

STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

FILED

PETITION OF INDIANAPOLIS POWER & LIGHT)
COMPANY ("IPL") FOR (1) AUTHORITY TO INCREASE)
RATES AND CHARGES FOR ELECTRIC UTILITY)
SERVICE, (2) APPROVAL OF REVISED DEPRECIATION)
RATES, ACCOUNTING RELIEF, INCLUDING UPDATE OF)
THE MAJOR STORM DAMAGE RESTORATION)
RESERVE ACCOUNT, APPROVAL OF A VEGETATION)
MANAGEMENT RESERVE ACCOUNT, INCLUSION IN)
BASIC RATES AND CHARGES OF THE COSTS OF)
CERTAIN PREVIOUSLY APPROVED PROJECTS,)
INCLUDING THE EAGLE VALLEY COMBINED CYCLE)
GAS TURBINE, THE NATIONAL POLLUTION)
DISCHARGE ELIMINATION SYSTEM AND COAL)
COMBUSTION RESIDUALS COMPLIANCE PROJECTS,)
RATE ADJUSTMENT MECHANISM PROPOSALS, COST)
DEFERRALS, AMORTIZATIONS, AND (3) APPROVAL OF)
NEW SCHEDULES OF RATES, RULES AND)
REGULATIONS FOR SERVICE.)

December 22, 2017

INDIANA UTILITY
REGULATORY COMMISSION

CAUSE NO. 45029

INDIANAPOLIS POWER & LIGHT COMPANY'S
SUBMISSION OF INADVERTENTLY OMITTED TESTIMONY

Indianapolis Power and Light Company ("IPL" or "Petitioner"), by counsel, hereby
submits the attached Direct Testimony and Attachments for Nicholas M. Grimmer, which was
inadvertently omitted from IPL's testimony and attachments prefiled in this Cause.

Respectfully submitted,

[Handwritten signature]

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Cause No. 45029
VERIFIED DIRECT TESTIMONY
OF
NICHOLAS M. GRIMMER
ON BEHALF OF
INDIANAPOLIS POWER & LIGHT COMPANY

INCLUDING IPL WITNESS NMG ATTACHMENTS 1, 2, AND 3

**VERIFIED DIRECT TESTIMONY OF NICHOLAS M. GRIMMER
ON BEHALF OF
INDIANAPOLIS POWER & LIGHT COMPANY**

1 **Q1. Please state your name, employer and business address.**

2 A1. Nicholas M. Grimmer. I am employed by Indianapolis Power & Light Company and my
3 address is One Monument Circle, Indianapolis, Indiana 46204.

4 **Q2. What is your position with Indianapolis Power & Light Company (“IPL” or
5 “Company”)?**

6 A2. I am Director, Fuel Supply, Logistics and Coal Combustion Product (“CCP”)
7 Management.

8 **Q3. Please briefly describe your educational and business experience.**

9 A3. I am a graduate of Indiana University with a BS in Public Policy and Management as
10 well as a graduate of the Indiana University School of Law - Indianapolis. I have
11 professional experience as a City Planner and Real Estate Broker prior to my graduating
12 from law school. I have served as an attorney in private practice with the law firm of
13 Stewart & Irwin in Indianapolis. Prior to coming to Indianapolis Power & Light
14 Company, I was Associate General Counsel in charge of leasing activities with a real
15 estate investment trust by the name of Equity Investment Group, and Corporate Counsel
16 for Do-it-Best Corp, a hardware purchasing cooperative. I was in the Legal Department
17 at Indianapolis Power & Light Company from July 2004 until I assumed the position of
18 Director, Fuel Supply (now called Director, Fuel Supply, Logistics and CCP
19 Management) on October 11, 2010.

1 **Q4. Are you familiar with IPL's purchases of fuel for use in its generating stations?**

2 A4. Yes, I have been involved in IPL's fuel related matters since 2004. As in-house counsel,
3 I worked with the Fuel Supply group reviewing a wide variety of agreements relating to
4 fuel procurement and transportation. Since October 11, 2010, I have been directly
5 involved in the day-to-day operations of the IPL Fuel Supply, Logistics & CCP
6 Management Department.

7 **Q5. Have you testified previously before the Indiana Utility Regulatory Commission**
8 **("Commission") or other regulatory agencies?**

9 A5. Yes. I have regularly testified in IPL's FAC proceedings since 2011.

10 **Q6. What is the purpose of your testimony in this proceeding?**

11 A6. My testimony discusses IPL's coal and fuel oil inventory and procurement practices and
12 supports the pro forma adjustment made to the June 30, 2017 Electric Fuel Stock
13 Inventory. I also provide the coal contract pricing for purposes of the pro forma system
14 re-dispatch presented by IPL Witness Dininger.

