

STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

IN THE MATTER OF THE VERIFIED)
PETITION OF INDIANAPOLIS POWER &)
LIGHT COMPANY D/B/A AES INDIANA)
PURSUANT TO IND. CODE § 8-1-40-16 FOR) CAUSE NO. 45504
APPROVAL OF RATE FOR THE)
PROCUREMENT OF EXCESS DISTRIBUTED)
GENERATION BY AES INDIANA)

**PETITIONER’S SUBMISSION OF DIRECT TESTIMONY OF
MATTHEW FIELDS**

Indianapolis Power & Light Company d/b/a/ AES Indiana (“Petitioner”, “AES Indiana” or the “Company”), by counsel, hereby submits the direct testimony and attachments of Matthew Fields.

Respectfully submitted,



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CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing was served upon the following via electronic email, First Class United States Mail, postage prepaid this 1st day of March, 2021 on:

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VERIFIED DIRECT TESTIMONY

OF

MATTHEW D. FIELDS

ON BEHALF OF

INDIANAPOLIS POWER & LIGHT COMPANY D/B/A AES INDIANA

SPONSORING AES INDIANA ATTACHMENT MDF-1

**VERIFIED DIRECT TESTIMONY OF MATTHEW D. FIELDS
ON BEHALF OF
INDIANAPOLIS POWER & LIGHT COMPANY D/B/A AES INDIANA**

1. INTRODUCTION

1

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

3 A1. My name is Matthew D. Fields. I am employed by Indianapolis Power & Light Company
4 d/b/a AES Indiana (“AES Indiana” or “Company”) whose business address is One
5 Monument Circle, Indianapolis, Indiana, 46204.

6 **Q2. What is your position with the AES Indiana?**

7 A2. I am Senior Engineer, Regulatory Affairs. In this role I am responsible for developing
8 technical analysis in support of state, federal and RTO policy and strategy matters.

9 **Q3. Please briefly describe your educational and professional background.**

10 A3. I hold a Bachelor of Science in Nuclear Engineering and a Master of Science in Nuclear
11 Engineering from Purdue University. I also hold a Master of Arts in Theological Studies
12 from The Southern Baptist Theological Seminary. During my time at Purdue I conducted
13 research, wrote a graduate thesis on nuclear fusion materials and advanced semiconductor
14 manufacturing, and was a fellow of the National Academy for Nuclear Training. I have
15 been a member and active participant of IEEE (Institute of Electrical and Electronics
16 Engineers) and ANS (American Nuclear Society) at various points in my career.

17 **Q4. Please summarize your prior work experience.**

1 A4. I have been an employee of AES Indiana since February 2017, initially as an engineer in
2 the transmission planning group. I worked in that group until July 2020, when I moved
3 into Regulatory Affairs in this current role.

4 From September 2013 to February 2017, I was employed as an engineer at Hoosier Energy
5 Rural Electric Cooperative. I worked there as a system planning engineer, developing
6 plans and technical analysis in support of the expansion of the Hoosier Energy transmission
7 system. From October 2011 to July 2013, I was employed by Southern Nuclear Operating
8 Company as a Nuclear Core Analysis Engineer. In that position, I was responsible for
9 developing nuclear core designs and associated complex neutron physics analysis along
10 with nuclear fuel budgets to meet Southern Company's fleet-wide energy generation needs.

11 **Q5. What is the purpose of your testimony in this proceeding?**

12 A5. In compliance with Ind. Code § 8-1-40-16, my testimony presents and supports AES
13 Indiana's proposed rate for the procurement of excess distributed generation ("EDG"),
14 which AES Indiana requests the Commission to approve in this proceeding. It also requests
15 that the Commission allow AES Indiana to file supplemental testimony on or before June
16 1, 2021, to address AES Indiana's calculation of EDG and application of any EDG credits
17 for consumers who leave AES Indiana's system prior to receiving a full set-off of any such
18 credit.

19 **Q6. Are you sponsoring any attachments?**

20 A6. Yes. I sponsor:

- 21 1.) AES Indiana Attachment MDF-1 which is a copy of the Petition in this
22 proceeding. Because the Petition has been filed separately with the

1 Commission, I have not reproduced a copy in the prefiling of my testimony.
2 The Petition will be offered as an attachment to my testimony at the evidentiary
3 hearing in this Cause.

4 **Q7. Are you submitting any workpapers?**

5 A7. Yes. I've submitted Workpaper MDF-1, which is an electronic spreadsheet showing the
6 2020 real time hourly LMPs at the IPL.IPL load node, the sum of those hourly LMPs, the
7 number of hours in 2020, and the resulting "average marginal price of electricity" (obtained
8 by dividing the LMP sum by the hours in 2020).

9 **Q8. Were the attachment and workpapers prepared or assembled by you or under your**
10 **direction and supervision?**

11 A8. Yes.

12 **1. DEFINITIONS**

13 **Q9. Please define the term "Distributed Generation" as used in your testimony.**

14 A9. I am using the term "Distributed Generation" as defined in Ind. Code § 8-1-40-3:

15 (a) As used in this chapter, "distributed generation" means
16 electricity produced by a generator or other device that is:

17 (1) located on the customer's premises;

18 (2) owned by the customer;

19 (3) sized at a nameplate capacity of the lesser of:

20 (A) not more than one (1) megawatt; or

21 (B) the customer's average annual consumption of electricity on
22 the premises; and

23 (4) interconnected and operated in parallel with the electricity
24 supplier's facilities in accordance with the commission's approved
25 interconnection standards.

