule affects both the utility and coal industries and also affects the large and small businesses that support and rely upon those industries. It will cause negative impacts on jobs due to the excessive costs of compliance – which were grossly underestimated by EPA – and regulatory burdens forcing plant closures. Those impacts are being, and will be, felt in communities around the country where those industries operate. Reconsideration will enable the Agency to take all of these impacts into account to the full extent allowed by law, as contemplated by recent Executive Orders.

The cost issues are exacerbated by EPA's overly ambitious assumptions about facilities' ability to comply with the limits imposed in the Rule. In fact, in many instances, facilities are not able to meet the limits with the technologies that EPA identified as the "best available technology economically achievable" ("BAT"). Actual costs are, therefore, much higher than EPA predicted. Either plants cannot comply at all or they are being forced to design, test, and try unproven technologies in addition to, or in lieu of, the model technologies in the hope of developing a compliance strategy. The Rule should be reconsidered so that its true costs can be accounted for, as required by the Clean Water Act ("CWA").

It is also undisputed that the Rule fails to consider fully the cumulative impacts of the Rule and the other contemporaneous major rulemakings affecting these industries. The cumulative cost of all of those rules affecting the utility and coal industries is staggering. In addition to the issue of costs, the respective rules' compliance deadlines were not harmonized to minimize or eliminate their conflicts. In the ELG rulemaking, EPA did not take public comment on the impacts of all of the rules combined. Undoubtedly, the industry's views could have been – and can be – informative. Consistent with the Administration's regulatory reform agenda, reconsideration of the ELG Rule will allow EPA to

consider all of these major rules collectively – and not through a piecemeal approach – with the benefit of public input.[5]

In addition, the Rule violated fundamental principles of public participation in rulemakings – transparency and reproducibility. Never before has EPA promulgated a rule while shielding such vast amounts of its basic work product from review. Here, EPA invoked the concept of Confidential Business Information ("CBI") to withhold facts, methods, and analyses on which its conclusions depend. To an unprecedented extent, the Agency withheld fundamental information purporting to justify the Rule. Among the information claimed as CBI, EPA designated as CBI thousands of pages of the record that demonstrably were not entitled to confidential treatment.

Compounding the lack of transparency and reproducibility, EPA repeatedly responded to public comments by citing key information that the Agency withheld from the public record. Directing commenters to information that is unavailable is effectively no response at all. Reconsideration will allow EPA to fix these problems.

[5] Moreover, since promulgation of the ELG Rule, circumstances have changed for the Clean Power Plan ("CPP") and the Coal Combustion Residuals ("CCR") Rule. Now, it is unclear the extent to which the CPP Rule will take effect or what changes to the CCR Rule will be made since portions of it are the subject of a new rulemaking. These significant changes in circumstances alone warrant reconsideration of the ELG Rule.

EPA also promulgated the Rule without gathering necessary data on certain types of plants covered by the Rule. EPA gathered no data whatsoever on the treatability of selenium and nitrates in Flue Gas Desulfurization Wastewater ("FGDW") produced by plants burning subbituminous coals, such as Powder River Basin ("PRB") coal, or lignite. These plants comprise upwards of 25% of the industry. Likewise, EPA set limits for modern Integrated Gasification Combined-Cycle ("IGCC") plants without gathering data relevant to those plants. Lacking data or any other credible evaluation of the likely performance and cost, EPA had no reasonable basis for concluding that those plants can comply with the limits imposed by the Rule. The Rule should be re-opened and reconsidered so that the applicable limits can be based on appropriate data.

Actual experience is confirming that the FGD limits cannot be met at all facilities. A recent pilot study using the biological treatment technology EPA selected as BAT has been conducted at a PRB-burning plant, and indications are that the data show the selenium limits cannot be met. Other facilities are finding that technologies beyond those considered by EPA may be necessary to meet the FGD limits. Similarly, data from a state-of-the-art IGCC plant prove that it cannot meet the Rule's wastewater limits.

Finally, EPA used patently obsolete or otherwise unreliable data in its analyses supporting its "zero discharge" requirement for bottom ash transport

water ("BATW"). In violation of both the letter and spirit of the Data Quality Act[6] and its implementing regulations, EPA evaluated BATW with poor quality characterization data, some of which was decades old. EPA used the data for several important purposes, including calculating a cost-effectiveness ratio that allows the Agency to compare the ELG Rule to other effluent guidelines rules. Obviously, if the underlying BATW characterization data are flawed, then the cost-effectiveness analysis is also flawed. Although EPA insisted a cost-effectiveness analysis is not required by the CWA, the Agency generated these analyses for all recent effluent guidelines rules, and it had an obligation to base its analysis on acceptable data. This it did not do.

All of these issues, both together and individually, warrant reconsideration of the ELG Rule to promote the President's regulatory reform agenda.

II. The Policies Established by Executive Orders on Regulatory Reform

The President has established an agenda mandating regulatory reform.[7] Reconsideration of the Rule is essential to fulfill the policies expressed in the Regulatory Reform Order.

[6] Pub. L. 106-554, § 1(a)(3), Title V, § 515 (Dec. 21, 2000) (also sometimes known as "Information Quality Act").

[7] *See* Executive Order 13777*, Enforcing the Regulatory Reform Agenda* (Feb. 24, 2017), 82 Fed. Reg. 12,285 (Mar. 1, 2017) ("Regulatory Reform Order").

The Regulatory Reform Order directs agencies to create Task Forces to "evaluate existing regulations … and make recommendations to the agency head regarding their repeal, replacement, or modification, consistent with applicable law."[8] The Task Forces have until May 25, 2017, to make their recommendations.[9] The Rule should be chief among the EPA Task Force's recommendations, for all the reasons set forth in this Petition.

The Task Forces are charged *at a minimum* with identifying regulations that adversely affect jobs, that impose costs exceeding benefits, or that rely on information and methods that are not transparent and reproducible.[10] The Rule

[8] *Id.* at 12,286.

[9] By imposing a rigorous deadline on the Task Force, the Regulatory Reform Order recognizes the urgency of addressing overly burdensome regulations. Ultimately, it is the customers of the electric utility industry who suffer the economic burden of exorbitantly expensive rules. This burden is exacerbated when important issues regarding those rules go unresolved for extended periods of time (*e.g.*, the Mercury and Air Toxics rule). Uncertainty also contributes to potential instability in energy delivery. Thus, in the spirit of the Regulatory Reform Order, the Agency should move expeditiously to reconsider and revise the Rule while suspending its deadlines in the meanwhile.

[10] *Id.* § 3(d). The Order reads: "At a minimum, each Regulatory Reform Task Force shall attempt to identify regulations that:

> (i) eliminate jobs, or inhibit job creation; …
>
> (iii) impose costs that exceed benefits; … [or]
>
> (v) are inconsistent with the requirements of section 515 of the Treasury and General Government Appropriations Act, 2001 (44 U.S.C. 3516 note), or the guidance issued pursuant to that provision, in particular those regulations that rely in whole or in part on data, information, or methods that are not publicly available or that are insufficiently transparent to meet the standard for reproducibility;..."

here meets *all three* of these criteria, as explained in more detail in the body of this Petition.[11]

Moreover, this Petition for Reconsideration satisfies another mandatory element of the Regulatory Reform Order – consultation with "entities significantly affected" by the Rule.[12] The Order directs that the Task Forces "shall seek input and other assistance" from stakeholders in identifying regulations with adverse effects:

> In performing the evaluation described in subsection (d) of this section, each Regulatory Reform Task Force shall seek input and other assistance, as permitted by law, from entities significantly affected by Federal regulations, including State, local, and tribal governments, small businesses, consumers, non-governmental organizations, and trade associations.[13]

Finally, the Regulatory Reform Order also incorporates fundamental principles from earlier Executive Orders that likewise support reconsideration of the Rule. For instance, agencies must consider the cumulative costs of regulations on businesses and communities:

> Each agency shall tailor its regulations to impose the least burden on society, including individuals, businesses of differing sizes, and other

---

[11] As to the second criterion (costs exceeding benefits), EPA's cost-benefit analysis was based so heavily on flawed or unavailable data that a full evaluation of the Rule's true costs and benefits is effectively impossible based on the current record. Thus, a primary focus on reconsideration should be to develop a record that will allow the Agency to determine whether the benefits indeed outweigh the costs of a new rule.

[12] *Id.* § 3(e).

[13] *Id.*

> entities (including small communities and governmental entities), consistent with obtaining the regulatory objectives, *taking into account, among other things, and to the extent practicable, the costs of cumulative regulations*.[14]

As detailed later in this Petition, the Rule fails to consider accurately the cumulative costs of EPA's major rules affecting the utility industry, the coal industry, and the communities depending on them.

In addition to the Regulatory Reform Order, the Rule also should be reconsidered as part of the Agency's compliance with the Executive Order 13771, popularly known as the "Two-for-One Order."[15] In addition to its other directives, the Two-for-One Order requires agencies to achieve a net incremental regulatory cost of zero in Fiscal 2017.[16] The costs of new regulations during the current fiscal year are offset by costs eliminated from existing regulations: "incremental costs associated with new regulations shall, to the extent permitted by law, be offset by the elimination of existing costs associated with at least two prior regulations."[17]

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[14] Executive Order 12866, *Regulatory Planning and Review* § 1(b)(11) (Sept. 30, 1993), 58 Fed. Reg. 51,735, 51,736 (Oct. 4, 1993) (emphasis added) (incorporated by reference in Regulatory Reform Order § 2(a)(ii)).

[15] *Executive Order 13771, Reducing Regulation and Controlling Regulatory Costs* (Jan. 30, 2017), 82 Fed. Reg. 9339 (Feb. 3, 2017).

[16] "For fiscal year 2017, which is in progress, the heads of all agencies are directed that the total incremental cost of all new regulations, including repealed regulations, to be finalized this year shall be no greater than zero,..." *Id.* § 2(b).

[17] *Id.* § 2(c).

By reconsidering the Rule and taking its costs properly into account when promulgating a revised ELG rule, EPA can discharge this obligation.

In carrying out its duties under the Regulatory Reform Order, the Agency must comply with the Administrative Procedure Act ("APA") and other applicable law.[18] Granting this Petition would enable EPA to promote the express policy of the Two-for-One Order consistent with the APA.

BACKGROUND ON RULE AND PENDING ELG LITIGATION

I. The Consent Decree Leading Up to the Final Rule

The ELG Rule is the product of a lawsuit. On September 14, 2009, the EPA Administrator received a 60-day notice of intent from the Environmental Integrity Project, which threatened to sue EPA for not revising the steam electric effluent limitations guidelines ("ELGs"). The very next day, EPA announced plans to revise the guidelines.[19] The next month, EPA released a "final detailed report" on its investigation of the industry for possible ELG revision.[20]

On November 8, 2010, Defenders of Wildlife and Sierra Club sued EPA and asked the court to set a judicial schedule for the rulemaking. But the plaintiffs had

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[18] *Id.*

[19] Press Release, EPA, *EPA Expects to Revise Rules for Wastewater Discharges from Power Plants* (Sept. 15, 2009).

[20] EPA, *Steam Electric Power Generating Point Source Category: Final Detailed Study Report,* EPA-821-R-09-008 (Oct. 2009), EPA-HQ-OW-2009-0819-0004 ("Final Detailed Study").

already settled with EPA. That same day, EPA and the environmental organizations jointly presented a Consent Decree to the court. As part of the settlement, EPA agreed to pay the plaintiffs $40,000 for the costs of negotiating, drafting, and filing the consent decree.[21] Thus, the rulemaking proceeded pursuant to a schedule imposed by a court order agreed to by environmental organizations and EPA without input from the industry and other affected stakeholders. Nonetheless, whenever possible – as during the comment periods on EPA's information collection request for the Rule – the industry urged EPA to collect representative data and provided recommendations for doing so.[22]

[21] UWAG moved to intervene in the litigation, asserting that the district court did not have subject matter jurisdiction over the matter because the CWA by its terms does not require EPA to revise ELGs by a date certain, instead requiring only that the Agency periodically review those guidelines – a duty that the facts pled showed EPA had discharged. The court denied UWAG's motion to intervene. *See Defenders of Wildlife v. Jackson,* 284 F.R.D. 1 (D.D.C. 2012). On appeal, the United States Court of Appeals of the D.C. Circuit found that UWAG lacked standing to challenge the rulemaking negotiated between EPA and environmental groups. *Defenders of Wildlife v. Perciaseppe,* 714 F.3d 1317 (D.C. Cir. 2013).

[22] *See, e.g.,* UWAG Comments on EPA's Draft Data Request (Mar. 23, 2007), EPA-HQ-OW-2009-0819-5450-Att 079 at 6 (commenting that EPA's plan to collect wastewater samples from 5-6 facilities would result in a dataset too small for valid correlations because even two plants burning the same coal and using similar technologies could have different wastewater quality due to factors such as boiler design, coal variations within the same coal rank, and size of treatment equipment or settling pond). *See also* UWAG Comments on Questionnaire for the Steam Electric Power Generating Effluent Guidelines, EPA ICR No. 2368.01 (Apr. 8, 2010), EPA-HQ-OW-2009-0819-0052 at 14-21 (questioning the practical utility of the ICR's focus on CCRs, when the proposed CCR rule was soon to be released and would radically change management of CCRs).

II. Promulgation of the Final Rule

EPA proposed the Rule on June 7, 2013.[23] The public comment period lasted until September 20, 2013. Between the end of the comment period and the promulgation of the Final Rule, EPA promulgated a suite of other major rules directed at coal-fired electric generating units. These included the Cooling Water Intake Structures ("CWIS") rule for existing facilities,[24] the CCR rule,[25] the CPP rule,[26] and the Carbon Pollution Standard for New Power Plants rule ("CPS").[27] EPA estimates the annualized total social costs[28] of the ELG and CWIS rules will be $471.2-479.5 million (2013$) and $274.9 million (2011$), respectively.[29] The Agency estimates the total annualized incremental costs of the CCR rule will be $509-735 million (2013$) (over 100 years).[30] The CPP is in a class by itself, with EPA predicting annual illustrative compliance costs of $1.4-2.5 billion (2020), $1.0-3.0 billion (2025), and $5.1-8.4 billion (2050) (all in 2011$).[31] Many of

[23] 78 Fed. Reg. 34,432 (June 7, 2013).

[24] 79 Fed. Reg. 48,300 (Aug. 15, 2014).

[25] 80 Fed. Reg. 21,302 (Apr. 17, 2015).

[26] 80 Fed. Reg. 64,662 (Oct. 23, 2015).

[27] 80 Fed. Reg. 64,510 (Oct. 23, 2015).

[28] "Total social costs" includes compliance costs to facilities and government administrative costs.

[29] 80 Fed. Reg. at 67,865 (ELG Rule); 79 Fed. Reg. at 48,415 (CWIS Rule).

[30] 80 Fed. Reg. at 21,309.

[31] 80 Fed. Reg. at 64,680-81.

those costs have been challenged as underestimates. In any event, it must be remembered that, ultimately, these billions in costs will be borne by utilities' ratepayers.

The Final ELG Rule was published on November 3, 2015.[32]

III. The Litigation Challenging the ELG Rule

Various petitioners filed seven petitions for judicial review of the Rule in multiple courts. The petitions were consolidated in the United States Court of Appeals for the Fifth Circuit.[33] Three separate groups of Petitioners (including UWAG as an industry petitioner) filed their opening briefs on December 5, 2016. EPA's brief is due May 4, 2017.[34]

IV. UWAG's Attempts to Obtain a Complete Record from EPA

When it promulgated the Final Rule, EPA improperly designated and withheld numerous documents in whole or in part on grounds of CBI. UWAG tried unsuccessfully to resolve these issues with EPA long before EPA finalized the administrative record and filed the certified index in the ELG Litigation. In a letter dated February 17, 2016, counsel for UWAG and others wrote to counsel for

[32] 80 Fed. Reg. 67,838-903 (Nov. 3, 2015).

[33] Consolidation Order, Judicial Panel on Multidistrict Litigation, ELG Litigation, ECF No. 00513301255 (Dec. 9, 2015).

[34] EPA's brief had been due April 4, 2017. On March 20, 2017, EPA filed a Motion to stay the briefing schedule for 30 days due to DOJ's unexpected reassignment of the case to new counsel. The Court granted the extension on March 21. However, the Rule itself is not stayed during this period. Hence, this Petition seeks an administrative stay of the Rule and/or other action to suspend the Rule's deadlines.

EPA seeking the disclosure of "EPA's methodologies and analyses supporting the ELG Rule that have been improperly withheld as … CBI," and additional "non-CBI information … improperly withheld from the public record."[35] In response, EPA refused to produce any additional information for the public record.[36] In fact, EPA apparently could not find a single *sentence or word* of additional information that could be disclosed despite clear evidence that the broad use of CBI designations was inappropriate.

Because the withheld information was critical to understanding the basis for the Rule, UWAG and others industry members thereafter filed a joint motion to complete the record in the Court of Appeals. The motion asked simply for EPA to reconsider whether the information withheld as CBI in fact qualified as CBI and for EPA to produce its methods and analyses in a non-CBI format for the public and the Court. EPA continued to resist the requests. The motion is still pending and is to be decided by the Court in conjunction with the merits of the appeal.

REASONS TO RECONSIDER THE RULE

I. EPA's Sweeping Use of CBI To Withhold Its Methods and Analyses Violated Principles of Transparency

EPA withheld its most basic data, methodologies, and analyses from the public record under the guise of CBI. This unprecedented lack of openness is

[35] Exhibit 1 at 1.

[36] Exhibit 2.

inconsistent with the policies articulated in Regulatory Reform Order for transparency and reproducibility. EPA has a duty to disclose the information supporting the Rule and to fully explain its course of inquiry, analysis, and reasoning. EPA has at its disposal tools that allow it to protect CBI, if necessary, yet EPA used none of them here, instead withholding at least 1,194 documents in whole or in part.

A. The Overreliance on CBI Is Inconsistent With the Data Quality Act and Agency Guidelines on Transparency and Reproducibility

In 2001, Congress enacted Public Law 106-554 ("Data Quality Act") directing OMB to issue guidance for ensuring the quality of data disseminated by Federal agencies by maximizing the objectivity, utility, and integrity of the information collected. OMB responded to the Data Quality Act by issuing guidelines for data quality and directing agencies to issue their own guidelines.[37] In turn, EPA issued its guidelines.[38] The Regulatory Reform Order expressly requires Task Forces to identify regulations that are inconsistent with the Data Quality Act or the guidance issued pursuant to it, "*in particular those regulations that rely in whole or in part on data, information, or methods that are not publicly*

[37] OMB, *Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies, Republication*, 67 Fed. Reg. 8452 (Feb. 22, 2002) ("OMB Data Quality Guidelines").

[38] EPA, *Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility and Integrity of Information Disseminated by the Environmental Protection Agency*, EPA/260R-02-008 (Oct. 2002) ("EPA Data Quality Guidelines").

available or that are insufficiently transparent to meet the standard for reproducibility."[39] The Rule meets this definition squarely.

According to the OMB Data Quality Guidelines, agency information must satisfy the "objectivity" criterion of the Data Quality Act, meaning "a focus on ensuring accurate, reliable, and unbiased information."[40] EPA describes the objectivity criterion similarly: "'Objectivity' focuses on whether the disseminated information …, as a matter of substance, is accurate, reliable, and unbiased."[41]

Because the record in a major rulemaking is considered to be an "influential" class of information, EPA expressly recognizes that such information is subject to a heightened standard of quality.[42] This "higher degree of quality" requires even greater "transparency about data and methods" to "facilitate the reproducibility of such information…."[43] Indeed, it is "important that analytic results for influential information have a higher degree of transparency…."[44]

EPA's conclusions in the Rule, as shown below, do not meet the definition of "reproducibility" as a result of the heavy use of CBI:

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[39] Regulatory Reform Order § 3(d)(v), 82 Fed. Reg. at 12,286 (emphasis added).

[40] OMB Data Quality Guidelines at 8459.

[41] EPA Data Quality Guidelines at 15.

[42] *Id.* at 20 ("should adhere to a rigorous standard of quality").

[43] *Id.* at 20-21.

[44] *Id.* at 21.

> "Reproducibility" means that the information is capable of being substantially reproduced, subject to an acceptable degree of imprecision.… With respect to analytic results, "capable of being substantially reproduced" means that independent analysis of the original or supporting data using identical methods would generate similar analytic results, subject to an acceptable degree of imprecision or error.[45]

Likewise, EPA's conclusions in the Rule do not meet its own guidelines for reproducibility:

> In addition, these Guidelines provide for the use of especially rigorous "robustness checks" and documentation of what checks were undertaken. *These steps, along with transparency about the sources of data used, various assumptions employed, analytic methods applied, and statistical procedures employed should assure that analytic results are "capable of being substantially reproduced."*[46]

Protections for CBI do not automatically dispense with the requirements of reproducibility. The OMB Data Quality Guidelines provide for situations where data cannot be released for valid reasons, and the guidelines impose alternative requirements:

> i. Making the data and methods publicly available will assist in determining whether analytic results are reproducible. However, the objectivity standard does not override other compelling interests such as privacy, trade secrets, intellectual property, and other confidentiality protections.
>
> ii. In situations where public access to data and methods will not occur due to other compelling interests, agencies shall apply especially rigorous robustness checks to analytic results and document

[45] OMB Data Quality Guidelines at 8460.

[46] EPA Data Quality Guidelines, Appendix A at 47 (emphasis added).

> what checks were undertaken. *Agency guidelines shall, however, in all cases, require a disclosure of the specific data sources that have been used and the specific quantitative methods and assumptions that have been employed.*[47]

These heightened standards of transparency and reproducibility lay out a clear analytical process for each individual assertion of CBI by EPA. Is the information in fact CBI? If not, EPA must make it available to the public with the Rule. If the information is CBI, then EPA must perform "especially rigorous robustness checks," disclose the sources of information, and disclose the specific quantitative methods and assumptions used.

The record supporting the Rule did not meet the requirements for reproducibility, regardless of whether EPA's individual claims of CBI were valid. In many instances documented below and in the ELG Litigation,[48] the CBI claims were specious on their face. In other instances where the CBI designation may or may not be warranted, there is scant evidence of "robustness checks," documentation of those checks, or other assurances of reproducibility, such as sources of data, various assumptions applied, and analytic methods applied. Thus, the industry and the public have been unable to evaluate the Rule fully.

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[47] OMB Data Quality Guidelines at 8460 (emphasis added). *See also* EPA Data Quality Guidelines at 21 (implementing same).

[48] *See* Industry Petitioners' Joint Motion to Complete the Administrative Record, ELG Litigation (June 22, 2016), ECF No. 00513560826 ("Motion to Complete Record"); Original Brief of Industry Petitioners, ELG Litigation (Dec. 5, 2016), ECF No. 00513783903 at 24-51.

Reconsideration is appropriate to allow meaningful public participation consistent with the policies of the Regulatory Reform Order.

B. EPA Can Make the Relevant Information Available Without Compromising CBI

EPA has available a variety of tools to present facts and analyses on which it relied, while at the same time protecting CBI. It has used those tools in many other effluent guidelines rulemakings.[49] EPA could, for instance, produce ranges of values, graphs, cost formulas or curves, discussions, or other analyses, as appropriate, to satisfy its obligations to present the "whole record" for review, including its methodologies and analyses, without disclosing CBI.[50]

In addition, EPA could have simply taken the time to collect more data that are not CBI. It could have supplemented the CBI information with information from other sources or consultants who would not assert CBI. Likewise, EPA could have conducted or commissioned its own studies to independently verify the information claimed as CBI. Reconsideration would allow this.

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[49] *See, e.g.*, EPA, *Development Document for Final Effluent Limitations Guidelines and Standards for the Iron and Steel Manufacturing Point Source Category* (Apr. 2002), at 1-9, 14-3–14-6 (aggregating certain data in the public record and masking facility identities) (available at http://www.epa.gov/eg/iron-and-steel-manufacturing-effluent-guidelines-documents) (last accessed Dec. 2, 2016).

[50] *See NRDC v. Thomas*, 805 F.2d 410, 418 n.13 (D.C. Cir. 1986).

C. EPA Has Not Been Transparent About the Cost or Performance of BAT for FGD Wastewater or Bottom Ash Transport Water

Congress has limited EPA's discretion in the selection of BAT by identifying specific factors the Agency must consider.[51] Because BAT must be "economically achievable," one such factor EPA must consider is cost.[52] The cost of regulations is also a policy priority under the Regulatory Reform Order. The CWA further requires EPA to consider the performance of the technology at reducing pollutants.[53] Performance and cost go hand-in-hand, as improving performance may require adding more technology, which then increases cost. The interplay of cost and performance is also a point of emphasis in the Regulatory Reform Order, which mandates a focus on cost-benefit analyses.

EPA bears the burden of demonstrating that it has considered the cost of the technology it chose as BAT and showing that the technology, at the cost EPA projected, will achieve the performance standards it set. Here, EPA's explanation of its performance and cost estimates for the technologies it chose as BAT for FGDW and BATW were general conclusions with crucial detail missing.

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[51] 33 U.S.C. § 1314(b)(2)(B).

[52] *Id.* ("Factors relating to the assessment of best available technology shall take into account … the cost of achieving such effluent reduction….").

[53] *Id.* at § 1314(b)(2)(A); *see E. I. du Pont de Nemours & Co. v. Train*, 430 U.S. 112, 131 (1977).

At the proposed rule stage, EPA discussed these technologies and its methodologies and analyses for evaluating their cost. EPA provided significantly more detail about its methodologies when it published the proposed ELG rule for public comment.[54] When EPA then took comments from the public, it learned – and in some instances even acknowledged – that its performance and cost analyses had shortcomings, overstating performance and understating cost.[55] This meant that EPA was required to collect additional information, make changes, and explain the changes in the Final Rule.

Transparency in the Final Rule was even more vital because EPA's errors at proposal were not trivial. For example, comments on the proposed Rule showed that, industry-wide, the cost of installing biological treatment alone for FGDW would nearly exceed EPA's estimated costs for adding both biological treatment and chemical precipitation treatment.[56] Indeed, one company's comments showed that the cost of installing EPA's selected FGDW treatment technology at its plants would be nearly *seven times higher* than EPA had estimated for a subset of those

[54] *See, e.g.*, Index.2292.6-88–6-105. [This Petition uses the same convention for citations to EPA's administrative record as in the Litigation by referring to the Certified Index. *See* Original Brief of Industry Petitioners at 5 n.11.]

[55] *See, e.g.*, Index.10081.6-665 (EPA agreeing with commenters who indicated that EPA should consider engineering-related costs and construction timelines associated with closed-loop bottom ash handling retrofits).

[56] *See* Index.8939.A-25 (finding incremental biological costs of over $2 billion).

same plants.[57] Similarly, the Electric Power Research Institute ("EPRI")[58] was unable to reproduce EPA's conclusions regarding the ability of biological treatment to remove pollutants from FGDW.[59] Based on EPRI's calculations, EPA had overestimated pollutant removals for biological treatment by a factor of eight.[60]

EPA's cost estimate for achieving no-discharge of BATW was likewise off by a wide margin. For example, after identifying a host of errors and omissions, EPRI calculated total industry capital costs for conversion from wet to dry bottom ash handling, just for plants with a nameplate generating capacity above 400 megawatts, to be over $6 billion and $452 million in annual O&M costs – more than double EPA's estimate.[61]

1. EPA Has Withheld Key Information Showing How the Agency Responded to Criticisms of Its Original Analyses

EPA responded to these comments by soliciting revised information from financially interested vendors. These are the same vendors whose technology was at issue and who had incentives to tout their systems as effective and reasonably

[57] Index.8689.160 (Southern Company).

[58] EPRI is an independent, nonprofit organization that conducts research and development relating to the generation, delivery, and use of electricity.

[59] Index.8939.4-2.

[60] *Id.* at 4-1.

[61] Index.8939.8-2.

priced. Much of the revised information – *and how EPA incorporated it into the final analyses* – was withheld. Thus, the public cannot determine whether EPA in fact corrected the original errors or whether the revised analyses are themselves appropriate. This flies in the face of the APA and the directives of the Regulatory Reform Order.

As Industry Petitioners have described at length, EPA's contacts with vendors demonstrate how EPA consciously chose to conceal the substance of its final cost analysis.[62] EPA prepared follow-up questions for one vendor "to clarify whether specific cost elements [identified by commenters] are included or not included in the cost estimates provided in previous correspondence," among other things.[63] The vendor responded to these questions, but that information has been withheld from the public record.[64]

Notes of subsequent meetings and correspondence between EPA and the vendor are similarly missing from the public record, nearly always in their entirety.[65] These inaccessible documents go to the heart of how EPA addressed the cost issue.

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[62] *See* Original Brief of Industry Petitioners at 30-32, 39-40.

[63] Post Proposal Questions for GE_for EPA Review, Index.11564.3.

[64] *See* CBI_GE Response to Post Proposal Questions, Index.11680.

[65] *See* Original Brief of Industry Petitioners at 30-32, 39-40.

2. In the Final Rule, EPA Hid Cost and Effectiveness Data, Methodologies, and Analyses Behind CBI

a. Cost

Using CBI as a pretext, EPA provided only its bare conclusions in the public record regarding many of its cost analyses. The Agency has not provided supporting detail for those analyses (anonymized or otherwise). Despite comments showing that EPA had omitted or grossly underestimated various costs for the proposed rule and despite the fact that EPA *added* new technology requirements, these final costs inexplicably *decreased* on a per-plant basis for FGDW. The average capital cost per plant went from just over $21.5 million for the Proposed Rule to approximately $20.5 million for the Final Rule.[66] And the average annual O&M costs went from approximately $2.2 million to approximately $1.4 million.[67]

EPA's revised cost figures cry out for explanation. Yet, EPA suggests only that it considered public comments and changed its analysis "where appropriate," but without ever explaining *how*.[68] This is not transparency, and it certainly eliminates any opportunity for reproducibility.

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[66] *Compare* Index.2920.9-28 *with* Index.12840.9-32.

[67] *Id.* (averages were calculated by dividing total industry cost by number of plants).

[68] *See, e.g.,* Index.12840.3-20 ("EPA evaluated public comments to identify plant-specific operation and flow data and, where appropriate, used this information to revise estimates of compliance costs and pollutant removals for those facilities….").

Despite the requirement to explain what it did, EPA withheld the underlying data, methodologies, and analyses under the guise of CBI. For example, they are missing from EPA's *Final Sanitized Steam Electric Incremental Costs and Pollutant Loadings Report* ("Final ICPR"), which EPA points to as "describ[ing] the methodologies used to estimate plant-specific compliance costs … associated with installing and operating the various technologies and practices that make up the regulatory options considered by EPA to revise the existing ELGs."[69] Unquestionably, this document was central to EPA's development of the Final Rule, yet information necessary to reproduce EPA's results is absent.

The Final ICPR is the only document that described EPA's consideration of costs and pollutant removals in full. The Final Technical Development Document[70] referred directly to the ICPR for detailed explanations of EPA's methodology.[71] Despite EPA's express reliance on this key document, the referenced subsections were redacted *in their entirety*. Again, this flies in the face of transparency and reproducibility.

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[69] Index.12134.1-1.

[70] EPA, *Technical Development Document for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category*, EPA-821-R-15-007 (Sept. 2015), EPA-HQ-OW-2009-0819-6432 ("TDD"),

[71] *See, e.g.,* Index.12840.9-25 (indirect capital costs methodology).

In fact, EPA withheld hundreds of pages of information from the Final ICPR as CBI.[72] The table of contents revealed the titles of the missing sections and subsections, and those titles made clear the vital nature of the withheld information.[73] In Section 5 alone, one can see that basic subject matter about cost was redacted:[74]

[72] *See* Index.12134 (un-paginated placeholder between 4-35 and 9-1, noting that Sections 5, 6, 7, and 8 "have been removed from this document").

[73] *See id.* at ii-vii.

[74] *Id.* at ii-iii.

According to its title, the missing Section 5 explains EPA's "General Methodology, Terminology, and Common Cost Elements." The missing subsections provided the "General Cost Methodology and Terminology" and other more specific cost methodologies, as well as the technologies evaluated.

The same is true for Sections 6 through 8. These sections laid out EPA's methodologies for analyzing costs and technologies for treating FGDW, fly ash

transport water, and BATW.[75] EPA redacted *all* of these sections and subsections. Under the pretext of CBI, EPA withheld over 250 pages in the Final ICPR.

While these sections or subsections might contain *some* CBI, the underlying methodologies themselves are necessary to understanding what EPA did and why. These missing pages are critical to determining whether EPA's promulgation of the Final Rule was reasonable. It is impossible to reproduce EPA's cost findings without the basic details on the methodology.

b. Effectiveness of BAT Technologies

In the Final Rule, EPA claimed that "biological treatment [is] well-demonstrated" technology for the treatment of FGDW.[76] But the public record hardly supports such an overarching conclusion. Nothing in the public record demonstrates that biological treatment can treat all of the industry's FGDW effectively.

EPA focused on a combination of two treatment systems for FGDW: chemical precipitation treatment (for mercury and arsenic) followed by biological treatment (for selenium and nitrate/nitrite).[77] These treatment systems are complex, multi-component technologies that must be designed and sized to treat a

[75] *Id.* at iii-vii (Section 6, 7, and 8 entitled "FGD Wastewater Cost Methodology," "Fly Ash Transport Water Cost Methodology," and "Bottom Ash Transport Water Cost Methodology," respectively).

[76] 80 Fed. Reg. at 67,850.

[77] Proposed Rule, 78 Fed. Reg. at 34,458 (Table VIII-1).

specific mix of pollutants, in terms of pollutant type, load, and distribution.[78] The use of biological treatment for FGDW treatment – and particularly for removal of selenium – is a relatively new innovation. The complexity and variability of FGDW make it difficult to treat using biological processes, which depend on stable conditions to maintain the microorganisms on which treatment depends. For instance, changes in temperature or in wastewater constituents, such as percentage of solids or an increase in chlorides, can cause system upsets.[79]

As explained in detail in the ELG Litigation, EPA's reliance on CBI prevented any demonstration that biological treatment is effective when a plant's FGDW contains high amounts of chloride.[80] Furthermore, EPA withheld correspondence with vendors that may undermine claims regarding the general efficacy of biological treatment. In one striking document, EPA redacted nearly everything of value as CBI regarding these issues.[81] The document suggested there are difficulties or, at the very least, important variables affecting the system's capabilities:[82]

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[78] Index.2920.7-4–7-13 (EPA's description of chemical precipitation and biological treatment technologies).

[79] *See, e.g.,* Index.9123.21-23.

[80] *See* Original Brief of Industry Petitioners at 38-39.

[81] Index.11999.

[82] *Id.* at 1-2 (all redactions in original).

- "GE reports [Redacted]. While GE has [Redacted]. GE is [Redacted] to control oxidants and ORP."
- "GE reports that thus far, any issues related to high oxidants or [Redacted]. GE believes these issues with [Redacted]."
- "The ABMet™ system can process wastewater with [Redacted] nitrate concentrations. [Redacted] with a membrane bioreactor (MBR) or stirred tank system with MBR to [Redacted] prior to treatment with the ABMet™ system. Alternatively, the ABMet™ system can be designed to [Redacted]."
- "EPA inquired about any existing biological treatment systems having operational issues. GE reported [Redacted]."
- "GE indicated [Redacted]."
- "EPA inquired about the mechanism used to remove selenium from the backwash stream. GE noted that [Redacted]."

Given these extreme redactions, EPA's analysis was not transparent, and its conclusions are not reproducible.

D. EPA has Not Documented Any "Especially Rigorous Robustness Checks" on Information Supplied by Third-Party Vendors With a Financial Stake in the Rule

As a general matter, EPA's duty to perform "robustness checks" is heightened when it relies on the expertise of third parties with a financial stake in the Agency's action. According to both the OMB Data Quality Guidelines and the EPA Data Quality Guidelines, a fundamental criterion for the "quality" of information is whether the information is "unbiased."[83] If EPA chooses to rely on

[83] OMB Data Quality Guidelines at 8459; EPA Data Quality Guidelines at 15.

self-interested outside vendors, the record must establish that the Agency critically analyzed the vendors' information due to the risk of bias. "An agency may not … reflexively rubber stamp information prepared by others."[84]

Here, EPA solicited information about the cost and performance of treatment technologies from the very vendors that would benefit financially from EPA's designation of their technologies as BAT. Because EPA's verification of vendor-supplied information is not available anywhere in the record, EPA did not satisfy its obligation to establish *reasonable* reliance on that information.

E. EPA's Lack of Transparency Is Evident in Its Responses to Public Comments That Cite Information Withheld from the Public Record

It is axiomatic that responses to public comments should advance the regulatory goals of transparency and reproducibility. Yet, for the ELG Rule, EPA's responses to comments demonstrate its failure to meet these goals. In its responses to comments, EPA referenced documents withheld, in whole or part, nearly 300 times under the pretext of CBI.[85] At least 53 of those references were to sections removed from the Final ICPR, which contains EPA's analysis of costs associated with the various technologies EPA considered and ultimately selected as BAT – 5 times to Section 5 (General Methodology, Terminology, and Common

[84] *Coliseum Square Ass'n, Inc. v. Jackson*, 465 F.3d 215, 236 (5th Cir. 2006), *cert. denied*, 552 U.S. 810 (2007) (internal quotation omitted).

