**TESTIMONY OF DOUGLAS F ESAMANN**
**PRESIDENT, DUKE ENERGY INDIANA, INC.**
**CAUSE NO. 44217 BEFORE THE**
**INDIANA UTILITY REGULATORY COMMISSION**

## I. INTRODUCTION

**Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

A. My name is Douglas F Esamann, and my business address is 1000 East Main Street, Plainfield, Indiana.

**Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

A. I am President of Duke Energy Indiana, Inc. ("Duke Energy Indiana" or "Company"), an indirect subsidiary of Duke Energy Corp. ("Duke Energy").

**Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.**

A. I am a graduate of Indiana University with a Bachelor of Science Degree in Accounting. I joined Public Service Company of Indiana, Inc. ("PSI") in 1979 and have held various positions with PSI or its affiliated companies in the Accounting, Tax, and Corporate Development areas. From March 1999 until October 2001, I was Vice President and Chief Financial Officer of Cinergy Corp.'s ("Cinergy's") Commercial Business Unit. I was named President of PSI Energy in October 2001. In 2004, I was named Senior Vice President of Energy Portfolio Strategy and Management for Cinergy. Immediately following the merger between Duke Energy and Cinergy in April 2006, I served as Group Vice President of Strategy and Planning for Duke Energy's U.S. Franchised Electric and Gas organization. In July 2009, I was named Senior Vice President of Corporate Strategy for Duke Energy until

assuming my current position of President of Duke Energy Indiana in November 2010.

**Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

A. The purpose of my testimony is to: (1) provide an overview of the relief requested by Duke Energy Indiana in this proceeding; (2) explain how the Company's emission profile has changed over time through our environmental compliance efforts; (3) discuss the potential challenges involved with our proposed environmental compliance projects; and (4) describe the overall policy benefits that inure to customers and the State of Indiana through our investment in environmental compliance projects now and going forward.

The testimony of Michael Geers (Petitioner's Exhibit B) explains the federal environmental requirements that are the impetus for the Company's current and planned construction program. The testimony of Joseph A. Miller, Jr. (Petitioner's Exhibit C) addresses in detail the Company's proposed environmental compliance projects, including an explanation of Duke Energy Indiana's process for determining the most appropriate and robust compliance plan under the various environmental requirements. The testimony of David Renner (Petitioner's Exhibit D) supports the Company's current cost estimate and project schedule. Mr. Gary Mouton of Burns & McDonnell ("B&M") (Petitioner's Exhibit E) provides additional support for Duke Energy Indiana's cost estimate and discusses B&M's role as a third party reviewer of the estimate. The testimony of Robert McMurry (Petitioner's Exhibit F) explains the Company's Integrated Resource Planning ("IRP") analyses performed as part of the development of the proposed environmental compliance plan and why the proposed

plan is the most economic for customers under a range of scenarios. The testimony of Jose Merino (Petitioner's Exhibit G) describes Duke Energy Indiana's load forecast and its economic assumptions. Robert W. Fleck of Wood Mackenzie (Petitioner's Exhibit H) provides support for Duke Energy's 2012 Fundamental Forecast, which serves as an input in the Engineering Screening Model and IRP analyses performed for this proceeding. Finally, the testimony of Kent Freeman (Petitioner's Exhibit I) explains in detail the proposed cost recovery mechanisms for the environmental compliance plan costs, how the requested ratemaking and accounting treatment will be coordinated with future rate cases, and how the rate relief requested in this proceeding will impact our retail customers.

## II. RELIEF REQUESTED

**Q. PLEASE SUMMARIZE THE RELIEF THAT DUKE ENERGY INDIANA IS REQUESTING IN THIS PROCEEDING.**

A. Duke Energy Indiana is requesting that the Commission approve the Company's proposed Phase 2 plan[1] for complying with the pending environmental requirements, and provide ongoing reviews and approvals of our plan annually (or semi-annually as part of the Company's semi-annual Rider 71 and 62 filings). Related to this overall plan approval, we are requesting that the Commission approve Duke Energy Indiana's use of various pollution control equipment contained in our Phase 2 plan; approve Duke Energy Indiana's use of certain clean coal technology equipment; and approve the Company's use of accelerated depreciation for certain pollution control equipment. We are also requesting timely recovery of our compliance costs,

[1] The Company's Phase 1 environmental compliance plan was filed under consolidated Cause Nos. 42622 and 42718. The Commission's May 24, 2006 Order approved Duke Energy Indiana's Phase 1 environmental compliance plan as provided for under the settlement agreement reached in that proceeding.

specifically: assurance of capital cost recovery (up to approved cost estimates); authority to recover financing, depreciation, operation and maintenance ("O&M") costs on a timely basis via Duke Energy Indiana's existing Environmental Cost Recovery ("ECR") tracking mechanisms; authority to recover certain equipment testing costs via Duke Energy Indiana's ECR tracking mechanisms; and authority to recover our compliance plan development, engineering and pre-construction costs via Duke Energy Indiana's ECR tracking mechanisms.[2] Finally, part of our plan to comply with the latest proposed set of environmental regulations includes the planned retirement of Wabash River Units 2 through 5. We are also currently evaluating whether retirement or natural gas retrofit is the most economic option for Wabash River Unit 6.

## III. CURRENT ENVIRONMENTAL REGULATION LANDSCAPE

**Q. PLEASE DESCRIBE THE CURRENT ENVIRONMENTAL REGULATION LANDSCAPE FOR ELECTRIC UTILITIES.**

A. Electric utilities are among the most highly environmentally-regulated industries in the nation. The current environmental regulation regime applicable to electric utilities is a mixture of "command and control" and "cap and trade" regulatory approaches.

Until 1990, federal and state environmental regulations required companies to control emissions in a prescriptive manner, often mandating emissions limits or specifying certain pollution control technology on a unit-by-unit basis.

[2] The Commission's Order in Cause Nos. 42622 and 42718 granted the Company the authority to timely recover its Phase 2 plan development, engineering and pre-construction costs. Order at 26. Duke Energy Indiana is seeking approval to similarly recover its Phase 3 plan development, engineering and pre-construction costs in this proceeding.

