

April 01, 2014

IOWA UTILITIES BOARD

STATE OF IOWA

BEFORE THE IOWA UTILITIES BOARD

<b>IN RE:</b>  <b>INTERSTATE POWER AND LIGHT COMPANY</b>	<b>DOCKET NO. EPB-2014-0150</b>
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**DIRECT TESTIMONY OF TERRY L. KOUBA**

1 **Q. Please state your name and business address.**

2 A. My name is Terry L. Kouba. My business address is 1000 Main Street,  
3 Dubuque, Iowa 52001-4700.

4 **Q. By whom are you presently employed and in what capacity?**

5 A. I am employed by Alliant Energy Corporate Services, Inc. (AECS), a  
6 service company subsidiary of Alliant Energy Corporation (Alliant Energy).  
7 My job title is Vice President – Generation Operations. In this position,  
8 most of my time is spent working for Alliant Energy’s wholly-owned utility  
9 subsidiaries, Interstate Power and Light Company (IPL), and Wisconsin  
10 Power and Light Company (WPL). I am testifying on behalf of IPL in this  
11 proceeding.

12 **Q. What is your educational background?**

13 A. My educational background includes a Bachelor of Science in Electrical  
14 and Electronics Engineering degree from North Dakota State University.

15 **Q. Please describe your professional experience.**

1 A. I have been employed by AECS or predecessor companies for over 31  
2 years. Until a short time ago, my title was Director – Generation  
3 Operations. I was recently promoted to Vice President – Generation  
4 Operations, responsible for the planning, operations and maintenance of  
5 IPL and WPL generating stations in Iowa, Minnesota and Wisconsin. Prior  
6 to being placed in charge of Generation Operations in 2010, I was the  
7 Regional Director of Generation - West, responsible for the management  
8 of nine IPL generating stations in Iowa and Minnesota. I have also served  
9 as a Director of Sourcing and Supply Chain and a Director in AECS’  
10 Energy Delivery business unit and Electrical Engineering. Prior to serving  
11 in these positions, I worked in a management capacity in Field  
12 Engineering, Operations Business Systems and Support, System  
13 Operations and Project Management.

14 **Q. Have you provided testimony in prior regulatory proceedings?**

15 A. Yes, I provided testimony in IPL’s 2010 and 2012 Emissions Plan and  
16 Budget (EPB) Filings before the Iowa Utilities Board (Board) in Docket  
17 Nos. EPB-2010-0150 and EPB-2012-0150, respectively. I also provided  
18 testimony in the proceeding to determine ratemaking principles for the  
19 Marshalltown Generating Station in Docket No. RPU 2012-0003.

20 **Q. What is the purpose of your testimony in this proceeding?**

21 A. The purpose of my testimony is to sponsor IPL’s Emissions Plan Update  
22 and its associated Budget Update, as well as to introduce the other  
23 witness appearing on IPL’s behalf.

1 **Q. Please summarize how IPL approaches its emissions planning.**

2 A. As I will describe in more detail later in my testimony, IPL provides energy  
3 service in a manner that values the environment, safety, reliability, and its  
4 customers' financial concerns. IPL's strategy corresponds to the Iowa  
5 Legislature's stated emissions, plan, and budget requirements that a utility  
6 "reasonably balance costs, environmental requirements, economic  
7 development potential, and the reliability of the electric generation  
8 transmission system.<sup>1</sup>

9 IPL is committed to a clean, safe and healthy environment. IPL has  
10 a long history of environmental stewardship, and is committed to  
11 complying with all environmental laws and regulations as it provides safe,  
12 reliable, cost effective service to its' customers. IPL integrates  
13 environmental requirements into all planning, decision-making,  
14 construction, and operating and maintenance activities it performs.  
15 Employees must conduct work in a manner demonstrating IPL's concern  
16 for preserving natural resources and protecting wildlife – acting in  
17 accordance with its Core Value of Responsibility. IPL is unwavering in  
18 fulfilling its commitments to its customers, the Board, and the State of  
19 Iowa, and will work cooperatively with the appropriate regulatory agencies  
20 and interested stakeholders in executing its duties.

21 **Q. How is your testimony organized?**

22 A. My testimony is organized into the following sections:

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<sup>1</sup> Iowa Code § 476.6(21)"c."