15 **Q7. Are you sponsoring any exhibits or attachments?**

16 A7. Yes. I am sponsoring IPL Financial Exhibit IPL-RB, Schedule RB9, IPL Witness NMG
17 Attachment 1, IPL Witness NMG Attachment 2 and IPL Witness NMG Attachment 3.

18 **Q8. Were the exhibit and attachments prepared or assembled by you or under your**
19 **direction or supervision?**

20 A8. Yes.

21 **Q9. Did you provide information used by any other IPL Witness in this Cause?**

1 A9. Yes. I provided an estimate of IPL's average cost of coal for IPL Witness Dininger,
2 which is provided as IPL Workpaper 1– IPL Witness NMG Direct Testimony.

3 **Q10. IPL previously had coal inventories at the Eagle Valley and Harding Street Station**
4 **Generation Stations. Do those stations require coal inventories going forward, and**
5 **if not, what did IPL do to eliminate those inventories?**

6 A10. The Eagle Valley coal-burning units have been retired and the Harding Street coal-
7 burning units have been retro-fitted to operate on natural gas. As such, there is no
8 ongoing need for a coal inventory at these stations and all salvageable coal that was
9 present at these stations was either burned in the normal course of business prior to the
10 shutdown or was reclaimed and transferred to the Petersburg Station and has been
11 accounted for a part of Petersburg's normal inventory.

12 **Q11. Please identify and describe the fuel requirements for IPL's coal-fired generating**
13 **station.**

14 A11. IPL burns approximately 4 to 5½ million tons of coal per year at Petersburg Generating
15 Station. The coal is mined and prepared at various mines located in southern Indiana.
16 Delivery is made to Petersburg by rail and truck. IPL maintains adequate coal
17 inventories of 25 to 50 days' supply as explained in more detail below. Diesel fuel or
18 fuel oil is primarily used for unit start-up, flame stabilization or, in some cases, as the
19 primary fuel for certain small generating units.

20 **Q12. Please describe IPL's coal and fuel oil procurement practices.**

21 A12. For coal, using IPL's load forecast, the Fuel Supply Group prepares a monthly outlook of
22 IPL's need for coal supplies for the next ten years to maintain adequate inventory levels.

1 As a need is identified, IPL starts the procurement process by preparing a solicitation for
2 competitive bids specifying the amount, term and quality needed and sending it to
3 suppliers who are on IPL's approved supplier list and who have the desired quality coal.
4 The bids are then received and analyzed based upon a lowest busbar cost factoring in
5 such variables as the price of the coal, transportation costs, quality characteristics and
6 generating unit parameters such as cost of environmental controls. A short list of
7 potential suppliers is selected and negotiations are entered into to determine the overall
8 best contract(s) for the Company. IPL reduces its overall coal market risk by diversifying
9 its suppliers, transportation options, and contract expiration dates.

10 Diesel fuel is procured by each generating plant's purchasing group. A blanket purchase
11 order or contract is set up with a fuel oil supplier based upon competitive bids and the
12 best overall service for the plant. The rack price of diesel fuel is tracked throughout the
13 year and deliveries are ordered by plant personnel based upon inventory levels and the
14 market price of diesel fuel. Fuel oil represents less than 1.3% of IPL's cost of coal for
15 Petersburg.

16 **Q13. Please explain and indicate how much coal (in days) is considered to be a reasonable**
17 **level of coal inventory.**

18 A13. The amount of coal inventory needed at Petersburg is based upon several factors such as
19 the quality and availability of the coal needed, whether the coal is purchased under
20 contract or on the spot market, the predictability of the consumption at the plant, price
21 volatility in the coal and electric power markets and the possibility for supply
22 interruptions. These variables cause coal inventories to fluctuate up and down every
23 month. Operational and safety concerns also play an important part in determining the