In the 1990 Clean Air Act Amendments, however, Congress established a new market-based form of regulation, "cap and trade." Under the cap and trade approach, a nationwide maximum quantity of $SO_2$ to be emitted is set (the "cap," expressed in tons of emissions). The government then distributes or sells emission allowances, which essentially are permits to release a specified amount of pollutant per year, to companies based on a standardized allocation system and past emission performance history. Under this approach, individual companies have the option of reducing their emissions to (or below) the level of their allowances, or of purchasing surplus allowances from companies that have allowances available. Compliance decisions are driven largely by economics – i.e. the comparative cost-effectiveness of on-system compliance versus reliance on the emission allowance market. This facilitates the overall reduction of pollution to the cap at a lower overall cost to society than would be the case under a command and control approach.

The most recent environmental rule compelling our proposed Phase 2 compliance plan is the Utility Mercury and Air Toxics Standard ("MATS"). MATS signals a return to the "command and control" pollution control regime – a major shift from the cap and trade, market-based programs seen as part of the NOx SIP Call Rule, Clean Air Interstate Rule ("CAIR"), Cross State Air Pollution Rule ("CSAPR") or the MATS rule's predecessor, the Clean Air Mercury Rule ("CAMR"). The ultimate impact of this policy change on the industry remains to be seen, but we anticipate an increase in compliance costs since managing compliance at a system level through the use of emission reductions and emission allowances is off the table.

Duke Energy Indiana's only options for each unit are clear – lower emissions or shut it down.

While our compliance options under the MATS rule are severely limited, long-term environmental compliance planning and implementation remains extremely complex for electricity generators. Shifting compliance deadlines, potential appellate outcomes and Congressional actions, equipment and fuel uncertainties and the wide-ranging variety of pending and anticipated air, water and waste pollution control rulemakings continue to impact future planning considerations.

**Q. PLEASE BRIEFLY SUMMARIZE THE NEW EMISSION REDUCTION REQUIREMENTS DUKE ENERGY INDIANA IS FACING.**

A. On April 16, 2012, the EPA's MATS rule was finalized. Compliance with the MATS rule is the primary driver of our Phase 2 compliance plan. The MATS rule uses a command and control approach to regulate hazardous air pollutant emissions from new and existing coal- and oil-fired steam electric generating units with capacity of greater than 25 MW. The hazardous air pollutant emissions specifically limited by the MATS rule include mercury, acid gases (such as hydrogen chloride) and certain non-mercury metals (such as arsenic, chromium, nickel and selenium). The MATS rule was proposed by the EPA to replace the Court-vacated CAMR, which was originally issued by the EPA in March 2005. CAMR was a market-based cap and trade regulation aimed at reducing nationwide mercury emissions in two compliance phases (reduction to a 34 ton mercury emission cap by 2010 and a further reduction to a 15 ton mercury emission cap by 2018). For units using bituminous or sub

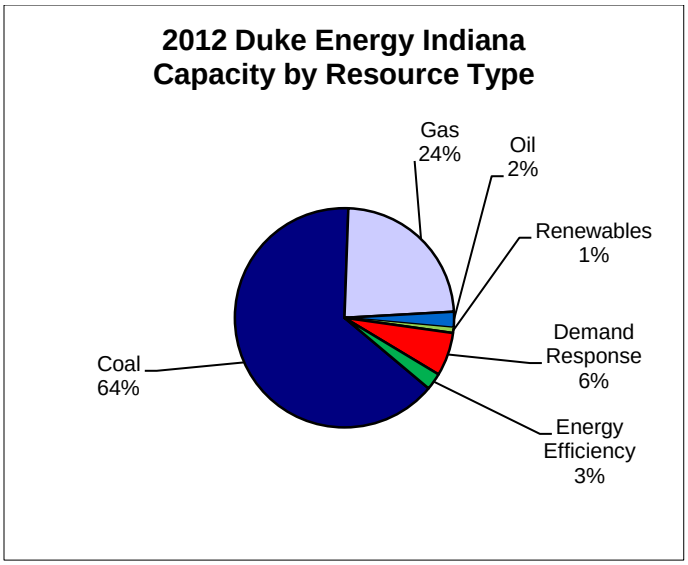
bituminous coal, the MATS rule now limits mercury emissions to 1.2 pounds of mercury emitted per trillion BTUs of heat input.

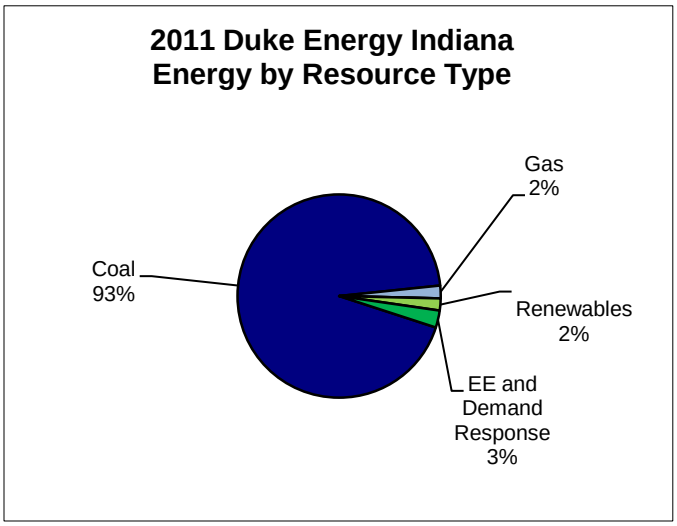
## IV. DUKE ENERGY INDIANA'S ENVIRONMENTAL PROFILE

**Q. PLEASE DESCRIBE DUKE ENERGY INDIANA'S CURRENT GENERATION PORTFOLIO.**

A. Duke Energy Indiana owns 12 generating stations, 60 individual generating units, with a total capacity of over 7,215 MWs.[3] The Company remains heavily reliant on coal-fired generation: 70% of our generating capability is coal-fired, with 26% natural gas-fired, 3% oil-fired, and less than 1% hydro-powered. Approximately 97% of the energy generated by Duke Energy Indiana's units in 2011 was produced from its coal-fired units.[4] As a result, the Company is Indiana's largest purchaser of coal – approximately 12.5 million tons annually, most from Indiana coal mines. The charts below show breakdowns of Duke Energy Indiana's 2012 capacity and 2011 energy by resource type, including the demand-side and renewable resources we rely on to meet our customers' requirements.