- 1 • Executive Summary;
- 2 • Introduction of the other IPL witness;
- 3 • An overview of IPL's coal-fired generation fleet;
- 4 • A general description of IPL's overall emissions strategy;
- 5 • The overall emissions impacts of IPL's emissions control efforts;
- 6 • System Reliability; and
- 7 • Conclusion.

### 8 EXECUTIVE SUMMARY

9 **Q. What specific projects were included in IPL's 2012 EPB approved by**  
10 **the Board?**

11 A. The following projects were included in IPL's 2012 EPB which was  
12 approved by the Board:

- 13 • Ottumwa Generating Station (OGS) Scrubber Project;
- 14 • OGS Baghouse Project;
- 15 • OGS Turbine/Generator Upgrade Project;
- 16 • Lansing Generating Station (LGS) Scrubber Project;
- 17 • Burlington Generating Station, Prairie Creek Generating Station and
- 18 M.L. Kapp Generating Station "Emission Lite" Emission Control
- 19 Projects; and
- 20 • Planning for emerging water and waste rules.

21 **Q. What is the status of the OGS scrubber, baghouse and turbine**  
22 **upgrade projects?**

23 A. IPL has continued to execute the OGS scrubber, baghouse and the  
24 turbine/generator upgrade projects as described in its' 2012 EPB. The  
25 installation of the scrubber will result in significant reductions in sulfur

1 dioxide (SO<sub>2</sub>) emissions and help enable IPL to comply with Clean Air  
2 Interstate Rule (CAIR) requirements. The baghouse project will result in  
3 significant reductions in mercury (Hg) and particulate matter (PM)  
4 emissions which will enable compliance with the Utility Mercury and Air  
5 Toxics Standard (MATS) rule which will be effective in April of 2015. The  
6 Utility MATS rule implements limits on particulate matter (PM),  
7 mercury(Hg) and hydrochloric (HCL) gas emissions. The turbine/generator  
8 upgrade project will replace original equipment, improve unit efficiency,  
9 increase unit capacity and reduce the unit's CO<sub>2</sub> intensity as measured in  
10 lb/Mwh. The current forecasted cost estimate for the scrubber baghouse  
11 projects is [REDACTED] The current forecasted cost estimate for the  
12 turbine/generator upgrade projects is [REDACTED] All these projects are  
13 currently forecast to be completed on schedule and budget. The projects  
14 are scheduled to be placed into service in November of 2014.

15 **Q. What is the status of the Lansing scrubber project?**

16 A. IPL has also continued to execute the Lansing scrubber project as  
17 described in its' 2012 EPB. The installation of the scrubber will  
18 significantly reduce SO<sub>2</sub> emissions from the unit and enable compliance  
19 with the CAIR rule. This project is currently forecast to be completed on  
20 schedule and budget. The current cost estimate for this project is  
21 [REDACTED] The project is currently scheduled to be placed into service  
22 in July of 2015.

1 **Q. What is the status of the Burlington, Prairie Creek and M.L. Kapp**  
2 **“Emission Lite” emission control projects?**

3 A. IPL outlined a plan in its' 2012 EPB to continue planning, engineering and  
4 analysis associated with less capital intensive emission control projects at  
5 [REDACTED] that would  
6 enable compliance with the pending Utility MATS rule. IPL did continue  
7 this planning, engineering and analysis which ultimately resulted in a  
8 decision that it was in the best interest of customers to execute these less  
9 capital intensive emission control projects on the [REDACTED]  
10 [REDACTED] to comply with the Utility MATS rule. It also resulted in  
11 a decision to switch the primary fuel at M.L. Kapp from coal to natural gas  
12 to comply with the Utility MATS rule. IPL executed precipitator upgrades  
13 on Burlington and Prairie Creek Units 3 and 4 in 2013 to reduce PM  
14 emissions. IPL will install activated carbon injections systems on these  
15 units in 2014 to reduce Hg emissions. These projects are being executed  
16 on schedule and budget and will be completed in 2014. The current  
17 forecasted cost estimate for the Prairie Creek Units 3 and 4 emission lite  
18 emission control project is [REDACTED] The current forecasted cost  
19 estimate for the Burlington emission lite emission control project is  
20 [REDACTED] IPL will switch the M.L. Kapp primary fuel to natural gas in  
21 Q2 2015 to comply with the Utility MATS rule. IPL will not execute  
22 emission lite projects on the M.L. Kapp unit.