[85] EPA cited documents entirely withheld 165 times and partially withheld 112 times.

Cost Elements), 30 times to Section 6 (FGD Wastewater Cost Methodology), 4 times to Section 7 (Fly Ash Transport Water Cost Methodology), and 14 times to Section 8 (Bottom Ash Transport Water Cost Methodology). Many of the "responses" corresponded to a public comment about an issue EPA is statutorily required to consider.[86] Thus, they were of central significance to the Final Rule.

Without the underlying documents referenced by EPA in its responses, the "responses" are reduced to summary conclusions. The responses cannot be reproduced or fully reviewed and, therefore, are inadequate. Referring commenters to unavailable CBI is effectively no response at all.

Beyond the policies of the Executive Orders, EPA has a legal duty to respond to public comments.[87] EPA has failed to satisfy either the regulatory policies expressed in the Executive Orders or the bare legal minimum required by the APA. Therefore, the Rule should be re-opened.

II. EPA Did Not Demonstrate That Biological Treatment is Technologically "Available"

A fundamental premise of "good science" and the regulatory reform agenda is that agencies must base regulations on adequate data. Although EPA sampled FGDW at several plants during development of the Rule, the resulting data do not

[86] For several pertinent examples pertaining to the statutory factors of cost, technical achievability, and facility age, *see* Original Brief of Industry Petitioners at 46-51.

[87] *PPG Indus., Inc. v. Costle*, 630 F.2d 462, 466 (6th Cir. 1980). *See* 5 U.S.C. § 553(c) (2015); *Nat'l Wildlife Fed'n v. Costle*, 629 F.2d 118, 134-35 (D.C. Cir. 1980).

capture the full range of FGDW variability across the broader industry as well as within a single facility throughout the year. As industry members emphasized in their comments on the proposed rule, FGDW quality is dependent on numerous factors. Those factors include coal quality, cycles of concentration in the FGD scrubber that impact chloride and other dissolved solids concentrations, residence time within the scrubber, and chloride and magnesium levels in the various reagents (*e.g.*, limestone) used in the scrubber to remove sulfur dioxide from the flue gas. In addition to the variability of FGD wastewater, industry has noted other factors that can affect the performance of biological treatment systems, specifically the FGDW chemistry, including the oxidation-reduction potential, nitrate concentration, and the various forms of selenium, some of which may be less efficiently captured in biological treatment. Other factors include cycling on and off of coal units, which can interfere with a continuous, steady FGD wastewater feed to the system, and temperature swings, which can inhibit the biological reaction rate. All of these factors can contribute to FGD wastewater variability whether the fuel is bituminous, subbituminous or lignite coal, or a blend of coals.

As just one example of this variability, the following sections focus on the differences between FGDW from bituminous and subbituminous plants and how those differences impact system performance. While EPA collected wastewater samples at a subbituminous plant, the plant did not have a biological treatment

system. In fact, *not one* of the subbituminous- or lignite-burning coal plants in EPA's database had biological treatment as part of its FGDW system.[88] Nor were any pilot test data for biological treatment available in the record for such facilities. Therefore, when promulgating the Rule, *the Agency did not demonstrate – and could not demonstrate – the feasibility of biological treatment for 16-25% of all plants (i.e., those burning subbituminous or lignite coal) subject to the new FGD limits*.[89] This was arbitrary, relied on an analysis that is not reproducible, and should be reconsidered.

Additionally, a new pilot study investigating biological treatment at a subbituminous-burning plant appears likely to demonstrate that the plant *cannot meet the FGDW limits using the technology EPA established as BAT*. UWAG is confident that these new data will confirm what industry has been saying all along: FGDW from plants burning subbituminous coal is different from that of plants burning bituminous coal, and the limits the Rule established for FGDW are

[88] The Rule's analytical database includes some data from Hatfield's Ferry, a plant that at the time burned a blend of PRB and Eastern bituminous coal. However, that plant did not have a biological treatment system for its FGD wastewater. *See* Index.1653.1.3-5. It also includes data from We Energies' Pleasant Prairie Plant which burns PRB coal but which also did not have biological treatment. *See* Index.9778.206.

[89] EPA based its estimates of plants burning subbituminous and lignite coals on EPA survey data. The survey collected information through 2009. But at the final rule stage, EPA asserted that, after accounting for "announced retirements," there were no lignite-burning plants discharging FGD wastewater. Index.10078.3-525. However, industry comments demonstrate that several lignite-burning plants are authorized to discharge FGD wastewater. *See* Index.9753.5.

therefore not appropriate. The limits also are not appropriate because plants burning bituminous coal can experience extreme FGDW variability due to a range of factors. EPA should grant this Petition and reconsider these limits based on appropriate and sufficient data that are broad enough to encompass the full range of coal-fired operations.

A. Differences Among Coal Types Have Significant Implications for the Performance and Cost of Biological Treatment

According to EPA, out of 100 plants identified as discharging FGDW in 2009, 15 to 20 plants burn subbituminous coal and 1 to 5 burn lignite.[90] This is important because coals vary greatly not only in their price,[91] availability, and heating value, but also in the air emissions they produce when burned,[92] the applicability and performance of air emissions control technologies,[93] and the characteristics of wastewater resulting from use of those air emissions control

[90] Index.12840.6-5(Table 6-2). EPA also identified 10-15 plants that burn two or more coal types. *Id.* Whether those plants can meet the limits is also in question.

[91] *See, e.g.,* Index.12372.215 (listing coal prices by types – bituminous, subbituminous, lignite, and anthracite – for selected years from 1949-2011).

[92] Different coals contain differing amounts and combinations of pollutants, including sulfur, hydrogen chloride, and mercury, which are important factors for designing and operating air emission technologies and managing the resulting wastewaters. *See* Index.12377.9-12.

[93] EPA has acknowledged differences between electric generating units based on coal types in other rulemakings. In the Mercury and Air Toxics Rule, EPA set different hazardous air pollutant emission standards based on coal ranks. 79 Fed. Reg. 24,073, 24,088 (Apr. 24, 2013).

technologies.[94] None of these facts is disputable. They apply with equal force to plants burning bituminous coal.

Nor can there be any dispute that steam electric units are typically designed to handle a certain coal type or types. A unit designed to burn a subbituminous coal such as PRB coal cannot simply switch to burning bituminous coal. Before any fuel switch, the facility operator would need to consider air pollution controls and permit limitations and operational changes necessary to accommodate the switch. The same is true for lignite plants. Therefore, fuel switching is not the remedy to issues arising from burning a certain variety of coal.

B. The Rule Arbitrarily Ignored the Differences Between FGD Wastewater from Subbituminous Coal and FGD Wastewater from Bituminous Coal

The Rule was based on several mistaken assumptions. Among them, EPA wrongly assumed that subbituminous-burning plants can achieve FGD limits derived using data for plants burning bituminous coals (and limited data at that) because biological treatment systems provide "a mechanism to reduce selenium and nitrate/[nitrite]" and because the selenium and nitrate/nitrite present in FGDW, whether derived from bituminous or subbituminous coal, "is not different."[95] The record refutes this flawed conclusion. The effectiveness and cost of wastewater

[94] Index.47.4-17 (noting pollutant concentrations in FGD scrubber purge vary due to, among other factors, "air pollution control systems operated upstream of the FGD system.").

[95] Index.10080.5-450—5-451.

treatment systems depend on the full pollutant "matrix" – that is, the specific mixture of pollutants as well as their individual characteristics – of the wastewater being treated.

The record demonstrates that FGDW from subbituminous-burning plants is substantially different from FGDW from bituminous-burning plants. The table below summarizes four-day average EPA data for FGDW exiting the chemical precipitation portions of the FGDW treatment systems at Allen and Belews Creek Stations, which burn Eastern bituminous coal, and at Pleasant Prairie Power Plant, which burns PRB coal.[96] The table compares dissolved fractions of constituents after the chemical precipitation system at all three facilities.[97]

For nitrates, the dissolved fraction of Pleasant Prairie's chemical precipitation effluent is more than *8 times* the values for both Allen and Belews Creek. For selenium, Pleasant Prairie's effluent is about *23 times* that of Allen and almost *twice* the Belews Creek value.[98]

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[96] At Belews Creek and Allen, this is a midpoint sample in the wastewater treatment system (chemical precipitation effluent), prior to biological treatment. But at Pleasant Prairie, the sampling point representing chemical precipitation effluent is the end of the FGDW treatment system since it has no biological treatment. Allen and Belews Creek use both chemical precipitation and biological treatment to treat their FGDW (Index.1992.2-2; Index.1954.2-3), while Pleasant Prairie uses a chemical precipitation system (Index.1966.2-3).

[97] *See* Index.1992.4-7–4-10(Table 4-2); Index.1954.4-16–4-18(Tables 4-4,4-5); Index.1966.4-12–4-14(Tables 4-3,4-4).

[98] The record contains additional documentation of the substantial differences in FGD wastewater influent between bituminous and subbituminous plants. *See, e.g.,* EPRI, *Pilot-Scale and Full-Scale Evaluation of Treatment Technologies for the Removal of Mercury and Selenium*

Comparison of 4-Day Average FGDW Treatment After Chemical Precipitation at Allen, Belews Creek, and Pleasant Prairie[99]

Analyte	Unit	4-Day Average Dissolved Effluent, Allen (E. Bituminous)	4-Day Average Dissolved Effluent, Belews Creek (E. Bituminous)	4-Day Average Dissolved Effluent, Pleasant Prairie (PRB)
Aluminum	(ug/l)	NQ[100]	ND	NQ
Arsenic*	(ug/l)	NQ	NQ	4.85
Boron	(ug/l)	58,600	150,000	9,930
Calcium	(ug/l)	1,750,000	3,490,000	639,000
Chloride	(mg/l)	3,300	7,780	1,950
Magnesium	(ug/l)	396,000	738,000	3,560,000
Manganese	(ug/l)	393	NQ	10,800
Mercury	(ng/l)	342	46,200	22.3
Nitrate/Nitrite	(mg/l)	13.3	19.8	160
Selenium	(ug/l)	91.1	1,210	2,080
Sodium	(ug/l)	31,300	48,900	518,000
Sulfate	(mg/l)	1,400	1,380	15,500
TDS	(mg/l)	7,560	20,100	22,400

*The pollutants highlighted are those for which EPA set new BAT limits.

In addition to the pollutants EPA chose to regulate, the values for many pollutants that EPA chose *not* to regulate – but which may affect the efficiency or

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in Flue Gas Desulphurization Water, Index.12102.3-4,3-5,3-8,3-23 (showing much higher selenium and nitrate levels for the subbituminous plant).

[99] Index.1992.4-7–4-10; Index.1954.4-16–4-18; Index.1966.4-12–4-14.

[100] "NQ" means the analyte was measured above the detection limit but below the quantitation limit for all four sampling days. "ND" means the analyte was below the detection limit and could not be quantified.

proper operation of the treatment system – are also quite different. For instance, the 4-day average sulfate level in the Pleasant Prairie influent is more than 11 times that of Allen or Belews Creek. Sulfate levels can affect the operation of the system by causing calcium sulfate scaling, in which mineral deposits build up inside the treatment system's piping and equipment.[101] At Pleasant Prairie, even with lime addition as a pretreatment step, the remaining high sulfate levels necessitate weekly cleaning of the secondary clarifier.[102] Without this regular cleaning, "excessive scale would build up and affect the performance of the clarifier."[103] This scaling issue is likely to impact both the denitrification system[104] EPA added to the model technology treatment chain and the biological treatment system meant to target nitrate/nitrite and selenium removal.

The presence of high TDS also can complicate treatment of FGDW. Within the biological treatment system, high TDS may interfere with attachment sites for bacteria, lessening the effectiveness of treatment.[105] As indicated in the table

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[101] Index.12102.4-3.

[102] Index.11876 (response to Question 19).

[103] *Id.*

[104] EPA has not demonstrated the use of a denitrification system as part of FGD wastewater treatment at any plant burning subbituminous coal, even though it accounted for denitrification costs at Pleasant Prairie and Hatfield's Ferry (which burns a blend of subbituminous and bituminous coals). Index.12264.Worksheet-List_of_Plants. Nonetheless, EPA simply assumes the additional technology will not be subject to operational issues such as scaling.

[105] EPRI, Index.12102.4-4.

above, EPA's 4-day average for Pleasant Prairie demonstrates a TDS level that is about 3 times that of Allen and also higher than Belews Creek. Data in the record show that TDS levels can be as high as 50,000 mg/l,[106] which is approximately *6 times* the Allen 4-day average and almost *2.5 times* the Belews Creek average. EPA tries to negate the TDS issue by pointing to a pilot study at Petersburg Station in which TDS "ranged as high as 27,000 mg/L."[107] But Petersburg burns bituminous coal, so its results are irrelevant for subbituminous- and lignite-burning plants. Moreover, since FGDW influent can contain TDS at levels almost double the amount documented at Petersburg,[108] the pilot study fails to demonstrate that biological treatment systems can handle high TDS levels from subbituminous fuels equally as well as TDS levels from bituminous fuels.

Notably, the table also demonstrates substantial variability between bituminous-burning plants. In particular, the selenium, mercury, and TDS values for Allen and Belews Creek are very different. A review of additional bituminous plants would likely reveal even greater variability.

Without data, it is not reasonable to *assume* – as EPA did – that biological treatment systems will work for all types of FGDW. The feasibility of biological

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[106] Index.126.2-3.

[107] Index.10080.5-365 (citation omitted).

[108] Index.126.2-3.

treatment for subbituminous-, lignite-, and bituminious -burning plants must be demonstrated through actual data that are representative of system variability. Reconsideration will allow just that.

C. Including Old Pleasant Prairie Data Did Not Remedy the Lack of Biological Treatment Data for Subbituminous Plants

Industry members commented extensively on the viability of biological treatment systems for subbituminous-burning plants. We Energies, the owner of Pleasant Prairie, commented that "nothing in the rulemaking record demonstrates that facilities burning subbituminous coal can meet the proposed selenium and nitrate/nitrite limitations."[109] The company urged EPA to "recalculate effluent limitations for FGD wastewater using a more robust set of data that represents the variability of FGD wastewater across the industry" and to include data from at least one plant burning solely subbituminous coals.[110]

In response, EPA explained that, between the proposed and final rules, it decided to use Pleasant Prairie data:[111]

> By including Pleasant Prairie in the dataset, the effluent limitations are based on data that include plants burning bituminous coal, subbituminous coal, and blends of bituminous and subbituminous coals. The record demonstrates that the chemical precipitation plus biological treatment BAT basis is effective at removing the pollutants present in FGD wastewater regardless of the type of coal that is

[109] Index.8923.3.

[110] *Id.*; *see also* Index.9778.116 (UWAG).

[111] Index.10084.9-368.

> burned, and in particular those pollutants for which EPA is establishing effluent limitations. See, e.g., the pollutant removal performance for arsenic and mercury.

EPA's response was misleading. Those Pleasant Prairie data were relevant *only* to the mercury and arsenic limits, which are based on chemical precipitation. The facility did not have biological treatment. The performance of Pleasant Prairie's chemical precipitation system as to arsenic and mercury was irrelevant to the performance of the biological treatment portion of the technology. Thus, EPA was wrong that "[t]he record demonstrates that the chemical precipitation plus biological treatment BAT basis is effective at removing the pollutants present in FGD wastewater regardless of the type of coal that is burned."[112]

EPA further misled by claiming: "The data in the record also shows that the biological treatment technology is effective at removing nitrate-nitrite and the different forms of selenium present in FGD wastewater; *that is proven true for every type of coal that has been tested with the technology.*"[113] Note EPA's qualified language: biological treatment is effective for "every type of coal *that has been tested with the technology*." That is the point. As of the final ELG Rule, subbituminous and lignite coal had not been tested with the technology, and thus

[112] Contrary to EPA's assertion, it also has not demonstrated that plants burning a blend of bituminous and subbituminous coals can meet the selenium and nitrate/nitrite limits. The only plant burning a blend of coals during EPA's sampling was Hatfield's Ferry, which had no biological treatment system.

[113] *Id.* (emphasis added).

the *technology is not demonstrated for those coal types.* To set limits without appropriate supporting data was arbitrary and capricious and should be reconsidered.[114]

D. EPA's Theorizing About the Efficacy of Biological Treatment Did Not Satisfy its Obligation to Base Limits on *Demonstrated* Performance

Lacking data, EPA nonetheless declared there is no "theoretical reason" why biological treatment would not be effective at plants burning subbituminous coal.[115] It based its "theoretical" judgment on two specious arguments.

First, EPA said that "[t]here is nothing unique about the form of selenium or nitrate-nitrite that is present in FGD wastewater at plants burning subbituminous (or any other type of coal) …."[116] This statement misses the point. Although the specific types of selenium and nitrate/nitrite in FGDW may generally be the same across coal types, the differences between FGD *wastewater* from bituminous coals and that from subbituminous coals can be significant.[117] As shown by EPA's own

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[114] *See Chemical Mfrs. Ass'n v. EPA,* 885 F.2d 253, 265 (5th Cir. 1989), *cert. denied sub nom. PPG Indus. v. EPA*, 495 U.S. 910 (1990) (EPA failed to demonstrate a "reasonable basis for its conclusion" where it tried to use data from end-of-pipe biological treatment systems to justify in-plant biological treatment systems).

[115] Index.10084.9-368.

[116] *Id.*

[117] And as already noted, EPA failed to capture the variability of FGDW across the industry. Even two plants burning bituminous coal can have very different FGDW characteristics due to differences in coal constituents or differences in operational conditions, such as cycles of concentration within the scrubbers.

data for the Allen, Belews Creek, and Pleasant Prairie plants, the wastewaters differ in material ways.

Nonetheless, EPA simply asserted that "the characteristics of wastewater from subbituminous plants (as evidenced by the data for Pleasant Prairie ...) are similar to the characteristics of wastewater from plants burning bituminous coal (i.e., … Belews Creek …)."[118] It is simply not true that all concentrations and characteristics of FGDW from subbituminous plants are similar to those for bituminous plants.[119] But even if they were "similar," comparing pollutant concentrations is not sufficient for demonstrating that biological treatment is feasible and available for subbituminous and lignite plants.[120]

Second, the Agency claimed it considered and ruled out whether other pollutants or wastewater characteristics unique to subbituminous coal would

[118] *Id.*

[119] *See supra* at 54-58.

[120] At the proposed rule stage, EPA did not include data from Pleasant Prairie, the only subbituminous-burning plant it sampled. EPA, *Technical Development Document for the Proposed Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category*, EPA-821-R-13-002 (Apr. 2013), EPA-HQ-OW-2009-0819-2257 at 10-6. But for the Final Rule, EPA included mercury and arsenic data from Pleasant Prairie in the dataset used to derive the FGD limits. Analytical Database for the Steam Electric Rulemaking, EPA-HQ-OW-2009-0819-5640. As a result of including the Pleasant Prairie data, the mercury daily maximum limit rose from 242 to 788 nanograms per liter, and the mercury monthly average rose from 119 to 356 nanograms per liter. Both arsenic limits also increased. The magnitude of the mercury changes are very significant, and indicate that including data from subbituminous-burning plants is essential to deriving appropriate limits.

potentially interfere with biological treatment.[121] With this statement, EPA waved away possible operational difficulties from scaling (as can be caused by high sulfate levels) or from high TDS (which can potentially impact biological treatment performance). Yet, these problems occur at facilities burning subbituminous coals, and EPA's justification was patently inadequate.

It is telling that, when promulgating the Rule, EPA urged all plants to perform site-specific pilot studies before installing FGDW equipment.[122] These studies are necessary, according to EPA, to assess wastewater characteristics and determine the most appropriate technologies and their design (*e.g.*, sufficient capacity and residence time) to handle the variability of the particular FGD wastewater.[123] EPA specified that the studies should be conducted "over a long enough period of time that will include variability in plant operations such as shutdowns, fuel switches (preferably for all fuel types burned at the plant), variability in electricity generating loads, periods with high [oxidation reduction potential], etc."[124] EPA recommended that a plant "identify the 'worst case' scenario and design a sufficient FGDW treatment system that can operate under

[121] Index.10084.9-368.

[122] Index.12006.14–16.

[123] *Id.*

[124] *Id.* at 15–16.

the worst case conditions and achieve the effluent limits."[125] Many of EPA's recommendations would significantly increase the complexity and cost of FGDW treatment.

EPA's own recommendations, and the reasoning underlying them, flatly contradict EPA's assertion that variability among FGD wastestreams among plants, and over time at a given plant, has no effect on the achievability of the limits or the cost of technology. Indeed, pilot studies are necessary *because of the unpredictable variability of FGDW*.[126] EPA was acknowledging the uniqueness of each FGDW at each given plant. This acknowledgement demonstrates that the Rule could not have taken into account all of the site-specific technologies needed to achieve the final effluent limits for FGD wastewater, including technologies needed at subbituminous-burning plants as well as at bituminous-burning plants. And, without a full consideration of site-specific design factors, EPA could not have properly derived costs for FGD compliance at all facilities.[127]

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[125] Index.12006.16.

[126] GE, a vendor of biological treatment systems, acknowledges the "*extreme variability* in effluent quality [i.e., FGD wastewater influent to the treatment system] due to the variety of coal sources, limestone sources, and scrubber operation…." J. Sonstegard, et al., ABMet: Setting the Standard for Selenium Removal, Index.250.2 (emphasis added).

[127] The same is true for derivation of costs for indirect dischargers attempting to meet the FGD limits. Several small public power facilities face daunting costs to comply with the mandated mercury, arsenic, selenium, and nitrates limits.

In responses to comments on the Rule, EPA also retorted that commenters had not provided data to prove subbituminous- or lignite-burning plants would be unable to meet the effluent limitations.[128] This, of course, turned EPA's regulatory obligation on its head. Since no subbituminous- or lignite-burning plants had installed the biological treatment system that EPA claimed is BAT, it would have been difficult indeed to produce such data. But that is beside the point. The burden is not on industry to prove why it should *not* be regulated. The burden is on EPA to justify regulation. Here, by statute, EPA was obliged to establish that the BAT technology is technologically "available" for the whole industrial category, including bituminous-, subbituminous-, and lignite-burning plants.

EPA also contended there is no evidence of possible interferences with biological treatment stemming from FGDW derived from subbituminous coal.[129] But that is a theoretical judgment unsupported by any performance data. It asserted that a "well operated" PRB-burning plant should have no issues meeting the limits.[130] Again, that is all theory, unsupported by any credible analysis.

With as much as 25% of the coal fleet dependent upon subbituminous or lignite coals, EPA's speculation is no small matter. EPA's database does not

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[128] Index.10080.5-166, .10078.3-525.

[129] Index.10084.9-368.

[130] Index.10080.5-148. If, in the absence of data, it is sufficient merely to say that a "well operated" plant should be able to meet a limit, then EPA could justify any conceivable limit.

reflect the true variability of FGDW. Selecting model technologies and setting limits on an incomplete database is not consistent with the regulatory reform agenda. The large range of FGDW variability affects all plants no matter their coal type.

For these reasons, EPA should reconsider the FGDW limits in the Final Rule.

E. New Data Are Likely to Demonstrate that Plants Burning Subbituminous and Bituminous Coal Cannot Comply With The Rule's Limits Through Use of EPA's Model Technology

After EPA published the Final Rule, EPRI initiated a pilot study of the Rule's model biological treatment technology at Pleasant Prairie, a plant burning 100% subbituminous PRB coal. The results of that pilot study are yet to be released, but UWAG believes they will support what industry has reiterated: (1) treating FGDW from plants burning subbituminous coal will be substantially more difficult than treating FGDW from plants burning bituminous coal; and (2) the model biological treatment technology for FGDW treatment is not demonstrated for use with FGDW from subbituminous plants. EPRI is likely to publish the final report within the next few weeks.

Also, new data collected by AEP illustrates that variability in wastewater management can also impact performance at bituminous plants such that additional technologies beyond EPA's model technology will be needed to achieve the limits.

If these new data are indeed contrary to EPA's assumption that biological treatment systems will function equally as well no matter the type of coal being burned, then they will further demonstrate why EPA must reconsider the limits for FGD wastewater.

III. EPA Violated Principles of Data Quality and Transparency in Characterizing Bottom Ash Transport Water

The Final Rule imposed a zero discharge requirement for BATW.[131] Every plant currently discharging any BATW (aside from oil-fired units and units less than 50 megawatts) must convert its systems to prevent any BATW discharge whatsoever.[132] This single requirement exacts a very heavy price. According to EPA, *103 plants must retrofit their BATW systems as a result of the Rule, at a total industry capital cost of over $2.5 billion* and annual operations and maintenance costs of $133 million (2010$).[133] Based on anecdotal reports, UWAG is confident EPA's cost estimate is a gross underestimate. However, the public cannot evaluate

[131] 40 C.F.R. § 423.13(k)(1)(i).

[132] The Rule provides two limited exemptions for discharges of BATW. First, plants can discharge "low volume, short duration" discharges from minor leaks or minor maintenance events. 40 C.F.R. § 423.11(p). Second, plants can discharge BATW if it is reused as makeup water in the FGD scrubber and thus subject to the FGD wastewater discharge limits. 40 C.F.R. § 423.13(k)(1)(i).

[133] TDD at Table 9-10, 9-45.

the estimate because EPA's estimates of plant-specific costs are not available for public review.[134]

EPA should have carefully selected the data used to justify this level of impact. But that was not the case. EPA's BATW data suffers from a plethora of data quality issues, all of which affect EPA's analyses. The following types of flaws infect the BATW data: (1) inconsistencies with EPA's own data acceptance criteria; (2) errors in units of measure; (3) use of unacceptable or obsolete analytical methods; and (4) application of overly conservative methodologies addressing non-detect analytical results. For example, EPA's analytical database uses the wrong units of measure for a mercury datapoint at the Kammer plant. The units should be nanograms per liter (parts per trillion) rather than micrograms per liter (parts per billion).[135] In addition, EPA used detection limits from older analytical methods to estimate pollutant concentrations even though the laboratory reported the pollutants were not detected in the samples. These unacceptable practices resulted in an overestimation of pollutant loadings for BATW. These sorts of errors justify reconsideration.

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[134] *See* EPA's Final ICPR. The portions of that document containing plant-specific costs (EPA-HQ-OW-2009-0819-6472.ATT1, ATT2) have been redacted from the record in their entirety.

[135] Analytical Database for the Steam Electric Rulemaking, EPA-HQ-OW-2009-0819-5640.

Additionally, EPA chose to include 27 samples of *40-year-old* data from *unidentified sources* as part of its BATW dataset. Because the sources of the data are neither identified nor described with relevant detail, the public cannot determine critical facts that go to the legitimacy of the data. For instance, EPA did not address whether the plants that supplied the data are still operating, whether the ash ponds sampled are still discharging, or whether the materials contained in the particular ash ponds are the same as when sampling occurred. It is impossible for the public to determine the ash pond management practices that would apply to the data or to determine whether, since the data were gathered, practices have changed. In short, there is no way for the public to determine whether the data are representative of *current* industry discharges. This lack of transparency is contrary to the goals of regulatory reform and the Office of Management and Budget's and EPA's own rules on the validity of data.[136]

The quality of the data was also dubious. EPA failed to provide any quality control/quality assurance information for the 27 samples. Moreover, EPA did not disclose either the laboratory methods used to analyze the samples or the actual laboratory reports to substantiate the data. Instead, the 40-year old values are

[136] *See* Exec. Order 13777, 82 Fed. Reg. at 12,286 (Mar. 1, 2017) (requiring evaluation of rules relying in whole or part on "data, information, or methods that are not publicly available or that are insufficiently transparent to meet the standard for reproducibility").

simply copied out of an outdated EPA report – *itself more than 30 years old* – with no proper supporting documentation.

Also, EPA used the poor quality BATW characterization data as a basis for several important purposes, including calculating a cost-effectiveness ratio. Since the underlying BATW characterization data was poor quality, the cost-effectiveness analysis is flawed. An agency has an obligation to base its analysis on acceptable data. In this case, EPA did not do so.

In the 21st century, data unsupported by routine quality control/quality assurance checks and proper documentation are not considered reliable data, and they should not be used to compel expenditures of $2.5 billion or more. Reconsideration of the BATW limits is appropriate.

The following sections explain how EPA selected BATW characterization data and why the data are critical to EPA's BATW decisions.

A. EPA Failed to Gather Current BATW Data

Despite site visits to 68 steam electric plants prior to the proposed ELG rule,[137] EPA collected only one sample of BATW.[138] EPA obtained this sample in 2007, almost 2 years before it decided to revise the steam electric ELGs. The lack of additional BATW samples during the course of the rulemaking was a curious

[137] 78 Fed. Reg. at 34,444.

[138] EPA sampled BATW at the Homer City Power Plant in August 2007. Final Detailed Study at 2-10.

omission that did not go unnoticed. Industry urged EPA to gather more BATW samples, but EPA never did so.

B. EPA Relied on Old Data from Unidentified Sources

The 1973-1976 data EPA used as part of its BATW dataset derive from 27 samples collected at three unidentified Tennessee Valley Authority plants. EPA first presented these data ("old TDD data") in 1980 as part of the proposed Development Document for the steam electric point source category.[139] EPA then incorporated them into Appendix A of the final 1982 Development Document.[140] In a memorandum describing its 2015 review of data for ash transport water, EPA noted that the 1982 Appendix A plants are "unidentified."[141] Incredibly, EPA decided to use the data even though it did not match the data with an individual plant or discharge point, and even though it has other sources of data, such as *current* data supplied by industry.[142]

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[139] EPA, *Development Document for Effluent Limitations Guidelines and Standards for the Steam Electric Point Source Category* (Sept. 1980), EPA-HQ-OW-2009-0819-5450-Att21 at 514-27, 552-56.

[140] EPA, *Development Document for Final Effluent Limitations Guidelines, New Source Performance Standards, and Pretreatment Standards for the Steam Electric Point Source Category* (Nov. 1982), EPA-HQ-OW-2009-0819-2186, Appendix A at 571-84, 609-13.

[141] ERG, *Ash Transport Water Analytical Data Review Methodology Memorandum* (Sept. 30, 2015), EPA-HQ-OW-2009-0819-6349 at 15.

[142] This use of data from unidentified plants is distinct from EPA's general practice of "anonymizing" data used in ELG rulemakings to protect CBI. When EPA uses codes instead of plant names and other identifying information to protect CBI, it nonetheless has identified for itself the plants supplying the data, and therefore the Agency has the means to satisfy itself that the data are representative. In this case, EPA admits that the plants are "unidentified."

In addition to the old TDD data, EPA's BATW analytical database uses more current industry-generated data and EPA's single 2007 sample. However, the old TDD data is a significant and influential component of the database, comprising approximately 28% of all the parameter data points used by EPA to characterize BATW for the Rule.[143]

C. Use of Data from Unidentified Sources Prevents Proper Data Evaluation

Without being able to tie the old TDD data to specific plants, one cannot properly evaluate whether the data are representative because key plant characteristics are unknown. EPA itself acknowledged several operating procedures that can affect BATW characteristics, including:

- adding chemicals to ash ponds to control pH;
- injecting carbon dioxide into the pond to reduce alkalinity;
- adding polymers to the pond to enhance settling; and
- adding acidic wastestreams to the pond, which can increase the metals concentration in the effluent.[144]

Without knowing the plants' identities, it is impossible to tell whether the plants used any of these methods during the sampling period or whether the plants now employ these methods.

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[143] EPA used a total of 2,252 data points to characterize BATW loadings. Of that amount, it derived 632 data points from the old TDD data. EPA, Analytical Database for Steam Electric Rulemaking, EPA-HQ-OW-2009-0819-5640.

[144] Final Detailed Study at 5-13, 5-15.

In sum, there is no way for EPA or the public to know if the data are representative of current industry discharges. EPA admitted that "[t]he processes employed and pollutants discharged by the industry look very different today than they did in 1982."[145] We agree. The processes employed to manage ash ponds – and the ash ponds themselves – have changed since the 1970s, when the old TDD data were collected. The Rule must be reconsidered to use more recent, reliable data in setting BATW limits.

D. The Old TDD Data Are Not Representative Because New Regulations Took Effect in 1974 and 1982

Changing regulations dramatically changed how the industry handled BATW over the years. Old data are therefore not representative of current BATW. The old TDD data, as already noted, were collected and analyzed in 1973-1976. The first steam electric ELGs became effective on November 7, 1974.[146] That rule stayed in effect until EPA revised the steam electric ELGs in 1982.[147]

Since 16 out of the 27 "old TDD data" samples were collected prior to November 7, 1974,[148] those samples do not reflect either the 1974 ELG rule or the 1982 revisions. Under the 1974 rule, existing facilities had to recycle BATW 12.5

[145] 80 Fed. Reg. at 67,840.

[146] 39 Fed. Reg. 36,186, 36,198 (Oct. 8, 1974).

[147] 47 Fed. Reg. 52,290 (Nov. 19, 1982).

[148] EPA lists the dates of the samples on Tables A-2, A-4, and A-13 of Appendix A of the 1982 Development Document, pp. A-5–A8, A-12–A-14, A-43.

times before discharging and were subject to numeric total suspended solids (TSS) and oil and grease limits.[149] New sources faced stricter requirements; they had to recycle BATW 20 times before discharging.[150] The 1974 regulation also set a pH range for all discharges of 6.0-9.0.[151] Because the pH of a pond can affect metal concentrations in the discharge, requiring ash ponds to operate within a pH range likely changed the discharges from the ponds. For these reasons, the 16 samples pre-dating the 1974 rule cannot be representative of current BATW discharges because they do not reflect current discharge limits.

The remaining 11 "old TDD data" samples pre-date the 1982 revisions. In that revision, EPA deleted the existing and new facility requirements to recycle BATW. That change alone is very significant and would have affected how ponds operate. Therefore, whether the old TDD data (both the 16 samples pre-dating the 1974 rule and the 11 samples pre-dating the 1982 revisions) are representative of current industry discharges is unknown.

E. The BATW Characterization Data Were Integral to EPA's Rulemaking Processes

Despite its many flaws, EPA used the BATW analytical data for several critical rulemaking functions. First, it used the sample analytical data to define

[149] 40 C.F.R. § 423.13(d) (1975).

[150] 40 C.F.R. § 423.15(d) (1975).

[151] 40 C.F.R. § 423.12(b)(1) (1975).

"pollutants of concern" or POCs. For BATW, EPA defined POCs as "those pollutants that are confirmed to be present at sufficient frequency in untreated wastewater samples of that wastestream."[152] EPA identified 37 BATW POCs.[153]

Second, using the defined POCs for the particular wastestream,[154] EPA calculated plant-specific loadings for baseline discharges and then totaled them to estimate current industry-wide pollutant loadings for the wastestream.[155] After calculating the baseline discharge, EPA estimated the amount of pollutants removed by the chosen technology option.[156]

Once EPA calculated pollutant pounds removed, it also calculated "toxic weighted pounds equivalent" or TWPEs. As EPA explained:

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[152] 80 Fed. Reg. at 87,647.

[153] TDD, Table 6-16 at 6-25 to 6-26. EPA established several protocols for accepting data used to define POCs. For example, (1) samples must be representative of full-scale plant operations; (2) for BATW, the sample must comprise at least 75% by volume BATW; and (3) source water sample data that are paired with wastewater sample data must be taken within a day of the wastewater sample collection date. TDD at 6-17 to 6-18. But Petitioners cannot substantiate whether EPA followed its own protocols as to BATW POC data because documents detailing EPA's POC evaluation are redacted in their entirety from the record available for public review. *See Memorandum-Bottom Ash and Fly Ash Transport Water Pollutants of Concern (POC) Analysis Methodology* (EPA-HQ-OW-2009-0819-6049); *Analysis-Source Water Ash Treatment Analysis Final* (EPA-HQ-OW-2009-0819-6048); and *Analysis-Pollutants of Concern Ash Treatment Analysis Final* (EPA-HQ-OW-2009-0819-6050).

[154] "The industry-level baseline loadings presented in Table 10-14 include only those pollutants identified as POCs…." TDD at 10-34.

[155] EPA lowered the numbers of plants with bottom ash ponds from 115 to 84 to account for the effect of the Clean Power Plan. *Cf.* TDD Table 10-14 to Table 10-15 at 10-34–10-36. Again, Petitioners cannot substantiate either number because EPA's underlying analysis is not part of the record available for public review. And, of course, any change in the CPP Rule will affect the number of plants likely to be affected by the ELG Rule.

[156] TDD, Tables 10-16 and 10-17 at 10-37.

> EPA uses toxic weighting factors (TWFs) to account for differences in toxicity across pollutants.... EPA calculated a toxic-weighted pound-equivalent (TWPE) value for each pollutant discharged to compare mass loadings of different pollutants based on their toxicity. To perform this comparison, EPA multiplied the mass loadings of pollutant in pounds/year by the pollutant-specific TWF to derive a "toxic-equivalent" loading (lb equivalent/yr), or TWPE.[157]

Using pounds of pollutant removed and/or TWPE calculations, EPA completed several essential elements of its rulemaking analysis:

1. It compared the pollutant removal efficacy of the technology options for BATW.

2. It used the baseline loading and estimated pollutant removals as a major input to the Environmental Assessment, a 513-page document prepared "to evaluate the environmental impact of pollutant loadings released under current (*i.e.*, baseline) discharge practices and assess the potential environmental improvement from pollutant loading removals under the final rule."[158]

3. It calculated the cost-effectiveness of the Rule as the cost per pound of TWPEs removed, for comparison to the cost-effectiveness of other effluent guidelines rulemakings.