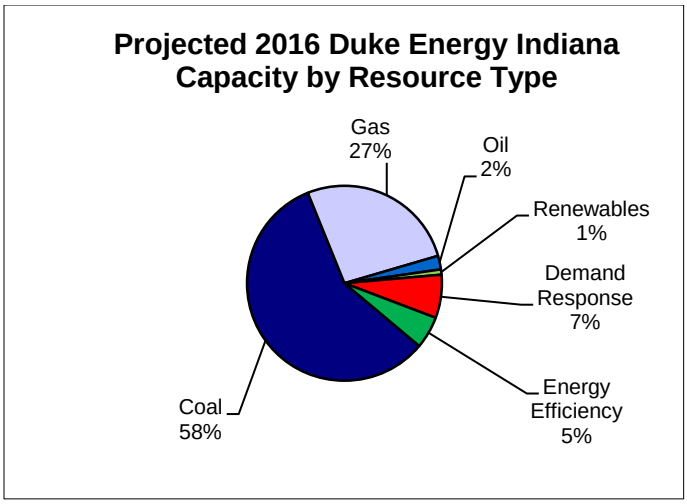
[3] Includes WVPA's and IMPA's ownership shares of Gibson Unit 5 and 100% of Henry County Station.
[4] When considering all resources, including EE and renewables, 93% was from coal-fired units.

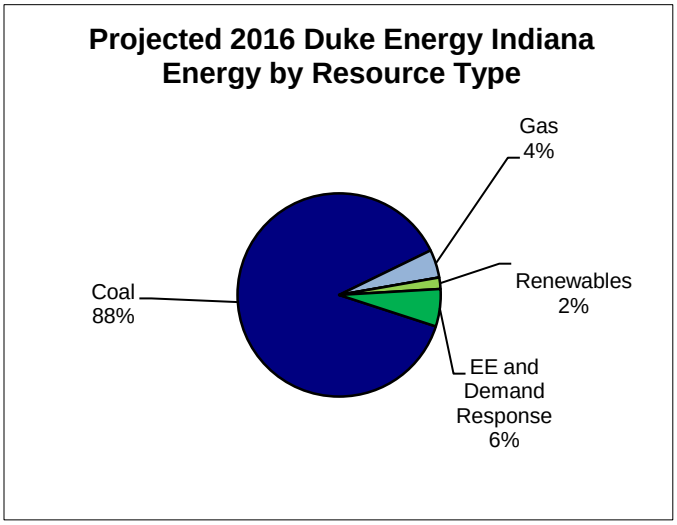



**Q. WILL DUKE ENERGY INDIANA'S RESOURCE MIX CHANGE AS A RESULT OF THE IMPLEMENTATION OF ITS PHASE 2 PLAN?**

A. Yes. Our portfolio will become less dependent on coal over time, even as soon as 2016, as shown by the diagrams below.




**Q. WHAT LEVELS OF $SO_2$, NOx AND MERCURY DOES DUKE ENERGY INDIANA CURRENTLY EMIT IN CONNECTION WITH ITS PRODUCTION OF ELECTRICITY?**

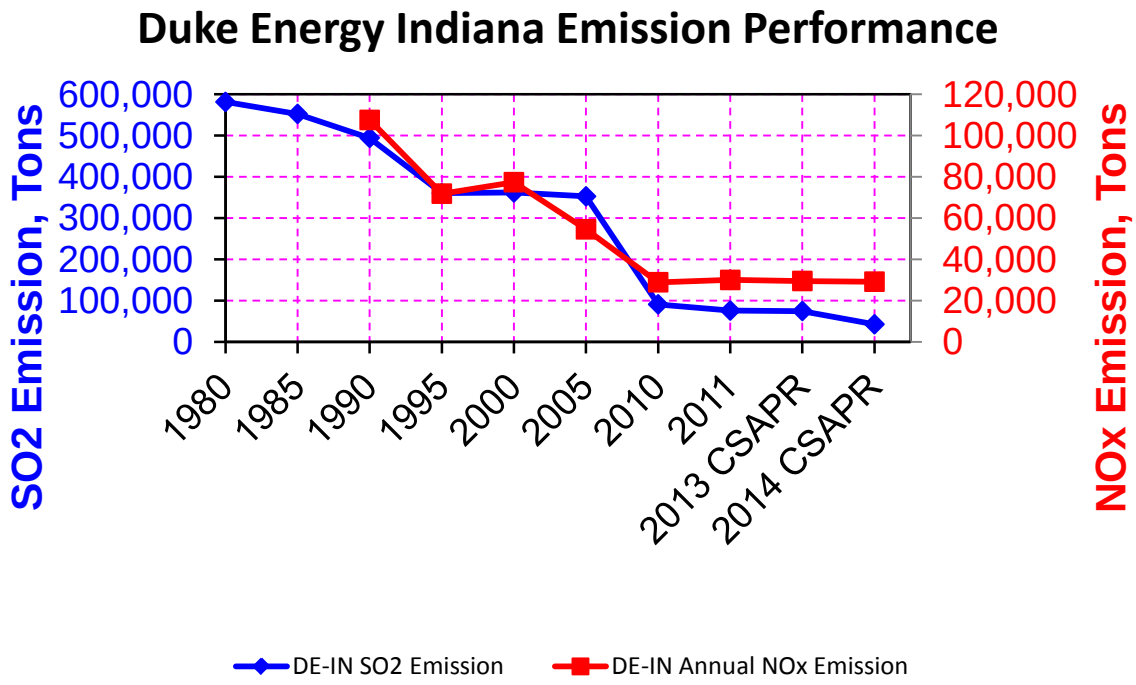
A. In 2011, Duke Energy Indiana emitted approximately 80,636 tons of $SO_2$, 31,489 tons of NOx, and 430.6 lbs. of mercury[5] annually as a result of producing electricity from its power plants (including all of Gibson 5).

**Q. HOW HAS DUKE ENERGY INDIANA'S EMISSION PROFILE CHANGED SINCE 1990?**

[5] The 2011 figures on mercury emissions are still being compiled. The 430.6 lb. figure is from 2010.

A. Duke Energy Indiana's emissions of $SO_2$ and NOx have decreased dramatically since 1990, even as customer demands and megawatt hours produced have increased. We have reduced $SO_2$ by over 84% (a 434,544 ton reduction from 515,180 tons emitted in 1990) and NOx by over 73% (an 83,861 ton reduction from 115,350 tons emitted in 1990).