23 **Q. What new initiatives or projects is IPL proposing in this EBP?**

1 A. IPL is not proposing any new emission control initiatives or projects that  
2 have not been proposed and discussed in previous IPL EPB filings.

### 3 INTRODUCTION OF THE OTHER IPL WITNESS

4 **Q. Please identify the other witness that IPL is presenting in this case?**

5 A. IPL is also presenting the testimony of Steve R. Jackson. Mr. Jackson's  
6 testimony addresses the following:

- 7 • The rationale for how IPL selected proposed air emissions control  
8 projects;
- 9 • A review of IPL's SO<sub>2</sub>, nitrogen oxides (NO<sub>x</sub>), Hg and other  
10 hazardous air pollutant (HAP), and greenhouse gas (GHG)  
11 emissions compliance requirements;
- 12 • A review of IPL's water and waste management requirements;
- 13 • How IPL can comply with these compliance requirements;
- 14 • Highlights of IPL's proposed or in-process emissions reduction  
15 projects;
- 16 • How IPL's plans differ from those contained in its previous filing;  
17 and
- 18 • What may cause IPL to change or add to its compliance plans.

19 Mr. Jackson's testimony generally supports many of the sections  
20 contained in the EPB Updates.

### 21 OVERVIEW OF IPL'S COAL-FIRED GENERATION FLEET

22 **Q. Please describe IPL's coal-fired electric power generating units.**

23 A. For decades, IPL's coal-fired electric power generating units have  
24 provided safe, reliable and affordable energy to its customers. IPL's  
25 owned, coal-fired generating unit fleet is currently comprised of seven  
26 electric generating units with a total nameplate capacity of 1,594 MW.

1 Below is a summary of the coal-fired units in the IPL generating fleet.  
 2 Please note that the concept of unit tiers is discussed later in my  
 3 testimony.

4

**IPL COAL-FIRED PLANT LIST**

Plant Name	Unit Information			
	Unit ID	Nameplate Capacity (MW)	Tier	Began Operation
Lansing Generating Station	4	260	1	1977
Ottumwa Generating Station	1	715	1	1981
Burlington Generating Station	1	212	2	1968
M.L. Kapp Generating Station	2	217.0	2	1967
Prairie Creek Station	1A	16	2	1997
Prairie Creek Station	3	44	2	1958
Prairie Creek Station	4	130	2	1967

5

6 **Q. Please describe IPL’s philosophy regarding environmental activities**  
 7 **at its coal-fired generating plants.**

8 A. IPL’s philosophy regarding environmental activities at its coal-fired  
 9 generating plants has remained consistent over time. IPL’s environmental  
 10 planning objectives are:

- 11 • Comply with environmental rules and regulations;
- 12 • Reduce IPL power plant emissions;
- 13 • Achieve prudent customer and shareowner outcomes; and
- 14 • Align with power plant co-owner expectations at jointly-owned
- 15 plants.

1 IPL's approach to meeting these objectives has also remained consistent  
2 over time. IPL focuses on a long-term rather than a step-by-step  
3 compliance strategy that considers existing and "on the horizon"  
4 environmental rules and regulations while encompassing balance of plant  
5 life compliance needs. IPL strives to implement high value-added  
6 emission control projects that provide significant environmental benefits  
7 and support its ability to meet compliance needs.

8 IPL believes its philosophy, objectives and approach leads to more  
9 efficient and effective power plant environmental solutions on behalf of its  
10 customers.

#### 11 **GENERAL DESCRIPTION OF IPL'S EMISSIONS STRATEGY**

12 **Q. How does IPL incorporate its fundamental air emissions planning**  
13 **objectives into its air emissions planning process?**

14 A. IPL incorporates its fundamental air emissions planning objectives into its  
15 air emissions planning process by considering a wide range of factors.

16 Major factors IPL considers include:

- 17 • Emission control technology performance;
- 18 • Emission control technology installation and operating costs;
- 19 • Generating unit impacts due to installation and post-installation  
20 operation of emissions controls;
- 21 • Changes in plant operations for emissions control in place of  
22 emissions control technology installation; and

- 1           • The potential impact to the customer and IPL if it is unable to  
2           comply in a timely manner with emerging environmental  
3           compliance requirements.