4. It compared the total estimated costs of the Rule to the total estimated benefits (*i.e.*, benefits based on EPA's estimate of the pounds of pollutants removed from receiving waterbodies).[159]

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[157] TDD at 10-3.

[158] EPA, *Environmental Assessment for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category*, EPA-821-R-15-006 (Sept. 2015), EPA-HQ-OW-2009-0819-6427 at 1-1.

[159] *See* EPA, *Benefit and Cost Analysis for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category*, EPA-821-R-15-005 (Sept. 2015), EPA-HQ-OW-2009-0819-5856.

Despite their serious flaws, the BATW characterization data, therefore, were critical building blocks for much of the Agency's rulemaking processes.

F. EPA's Cost-effectiveness Analysis for BATW is Flawed

EPA's cost-effectiveness analyses illustrate the importance of selecting the right BATW characterization data. The flawed dataset that EPA used for BATW characterization affected EPA's cost-effectiveness analysis by increasing the amount of pollutant loadings attributable to BATW. While EPA was quick to note that a cost-effectiveness analysis is "not required by the CWA, and not a determining factor for establishing BAT,"[160] this analysis allowed EPA to compare the effectiveness of candidate technologies while factoring in the costs of those technologies. Using this metric also allowed EPA to compare the cost-effectiveness of a portion or the Rule (or the entire Rule) to recently promulgated BAT limitations for other industries, which range from less than $1 per TWPE to $404 per TWPE.[161]

In the proposed ELG Rule, EPA estimated that a zero discharge approach to BATW would cost $107 per TWPE.[162] At the proposed rule stage, UWAG

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[160] 80 Fed. Reg. at 67,881.

[161] *Id.*

[162] EPA, *Technical Development Document for the Proposed Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category*, EPA-821-R-13-002 (April 2013), EPA-HQ-OW-2009-0819-2257 at 8-34; see also 78 Fed. Reg. at 34,474 col. 1.

challenged EPA's BATW cost-effectiveness analysis on several grounds, including the use of old or otherwise invalid data.[163] When UWAG calculated its own cost-effectiveness ratio for BATW, using better quality characterization data and more realistic capital costs, it ranged from $1,635 to $16,492 per TWPE.[164] Therefore, UWAG's estimate for the ELG Rule was *4 to 41 times greater than $404 per TWPE,* the highest historical BAT cost-effectiveness ratio that EPA had ever used.

In the Final Rule, EPA adjusted the characterization data it used for BATW to eliminate some of the data that UWAG pointed to as old and invalid. But it substituted in other old 1970s-1980s data from unidentified plants, as well as newer data that in some cases were misinterpreted. Based on the new dataset, EPA calculated a new cost-effectiveness ratio for BATW of $314-457 per TWPE, or about 3 to 4 times its original estimate.[165] Nonetheless, EPA found that the cost-effectiveness of the total final rule was in the range of $136-149 per TWPE.[166]

Even after EPA's adjustments for the final rule, the BATW characterization dataset is of unacceptable quality, for the many reasons previously noted, which resulted in a significant overestimation of pollutant loadings attributed to BATW. Having undertaken to consider cost-effectiveness – and having used it as a primary

[163] UWAG Sept. 2013 Comments at 79.

[164] *Id*.

[165] 80 Fed. Reg. at 67,882.

[166] *Id.*

tool across multiple effluent guidelines rules – EPA had an obligation to use acceptable data in its analysis. It failed to do so.

Whether or not the CWA requires EPA to perform a cost-effectiveness analysis of BAT determinations, it is good administrative practice to do so. Since EPA's cost-effectiveness analysis depends on the quality of the underlying pollutant loading data and those data are derived from BATW characterization data, if the characterization data are flawed, then the whole cost effectiveness analysis is flawed and should be reconsidered.

The lack of transparency is reason alone to reevaluate an EPA decision that the Agency admits will cost *at least $2.5 billion*. When coupled with the serious concerns about the representativeness and accuracy of the data, it is clear that reconsideration is appropriate and that an administrative stay during reconsideration is likewise appropriate.

IV. New Data Also Demonstrate that the Rule's IGCC Limits are Technologically Infeasible

Sufficiency of data is another core requirement for sound regulation.[167] For IGCC plants, EPA badly missed the mark. The IGCC limits in the Rule were based on an insufficient and unrepresentative dataset. Newly available data prove

[167] "Each agency shall base its decisions on the best reasonably obtainable scientific, technical, economic, and other information concerning the need for, and consequences of, the intended regulation." Executive Order 12866, *Regulatory Planning and Review* (Sept. 30, 1993), 58 Fed. Reg. 51,735, 51,736 (Oct. 4, 1993).

that industry's concerns about the limits were justified. The new data show that the limits for IGCC wastewater cannot reliably be met. Indeed, a brand new, state-of-the-art IGCC facility cannot meet the limits, *even though it employs what EPA deemed to be "model" technology.*

The record is clear that EPA relied on incomplete and inappropriate data in setting the IGCC limits. The new facility – Duke Energy Indiana's Edwardsport[168] – uses a two-stage gasification wastewater treatment system. Two-stage treatment produces far less wastewater, but that residual wastewater (known as "crystallizer effluent") has higher pollutant concentrations than does the wastewater from one-stage treatment (known as "vapor compression effluent"). Duke commenced construction of Edwardsport in 2008, and commercial operations began in June 2013, the same month in which EPA published the proposed ELG Rule.

To develop the gasification wastewater limits, EPA gathered gasification wastewater characterization data from two other IGCC facilities that had been in operation for many years: Wabash River (which used one-stage treatment and which has since closed) and Polk (which uses two-stage treatment). Despite

[168] Edwardsport qualifies under the Rule as an "existing facility," not a "new" facility, because it commenced construction long before the ELG Rule was proposed, much less finalized.

having limited data from only two facilities,[169] EPA discarded Polk's crystallizer effluent data because the Agency believed Polk's crystallizer was malfunctioning at the time of sampling.[170] With that decision, EPA rejected its only crystallizer effluent data (*i.e.*, data most likely to be similar to the crystallizer effluent that the state-of-the-art Edwardsport plant would generate). Notwithstanding the data shortcomings, EPA did not seek to obtain replacement data from Polk. Despite comments from industry expressing concern about the lack of sufficient IGCC-specific data in the record[171] and the numerous technical differences between the limited number of IGCC facilities in operation,[172] EPA used only vapor compression effluent data from Polk (representing one-stage treatment) to set the final limits for arsenic and mercury.[173]

Data from Edwardsport demonstrate that a state-of-the-art plant with two-stage treatment cannot meet the limits. EPA set gasification wastewater limits for arsenic, mercury, selenium, and TDS. The summary table below compares

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[169] The dataset collected by EPA included only four daily effluent samples from each facility. In Polk's case, there were four daily samples of effluent from the intermediate vapor compression step and four samples of final effluent from the crystallizer.

[170] Index.2920.13-20; Index.12840.13-26-13-27.

[171] Index.8684. 78-81 (Duke Energy) (discussing inadequacies of data set for setting reliably achievable gasification wastewater limits), Index 9778.289-91 (UWAG) (discussing inadequacies of gasification wastewater data set).

[172] Index.8684.77-78; Index.9778.287-89.

[173] The effluent data from Wabash River were also used by EPA in setting ELG limits for selenium and TDS. However, it is the ELG limit for mercury that poses Edwardsport's greatest compliance challenge.

Edwardsport arsenic, mercury, and TDS data from May 2013- October 2015 to the ELG limits.[174]

Parameter	Edwardsport Daily Maximum	ELG Daily Maximum	Edwardsport 30-day Average	ELG 30-day Average
Arsenic, total ug/L)	15	4	--	--
Mercury, total (ng/L)	12.8	1.8	9.1[a]	1.3
Total dissolved solids (TDS) (mg/L)	222	38	67.2[b]	22

a=September 2015 average (highest 30-day average)
b=October 2015 average (highest 30-day average)

Since 2015, Edwardsport gasification wastewater effluent continues to exceed the arsenic, mercury, and TDS limits. According to its renewed wastewater discharge permit, the new ELG limits will be applicable to Edwardsport in April 2021.

Because the existing $120 million gasification wastewater treatment system cannot consistently meet the limits, Edwardsport was forced to file a request for a fundamentally different factor variance[175] and is awaiting a response from EPA Region V. Variances from ELG limits are very rarely granted – none thus far have been granted under the Rule. If Edwardsport is denied a variance, its options will

[174] The Edwardsport data are based on 27 samples, as documented in Appendix 1 to Duke Energy Indiana, LLC's Application for a Fundamentally Different Factor Variance, Edwardsport IGCC Station, NPDES Permit IN0002780, submitted to EPA Region V and Indiana Dept. of Environmental Management (April 27, 2016) ("Duke FDFV Application"), attached as Exhibit 3 to this Petition.

[175] Duke FDFV Application.

be to (1) identify, design, and install one-of-a-kind wastewater treatment technologies in the hope of achieving consistent compliance; or (2) stop operating. By statute, BAT must be based on "available" technologies. Companies should not be forced *after* an ELG is issued to explore new and untested technologies in the hope of meeting the limits.

This is how a rule based on woefully insufficient data penalizes industry and imposes excessive costs on society. Duke – despite its substantial efforts to design, construct, and operate a costly state-of-the-art IGCC facility – has been forced into an uncertain position as a result of the Rule's unreasonable and unsubstantiated limits. Well-developed rules are supported by appropriate data and do not cause lingering uncertainties; they allow businesses to make efficient, cost-effective decisions. The limits for IGCC facilities are an example of the worst type of regulatory outcome: requirements that (1) are technologically infeasible and (2) increase costs and exacerbate business stagnation due to uncertainty.

V. Cumulatively, the ELG Rule and Other Rules Are Having Devastating Economic Impacts

It is undeniable that the convergence of the ELG Rule and other rules affecting coal-fired power plants is causing adverse economic impacts. The other rules include the CCR rule, the CPP rule, and the CWIS rule. First, the cumulative compliance costs are massive. As a result, the rules will cause and contribute to

plant closures and job losses. Second, the lack of coordination among the rules (and in particular the compliance deadlines they set) magnifies business uncertainty and expense. Third, the CPP and the CCR rule have seen their status change since promulgation of the ELG Rule. Both are in litigation and subject to further changes, thus exacerbating uncertainty about the costs and plant closures attributable specifically to the ELG Rule and whether and how the rules can be harmonized.

The cumulative impact of all these rules makes the ELG Rule a prime candidate for reconsideration to promote regulatory reform policies.

A. For Coal-Fired Units, the Cumulative Compliance Costs and Job Losses From EPA Rules Are Staggering

EPA's own estimates[176] of the costs of the ELG, CCR, CPP, and CWIS rules demonstrate the adverse economics the coal-fired fleet is facing. EPA claims the *annualized* total social costs of the ELG and CWIS rules will be $471.2-479.5 million (2013$) and $274.9 million (2011$), respectively.[177] The Agency estimates the total *annualized* incremental costs of the CCR rule will be $509-735 million (2013$) (over 100 years).[178] The CPP alone is projected to cost billions per year. EPA predicts annual illustrative compliance costs of $1.4-2.5 billion (2020),

[176] Again, industry does not accept EPA's estimates. In fact, industry believes EPA grossly underestimated the costs of many of these rules.

[177] 80 Fed. Reg. at 67,865 (ELG Rule); 79 Fed. Reg. at 48,415 (CWIS Rule).

[178] 80 Fed. Reg. at 21,309.

$1.0-3.0 billion (2025), and $5.1-8.4 billion (2050) (all in 2011$).[179] Cumulatively, these rules are projected annually to cost the coal-fired industry (and their customers) billions of dollars for many years.

While the CPP and the CCR rules are being substantially changed, UWAG members are incurring the heavy costs of complying or planning to comply with the ELG rule. Dynegy Inc. recently estimated its costs of compliance to total approximately $308 million, with $41 million to be spent in less than one year and $178 million to be spent within 3 years.[180] Dynegy's costs are not unique. NRG, another UWAG member, anticipates that its total ELG costs will be approximately $200 million.[181] AEP has included in its total projected environmental investments for 2018 through 2025 ELG Rule compliance costs ranging from $400-$550 million through 2023.[182]

Smaller, local utilities are likewise experiencing high compliance costs relative to their lower numbers of ratepayers. For instance, City Utilities of Springfield, Missouri is a community-owned utility. It is a component of the City of Springfield and is overseen by a board of local citizens. It operates electric

[179] 80 Fed. Reg. at 64,680-81.

[180] Dynegy Inc., Form 10-K, filed with the U.S. Securities and Exchange Commission for the fiscal year ended December 31, 2016 (Feb. 27, 2017) at 18.

[181] NRG, Form 10-K, filed with the U.S. Securities and Exchange Commission for the fiscal year ended December 31, 2016 (Feb. 28, 2017) at 32.

[182] AEP, Inc. Form 10K, filed with the U.S. Securities and Exchange Commission for the fiscal year ended December 31, 2016 (Feb. 28, 2017) at 14.

generating capacity of 1,120 MW, providing electricity to approximately 112,000 customers over a 320-square mile area. To comply with the ELG Rule, City Utilities has already spent $4 million in capital costs and will need to spend an additional $3 million in capital costs if the "zero discharge" BATW requirement stands, exclusive of additional annual operating costs. This is in addition to the significant costs to comply with the CCR Rule at an estimated total cost of $14 million.

Since the ELG Rule phases in compliance from November 1, 2018, through December 31, 2023,[183] prompt reconsideration of the Rule offers a potential of relief from some of these costs.[184]

Unit and facility closures based on the cumulative impact of these rules are inevitable. In 2015, when EPA promulgated another rule affecting coal-fired power plants (the Mercury and Air Toxics Standards rule), utilities were forced to retire almost 14 gigawatts of coal-fired generation.[185] That represented more than

[183] 80 Fed. Reg. at 67,854.

[184] Some public power utilities are experiencing especially acute impacts from the Rule's deadlines because they are indirect dischargers. Instead of phased-in compliance deadlines, they face a fixed deadline of November 1, 2018, as indirect dischargers subject to Pretreatment Standards for New Sources ("PSNS") and Pretreatment Standards for Existing Sources ("PSES"). Thus, those dischargers are making significant capital investment decisions without knowing the ultimate fate of the CPP or CCR rules (or, indeed, the ELG Rule itself if this petition is granted). Reconsideration, coupled with a suspension of the deadline, is imperative for them.

[185] U.S. Energy Information Admin., *Coal made up more than 80% of retired electricity generating capacity in 2015,* (available at www.eia.gov.todayinenergy/detail.php?id=25272).

80% of all 2015 retirements.[186] Similar impacts from the current batch of rules are likely. EPA itself estimated that, due to the CPP rule alone, 47 plants and another 19 units that otherwise would be subject to the ELG Rule would close or be repowered.[187]

Job losses are a natural consequence of unit and facility closures. Even for those power plants repowered with natural gas, there will be job losses, because a coal-fired unit employs more personnel than a comparably sized natural-gas fired unit.[188] For the CPP alone, the Energy Information Administration (EIA) estimated severe job losses. By 2030, EIA forecasts that, if the CPP is implemented, there would be about *376,000 fewer non-farm jobs than if there were no CPP.*[189] The U.S. Chamber of Commerce, among many others, asked the Supreme Court to stay the CPP because of economic concerns, including localized issues in rural or economically distressed areas of the country. Its stay application included many declarations from potentially affected communities. For example, a

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[186] *Id.*

[187] TDD, Table 4-18 at 4-45.

[188] Buchsbaum, L., *Supporting Coal Power Plant Workers Through Plant Closures,* Power Magazine, June 1, 2016 (available at www.powermag.com/supporting-coal-power-plant-workers-plant-closures) (quoting AEP spokesperson that a "good-size" natural gas plant requires about 25 workers, as compared to 100-200 for a "good-size" coal-fired plant) (last visited March 18, 2017).

[189] Institute for 21st Century Energy, U.S. Chamber of Commerce, *EPA Clean Power Plan: EIA's Forecast Shows Benefits Fall Well Short of Costs … Again* (June 2016) at 10, *citing* EIA, Annual Energy Outlook 2016.

school superintendent from Oliver County, North Dakota, described the likely impact to his District upon closure of one of two units at a nearby coal-fired station and the resulting 40% reduction in employment at a local coal mine. About 25% of the student population of the District are students whose families are dependent on the energy sector for their jobs, and the loss of those students would devastate the District:

> [T]he closure of the Coal Creek and Minnkota units and reduced production at the Falkirk Mine would result in significant financial harm to the District. One of the most important sources of income for the District is local property taxes. As families move away in response to the closures and reduced production at the mine, the size of the tax base will shrink, thus cutting funding for the District. Our local taxable evaluation will decrease with flooding of houses on the market and the lack of prospective home buyers .... This loss of funding would force the District to lay off staff, cut vital programs, or both.[190]

The business manager for a local chapter of the International Brotherhood of Boilermakers also submitted a declaration in support of the U.S. Chamber of Commerce's application for stay. He predicted that one station's closure would cost the local's members over $8,000,000 in wages and benefits in 2016 and the

[190] Declaration of Curtis Pierce, District Superintendent, Center-Stanton Public School District, Exhibit 7-H to U.S. Chamber of Commerce's Application for Immediate Stay of Final Agency Action Pending Appellate Review, para. 10 at 4, *West Virginia v. EPA*, No. 15-A-787 (Sup. Ct. Jan. 27, 2016).

closure of one of two units at another facility would mean the loss of $13-14,000,000 in wages and benefits.[191]

The ELG Rule's costs contribute to the threat of job losses, particularly when it is added on top of the impacts of other rules. The right course, therefore, is to reconsider the ELG Rule and its impacts on the economy as a whole and on local communities.

B. Lack of Coordination Among the Rules Causes Economic Inefficiencies and Uncertainties

EPA purported to analyze the impact of the final CCR rule and the proposed CPP rule on the ELG Rule. EPA agreed that the CPP was a major new rule affecting the same plants targeted by the ELG Rule; that is why EPA conducted its analysis. But it did not release its CPP analysis for public comment, and thus the industry had no way of evaluating it during the ELG rulemaking.

Had EPA's analysis of the CPP been released for comment, the industry would have demonstrated to EPA that the Final Rule's deadlines should be synchronized with the CPP's, to avoid unnecessary waste of resources and compliance costs. As issued, the Rule specifies that the new limits become

[191] Declaration of Luke Voigt, Business Manager, International Brotherhood of Boilermakers Local 647, Exhibit 7-C to U.S. Chamber of Commerce's Application for Immediate Stay of Final Agency Action Pending Appellate Review, paras. 8 and 10 at 4, 5, *West Virginia v. EPA*, No. 15-A-787 (Sup. Ct. Jan. 27, 2016).

applicable "as soon as possible."[192] Although permitting authorities have discretion to consider the CPP in deciding what constitutes "as soon as possible" for a given facility,[193] industry is experiencing wide variations in applicability dates. In any event, the ELG Rule requires application of the new limits "no later than" December 31, 2023. Consequently, the Rule's deadlines are inconsistent with the CPP's requirements to achieve greenhouse gas performance rates between 2022 and 2030.[194]

Competing deadlines will necessarily have an impact on EPA's analysis of the respective costs of the rules. More importantly, competing deadlines increase uncertainty for the industry members attempting to comply. And these uncertainties and complications increase costs, as industry struggles to harmonize its decisions on all of the pending rules at once.

A similar lack of harmony exists between the CCR rule and the ELG Rule. As a part of the CCR rule litigation,[195] EPA sought and was granted voluntary remand of portions of the rule.[196] Two of the remanded provisions have significant

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[192] *See, e.g.*, 80 Fed. Reg. at 67,894-95 (to be codified at 40 C.F.R. § 423.13(g)(1)(i)) (requiring compliance with the new FGD wastewater limits "as soon as possible beginning November 1, 2018, but no later than December 31, 2023").

[193] *See id.* at 67,894 (to be codified at 40 C.F.R. § 423.11(t)(2)(ii)).

[194] 80 Fed. Reg. at 64,664.

[195] *Utility Solid Waste Activities Group ("USWAG") v. EPA,* No. 15-1219 (D.C. Cir. filed July 15, 2015).

[196] Order, *USWAG v. EPA* (June 14, 2016), ECF No. 1619358.

consequences for discharges from ponds governed by the ELG Rule. Under those provisions (40 C.F.R. § 257.103(a) and 40 C.F.R. § 257.103(b)), a facility required to cease sending CCRs to a pond has to begin closing the pond within 30 days after ceasing its use for CCR waste.[197] But many industry ponds are used for both CCR and non-CCR wastewater. Therefore, EPA remanded these provisions so that it could consider whether to extend the CCR rule's alternative closure provisions to ponds that cease receiving CCR wastes but continue receiving non-CCR wastewater. [198]

EPA's decision on this point is critical to management of many existing ponds. If those ponds need to cease receiving both CCR and non-CCR wastewaters, many industry facilities will have to develop whole new wastewater management systems, and in many cases that involves rethinking the entire water balance and wastewater characteristics for each wastestream. If a pond may have to cease receiving non-CCR wastewater as a result of the CCR rule, then it makes no sense to retrofit treatment systems for purposes of the ELG Rule without considering that impact. It is inefficient in the extreme to undertake enormous system retrofits for purposes of the ELG Rule, and then have to rethink those retrofits – at considerable expense and system down-time – when EPA acts on the

[197] *See* 40 C.F.R. § 257.102(e).

[198] Respondent EPA's Unopposed Motion For Voluntary Remand of Specific Regulatory Provisions, Section II.E at 8-9, *USWAG v. EPA* (Apr. 18, 2016), ECF No. 1609250.

remanded CCR provisions. Through reconsideration of the ELG Rule and an administrative stay, these inefficiencies caused by the mandates of multiple rules can be addressed.

C. The Changed Status of the CPP and the CCR Rule Warrants Reconsideration of EPA's Cost Analysis

Even if EPA's analyses of the CPP and CCR impacts on the ELG Rule were accurate when the ELG Rule was finalized (and they were not), they cannot be accurate now. For the ELG Rule, EPA developed two separate economic analyses: one including the CCR rule, and one including both the CCR rule and the CPP. Given recent developments, analyzing the ELG Rule's impacts to industry and society through the lens of the CPP and CCR rules as finalized is inappropriate.

In February 2016, the Supreme Court stayed the CPP rule pending the outcome of judicial challenges.[199] Moreover, the President appears poised to issue an executive order requiring EPA to reconsider and potentially repeal the CPP.[200] These new circumstances provide strong reason to reconsider EPA's cost analysis for the ELG Rule. That analysis assumed unit closures or retrofits to gas caused by the CPP according to the CPP's original schedule. But, because of the stay, CPP

[199] Order, *Chamber of Commerce v. EPA*, No. 15-A-787 (Sup. Ct. Feb. 9, 2016).

[200] *The Clean Power Plan is gone – and there's no 'replace',* E&E News (Mar. 9, 2017), available at http:/www.eenews.net/stories/1060051196 (last visited March 9, 2017).

implementation – if it occurs at all – could be years behind schedule. As a result, the true cost implications of the ELG Rule are not reflected in any EPA analysis.

As already described, the CCR rule also is being challenged in court,[201] and EPA has been granted a voluntary remand of portions of the rule. The remaining litigation issues could be decided by the court, possibly by the end of this year. Additionally, Congress recently enacted legislation that affected a major change in the CCR rule implementation.[202] The legislation allows states to assume responsibility for overseeing CCR rule implementation within their jurisdictions. Thus, substantial changes also may occur with the CCR rule.

Given the extreme uncertainties that were not present when EPA analyzed the cost impacts of these rules on the ELG Rule, it is incumbent upon EPA to reconsider the true costs of the ELG Rule and provide its analysis to the public for proper review and comment.

REQUEST FOR IMMEDIATE AGENCY ACTION TO SUSPEND OR DELAY COMPLIANCE DEADLINES

UWAG hereby requests an administrative stay pursuant to 5 U.S.C. § 705. When judicial review is pending and when "justice so requires," this section

[201] *USWAG v. EPA*.

[202] Water Infrastructure Improvements for the Nation Act, Pub. L. 114-322, Sec. 2301 (amending § 4005 of the Solid Waste Disposal Act (42 U.S.C. § 6945) to allow state programs for control of coal combustion residuals).

confers discretion upon an agency to "postpone the effective date of action taken by it." *Id.* For all the reasons above, justice dictates a stay here.

In addition, EPA should take all other administrative actions that may be necessary to assure the immediate suspension or delay of the Rule's fast-approaching compliance deadlines while EPA works to reconsider and revise, as appropriate, the substantive requirements of the current Rule pursuant to notice and comment rulemaking.[203] Notably, there are many options available for EPA to suspend or extend the compliance deadlines in order to preserve the status quo and avoid irreparable harm pending the completion of the reconsideration proceeding.[204]

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[203] Suspending the deadlines for indirect dischargers, among others, is particularly critical because they face a hard deadline of November 1, 2018, to meet the PSES/PSNS standards for several wastestreams. Accordingly, those dischargers are in the process now of making costly decisions that may be greatly affected by reconsideration.

[204] These options for EPA action include the following: (1) fast-tracked issuance of a new rule that rescinds or extends the compliance deadlines through an expedited notice and comment rulemaking, *see, e.g.*, National Emissions Standards for Hazardous Air Pollutants for Stationary Combustion Turbines; Final Rule; Stay, 69 Fed. Reg. 51,184 (Aug. 18, 2004) (pausing effective dates of a rule on the basis that the agency was in the process of amending the underlying rule); (2) prompt issuance of an interim final rule without notice and comment under the "good cause" exemption set forth in the APA at 5 U.S.C. § 553(b)(3)(B), *see* Oil Pollution Prevention and Response; Non-Transportation-Related Onshore and Offshore Facilities; Interim Final Rule, 68 Fed. Reg. 1348 (Jan. 9, 2003) (postponing requirements that had gone into effect in August 2002 without notice and comment under the good cause exemption on the basis of impending deadlines that would no longer be appropriate once EPA finished revising the underlying rule); and (3) the prompt issuance of informal EPA guidance confirming that permitting authorities have broad discretion to set compliance deadlines under the Rule spanning the *entire* compliance window based on the four factors enumerated in 40 C.F.R. § 423.11(t) and are not obligated to impose a compliance deadline based on the initial deadline of November 1, 2018, due, in part, to EPA's decision to reconsider the substantive requirements of the Rule.

CONCLUSION

For all the foregoing reasons, EPA should grant this Petition, stay the Final ELG Rule and/or take other action to suspend the Rule's existing compliance deadlines, and promptly undertake to initiate a new rulemaking.

Dated: March 24, 2017

UTILITY WATER ACT GROUP

By _____
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EXHIBITS

Exhibit 1 H.M. Johnson, III, Hunton & Williams. Letter to M. McDermott, U.S. Dept. of Justice - Request for Disclosure of Information Withheld As Confidential Business Information From the Public Record for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category Final Rule (Feb. 17, 2016)

Exhibit 2 M. McDermott, U.S. Dept. of Justice. Letter to H.J. Johnson, III, Hunton & Williams – Response to Request for Disclosure of Information Withheld As Confidential Business Information From the Public Record for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category Final Rule (Mar. 17, 2016)

Exhibit 3 Appendix 1 to Duke Energy Indiana, LLC's Application for a Fundamentally Different Factor Variance, Edwardsport IGCC Station, NPDES Permit IN0002780, submitted to EPA Region V and Indiana Dept. of Environmental Management (April 27, 2016)

Exhibit 1

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February 17, 2016

Via E-Mail and U.S. Mail

Martin F. McDermott, Esq.
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Re: Request for Disclosure of Information Withheld As Confidential Business Information From the Public Record for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category Final Rule

Dear Martin:

As you know, I represent the Utility Water Act Group, Southwestern Electric Power Company, and Union Electric Company (d/b/a Ameren Missouri) (collectively, "Industry Petitioners") in challenges to EPA's promulgation of the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category Final Rule (the "ELG Rule" or "Rule") under the Clean Water Act ("CWA"). This letter requests the disclosure of EPA's methodologies and analyses supporting the ELG Rule that have been improperly withheld as confidential business information ("CBI"). In addition, our review reveals that EPA has "over-redacted" many documents, with the result being that important non-CBI information has been improperly withheld from the public record. We request such non-CBI information as well. Attachment A is a preliminary list of documents in the public record that withhold information to which Industry Petitioners are entitled and that have been identified so far in our review of the record. As discussed in detail below, EPA is required to disclose all this information.

Judicial review of agency decisions under the Administrative Procedure Act ("APA") is based upon the "whole record," which includes all the material "considered" by the agency

decisionmaker. *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 419 (1971). Since publishing the final ELG Rule in the *Federal Register* on November 3, 2015, EPA has publicly released many of the documents it considered when promulgating the Rule. However, EPA determined that many critical documents and other information it considered are CBI. As a result, EPA has withheld these materials from inclusion in the public record for the ELG Rule, impeding Industry Petitioners' right to challenge to the Rule and thereby frustrating judicial review of the same.

I recognize that CBI is ordinarily protected from disclosure under applicable law. For instance, the Freedom of Information Act ("FOIA") exempts CBI from mandatory disclosure. *See* 5 U.S.C. § 552(b)(4). But, on the other hand, the CWA authorizes the disclosure of CBI "when relevant in any proceeding under" the CWA. 33 U.S.C. § 1318(b). EPA's FOIA regulations go on to provide that a "proceeding," in the context of the CWA, includes "any rulemaking...conducted by EPA," such as the promulgation of the ELG Rule. 40 C.F.R. § 2.302(a)(4); *see id.* at § 2.302(g) (prescribing procedures for release of "relevant" CBI).

In any event, Industry Petitioners do not specifically seek the disclosure of CBI provided to EPA by the public in the course of the ELG rulemaking. Instead, Industry Petitioners request only the disclosure of the methodologies and analyses EPA relied upon in promulgating the Final Rule (as well as non-CBI information that has been withheld). In past rulemakings, EPA has recognized its obligation to present its methodologies and analyses in the public record, even when it used CBI to develop or apply them. It has done so by employing techniques to ensure that the bases for its decisions were fully explained without the need to disclose the CBI itself. EPA has not employed those techniques here. Not only has the CBI been withheld, but the methodologies and analyses themselves have been withheld.

EPA has a strong interest in making these methodologies and analyses public, because it must rely on and justify the ELG Rule in the courts based on the public record standing alone. Courts have shown a particular reluctance to permit EPA to withhold crucial information from a public rulemaking record on the basis that it is CBI. When EPA makes such claims, it must still provide adequate explanation in the public record to support the rulemaking through the use of non-CBI data, methodologies, and analyses that satisfy the standard upon review. *See Nat'l Wildlife Fed'n v. EPA*, 286 F.3d 554, 565 (D.C. Cir. 2002). To satisfy this requirement, it is appropriate for EPA to compile the CBI in the rulemaking record into a composite, non-CBI format that is made part of the public record and discussed by the agency "at some length." *Natural Resources Defense Council v. Thomas*, 805 F.2d 410, 418 n. 13 (D.C. Cir. 1986). At bottom, the public record must be sufficient for petitioners "to mount a challenge

to EPA's rulemaking," Order, *Nat'l Wildlife Fed'n*, Feb. 2, 2000, Attach. B, and "to provide the reviewing court with a way to know the agency's methodology." *Nat'l Wildlife Fed'n*, 286 F.3d at 564 (internal quotation and citation omitted).

The public record here falls far short of the requirements under the APA, CWA, EPA regulations, and case law. EPA has designated data and analyses that are crucial to understanding the ELG Rule, and EPA's methodology in promulgating it, as CBI, and failed to provide sufficient non-CBI data and analyses to support the Rule.

For example, in one document, EPA designated entire sections of a report as CBI. In its Incremental Costs and Pollutant Removals for the Final Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category, Sep. 2015, EPA-HQ-OW-2009-0819-6472, EPA withheld whole sections of the report on General Methodology, Terminology, and Common Cost Elements, FGD Wastewater Cost Methodology, Fly Ash Transport Water Cost Methodology, and Bottom Ash Transport Water Cost Methodology. Based on the document's table of contents, the omitted sections comprise over 260 pages, covering such basic information as descriptions of the technologies analyzed and such critical information as cost methodologies. Consequently, the cost methodologies are a complete mystery. It is unclear why the *entirety* of these sections would be classified as CBI or not made available in a manner to avoid disclosing CBI.

In another example, in its Technical Development Document for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category, EPA references a memorandum produced by the Eastern Research Group, entitled "Bottom Ash and Fly Ash Transport Water Pollutants of Concern (POC) Analysis Methodology," to explain its review of "bottom ash transport water and fly ash transport water using the general data quality review criteria described in this section, *as well as more specific criteria listed in the memorandum*." EPA-HQ-OW-2009-0819-6432, at 6-23 (emphasis added). Nevertheless, EPA has withheld the *entire* memorandum from the public record as CBI, *see* EPA-HQ-OW-2009-0819-6049, making it impossible for the public to know what criteria EPA employed to identify POCs for bottom ash and fly ash transport water.

The record is replete with other examples and the Industry Petitioners continue their review of the record to identify examples in addition to these and those listed in Attachment A. In each case, EPA has violated the law by failing to release the basic and fundamental methodologies and analyses that support the ELG Rule. With the public record as it currently stands, it is a complete mystery to the public and reviewing courts how EPA reached its conclusions on

critical issues. EPA should have employed techniques to protect the CBI while simultaneously making available to the public the methodologies and analyses on which EPA made its decisions. Instead, it decided to improperly withhold critical methodologies and analyses in their entirety, presumably because they contain or discuss some amount of CBI. And even where EPA did manage to release redacted versions of documents, such as discussed above regarding the Incremental Costs and Pollutant Removals for the Final Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category, it still failed to produce non-CBI versions of the redacted methodologies and analyses to support the ELG Rule without revealing CBI.

The FGD wastewater limits are an example of EPA's failure to disclose its methodologies. We have been unable to locate any document explaining how EPA calculated those limits. Whether or not its non-disclosure is the result of over-designating CBI, this methodology is fundamental to the ELG rule. Industry Petitioners request its disclosure as part of the record.

As explained above, all of the methodologies and analyses sought by the Industry Petitioners should be in the public record whether in redacted form or in a form that otherwise protects the CBI. I respectfully ask EPA to compile the methodologies and analyses it considered in the ELG rulemaking and present them in a manner that allows the public and reviewing courts to review EPA's compliance with the CWA, APA, and other applicable law, without improperly disclosing CBI. In addition, EPA should withhold from the public record only actual CBI, not non-CBI data and information. We ask that EPA review its redactions and remove those redactions that improperly conceal non-CBI information.

I would further suggest that the parties agree to continue to hold the case in abeyance until the public record is complete.

This request applies to EPA's methodologies and analyses in the final ELG Rule, as well as any data that are necessary to explain those methodologies and analyses. The Industry Petitioners do not waive their rights to challenge whether various data or documents meet the requirements of CBI, or to expand the list of documents sought as reflected in Attachment A.

HUNTON&
WILLIAMS

I would greatly appreciate a response by February 29, 2016, so that the Industry Petitioners can decide how to proceed. In the meanwhile, please do not hesitate to contact me if you wish to discuss. Best regards.

Sincerely,

Harry M. Johnson, III

Enclosure

Attachment A

Document Title	Docket Number	Docket Abstract
Incremental Costs and Pollutant Removals for the Final Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category Chapter 5 – General Methodology, Terminology, and Common Cost Elements DCN SE05831	EPA-HQ-OW-2009-0819-6023[1]	CBI Final Draft of the Steam Electric Incremental Costs and Pollutant Loadings report. This version of the report contains confidential business information.
Incremental Costs and Pollutant Removals for the Final Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category Chapter 6 –FGD Wastewater Cost Methodology DCN SE05831	EPA-HQ-OW-2009-0819-6023	CBI Final Draft of the Steam Electric Incremental Costs and Pollutant Loadings report. This version of the report contains confidential business information.
Incremental Costs and Pollutant Removals for the Final Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category Chapter 7 – Fly Ash Transport Water Cost Methodology DCN SE05831	EPA-HQ-OW-2009-0819-6023	CBI Final Draft of the Steam Electric Incremental Costs and Pollutant Loadings report. This version of the report contains confidential business information.
Incremental Costs and Pollutant Removals for the Final Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category Chapter 8 – Bottom Ash Transport Water Cost Methodology DCN SE05831	EPA-HQ-OW-2009-0819-6023	CBI Final Draft of the Steam Electric Incremental Costs and Pollutant Loadings report. This version of the report contains confidential business information.
Incremental Costs and Pollutant Removals: Attachment A-CBI Appendix A to the Costs and Loads Report – DCN SE05831A1	EPA-HQ-OW-2009-0819-6023-Att 1	CBI_Appendix A to the Costs and Loads Report includes plant-level estimated compliance costs and pollutant removals that incorporate the CCR rule and the CPP rule.