The chart below illustrates the reductions in NOx and $SO_2$ emissions achieved on the Company's system from 1980 to today. The 2013 and 2014 figures represent the emission allocations granted to Duke Energy Indiana under CSAPR.




**Q. HOW HAS DUKE ENERGY INDIANA ACHIEVED THESE EMISSION REDUCTIONS?**

A. The Company's emission reductions have been achieved through the installation of pollution control equipment, the use of lower-sulfur fuel and increased fuel diversity in our generation portfolio. In the 1990s, Duke Energy Indiana invested over $500

million in pollution control equipment to reduce $SO_2$ and NOx emissions under the 1990 Clean Air Act Amendments. Between 2000 and 2005, the Company invested another $569 million in NOx control equipment – selective catalytic reduction equipment ("SCRs"), low-NOx burners and burner optimization systems – to further reduce NOx emissions in compliance with the federal and state NOx SIP Call requirements. Since 2005, Duke Energy Indiana has invested close to $1.1 billion to comply with the CAIR and CAMR rules and as part of a Consent Decree reached with the U.S. Department of Justice related to New Source Review claims. The Company's prior equipment investments are also required to comply with the MATS rule and CSAPR.

**Q. WHAT IS THE COMPANY'S VIEW OF THE LIKELY ENVIRONMENTAL REGULATION ANTICIPATED OVER THE NEXT FIVE YEARS?**

A. As discussed in more detail in the testimonies of Mr. Geers and Mr. Miller, the pressure on coal-fired generation will continue. In addition to requirements under the MATS, CSAPR, and National Ambient Air Quality Standards ("NAAQS") rules, the Company is also anticipating increasingly stringent water and waste limits – the Coal Combustion Residuals ("CCR") rule currently under consideration by the EPA and §316(b) rules on fish impingement and entrainment.

The Company continues to believe that carbon constraints will eventually be implemented by Congress. The EPA, with the backing of the U.S. Supreme Court in the *Massachusetts v. EPA* decision, has already launched its regulatory program. The Agency recently issued its proposed new source performance rule for greenhouse gas emissions, which will impact future power plants that, today, do not have a

Prevention of Significant Deterioration ("PSD") permit. We expect that EPA will also propose a greenhouse gas regulatory program for existing power plants, but we do not know when or how stringent that proposal will be. These regulations, even without congressional action, are potentially significant and thus, it remains reasonable to consider greenhouse gas constraints as part of the Company's 20-year resource planning process.

**Q. WHAT IS DUKE ENERGY INDIANA'S STRATEGY FOR THESE CURRENT AND PENDING ENVIRONMENTAL REGULATIONS?**

A. Duke Energy Indiana remains cognizant of the tension between the new requirements to spend capital and O&M dollars inherent in environmental compliance regimes and our customers' interest in the maintenance of safe and reliable service at reasonable rates. Pollution control investments (and the cost of replacement generation needed to cover retirements) are expensive and do not add productive capacity to the system (many add auxiliary loads or require derates to operate).

Duke Energy Indiana is proceeding under the assumption that increasingly stringent environmental regulations will be implemented over the next three to five years. We will continue to actively pursue more cost-effective options for compliance through legislative, judicial and administrative forums. As our Phase 2 environmental compliance testimony demonstrates, installation and operation of the proposed Phase 2 projects is the Company's most economic course of action (even taking these future regulations into account). Through Duke Energy Indiana's extensive testing and analysis process, we anticipate the Company's units retrofitted with additional environmental controls will be well positioned to comply with a wide

range of potential outcomes of final environmental rules ahead. Our plan also includes the retirement of Wabash River Units 2-5, the oldest and smallest coal-fired units on our system, because the retrofit of these units will not be economical. As Mr. Miller's testimony discusses, the Company is also continuing to assess the various long-term options for Wabash River Unit 6 and Gibson 5, including reviewing the potential for retrofitting Wabash River Unit 6 to run on natural gas.

Duke Energy Indiana also continues to examine whether additional conservation and renewable resources should be added to our portfolio. The Company is aggressively working towards compliance with the Commission's generic demand side management order through participation with the third party administrator for Core Programs and through its recently approved and implemented Core Plus Programs.

Renewable energy options are frequently reviewed by Duke Energy Indiana. Duke Energy currently purchases up to 100.5 MW of wind power from Indiana's first commercial wind farm, which is located in Benton County, Indiana. This 20-year agreement was the first significant, long-term purchase of wind power in Indiana. In addition, the use of customer-generated renewable energy continues to grow. During 2011, 50 new Net Metering customers were added, and Duke Energy Indiana currently has 157 total customers on that tariff, with a mix of wind and solar resources. Again, cost-effectiveness of these options is front of mind for me and for Duke Energy Indiana. We are committed to meeting our customers' needs for electricity, while in compliance with pending environmental regulations, in a safe and

reliable manner – as such, all reasonable, cost-effective options for meeting our obligation to serve are on the table.

**Q. WHY IS A DIVERSE PORTFOLIO OF GENERATION OPTIONS IMPORTANT TO DUKE ENERGY INDIANA?**

A. Low cost, reliable electricity results in part from our ability to utilize a variety of resource options – traditional baseload, intermediate and peaking generating plants, power purchases, renewable resources and demand-side resources – and a variety of fuels. Fuel diversity is an important component of reliable and affordable energy. Utilizing a diverse mix of fuels helps the Company to hedge against fuel price volatility. Indeed, Duke Energy Indiana has added over 1800 MWs of peaking and mid-merit natural gas-fired capacity over the last decade, which now gives us a total of 1904 MWs (26% of our capacity) in natural gas-fired plants. Moreover, our IRP projects the addition of more natural gas-fired plants in the coming years to meet our customers' needs.