1 target inventory level. Having the inventory too low can cause unit operational issues
2 such as derates in an extreme weather event like excessive rain and having the inventory
3 too high can cause safety issues for trucks dumping coal on the pile. Over the past five
4 years, Petersburg's inventory has been as low as 25 days' supply and as high as 71 days'
5 supply. Some of these variables can be anticipated and some cannot so the uncertainty
6 must be managed. Each year, IPL examines the most recent five year historical burns on
7 a month-by-month basis. The highest monthly coal burn in the past five years divided by
8 30 is known as the Maximum Burn Day ("MBD"). The amount of coal in inventory
9 divided by the MBD provides an approximation of the number of days of supply on hand
10 each month based upon peak generation when fuel supply is most critical. IPL Witness
11 NMG Attachment 1 shows the MBD, the average inventory at each of IPL's generation
12 stations covering the period beginning January 1, 2012 through December 31, 2016. The
13 average inventory represents a 5-year rolling average using month end reports for the
14 respective time period and the current target inventory for each station. Due to the fact
15 that IPL's Harding Street Station has been converted to natural gas and IPL's Eagle
16 Valley coal-fired generation units have been retired, their current target inventories are
17 zero. The desired inventory targets represent the levels which based on IPL's experience
18 are reasonable in order to account for all of the variables previously mentioned. The
19 desired inventory targets can be adjusted up or down at various times for specific reasons.
20 For example, prior to periods of expected high burns or if a temporary mine shutdown is
21 anticipated, the inventory might be increased until the period had passed. If a generating
22 unit maintenance outage is planned, the inventory might be decreased during the time

1 leading up to the outage. IPL maintains monthly tonnage flexibility in its coal contracts
2 to enable it to manage through these periods.

3 **Q14. Does IPL keep a fuel oil inventory for generation purposes at each of its plants?**

4 A14. No. Only Petersburg and Harding Street have fuel oil in inventory for the purpose of
5 generating power.

6 **Q15. How does Petersburg use fuel oil in the generation process and what is the target
7 inventory at this location?**

8 A15. The primary generating units at Petersburg are coal-fired. These units use fuel oil to re-
9 fire the units after they come off line. They also use fuel oil from time to time to stabilize
10 the flame during periods of disruption. Petersburg also has three 2.5 MW diesel
11 generators on-site. These units provide Petersburg with its black start capabilities. Black
12 start capability refers to the station's ability to come on line without drawing auxiliary
13 power from another unit or the grid. The target fuel oil inventory for Petersburg is
14 325,000 gallons.

15 **Q16. How did you arrive at the Petersburg target inventory level?**

16 A16. Petersburg's inventory target took several things into consideration. A single restart of
17 Units 3 or 4 will consume 67,000 gallons on average. It is not uncommon for these units
18 to be restarted several times a year. In addition, this inventory target is consistent with
19 actual average inventory over the last five years and very close to the inventory at the
20 close of the test year.

21 **Q17. How does Harding Street use fuel oil in the generation process and what is the
22 target inventory at this location?**

1 A17. Harding Street is home to both natural gas and fuel oil powered generators. The three
2 primary generators at Harding Street, Units 5, 6 & 7, are natural gas fired units and have
3 no need for fuel oil. However, Harding Street has a pair of fuel oil only powered units
4 (Units 1&2) and two dual fuel units that can operate on both natural gas and fuel oil (GTs
5 4 & 5). These fuel oil and dual fuel generation units provide Harding Street with its
6 black start capabilities. The target inventory level for Harding Street is 550,000 gallons.

7 **Q18. How did you arrive at the Harding Street target inventory level?**

8 A18. Harding Street's black start protocol requires, at a minimum, a 24-hour supply of fuel oil
9 sufficient to drive Units 1 & 2 and GTs 4 & 5 at full load. This calculates to
10 approximately 278,000 gallons. The target inventory was set at approximately two days'
11 supply at full load. It is important to note that at Petersburg, fuel oil is used to transition
12 from a black start to a sustainable coal-fired state because Harding Street is dependent on
13 the delivery of natural gas. In the absence of a reliable gas supply, fuel oil is the only
14 source of fuel until the natural gas disruption is resolved.

15 **Q19. How much fuel, by source type, did IPL's plants consume in the test year ending**
16 **June 30, 2017?**

17 A19. The amount of coal and fuel oil consumed by Petersburg is shown on IPL Witness NMG
18 Attachment 2.

19 **Q20. What is the cost of the fuel consumed by IPL, by source type, in the test year ending**
20 **June 30, 2017?**

21 A20. The amounts are shown on IPL Witness NMG Attachment 2.

22 **Q21. Is the amount stated above consistent with prior years?**

1 A21. Generally, yes. Fuel costs can vary from year to year based upon factors such as price
2 fluctuations, weather, load growth, planned generating unit maintenance outages,
3 unplanned generating unit outages, availability of energy from renewables such as wind
4 power and outside market forces such as the price for natural gas and electricity available
5 for purchase on the grid. Although the coal inventory at the end of the test year was
6 within the normal operating parameters, the inventory was slightly higher than our
7 inventory target.

8 **Q22. What other costs have been included in fuel inventory for rate base purposes?**

9 A22. The cost of freeze protection in the winter months and the cost of railcar maintenance
10 directly related to the transportation of coal are included. These costs represent less than
11 0.2% of the total cost of coal for Petersburg.