[1] To the extent that any of the redacted content of the "sanitized" version of this document and its attachments (EPA-HQ-OW-2009-0819-6472 and attachments) differs from the content of the CBI version and its attachments (EPA-HQ-OW-2009-0819-6023 and attachments), we also request release of the redacted content of the sanitized version and its attachments.

Document Title	Docket Number	Docket Abstract
Incremental Costs and Pollutant Removals: Attachment B-CBI Appendix B to the Costs and Loads Report – DCN SE05831A2	EPA-HQ-OW-2009-0819-6023-Att 2	CBI_Appendix B to the Costs and Loads Report includes plant-level estimated compliance costs and pollutant loadings reflecting only ELGs costs and loads and costs and loads with the CCR rule incorporated.
CBI GE ABMet Pilot Study Report – DCN SE06361	EPA-HQ-OW-2009-0819-6456	CBI Report from GE Water describing results of a pilot study conducted using its ABMet biological treatment system. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Notes from Call with GE Water on April 14, 2014 – DCN SE05692	EPA-HQ-OW-2009-0819-5735	CBI_Call with GE discussing ORP treatment at a coal-fired power plant. This document contains CBI and is not available online or from the EPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Memorandum to the Steam Electric Rulemaking Record: Water Quality Module: Plant and Receiving Water Characteristics – DCN SE04513	EPA-HQ-OW-2009-0819-6450	CBI Memorandum documenting the identification of immediate receiving waters for the steam electric power plants in the Final EA Report and incorporation of water body characteristics for use in EA analyses, including the national-scale immediate receiving. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Email from Bill Bonkowki; RE: Clarification on Updated ABMet Costs from June 2014 – DCN SE04234	EPA-HQ-OW-2009-0819-5718	This document contains CBI and is not available online or from the EPA Docket Center. Please contact the Document Control Officer listed in the Federal Register. CBI Documentation of follow up questions provided to GE regarding some outstanding questions based on their updated costing data for the ABMet system. GE provided updated costs for the ABMet system via email in June 2014 (SE04230). EPA and ERG responded

Document Title	Docket Number	Docket Abstract
CBI GE ABMet Backwash Information – DCN SE00751	EPA-HQ-OW-2009-0819-5691	This document contains CBI and is not available online or from the EPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 1 – DCN SE05839A1	EPA-HQ-OW-2009-0819-5681-Att 1	CBI Development of methodology to estimate missing FGD wastewater flow rates for plants currently operating wet FGD scrubbers. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 2 – DCN SE05839A2	EPA-HQ-OW-2009-0819-5681-Att 2	CBI Documentation of process used to identify those plants discharging FGD wastewater and determination of FGD wastewater flow rate. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 6 – DCN SE05839A6	EPA-HQ-OW-2009-0819-5681-Att 6	CBI Identification of plants that incur back-up silo and pugmill or redundancy compliance costs associated with fly ash handling. Also includes a comparison of O&M costs associated with dry fly ash handling and traditional wet sluicing systems. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 11 – DCN SE05839A11	EPA-HQ-OW-2009-0819-5681-Att 11	CBI Development of methodology to estimate dollar per ton costs to transport and dispose of treatment solids to an off-site landfill. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.

Document Title	Docket Number	Docket Abstract
CBI Supplemental Costs and Loadings Attachment 13 – DCN SE05839A13	EPA-HQ-OW-2009-0819-5681-Att 13	CBI Plant-specific assessments and determinations of FGD wastewater treatment in place. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 15 – DCN SE05839A15	EPA-HQ-OW-2009-0819-5681-Att 15	CBI Development of annual FGD wastewater treatment flows for plant operating chemical precipitation; development of capacity factor used to size FGD wastewater treatment systems This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 16 – DCN SE05839A16	EPA-HQ-OW-2009-0819-5681-Att 16	CBI Development of factor used to determine the flow rate of sludge generated by chemical precipitation as a function of FGD wastewater flow This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 37 – DCN SE05839A37	EPA-HQ-OW-2009-0819-5681-Att 37	CBI Assessment of materials of construction for wastewater treatment tanks This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 39 – DCN SE05839A39	EPA-HQ-OW-2009-0819-5681-Att 39	CBI Development of an algorithm to determine whether chemical storage tanks are required (as opposed to onsite storage in chemical totes), and if so, the tank size requirements This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.

Document Title	Docket Number	Docket Abstract
CBI Supplemental Costs and Loadings Attachment 44 – DCN SE05839A44	EPA-HQ-OW-2009-0819-5681-Att 44	CBI Development of an algorithm to estimate lime storage requirements and lime storage silo size. Development of a cost equation for lime feed system purchase costs This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 45 – DCN SE05839A45	EPA-HQ-OW-2009-0819-5681-Att 45	CBI Chemical feed system specifications provided by a vendor This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 54 – DCN SE05839A54	EPA-HQ-OW-2009-0819-5681-Att 54	CBI Development of the design basis and treatment in place methodology for clarifiers This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 56 – DCN SE05839A56	EPA-HQ-OW-2009-0819-5681-Att 56	CBI Filter press information and purchase costs provided by a vendor This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 58 – DCN SE05839A58	EPA-HQ-OW-2009-0819-5681-Att 58	CBI Filter press specifications provided by a vendor This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 63 – DCN SE05839A63	EPA-HQ-OW-2009-0819-5681-Att 63	CBI_Development of cost factors used to estimate total direct capital costs (i.e., installation, site prep, buildings, land, and instrumentation and controls) as a function of purchased equipment. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.

Document Title	Docket Number	Docket Abstract
CBI Supplemental Costs and Loadings Attachment 65 – DCN SE05839A65	EPA-HQ-OW-2009-0819-5681-Att 65	CBI Development of a cost equation for operating labor costs This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 66 – DCN SE05839A66	EPA-HQ-OW-2009-0819-5681-Att 66	CBI Development of cost factors used to estimate labor and maintenance materials costs as a function of annual FGD wastewater flow This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 67 – DCN SE05839A67	EPA-HQ-OW-2009-0819-5681-Att 67	CBI Development of chemical dosage rates This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 68 – DCN SE05839A68	EPA-HQ-OW-2009-0819-5681-Att 68	CBI Chemical purchase costs provided by vendors This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 72 – DCN SE05839A72	EPA-HQ-OW-2009-0819-5681-Att 72	CBI Development of an equation to estimate chemical precipitation dewatered sludge generation as a function of FGD wastewater flow. Estimation of density of dewatered chemical precipitation dewatered sludge This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 73 – DCN SE05839A73	EPA-HQ-OW-2009-0819-5681-Att 73	CBI Development of equation to estimate ABMet backwash flow rate and backwash solids generation. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.

Document Title	Docket Number	Docket Abstract
CBI Supplemental Costs and Loadings Attachment 75 – DCN SE05839A75	EPA-HQ-OW-2009-0819-5681-Att 75	CBI Correspondence with General Electric (GE) regarding costing information for their ABMet biological treatment system. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 76 – DCN SE05839A76	EPA-HQ-OW-2009-0819-5681-Att 76	CBI Summary of correspondence with General Electric (GE) regarding updated costing information for their ABMet biological system as of 2014. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 78 – DCN SE05839A78	EPA-HQ-OW-2009-0819-5681-Att 78	CBI Derivation of ORP Monitor costing methodology. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 79 – DCN SE05839A79	EPA-HQ-OW-2009-0819-5681-Att 79	CBI Summary of correspondence with ABB regarding capital costs and O&M requirements associated with an ORP Monitor. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register
CBI Supplemental Costs and Loadings Attachment 83 – DCN SE05839A83	EPA-HQ-OW-2009-0819-5681-Att 83	CBI Development of factor used to calculate costs associated with purchasing materials used for maintaining the biological treatment system.
CBI Supplemental Costs and Loadings Attachment 84 – DCN SE05839A84	EPA-HQ-OW-2009-0819-5681-Att 84	CBI Compilation of data from GE and HPD regarding costing information for the vapor compression evaporation system. Cost curves and equations developed from vendor data were used to estimate system level costs for installing and operating a vapor compres

Document Title	Docket Number	Docket Abstract
CBI Supplemental Costs and Loadings Attachment 85 – DCN SE05839A85	EPA-HQ-OW-2009-0819-5681-Att 85	CBI Methodology used to estimate O&M costs associated with sodium bisuflite addition. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI supplemental Costs and Loadings Attachment 87 – DCN SE05839A87	EPA-HQ-OW-2009-0819-5681-Att 87	CBI Development of factors and equations for the fly ash handling conveyance capital and O&M costs. These equations and factors include the conveyance equipment capital cost equation, redundant equipment capital cost equations, direct capital cost factor, This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 88 – DCN SE05839A88	EPA-HQ-OW-2009-0819-5681-Att 88	CBI Development of factors and equations for the fly ash handling intermediate capital and O&M costs. These equations and factors include the intermediate storage equipment capital cost equation (for concrete and steel silos), direct capital cost factor, This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 89 – DCN SE05839A89	EPA-HQ-OW-2009-0819-5681-Att 89	CBI Development of the typical moisture content used to calculate the amount of moisture conditioned fly ash to be transported to a landfill. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.

Document Title	Docket Number	Docket Abstract
CBI Supplemental Costs and Loadings Attachment 92 – DCN SE05839A92	EPA-HQ-OW-2009-0819-5681-Att 92	CBI Development of factors for the bottom ash MDS conveyance O&M costs. These factors include the conveyance operating and maintenance labor rates, operating and maintenance labor hours, maintenance materials cost factor. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 93 – DCN SE05839A93	EPA-HQ-OW-2009-0819-5681-Att 93	CBI Development of factors for the bottom ash intermediate storage O&M costs. These factors include the intermediate storage operating and maintenance labor rates, operating and maintenance labor hours, maintenance materials cost factor, and pugmill energ This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 96 – DCN SE05839A96	EPA-HQ-OW-2009-0819-5681-Att 96	CBI Development of the typical moisture content used to calculate the amount of moisture conditioned bottom ash to be transported to a landfill. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 97 – DCN SE05839A97	EPA-HQ-OW-2009-0819-5681-Att 97	CBI Telecon and email correspondence with bottom ash handling vendor containing information on bottom ash handling conversions and specific costs for bottom ash conversions, drag chain replacement costs, and drag chain replacement frequency. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.

Document Title	Docket Number	Docket Abstract
CBI Supplemental Costs and Loadings Attachment 98 – DCN SE05839A98	EPA-HQ-OW-2009-0819-5681-Att 98	CBI Development of the equation to estimate the volume of the remote MDS conveyor to estimate the volume of surge capacity required for maintenance. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 100 – DCN SE05839A100	EPA-HQ-OW-2009-0819-5681-Att 100	CBI Methodology used to estimate compliance costs for plants discharging IGCC wastewater. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Updated ABMet Cost Curve – DCN SE04230	EPA-HQ-OW-2009-0819-5658	CBI_New cost curve from GE to reflect updated costs for the ABMet system. This new costing data includes updated installed costs based on flow rate as of July 2014. This document contains CBI and is not available online or from the EPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
Memorandum-Bottom Ash and Fly Ash Transport Water Pollutants of Concern (POC) Analysis Methodology – DCN SE04745	EPA-HQ-OW-2009-0819-6049	CBI. This memorandum provides details on EPA analysis of ash transport water data to determine pollutants of concern associated with this wastestream.
Analysis – CBI Pollutants of Concern Ash Treatment Analysis – DCN SE04746	EPA-HQ-OW-2009-0819-6050	CBI. This spreadsheet was developed as part 2 of EPA's analysis to identify pollutants of concern in ash transport water. This spreadsheet contains all non-paired ash transport water data accepted by EPA and the results of part 2 of the POC analysis.

Document Title	Docket Number	Docket Abstract
Data – CBI Final Ash Transport Water Analytical Data Review Matrix – DCN SE05575	EPA-HQ-OW-2009-0819-6381	CBI_This MS Excel workbook supporting the review of all data sources identified with ash transport water data. Information about the data source identification, plant identification, wastestream identification, and sample identification were compiled in this matrix to evaluate data usability, representativeness, and characterization. All data sources in the matrix were evaluated with EPA's ash data acceptance criteria.
Data – CBI FGD & Ash Cost Model with and without CCR – DCN SE05841	EPA-HQ-OW-2009-0819-6028	CBI_Database used to calculate compliance costs for FGD, fly ash and bottom ash for populations of plants including and not including CCR.
CBI FGD & Ash Cost Model Database Dictionary – DCN SE05841.A1	EPA-HQ-OW-2009-0819-6028-Att 1	CBI_Data element dictionary for the FGD and Ash Steam Electric Cost Model. This excel file contains descriptions of the tables, field names, and code modules contained within the FGD and Ash Steam Electric Cost Model.
Analysis-CBI Source Water Ash Treatment Analysis Final – DCN SE04744	EPA-HQ-OW-2009-0819-6048	CBI. This spreadsheet was developed as part 1 of EPAs analysis to identify pollutants of concern in ash transport water. This spreadsheet contains all paired source water and ash transport water data accepted by EPA and the results of part 1 of the POC analysis.
CBI Memorandum to the Steam Electric Rulemaking Record: Steam Electric Effluent Guidelines Evaluation of Potential Subcategorization Approaches – DCN SE05813	EPA-HQ-OW-2009-0819-6206	CBI Memorandum describing the evaluation of potential subcategorization and threshold approaches.
Data – CBI Bottom Ash Complete Recycle Estimated Cost for Plants with Remote MDS systems to implement Complete Recycle of Bottom Ash Transport Water Calculation File – DCN SE05960	EPA-HQ-OW-2009-0819-6213	CBI_Calc file used to estimate costs associated with implementing complete recycle of bottom ash transport water at plants with remote MDS installations.

Document Title	Docket Number	Docket Abstract
Data – CBI Draft UCC Ash Handling Documentation Attachments 1 through 8 for UCC Review – DCN SE05922	EPA-HQ-OW-2009-0819-6151	CBI Attachments 1 through 8 to the UCC ash handling documentation. These attachments include fly ash and bottom ash handling conversion data delivered to UCC on September 9, 2015 for review. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
Data – CBI Intake Analysis Database for CCR Population – DCN SE05696	EPA-HQ-OW-2009-0819-6003	CBI_This database calculates the percent water reduction for plants using raw water for their FGD, bottom ash, and fly ash systems. Also contains estimates for if plants recycle ash transport water.
Data – CBI Intake Analysis Database for CPP Population – DCN SE05697	EPA-HQ-OW-2009-0819-6005	CBI_This database calculates the percent water reduction for plants using raw water for their FGD, bottom ash, and fly ash systems. Also contains estimates for if plants recycle ash transport water.
CBI Additional GE Response to Post Proposal Questions – DCN SE04208	EPA-HQ-OW-2009-0819-5650	CBI_Answers provided by GE in response to EPA questions regarding issues raised during the comment period. These responses are in addition to the initial responses provided in DCN SE04202.
CBI Supporting Charts for GE's Response to Post Proposal Questions – DCN SE04208A1	EPA-HQ-OW-2009-0819-5650-Att 1	CBI Additional charts provided along with response to questions. This document contains CBI and is not available online or from the EPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI GE Written Response to Additional Follow Up Questions – DCN SE04222	EPA-HQ-OW-2009-0819-5655	CBI_GE provided written response to the follow up questions that were provided to them in writing (SE04209) and discussed in a meeting with EPA and ERG on April 14, 2014.

Document Title	Docket Number	Docket Abstract
CBI Attachment to GE Written Responses – DCN SE04222A1	EPA-HQ-OW-2009-0819-5655-Att I	CBI_An updated graph provided as an attachment to the written responses provided by GE. This document contains CBI and is not available online or from the EPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
Data – CBI Leachate Cost Model – DCN SE05842	EPA-HQ-OW-2009-0819-6029	This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register. CBI_Database used to calculate compliance costs for leachate.
CBI – Leachate Cost Model Database Dictionary – DCN SE05842A1	EPA-HQ-OW-2009-0819-6029-Att I	CBI_Data element dictionary for the Leachate Steam Electric Cost Model. This excel file contains descriptions of the tables, field names, and code modules contained within the Leachate Steam Electric Cost Model. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
Data – CBI Leachate Loadings Database with CPP – DCN SE05860	EPA-HQ-OW-2009-0819-6039	CBI_Database used to calculate leachate pollutant loadings and removals for the proposed CPP population. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
Data – CBI FGD & Ash Cost Model with Proposed CPP – DCN SE05862	EPA-HQ-OW-2009-0819-6042	CBI_Database used to calculate compliance costs for FGD, fly ash and bottom ash for populations of plants reflecting the proposed CPP. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.

Document Title	Docket Number	Docket Abstract
CBI – FGD & Ash Cost Model with CPP Database Dictionary – DCN SE05862A1	EPA-HQ-OW-2009-0819-6042-Att 1	CBI_Data element dictionary for the FGD and Ash Steam Electric Cost Model with CPP. This excel file contains descriptions of the tables, field names, and code modules contained within the FGD and Ash Steam Electric Cost Model with CPP. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Memorandum to the Steam Electric Rulemaking Record: Steam Electric Effluent Guidelines – Evaluation of Potential Subcategorization Approaches – DCN SE05813	EPA-HQ-OW-2009-0819-6206	CBI Memorandum describing the evaluation of potential subcategorization and threshold approaches. This document contains CBI and is not available online or from the EPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
Data – CBI Subcategorization Threshold Calculation Database – DCN SE05960	EPA-HQ-OW-2009-0819-6220	This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register CBI_Database that documents EPA's evaluation of potential subcategorization associated with generating unit size capacity (in MW).
CBI Data Dictionary for the Subcategorization Threshold Calculation Database – DCN SE05960.A1	EPA-HQ-OW-2009-0819-6220-Att 1	This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register CBI_Database dictionary describing the tables, fields, and queries used in the subcategorization threshold analyses (DCN SE05960).

Attachment B

United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 99-1452 **September Term, 1999**

National Wildlife Federation, et al.,
Petitioners

v.

Environmental Protection Agency and Carol M. Browner, Administrator, Environmental Protection Agency,
Respondents

American Forest and Paper Association Inc.,
Intervenor for Respondent

Consolidated with 99-1454, 99-1455, 99-1456

BEFORE: Ginsburg and Sentelle, Circuit Judges

ORDER

Upon consideration of the motion to dismiss, the responses thereto, and the replies; the motion filed by National Wildlife Foundation, et al. (collectively, NWF), to compel disclosure of information in the administrative record and to stay the briefing schedule until EPA discloses the information, the responses thereto, and the replies; the motions to strike, and the responses thereto; the motion of the Chemical Manufacturers Association and the Coalition for Effective Environmental Information to intervene or to file an amicus brief in opposition to NWF's motion to compel, and the responses thereto, it is

ORDERED that the motion to dismiss be referred to the merits panel to which these consolidated petitions for review are assigned. The parties are directed to include in their briefs the arguments raised in the motion to dismiss rather than incorporate those arguments by reference. It is

FURTHER ORDERED that the motions to strike be dismissed as moot. It is

No. 99-1452 **September Term, 1999**

FURTHER ORDERED that the motion to intervene or to file an amicus brief be denied. It is

FURTHER ORDERED that the motion to compel and to stay the briefing schedule be denied. The confidential business information NWF seeks is the type of sensitive information and confidential or trade secret information that EPA can properly withhold from public view. See Natural Resources Defense Council v. Thomas, 805 F.2d 410, 418 n.13 (D.C. Cir. 1986). The material contained in the public record appears sufficient for NWF to mount a challenge to EPA's rulemaking. See MD Pharm., Inc. v. DEA, 133 F.3d 8, 13-14 (D.C. Cir. 1998) (distinguishing agency actions in which documents relied on are "a complete mystery" and those in which the documents have been identified but not disclosed because they contain sensitive material).

The Clerk is instructed to process these consolidated cases for briefing and argument in the ordinary course.

Per Curiam

Exhibit 2

U.S. Department of Justice

Environment and Natural Resources Division

Martin McDermott
Environmental Defense Section
P.O. Box 7611
Washington, DC 20044

Telephone (202) 514-4122
Facsimile (202) 514-8865

March 17, 2016

Re: Response to Request for Disclosure of Information Withheld as Confidential Business Information From the Public Record for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category Final Rule

Dear Pete:

This letter responds to your letter of February 17, 2016, requesting that EPA disclose certain documents withheld as confidential business information ("CBI") related to analyses for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category Final Rule (the "Rule"). A careful review of the entire record demonstrates that EPA adequately explained its rationale for the Rule in documents that do not disclose information claimed as CBI. EPA is confident that the public record presents the methodologies and analyses the Agency used to reach its final determination in sufficient detail so that stakeholders as well as any reviewing court can consider whether the Agency's decisions were reasonable.

As noted in your letter, EPA removed from public view those documents that steam electric power generating facilities and others claimed as CBI. EPA is statutorily obligated to protect from disclosure all information claimed as CBI. *See Nat'l Wildlife Fed'n v. EPA*, 286 F.3d 554, 564-65 (D.C. Cir. 2002) ("EPA cannot be faulted for keeping [CBI] confidential" in a rulemaking record because CBI "may not be publicly disclosed" pursuant to CWA section 308(b).) The protocols that EPA used to identify and protect the CBI obtained or developed during this rulemaking are described in several documents in the record, including Section 3.8 of the publicly-available non-CBI version of Incremental Costs and Pollutant Removals for the Final Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category ("Costs and Pollutant Removals Report"). Document Control Number (DCN) SE05832; EPA-HQ-OW-2009-0819-6472. To prevent disclosing CBI, the Agency found it necessary to withhold from the public docket all information claimed as CBI as well as some additional data that, although not claimed as CBI, could inadvertently release CBI if made public. Where possible when dealing with CBI, EPA attempted to make information publicly available, using techniques such as aggregating certain data in the public docket, presenting

ranges of values, or masking plant identities to prevent CBI disclosure. The Agency's approach to protecting CBI ensures that the data in the public docket present the basis for the Rule and provide the opportunity for public comment, without compromising data confidentiality.

The public record contains a complete account of the methodologies and analyses underlying the Rule, notwithstanding EPA's protection of CBI. Your letter states that "the cost methodologies are a complete mystery" because EPA omitted 260 pages from the Costs and Pollutant Removals Report. Letter at 3. Yet your letter does not mention the "Non-CBI" version of the Costs and Pollutant Removals Report that EPA prepared for the proposed rule, which was available for review during the public comment period and remains publicly available. DCN SE03581; EPA-HQ-OW-2009-0819-2256; *see also* the Costs and Pollutant Removals Report for the Final Rule, DCN SE05832; EPA-HQ-OW-2009-0819-6472. These documents present the cost methodologies in great detail.

Other documents available to the public also discuss the cost methodologies used for the Rule. Section 9 of the Technical Development Document ("TDD") describes the cost methodologies used to analyze the technology options for each of the waste streams. DCN SE05904; EPA-HQ-OW-2009-0819-6432. Changes made to the cost estimates following proposal in response to public comments are presented in section V.D of the Federal Register notice for the final Rule. More detailed explanations of specific changes EPA made are included in EPA's comment response document, "Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category: EPA's Response to Public Comments" ("Comment Response Document"), *see, e.g.*, Comment Codes 10b, 14b and 16b. DCN SE05958; EPA-HQ-OW-2009-0819-6469. In addition, at the time of proposal EPA made available to power companies certain CBI and CBI-deducible data related to their power plants so that they could review the plant-specific input and output data used by EPA's models to estimate costs and pollutant removals.

Your letter also states that CBI redactions, particularly the redaction of the "Bottom Ash and Fly Ash Transport Water Pollutants of Concern (POC) Analysis Methodology" memorandum, "make it impossible for the public to know what criteria EPA employed to identify POCs for bottom ash and fly ash transport water." Letter at 3. On the contrary, the record contains ample documentation of the criteria EPA employed to identify pollutants of concern for bottom ash and fly ash transport water. Section 12 of the non-CBI version of the "Incremental Costs and Pollutant Removals for the Final Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category" provides a comprehensive description of the criteria employed. DCN SE05832; EPA-HQ-OW-2009-0819-6472. The criteria are presented elsewhere as well, including in Section 6.6.4 of the TDD, "Pollutants of Concern: Ash Transport Water POCs," and discussed in response to specific comments in Part 6 of the Comment Response Document.

Finally, the suggestion in your letter that EPA has "fail[ed] to disclose its methodologies" for calculating the flue gas desulfurization (FGD) wastewater limits is inaccurate. The methodologies EPA used to calculate the effluent limitations for FGD wastewater are carefully described in the Section 13 and Appendix B of the TDD. EPA's data and methodologies are also explained elsewhere in the record, including in the "Statistical Support Document: Effluent Limitations for FGD Wastewater, Gasification Wastewater, and Combustion Residual Leachate for the Final Steam Electric Power Generating Effluent Limitations Guidelines and Standards,"

DCN SE05733, EPA-HQ-OW-2009-0819-6430, and in response to specific comments in Comment Code 31 in the Comment Response Document.

In compiling the record for this Rule, EPA balanced the privacy claims of steam electric power generating facilities, as well as vendors and others who provided EPA valuable data, with its commitment to a transparent and accountable rulemaking process. Although EPA did not disclose every document submitted to the Agency in order to appropriately protect confidentiality, the thousands of documents accessible in the public record provide ample explanation of the Agency's decisions.

In light of the robust public record for this Rule, there is no reason to defer litigation over it. Now that the period for filing petitions for review has concluded, EPA plans to file a certified index to the record. The Agency hopes that challenges can proceed expeditiously in order to maximize both industry certainty and the Rule's benefits to public health and the environment.

Sincerely,

Martin F. McDermott, Trial Attorney

Exhibit 3
Appendix to Application of Duke Energy Indiana, LLC For a Fundamentally Different Factor Variance

Appendix 1

2013 and 2015 Data from Edwardsport IGCC Grey Water Treatment System

Appendix 1: 2013 and 2015 Data from Edwardsport IGCC Grey Water Treatment System

	Mercury, ng/l			Arsenic, ug/l			TDS, mg/l		
	Filtered	Influent	Effluent	Filtered	Influent	Effluent	Filtered	Influent	Effluent
ELG daily max / 30-day avg.			1.8 / 1.3			4 / -			38 / 22
5/9/2013						<0.06			
5/23/2013						<0.06			
6/6/2013						<6			
6/13/2013						<6			
7/22/2013			2.08						
7/24/2013						2			
7/31/2013						<0.6			
8/2/2013						<0.6			
8/8/2013			9.58						
8/25/2013						15			
9/5/2013						<0.06			
9/25/2013						<0.06			
10/3/2013			2.53						
10/8/2013						<0.6			
10/17/2013						<0.6			
9/8/2015	0.540	6.55	12.8	<1.0	1,100	<1.0	300	2,540	20
9/10/2015	<0.50	15.8	5.25	<1.0	120	<1.0	300	3,020	40
9/15/2015	<0.50	10.8	10.3	<2.0	120	<2.0	120	2,560	<10
9/17/2015	<0.50	21.2	6.55	<2.0	130	<2.0	280	2,090	20
9/22/2015	<0.50	22.0	10.8	<1.0	31	<1.0	324	2,200	10
9/24/2015	<0.50	23.4	11.5	<1.0	63	<1.0	322	2,140	<10
9/29/2015	<0.50	44.4	6.40	<1.0	67	<1.0	420	2,700	32
10/1/2015	<0.50	7.35	3.92	<1.0	42	<1.0	336	2,980	20
10/6/2015	<0.50	15.6	2.40	<1.0	33	<1.0	340	2,680	20
10/8/2015	<0.50	11.8	5.79	<1.0	38	<1.0	380	1,660	14
10/13/2015	<0.50	30.4	3.05	<1.0	210	<1.0	320	2,230	222
10/15/2015	<0.50	59.5	0.877	<1.0	230	<1.0	340	2,120	60
Maximum	**0.54**	**59.5**	**12.8**	**<2.0**	**1,100**	**15**	**420**	**3,020**	**222**
Average	**<0.50**	**22.4**	**6.3**	**<1.2**	**182**	**1.9**	**315**	**2,410**	**39.8**
Minimum	**<0.50**	**6.55**	**0.9**	**<1.0**	**31**	**<0.1**	**120**	**1,660**	**<10**
Count	**12**	**12**	**15**	**12**	**12**	**24**	**12**	**12**	**12**

ATTACHMENT D.

FEDERAL REGISTER NOTICE OF WITHDRAWAL OF FEDERAL PLAN

We accept anonymous comments. All comments received will be posted without change to *http://www.regulations.gov* and will include any personal information you have provided. For more about privacy and the docket, you may review a Privacy Act notice regarding the Federal Docket Management System in the March 24, 2005, issue of the **Federal Register** (70 FR 15086).

Documents mentioned in this NPRM as being available in the docket, and all public comments, will be in our online docket at *http://www.regulations.gov* and can be viewed by following that Web site's instructions. Additionally, if you go to the online docket and sign up for email alerts, you will be notified when comments are posted or a final rule is published.

We plan to hold one public meeting on May 08, 2017 at 5 p.m. at the East Hawaii County Building (Hilo) Aupuni Center Conference Room located at 101 Pauahi St. #7, Hilo, Hawaii 96720. For information on facilities or services for individuals with disabilities or to request special assistance at the public meeting, contact the person named in the **FOR FURTHER INFORMATION CONTACT** section, above.

List of Subjects in 33 CFR Part 165

Harbors, Marine safety, Navigation (water), Reporting and recordkeeping requirements, Security measures, Waterways.

For the reasons discussed in the preamble, the Coast Guard proposes to amend 33 CFR part 165 as follows:

PART 165—REGULATED NAVIGATION AREAS AND LIMITED ACCESS AREAS

■ 1. The authority citation for part 165 continues to read as follows:

Authority: 33 U.S.C. 1231; 50 U.S.C. 191; 33 CFR 1.05–1, 6.04–1, 6.04–6, and 160.5; Department of Homeland Security Delegation No. 0170.1.

■ 2. Add § 165.1414 to read as follows:

§ 165.1414 Safety Zone; Pacific Ocean, Kilauea Lava Flow Ocean Entry on Southeast Side of Island of Hawaii, HI.

(a) *Location.* The safety zone area is located within the COTP Zone (See 33 CFR 3.70–10) and encompasses one primary area from the surface of the water to the ocean floor at the Kilauea active lava flow entry into the Pacific Ocean on the southeast side of the Island of Hawaii, HI. The entry point of the lava does change based on flow, however the safety zone will encompass all waters extending 300 meters (984 feet) in all directions around the entry point of lava flow into the ocean associated with the lava flow at the Kamokuna lava delta.

(b) *Enforcement period.* The COTP Honolulu will establish the enforcement dates that will be announced with a notice of enforcement of regulations published in the **Federal Register**. The enforcement dates will also be announced with a Broadcast Notice to Mariners, Local Notice to Mariners, and Outreach.

(c) *Regulations.* The general regulations governing safety zones contained in § 165.23 apply to the safety zone created by this rule.

(1) All persons and vessels are required to comply with the general regulations governing safety zones found in this part.

(2) Entry into or remaining in this safety zone is prohibited unless authorized by the COTP Honolulu or his designated representative.

(3) Persons or vessels desiring to transit the safety zone identified in paragraph (a) of this section may contact the COTP of Honolulu through his designated representatives at the Command Center via telephone: (808) 842–2600 and (808) 842–2601; fax: (808) 842–2642; or on VHF channel 16 (156.8 Mhz) to request permission to transit the safety zone. If permission is granted, all persons and vessels must comply with the instructions of the COTP Honolulu or his designated representative and proceed at the minimum speed necessary to maintain a safe course while in the safety zone.

(4) The U.S. Coast Guard may be assisted in the patrol and enforcement of the safety zone by Federal, State, and local agencies.

(d) *Notice of enforcement.* The COTP Honolulu will provide notice of enforcement of the safety zone described in this section by verbal radio broadcasts and written notice to mariners.

(e) *Definitions.* As used in this section, ''designated representative'' means any Coast Guard commissioned, warrant, or petty officer who has been authorized by the COTP to assist in enforcing the safety zone described in paragraph (a) of this section.

Dated: March 28, 2017.

M.C. Long,

Captain, U.S. Coast Guard, Captain of the Port Honolulu.

[FR Doc. 2017–06474 Filed 3–31–17; 8:45 am]

BILLING CODE 9110–04–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 60

[FRL9961–12–OAR]

Withdrawal of Proposed Rules: Federal Plan Requirements for Greenhouse Gas Emissions From Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations; and Clean Energy Incentive Program Design Details

AGENCY: Environmental Protection Agency (EPA).

ACTION: Withdrawal of proposed rules.

SUMMARY: The U.S. Environmental Protection Agency (EPA) is withdrawing the October 23, 2015 proposals for a federal plan to implement the greenhouse gas (GHG) emission guidelines (EGs) for existing fossil fuel-fired electric generating units (EGUs), for model trading rules for implementation of the EGs, and for amendments to the Clean Air Act (CAA) 111(d) framework regulations, and the June 30, 2016 proposed rule concerning design details of the Clean Energy Incentive Program (CEIP).

DATES: The proposed rule published on October 23, 2015 entitled ''Federal Plan Requirements for Greenhouse Gas Emissions From Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations.'' 80 FR 64966, and the proposed rule published on June 30, 2016 entitled ''Clean Energy Incentive Program Design Details,'' 81 FR 42940, are withdrawn as of April 3, 2017.

FOR FURTHER INFORMATION CONTACT: Mr. Peter Tsirigotis, Sector Policies and Programs Division (D205–01), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711; telephone number: (888) 627–7764; email address: *airaction@epa.gov*.

SUPPLEMENTARY INFORMATION:

1. Background

On October 23, 2015, EPA published final carbon dioxide EGs under CAA 111(d) for existing EGUs, entitled ''Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units,'' 80 FR 64662 (October 23, 2015) (Clean Power Plan or CPP). On the same date, in connection with the CPP, EPA published a proposed rule for a federal plan to implement those guidelines, for model trading rules to aid implementation of the guidelines, and for amendments to

the existing framework regulations implementing CAA 111(d) ''Federal Plan Requirements for Greenhouse Gas Emissions From Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations.'' 80 FR 64966 (October 23, 2015) (the October 2015 Proposed Rule). Subsequently, on June 30, 2016, EPA published proposed design details of the Clean Energy Incentive Program (CEIP), an optional program that States could use to incentivize early emission reduction projects under the CPP. ''Clean Energy Incentive Program Design Details,'' 81 FR 42940 (June 30, 2016) (CEIP Proposed Rule). The EPA never finalized the October 2015 Proposed Rule or the CEIP Proposed Rule, and is not doing so today. Instead, it is withdrawing them both.

The CPP was promulgated under Section 111 of the CAA. 42 U.S.C. 7411. Section 111 of the Clean Air Act authorizes the EPA to issue nationally applicable New Source Performance Standards (NSPS) limiting air pollution from ''new sources'' in source categories that cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare. 42 U.S.C. Section 7411(b)(1). Under this authority, the EPA had long regulated new fossil fuel-fired power plants to limit air pollution other than carbon dioxide, including particulate matter (PM); nitrogen oxides (NO_X) and sulfur dioxide (SO_2). See 40 CFR part 60 subparts D, Da. In 2015, the EPA issued a rule that for the first time set carbon dioxide emissions limits for new fossil fuel-fired power plants. Standards of Performance for Greenhouse Gas Emissions From New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units (New Source Rule), 80 FR 64510 (October 23, 2015). Under certain circumstances, when the EPA issues standards for new sources under Section 111(b), the EPA has the authority under Section 111(d), to prescribe regulations under which each State is to submit a plan to establish standards for existing sources in the same category. The EPA relied on that authority to issue the CPP, which for the first time required States to submit plans specifically designed to limit carbon dioxide emissions from existing fossil fuel-fired power plants.

Due to concerns about EPA's legal authority and record, 24 States and a number of other parties sought judicial review of the New Source Rule in the U.S. Court of Appeals for the District of Columbia. *State of North Dakota* v. *EPA,* No. 15–1381 (and consolidated cases) (D.C. Cir.). Similarly, due to concerns about EPA's legal authority and record, 27 States and a number of other parties sought judicial review of the CPP in the D.C. Circuit. *State of West Virginia* v. *EPA*, No. 15–1363 (and consolidated cases) (D.C. Cir.). On February 9, 2016, the Supreme Court stayed implementation of the CPP pending judicial review. Oral argument in the D.C. Circuit in *North Dakota* is currently scheduled for April 17, 2017. Following full merits briefing, oral argument in *West Virginia* was held before the D.C. Circuit, sitting *en banc*, on September 27, 2016. Both challenges to these rules are pending in the D.C. Circuit.

2. Energy Development Executive Order and Other Related Notices

On March 28, 2017, President Trump issued an Executive Order establishing a national policy in favor of energy independence, economic growth, and the rule of law. The purpose of that Executive Order is to facilitate the development of U.S. energy resources and to reduce unnecessary regulatory burdens associated with the development of those resources. The President has directed agencies to review existing regulations that potentially burden the development of domestic energy resources, and appropriately suspend, revise, or rescind regulations that unduly burden the development of U.S. energy resources beyond what is necessary to protect the public interest or otherwise comply with the law. The Executive Order also directs agencies to take appropriate actions, to the extent permitted by law, to promote clean air and clean water while also respecting the proper roles of Congress and the States. This Executive Order specifically directs EPA to review and, if appropriate, initiate proceedings to suspend, revise or rescind the CPP.