## V. <u>DUKE ENERGY INDIANA'S PROPOSED PHASE 2 COMPLIANCE PLAN</u>

**Q. PLEASE SUMMARIZE THE PRIMARY COMPONENTS OF DUKE ENERGY INDIANA'S PROPOSED PHASE 2 COMPLIANCE PLAN.**

A. The primary features of Duke Energy Indiana's Phase 2 compliance plan are selective catalytic reduction systems ("SCRs") on Cayuga Units 1 and 2; dry sorbent injection ("DSI") systems on Cayuga Units 1 and 2 for $SO_3$ mitigation; activated carbon injection ("ACI") systems on Cayuga Units 1 and 2, all five Gibson Station units and Gallagher Units 2 and 4; and mercury re-emission chemical injection systems on Cayuga Units 1 and 2 and Gibson Units 1, 2, 3 and 5. These Phase 2 projects were

designed primarily to meet the requirements of the MATS rule and are targeted towards mercury reductions at these units (with the exception of the DSI systems at Cayuga, which are proposed for $SO_3$ mitigation). The charts below show the primary components of the Company's Phase 2 compliance plan and the preliminary Phase 3 compliance plan (the Company is not yet seeking approval of its Phase 3 plan):

**Duke Energy Indiana's Proposed Phase 2 Compliance Plan**

| Station | Compliance Plan | Estimated In-Service Date |
|---|---|---|
| **Cayuga Station** | Unit 1 – SCR, DSI, ACI, arsenic mitigation system, mercury re-emission chemical injection system | December 2014 |
| | Unit 2 – SCR, DSI, ACI, arsenic mitigation system, mercury re-emission chemical injection system | June 2015 |
| **Gallagher Station** | Unit 2 – ACI | April 2014 |
| | Unit 4 – ACI | April 2014 |
| **Gibson Station** | Unit 1 – ACI, mercury re-emission chemical injection system | November 2014 |
| | Unit 2 – ACI, mercury re-emission chemical injection system | December 2014 |
| | Unit 3 – ACI, mercury re-emission chemical injection system | December 2014 |
| | Unit 4 – ACI | April 2014 |
| | Unit 5 – ACI, mercury re-emission chemical injection system | May 2015 |
| **Wabash River Station** | Unit 2 – retirement | April 2015 |
| | Unit 3 – retirement | April 2015 |
| | Unit 4 – retirement | April 2015 |
| | Unit 5 – retirement | April 2015 |
| | Unit 6 –retirement or natural gas retrofit (evaluation underway) | April 2015 |

**Duke Energy Indiana's Preliminary Phase 3 Compliance Plan**

| | Compliance Plan | Estimated In-Service Date |
|---|---|---|
| **Air Emission-Related Projects** | Utility MATS Emission Monitoring Program | 2014-2015 |
| | Gibson Units 1-3 Precipitator Enhancements | 2014-2016 |
| | Gibson Unit 5 FGD Replacement[6] | 2017-2018 |
| | Cayuga Units 1-2 and Gibson 1-4 FGD Enhancements | 2014-2017 |
| | Gibson Units 1-5 SCR Upgrades | 2018-2020 |
| | Gallagher Units 2 and 4 SNCR | 2018-2020 |
| **Water Management-Related Projects** | 316(b) Studies | 2013-2018 |
| | 316(b) Impingement Implementation | 2016-2020 |
| | Station Wastewater Treatment Plants | 2016-2017 |
| **Waste Management-Related Projects** | Cayuga Units 1-2, Gibson Units 1-5 and Gallagher Units 2 and 4 Dry Bottom Ash Collection | 2016-2017 |
| | Wet Ash Pond Closure | 2020-2021 |

The testimony of Mr. Miller provides more detail on our proposed Phase 2 compliance plan, as well as on the testing and analysis that has gone into what we know today about our preliminary Phase 3 compliance plan (for which we are not seeking Commission approval at this time). Duke Energy Indiana is showing its

[6] As explained by the testimony of Mr. Miller, this should be viewed as a placeholder for the potential range of options for Gibson Unit 5 – either refurbishment of the existing FGD, a replacement FGD or retirement of Gibson Unit 5 and replacement capacity.

current view of upcoming compliance needs for its units to provide the Commission and stakeholders insight into the Company's testing program and also into the potential investments required by the current and future environmental regulations.

**Q. WHEN DOES THE COMPANY ANTICIPATE THAT IT WILL NEED TO RETURN TO THE COMMISSION TO SEEK APPROVAL OF ALL OR SOME OF ITS PHASE 3 COMPLIANCE PLAN?**

A. We tentatively plan to file our Phase 3 compliance plan by the spring of 2013. This filing timeframe would likely support a schedule in time for us to complete our equipment installations by the MATS rule compliance date.

It is possible that a potential timing issue could present itself related to one of the Gibson units that would need to undergo an outage for the potential precipitator enhancements in the spring of 2014. The Company would certainly address any potential clean coal technology certificate timing issues in our Phase 3 filing, and explain in detail the Company's desired schedule to ensure compliance.

**Q. SOME OF THE PRELIMINARY PHASE 3 PROJECTS APPEAR DESIGNED FOR MATS COMPLIANCE. PLEASE EXPLAIN WHY THE COMPANY HAS NOT OFFERED ITS COMPLETE MATS COMPLIANCE PLAN IN THIS PROCEEDING.**

A. Duke Energy Indiana decided to take some additional time in the development of some components of its MATS compliance plan because there were some substantial and important changes to the final rule versus the proposed rule, as detailed by Messrs. Miller and Geers. Most importantly, as a result of the changes to the final MATS rule, the Company was able to avoid the installation of several potential

baghouse projects. Now that the Company does not need to install the baghouse projects, there is a need to develop scope and cost estimates for precipitator upgrades, which are needed to ensure adequate performance subsequent to the addition of the ACI systems. Duke Energy Indiana is also continuing to assess the monitoring strategy for our units given that the final MATS rule provides for multiple options for demonstrating compliance with the emission limits.

The Company felt it was necessary to present its Phase 2 projects now because we need to start construction work on the Cayuga SCR projects this summer in order to have them in service by the MATS rule compliance date. The two Cayuga SCRs are the critical path projects in our Phase 2 Plan.

**Q. IN YOUR JUDGMENT, IS DUKE ENERGY INDIANA'S PROPOSED PHASE 2 PLAN DESIGNED TO COST-EFFECTIVELY ENSURE COMPLIANCE WITH ENVIRONMENTAL REGULATIONS?**

A. Yes, it is. As Messrs. Miller and McMurry explain, Duke Energy Indiana subjected our proposed Phase 2 plan to a number of different sensitivity analyses that could have impacted the plan results. These alternative sensitivities included: environmental & generation capital cost sensitivities; various fuel and market price sensitivities; a no carbon constraint sensitivity; and various load forecast sensitivities. Duke Energy Indiana's Phase 2 plan performed well in all of the analyses leading us to conclude that our proposed Phase 2 plan was a robust and cost-effective way to ensure compliance with environmental regulations.