12 **Q23. Please explain the coal pro forma adjustment shown on IPL Financial Exhibit IPL-
13 RB, Schedule RB9.**

14 A23. The coal inventories at the end of the test year (June 30, 2017) were slightly above the
15 desired levels shown on IPL Witness NMG Attachment 1. An adjustment is made to the
16 ending inventories as of June 30, 2017, to bring them down to the target levels shown in
17 IPL Witness NMG Attachment 1. Specifically, the test year ending inventory was higher
18 than IPL's average target inventory level. To determine the value of the coal, I used the
19 average weighted cost of inventory. This represents the price of the current ton in
20 inventory in order to bring each plant's inventory down to the desired level. As shown
21 on IPL Financial Exhibit IPL-RB, Schedule RB9, this results in a pro forma decrease to
22 the June 30, 2017 inventory of \$1,697,000. If this adjustment was not included, fuel
23 inventory would be overstated.

1 **Q24. Please explain the fuel oil pro forma adjustment shown on IPL Financial Exhibit**
2 **IPL-RB, Schedule RB9.**

3 A24. At the end of the Test Year (June 30, 2017), the fuel oil inventories at both Harding
4 Street Station and Petersburg Station were below the desired levels shown on IPL
5 Witness NMG Attachment 3. An adjustment is made to the ending inventories as of June
6 30, 2017, to bring them up to the target levels shown in IPL Witness NMG Attachment 3.
7 To determine the value of the fuel oil, I used the average weighted cost of inventory. As
8 shown on IPL Financial Exhibit IPL-RB, Schedule RB9, this results in a pro forma
9 increase to the June 30, 2017 inventory of \$234,041. If this adjustment was not included,
10 fuel oil inventory would be understated.

11 **Q25. Please describe the information you provided to support IPL Witness Dininger's**
12 **testimony.**

13 A25. I provided IPL Workpaper 1– IPL Witness NMG Direct Testimony, which calculates
14 estimates of IPL's cost of coal for the period July 2016 through June 2017 to be used in
15 the pro forma dispatch performed by IPL Witness Dininger. The estimated costs were
16 developed from IPL's coal and transportation contracts.

17 **Q26. Does that conclude your verified pre-filed direct testimony?**

18 A26. Yes.

VERIFICATION

I, Nicholas M. Grimmer, Director, Fuel Supply, Logistics and Coal Combustion Product Management for Indianapolis Power & Light Company, affirm under penalties of perjury that the foregoing representations are true and correct to the best of my knowledge, information and belief.

A handwritten signature in black ink, appearing to read "Nicholas M. Grimmer", written over a horizontal line.

Nicholas M. Grimmer

Dated: December 22, 2017

IPL COAL INVENTORY LEVELS

	Petersburg
Maximum Burn Day Tons	16,900
Average Coal Inventory Tons (2012-2016)	697,500
Average Coal Inventory Days (2012-2016)	41.3
Desired Inventory Tons	660,000
Desired Inventory Days	39.0

CALCULATION OF PRO-FORMA ADJUSTMENT

	Petersburg
Coal Inventory (Actual Tons 6-30-17)	695,570
Tons Subtracted	(35,570)
Cost of Inventory Tons (\$/Ton)	\$47.71
Pro Forma Adjustment	\$1,697,045
Source of Coal	Somerville, Oaktown, Antioch & Gibson County

IPL FUEL CONSUMPTION**TEST YEAR JULY 1, 2016 THROUGH JUNE 30, 2017**

Generating Station	Measurement	Fuel Consumption
Petersburg- Coal	Tons	4,665,299
Petersburg- Oil	Gallons	1,317,414

IPL COST OF FUEL CONSUMPTION**TEST YEAR JULY 1, 2016 THROUGH JUNE 30, 2017**

Generating Station	Cost of Fuel Consumption
Petersburg- Coal	\$225,383,202
Petersburg- Oil	\$2,001,349

IPL OIL INVENTORY LEVELS AT JUNE 30, 2017

	Petersburg	Harding Street
Oil Gallons	319,131	383,226
Average Price per Gallon	\$ 1.80	\$ 1.34

CALCULATION OF PRO-FORMA ADJUSTMENT

	Petersburg	Harding Street
Oil Inventory Pro Forma Gallons	325,000	550,000
Oil Inventory Gallons at June 30, 2017	319,131	383,226
Proposed Change in Gallons	5,869	166,774
Average Price per Gallon at June 30, 2017	\$1.80	\$1.34
Oil Inventory Adjustment	\$10,564	\$223,477