In EPA's notice announcing the initiation of its review of the CPP, EPA states that, if its review concludes that suspension, revision or rescission of the CPP may be appropriate, EPA's review will be followed by a rulemaking process that will be transparent, follow proper administrative procedures, include appropriate engagement with the public, employ sound science, and be firmly grounded in the law.

3. Why is the EPA withdrawing the October 2015 Proposed Rule and the CEIP Proposed Rule?

The Executive Order directs the EPA to review the October 2015 Proposed Rule and, if appropriate, as soon as practicable and consistent with law, consider revising or withdrawing the October 2015 Proposed Rule. In anticipation of the Executive Order, the EPA had already begun a review of both the October 2015 Proposed Rule, and of the CEIP Proposed Rule, which proposes implementation details for a program that is directly connected to the CPP. In light of the policies set forth in the Executive Order and the Agency's concurrent notice initiating a review of the CPP, EPA has decided to withdraw the Proposed Rules, for the reasons discussed below.

At this time, the EPA is not under an obligation to finalize these rulemakings, nor is there a time-sensitive need for them given the Supreme Court stay of the CPP. The October 2015 proposal and the CEIP proposal were issued at EPA's discretion to implement the 2015 CPP. First, the proposed model trading rules were designed to provide a sample for States wishing to adopt a trading program to implement the CPP. It was the CPP, however, that was designed to establish the binding requirements for state action, while the purpose of the proposed model rules was to give states examples of how to design an approvable program. While model rules may be helpful, they are not required under the CAA. Second, under the Clean Air Act's principles of cooperative federalism, hopefully a federal plan will never be needed to implement Section 111(d) emission guidelines, and a federal plan certainly is not statutorily required early in the implementation process, when the Agency's focus is to assist States in developing approvable state plans. Finally, the CEIP proposal provides details for a voluntary program that was designed to help States and tribes meet their CPP goals by removing barriers to investment in energy efficiency in low-income communities and encouraging early investments in zero-emitting renewable energy generation. The CEIP is not required by the CAA. Furthermore, because the energy markets continue to change, the appropriateness of the details of the CEIP proposal are dependent on projected market conditions during the time period when it would apply. Changes in CPP compliance dates, including state plan submission dates, would likely necessitate a re-evaluation of the CEIP proposal details.

When EPA initially made these proposals, it assumed that States needed immediate guidance to develop state plans because EPA had set state plan submission dates starting in September 2016. EPA also wanted to be prepared to institute a federal plan immediately if a State missed its submission date. Given the Supreme Court's stay of the CPP, however, the CPP compliance

dates must be reviewed. Indeed, the first state plan submission date has already passed, and other compliance dates are likely to pass while the Supreme Court stay is pending. Further, under the Supreme Court's stay of the CPP, States and other interested parties have not been required nor expected to work towards meeting the compliance dates set in the CPP. Thus, as the EPA conducts its review of the CPP and decides what further action to take on the EGU emission guidelines, EPA will ensure that any and all remaining compliance dates will be reasonable and appropriate in light of the Supreme Court stay of the CPP and other factors. Further state action will not be required unless and until there is resolution of the pending litigation or the EPA issues new EGU emission guidelines. This gives the EPA time to re-evaluate these CPP-related proposals.

The EPA believes it should use this time to re-evaluate these CPP-related proposals and, if appropriate, put out re-proposals or new proposals to ensure that the public is commenting on EPA's most up-to-date thinking on these issues. There are a number of reasons why these proposals may ultimately not reflect the Agency's reasoned policy decisions reflecting both the current state of the energy market and the agency's operative understanding of its statutory authority. First, the Agency has announced that it is reviewing and, as appropriate, may suspend, revise or rescind the CPP. Though our review of the CPP is ongoing and any final decision to suspend, revise or rescind it will be made only after EPA has provided notice and an opportunity for public comment, it is possible that the CPP as promulgated in 2015 will be rescinded and that new emission guidelines, if any, for existing EGUs will be different from the CPP. Because the CPP-related Proposed Rules are designed to provide implementation details related to the specific requirements of the CPP, any changes to the CPP or new emission guidelines would most likely require changes to these CPP-related proposals. Thus, this preliminary action to withdraw these CPP-related proposals will allow EPA to review them in light of its review of the CPP and, if they are still needed, to determine the appropriate next steps for these proposals, which may be to develop new proposals with revisions to ensure they are consistent with and appropriately implement revised emission guidelines, if any. Second, whether or not the EPA makes any changes as a result of its review of the CPP, it is appropriate for the EPA to re-evaluate the proposals in light of the policies set forth in the Executive Order and ensure that what the Agency proposes and seeks public comment on has been developed or reviewed in light of those policies.

As a final point, we want to be clear that our withdrawal of these proposals is not based on any final substantive decision that we have made with respect to these proposals. We are withdrawing these proposals for the procedural reasons that we have discussed above to promote the EPA's review of the CPP and future rulemaking process, and ensure that interested parties have a full opportunity to comment on proposals that reflect the Agency's most up-to-date and relevant thinking. Thus, for the reasons stated above, EPA concludes that, at this time, it is appropriate to withdraw the October 2015 Proposed Rule and the CEIP Proposed Rule. The

EPA intends to review these proposals in conjunction with its comprehensive review of the CPP. Based on that review, the Agency will determine how best to proceed, which may include the development of new proposals consistent with the requirements of CAA Section 307(d).

4. Statutory Authority

Pursuant to CAA Section 307(d)(1)(V), the Administrator is determining that this withdrawal is subject to the provisions of CAA Section 307(d). The statutory authority for this notice is provided by Sections 111, 301 and 307(d) of the CAA as amended (42 U.S.C. 7411, 7601 and 7607(d)).

5. Impact Analysis

Because the EPA is not promulgating any regulatory requirements, there are no compliance costs or impacts associated with today's final action.

6. Statutory and Executive Order Reviews

Today's action does not establish new regulatory requirements. Hence, the requirements of other regulatory statutes and Executive Orders that generally apply to rulemakings (*e.g.,* the Unfunded Mandate Reform Act) do not apply to this action.

Dated: March 28, 2017.

E. Scott Pruitt,

Administrator.

[FR Doc. 2017–06518 Filed 3–31–17; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 68

[EPA–HQ–OEM–2015–0725; FRL–9960–44–OLEM]

RIN 2050–AG91

Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act; Further Delay of Effective Date

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to delay the effective date of the final rule that amends the Risk Management Program regulations under the Clean Air Act published in the **Federal Register** on January 13, 2017. On March 16, 2017, the EPA published in the **Federal Register** a stay and delay of the effective date pending reconsideration to June 19, 2017. The EPA is proposing to further delay the effective date to February 19, 2019. This action would allow the Agency time to consider petitions for reconsideration of this final rule and take further regulatory action, which could include proposing and finalizing a rule to revise the Risk Management Program amendments.

DATES:

Comments. Written comments must be received by May 19, 2017.

Public Hearing. The EPA will hold a public hearing on this proposed rule on April 19, 2017 in Washington, DC.

ADDRESSES:

Comments. Submit your comments, identified by Docket ID No. EPA–HQ–OEM–2015–0725, at *http://www.regulations.gov.* Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from *Regulations.gov*. The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.* on the web, cloud, or other file sharing system). For additional submission methods, the full

ATTACHMENT E.

EPA ALLOCATION OF CARBON REDUCTION REQUIREMENTS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

MEMORANDUM

To: Docket EPA-HQ-OAR-2015-0199

From: U.S. Environmental Protection Agency, Office of Air and Radiation

Date: August 2015

Subject: Allowance Allocation Proposed Rule Technical Support Document (TSD)

This memorandum provides information to support the EPA's approach to distribute CO_2 allowances in the proposed Clean Power Plan emission guidelines (EGs) mass-based federal plan.[1] As detailed in section V.D of the preamble to the proposed federal plan, the EPA would distribute an amount of CO_2 allowances in each state, for each year in each compliance period, equal to annual emission totals that are consistent with the statewide mass-based emissions goals promulgated in the EGs.[2] The EPA would base the distribution of allowances to affected electric generating units (EGUs) on each unit's share of state-level historical generation. The EPA would also create three set-asides of allowances: (1) an early action set-aside; (2) a set-aside for output-based allocation to affected EGUs that are natural gas combined cycle (NGCC); and (3) a set-aside for renewable energy projects. Excepting the allowances distributed from those set-asides, the EPA would distribute allowances in each state to affected EGUs using the historical-generation based approach.

This memorandum provides additional explanation for the historical-generation based allocation approach, the early action set-aside, and the set-aside for output-based allocation. A separate technical support document (TSD), titled "Renewable Energy Set-Aside Technical Support Document (TSD)," details the renewable energy (RE) set-aside.

The preamble to the proposed federal plan requests comment on allocating a portion of allowances to load-serving entities (LSEs) but does not propose to allocate to LSEs. States may also have an interest in an allocation to LSEs under a state mass-based plan; this memorandum provides additional information on allocating to LSEs.

The memorandum is organized as follows:

[1] Federal Plan Requirements for Greenhouse Gas Emissions from Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations.

[2] In this TSD, the term "state" generally encompasses the 50 states and the District of Columbia, U.S. territories, and any Indian Tribe, to the extent that the associated rulemaking is applicable to such jurisdictions.

This memorandum includes the following Appendices (attached Excel Workbooks):

- Appendix A: Calculated Historical-Generation Based Allocations and Underlying Data
- Appendix B: Clean Energy Investment Pool Early Action Set-Aside Size Calculation
- Appendix C: Output-based Allocation Set-Aside Size Calculation

1.0 HISTORICAL GENERATION-BASED ALLOCATIONS TO EGUS

Section V.D.1 of the preamble to the federal plan details the proposed approach to allocate allowances to affected EGUs based on historical generation data. This TSD provides additional information in support of the proposed approach. With the exception of allowances distributed from set-asides, the EPA would distribute all allowances in each state to affected EGUs based on each unit's share of state-level historical generation.

The EPA calculated proposed unit-level allocations using average annual net generation over the period 2010 through 2012 for all units that are identified as likely affected units in the 2012 adjusted baseline data from the EGs. The EPA included generation from, and calculated allocations to, all such units including units that may cease operations prior to the start of the program (i.e., prior to the first compliance period). For units that commenced operation in 2010 or 2011, the EPA excluded data from that year from the calculations. For units that were under construction and commenced operation during or after 2012, the EPA estimated 2012 net generation based on the unit's net summer capacity, assuming a 55 percent capacity factor for combined cycle gas units, a 60 percent capacity factor for steam units, and 8784 hours per year.[3] This wass the same approach taken to estimate 2012 generation for under-construction units in the Clean Power Plan EGs (see CO_2 Emission Performance Rate and Goal Computation TSD for the CPP Final Rule).

The units in the 2012 EGs baseline do not match one-for-one with the EGUs to which the EPA would allocate allowances. This is because the units in the 2012 EGs baseline are at the generator level while affected EGUs that would be subject to the federal plan are boiler-level. The EPA proposes to allocate allowances to affected EGUs at the boiler level.

The EPA first determined allocations at the generator level using 2010 through 2012 Energy Information Administration (EIA) net-generation data. Then, the EPA translated the resulting generator-level

[3] The EPA assumed 8,784 hours per year because 2012 was a leap year.

allocations to the boiler level by matching generators to boilers. The EPA matched generators to boilers using an approach similar to the matching approach that is discussed in the CO_2 Emission Performance Rate and Goal Computation Technical Support Document for the CPP Final Rule. For combined cycle units, the allocations were summed across all generators within a plant and then distributed to the units in the plant, based on the proportion of heat input from the EIA-923 Boiler file. For all other units: (1) if there was a one-to-one boiler-to-generator relationship, the allocation was matched directly with the boiler; (2) if multiple generators were associated with one boiler, then the allocations were summed across generators and matched to the boiler; (3) if multiple boilers were matched to multiple generators, then the generator-level allocations were summed and distributed to the boilers, based on the proportion of heat input from the EIA-923 Boiler file. If heat input data was unavailable, then the allocation was distributed to all boilers equally. The resulting boiler-level allocations are shown in Appendix A to this TSD, in the worksheet labelled "Proposed FP Allocations" – these are the proposed EGU allocations for the mass-based federal plan. The EPA rounded each EGU's allocations to the nearest ton.[4]

The 2010 through 2012 generator-level data that the EPA used to determine generator-level allocations before translating to boiler-level allocations, are provided in Appendix A, in the worksheet labelled "Underlying Generator-Level Data." The worksheet shows the calculated generator-level allocations, which are a step before translating to boiler-level allocations.

As detailed in section V.D.1 in the proposal, the EPA calculated allocations for all EGUs in the 2012 adjusted baseline from the EGs, regardless of whether any unit in that baseline may retire prior to the start of the first compliance period. The proposed allocations for all such EGUs (i.e., all EGUs in the 2012 adjusted baseline) are provided in Appendix A to this TSD in the worksheet labelled "Proposed FP Allocations" – these are the proposed allocations for the federal plan.

While proposing to allocate allowances to all EGUs in the 2012 adjusted baseline, the proposal also requests comment on the EPA's treatment of allocations to units included in the 2012 data set that cease operations before the start of the first compliance period. In section V.D.5 of the preamble to the proposed federal plan, the EPA proposes that if an affected EGU does not operate for 2 full consecutive calendar years, then starting with the next compliance period for which allowances have not yet been recorded, the allowances that would otherwise have been distributed to the unit would be allocated to the RE set-aside for the state in which the unit that ceased operations is located. As discussed in the preamble, the EPA proposes to record allowances by June 1, 2021 for the first compliance period (2022 through 2024). If the approach detailed in section V.D.5 is applied to a unit that ceases operations before the start of the program, then a unit that ceases operations by the end of 2018 (i.e., doesn't

[4] In this TSD all references to "tons" are "short tons," unless otherwise noted.

operate in calendar years 2019 or 2020) would not receive allocations. A unit that ceases operations in 2019 or 2020 would receive allocations for the first compliance period.[5]

Another approach for addressing units included in the 2012 data set that cease operations before the start of the first compliance period is to not allocate allowances to any unit that has an effective retirement date, or otherwise ceases operations, prior to January 1, 2021 (this date is before June 1, 2021, the proposed date by which the EPA would record allowances for the first compliance period). In this alternative approach, a unit submitting a retired unit exemption form with an effective retirement date of January 1, 2021 or earlier would not receive allocations for the proposed federal plan, and those allowances could instead be distributed to the RE set-aside, the output-based set-aside, or remaining affected EGUs in the state. In effect, this later cut-off date would reduce the amount of allowances being allocated to units that have no need of them for compliance purposes.

The proposal also requests comment on an alternative of continuing allocations to units that retire, instead of ceasing allocations to the retired units starting with the next compliance period for which allowances have not yet been recorded for the unit. Another approach would be to continue allocations to such units for a longer period, e.g., for two or three compliance periods or, for example, for ten years. The EPA urges such commenters to include suggested rationales for such an approach.

The EPA anticipates that it would know if a unit does not operate for two full consecutive calendar years, or on or after January 1, 2021, based on information that the unit owner or operator reports to EPA in accordance with 40 CFR part 75 (i.e., submission of a long term cold storage notification under 40 CFR 75.61 (a)(7) or quarterly emission data reports under 40 CFR 75.64 with zero operating time) and/or if a unit submits a retired unit exemption form. A retired unit exemption form is required for a unit to become exempt upon retirement from the Acid Rain Program (ARP), Clean Air Interstate Rule (CAIR), and Cross State Air Pollution Rule (CSAPR). The EPA anticipates expanding the use of the retired unit exemption form to include the proposed federal plan. In order to ensure that it has accurate information regarding units' operating status prior to the start of the compliance periods, the EPA is considering requiring a unit that retires before January 1, 2021 to submit by that date a retired unit exemption form.

Recognizing the distinction between units that permanently retire versus those that simply cease operating for an extended period of time, the proposal also requests comment on the treatment of allocations to units in long term cold storage. In the proposed approach, a unit in long term cold storage for two full consecutive calendar years would, starting with the next compliance period for which allowances had not yet been recorded, permanently cease receiving allocations.

The EPA proposes that the allowances for the proposed set-asides would be deducted from the total budget for a state prior to the historical generation-based allocation. Allowances remaining in under-

[5] Note that the issue of allocations of allowances to units that cease operations is distinct from the proposed compliance-exemption provisions for units that "permanently retire."

subscribed set-asides would be recycled back into the historical-generation allocation for distribution to the affected EGUs. Table 1 summarizes the set-asides that the EPA proposes to apply in each compliance period. Sections 2 and 3 in this TSD provide further information on the proposed Clean Energy Incentive Program (CEIP) early action set-aside and output-based allocation set-aside (OBA), respectively. Further information on the proposed renewable energy (RE) set-aside is provided in a separate TSD (see Renewable Energy Set-Aside TSD).

Table 1 – Allowance Set-Asides

Interim period			Final period
1st Compliance Period 2022-2024	2nd Compliance Period 2025-2027	3rd Compliance Period 2028-2029	2030-2031 and thereafter
CEIP + RE	OBA + RE	OBA + RE	OBA + RE

The sizes of the proposed CEIP and OBA set-asides are not based on fixed percentages and vary by state (the proposed RE set-aside is 5 percent in every state). Because the percentage of total allowances that the EPA would distribute to the set-asides varies by state, the percentage of allowances that the EPA would allocate to affected EGUs using the historical-generation approach also varies by state. On a nationwide basis, the EPA would allocate 90 percent of total allowances to affected EGUs for the first compliance period, based on the historical-generation approach, and 89 percent for each subsequent compliance period.[6]

2.0 CLEAN ENERGY INCENTIVE POOL EARLY ACTION SET-ASIDE

Section V.D.4 in the federal plan details the proposed approach to calculate the size of the Clean Energy Incentive Pool (CEIP) early action set-aside in each state. As discussed in that section, the EPA would determine the size of the early action set-aside in each state by distributing 300 million CO_2 allowances among all the states based on each state's relative share of the total reductions from the 2012 adjusted baseline mass emissions to the 2030 statewide mass goals. The EPA would set aside 100 million allowances from the total available in each year of the first three-year compliance period to make a total

[6] The EPA would handle the allocation of allowances in a state under a final federal plan only if the state did not submit an approvable state plan (or approvable state-determined allowance distribution methodology).

of 300 million allowances.[7] By setting the size of the proposed federal plan CEIP set-asides nationwide at 300 million allowances, the EPA would be allowing those states subject to a federal plan to be able to potentially access the full amount of their state's pro rata share of the 300 million-allowance federal CEIP "match." (The total size of the EPA match was set in the EGs.)

To calculate the set-asides in this proposed approach, the EPA compared each state's 2012 adjusted baseline CO_2 to its 2030 statewide mass goal. The EPA used the 2012 adjusted baseline CO_2 mass emissions from the state-level data in Appendix 3 of the CO_2 Emission Performance Rate and Goal Computation TSD for the CPP Final Rule. The EPA summed each state's adjusted baseline coal, NGCC, and oil/gas (OG) steam emissions from Appendix 3 to arrive at state total adjusted baseline CO_2 emissions. The resulting state total CO_2 emissions are shown in Appendix B to this TSD, in the workbook titled "CEIP Early-Action Set-Asides." The workbook also shows the calculation steps that the EPA took to determine the size of the proposed early action set-asides for each state.[8]

For all but four states, the 2030 mass goal is lower than the adjusted baseline. For the four states where the 2030 mass goal is higher than the adjusted baseline, the EPA calculated set-asides equal to 1 percent of the state's 2030 mass goal.[9] The EPA subtracted the sum of the set-asides for those four states (110,968 tons) from the total nationwide allowances available for each year of the set-aside (100 million tons), which results in 99,889,032 tons to be distributed among the remaining 46 states (for which the EPA established goals in the EGs) for each year of the set-aside.

The EPA then distributed the 99,889,032 tons among the 46 states in proportion to each state's relative share of the total reduction from the 2012 adjusted baseline to the 2030 statewide mass goals. The calculations and resulting set-asides are shown in the CEIP Early-Action Set-Asides workbook in Appendix B to this TSD. The proposed early action set-asides for each state are in Table 10 in section V.D.4 in the preamble to the proposed federal plan. The early action set-asides in Table 10 sum to 100 million tons per year nationwide from 2022 through 2024, which would result in a total of 300 million allowances if all of these set-asides were to be implemented.

3.0 OUTPUT-BASED ALLOCATION SET-ASIDE

As noted in section V.D.3 of the preamble to the proposed federal plan, the EPA is proposing a set-aside approach referred to as output-based allocation (OBA), which allocates a portion of allowances to existing NGCC units as a means of mitigating leakage.

[7] The EPA would implement the early action set-aside in a state under a final federal plan only if the state did not submit an approvable state plan (or approvable state-determined allowance distribution methodology).
[8] The EPA established the statewide mass goals in the Clean Power Plan EGs.
[9] These are Connecticut, Idaho, Lands of the Fort Mojave Tribe, and Maine.

Key parameters to be identified under the OBA approach include which affected EGUs receive the allocation, the timing of the set-aside's allocation procedure, the allocation rate(s), and the size of the set-aside. As described in the preamble and summarized here, the EPA proposes that existing NGCC units are eligible for the set-aside. The allocation rate is 1,030 lbs/MWh-net, which is the 111(b) standard for new NGCC units. Eligible units would receive allowances from the set-aside if their average capacity factor is above 50 percent. Beginning with the second compliance period, a portion of the total allowances within each mass-based federal plan state would be allocated to eligible units, based, in part, on their level of electricity generation in the previous compliance period. The amount of OBA set-aside allowances that an affected EGU would receive is based on its net generation above its 50 percent capacity factor in the preceding compliance period, multiplied by the allocation rate. The size of the set-aside is determined by assuming that it would incentivize all existing NGCC in the state to increase their utilization to a 60 percent capacity factor. That is, the size of the set aside in a state is calculated as the allocation rate, multiplied by 10 percent of the net generation (60 percent capacity factor minus 50 percent capacity factor) that may be achieved by all existing NGCC units in that state.

The following sections provide additional information in support of the proposed approach and identify other considerations.

The data that the EPA used to calculate the size of the proposed OBA set-aside in each state are in Appendix C, in the workbook titled "OBA Set-Asides." In that workbook, the tab labelled "State-level data" contains the baseline state-level NGCC net summer capacity data that the EPA used to calculate the size of the OBA set-aside for each state. This data is taken from Appendix 3 of the CO_2 Emission Performance Rate and Goal Computation TSD for the CPP Final Rule. In the OBA Set-Asides workbook, the calculations are shown in the tab labelled "OBA Set-Aside Calculation." As shown in this worksheet, the EPA calculated each state's OBA set-aside, in tons, as:

$$\text{Baseline NGCC capacity} \times 10\% \times 8{,}760 \text{ hours} \times 1{,}030 \text{ lb/MWh-net} \times 1/2{,}000$$

In the above equation:

- Baseline NGCC capacity is the adjusted 2012 baseline NGCC capacity,
- 10% is the difference between a capacity factor of 50% and capacity factor of 60%,
- 8,760 is the number of hours in a year,
- 1,030 lb/MWh-net is the 111(b) standard for new NGCC units, and
- 1/2000 is used to convert pounds (lbs) to tons

The EPA would place the amount of allowances that result from the above calculation from each year's allocation into that state's OBA set-aside.

Eligible Sources

As discussed in the preamble for the federal plan, existing NGCC units would be eligible for the OBA set-aside, because the difference in generation incentives between affected stationary combustion turbines

subject to a mass goal and otherwise similar new stationary combustion turbines that are subject to the 111(b) standards is likely one of the most salient deviations in production incentives to address. The EPA expects that the new emitting source of generation that would be constructed absent the OBA set-aside, and the source of leakage, would be new NGCC units. The EPA's modeling shows that new NGCCs are the most competitive new CO_2-emitting electricity-generating technology (U.S. EPA 2015).

The EPA proposes an approach under which each existing NGCC that is eligible for the set-aside receive OBA at the allocation rate only if its average capacity factor in the compliance period is above 50 percent on a net basis. The allocation rate only applies above a particular average capacity factor because it is intended to incentivize marginal generation and not generation that would have otherwise occurred absent the output-based allocation from the set-aside. Under this approach, eligible affected EGUs would receive no allowances from this set-aside for generation below this average capacity factor (although all affected EGUs will still receive allowances through the historic-generation-based approach detailed above).

Furthermore, this approach avoids incentivizing production at levels of generation below an average capacity factor of 50 percent from an eligible source, and therefore avoids giving an incentive to an inefficient or infrequently used EGU to operate if it is not otherwise economically efficient to do so.

Each eligible EGU would receive allowances at the allocation rate for all generation above an average capacity factor of 50 percent. That is, there is no "maximum" average capacity factor above which output-based allocations are not earned by an EGU eligible to receive them. This is to maintain the marginal incentive to generate from the affected EGU. The total number of allowances available in the set-aside is limited, however.

As described in the preamble and shown in the equation above, the total size of the set-aside is limited. As noted above, the size of the set-aside is the amount that would allow all existing NGCC EGUs in the state to increase their utilization to a 60 percent capacity factor and receive OBA allowances for that increase. The set-aside is thus sized based on multiplying the allocation rate by 10 percent of the capacity of eligible EGUs, where 10 percent is the difference between a capacity factor of 50 and 60 percent. The 50 percent value is based on the capacity factor above which all generation from an individual eligible EGU may receive allowances from the set aside. Limiting the size of the set-aside reduces the risk of incentivizing too much generation from eligible sources, which may lead to unintended consequences, as discussed below. The 60 percent capacity factor is used only to determine the size of the set–aside and eligible EGUs would still be able to earn additional OBA allowances for generation above a 60 percent capacity factor. That is, there is no capacity factor-based limit on the generation eligible to receive allowances from the set aside. This approach encourages competition between individual eligible EGUs and encourages those eligible EGUs to collectively operate at a high capacity factor.

Other Considerations for the Output-Based Allocation Set-Aside

OBA lowers the marginal production cost of eligible EGUs. Therefore, if these EGUs influence electricity prices, the reduction in their production costs will place downward pressure on the electricity price.

It is important that the OBA approach be designed to avoid unintended consequences. In particular, the design should avoid, to the extent possible, reduction in incentives to invest in new zero- or low-emitting generation as a result of the downward pressure the allocation approach may place on electricity prices. In part, this is why an RE set-aside is a useful complement to the OBA set-aside.

Furthermore, providing too strong a generation incentive to affected EGUs eligible for the set-aside could increase total electricity production costs. Specifically, if applied too strongly, OBA can go beyond the alignment of incentives across similar EGUs and lead to undesirable differences in incentives in the other direction. For example, if eligible affected EGUs receive too large a number of allowances for each MWh of generation, this set-aside could incentivize relatively higher-cost generation subject to a mass goal to crowd out relatively lower-cost generation from new EGUs instead of aligning their incentives to produce. This could raise the total cost of achieving overall emission levels with relatively little environmental benefit. Similarly, the size of the total set-aside is limited in order to avoid over-incentivizing production by eligible EGUs. The output-based allocation set-aside should be designed to address these economic concerns.

Studies suggest that the production incentives of existing EGUs subject to cost-of-service regulation to produce under a mass-based regulation may differ from existing EGUs that operate in a restructured market (see, e.g., Burtraw et al. 2001, Parry 2006, Fowlie, 2010). These studies suggest that existing sources in cost-of-service states may not have the same incentive to reduce their generation in the presence of a mass-emissions restriction compared to a similar situation in restructured markets.[10] The extent to which these incentives may differ between cost-of-service and restructured markets may also affect the nature or extent of how leakage could occur in the context of mass-based implementation to achieve state goals. The proposed OBA approach would apply for all states regardless of the market structure in that state. However, the agency invites comment in the preamble on whether an approach other than the particular OBA approach in this proposal could be used in a state-determined allocation approach to address leakage. Commenters on this approach may wish to consider whether the nature of economic regulation of electricity supply in their state or region suggest any adjustment to the design of this OBA approach that could address leakage more successfully with regard to market structure.

4.0 ALLOCATIONS TO LOAD-SERVING ENTITIES

[10] However, any difference in these production incentives between cost-of-service and restructured markets may depend, for example, on how state PUCs treat allocated allowance value in retail rate-making.

As described in section V.D.1 of the preamble to the proposed federal plan, the EPA requests comment on an alternative approach to allocation, which is allocating a portion of the allowances to load-serving entities (LSEs) rather than to affected EGUs. LSEs are the entities responsible for delivering power to retail consumers, and they include entities that are investor-owned, publicly owned, or owned by rural electric cooperatives, as well as other entities.

As described in the preamble, allocation to LSEs can help mitigate bill impacts on electricity consumers when applied in concert with certain additional design features. In particular, if LSEs commit and/or are required to pass through to ratepayers the value from selling the allocated allowances as condition of receiving an allocation of allowances, this approach can mitigate the impact of electricity bill increases on consumers that might otherwise result from application of the federal plan. This type of approach can also help to avoid or mitigate the potential for windfall profits for affected EGUs. Economic theory indicates that direct allocation to generators could result in profits to generators that, despite receiving allowances free of charge, include in the marginal cost of producing electricity some or all of the opportunity cost of having to surrender an allowance (which has an economic value) to cover the emissions associated with the marginal production of electricity.

Some existing mass-based greenhouse gas (GHG) emission programs allocate allowances to LSEs. For example, California's GHG emissions program allocates allowances for free to distribution utilities on behalf of electricity ratepayers, with the goal of protecting electricity ratepayers. California's regulations stipulate auction proceeds and allowance value obtained by an electrical distribution utility from these direct allocations "shall be used exclusively for the benefit of retail ratepayers of each electrical distribution utility……and may not be used for the benefit of entities or persons other than such ratepayers."[11] Each distribution utility that receives an allowance allocation must submit an annual report describing how they complied with this provision in their disposition of any auction proceeds and allowance value received for the prior calendar year.

The EPA could apply this approach to allocating allowances by conditioning the receipt of allowances by LSEs on the pass through to consumers of any allowance value, if necessary. In addition, most LSEs are regulated by state public utility commissions that would have authority to ensure that the value of allowances directly allocated to LSEs be passed through to ratepayers. Other LSEs that are publicly owned or are electric cooperatives have governing structures that could ensure that allowance value be passed through to ratepayers.

Allocation to LSEs, by reducing average electricity rate impacts, could reduce incentives for socially efficient demand response, including potential investment in energy efficiency (see, for example, Blonz et al. 2010). The magnitude of this effect, relative to alternative allocation options, may depend on certain design options and types of consumers (e.g., households, commercial and industrial consumers), and whether any allocation of allowance revenue to consumers is through or separate from the billing of

[11] Cal. Code Regs. tit. 17, § 95892(d)(3) (2015).

electricity.[12] As described in the preamble, the EPA requests comment on the form by which LSEs may distribute allowance value to rate-payers.

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[12] Analyses that evaluate how households respond to changes in average and marginal electricity prices include, for example, Borenstein (2009), Ito (2014), and Fell et al. (2014).

ATTACHMENT F.

INDUSTRY APPEAL OF ELGS

No. 15-60821

IN THE UNITED STATES COURT OF APPEALS
FOR THE FIFTH CIRCUIT

SOUTHWESTERN ELECTRIC POWER COMPANY; UTILITY WATER ACT GROUP; UNION ELECTRIC COMPANY, doing business as Ameren Missouri; WATERKEEPER ALLIANCE, INCORPORATED; ENVIRONMENTAL INTEGRITY PROJECT; SIERRA CLUB; AMERICAN WATER WORKS ASSOCIATION; NATIONAL ASSOCIATION OF WATER COMPANIES; CITY OF SPRINGFIELD, MISSOURI, by and through the Board of Public Utilities; DUKE ENERGY INDIANA, INCORPORATED,

Petitioners,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY; GINA MCCARTHY, in her official capacity as Administrator of the United States Environmental Protection Agency,

Respondents.

Petitions for Review of an Order of the Environmental Protection Agency

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ORIGINAL BRIEF OF INDUSTRY PETITIONERS

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CERTIFICATE OF INTERESTED PERSONS

The undersigned counsel of record certifies that the following listed persons and entities as described in the fourth sentence of Rule 28.2.1 have an interest in the outcome of this case. These representations are made in order that the judges of this Court may evaluate possible disqualification or recusal.

Utility Water Act Group ("UWAG"),[1]
Petitioner/Intervenor

Southwestern Electric Power Company ("SWEPCO"),
Petitioner

Union Electric Company (d/b/a Ameren Missouri) ("Ameren"),
Petitioner

Kristy A.N. Bulleit and Harry M. Johnson, III,
Counsel for UWAG, SWEPCO, and Ameren

City of Springfield, Missouri, by and through its Board of Public Utilities ("City Utilities"),
Petitioner

Thomas J. Grever,
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Duke Energy Indiana, Inc.,
Petitioner

Sean M. Sullivan,
Counsel for Duke Energy Indiana, Inc.

[1] UWAG is an energy utility industry group consisting of 211 individual energy companies and three national trade associations of energy companies: the Edison Electric Institute, the National Rural Electric Cooperative Association, and the American Public Power Association.

Clean Water Action,
Intervenor

Environmental Integrity Project,
Petitioner/Intervenor

Sierra Club,
Petitioner/Intervenor

Waterkeeper Alliance, Inc.,
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STATEMENT REGARDING ORAL ARGUMENT

Petitioners Utility Water Act Group ("UWAG"), Southwestern Electric Power Company ("SWEPCO"), Union Electric Company dba Ameren Missouri ("Ameren"), City of Springfield, Missouri, by and through the Board of Public Utilities ("City Utilities"), and Duke Energy Indiana, Inc. ("Duke Energy") (collectively, "Industry Petitioners") respectfully request oral argument.

Oral argument is warranted for a number of reasons. This case involves the regulation of the wastewater of the steam electric power generating industry by Respondents United States Environmental Protection Agency and Gina McCarthy, in her official capacity as Administrator of the United States Environmental Protection Agency (collectively, "EPA"). The regulation is expected to cost the industry billions of dollars and impact our society in innumerable ways. Seven separate petitions for review were filed by diverse interests, including industry, environmental organizations, and other affected groups.

Moreover, the procedure by which EPA imposed this regulation is unprecedented and warrants special attention by the Court. Notwithstanding the mandate of the Administrative Procedure Act, 5 U.S.C. §§551-59, 701-06 ("APA"), for transparent and defensible rulemakings, EPA has withheld from the public record critical data, methodologies, and analyses purporting to support the final rule, claiming they are confidential business information. As such, oral

argument is necessary to scrutinize EPA's substantive conclusions underlying the rule, as well as its explanation for its procedural choices here.

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GLOSSARY OF TERMS AND ACRONYMS

AMP	American Municipal Power
APA	Administrative Procedure Act
BAT	Best Available Technology Economically Achievable
BATW	Bottom Ash Transport Water
CBI	Confidential Business Information
CCR	Coal Combustion Residuals
CPP	Clean Power Plan
CWA	Clean Water Act
ELGs	Effluent Limitations Guidelines
EPRI	Electric Power Research Institute
FGD	Flue Gas Desulfurization
FGDW	FGD Wastewater
GWW	Gasification Wastewater
ICPR	Incremental Costs and Pollutant Removals Report
IGCC	Integrated Gasification Combined-Cycle
MDS	Mechanical Drag System
NODA	Notice of Data Availability
NPDES	National Pollutant Discharge Elimination System

NSPS	New Source Performance Standards
O&M	Operation and Maintenance
ORP	Oxidation Reduction Potential
PRB	Powder River Basin
RIA	Regulatory Impact Analysis
RMDS	Remote Mechanical Drag System
TDD	Technical Development Document
TDS	Total Dissolved Solids
VCE	Vapor Compression Evaporation

JURISDICTIONAL STATEMENT

Industry Petitioners seek review of the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category; Final Rule (the "Final Rule" or "Rule"). The Rule was promulgated by EPA pursuant to several Clean Water Act ("CWA") sections: 33 U.S.C. §§1311, 1314, 1316, 1317, 1318, 1342 and 1361. The Final Rule was published on November 3, 2015.[2]

This Court has jurisdiction under §509(b)(1)(E) of the CWA, 33 U.S.C. §1369(b)(1)(E) (2015), which provides that review of EPA's actions in approving or promulgating any effluent limitation or "other limitation" under 33 U.S.C. §§1311, 1312, 1316, or 1345 may be had by any interested person in the Circuit Court of Appeals of the United States for the Federal Judicial District in which the person resides or transacts business that is directly affected by such action.[3]

Each Industry Petitioner filed in a Circuit Court in which it, or its members, transact business that is directly affected by the Final Rule.

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[2] 80 Fed. Reg. 67,838-903 (Nov. 3, 2015).

[3] *See Am. Petroleum Inst. v. EPA,* 661 F.2d 340 (5th Cir. 1981) (Court had jurisdiction under 33 U.S.C. §1369(b) to hear challenge to effluent limitations guidelines for the petroleum refining industry).

STATEMENT OF THE ISSUES PRESENTED FOR REVIEW

1. Did EPA violate the Administrative Procedure Act ("APA") by withholding essential data, methodologies, and analyses from the public record as confidential business information ("CBI")?