4 **Q. Please describe, at a high level, IPL’s proposed strategy for its coal-**  
5 **fired power plants.**

6 A. IPL’s strategy is based upon its corporate strategic plan, which is built on  
7 three key elements:

- 8           • Competitive costs;  
9           • Reliable service; and  
10          • Balanced generation.

11 More specifically, IPL’s generation strategy is to provide a balanced  
12 generation portfolio to reduce costs and risks for its customers and remain  
13 flexible for the future. Key elements of IPL’s strategy include:

- 14          • Balancing generation ownership with customer energy needs;  
15          • Balancing the type of fuels used to produce electricity for its  
16          customers;  
17          • Maintaining flexibility to react to future environmental requirements;  
18          and  
19          • Continuing to efficiently operate its units and aggressively manage  
20          fuel costs.

21 IPL believes this strategy provides long-term advantages to its customers.

22 **Q. Please provide an overview of how IPL plans to implement this**  
23 **generation strategy.**

24 A. IPL plans to implement this strategy by focusing on five key objectives.

1           First, IPL plans to install environmental controls on key units,  
2 improve the efficiency of key units, and increase the capacity of key units  
3 to provide energy on a long-term basis at a reasonable cost. These plans  
4 will be executed at IPL's newer, larger, more efficient units including  
5 Lansing 4 and Ottumwa where IPL plans to address long-term operation  
6 and compliance needs. IPL refers to these units as Tier I units. Achieving  
7 emission reduction economies of scale is possible at these Tier I units as  
8 the cost per ton of SO<sub>2</sub>, NO<sub>x</sub> or Hg removed is typically less than what can  
9 be achieved on smaller units. Synchronizing the installation of  
10 environmental controls with projects to improve efficiency and increase  
11 capacity enables IPL to provide customer value by enabling increased,  
12 cost effective energy output from these units as well as reducing  
13 emissions. Increasing the capacity of these units also offsets the reduction  
14 in available unit capacity that results from installing new emission control  
15 equipment.

16           Second, IPL is executing projects utilizing less capital intensive  
17 emission control technologies at a number of IPL's units including  
18 Burlington and Prairie Creek Units 3 and 4. IPL refers to these units as  
19 Tier II units. Tier II units are typically older, less efficient, mid-sized units in  
20 IPL's fleet. These less capital intensive emission control projects typically  
21 have shorter installation times which allow IPL to mitigate the risk  
22 associated with rule uncertainty, delay project expenditures and still  
23 comply with certain environmental rules in a timely manner. IPL plans to

1 maintain flexibility to the extent it is able so that it may respond to  
2 changing compliance needs at these units.

3 Third, IPL plans to retire or refuel the oldest and smallest coal-fired  
4 units in its fleet. IPL refers to these units as Tier III units. IPL's decisions  
5 regarding retirement or refueling of these units have and will continue to  
6 be made based on energy market, operational, environmental and other  
7 factors. IPL does not plan to install additional emission control equipment  
8 on any of its remaining Tier III units. Once the retirement of all Tier III  
9 units is complete, IPL will have no remaining Tier III units.

10 A summary of the tiering of IPL's generating units is provided in  
11 Section II, Part A of this filing.

12 Fourth, IPL will add natural gas-fired generation to further diversify  
13 its asset portfolio as evidenced by IPL's plan to construct and operate the  
14 Marshalltown Generating Station.

15 Fifth, IPL will continue to investigate other portfolio options as  
16 appropriate, as evidenced by its new DAEC PPA, executed between itself  
17 and the DAEC's owner, NextEra Energy Duane Arnold, LLC  
18 (NextEra/DAEC), for the output of the DAEC through 2025. The new  
19 DAEC PPA was approved in Docket No. SPU-2005-0015.

20 IPL believes implementation of this strategy will result in efficient  
21 and effective solutions that will not only ensure environmental compliance,  
22 but be in the long term best interest of its customers.

1 **Q. In your opinion, does this plan meet the requirements of Iowa Code**  
2 **476.6(21)?**

3 A. While I am not an attorney, in my opinion, I believe IPL's proposed plan  
4 meets the policy objectives outlined in Iowa Code § 476.6(21). This plan,  
5 as presented, is reasonably expected to achieve cost-effective compliance  
6 with currently applicable state environmental compliance requirements  
7 and federal ambient air quality standards including promulgated, but not  
8 yet effective environmental compliance requirements.