**Q. ARE THERE VARIABLES THAT COULD CHANGE ANY ASPECT OF THE COMPANY'S PROPOSED PHASE 2 PLAN?**

A. The main area of risk in Duke Energy Indiana's Phase 2 plan is the potential for the MATS rule to be adjusted on appeal to more closely resemble the original proposed MACT standard. As Mr. Miller explains, the final MATS rule has allowed the Company to cancel its plans for baghouse projects and proceed with advancing the Cayuga SCRs ahead of when they were previously projected to be needed (approximately 2018 for compliance with Ozone NAAQS requirements). Another area of uncertainty that could impact the Company's Phase 2 plan relates to the implementation of the MATS rule's work practice standards. As discussed more fully in Mr. Miller's testimony, depending on how the MATS rule's work practice standards are ultimately implemented, there is a potential that the ACI systems for Gallagher Units 2 and 4 could be cancelled. However, based on what we know today, it is prudent to plan for the ACI systems for Gallagher Units 2 and 4 to comply with the MATS rule, but also to include a potential "off ramp" prior to expending significant dollars for these systems.

**Q. WHAT ARE THE ESTIMATED CAPITAL COSTS OF DUKE ENERGY INDIANA'S PHASE 2 COMPLIANCE PLAN?**

A. The Company's Phase 2 compliance plan is estimated to require a capital investment of approximately $450 million, plus actual accrued AFUDC, estimated to be $19 million.[7]

## VI. TIMELY RECOVERY OF COMPLIANCE COSTS

**Q. PLEASE DESCRIBE THE RATE RELIEF SOUGHT BY DUKE ENERGY INDIANA IN THIS PROCEEDING.**

[7] This AFUDC estimate assumes regular 6 month CWIP update proceedings and IURC orders. The total amount of AFUDC on the Project without consideration of CWIP ratemaking would be approximately $33 million. See testimony of Mr. Freeman for more details.

A. Duke Energy Indiana is requesting authority to recover its Phase 2 compliance plan costs on a timely basis. Specifically, the Company is proposing to recover its financing costs, depreciation costs (using 20 year accelerated depreciation), and associated O&M costs via Duke Energy Indiana's existing Environmental Cost Recovery cost tracking mechanisms (Standard Contract Riders No. 62 and 71). We are also seeking to recover the Phase 3 plan development, engineering and pre-construction costs via Rider 71.[8]

**Q. MR. ESAMANN, IN YOUR VIEW, WHY SHOULD THE COMMISSION AUTHORIZE TIMELY RECOVERY OF ENVIRONMENTAL COMPLIANCE COSTS?**

A. Duke Energy Indiana has experienced, and will likely continue to experience, significant environmental compliance costs. As described by Mr. Miller, the Company is forecasting (but not seeking recovery of) additional future investments of approximately $945 million (without AFUDC). Timely recovery of these costs is important from a credit quality perspective and is reasonable from a ratemaking policy perspective.

Timely cost recovery of costs is important from a credit quality perspective because it is crucial to the Company and its customers that Duke Energy Indiana be able to finance these needed capital investments on the best terms possible. An order from this Commission authorizing timely recovery of Duke Energy Indiana's environmental compliance costs will support the Company's access to capital markets on a timely and economic basis, by signaling to the financial community that this

[8] As previously noted, the Commission's order in Cause Nos. 42622 and 42718 approved timely recovery of Phase 2 development, engineering and pre-construction costs. Order at 26.

Commission continues to believe it is appropriate for a utility to have the opportunity to recover its prudently-incurred costs of providing reliable utility service in a regulated environment.

Timely cost recovery is reasonable from a ratemaking policy perspective because these costs have been and will be incurred in order to be able to continue to meet our obligation to provide adequate and reliable electric utility service to retail customers in the State of Indiana. If we do not make the necessary investments to comply with emission reduction requirements, our generating units would be shut down. Perhaps stating the obvious, having generating units available to meet customer loads is a critical component of meeting this obligation to customers. One of the basic tenets of regulation is that a utility should be provided with the opportunity to recover from customers its prudently-incurred costs of providing utility service. This basic ratemaking principle is consistent with the idea that the costs of providing utility service should be reflected in the prices charged for that service. Timely recovery of our environmental compliance costs is consistent with these ratemaking concepts.

## VII. BENEFITS OF DUKE ENERGY INDIANA'S PHASE 2 COMPLIANCE PLAN

**Q. PLEASE DESCRIBE THE PRIMARY BENEFITS OF THE COMPANY'S PROPOSED PHASE 2 PLAN.**

A. In my view, our environmental compliance plan will allow Duke Energy Indiana to achieve compliance with stringent new emission reduction requirements most economically and will allow the Company to continue to provide adequate and

reliable electric utility service to our customers. At the same time, these investments will result in substantial reductions to mercury and $SO_3$ emissions.

In addition, our compliance plan will have positive implications for Indiana's economy and for Indiana economic development. In just one example, Duke Energy Indiana is currently Indiana's largest purchaser of coal – approximately 12.5 million tons per year, mostly from Indiana coal mines. Our Phase 2 investments will allow Duke Energy Indiana to continue to utilize its coal-fired generating units and Illinois Basin coal. Further, the construction of the SCRs and other Phase 2 projects will create approximately 275 construction jobs in the State of Indiana.