2. Did EPA violate the APA by relying on CBI materials not in the public record when responding to public comments?

3. Was it arbitrary and capricious for EPA to set limits applicable to plants burning subbituminous coal or lignite without collecting wastewater data or performing analyses necessary to determine whether those plants can achieve those limits?

4. Did EPA violate the APA by failing to provide the public any opportunity to comment on EPA's analyses of the Clean Power Plan, which EPA relied on in the Final Rule as part of its statutorily-required consideration of cost?

5. Did EPA's unexplained, differential treatment of the best available technology for gasification wastewater render the resulting limits, and its cost analysis of those limits, arbitrary and capricious?

STATEMENT OF THE CASE

Industry Petitioners seek review of certain provisions of the Final Rule, which was deemed issued for purposes of judicial review on November 17, 2015.[4] Various petitioners filed seven petitions for judicial review in multiple U.S. Courts of Appeals. The petitions were consolidated in this Court.[5]

The Final Rule revises the technology-based wastewater discharge limits for the steam electric power generating industry. It sets new and stringent "effluent limitations guidelines" ("ELGs") for hundreds of existing coal-fired power generating facilities, as well as more stringent new source performance standards ("NSPS") for new sources. The CWA prescribes the factors EPA must consider in developing ELGs and NSPS. As with all rulemakings, EPA also must comply with rulemaking procedures under the APA, 5 U.S.C. §§551-559, 701-06.

EPA has violated both the CWA and the APA in its conduct of this rulemaking. The relevant history and factual context of the Final Rule follow.

I. EPA's Development of Industry-Specific Effluent Guidelines and Standards

Sections 301 and 304 of the CWA, 33 U.S.C. §§1311, 1314 (2015), require EPA to establish, periodically review and, if appropriate, update ELGs for point source discharges from existing facilities in various industries. CWA §306, 33

[4] 80 Fed. Reg. at 67,838.

[5] Judicial Panel on Multidistrict Litigation, Consolidation Order, ECF#00513301255 (Dec. 9, 2015).

U.S.C. §1316 (2015), requires EPA to develop NSPS for new sources. Both ELGs and NSPS are technology-based. EPA sets these technology-based limits by promulgating nationally uniform, primarily numerical regulations for industry categories or subcategories of dischargers.[6] Those limits and standards must be included in any National Pollutant Discharge Elimination System ("NPDES") permit issued by EPA or a state permitting authority.

EPA first adopted ELGs for the steam electric point source category in 1974, soon after passage of the CWA.[7] In 1982, the Agency finalized a major revision of the ELGs.[8] In 2009, EPA initiated another major revision to the steam electric ELGs, and the resulting Final Rule is the subject of this litigation.

At issue are new ELGs based on the "best available technology economically achievable" ("BAT") standard in 33 U.S.C. §1314(b)(2)(B). The statute requires EPA to take into account the following factors when establishing BAT limits.[9]

- age of equipment and facilities involved;
- the process employed;
- engineering aspects of the application of various types of control techniques;

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[6] *See E. I. du Pont de Nemours & Co. v. Train*, 430 U.S. 112, 121-22 (1977).

[7] 39 Fed. Reg. 36,186 (Oct. 8, 1974).

[8] 47 Fed. Reg. 52,290 (Nov. 19, 1982).

[9] *Id*. §1314(b)(2)(B).

- process changes;
- cost of achieving effluent reductions;
- non-water quality environmental impact (including energy requirements); and
- "such other factors as the Administrator deems appropriate."

Section 306 likewise requires consideration of cost and performance for NSPS.[10]

This litigation presents fundamental issues regarding the adequacy of EPA's record support primarily on the performance and cost of technologies it selected for three specific wastestreams discussed below. The same arguments apply equally to the ELGs and the NSPS.

II. Development of the Final Rule

A. EPA Initiates ELG Rulemaking

In October 2009, EPA released a final report on its investigation of the industry for possible ELG revision.[11] This rulemaking, conducted pursuant to a schedule EPA negotiated with several environmental groups, ensued.[12] Among other things, the Agency collected wastewater characterization data and technology

[10] *See id.* §§1316(a)(1), (b)(1)(B).

[11] Index.47. Documents from EPA's Certified Administrative Record Index are cited herein as "Index.[ROA DOC.#].[pincite]." An appendix containing those portions of the administrative record cited by the parties will be filed separately in accordance with 5th Cir. R.30.2(a).

[12] *See* Consent Decree at ¶¶3-4, *Defenders of Wildlife v. Jackson* (D.D.C. Mar. 19, 2012) (No. 10-cv-1915), ECF#15.

performance information through an industry survey and through site visits and sampling events.[13] On June 7, 2013, EPA published the Proposed Rule.[14]

B. EPA's Proposal

The Proposed Rule outlined regulatory options for further regulation of seven wastestreams, assessing each option's performance and cost.[15] Three of those wastestreams—or effluent—are at issue here.

1. The Primary Wastestreams at Issue

The first is flue gas desulfurization ("FGD") wastewater ("FGDW"). To meet air quality requirements, many coal-fired plants use FGD "scrubbers" to control sulfur dioxide emissions. In a wet scrubber, a slurry containing lime or limestone reacts with the sulfur in the flue gas to form calcium sulfite. Metals and other constituents arriving at the scrubber may end up in the scrubber slurry and intermittently leave the scrubber in the scrubber "blowdown" (*i.e.,* wastewater), which is categorized as FGDW.[16] The characteristics of the resulting FGDW vary widely among plants and even over time at any given plant, according to a variety

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[13] *See* 78 Fed. Reg. 34,432, 34,444 (June 7, 2013) ("Proposed Rule") (summarizing EPA's sampling efforts).

[14] *Id.*

[15] *Id.* at 34,458, Table VIII-1.

[16] *Id*. In addition to scrubber blowdown, EPA includes the following wastestreams in the definition of FGDW: "overflow or underflow from the solids separation process, FGD solids wash water, and the filtrate from the solids dewatering process." 80 Fed. Reg. at 67,893 (to be codified at 40 C.F.R. §423.11(n)).

of factors, including most prominently the type of coal burned and its constituents, as EPA's record shows.[17]

The second wastestream at issue is bottom ash transport water ("BATW"). Plants generate BATW if they use water to sluice bottom ash[18] out of the boiler to a treatment system. BATW generally flows from a hopper underneath the boiler through pipes to a surface impoundment or dewatering bin. In many cases, the system discharges to a surface water.

The third wastestream at issue is gasification wastewater ("GWW") from integrated gasification combined-cycle ("IGCC") units. IGCC is an electric power generation process combining technology that produces synthetic gas from coal with combined cycle systems that generate electricity using that gas.[19] The production, cleaning, combustion, and cooling of synthetic gas can involve a number of processes resulting in GWW.[20]

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[17] *See, e.g.,* EPA, *Variability in Flue Gas Desulfurization Wastewater: Monitoring and Response*, Index.12006.15-16; *see also infra* at 53-54. EPA notes that "coal is the source of the majority of the pollutants that are present in the FGD wastewater (i.e., the pollutants present in the coal are likely to be present in the FGD wastewater)." Index.47.4-17.

[18] EPA defines "bottom ash" in part as "the ash,…which settles in the furnace or is dislodged from furnace walls." 80 Fed. Reg. at 67,893 (to be codified at 40 C.F.R. §423.11(f)). It defines "transport water" in part as "any wastewater that is used to convey…bottom ash…from the ash collection or storage equipment, or boiler, and has direct contact with the ash." *Id.* at 67,894 (to be codified at 40 C.F.R. §423.11(p)).

[19] 78 Fed. Reg. at 34,448.

[20] GWW means "any wastewater generated at an [IGCC] operation from the gasifier or the syngas cleaning, combustion, and cooling processes." 80 Fed. Reg. at 67,894. It includes, but is not limited to: "[s]our/gray water; CO_2/steam stripper wastewater; sulfur recovery unit

2. EPA's Approach To Developing the Proposed ELGs

For each of these wastestreams, EPA assessed the amount of pollutants that candidate technologies were likely to remove and the pollutant limits each could achieve for all coal-fired power plants producing that wastestream.[21]

EPA also conducted a multi-step cost evaluation of the regulatory alternatives. First, EPA identified the universe or "baseline" of coal-fired plants that would incur costs to comply with any or all of the proposed ELGs. EPA excluded plants that EPA believed would retire or convert to gas before the Rule's anticipated effective date.[22] EPA then estimated the cost of the technology in question for each plant in the baseline.[23] Using those cost estimates, EPA evaluated the percentage of each plant's revenue (and the revenue of any parent entity) that the cost would represent.[24] EPA also assessed the market impacts of the proposal. The Agency used various metrics to assess the likelihood that the

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blowdown, and wastewater resulting from slag handling or fly ash handling, particulate removal, halogen removal, or trace organic removal." *Id*.

[21] Index.2920.10-2 (consideration of technology pollutant removals), 13-3–13-4 (calculation of limitations).

[22] *Id.* at 9-2 n.74.

[23] *See*, *e.g.*, *id.* at 9-27–9-28 (presenting EPA's estimate of "compliance costs for those generating units expected to be subject to the proposed ELGs" for FGDW).

[24] Index.2639.4-3,4-9.

Rule would affect generating capacity or cause premature retirements, among other things.[25] For this set of analyses, EPA used an "Integrated Planning Model."[26]

EPA's cost analysis at proposal excluded certain elements. It did not include any assessment of the remaining useful life of the plants that were in the baseline and anticipated to bear compliance costs. EPA also did not include the economic impacts of another important rule affecting the same coal-fired plants: the Clean Power Plan ("CPP") for greenhouse gases, which was under development but had not yet been formally proposed.[27]

3. FGD Wastewater

EPA focused on a combination of two treatment systems for FGDW: chemical precipitation treatment (for mercury and arsenic) followed by biological treatment (for selenium and nitrate/nitrite).[28] These treatment systems are complex, multi-component technologies that must be designed and sized to treat a specific mix of pollutants, in terms of pollutant type, load, and distribution.[29] The use of biological treatment for FGDW treatment—and particularly for removal of selenium—is a relatively new innovation. The complexity and variability of

[25] *Id.* at 5-7.

[26] *Id.* at C-1–C-5.

[27] *See* 79 Fed. Reg. 34,830 (June 18, 2014).

[28] Proposed Rule, 78 Fed. Reg. at 34,458 (Table VIII-1).

[29] Index.2920.7-4–7-13 (EPA's description of chemical precipitation and biological treatment technologies).

FGDW make it difficult to treat using biological processes, which depend on stable conditions to maintain the microorganisms on which treatment depends. For instance, changes in temperature or in wastewater constituents, such as percentage of solids or an increase in chlorides, can cause system upsets.[30]

EPA relied on two steam electric plants using biological treatment to remove selenium: Belews Creek and Allen.[31] Both plants burn only bituminous coals.[32]

EPA also assessed the performance of chemical precipitation treatment at those plants and four others. These included Pleasant Prairie, burning 100% subbituminous coal, and Hatfield's Ferry, burning a blend of bituminous and subbituminous coals.[33] But neither of those plants uses biological treatment, and EPA used no data from plants that burn lignite.[34] Thus, EPA lacked any data with which to assess the performance of biological treatment on FGDW produced by the roughly 25% of the industry that burns subbituminous or lignite coals.[35]

EPA estimated the compliance costs of chemical precipitation and biological treatment for each facility by using cost curves from technology vendors and plant-

[30] *See*, *e.g.*, Index.9123.21-23.

[31] *See* Index.2920.13-5.

[32] *Id.* at 3-11.

[33] *Id.*

[34] *Id.*

[35] *See id.* at 6-5(Table 6-2).

provided wastewater flows data.[36] Much of the vendor cost information and some of the flow data were classified as CBI and not released. EPA likewise did not provide any information showing that it had investigated the underlying basis for the vendors' cost information.

Based on this information, EPA estimated that the 116 plants included in the baseline at proposal would incur industry-wide costs of $2.5 billion in one-time capital expenditures and $257 million in annual operation and maintenance ("O&M") costs. [37]

EPA received many comments on the proposed rule, including extensive comments from UWAG.[38] Comments showed that EPA overestimated the feasibility and performance of both chemical precipitation treatment and biological treatment, even for the plants for which EPA had performance data.[39]

With regard to biological treatment, commenters stressed that EPA had failed to account for the full range of variation in FGDW across the industry and at any given plant over time. In particular, comments noted that EPA lacked any information with which to assess the treatability of FGDW produced by plants

[36] *See* Proposed Incremental Costs and Pollutant Removals ("Proposed ICPR"), Index.2292.6-8,6-92.

[37] Index.2920.9-28.

[38] Index.9778.

[39] *See id.*

burning subbituminous or lignite coals, which are likely to have different characteristics from FGDW produced by the plants in EPA's database.[40]

Even for plants burning bituminous coals, commenters explained that (1) EPA's selected technology was not demonstrated to be capable of handling the high nitrate loads typical of FGDW; [41] and (2) EPA failed to consider the capability of biological treatment systems to handle higher chloride levels than occurred at Belews Creek and Allen.[42]

Besides these concerns about the technologies' performance, commenters also raised significant questions about EPA's cost estimate.[43]

4. Bottom Ash Transport Water

For BATW, EPA considered two options. The first was the status quo (allowing discharge subject to certain limits). The second was a prohibition against any discharge of BATW through the use of a technology located directly under the boiler (mechanical drag system ("MDS")) or a similar technology

[40] *See*, *e.g.*, Index.9753.17-18; Index.8923.3.

[41] *See*, *e.g.*, Index.9778.203-04.

[42] *Id.* at 165-67.

[43] *See*, *e.g.*, Index.8689.160 (commenting that capital costs for retrofitting chemical precipitation plus biological treatment for some of Southern's plants would be up to $1.7 billion, versus EPA's estimated $253 million for those plants plus others of Southern's).

located away from the boiler (remote mechanical drag system ("RMDS")).[44] Only RMDS requires water for bottom ash transport.

EPA calculated the cost of BATW compliance for the plants in its baseline (*i.e.*, those plants that EPA thought were not already complying with the proposed BATW discharge prohibition). EPA estimated that it would cost the industry $4.47 billion in initial capital and $494 million annually for O&M.[45]

Commenters demonstrated that EPA had overestimated the feasibility and underestimated the costs of constructing and operating the BATW model technologies. In particular, the Electric Power Research Institute ("EPRI")[46] and UWAG showed that EPA ignored engineering overhead, as well as the costs associated with constructing buildings to protect RMDSs from adverse weather events, and adding clarification and reaction tanks to remove fines, which some plants may need.[47] Also, as commenters pointed out, EPA failed to account for additional BATW storage capacity during major maintenance events. [48]

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[44] Index.12840.7-41–7-42. EPA identified the status quo as "preferred" for plants less than 400 megawatts. 78 Fed. Reg. at 34,435-36.

[45] Index.2920.9-40(Table 9-6).

[46] EPRI is an independent, non-profit organization that "conducts research and development on the generation, distribution and use of electricity for the benefit of the public." http://www.epri.com/About-Us/Pages/Our-Business.aspx (last accessed Dec. 2, 2016).

[47] Index.9778.64 (UWAG); Index.8939.8-3,8-5 (EPRI).

[48] Index.8689 (Southern Company); *see also* Index.8692.3-4 (City Utilities) (space needs and costs for retrofitting would preclude retrofitting in some cases, particularly where facility housed two or more units).

5. Gasification Wastewater

IGCC facilities use two different types of waste treatment systems for GWW: a one-stage system, known as Vapor Compression Evaporation ("VCE"), and a two-stage system, in which the wastewater produced by VCE is further treated using "forced circulation evaporation" (also known as crystallization).[49] Two-stage treatment produces far less wastewater, but that wastewater (known as "Crystallizer Effluent") has higher pollutant concentrations than does the wastewater from one-stage treatment ("VCE Effluent"), as EPA recognized when it evaluated essentially the same technology for FGDW. *Id.*

To develop the proposed GWW limits, EPA considered wastewater treatment data from two IGCC facilities: Wabash River (which uses one-stage treatment), and Polk (which uses two-stage treatment).[50] But EPA discarded Polk's Crystallizer Effluent data because the Agency believed Polk's crystallizer was malfunctioning at the time of sampling.[51] Thus, the record is devoid of any data regarding the pollutant content of Crystallizer Effluent at IGCC facilities.

During EPA's development of the proposed GWW limits, Duke Energy explained to EPA that its new Edwardsport facility would produce both VCE

[49] *See* Technical Development Document for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category ("Final TDD"), Index.12840.7-14–7-18 (discussion of FGDW treatment technologies equally applicable to GWW).

[50] Index.2920.13-5,13-20; Index.12840.13-7,13-26.

[51] Index.2920.13-20; Index.12840.13-26–13-27.

Effluent and Crystallizer Effluent, and would combine them for further treatment in a reverse osmosis process before discharge.[52] In its discussion of Two-Step Treatment at IGCC facilities, EPA had acknowledged that IGCC facilities might choose to reuse VCE Effluent and Crystallizer Effluent onsite, discharge both streams, or manage each stream separately, which is why the Agency sampled the treated effluent from both steps.[53]

Puzzlingly, though, when EPA proposed the GWW limits, EPA ignored the pollutant contribution of Crystallizer Effluent to a combined GWW discharge and set the proposed limits based solely on VCE Effluent.[54] Moreover, EPA ignored the only valid data in the record about the relative pollutant content of VCE Effluent versus Crystallizer Effluent, *i.e.*, the data EPA obtained from the Brindisi plant regarding the ability of Two-Step Treatment to treat FGDW, which showed that the pollutant content of Crystallizer Effluent is higher than VCE Effluent.[55] Despite comments from industry expressing concern about the lack of sufficient IGCC-specific data in the record,[56] the numerous technical differences between the

[52] NPDES Permit No. IN0002780, Duke Energy Indiana, Inc. – Edwardsport, Index.123.132.

[53] Index.2920.13-20; *see also* Index.12840.13-26.

[54] Index.2920.13-20; *see also* Index.12840.13-27.

[55] Index.2920.13-19; *see also* Index.12840.13-25–13-26.

[56] Index.8684.78-81 (Duke Energy) (discussing inadequacies of data set for setting reliably achievable GWW limits), 86-87 (noting Edwardsport did not begin commercial operation until June 2013 and that additional operational time was needed before reliable

limited number of IGCC facilities in operation,[57] and EPA's decision to set the GWW limits based solely on VCE Effluent,[58] EPA finalized the GWW limits as proposed.

C. EPA Develops the Final Rule

After the comment period closed, EPA engaged in extensive discussions and correspondence with vendors marketing technologies for treating FGDW and BATW. One example is reflected in "Post Proposal Questions for GE_for EPA Review," in which EPA asked follow up questions to GE "to clarify whether specific cost elements [identified by commenters] are included or not included in the cost estimates provided in previous correspondence."[59] In developing the Final Rule and responding to public comments, the record shows EPA relied heavily on the information it collected from those vendors. Yet that critical information was withheld from the record on the grounds that it is CBI.

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performance data would be available); Index.9778.289-91 (UWAG) (discussing inadequacies of data set for setting reliably achievable GWW limits).

[57] Index.8684.77-78; Index.9778.287-89.

[58] Index.9778.290 ("Apparently EPA based the limits on condensate from a vapor compression evaporator, probably the cleanest wastestream that could be found…."); Index.8684.85-86 ("[T]he sampling events that EPA conducted focused only on effluent consisting of the vapor-compression evaporator condensate from the grey water treatment systems. It is inconsistent to then establish the same effluent limits for all other ancillary wastestreams … based only on the sampling data from the narrow subset of grey water effluent data associated with the vapor-compression evaporation technology installed.").

[59] Index.11564.3.

Moreover, EPA doubled-down on its redaction of even basic methodological information. It classified large swaths of the record as CBI, most notably in the Final Sanitized Steam Electric Incremental Costs and Pollutant Loadings Report ("Final ICPR"). EPA removed entire sections from the Final ICPR, even though the same sections were not classified as CBI at proposal.[60] These included all of Section 5 ("General Methodology, Terminology, and Common Cost Elements"), Section 6 ("FGD Wastewater Cost Methodology"), Section 7 ("Fly Ash Transport Water Cost Methodology"), and Section 8 ("Bottom Ash Transport Water Cost Methodology").

After the close of the comment period, EPA also undertook a fresh round of analyses that had the effect of removing more plants from the baseline, thereby making the economic impact of the Final Rule look far smaller. Among other things, EPA recognized the significance of the CPP Rule. The Agency re-ran its Integrated Planning Model to assess for the first time the impact of the proposed CPP Rule on the baseline.[61] It also conducted a follow-up analysis on the implications of the final CPP.[62] Neither of these analyses was made available for public comment. Departing from the practice it followed for other major

[60] *Compare* Proposed ICPR, Index.2292.§§5-8 (proposed cost methodologies spanning 217 pages), *with* Final ICPR, Index.12134.§§5-8 (an estimated 250 pages entirely withheld as CBI).

[61] 80 Fed. Reg. at 67,866-67.

[62] *See* Analysis of Potential Effect of Using a Baseline with the CPP Proposal in Lieu of the CPP Final, Index.12360.

environmental rules, EPA did not issue a Notice of Data Availability ("NODA") for the ELG rulemaking when the CPP was proposed.[63] Based on its CPP analyses, EPA took 47 plants fully out of the baseline, and 19 partially out of it.[64]

Besides consulting the vendors and removing more plants from the baseline, EPA obtained some additional information on biological treatment at the Belews Creek and Allen plants.[65] But EPA obtained no information on the extent to which biological treatment of FGDW from plants burning subbituminous or lignite coals could achieve the final selenium and nitrate/nitrite limits, nor did it evaluate the likely cost. And, EPA says that much of the post-proposal FGDW cost information is CBI.[66] Thus, the public has no access to the basic facts on which EPA relied and cannot reproduce its calculations.

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[63] "Federal agencies routinely use NODAs to provide the public with an opportunity to consider and comment on emerging technical issues and data related to an ongoing rulemaking or other important environmental protection program." EPA, Fact Sheet: Clean Power Plan Notice of Data Availability (Oct. 28, 2014), available at www.epa.gov/cleanpowerplan/fact-sheet-clean-power-plan-notice-data-availability (last accessed Dec. 2, 2016). *See*, *e.g.*, 79 Fed. Reg. 64,543 (Oct. 30, 2014), 79 Fed. Reg. 67,406 (Nov. 13, 2014) (two NODAs for CPP); 78 Fed. Reg. 46,490 (Aug. 2, 2013) (third NODA for Coal Combustion Residuals Rule).

[64] Index.12840.4-45 (Table 4-18).

[65] Index.11727 (Belews Creek data submittal of March 28, 2014); Index.11725 (Allen data submittal of March 28, 2014).

[66] *See, e.g.,* Supplemental Costs and Loadings Documentation Memorandum, Index.12183.7 (describing Index.12268, 12261, and 12262 (all CBI) as methodology to estimate sodium bisulfite O&M costs, derivation of oxidation reduction potential ("ORP") monitor costing methodology, and correspondence with vendor regarding capital and O&M for ORP monitor, respectively).

For BATW, EPA claims that it added tank rental costs for "surge capacity" during bottom ash maintenance events, and that it updated or adjusted its direct and indirect capital cost factors.[67] However, it is impossible to see exactly what costs EPA assumed, because much of that information is CBI.[68]

The Final Rule requires all plants discharging FGDW to meet new BAT limits for mercury, arsenic, selenium, and nitrate/nitrite.[69] The limits are the same across the industry without regard to coal type burned. The Rule also prohibits the discharge of BATW except in very limited circumstances,[70] and imposes limits on GWW.[71]

III. Industry Petitioners' Motion To Complete the Record

Because EPA withheld so much basic information from the public record as CBI, certain industry petitioners[72] filed a joint motion to complete the record.[73] The motion was filed long before briefing commenced on the merits. It sought to compel EPA to reconsider whether the information withheld as CBI in fact

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[67] *See* 80 Fed. Reg. at 67,845.

[68] *See, e.g.*, Index.12183.9 (describing Index.12275, 12281, and 12280 (all CBI) as cost equations and factors for bottom ash conveyance O&M costs, RMDS volume estimate for tank rental costs, and MDS/RMDS drag chain replacement frequency and cost, respectively).

[69] 80 Fed. Reg. at 67,894-95 (to be codified at 40 C.F.R. §423.13(g)(1)(i)).

[70] *Id.* at 67,896 (to be codified at 40 C.F.R. §423.13(k)(1)(i)).

[71] *Id.* (to be codified at 40 C.F.R. §423.13(j)(l)(i)).

[72] It was unnecessary for Duke Energy to join the motion because its separate petition for review does not depend on CBI.

[73] ECF# 00513560826.

qualifies as CBI, and to produce its methods and analyses in a non-CBI format for the public and the Court. EPA filed an opposition,[74] and the motion was initially denied by a single judge order.[75] Industry Petitioners then filed a motion for reconsideration by the full motions panel.[76] The panel ordered the motion to complete the record to be "carried with the case."[77] Because the motion relates to information that EPA relied on in the Final Rule, but withheld from the public and Court, the motion is integrally related to Industry Petitioners' arguments on the merits herein.

SUMMARY OF ARGUMENT

This is a case of first impression. Never before has EPA promulgated a rule while shielding such vast amounts of its basic work product from review. Here, EPA has invoked the concept of CBI to withhold facts, methods and analyses on which its conclusions depend. As an initial matter, this Court must decide whether an agency may use CBI as a justification for offering only bare conclusions without explaining how and why it reached its regulatory decisions. This Court must further decide whether an agency may rely heavily on information from equipment vendors with a significant financial stake in the outcome of the rule, but

[74] ECF# 00513661798.

[75] ECF# 00513686767.

[76] ECF# 00513695043.

[77] ECF# 00513769227.

then remove critical portions of that information from the public record under the guise of CBI.

The Final Rule is not inconsequential. It will force plant closures and have massive impacts on an industry that is vital to our nation's infrastructure. Yet, to an unprecedented extent, the Agency has withheld fundamental information purporting to justify the rule. EPA claims thousands of pages of the record are CBI that cannot be shared with the public or this Court, including the following:

- entire chapters of core documents with titles such as "General Methodology, Terminology, and Common Cost Elements," and entire sections with titles such as "General Cost Methodology" and "Compliance Cost Methodology";
- results from pilot and full-scale studies conducted specifically to test the effectiveness of EPA's proposed BAT; and
- basic cost information that the CWA requires EPA to consider.

On the record before the Court, the Final Rule is arbitrary and capricious because it lacks adequate justification and support. The pervasiveness of CBI is so great that the Rule must be vacated in its entirety.[78]

That is not the only defect with the Rule. EPA took other impermissible shortcuts that resulted in an inadequate record or otherwise violated the APA.

EPA's overreliance on CBI also produced legally deficient responses to public comments. For instance, the responses repeatedly cite to information that

[78] Indeed, EPA has withheld so much information that neither Petitioners nor the Court can know the full extent of potential deficiencies of the Rule.

EPA solicited from vendors to respond to the comments, but EPA then withheld from the public record. Directing commenters to documents that are unavailable is effectively no response at all and violates the APA. Again, given the extent of the violation, vacatur is the appropriate remedy.

EPA also promulgated the Final Rule without gathering necessary data on certain types of plants covered by the Rule. EPA gathered no data whatsoever on the treatability of selenium and nitrates in FGDW produced by plants burning subbituminous coals, such as Powder River Basin coal ("PRB"), or lignite. These plants comprise upwards of 25% of the industry. EPA set stringent limits for selenium and nitrates based on use of biological treatment and applied those limits to all coal plants, regardless of the type of coal they burn. But those limits reflect no consideration of the likely performance and cost of biological treatment at plants burning subbituminous coals or lignite. Lacking data or any other credible evaluation of the likely performance and cost of biological treatment for their FGDW, EPA had no reasonable basis for concluding that those plants can comply with the limits. Consequently, irrespective of the other defects in the Rule, the FGDW limits must be vacated as applied to plants burning subbituminous or lignite coals.

In addition, in its haste to promulgate the Final Rule, EPA deprived the public of notice and opportunity to comment on a key issue. EPA acknowledges

that it relied on the CPP in its cost analysis for the Final Rule, but EPA never allowed the public the opportunity to comment on the CPP's impacts on ELG costs and compliance. Because this error implicates the entire Final Rule, the Rule should be vacated.

Finally, the limits on GWW from IGCC plants are arbitrary and capricious. Without any rational explanation, EPA used a methodology to set limits for GWW that conflicts directly with EPA's indistinguishable methodology for FGDW. This represents an additional reason why the GWW limits must be vacated.

STANDARD OF REVIEW

The Final Rule is an "agency action" subject to review under the APA, which provides for review of "[a]gency action made reviewable by statute and final agency action for which there is no other adequate remedy in a court…."[79] An agency action, such as the Final Rule, must be held unlawful and set aside if that action is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law…."[80]

In reviewing an agency's action, the Court must determine whether the action "bears a rational relationship to the statutory purposes" and whether "there

[79] 5 U.S.C. §704 (2015); *see ConocoPhillips Co. v. EPA*, 612 F.3d 822, 831 (5th Cir. 2010).

[80] 5 U.S.C. §706(2)(A) (2015); *Bennett v. Spear*, 520 U.S. 154, 154-55, 174-75 (1997).

is substantial evidence in the record to support it."[81] The Court must make a "searching and careful" review to determine whether an agency action is arbitrary and capricious.[82]

ARGUMENT

I. EPA's Sweeping Use of CBI To Withhold Its Methods and Analyses Has Deprived the Public and the Court of the Required Foundation for the Rule

EPA has withheld its most basic data, methodologies, and analyses from the public record under the guise of CBI. This is unacceptable and unprecedented. EPA has a duty to disclose the whole record of its action and to fully explain its course of inquiry, analysis, and reasoning. EPA has at its disposal tools that allow it to protect CBI, if necessary, yet EPA used none of them here, instead withholding at least 1,194 documents in whole or in part.[83]

This is not harmless error. The missing documents constitute the facts and analyses EPA conducted both to respond to comments and to arrive at its final assessment of the cost and performance of technologies selected as BAT. EPA's decision that the economic impacts render its BAT limits "economically

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[81] *Texas Oil & Gas Ass'n v. EPA,* 161 F.3d 923, 934 (5th Cir. 1998) (quoting *Mercy Hosp. of Laredo v. Heckler,* 777 F.2d 1028, 1031 (5th Cir. 1985)).

[82] *Citizens to Preserve Overton Park, Inc. v. Volpe,* 401 U.S. 402, 416 (1971).

[83] *See* Certified Index to the Administrative Record. ECF#00513538746 (June 8, 2016). (CBI column indicating some, but not all, of document withheld as CBI, *see, e.g.,* Index.12136 (Appendix to Final ICPR containing EPA's estimates of costs not accounting for the CPP, withheld in its entirety although indicated as not containing CBO in the index)).

achievable" depends on those facts and analyses, many of which it has hidden. In place of the details, EPA offers only summary conclusions, or *ipse dixits*.

A. EPA Has a Duty To Disclose the Facts on Which It Relied and To Fully Explain Its Reasoning

Only the record can supply a justification for the Final Rule. The Court may not presume EPA acted with a reliable and adequate foundation: "the grounds upon which the administrative agency acted" [must] be "clearly disclosed and adequately sustained" in the record.[84] "It is the Agency's duty to 'fully explicate its course of inquiry, its analysis, and its reasoning.'"[85] In *Pacific Fisheries*, the court remanded a portion of ELGs and rejected consideration of a study "vague[ly] referenc[ed]" in the record as support for EPA's conclusion regarding effectiveness of BAT, where the record did "not disclose the analytic approach utilized" in the study, among other things.[86] Similarly, in *Tanners' Council*, the Fourth Circuit set aside ELGs due to the lack of available record evidence to support them, lest the court "would have to trust completely EPA's conclusions."[87]

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[84] *SEC v. Chenery Corp.*, 318 U.S. 80, 94 (1943).

[85] *Ass'n of Pac. Fisheries v. EPA*, 615 F.2d 794, 820 (9th Cir. 1980) (Kennedy, J.) (quoting *Tanners' Council of Am., Inc. v. Train*, 540 F.2d 1188, 1191 (4th Cir. 1976)).

[86] *Id*.; *see also* CBI_GE ABMet Pilot Study Report, Index.11966 (entirely withheld, and discussed nowhere in the public record); *NRDC v. EPA,* 808 F.3d 556, 574 (2d Cir. 2015) (remanding EPA's issuance of CWA general permit setting effluent limitations based on BAT, where EPA actively worked to keep information about disfavored treatment technology out of record by "exclud[ing] or delet[ing information] from the final report" of its own scientific advisory board).

[87] 540 F.2d at 1193.

As this Court has further explained, "[j]udicial review must be based on something more than trust and faith in EPA's experience."[88] "Courts…are no longer content with mere administrative ipse dixits based on supposed administrative expertise."[89] Nor is an agency's "presumption of regularity" a viable substitute for a complete record.[90]

In short, the Court may not presume that EPA's decision is supported by information withheld from the public record.

B. EPA Has Myriad Tools To Make the Whole Record Available Without Compromising CBI

EPA has available a variety of tools to present facts and analyses on which it relied, while at the same time protecting confidential information. It has used those tools in many other effluent guidelines rulemakings.[91] EPA could, for instance, produce ranges of values, graphs, cost formulas or curves, discussions, or other analyses, as appropriate, to satisfy its obligations to present the "whole record" for review, including its methodologies and analyses, without disclosing

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[88] *Am. Petroleum Inst.,* 661 F.2d at 349 (internal quotation omitted) (remanding ELGs for additional consideration and explanation of cost by EPA).

[89] *Id.*

[90] *Id.* at 348 (quoting *Overton Park*, 401 U.S. at 415) ("presumption is not to shield [agency's] action from a thorough, probing, in-depth review").

[91] *See, e.g.*, Development Document for Final Effluent Limitations Guidelines and Standards for the Iron and Steel Manufacturing Point Source Category (Apr. 2002), at 1-9, 14-3–14-6 (aggregating certain data in the public record and masking facility identities) (available at www.epa.gov/eg/iron-and-steel-manufacturing-effluent-guidelines-documents) (last accessed Dec. 2, 2016).

CBI.[92] In *NRDC*, the court found that EPA had adequately explained its decision where it compiled CBI in the rulemaking record into a composite, anonymized non-CBI graph as part of the public record and discussed the graph "at some length."[93]

In addition, EPA could have simply taken the time to collect more data that are not CBI. It could have supplemented the CBI information with information from other sources or consultants who would not assert CBI. Likewise, EPA could have conducted or commissioned its own studies to independently verify the information claimed as CBI.

In other words, EPA is not handcuffed by CBI, as it may suggest. Instead, when EPA makes use of CBI, it must still fully explain in the public record both the facts found and its reasoning from those facts. It must support the rulemaking through the use of non-CBI data, methodologies, and analyses that satisfy the standard upon review.[94]

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[92] *See NRDC v. Thomas*, 805 F.2d 410, 418 n.13 (D.C. Cir. 1986).

[93] *Id.*

[94] *See Nat'l Wildlife Fed'n v. EPA*, 286 F.3d 554, 565 (D.C. Cir. 2002) (economic analysis predicting bankruptcies and plant closures was adequate, even though it did not reveal firm-specific CBI, because anonymized non-CBI compilation provided all necessary information).

C. EPA Did Not Adequately Explain the Cost or Performance of BAT for FGD Wastewater or Bottom Ash Transport Water, and Is Hiding Behind CBI

Congress has limited EPA's discretion in the selection of BAT by identifying specific factors the Agency must consider.[95] Because BAT must be "economically achievable," one such factor EPA *must* consider is cost.[96] So, too, EPA must consider the performance of the technology at reducing pollutants.[97] Performance and cost go hand-in-hand, as improving performance may require adding more technology, which then increases cost.

EPA bears the burden of demonstrating that it considered the cost of the technology it chose as BAT and showing that the technology, at the cost EPA projected, will achieve the performance standards it set.[98] Here, EPA's explanation of its performance and cost estimates for the technologies it chose as BAT for FGDW and BATW are general conclusions with crucial detail missing.

At the proposed rule stage, EPA discussed these technologies and its methodologies and analyses for evaluating their cost. EPA provided significantly

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[95] 33 U.S.C. §1314(b)(2)(B).

[96] *Id.* ("Factors relating to the assessment of best available technology shall take into account…the cost of achieving such effluent reduction….").

[97] *Id.* at §1314(b)(2)(A); *see E. I. du Pont de Nemours & Co.*, 430 U.S. at 131.

[98] *Am. Petroleum Inst.,* 661 F.2d at 356-57 (remanding EPA's promulgation of ELGs for further consideration of cost, where industry and EPA cost data differed significantly and EPA offered "no explanation and no support for [its] conclusions" regarding cost); *Am. Meat Inst. v. EPA*, 526 F.2d 442, 465 (7th Cir. 1975) (concluding that EPA could not rely on a technology as basis for limitation, where it was incapable of meeting the limitation without incurring "impractical and extremely expensive" costs not considered by EPA when selecting BAT).

more detail about its methodologies when it published the proposed ELG rule for public comment.[99] When EPA then took comments from the public, it learned—and in some instances even acknowledged—that its performance and cost analyses had shortcomings, overstating performance and understating cost.[100] This meant that EPA was required to collect additional information, make changes, and explain the changes in the Final Rule.