9 However, numerous revised or newly-developed environmental  
10 rules and regulations are forthcoming, but not specifically understood at  
11 this point in time. IPL will continue to monitor pending rules and  
12 regulations. IPL will maintain sufficient flexibility to respond, as necessary,  
13 to the outcomes of these pending rules and regulations while ensuring  
14 future environmental compliance requirements are met and being  
15 sensitive to the resulting impact on customer rates.

16 **Q. Does this plan reasonably balance issues such as costs,**  
17 **environmental requirements, economic development potential, and**  
18 **electric generation and transmission system reliability?**

19 A. Yes, it does. IPL takes its responsibility to provide safe, environmentally  
20 responsible, reliable, and affordable energy to its customers very seriously  
21 and has considered these issues in its emissions planning process. This is  
22 evidenced by IPL:

- 23 • Conducting ongoing research and testing to identify least cost  
24 compliance approaches and emissions control options;

- 1 • Promoting coordination and aggregation of its projects with planned  
2 generating unit outages; and
- 3 • Demonstrating its willingness to modify plans based on changing  
4 internal and external needs, desires and requirements.

5 **Q. What are the key environmental compliance aspects of this proposed**  
6 **plan?**

7 A. The four key aspects of this proposed plan include:

- 8 1) Continuing the execution of the scrubber/baghouse project at the OGS  
9 and the scrubber project at the LGS;
- 10 2) Undertaking efficiency and energy output improvement projects at the  
11 OGS;
- 12 3) Executing less capital-intensive emission control projects at select Tier  
13 II units; and
- 14 4) Continuing compliance research and planning for possible plant  
15 operating and infrastructure changes associated with emerging water  
16 and waste rules.

17 **OVERALL EMISSIONS IMPACTS**  
18 **OF IPL'S EMISSIONS CONTROL EFFORTS**

19 **Q. What will be the results of this plan?**

20 A. Executing IPL's plan will result in reduced air emissions. The largest  
21 reductions will occur to SO<sub>2</sub> and mercury emissions. IPL estimates that  
22 SO<sub>2</sub> and mercury emissions will drop by approximately [redacted] and [redacted]  
23 respectively. Other air emissions, including NO<sub>x</sub> and particulate matter, will  
24 also decrease but by lesser amounts. IPL estimates that these emissions  
25 will drop by approximately [redacted] These reduced air emissions will enable

1 IPL to comply with emerging air emission rules and regulations including  
2 the CAIR and its successor, and the Utility MATS.

3 **Q. How does IPL's plan differ from the previous plan?**

4 A. There are no significant differences between IPL's 2012 and 2014 EPBs.  
5 As outlined above, IPL wants to note the transition from planning,  
6 engineering and analysis to project execution on the less capital intensive  
7 emission control projects at Burlington and Prairie Creek and the decision  
8 to switch primary fuels from coal to natural gas at M.L. Kapp.

9 **Q. Does IPL's plan include emissions control activities that are already  
10 conducted as a matter of routine compliance?**

11 A. No. IPL performs ongoing emissions control activities at its power plants to  
12 meet current compliance requirements. The plan being discussed here,  
13 however, considers future projects and costs separately from ongoing  
14 routine compliance activities. It does not encompass all IPL compliance  
15 activities.

16 **Q. How does the current uncertainty associated with environmental  
17 compliance rules and compliance deadlines impact decisions  
18 regarding compliance solutions and project timelines?**

19 A. The current uncertainty regarding environmental rules and associated  
20 compliance deadlines creates challenges as IPL evaluates compliance  
21 alternatives and makes decisions to meet its compliance objectives. This  
22 is especially true when a rule requires installation of emission control  
23 equipment that has a long lead time prior to placing it in service. In the

1 current rule making environment, it is extremely difficult, if not impossible,  
2 to consistently install emission controls “just in time” to comply with rule  
3 requirements.