## VIII. CONCLUSION

**Q. PLEASE IDENTIFY PETITIONER'S EXHIBIT A-1.**

A. Petitioner's Exhibit A-1 is a copy of the verified petition initiating this proceeding.

**Q. DOES THIS CONCLUDE YOUR PREFILED TESTIMONY?**

A. Yes, it does.

**STATE OF INDIANA**

**INDIANA UTILITY REGULATORY COMMISSION**

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| **VERIFIED PETITION OF DUKE ENERGY INDIANA, INC., FOR APPROVAL OF (1) A PHASE 2 COMPLIANCE PLAN REGARDING PENDING EMISSIONS REDUCTION REQUIREMENTS; (2) THE USE OF CERTAIN QUALIFIED POLLUTION CONTROL PROPERTY AND CLEAN ENERGY PROJECTS; (3) CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY FOR CLEAN COAL TECHNOLOGY; (4) THE USE OF CONSTRUCTION WORK IN PROGRESS RATEMAKING TREATMENT; (5) CERTAIN FINANCIAL INCENTIVES IN CONNECTION WITH PETITIONER'S COMPLIANCE PLAN, INCLUDING THE TIMELY RECOVERY OF COSTS INCURRED DURING CONSTRUCTION AND OPERATION OF THE CLEAN COAL TECHNOLOGY PROJECTS VIA DUKE ENERGY INDIANA'S RIDER NOS. 62 AND 71, AND THE USE OF ACCELERATED DEPRECIATION; (6) THE AUTHORITY TO DEFER POST-IN-SERVICE CARRYING COSTS, DEPRECIATION COSTS, AND OPERATION AND MAINTENANCE COSTS ON AN INTERIM BASIS UNTIL THE APPLICABLE COSTS ARE REFLECTED IN PETITIONER'S RATES; (7) CONDUCTING ONGOING REVIEWS OF THE IMPLEMENTATION OF PETITIONER'S COMPLIANCE PLAN; (8) THE TIMELY RECOVERY OFEMISSION ALLOWANCE COSTS IN DUKE ENERGY'S RIDER NO. 63; AND (9) DEFERRAL AND RECOVER THE PHASE 3 PLAN DEVELOPMENT, ENGINEERING AND PRE-CONSTRUCTION COSTS** | ) CAUSE NO. 44217 |

## VERIFIED PETITION

Duke Energy Indiana, Inc. (hereinafter referred to as "Petitioner" or "Duke Energy Indiana") respectfully petitions the Indiana Utility Regulatory Commission ("Commission") for approval of a Phase 2 compliance plan and all other necessary relief. In support of this Petition, Duke Energy Indiana states as follows:

1. **Petitioner's Corporate and Regulated Status.** Duke Energy Indiana is an Indiana corporation with its principal office in the Town of Plainfield, Hendricks County, Indiana. Its address is 1000 East Main Street, Plainfield, Indiana 46168. It has the corporate power and authority, among others, to engage, and it is engaged, in the business of supplying electric utility service to the public in the State of Indiana. Accordingly, Petitioner is a "public utility" within the meaning of that term as used in the Indiana Public Service Commission Act, as amended, Ind. Code § 8-1-2-1, and is subject to the jurisdiction of the Commission in the manner and to the extent provided by the laws of the State of Indiana, including Ind. Code § 8-1-2-1 *et seq.*

2. **Petitioner's Electric Utility Service.** Duke Energy Indiana owns, operates, manages and controls plants, properties and equipment used and useful for the production, transmission, distribution and furnishing of electric utility service to the public in the State of Indiana. It directly supplies electric energy throughout its 22,000 square mile service area to approximately 790,000 customers located in 69 counties in the central, north central and southern parts of the State of Indiana. Petitioner also sells electric energy for resale to municipal utilities, Wabash Valley Power Association, Inc., Indiana Municipal Power Agency and to other public utilities that in turn supply electric utility service to numerous customers in areas not served by Petitioner.

3. **Petitioner's Electric Generating Properties.** Petitioner's electric generating properties currently consist of: (1) steam capacity located at four stations comprised of 14 coal-fired generation units; (2) combined cycle capacity located at one station comprised of three natural gas-fired combustion turbines ("CT") and two steam turbine-generators; (3) a run-of-river hydroelectric generation facility comprised of three units; (4) peaking capacity consisting of

seven oil-fired diesels located at two stations, seven oil-fired CT units located at two stations, and 24 natural gas-fired CTs, one of which has oil back-up.

4. **Federal and State Jurisdiction:** Duke Energy Indiana's operations are subject to federal and state rules promulgated by, among others, the United States Environmental Protection Agency ("EPA"), the Indiana Department of Environmental Management ("IDEM"), and by the Air Pollution Control Board of the State of Indiana. Such rules establish environmental compliance standards that govern emissions from Duke Energy Indiana's generating stations.

5. **Emissions Reduction Rules:** The EPA's Utility Mercury and Air Toxics Standard ("MATS") is the main rule driving Petitioner's compliance plan in Phase 2.[1] Other rules considered and analyzed as part of Petitioner's Phase 2 and preliminary Phase 3 compliance plans include the final, but stayed, Cross State Air Pollution Rule ("CSAPR"); the proposed 316(b) cooling water intake structures rule ("316(b)"); the proposed Coal Combustion Residuals ("CCR") rule; potential revisions to the Steam Electric Effluent Guidelines ("SEEG"); and the National Ambient Air Quality Standards ("NAAQS"), among others.

6. **Petitioner's Phase 2 Plan for Compliance with Pending Emissions Reduction Requirements.** Duke Energy Indiana's proposed Phase 2 compliance plan consists of the following projects:

- Adding selective catalytic reduction ("SCR") systems to Cayuga Units 1 and 2, primarily for use as mercury oxidation devices. The Cayuga retrofit projects would also include dry sorbent injection ("DSI") for $SO_3$ mitigation, activated

[1] The Company's Phase 1 environmental compliance plan was filed under consolidated Cause Nos. 42622 and 42718. The Commission's May 24, 2006 Order approved Duke Energy Indiana's Phase 1 environmental compliance plan as provided for under the settlement agreement reached in that proceeding. Therefore, the instant filing constitutes Petitioner's Phase 2 Environmental Compliance Plan.

carbon injection ("ACI") for mercury trim control, mercury re-emission chemical injection systems, and an arsenic mitigation system for SCR catalyst protection. We also seek authorization to include future SCR catalyst replacements for Cayuga in ongoing Environmental Compliance Recovery ("ECR") proceedings, as we do currently for the Gibson SCRs.

- Adding ACI as a mercury trim control to all five Gibson units, and Gallagher Units 2 and 4.
- Adding mercury re-emission chemical injection systems to Gibson Units 1, 2, 3, and 5.

7. **Request for Prehearing Conference.** Petitioner requests that, pursuant to 170 IAC 1-1.1-15, the Commission convene a prehearing conference in this Cause within forty-five (45) days following the filing of this petition for the purpose of establishing a procedural schedule.