EPA's errors at proposal were not trivial. For example, comments showed that, industry-wide, the cost of installing biological treatment alone for FGDW would nearly exceed EPA's estimated costs for adding both biological treatment and chemical precipitation treatment.[101] Indeed, one company's comments showed that the cost of installing EPA's selected FGDW treatment technology at its plants would be nearly seven times higher than EPA had estimated for a subset of those same plants.[102] Similarly, EPRI was unable to replicate EPA's conclusions regarding the ability of biological treatment to remove pollutants from FGDW.[103]

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[99] *See, e.g.*, Index.2292.6-88–6-105.

[100] *See, e.g.*, Index.10081.6-665 (EPA agreeing with commenters who indicated that EPA should consider engineering-related costs and construction timelines associated with closed-loop bottom ash handling retrofits).

[101] *See* Index.8939.A-25 (finding incremental biological costs of over $2 billion).

[102] Index.8689.160 (Southern Company).

[103] Index.8939.4-2.

Based on EPRI's calculations, EPA had overestimated pollutant removals for biological treatment by a factor of eight.[104]

EPA's cost estimate for achieving no-discharge of BATW was likewise off by a wide margin. For example, after identifying a host of errors and omissions, EPRI calculated total industry capital costs for conversion from wet to dry ash handling, just for plants with a nameplate generating capacity above 400 megawatts, to be over $6 billion and $452 million in annual O&M costs – more than double EPA's estimate.[105]

1. EPA Reacts to the Comments by Soliciting CBI from Vendors

EPA responded to these comments by soliciting revised information from financially interested vendors. These are the same vendors whose technology was at issue and who had incentives to tout their systems as effective and reasonably priced. Much of the revised information – *and how EPA incorporated it into the final analyses* – has been withheld from the public and the Court. Thus, neither Industry Petitioners nor the Court can determine whether EPA in fact corrected the original errors or whether the revised analyses are themselves rational. This flies in the face of the APA.

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[104] *Id.* at 4-1.

[105] Index.8939.8-2.

EPA's contacts with vendors demonstrate how EPA consciously chose to conceal the substance of its final cost analysis. EPA prepared follow-up questions for GE "to clarify whether specific cost elements [identified by commenters] are included or not included in the cost estimates provided in previous correspondence," among other things.[106] GE responded to these questions, but that information has been withheld from the public record.[107]

Notes of subsequent meetings and correspondence between EPA and GE are similarly missing from the public record, nearly always in their entirety. Presumably, these pertain directly to the questions identified by the public during the comment period.[108] Other key documents have been withheld in their entirety, such as:

- the updated cost curve supplied to EPA by GE in 2014;[109]
- additional follow-up questions and answers between EPA and GE;[110]
- correspondence with GE regarding ABMet costing information;[111] and

[106] Post Proposal Questions for GE_for EPA Review, Index.11564.3.

[107] *See* CBI_GE Response to Post Proposal Questions, Index.11680.

[108] *See, e.g.*, Notes from Call with GE Water on March 4, 2015, Index.11999 (redacted to effectively be of no use, *e.g.*, "GE indicated [Redacted].").

[109] CBI_Updated ABMet Cost Curve, Index.11888.

[110] CBI_Email from Bill Bonkowki; RE: Clarificiation [sic] on Updated ABMet Costs from June 2014, Index.11906.

[111] CBI_Supplemental Costs and Loadings Attachment 75, Index.12258 (description found in metadata available at Regulations.gov, *see* https://www.regulations.gov/docket?D=EPA-HQ-OW-2009-0819-5681 (last accessed Dec. 2, 2016)).

- summary of correspondence with GE regarding updated ABMet costing information as of 2014.[112]

These inaccessible documents go to the heart of how EPA addressed the cost issue.

2. In the Final Rule, EPA Offers Only Conclusions and Hides Its Cost and Effectiveness Data, Methodologies, and Analyses Behind CBI

a. Cost

Using CBI as a pretext, EPA has provided only its bare conclusions in the public record regarding many of its cost analyses. The Agency has not provided supporting detail for those analyses (anonymized or otherwise). Despite comments showing that EPA had omitted or grossly underestimated various costs for the proposed rule, and despite the fact that EPA added new technology requirements, these final costs inexplicably *decreased* on a per-plant basis for FGDW. The average capital cost per plant went from just over $21.5 million for the Proposed Rule to approximately $20.5 million for the Final Rule.[113] And the average annual O&M costs went from approximately $2.2 million to approximately $1.4 million.[114]

EPA's revised cost figures cry out for explanation. Yet, EPA offers only its *ipse dixit* as support. EPA suggests that it considered public comments and

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[112] CBI_Supplemental Costs and Loadings Attachment 76, Index.12259 (same as footnote 111).

[113] *Compare* Index.2920.9-28 *with* Index.12840.9-32.

[114] *Id.* (averages were calculated by dividing total industry cost by number of plants).

changed its analysis "where appropriate," but without ever explaining *how*.[115] EPA provides no detail that would allow any meaningful review.

Despite the requirement to explain what it did, EPA withheld the underlying data, methodologies, and analyses under the guise of CBI. For example, they are missing from EPA's Final ICPR, which "describes the methodologies used to estimate plant-specific compliance costs…associated with installing and operating the various technologies and practices that make up the regulatory options considered by EPA to revise the existing ELGs."[116] Unquestionably, this document is central to EPA's development of the Final Rule.

The Final ICPR is the only document that describes EPA's consideration of costs and pollutant removals in full. The Final TDD refers directly to it for detailed explanations of EPA's methodology. For example, the Final TDD summarizes EPA's final method for estimating indirect capital costs, and cites Section 6.2.6.10 of the Final ICPR "for more details on the methodology."[117] Despite EPA's express reliance on this key document, the referenced subsection has been redacted *in its entirety*.

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[115] *See, e.g.,* Index.12840.3-20 ("EPA evaluated public comments to identify plant-specific operation and flow data and, where appropriate, used this information to revise estimates of compliance costs and pollutant removals for those facilities….").

[116] Index.12134.1-1.

[117] *See* Index.12840.9-25. There is no section 6.2.6.10 of the Final ICPR identified in the table of contents in the public record. Presumably, EPA meant to cite to section 6.1.6.10, which the table of contents describes as discussing EPA's indirect capital costs methodology.

In fact, EPA has withheld entire sections from the Final ICPR as CBI consisting of hundreds of pages of information.[118] The table of contents reveals the titles of the missing sections and subsections, and those titles make clear the vital nature of the withheld information.[119] In Section 5 alone, one can see that basic subject matter about cost has been redacted:[120]

[118] *See* Index.12134 (un-paginated placeholder between 4-35 and 9-1, noting that Sections 5, 6, 7, and 8 "have been removed from this document").

[119] *See id.* at ii-vii.

[120] *Id.* at ii-iii.

According to its title, the missing Section 5 explains EPA's "General Methodology, Terminology, and Common Cost Elements." The missing subsections provide the "General Cost Methodology and Terminology" and other more specific cost methodologies. In addition to EPA's final cost methodologies underlying the Final Rule, these sections identify and describe the technologies evaluated. In short, the titles of Section 5 and its subsections confirm that EPA has withheld basic cost information necessary to evaluate its methods and analyses.

The same is true for Sections 6 through 8. These sections lay out EPA's methodologies for analyzing costs and technologies for treating FGDW, fly ash transport water, and BATW.[121] As with Section 5, EPA included within these sections basic technology descriptions for multiple wastewater treatment options, as well as capital cost and operation and maintenance cost methodologies for each technology.[122] EPA redacted *all* of these sections and subsections.

While these sections or subsections might contain some CBI, the underlying methodologies themselves are necessary to understanding what EPA did and why. In fact, the proposed version contains substantially more information than the final. This enabled the public to evaluate EPA's cost methodologies in the Proposed ICPR, which provided *217* pages of methods and analyses in chapters 5, 6, 7, and 8.[123] By withholding these methods and analyses in the Final ICPR, EPA has deprived the public of the same ability to analyze the Final Rule.

These missing pages are critical to determining whether EPA's promulgation of the Final Rule was reasonable. EPA's Response to Comments alone cited the redacted portions of the Final ICPR *at least 53 times*—5 times to Section 5

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[121] *Id.* at iii-vii (Section 6, 7, and 8 entitled "FGD Wastewater Cost Methodology," "Fly Ash Transport Water Cost Methodology," and "Bottom Ash Transport Water Cost Methodology," respectively).

[122] *See, e.g., id.* (table of contents identifying redacted subsections entitled "Technology Description" for chemical precipitation for FGDW (Section 6.1.1), vactor truck collection for fly ash transport water (Section 7.2.1), and MDS for BATW (Section 8.1.1)).

[123] *See* Index.2292.5-1–8-33.

(General Methodology, Terminology, and Common Cost Elements), 30 times to Section 6 (FGD Wastewater Cost Methodology), 4 times to Section 7 (Fly Ash Transport Water Cost Methodology), and 14 times to Section 8 (Bottom Ash Transport Water Cost Methodology).[124]

Under the pretext of CBI, EPA has withheld over 250 pages in the Final ICPR presenting the Agency's cost methodologies for the Final Rule from the public record. No other document presents these methodologies in a way that allows them to be critically reviewed.[125] For example, the Final TDD is carefully crafted to provide only general narrative descriptions of "EPA's *approach* for estimating costs."[126] This is no substitute, for instance, for the actual "details on

[124] *See, e.g.*, Index.10079.4-188 ("EPA disagrees with the commenter's assertion that EPA did not include capital expenditures for plants recycling a majority of their bottom ash transport water. EPA did. As discussed in Section 8.5 of the [Final ICPR], EPA included a one-time bottom ash management cost…"), 4-194 ("EPA disagrees with the commenter's assertion that EPA did not account for costs associated with jurisdictional regulatory approval and that EPA also fails to account for any equipment that may be retired or rendered obsolete. As discussed in Section 5.1 of the [Final ICPR], EPA includes costs associated with indirect capital costs.").

[125] Complete redaction of large ICPR sections calls into question whether the hidden data satisfies even minimal data reliability. At the proposal stage, EPA chose to use dubious 1980s BATW pollutant loadings data. When commenters objected, EPA removed these values from its loadings database. Index.10081.6-423. There is no reason to believe the hidden data in the Final Rule is any more reliable.

[126] Index.12840.9-33 (emphasis added); *see, e.g.*, *id.* at 9-38 (describing EPA's cost methodology for converting to dry bottom ash MDS handling merely as "Total MDS Capital Costs = Conveyance and Intermediate Storage Equipment Costs + Direct Capital Costs + Indirect Capital Costs + Bottom Ash Disposal Costs").

the bottom ash cost *methodology*," which is redacted from the ICPR.[127]

As such, EPA has failed to explain its consideration of the cost of BAT under the CWA.

b. Effectiveness of BAT Technologies

EPA claims that "biological treatment [is] well-demonstrated" technology for the treatment of FGDW.[128] But the public record hardly supports such an overarching conclusion. Nothing in the public record demonstrates that biological treatment can treat all of the industry's FGDW effectively.

For example, EPA's reliance on CBI prevents any demonstration that biological treatment is effective when a plant's FGDW contains high amounts of chloride. EPA acknowledges that "[c]hemical precipitation systems are typically not able to remove chlorides from FGD wastewater…."[129] This means that biological treatment systems must be able to handle whatever chloride is present in FGDW.

The public record establishes that chloride levels exceed 25,000 ppm at some plants discharging FGDW.[130] By comparison, the public record also suggests that biological treatment is not designed for chloride levels that high. At

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[127] *Id.* at 9-37 (emphasis added) (citing to unavailable Final ICPR Section 8 for such details).

[128] 80 Fed. Reg. at 67,850.

[129] Index.12840.8-9.

[130] Index.10080.5-379.

the 2010 International Water Conference, GE described its ABMet biological treatment system—which EPA used as the basis for BAT—as "designed to handle chloride levels up to 20,000 ppm."[131] EPA's explanation of the discrepancy is critical because the Agency established the Rule's limits based only on plants with chloride levels less than 10,000 ppm.[132]

Despite the evidence in the public record, EPA claims that the *non-public* "record demonstrates that…bioreactor systems can handle chloride levels of up to 30,000 ppm" or even 35,000 ppm.[133] But it is impossible for the Court or public to verify whether EPA's statement has any basis whatsoever. EPA has withheld the document it claims demonstrates the system's efficacy, even when the claims exceed the vendor's own public statements. In any event, EPA relies entirely on GE's unsubstantiated claims, not *EPA's* analysis of them.[134]

EPA also has withheld correspondence with the vendor that may undermine the claims regarding the general efficacy of biological treatment. In the two-page "Notes from Call with GE Water," EPA has redacted nearly everything of value as

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[131] Index.9778.165-66 (citing Sonstegard, J., J. Harwood, and T. Pickett, "ABMet™: Setting the Standard for Selenium Removal," 2010 International Water Conference, IWC-10-18, at 5). UWAG also noted that GE had privately advised EPRI that the system could handle up to 25,000 ppm chloride. *Id.* (explaining that 25,000 ppm has not been demonstrated anywhere). But, even if *that* level were demonstrated, nothing in the record demonstrates that the system could handle *higher* than 25,000 ppm.

[132] *Id.* at 166.

[133] Index.12840.8-9 (citing CBI_Additional GE Response to Post Proposal Questions, Index.11781, and Index.10080.5-379).

[134] *See, e.g.*, Index.12006.8–9.

CBI regarding these issues.[135] The memorandum is striking. It suggests there are difficulties or, at the very least, important variables affecting the system's capabilities:[136]

- "GE reports [Redacted]. While GE has [Redacted]. GE is [Redacted] to control oxidants and ORP."
- "GE reports that thus far, any issues related to high oxidants or [Redacted]. GE believes these issues with [Redacted]."
- "The ABMet™ system can process wastewater with [Redacted] nitrate concentrations. [Redacted] with a membrane bioreactor (MBR) or stirred tank system with MBR to [Redacted] prior to treatment with the ABMet™ system. Alternatively, the ABMet™ system can be designed to [Redacted]."
- "EPA inquired about any existing biological treatment systems having operational issues. GE reported [Redacted]."
- "GE indicated [Redacted]."
- "EPA inquired about the mechanism used to remove selenium from the backwash stream. GE noted that [Redacted]."

Given these extreme redactions, the public record simply does not support EPA's conclusions.

D. EPA's Duty To Explain Is at Its Greatest When It Relies on Third-Party Vendors That Have a Financial Stake in the Outcome

As a general matter, EPA's duty to explain its reasoning is heightened when it relies on the expertise of outside parties. As this Court recently reiterated, EPA

[135] Index.11999.

[136] *Id.* at 1-2 (all redactions in original).

"is free to rely on outside experts to support its conclusions, [but] the level of deference owed to an agency's conclusions is substantially diminished when the subject matter in question lies beyond the agency's expertise."[137]

If EPA chooses to rely on outside vendors, the record must establish that the Agency critically analyzed the vendors' information. "As long as [EPA] conducts its own independent and thorough review of the consultants' report, the agency's reliance on outside reports is within its discretion and does not change the standard of review."[138] "An agency may not…reflexively rubber stamp information prepared by others."[139] Because EPA's verification of vendor-supplied information is not available anywhere in the record, EPA has not satisfied its obligation to establish *reasonable* reliance on the vendor information.

These imperatives should be at their highest when EPA relies on information supplied by *self-interested* vendors. EPA solicited information about the cost and performance of treatment technologies from the very vendors that would benefit financially from EPA's designation of their technologies as BAT. EPA's reliance

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[137] *Texas v. EPA*, 829 F.3d 405, 432 (5th Cir. 2016).

[138] *Avoyelles Sportsmen's League, Inc. v. Marsh*, 715 F.2d 897, 906 n.17 (5th Cir. 1983) (rejecting lower court's decision to engage in *de novo* review, but suggesting nevertheless that more probing review is warranted if record does not reveal agency's independent review of outside reports); *cf. Save Our Wetlands, Inc. v. Sands*, 711 F.2d 634, 642 (5th Cir. 1983) (under NEPA, "the agency was fully authorized to consider or even adopt the [outside report]. It must, however, independently verify the report.").

[139] *Coliseum Square Ass'n, Inc. v. Jackson*, 465 F.3d 215, 236 (5th Cir. 2006), *cert. denied*, 552 U.S. 810 (2007) (internal quotation and citations omitted).

on these financially motivated vendors shows that the Agency itself lacks the necessary expertise.[140]

As such, any deference owed to EPA's conclusory assertions regarding the cost and performance of BAT is "diminished and the agency must support its arguments more thoroughly than in those areas in which it has considerable expertise and knowledge."[141] This is particularly true when confronted with well-supported arguments and studies in public comments.[142] As this Court has held, EPA fails to fulfill "its obligation of…analysis" under the CWA when the Agency relies on studies or data that may "mask an important methodological flaw."[143] To survive judicial review, EPA must demonstrate—not merely assert—that the vendor information it relied on was accurate and that EPA independently verified the information and any analyses relying upon it.

By concealing the critical information from review as CBI, EPA utterly fails to meet this heightened standard.

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[140] *See Texas*, 829 F.3d at 432 (EPA's very "reliance on an outside expert demonstrates" that it lacks the expertise). While EPA certainly has experience establishing effluent limitations based on, for instance, performance capabilities of wastewater treatment technologies as provided by vendors, EPA must provide enough detail to verify the reasonableness of its reliance on such information. This is the minimum that the APA requires.

[141] *Id.* at 433.

[142] *Id.* at 422-33 (merely "pointing to the report of [its] outside expert, does not detail why" EPA's regulation overcomes industry's concerns).

[143] *Am. Petroleum Inst.,* 661 F.2d at 356 (remanding ELGs).

E. EPA's Failure To Explain Its Rationale Is So Egregious That It Warrants Vacating the Entire Rule

If an agency's "finding is not sustainable on the administrative record made, then the…decision must be vacated and the matter remanded…for further consideration."[144] Here, EPA has said *what* it believes, but it has not shown *why* it believes that.[145] Despite EPA's reassurances in presenting its conclusions, the Agency has pointed to supporting information that has been withheld as CBI. Without access to that information, it is impossible to verify that EPA promulgated a defensible rule.

In light of the *systemic* failings by EPA to support and explain the Final Rule on the public record before the Court, the Court should vacate the Rule.

II. EPA Has Failed To Respond Adequately to Public Comments, Because Many of Its Responses Are Based on Information Withheld from the Public Record

EPA has failed to satisfy its obligations to respond to public comments. In its Response to Comments alone, EPA referenced documents withheld, in whole or part, nearly 300 times under the pretext of CBI.[146] At least 53 of those references are to sections removed from the Final ICPR, which contains EPA's analysis of costs associated with the various technologies EPA considered and ultimately

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[144] *Camp v. Pitts*, 411 U.S. 138, 143 (1973).

[145] *See Sierra Club v. EPA*, 167 F.3d 658, 663 (D.C. Cir. 1999) ("Although EPA said *that* it believed the combination of regulatory and uncontrolled data gave an accurate picture of…performance, it never adequately said *why* it believed this.") (emphasis in original).

[146] EPA cited documents entirely withheld 165 times and partially withheld 112 times.

selected as BAT. These inaccessible documents, expressly referenced by EPA, are part and parcel of the Agency's Response to Comments.

EPA had the latitude to craft its responses and support them with whatever documentation it chose. It was not required to refer to CBI. EPA could have anonymized or sanitized the CBI, presenting the information in a non-confidential fashion. Instead, EPA forsook this opportunity, without justification or explanation.

Without the underlying documents referenced by EPA itself, the "responses" are reduced to summary conclusions. The responses cannot be verified or fully reviewed and, therefore, are legally inadequate. Referring commenters to unavailable CBI is effectively no response at all.

A. EPA Has a Duty To Respond to Public Comments

EPA must give "reasoned responses to all significant comments."[147] A response to comments is adequate only if it allows the reviewing court to determine whether the agency has "examine[d] the relevant data and articulate[d] a satisfactory explanation for its action including a rational connection between the facts found and the choice made."[148] As this Court has explained, the precise

[147] *PPG Indus., Inc. v. Costle*, 630 F.2d 462, 466 (6th Cir. 1980). *See* 5 U.S.C. §553(c) (2015); *Nat'l Wildlife Fed'n v. Costle*, 629 F.2d 118, 134-35 (D.C. Cir. 1980) ("*Costle*").

[148] *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (internal quotation and citation omitted).

"scope and degree of detail required by §553(c) depends on the scope and detail provided in the comments."[149]

Mere conclusions are insufficient.[150] Moreover, the agency must fully explain responses that reject significant comments, particularly where "the magnitude of the difference" between the commenter's and agency's figures "should have alerted the EPA to the possibility that the…objections…were well-founded."[151]

B. If EPA Chooses To Rely on a Document in Its Response to Comments, EPA Must Defend the Document

An agency has the prerogative to respond to comments in whatever fashion it chooses, so long as it does so adequately.[152] This prerogative extends to the selection of evidence in support of responses to comments. However, when an agency chooses to refer to other documents in its final decision, "the reasoning [in those documents] becomes that of the agency and becomes its responsibility to defend."[153] As the Court explained, "the public interest in knowing the reasons for

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[149] *Cent. & S. W. Servs., Inc. v. EPA*, 220 F.3d 683, 692 (5th Cir. 2000), *cert. denied sub nom. Util. Solid Waste Activities Group v. EPA*, 532 U.S. 1065 (2001).

[150] *Am. Mining Cong. v. EPA*, 907 F.2d 1179, 1190-91 (D.C. Cir. 1990).

[151] *Texas v. EPA*, 499 F.2d 289, 309 (5th Cir. 1974), *cert. denied sub nom. Exxon Corp. v. EPA*, 427 U.S. 905 (1976).

[152] *See United States v. Nova Scotia Food Prods. Corp.*, 568 F.2d 240, 252 (2d Cir. 1977) ("The agencies certainly have a good deal of discretion in expressing the basis of a rule, but the agencies do not have quite the prerogative of obscurantism reserved to legislatures.").

[153] *NLRB v. Sears, Roebuck & Co.*, 421 U.S. 132, 161 (1975).

a policy actually adopted by an agency supports" disclosure of the information in those documents.[154]

C. EPA's Express Reliance on Unavailable CBI in Its Responses to Comments Fails To Satisfy the APA

EPA cannot justify a rule by relying on reports, studies, or data withheld from the public record, even if referenced in its response to comments.[155] The following sections highlight just a few examples of this, where each "response" pertains to objections raised by the public about issues EPA is required to consider under the CWA. EPA's consideration of, and response to, these objections is therefore of central significance to the Final Rule. EPA's responses are plainly inadequate due to reliance on CBI.

1. EPA's Responses Regarding the Impact of Facility Age on Its Selection of BAT

The CWA requires EPA to consider "the age of equipment and facilities involved" when selecting BAT.[156] In its comments, American Municipal Power, Inc. ("AMP") questioned EPA's claim "that the age of a plant or unit 'by itself does not in general affect the wastewater characteristics, the processes in place, or the ability to install the treatment technologies evaluated as part of this

[154] *Id.*

[155] *Ass'n of Pac. Fisheries*, 615 F.2d at 819-20.

[156] 33 U.S.C. §1314(b)(2)(B).

rulemaking.'"[157] AMP went on to note that "the age of a plant or unit *does significantly* impact the cost-effectiveness of any new regulatory controls…, as well as the overarching decision of its owner as to whether to make the retrofit or close the facility instead."[158] AMP's concern was "that EPA's failure to establish subcategories (which could vary applicability based on unit age…) … could needlessly add to the long list of closed coal units and thus negatively impact regional electric reliability…."[159]

EPA publicly offers very little in response to this comment. First, it simply restates its original conclusory statement "that neither age nor location of a plant or generating unit 'by itself in general affect the wastewater characteristics, the processes in place, or the ability to install and operate the treatment technologies evaluated as part of this rulemaking.'"[160] Next, it asserts that "EPA's analysis shows that all operations covered by the final rule can achieve the final limitations."[161]

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[157] Index.8765.2 (quoting Proposed Rule, 78 Fed. Reg. at 34,446).

[158] *Id.* (emphasis added).

[159] *Id.*

[160] Index.10078.3-590.

[161] *Id.*

EPA supports these assertions entirely by reference to CBI.[162] The response points to a document that has been withheld in its entirety—"CBI Memorandum: Steam Electric Effluent Guidelines – Evaluation of Potential Subcategorization Approaches."[163] Because this is the only document EPA offers in its response to comments as containing the full explanation of its required consideration of age, the response is patently inadequate.[164]

2. EPA's Responses Regarding the Effectiveness of Biological Treatment

UWAG questioned in its comments whether biological treatment was demonstrated to effectively treat FGDW with high nitrate or selenium concentrations.[165] EPA again responded by referring to CBI. EPA claims that "GE has conducted a number of pilot and full-scale studies that have demonstrated the effectiveness of the biological treatment system in meeting nitrate-nitrite and selenium limits."[166] In support of that statement, EPA cites only two documents,

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[162] *Id.* at 3-591 (citing DCN-SE05813). In its nearly 6,000-page long Response to Comments, EPA repeatedly refers the reader back to this response as proof of its consideration of age. *See, e.g.,* Index.10080.5-521.

[163] Index.12128. EPA also cites to Chapter 5 of its Regulatory Impact Analysis ("RIA"), which is irrelevant. *See* Index.10078.3-591. That chapter makes no mention of "age" at all. *See* Index.12842.5-1–5-26. The RIA certainly does not explain *why* or *how* EPA's economic analysis eliminates age as a determining factor for projecting generating unit retirements, as EPA claims. *See id*. Nor does the RIA provide any reasoning in response to AMP's comment that age significantly impacts the cost-effectiveness of new regulatory controls.

[164] *See* Index.12840.5-2 (briefly summarizing EPA's consideration of age, but citing repeatedly to the same withheld memorandum for detailed explanation).

[165] Index.9778.148–50.

[166] Index.10080.5-447.

both of which are entirely withheld as CBI: "CBI_Additional GE Response to Post Proposal Questions," and "CBI_GE Written Responses to Additional Follow Up Questions."[167]

Apart from CBI, EPA offers nothing to support its belief that "[t]he ability of the biological technology to effectively operate under varying conditions of chlorides, TDS and other characteristics is well-demonstrated by the record for the rule."[168] EPA cites to recommendations on "how plants can (and should) ensure the proper operation of the treatment system, including steps that should be taken to condition the influent wastewater prior to the bioreactor."[169] But even assuming that EPA's recommended steps *might* help biological treatment systems treat high levels of selenium and nitrate, those steps do not *demonstrate* the ability of the system to meet the specific limits.

Given that the only possible demonstration is withheld as CBI, EPA has failed to respond to comments adequately.[170]

3. EPA's Responses Regarding the Costs of BAT

Most striking are EPA's inadequate responses regarding the costs of BAT, and therefore overall costs of the Final Rule. In one remarkable example, UWAG

[167] *Id.* (citing Index.11781 and Index.11846, respectively).

[168] Index.10080.5-448. "TDS" means total dissolved solids.

[169] *Id.* at 5-447.

[170] Commenters also questioned whether EPA had adequately considered whether high chloride levels impeded biological systems. *See supra* at 38-40. As noted previously, EPA used CBI to withhold the information supporting EPA's position. *Id.*

identified transcription errors in EPA's economic model that resulted in estimated costs being "*off by a factor of 10*, underestimating the overall capital costs for dry fly ash retrofits for the industry."[171]

EPA conceded these mistakes in its Response to Comments.[172] EPA's cursory response says that it corrected its equations, but does not reveal the new equations themselves. And EPA does not show that these changes were actually made. Confirmation of this is presumably contained only in the withheld CBI sections of the Final ICPR.

Indeed, EPA frequently referenced withheld sections of the Final ICPR in its Response to Comments. For instance, EPA says that it considered all of the following when finalizing the Rule, yet offers no details as to *how* it did so:

- costs of jurisdictional regulatory approvals, and the impact of equipment retired or rendered obsolete;[173]
- costs for a chemical addition system that will add a chemical reducing agent into the FGDW chemical precipitation system when needed to respond to elevated ORP levels;[174]
- costs for the treatment and disposal of the backwash from the biological system in the chemical precipitation component of FGDW BAT;[175]

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[171] Index.9778.96–98 (emphasis added).

[172] Index.10081.6-234 ("EPA acknowledges the errors in the three capital cost equations….").

[173] Index.10079.4-194 (citing Final ICPR, Index.12134.§5.1).

[174] Index.10080.5-382 (citing §6.2).

[175] *Id.* at 5-384, 5-401 (citing §6.2).

- costs for additional instrumentation to allow for appropriate monitoring and control of FGDW characteristics entering treatment;[176] and

- costs for adequate staffing for O&M of the treatment system, as well as staffing associated with disposal of treatment residuals.[177]

Commenters presented specific concerns about specific cost issues, yet EPA's position is simple: "trust us."[178]

Under the APA, EPA must show its work to enable the Court to "engage in a substantial inquiry."[179] EPA's repeated failure to respond adequately to comments is fatal to the Final Rule. Vacatur is the required remedy.[180]

III. EPA Failed To Demonstrate That Biological Treatment is Technologically "Available" for Plants Burning Subbituminous or Lignite Coals

None of the plants on which EPA based its biological treatment-based limits burns subbituminous or lignite coal.[181] Indeed, not one of the subbituminous- or

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[176] *Id.* at 5-513 (citing §§6.1, 6.2).

[177] *Id.* at 5-401 (citing §6.2).

[178] *See also id.* at 5-537 ("The absence of cost curves due to the presence of CBI prevents EPA from comparing the differences between EPA's costs and the commenter's costs for the biological treatment system."). Similar concerns apply to the responses to comments about fly ash transport water. City Utilities warned in comments that EPA's conclusion that retrofitting controls was economically feasible was based on studies performed under vastly different fly ash market conditions that no longer existed. Index.8692.3 ("EPA's final EGU mercury rule and proposed coal combustion residual (CCR) rule have induced a chilling effect on the ash recycling market," such that "the cost-effectiveness of future dry flyash conversion projects should in no way be gauged by comparison to projects completed prior to the mercury MACT and CCR publication."). However, EPA's detailed cost methodology on this issue is withheld as CBI. *See* Index.12134 (entire section titled "Fly Ash Transport Water Cost Methodology" redacted).

[179] *Overton Park*, 401 U.S. at 415.

[180] *See* 5 U.S.C. §706(2); *Cent. & S. W. Servs.*, 220 F.3d at 692 (identifying limited circumstances, which are not present here, when remand without vacatur would be appropriate upon finding an agency's responses to comments inadequate).

lignite-burning coal plants in EPA's database has biological treatment as part of its FGDW system, nor were any pilot test data for biological treatment available for such facilities in the record. Therefore, based on EPA's record, *the Agency has not demonstrated—and cannot demonstrate—the feasibility of biological treatment for 16-25% of all plants subject to the new FGD limits*.[182]

As this Court has stated, "EPA bears the burden of producing a reasonable basis on the record for its regulations."[183] Here, as in *Chemical Manufacturers*, the decision to regulate FGDW discharged by these plants without any performance data for biological treatment is arbitrary and capricious and in violation of the statutory command that EPA consider those factors.

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[181] The Rule's analytical database includes some data from Hatfield's Ferry, a plant that at the time burned a blend of PRB and Eastern bituminous coal. However, that plant did not have a biological treatment system for its FGD wastewater. *See* Index.1653.1.3-5. It also includes data from We Energies' Pleasant Prairie Plant which burns PRB coal but which also did not have biological treatment. *See* Index.9778.206.

[182] EPA based its estimates of plants burning subbituminous and lignite coals on EPA survey data. The survey collected information through 2009. But at the final rule stage, EPA asserted that, after accounting for "announced retirements," there were no lignite-burning plants discharging FGD wastewater. Index.10078.3-525. However, industry comments demonstrate that several lignite-burning plants are authorized to discharge FGD wastewater. *See* Index.9753.5.

[183] *Chem. Mfrs. Ass'n v. EPA*, 885 F.2d 253, 265 (5th Cir. 1989), *cert. denied sub nom. PPG Indus. v. EPA*, 495 U.S. 910 (1990) (vacating/remanding ELG where lack of performance data in the record for in-plant biological treatment meant EPA's decision to derive limits for 20 pollutants based on in-plant biological treatment was "no more than an educated guess").

A. Differences Among Coal Types Have Significant Implications for the Performance and Cost of Biological Treatment

According to EPA, out of 100 plants identified as discharging FGDW in 2009, 15 to 20 plants burn subbituminous coal and 1 to 5 burn lignite.[184] This is important because coals vary greatly not only in their price,[185] availability, and heating value, but also in the air emissions they produce when burned,[186] the applicability and performance of air emissions control technologies,[187] and the characteristics of wastewater resulting from use of those air emissions control technologies.[188] None of these facts is disputable.

Nor can there be any dispute that steam electric units are typically designed to handle a certain coal type or types. A unit designed to burn a subbituminous coal such as PRB coal cannot simply switch to burning bituminous coal. The same is true for lignite plants.

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[184] Index.12840.6-5(Table 6-2). EPA also identified 10-15 plants that burn two or more coal types. *Id.* Whether those plants can meet the limits is also in question.

[185] *See, e.g.,* Index.12372.215 (listing coal prices by types—bituminous, subbituminous, lignite, and anthracite—for selected years from 1949-2011).

[186] Different coals contain differing amounts and combinations of pollutants, including sulfur, hydrogen chloride, and mercury, which are important factors for designing and operating air emission technologies and managing the resulting wastewaters. *See* Index.12377.9-12.

[187] EPA has acknowledged differences between electric generating units based on coal types in other rulemakings. In the Mercury and Air Toxics Rule, EPA set different hazardous air pollutant emission standards based on coal ranks. 79 Fed. Reg. 24,073, 24,088 (Apr. 24, 2013).

[188] Index.47.4-17 (noting pollutant concentrations in FGD scrubber purge vary due to, among other factors, "air pollution control systems operated upstream of the FGD system.").

At no point over the course of this rulemaking did EPA purport to restrict, or consider the feasibility and cost of restricting, the type of coal a plant could burn or the type of air emissions control technology a facility might use in meeting applicable air emissions control requirements. Thus, each affected facility's choice of coal and its air emissions control technology must be taken as a given and not as a collateral factor that can simply be changed in order achieve the ELGs.

B. FGD Wastewater from Subbituminous Coal is Very Different from FGD Wastewater from Bituminous Coal

EPA claims that subbituminous-burning plants can achieve the FGD limits because biological treatment systems provide "a mechanism to reduce selenium and nitrate/[nitrite]" and because the selenium and nitrate/nitrite present in FGDW, whether derived from bituminous or subbituminous coal, "is not different."[189] The record refutes this flawed conclusion. The effectiveness and cost of wastewater treatment systems depend on the full pollutant "matrix"—that is, the specific mixture of pollutants as well as their individual characteristics—of the wastewater being treated.

The record demonstrates that FGDW from subbituminous-burning plants is substantially different from FGDW from bituminous-burning plants. The table below summarizes four-day average EPA data for FGDW exiting the chemical precipitation portions of the FGDW treatment systems at Allen and Belews Creek

[189] Index.10080.5-450–5-451.

Stations, which burn Eastern bituminous coal, and at Pleasant Prairie Power Plant, which burns PRB coal.[190] The table uses dissolved values after chemical precipitation, because biological treatment is designed to remove dissolved fractions of constituents.[191] Allen and Belews Creek use both chemical precipitation and biological treatment to treat their FGDW,[192] while Pleasant Prairie uses a chemical precipitation system.[193]

For nitrates, the dissolved fraction of Pleasant Prairie's chemical precipitation effluent is more than *8 times* the values for both Allen and Belews Creek. For selenium, Pleasant Prairie's effluent is about *23 times* that of Allen and almost *twice* the Belews Creek value.[194]

[190] At Belews Creek and Allen, this is a midpoint sample in the wastewater treatment system, prior to biological treatment. But at Pleasant Prairie, the sampling point is the end of the FGDW treatment system since it has no biological treatment.

[191] *See* Index.1992.4-7–4-10(Table 4-2); Index.1954.4-16–4-18(Tables 4-4,4-5); Index.1966.4-12–4-14(Tables 4-3,4-4).

[192] Index.1992.2-2; Index.1954.2-3.

[193] Index.1966.2-3.

[194] The record contains additional documentation of the substantial differences in FGD wastewater influent between bituminous and subbituminous plants. *See, e.g.,* EPRI, *Pilot-Scale and Full-Scale Evaluation of Treatment Technologies for the Removal of Mercury and Selenium in Flue Gas Desulphurization Water*, Index.12102.3-4,3-5,3-8,3-23 (showing much higher selenium and nitrate levels for the subbituminous plant).