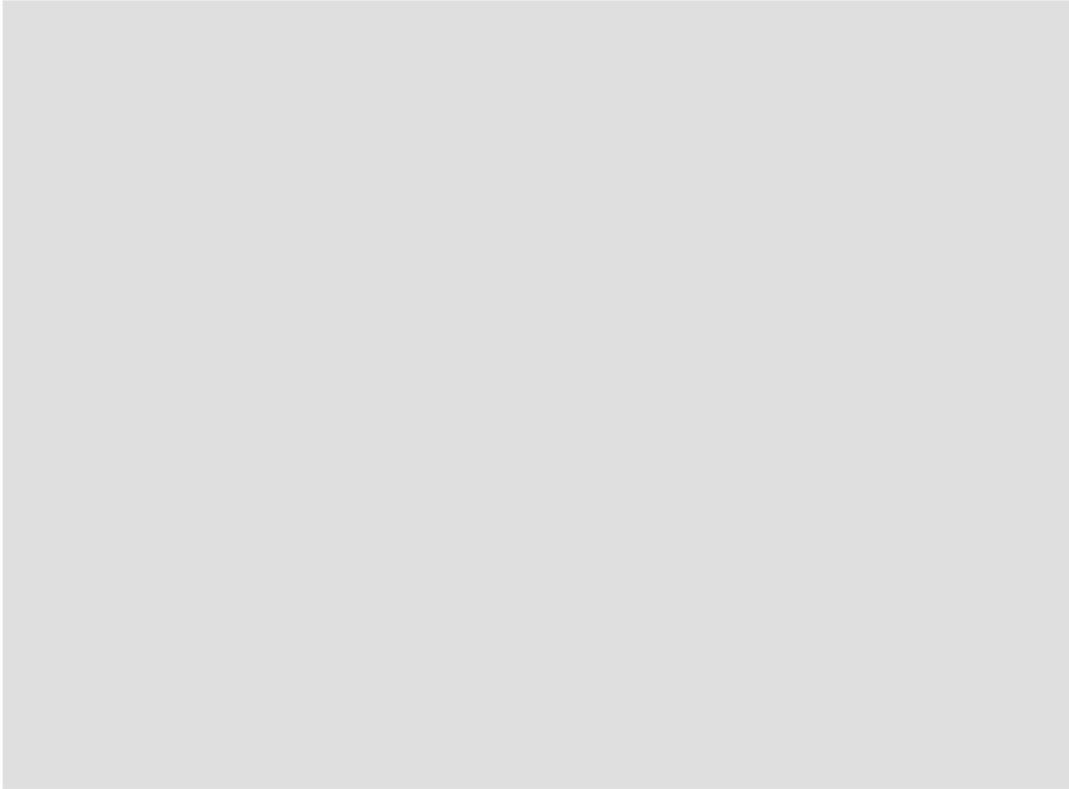
4 IPL meets these challenges by closely monitoring the rule making  
5 process and working to influence the outcomes from it on behalf of its  
6 customers. IPL also anticipates emission compliance requirements based  
7 on proposed rules and environmental rule making trends and proposes  
8 emission control projects IPL is confident will be necessary to meet the  
9 compliance requirements of a single or multiple pending emission rules.

10 IPL also engages in research and development of various less  
11 capital intensive emission control solutions that have shorter installation  
12 lead times. This type of emission control project, in some cases, allows  
13 IPL to delay the start of projects until after rules are finalized and there is  
14 “less” uncertainty about compliance requirements and deadlines. This  
15 approach, while not possible in all cases, allows IPL to mitigate the risks  
16 associated with rule making uncertainty and still complete projects in time  
17 to ensure compliance.

18 **Q. Will IPL need to propose further emissions control or other**  
19 **environmental compliance projects at its coal-fired units in the**  
20 **future?**

21 A. Yes, although IPL has gained a greater understanding of emerging  
22 environmental rules and regulations and their impact on IPL’s coal-fired  
23 generating units, a significant number of environmental rules and

1 regulations continue to emerge and evolve. Specific emerging federal or  
2 state rules and regulations that impact air, water and waste will likely  
3 affect IPL's coal-fired generating units in the future and may result in the  
4 need for additional emissions control or other environmental compliance  
5 projects.



17 **Q. Has IPL examined other methods to reduce emissions?**

18 A. Yes, IPL has examined a range of technologies and continues to monitor  
19 the development of new control technologies. As shown in IPL's Budget  
20 Update, Section II, Part C, and associated Appendix B, there is a detailed  
21 analysis of the various technologies, approaches and alternatives to meet  
22 air emissions compliance requirements. IPL also continues to support and  
23 review findings from the collaborative research that Electric Power

1 Research Institute and other utility support organizations conduct with  
2 combustion and post-combustion emissions control technologies. Through  
3 its support and review of this research, IPL also obtains information on the  
4 actual performance of various technologies at utility-scale generating  
5 units.