8. **Applicable Law**. Various Indiana laws and Commission are applicable to the subject matter of this Petition.[2]

- Ind. Code 8-1-27 *et seq.* applies to the Commission's review and approval of environmental compliance plans.
- Ind. Code 8-1-8.7 *et seq.* provide for the Commission's review and approval of proposals to construct and use clean coal technology. This chapter also provides

[2] We recognize that in *General Motors Corp. v. Indianapolis Power & Light Co.*, 654 N.E.2d 752 (Ind. Ct. App. 1995), the Court of Appeals ("Court") declared that a portion of Ind. Code § 8-1-2-6.6 relating to Indiana coal violates the Commerce Clause of the United States Constitution. The Court severed the unconstitutional provision from the remainder of the statute which was held to be valid and effective. The Court stated that if a plan "is found by the Commission to be the option best fitting the non-protectionist criteria in the statute, no bar exists to its approval on the basis that it includes the use of Indiana coal . . . ." In accordance with the *General Motors* case, although the Company's environmental compliance plan does ensure continued use of Illinois Basin coal at most of our units, other than Gallagher Units 2 and 4, we recognize this factor should not be a prerequisite for Duke Energy Indiana's requested relief in this case.

for assurance of cost recovery consistent with approved cost and schedule estimates, and ongoing review of construction projects.

- Ind. Code 8-1-8.8 *et seq.* provides for timely recovery of construction and operating costs for clean energy projects that use Illinois basin coal. Ind. Code 8-1-8.8 *et seq.* also provides for other incentives for clean energy projects.
- Ind. Code § 8-1-2-6.1 provides for the recovery of preconstruction costs associated with employing clean coal technology.
- Ind. Code § 8-1-2-6.7 provides for the use of accelerated depreciation for clean coal technology projects.
- Ind. Code § 8-1-2-6.8 provides for construction work in progress treatment for qualified pollution control property.

Petitioner also considers Ind. Code §§ 8-1-2-23, 8-1-2-42(a), and 170 IAC 4-6-1 *et seq.*, among others, applicable to the subject matter of this proceeding.

9. **Petitioner's Counsel**. Kelley A. Karn, Elizabeth A. Herriman, and Casey M. Holsapple of 1000 E. Main Street, Plainfield, Indiana 46168 are counsel for Petitioner in this matter, and are duly authorized to accept service of papers in this Cause on behalf of Petitioner.

10. **Relief Requested**. Petitioner respectfully requests that the Commission make such investigation and hold such hearings as it may deem necessary and advisable, and thereafter make and enter an order: (1) approving Duke Energy's proposed Phase 2 plan for reducing emissions in light of pending emissions reduction requirements, including the construction and use of various emissions reduction equipment; (2) approving for use, pursuant to Ind. Code § 8-1-2-6.8 and 170 IAC 4-6-2, and pursuant to Ind. Code 8-1-8.8, Petitioner's proposed Phase 2 emissions reduction equipment, as qualified pollution control property and clean energy projects; (3) grant Petitioner a Clean Coal Certificate of Public Convenience and Necessity for the construction and use of clean coal technology, to the extent required by Ind. Code § 8-1-8.7-1; (4) approving the use of construction work in progress ratemaking treatment; (5) providing for ongoing review of Petitioner's implementation of its compliance plan; (6) providing, pursuant to Ind. Code § 8-1-2-6.8 and 8-1-8.8, assurance of cost recovery of capital investments made pursuant to a Commission-approved compliance plan; (7) providing for the timely recovery of the financing, construction and operating costs associated with Petitioner's Phase 2 plan, as previously authorized by this Commission's Order in Cause Nos. 42622 and 42718, via

Petitioner's existing Standard Contract Riders No. 62 and 71; (8) authorizing the use of accelerated (20-year) depreciation in connection with Petitioner's environmental compliance projects; (9) providing for the timely recovery of emission allowance costs incurred in connection with compliance with the new $SO_2$ and $NO_x$ emissions reduction requirements via Petitioner's existing Standard Contract Rider No. 63; (10) authorizing the timely recovery of Phase 3 plan development, preliminary engineering, testing and pre-construction costs via Rider 62 and/or 71; (11) granting Petitioner authority to defer post-in-service carrying costs, depreciation costs, and operation and maintenance costs on an interim basis, until the applicable costs are reflected in Petitioner's rates; and (12) granting Petitioner such further relief in the premises as may be appropriate and proper.

Dated as of the 28th day of June, 2012.

**DUKE ENERGY INDIANA, INC.**

By: _____
Douglas F Esamann, President
Duke Energy Indiana, Inc.

By: _____
Counsel for Duke Energy Indiana, Inc.

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**AFFIDAVIT**

STATE OF INDIANA )
) SS:
COUNTY OF HENDRICKS )

Douglas F Esamann and Elizabeth A. Herriman, being first duly sworn, depose and say that they are the President of Duke Energy Indiana, Inc., and Counsel for Duke Energy Business Services LLC, the service company affiliate of Duke Energy Indiana, Inc., respectively, the Applicant in the foregoing Application; that as such they have executed the foregoing Application and have authority to do so; that they have read said Application and know the contents thereof; and that the statements therein contained are true to the best of their knowledge, information and belief.

Douglas F Esamann, President,

Elizabeth A. Herriman, Attorney

Subscribed and sworn to before me,
This 28th day of June, 2012.

Diana M. Clark
Notary Public

My Commission Expires: April 17, 2014

My County of Residence: Morgan

## CERTIFICATE OF SERVICE

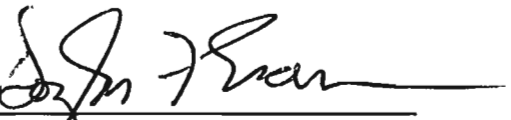
The undersigned hereby certifies that a copy of the foregoing was hand delivered or mailed, postage prepaid, in the United States mail, this 28th day of June, 2012, to the following:

Indiana Office of Utility Consumer Counselor
PNC Center
115 W. Washington Street
Suite 1500 South
Indianapolis, Indiana 46204

By: _____
Counsel for Duke Energy Indiana, Inc.

**VERIFICATION**

I hereby verify under the penalties of perjury that the foregoing representations are true to the best of my knowledge, information and belief.

Signed:  Dated: 6-28-12

Douglas F Esamann