Comparison of 4-Day Average FGDW Treatment After Chemical Precipitation at Allen, Belews Creek, and Pleasant Prairie[195]

Analyte	Unit	4-Day Average Dissolved Effluent, Allen (E. Bituminous)	4-Day Average Dissolved Effluent, Belews Creek (E. Bituminous)	4-Day Average Dissolved Effluent, Pleasant Prairie (PRB)
Aluminum	(ug/l)	NQ[196]	ND	NQ
Arsenic*	(ug/l)	NQ	NQ	4.85
Boron	(ug/l)	58,600	150,000	9,930
Calcium	(ug/l)	1,750,000	3,490,000	639,000
Chloride	(mg/l)	3,300	7,780	1,950
Magnesium	(ug/l)	396,000	738,000	3,560,000
Manganese	(ug/l)	393	NQ	10,800
Mercury	(ng/l)	342	46,200	22.3
Nitrate/Nitrite	(mg/l)	13.3	19.8	160
Selenium	(ug/l)	91.1	1,210	2,080
Sodium	(ug/l)	31,300	48,900	518,000
Sulfate	(mg/l)	1,400	1,380	15,500
TDS	(mg/l)	7,560	20,100	22,400

*The pollutants highlighted are those for which EPA set new BAT limits.

In addition to the pollutants EPA chose to regulate, the values for many pollutants that EPA chose *not* to regulate—but which may affect the efficiency or proper operation of the treatment system—are also quite different. For instance, the 4-day average sulfate level in the Pleasant Prairie influent is more than 11

[195] Index.1992.4-7–4-10; Index.1954.4-16–4-18; Index.1966.4-12–4-14.

[196] "NQ" means the analyte was measured above the detection limit but below the quantitation limit for all four sampling days. "ND" means the analyte was below the detection limit and could not be quantified.

times that of Allen or Belews Creek. Sulfate levels can affect the operation of the system by causing calcium sulfate scaling, in which mineral deposits build up inside the treatment system's piping and equipment.[197] At Pleasant Prairie, even with lime addition as a pretreatment step, the remaining high sulfate levels necessitate weekly cleaning of the secondary clarifier.[198] Without this regular cleaning, "excessive scale would build up and affect the performance of the clarifier."[199] This scaling issue is likely to impact both the denitrification system[200] EPA has added to the model technology treatment chain and the biological treatment system meant to target nitrate/nitrite and selenium removal.

The presence of high TDS also can complicate treatment of FGDW. Within the biological treatment system, high TDS may interfere with attachment sites for bacteria, lessening the effectiveness of treatment.[201] As indicated in the table above, EPA's 4-day average for Pleasant Prairie demonstrates a TDS level that is about 3 times that of Allen and also higher than Belews Creek. Data in the record

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[197] Index.12102.4-3.

[198] Index.11876 (response to Question 19).

[199] *Id.*

[200] EPA has not demonstrated the use of a denitrification system as part of FGD wastewater treatment at any plant burning subbituminous coal, even though it accounted for denitrification costs at Pleasant Prairie and Hatfield's Ferry (which burns a blend of subbituminous and bituminous coals). Index.12264.Worksheet-List_of_Plants. Nonetheless, EPA simply assumes the additional technology will not be subject to operational issues such as scaling.

[201] EPRI, Index.12102.4-4.

show that TDS levels can be as high as 50,000 mg/l,[202] which is approximately *6 times* the Allen 4-day average and almost *2.5 times* the Belews Creek average. EPA tries to negate the TDS issue by pointing to a pilot study at Petersburg Station in which TDS "ranged as high as 27,000 mg/L."[203] But Petersburg burns bituminous coal, so its results are irrelevant for subbituminous- and lignite-burning plants. Moreover, since FGDW influent can contain TDS at levels almost double the amount documented at Petersburg,[204] the pilot study fails to demonstrate that biological treatment systems can handle high TDS levels from subbituminous fuels equally as well as TDS levels from bituminous fuels.

Without data, it is not reasonable to *assume*—as EPA has done—that biological treatment systems will work for wastewater generated by subbituminous- and lignite-burning plants. The feasibility of biological treatment for subbituminous and lignite-burning plants must be demonstrated through actual data from these types of facilities.

C. Including Pleasant Prairie Data Does Not Remedy the Lack of Biological Treatment Data for Subbituminous Plants

Industry members commented extensively on the viability of biological treatment systems for subbituminous-burning plants. We Energies, the owner of

[202] Index.126.2-3.

[203] Index.10080.5-365 (citation omitted).

[204] Index.126.2-3.

Pleasant Prairie, commented that "nothing in the rulemaking record demonstrates that facilities burning subbituminous coal can meet the proposed selenium and nitrate/nitrite limitations."[205] The company urged EPA to "recalculate effluent limitations for FGD wastewater using a more robust set of data that represents the variability of FGD wastewater across the industry" and to include data from at least one plant burning solely subbituminous coals.[206]

In response, EPA explained that, between the proposed and final rules, it decided to include Pleasant Prairie data in the database used to derive FGD limits:[207]

> By including Pleasant Prairie in the dataset, the effluent limitations are based on data that include plants burning bituminous coal, subbituminous coal, and blends of bituminous and subbituminous coals. The record demonstrates that the chemical precipitation plus biological treatment BAT basis is effective at removing the pollutants present in FGD wastewater regardless of the type of coal that is burned, and in particular those pollutants for which EPA is establishing effluent limitations. See, e.g., the pollutant removal performance for arsenic and mercury.

EPA's response is misleading. The Pleasant Prairie data are relevant only to the mercury and arsenic limits, which are based on chemical precipitation. The facility did not have biological treatment. The performance of Pleasant Prairie's chemical precipitation system as to arsenic and mercury is irrelevant to the

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[205] Index.8923.3.

[206] *Id.*; *see also* Index.9778.116 (UWAG).

[207] Index.10084.9-368.

performance of the biological treatment portion of the technology. Thus, EPA is wrong that "[t]he record demonstrates that the chemical precipitation plus biological treatment BAT basis is effective at removing the pollutants present in FGD wastewater regardless of the type of coal that is burned."[208]

EPA further misleads by claiming: "The data in the record also shows that the biological treatment technology is effective at removing nitrate-nitrite and the different forms of selenium present in FGD wastewater; *that is proven true for every type of coal that has been tested with the technology.*"[209] Note EPA's qualified language: biological treatment is effective for "every type of coal *that has been tested with the technology*." That is the point. Subbituminous and lignite coal have not been tested with the technology, and thus the *technology is not demonstrated for those coal types.* To set limits without appropriate supporting data is arbitrary and capricious.[210]

[208] Contrary to EPA's assertion, it also has not demonstrated that plants burning a blend of bituminous and subbituminous coals can meet the selenium and nitrate/nitrite limits. The only plant burning a blend of coals during EPA's sampling was Hatfield's Ferry, which had no biological treatment system.

[209] *Id.* (emphasis added).

[210] *See Chemical Mfrs.,* 885 F.2d at 265 (EPA failed to demonstrate a "reasonable basis for its conclusion" where it tried to use data from end-of-pipe biological treatment systems to justify in-plant biological treatment systems).

D. EPA's Theorizing About the Efficacy of Biological Treatment is Nothing More Than an Impermissible "Educated Guess"

Lacking data, EPA nonetheless declares there is no "theoretical reason" why biological treatment would not be effective at plants burning subbituminous coal.[211] It bases its "theoretical" judgment on two specious arguments.

First, EPA says that "[t]here is nothing unique about the form of selenium or nitrate-nitrite that is present in FGD wastewater at plants burning subbituminous (or any other type of coal)…."[212] This statement misses the point. Although the specific types of selenium and nitrate/nitrite in FGDW may generally be the same across coal types, the differences between FGD *wastewater* from bituminous coals and that from subbituminous coals is significant. As shown by EPA's own data for the Allen, Belews Creek, and Pleasant Prairie plants, the wastewaters differ in material ways.

Nonetheless, EPA simply asserts that "the characteristics of wastewater from subbituminous plants (as evidenced by the data for Pleasant Prairie….) are similar to the characteristics of wastewater from plants burning bituminous coal (i.e.,…Belews Creek…)."[213] It is simply not true that all concentrations and characteristics of FGDW from subbituminous plants are similar to those for

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[211] Index.10084.9-368.

[212] *Id.*

[213] *Id.*

bituminous plants.[214] But even if they were "similar," comparing pollutant concentrations is not sufficient for demonstrating that biological treatment is feasible and available for subbituminous and lignite plants.

Second, the Agency claims it considered and ruled out whether other pollutants or wastewater characteristics unique to subbituminous coal would potentially interfere with biological treatment.[215] With this statement, EPA waves away possible operational difficulties from scaling (as can be caused by high sulfate levels) or from high TDS (which can potentially impact biological treatment performance). Yet, these problems occur at facilities burning subbituminous coals, and EPA's responses on the record are inadequate, as discussed above.

It is telling that EPA urges all plants to perform site-specific pilot studies before installing FGDW equipment.[216] These studies are necessary, according to EPA, to assess wastewater characteristics and determine the most appropriate technologies and their design (*e.g.*, sufficient capacity and residence time) to handle the variability of the particular FGD wastewater.[217] EPA specifies that the studies should be conducted "over a long enough period of time that will include

[214] *See supra* at 54-58.

[215] Index.10084.9-368.

[216] Index.12006.14–16.

[217] *Id.*

variability in plant operations such as shutdowns, fuel switches (preferably for all fuel types burned at the plant), variability in electricity generating loads, periods with high [oxidation reduction potential], etc."[218] These pilot studies are necessary because of the unpredictable variability of FGDW.[219] EPA recommends that a plant "identify the 'worst case' scenario and design a sufficient FGDW treatment system that can operate under the worst case conditions and achieve the effluent limits."[220]

In short, EPA acknowledges the uniqueness of each FGDW at each given plant. This acknowledgement demonstrates that EPA could not have taken into account all of the site-specific technologies needed to achieve the final effluent limits for FGD wastewater. Without a full consideration of site-specific design factors, EPA could not have properly derived costs for FGD compliance at all facilities.

For lignite, EPA claims its data are "representative of the plants discharging FGD wastewater."[221] Even though EPA's survey documented 1-5 lignite plants discharging FGDW, the Agency claims that, once "announced retirements" are

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[218] *Id.* at 15–16.

[219] GE, a vendor of biological treatment systems, acknowledges the "*extreme variability* in effluent quality [i.e., FGD wastewater influent to the treatment system] due to the variety of coal sources, limestone sources, and scrubber operation…." J. Sonstegard, et al., ABMet: Setting the Standard for Selenium Removal, Index.250.2 (emphasis added).

[220] Index.12006.16.

[221] Index.10078.3-525.

accounted for, there are no lignite plants discharging FGDW.[222] But, as Luminant informed EPA, although its lignite plants had not discharged FGDW in some time, the plants are fully authorized to discharge FGDW.[223] Clearly, the ability to discharge FGDW is important to those plants. Otherwise, they would not retain that flexibility in their permits. Luminant also explained to EPA that lignite "is a basic fuel in the Texas fleet."[224]

EPA also retorts that commenters provided no data demonstrating that subbituminous- or lignite-burning plants would be unable to meet the effluent limitations.[225] Since no subbituminous- or lignite-burning plants have installed the biological treatment system that EPA claims is BAT, it would be difficult indeed to produce such data. But that is beside the point. The burden is on EPA to demonstrate that the BAT technology is technologically "available" for the whole industrial category.

In any event, the law does not tolerate rules based on theoretical possibilities. A strikingly similar issue arose in this Court.[226] There, industry challenged effluent limitations based on biological treatment, just as in this case.

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[222] *Id.*

[223] Index.9753.5.

[224] *Id.* at 18.

[225] Index.10080.5-166, .10078.3-525.

[226] *See Chem. Mfrs.,* 885 F.2d 253 (remanding portions of ELG for the organic chemicals, plastics, and synthetic fibers industries).

EPA designated in-plant biological treatment as the model BAT technology.[227] However, EPA had no data from in-plant biological treatment systems, just as here there is no performance data for biological treatment systems at plants burning subbituminous or lignite coals. Instead, EPA "relied on a data base consisting solely of three end-of-pipe biological treatment plants."[228] In the case at hand, EPA relies on data from two biological treatment systems located at plants burning *bituminous* coals to set the selenium and nitrate/nitrite limits at issue.[229] In *Chemical Manufacturers*, industry petitioners explained that the detention time for the three end-of-pipe treatment systems used to derive the limits exceeded the maximum time used by EPA to estimate the costs of in-plant treatment systems. Therefore, industry claimed, EPA had not demonstrated that the limits could be achieved since "detention time is a key variable determining the effectiveness of biological treatment…."[230]

EPA tried to justify its use of end-of-pipe treatment data by noting that the in-plant and end-of-pipe systems use similar biological processes and treated comparable wastestreams. EPA also claimed that the concentration of biodegrading organisms in the aeration basin would decrease the amount of

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[227] *Id.* at 264.

[228] *Id.*

[229] Index.12840.13-39.

[230] *Chem. Mfrs.*, 885 F.2d at 265 (footnote omitted).

detention time necessary to reach the prescribed level of treatment.[231] But this Court was unmoved by these factors. It found that "the record contains no performance data for in-plant treatment of the twenty priority pollutants at issue…."[232] The court rejected EPA's theoretical point about the concentration of biodegrading organisms affecting detention time as "no more than an educated guess."[233] EPA failed to "make clear exactly what level of pollution would result from any given combination of shorter detention time and increased [concentration of biodegrading organisms]."[234] The Court thus found that EPA had not demonstrated a reasonable basis for its conclusion that in-plant biological treatment would be as effective as end-of-pipe biological treatment.[235]

In the case at hand, EPA is also guessing. It says there is no evidence of possible interferences with biological treatment stemming from FGDW derived from subbituminous coal.[236] But that is a theoretical judgment unsupported by any performance data. It says a "well operated" PRB-burning plant should have no

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[231] *Id.*

[232] *Id.*

[233] *Id.*

[234] *Id.*

[235] *Id.*

[236] Index.10084.9-368.

issues meeting the limits.[237] Again, that is all theory, unsupported by any credible analysis.

With as much as 25% of the coal fleet dependent upon subbituminous or lignite coals, EPA's speculation is no small matter. It is certainly not clear "exactly what level of pollution" would result from applying biological treatment at subbituminous- and lignite-burning plants.[238] For these reasons, EPA's FGDW limits must be vacated as to subbituminous- and lignite-burning plants.

IV. EPA's Failure To Solicit Comments Before Stripping Plants from the Baseline Violated the APA and Undermined EPA's Economic Impact Assessment

EPA undertook significant analyses of the CPP's impacts on the Final Rule without notice or public comment.[239] Based on those analyses, it stripped 47 plants out of the baseline entirely, and another 19 partially. This allowed the Agency to substantially reduce its estimate of the number of plants that would close, convert to gas, or change their ash management practices as a result of the Final Rule, which in turn profoundly affected the Agency's assessment of the Rule's economic impact on the industry. It also deprived the Industry Petitioners and the public of any opportunity to raise questions about the accuracy of EPA's assessment, or to understand and address the assumptions EPA made about the remaining useful life

[237] Index.10080.5-148. If, in the absence of data, it is sufficient merely to say that a "well operated" plant should be able to meet a limit, then EPA could justify any conceivable limit.

[238] *Chem. Mfrs.,* 885 F.2d at 265.

[239] Index.12840.4-45.

of facilities that EPA projected would stay open beyond its chosen compliance deadline of December 31, 2023 (but not necessarily very far beyond that date). By failing to provide for public comment on its CPP analyses, EPA violated the APA. The Rule must be vacated and remanded to EPA to consider public comments because EPA's analyses implicate the entire Rule.

A. The APA Requires EPA To Solicit Comments on Significant New Information That Arises After the Close of the Comment Period

Under the APA, EPA must set forth in its notice of proposed rulemaking "either the terms or substance of the proposed rule or a description of the subjects and issues involved."[240] "The notice should be sufficiently descriptive of the 'subjects and issues involved' so that interested parties may offer informed criticism and comments."[241]

As this Court has explained, "fairness requires that the agency afford interested parties an opportunity to challenge the underlying factual data relied on by the agency."[242] "[I]f new data are considered after the agency receives comments on the data it initially provides, the nature of the change…in the newly-considered data determines whether it must again publish notice and invite

[240] 5 U.S.C. §553(b)(3).

[241] *Ethyl Corp. v. EPA*, 541 F.2d 1, 48 (D.C. Cir. 1976) (en banc), *cert. denied*, 426 U.S. 941 (1976).

[242] *Chem. Mfrs. Ass'n v. EPA*, 870 F.2d 177, 200 (5th Cir. 1989), *cert. denied sub nom. PPG Indus. v. EPA,* 495 U.S. 910 (1990).

additional comments."[243] "A petitioner who objects to an agency's failure to publish data for comment must indicate with reasonable specificity what portions of the document it objects to and how it might have responded if given the opportunity."[244]

B. EPA Was Required To Solicit Comments on the Effect of the CPP on the Rule, and Its Failure To Do So Prejudiced Industry

A major new rule proposed by EPA after the close of the comment period on the proposed ELG rule, which would regulate the same industry as the Final Rule, is significant new data in the Agency's possession requiring additional notice and comment under the APA.[245] The same is true of EPA's own analysis of the impact of the CPP on the Final Rule. Yet EPA failed to release this analysis for comment before finalizing the Rule.

EPA agrees that the CPP, which sets greenhouse gas emission guidelines for existing power plants, is a major new rule affecting the same plants targeted by the Final Rule; that is why EPA conducted its analysis.[246] But EPA should have given the public an opportunity to comment on the impact of this major regulation on the Final Rule. It had plenty of time to do so, given that EPA proposed and finalized

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[243] *Id.* at 201.

[244] *Id.* at 202 (internal quotations and citation omitted).

[245] *See id.* at 201.

[246] *See* EPA Fact Sheet: Overview of the Clean Power Plan (CPP is a "historic and important step in reducing carbon pollution from power plants" that generated 4.3 million public comments) (available at www.epa.gov/cleanpowerplan/fact-sheet-overview-clean-power-plan) (last accessed Dec. 2, 2016).

the CPP nearly 17 months and 3 months, respectively, before it published the Final Rule at issue here.[247]

A recent—and strikingly similar—example demonstrates the critical importance of public comments in this situation. In virtually identical circumstances, the public was given the opportunity to comment on EPA's analysis of the CPP's impacts in the recent Cross-State Air Pollution Rule Update. EPA decided to drop the CPP analysis altogether after acknowledging that commenters were correct that the analysis was performed inappropriately.[248]

If given that opportunity here, the industry would not only have addressed errors in EPA's analysis, it also would have demonstrated to EPA that the Final Rule's deadlines should be synchronized with the CPP's, to avoid unnecessary waste of resources and compliance costs. As issued, the Rule specifies that the new limits become applicable "as soon as possible."[249]

Although permitting authorities have discretion to consider the CPP in deciding what constitutes "as soon as possible" for a given facility,[250] the Final Rule requires application of the new limits "no later than" December 31, 2023.

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[247] *See* 79 Fed. Reg. at 34,830 (June 18, 2014); 80 Fed. Reg. 64,662, 64,941 (Oct. 23, 2015) (noting finalization date of August 3, 2015).

[248] 81 Fed. Reg. 74,504, 74,529 (Oct. 26, 2016) ("We agree that the CPP should not be included in the base case modeling for this rule.").

[249] *See, e.g.*, 80 Fed. Reg. at 67,894-95 (to be codified at 40 C.F.R. §423.13(g)(1)(i)) (requiring compliance with the new FGD wastewater limits "as soon as possible beginning November 1, 2018, but no later than December 31, 2023").

[250] *See id.* at 67,894 (to be codified at 40 C.F.R. §423.11(t)(2)(ii)).

Consequently, the Rule's outer deadline of 2023 is inconsistent with the CPP's requirements to achieve greenhouse gas performance rates between 2022 and 2030.[251] Competing deadlines will necessarily have an impact on EPA's analysis of the respective costs of the rules—and, as noted earlier, cost is a statutory factor EPA is required to consider.

Without the benefit of comments on the impact of the CPP on the proposed ELG rule, EPA did not fully consider the ways in which the Final Rule's deadlines would lead to unanticipated consequences. And, the failure to solicit comments on this point has deprived the Court of the opportunity to evaluate the reasonableness of EPA's conclusions.[252]

In conclusion, Industry Petitioners have indicated with "reasonable specificity" what information EPA withheld from public comment "and how [they] might have responded if given the opportunity."[253] EPA's consideration of the CPP, as well as the Agency's internal analyses of the impacts on the Final Rule, is significant, "newly-considered data" in the Agency's possession that required it to

[251] 80 Fed. Reg. at 64,664.

[252] *See Gen. Tel. Co. of the Sw. v. United States*, 449 F.2d 846, 862 (5th Cir. 1971) (quoting *Automotive Parts & Accessories Ass'n v. Boyd*, 407 F.2d 330, 338 (D.C. Cir. 1968)) (responses to comments enable court "to see what major issues of policy were ventilated…and why the agency reacted to them as it did").

[253] *Chem. Mfrs.*, 870 F.2d at 202 (internal citation omitted).

"again publish notice and invite additional comments."[254] The APA requires vacatur where the agency's error infects the entire rule.[255]

V. The Gasification Wastewater Limits Are Arbitrary and Capricious

The absence of any data regarding Crystallizer Effluent at IGCC facilities, and EPA's failure to explain how it could set the GWW limits without those data, undermines the GWW limits themselves and EPA's cost analysis of those limits. EPA has not explained why VCE Effluent-based GWW limits are achievable or how it was able to reach that conclusion without any Crystallizer Effluent data from an IGCC facility. Given that Duke Energy's Edwardsport facility will combine VCE and Crystallizer Effluent for additional treatment before discharge, and that there is insufficient data in the record regarding the performance of Edwardsport's GWW treatment system to know whether the Edwardsport facility can comply with the GWW limits, EPA's assumption that there would be no capital costs of compliance due to the GWW limits is arbitrary and capricious.

[254] *Id.* at 201. Notably, EPA twice re-opened the public comment period for the CPP when new information became available. *See* 79 Fed. Reg. 64,543 (Oct. 30, 2014); 79 Fed. Reg. 67,406 (Nov. 13, 2014). *See also Gerber v. Norton*, 294 F.3d 173, 184 (D.C. Cir. 2002) (appellants "presented enough to show that on remand they can mount a credible challenge…and were thus prejudiced by the absence of an opportunity to do so before….").

[255] *Chem. Mfrs.*, 870 at 200.

A. When Evaluating Two-Step Treatment for FGD Wastewater, EPA Concluded It Could Not Set Effluent Limits Based Solely on VCE Effluent But Did the Exact Opposite for Gasification Wastewater Without Explanation or Basis in the Record

In the Final Rule, EPA evaluated the ability of Two-Step Treatment to treat two types of wastewater—FGDW and GWW—but adopted starkly different approaches for setting BAT limits based on that technology. For FGDW, EPA explicitly stated the pollutant concentrations in Crystallizer Effluent are greater than the pollutant concentrations in VCE Effluent.[256] It also recognized the possibility that a facility might combine the two streams prior to discharge and concluded:[257]

> *Setting the limitations* [based] *on the higher concentration stream* [Crystallizer Effluent] *is necessary to ensure plants … can meet the limitations*, regardless of whether they sample the effluent streams separately or as a combined stream.

For GWW, EPA discarded the only available data regarding Crystallizer Effluent because the Agency concluded the data reflected an ongoing malfunction of Polk's crystallizer.[258] But, in spite of EPA's understanding that Crystallizer Effluent has a higher pollutant concentration than VCE Effluent—as well as the Agency's statement that effluent limits for Two-Step Treatment needed to be based on the "higher concentration stream"—EPA did not go back to Polk to obtain

[256] Index.12840.13-25.

[257] *Id.* at 13-25–13-26 (emphasis added).

[258] *Id.* at 13-27.

additional data regarding Polk's Crystallizer Effluent after the malfunction was resolved. Instead, and without explanation, EPA simply set the GWW limits based on the pollutant concentration of VCE Effluent—the *lower* concentration stream.[259]

In doing so, EPA has run afoul of its obligation to provide a reasoned explanation in the record for treating similarly situated matters differently.[260] The record contains no evidentiary basis to conclude the chemical content of Crystallizer Effluent is lower than the content of VCE Effluent at IGCC Facilities, and EPA has provided no explanation—even a purely theoretical one—as to why this would be the case.[261] Nor has EPA explained why it believes the GWW limits (unlike FGDW) do not need to be based on the "higher concentration stream" or why IGCC facilities will be able to reliably meet the GWW limits (based on VCE Effluent) when the Agency determined this was not possible with respect to FGDW. The Court should vacate and remand the GWW limits to EPA to explain

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[259] *Id.*

[260] *See Lilliputian Sys., Inc. v. PHMSA*, 741 F.3d 1309, 1313-14 (D.C. Cir. 2014) (remanding because agency failed to provide "reasoned explanation and substantial evidence in the record" justifying disparate treatment of products regulated by final rule); *Costle*, 629 F.2d at 133 (remanding because agency failed to explain basis for its disparate treatment of dredged and nondredged waste).

[261] *See Lilliputian Sys.*, 741 F.3d at 1313-14 (noting record demonstrated similar safety hazards existed from articles subject to air transport ban and articles that were not and that agency failed to articulate how or why it chose to treat them differently); *Costle*, 629 F.2d at 135 ("In short, the record is devoid of any statement, concise and general or otherwise, of the basis for the choices made.").

the basis for its disparate treatment of GWW and FGDW and how EPA was able to proceed in this manner without any data in the record regarding the chemical content of Crystallizer Effluent at IGCC Facilities.

B. The Central Premises Behind EPA's Cost Analysis for the Gasification Wastewater Limits Are Erroneous

In the Final TDD, EPA stated that all three IGCC facilities in existence during the agency's development of the GWW limits already used the treatment technology it selected as BAT and, on that basis, asserted there would be no capital costs of compliance associated with the final GWW limits.[262] This assertion ignores the effect of combining VCE and Crystallizer Effluent into a single stream, *i.e.*, that the concentration of pollutants in the combined stream will be higher than the concentration of pollutants in the VCE Effluent alone as well as EPA's own conclusion (regarding FGDW) that Crystallizer Effluent, if kept as a separate stream, will have a higher pollutant concentration than VCE Effluent.[263]

Contrary to EPA's unsupported assertion, any facility employing Two-Step Treatment before discharging GWW *will* incur capital costs to comply with the GWW limits because, based on the data and analysis in the record: (i) a combination of VCE and Crystallizer Effluent will not be able to reliably meet effluent limits based on the lower pollutant concentration of VCE Effluent; and

[262] Index.12840.9-7.

[263] *Id.* at 13-25–13-26.

(ii) Crystallizer Effluent, if handled separately, will have a higher pollutant concentration that exceeds limits based on the cleaner VCE Effluent. Thus, in either scenario, a facility would need to modify its wastewater treatment process by: (i) installing additional treatment for separate Crystallizer Effluent streams or to counter the effects of combining the streams, (ii) modifying the system to keep the streams separate, and/or (iii) eliminating discharges of Crystallizer Effluent entirely. Each alternative would necessarily involve a capital expense and would produce additional ongoing compliance costs as well. In other words, facilities like Polk or Duke Energy's Edwardsport plant will—as a matter of logic—incur significant compliance costs due to the GWW limits that EPA's cost analysis did not consider.[264]

As such, with respect to GWW, EPA has failed to satisfy its obligation to make a "serious, careful, and comprehensive study of the costs which compliance will impose on the industry."[265] The Court should vacate and remand the rule to EPA to correct its cost analysis for GWW, including the development of additional data regarding the actual performance of Edwardsport's GWW treatment system. EPA will then be in a position to make a reasoned, data-based analysis of whether

[264] NPDES Permit No. IN0002780, Duke Energy Indiana, Inc. – Edwardsport, Index.123.132 (explaining Edwardsport would recombine both streams for additional treatment via reverse osmosis before discharge).

[265] *Am. Petroleum Inst.*, 661 F.2d at 355 (internal citation omitted).

the GWW limits will produce capital compliance costs at Edwardsport and whether to proceed in light of those costs.[266]

CONCLUSION

For the reasons above, Industry Petitioners request that the Court vacate the Final Rule in its entirety. In the alternative, the Court should vacate the FGDW limits as applied to plants burning subbituminous or lignite coals, and vacate the GWW limits.

[266] *See id.* at 355-57; *Weyerhaeuser Co. v. Costle*, 590 F.2d 1011, 1030-31 (D.C. Cir. 1978) (refusing to consider post hoc agency analysis suggesting erroneous assumptions included in cost analysis did not affect substance of final rule).

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CERTIFICATE OF SERVICE

I certify that on December 5, 2016, a true and correct copy of the foregoing was filed through the Court's ECF system, and thereby served on all counsel of record in the consolidated cases.

/s/ Harry M. Johnson, III
Harry M. Johnson, III
Counsel for UWAG, SWEPCO, and Ameren

CERTIFICATE OF COMPLIANCE

Certificate of Compliance With Type-Volume Limitation, Typeface Requirements, and Type Style Requirements

I certify that the foregoing Industry Petitioners' Opening Brief filed through the Court's ECF system, is an exact copy of the paper document, 5th Cir. R. 25.2.1, does not contain any personal identifiers requiring redaction, 5th Cir. R. 25.2.13, and has been scanned for viruses with the most recent version of a commercial virus scanning program and is free of viruses.

I further certify that:

1. this brief complies with the type-volume limitation of this Court's Order dated Sept. 28, 2016, because this brief contains 17,567 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii); and

2. this brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type style requirements of Fed. R. App. P. 32(a)(6) because this brief has been prepared in a proportionally spaced typeface using Microsoft Word in Times New Roman 14-pt font.

Date: December 5, 2016

/s/ Harry M. Johnson, III
Counsel for Petitioner/Intervenor UWAG and Petitioners SWEPCO and Ameren

General Information

Court	US Court of Appeals for the Fifth Circuit; US Court of Appeals for the Fifth Circuit
Docket Number	15-60821

ATTACHMENT G

PREPUBLICATION OF FEDERAL REGISTER NOTICE

STAY OF ELG COMPLIANCE DEADLINES

6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 423

[EPA-HQ-OW-2009-0819]

RIN 2040-AF14

Stay of Certain Compliance Deadlines for the Final Rule Entitled "Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category" Published by the Environmental Protection Agency on November 3, 2015.

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice; delay of compliance deadlines.

SUMMARY: By a letter dated April 12, 2017, the Administrator announced the EPA decision to reconsider the final rule that amends the effluent limitations guidelines and standards for the steam electric point source category under the Clean Water Act ("CWA"), published in the **Federal Register** on November 3, 2015. These regulations have been challenged in the U.S. Court of Appeals for the Fifth Circuit, *Southwestern Electric Power Co., et al. v. EPA*, No. 15-60821. The earliest compliance date for the new, and more stringent, best available technology economically achievable ("BAT") effluent limitations and pretreatment standards is November 1, 2018, for each of the following wastestreams: fly ash transport water, bottom ash transport water, flue gas desulfurization ("FGD") wastewater, flue gas mercury control wastewater, and gasification wastewater. These dates have not yet passed and they are within the meaning of the term "effective date" as that term is used in Section 705 of the Administrative Procedure Act ("APA"). Thus, by this action, the EPA is administratively staying and delaying these compliance dates pending judicial review. During this reconsideration, EPA will conduct notice and comment rulemaking with respect to staying the effective dates and/or the compliance dates

of the Rule.

DATES: The compliance dates of the Rule specified at 40 CFR §§ 423.11(t), 423.13(g)(1)(i), 423.13(h)(1)(i), 423.13(i)(1)(i), 423.13(j)(1)(i), 423.13(k)(1)(i) and 40 CFR §§ 423.16(e), 423.16(f) 423.16(g) 423.16(h) 423.16(i), published at 80 FR 67838 (Nov. 3, 2015), are stayed pending judicial review.

ADDRESSES: EPA has established a docket for the Rule amending 40 CFR part 423 under Docket ID No. EPA-HQ -OW-2009-0819. All documents in the docket are listed on the *http://www.regulations.gov* web site.

FOR FURTHER INFORMATION CONTACT: For technical information, contact Ronald Jordan, United States Environmental Protection Agency, Engineering and Analysis Division; telephone number: (202) 564-1003; email address: jordan.ronald@epa.gov. For information related to NPDES permitting of these facilities, contact Sean Ramach at (202) 564-2865, email address: ramash.sean@epa.gov.

Electronic copies of this document and related materials are available on EPA's website at https://www.epa.gov/eg/steam-electric-power-generating-effluent-guidelines-2015-final-rule. Copies of this final rule are also available at http://www.regulations.gov.

SUPPLEMENTARY INFORMATION:

I. Background

On November 3, 2015, the EPA issued a final rule amending 40 CFR part 423, the effluent limitations guidelines and standards for the steam electric power generating point source category, under Sections 301, 304, 306, 307, 308, 402, and 501 of the CWA (33 U.S.C. §§ 1311, 1314, 1316, 1317, 1318, 1342, and 1361). The amendments addressed and contained limitations and standards on various wastestreams at steam electric power plants: fly ash transport water, bottom ash transport water, flue gas mercury control wastewater, FGD wastewater, gasification

wastewater, and combustion residual leachate. Collectively, this rulemaking is known as the "Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category" ("Rule"). For further information on the Rule, see 80 FR 67838 (Nov. 3, 2015).

EPA received seven petitions for review of the Rule. The United States Judicial Panel on Multi-District Litigation issued an order on December 8, 2015, consolidating all of the petitions in the U.S. Court of Appeals for the Fifth Circuit. Petitioners have filed their briefs, and EPA's brief is currently due by May 4, 2017.

In a letter dated March 24, 2017, the Utility Water Act Group ("UWAG")[1] submitted a petition for reconsideration of the Rule and requested that EPA suspend the Rule's approaching deadlines. In a letter dated April 5, 2017, the Small Business Administration Office of Advocacy also petitioned the EPA for reconsideration of the Rule. The petitions raise wide-ranging and sweeping objections to the Rule, some of which overlap with the claims in the ongoing litigation challenging the Rule in the U.S. Court of Appeals for the Fifth Circuit.[2] The UWAG petition also points to new data, claiming that plants burning subbituminous and bituminous coal cannot comply with the Rule's limitations and standards for FGD wastewater through use of EPA's model technology. The UWAG petition says that a pilot study has been conducted at the Pleasant Prairie plant that supports petitioner's request, and that a final report on the pilot study "is likely to [be] publish[ed] . . . within the next few weeks." Moreover, the petitions say that new data have been collected by American Electric Power that "illustrate[] that variability in wastewater management can also impact performance at bituminous plants such that additional technologies

[1] UWAG is a voluntary, ad hoc, unincorporated group of 163 individual energy companies and three national trade associations of energy companies: Edison Electric Institute, the National Rural Electric Cooperative Association, and the American Public Power Association.

[2] A copy of each petition is included in the docket for this rule, Docket ID No. EPA-HQ-OW-2009-0819.

beyond EPA's model technology will be needed to achieve the limits." EPA wishes to review these data.

In an April 12, 2017 letter to those who submitted the reconsideration petitions, the Administrator announced his decision to reconsider the Rule (a copy of this letter is included in the docket for the Rule). As explained in that letter, after considering the objections raised in the reconsideration petitions, the Administrator determined that it is appropriate and in the public interest to reconsider the Rule. Under Section 705 of the APA, 5 U.S.C. § 705, and when justice so requires, an Agency may postpone the effective date of action taken by it pending judicial review. The compliance dates for certain limitations and standards in the Rule do not occur until November 1, 2018, and in the case of the Rule those dates are within the meaning of the term "effective date" as that term is used in Section 705 of the APA. In light of the capital expenditures that facilities incurring costs under the Rule will need to undertake in order to meet the compliance deadlines for the new, more stringent limitations and standards in the Rule—which are as early as November 1, 2018, for direct dischargers and by November 1, 2018, for indirect dischargers—the Agency finds that justice requires it to stay the compliance dates of the Rule that have not yet passed, pending judicial review. *See* 80 FR 67838, 67863-67868 (Nov. 3, 2015) (discussion of costs of the Rule). This will preserve the regulatory status quo with respect to wastestreams subject to the Rule's new, and more stringent, limitations and standards, while the litigation is pending and the reconsideration is underway. While EPA is not making any concession of error with respect to the rulemaking, the far-ranging issues contained in the reconsideration petitions warrant careful and considerate review of the Rule. EPA will also file a motion requesting the Fifth Circuit to hold the litigation challenging the Rule in abeyance while the Agency reconsiders the Rule, after which it will inform the Court of any portions of the Rule

for which it seeks a remand so that it can conduct further rulemaking. Separately, EPA intends to conduct notice and comment rulemaking to stay the compliance deadlines for the new, more stringent limitations and standards in the Rule.

II. Issuance of a Stay and Delay of Compliance Dates

The EPA hereby issues an administrative stay of the compliance dates that have not yet passed contained in the Effluent Guidelines and Standards for the Steam Electric Power Generating Point Source Category under Section 705 of the APA. The compliance dates of the Rule specified at 40 CFR §§ 423.11(t), 423.13(g)(1)(i), 423.13(h)(1)(i), 423.13(i)(1)(i), 423.13(j)(1)(i), and 423.13(k)(1)(i), and 40 CFR §§ 423.16(e), 423.16(f) 423.16(g) 423.16(h) 423.16(i), published at 80 FR 67838 (Nov. 3, 2015), are stayed pending judicial review.

List of Subjects in 40 CFR Part 68

Environmental protection, Electric power generation, Power plants, Waste treatment and disposal, Water pollution control.

Dated: APR 12 2017

E. Scott Pruitt,

Administrator.