6 **Q. Are you confident that IPL can remain in compliance with existing  
7 and future environmental rules based on its current plan as outlined  
8 in this filing?**

9 A. Yes. I have provided an overview of IPL's compliance plan in my  
10 testimony. Mr. Jackson, in his testimony, describes in detail the many  
11 current and proposed environmental rules that IPL is required to comply  
12 with. Mr. Jackson also provides more detail describing how IPL's current  
13 plan will allow us to comply with existing and future environmental rules.

14 **Q. How will the proposed projects affect the day-to-day operations of  
15 the impacted plants or units?**

16 A. Installing and operating new emissions controls results in increased costs  
17 associated with day-to-day operation and maintenance of the emissions  
18 control equipment. These costs vary depending on the type of emissions  
19 controls utilized. Incremental operation and maintenance costs generally  
20 include chemicals, labor, routine maintenance and future repair and  
21 replacement. Emissions controls typically also require additional power to  
22 operate and, hence, reduce the available energy generated by the plant or  
23 unit.

1           As environmental rules and compliance solutions continue to  
2           evolve, IPL will work with appropriate stakeholders to ensure appropriate  
3           and timely recovery of costs associated with environmental compliance.

4   **Q.   Does this plan include a requirement to limit future GHG emissions?**

5   A.   No, it does not. IPL has incorporated the risk of future potential GHG rules  
6           and regulations into its planning, but has not included a specific  
7           requirement to limit future GHG emissions in this specific near-term plan  
8           for its coal-fired power plants.

9   **Q.   Why not?**

10  A.   Future potential GHG rules and regulations remain unclear. Because of  
11           this high degree of uncertainty, IPL does not believe it is in the best  
12           interests of its customers to embark on a specific program at its existing  
13           fleet for GHG reduction initiatives from its coal-fired generating units.

14           However, IPL has developed a generation strategy that will result in  
15           reduced GHG emissions and enable further GHG emissions reduction if  
16           and when needed. IPL's generation strategy will allow it to continue  
17           serving customers reliably in a GHG-constrained world.

18  **Q.   How does this plan accommodate the need to potentially limit future  
19           GHG emissions?**

20  A.   IPL's generation strategy, much of which is embodied in this plan, does  
21           not primarily focus on reducing GHG emissions. However, executing it  
22           ultimately results in reduced GHG emissions or positions IPL to more cost  
23           effectively reduce GHG emissions when it becomes necessary to do so in

1 the future. Completing projects to improve plant efficiency and increase  
2 capacity at its Tier I generating units enables IPL to reduce the GHG  
3 emissions intensity at these units (in terms of pounds emitted per MWH  
4 produced). Retiring or fuel switching select IPL Tier II coal-fired units to  
5 operate using natural gas will also reduce GHG emissions. Additionally,  
6 adding more natural-gas fired combined cycle generating capacity or other  
7 supply options to IPL's generating fleet, coupled with limiting significant  
8 investment in IPL's Tier II coal-fired units, creates a more cost effective  
9 and viable potential option to further reduce coal-fired generation in the  
10 future; these actions allow IPL to more easily retire Tier II coal-fired units  
11 and increase energy produced from gas-fired generating capacity that  
12 may not be fully utilized. These actions either reduce or support future  
13 reduction of IPL's GHG emissions.

14 **Q. What other actions is IPL taking with regard to the need to limit  
15 future GHG emissions?**

16 A. IPL continues to incorporate potential GHG emissions compliance costs  
17 into its generating portfolio planning and decision-making process with a  
18 focus on how compliance strategies impact the cost of service to  
19 customers. Uncertainty regarding GHG reduction regulations and timing  
20 make it very difficult to understand the relative costs and benefits of near  
21 and long term changes to the IPL generating portfolio.

22 Options, other than those already discussed, to address GHG  
23 regulations could include, but are not limited to adding more renewable

1 resources such as wind and reducing demand and energy consumption  
2 through existing and new energy efficiency programs. IPL may also  
3 consider using advanced technology coal-fired generation that includes  
4 carbon capture and sequestration to meet longer-term generation needs  
5 to the extent it is technologically and economically viable to do so. IPL will  
6 continue to evaluate these options as it works to evolve its energy supply  
7 portfolio to comply with emerging GHG rules and regulations.

### 8 **SYSTEM RELIABILITY**

9 **Q. Is IPL taking steps to address system reliability regarding the timing**  
10 **of the outages to complete its planned emissions control projects**  
11 **and potential retirement or refueling of units?**

12 A. Yes, IPL has been working and will continue to work closely with the  
13 Midcontinent Independent System Operator, Inc. (MISO) to ensure that  
14 the planned outages at its OGS and LGS to install emission controls,  
15 potential planned outages at its Tier II units for emission control projects  
16 and plans for unit retirement or retrofit can be executed as planned without  
17 adversely impacting the reliability of the grid.

18 IPL has been working closely with MISO to understand the grid  
19 reliability impacts of potential, future unit retirements or fuel conversions  
20 and coordinate associated plans. This effort is ongoing and will continue in  
21 2014 and beyond.

22 IPL understands the important role its units play in ensuring the  
23 reliability of the electrical grid. IPL also understands the need to

1 coordinate potential changes to its units with MISO, whether through  
2 scheduling outages for the addition of emissions control equipment,  
3 potential retirement of units or potential unit fuel conversions. IPL has  
4 taken the approach to communicate potential changes to its units with  
5 MISO as early as possible to ensure IPL understands any potential  
6 system reliability issues and then address them appropriately. Timely and  
7 frequent communication with MISO helps ensure that IPL can execute its  
8 plans without adversely impacting the reliability of the grid. It also allows  
9 more time to modify plans if necessary to ensure the reliability of the grid  
10 going forward.

## 11 CONCLUSION

12 **Q. Please summarize your position on IPL's proposed EPB?**

13 A. IPL's overall strategy involves not just the installation of emissions  
14 controls, but a broad spectrum of generation investments, strategies, and  
15 balance intended to provide its customers with environmentally  
16 conscience, reliable energy service at a reasonable cost. IPL estimates  
17 that implementation of its plan, by the end of 2016, will decrease  
18 emissions by the following estimated amounts:

- 19 • Mercury – [REDACTED]
- 20 • Sulfur Dioxide – [REDACTED]
- 21 • Filterable particulate matter – [REDACTED]
- 22 • Nitrogen oxide – [REDACTED]

1 IPL carefully examines the investment necessary to accomplish its  
2 emissions reduction goals, and believes it will accomplish these goals in a  
3 manner that will protect the integrity and reliability of the grid at a fair and  
4 reasonable expense. IPL undertakes this careful financial planning on  
5 behalf of its customers; while IPL certainly believes in a competitive utility  
6 rate that still encourages energy efficiency, IPL carefully considers the  
7 financial obligations its investment decisions place upon its customers.

8 IPL understands that reliable electric service is vital to public safety,  
9 to the quality of life for its customers, and to the state's economic health.

10 IPL also understands that the provision of energy can have environmental  
11 consequences, and is careful to balance these consequences in planning.

12 IPL believes that its EPB provided in this docket for the Board's review is a  
13 carefully considered, balanced, and appropriate strategy.

14 **Q. Does this conclude your prepared direct testimony?**

15 A. Yes.

**STATE OF IOWA**  
**BEFORE THE IOWA UTILITIES BOARD**

<b>IN RE:</b>  <b>INTERSTATE POWER AND LIGHT COMPANY</b>	<b>DOCKET NO. EPB-2014-0150</b>
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AFFIDAVIT OF  
TERRY L. KOUBA

STATE OF IOWA                    )  
  ) ss.  
COUNTY OF DUBUQUE         )

I, Terry L. Kouba, being first duly sworn on oath, depose and state that I am the same Terry L. Kouba identified in the Direct Testimony; that I have caused the Direct Testimony, to be prepared and am familiar with the contents thereof; and that the Direct Testimony, is true and correct to the best of my knowledge and belief as of the date of this Affidavit.

/s/ Terry L. Kouba  
Terry L. Kouba

Subscribed and sworn to before me,  
a Notary Public in and for said County  
and State, this 26<sup>th</sup> day of March, 2014.

/s/ Renee A. Erschen  
Renee A. Erschen  
Notary Public  
My commission expires on October 2, 2014