1 (b) The term does not include electricity produced by the following:

2 (1) An electric generator used exclusively for emergency purposes.

3 (2) A net metering facility (as defined in 170 IAC 4-4.2-1(k))
4 operating under a net metering tariff.

5 **Q10. Please define the term “Excess Distributed Generation” as used in your testimony.**

6 A10. I am using the term “Excess Distributed Generation” as defined in Ind. Code § 8-1-40-5:

7 As used in this chapter, “excess distributed generation” means the
8 difference between:

9 (1) the electricity that is supplied by an electricity supplier to a
10 customer that produces distributed generation; and

11 (2) the electricity that is supplied back to the electricity supplier by
12 the customer.

13 **2. RATE CALCULATION**

14 **Q11. Please describe the statutory definition of the formula to determine the rate to be**
15 **credited to customers for the procurement of Excess Distributed Generation.**

16 A11. Per Indiana Code § 8-1-40-17, the proposed rate is the product of (1) the average marginal
17 price of electricity paid by the electricity supplier during the most recent calendar year;
18 multiplied by (2) one and twenty-five hundredths (1.25).

19 **Q12. How did AES Indiana calculate the average marginal price of electricity paid by AES**
20 **Indiana during the most recent calendar year?**

21 A12. As shown in Workpaper MDF-1, AES Indiana calculated the average marginal price of
22 electricity by averaging the 2020 real time hourly LMPs at the IPL.IPL load node. The
23 average was calculated by summing the hourly LMPs for the preceding calendar year and
24 then dividing by 8784, which represents the total hours in the 366 days in 2020. The result

1 was \$22.37/MWh. AES Indiana selected the IPL.IPL node because AES Indiana is
2 charged for energy at that node.

3 **Q13. What is the EDG rate for the procurement of Excess Distributed Generation using**
4 **the formula and input described above?**

5 A13. AES Indiana's proposed EDG rate is \$27.96 per MWh, which when converted to a per
6 kilowatt-hour basis (i.e. divided by 1000) is \$0.027960 per kWh. That number was
7 calculated by multiplying the average marginal price of electricity paid by AES Indiana
8 during the most recent calendar year (\$22.37/MWh) by 1.25.

9 **3. CALCULATION OF EXCESS DISTRIBUTED GENERATION**

10 **Q14. Does AES Indiana propose a method for calculating EDG?**

11 A14. Not at this time. Consistent with Ind. Code § 8-1-40-16, AES Indiana now offers its
12 proposed EDG rate for approval. It requests that the Commission allow it to file
13 supplemental testimony on or before June 1, 2021, to address AES Indiana's proposed
14 calculation of EDG and application of customer credits for EDG.

15 **Q15. What issues does calculation of EDG raise?**

16 A15. Ind. Code § 8-1-40-5 defines EDG as the difference between: (1) the electricity that is
17 supplied by an electricity supplier to a customer that produces distributed generation; and
18 (2) the electricity that is supplied back to the electricity supplier by the customer. Unlike
19 the regulations setting the methodology for net metering,¹ the statutory definition for EDG
20 is silent as to when a utility, like AES Indiana, must calculate EDG. The parties in pending

¹ 170 IAC 4-4.2-7 provides, in relevant part, that "[t]he investor-owned electric utility shall measure the difference between the amount of electricity delivered by the investor-owned electric utility to the net metering customer and the amount of electricity generated by the net metering customer and delivered to the investor-owned electric utility *during the billing period*[" (emphasis supplied).

1 Cause No. 45378 have presented two possibilities for the frequency of the statutorily-
2 required EDG calculation. Vectren proposed that EDG be calculated “instantaneously”.
3 The Consumer parties in the Vectren case proposed that EDG be calculated monthly, just
4 like net metering. AES Indiana believes there may be additional methods for calculating
5 EDG that comply with Ind. Code § 8-1-40-5, that do not mimic net metering’s
6 methodology, and that mitigate certain of the adverse incentives net metering creates.

7 **Q16. Any other issues AES Indiana seeks to address in its supplemental testimony?**

8 A16. While it appears clear that Ind. Code § 8-1-40-18 requires that DG customers receive a
9 credit on their monthly bills for the total EDG that month and that any excess credit carries
10 forward to the next month, the statute is silent as to application of any excess EDG credit
11 if a DG customer leaves the premises before that credit has been fully set off against the
12 customer’s other charges.

13 **Q17. What is the benefit of AES Indiana’s filing the described supplemental testimony?**

14 A17. AES Indiana believes that presentation and approval of AES Indiana’s proposed EDG rate
15 should not be controversial – the method for calculating the EDG rate is set forth in the
16 statute and is derived from publicly available data. Application of that EDG rate is,
17 however, more complicated, as the briefing in pending Cause No. 45378 has shown. AES
18 Indiana believes that allowing it to file supplemental testimony on or before June 1, 2021,
19 focusing on its proposed calculation of EDG and application of EDG credits, is reasonable
20 and makes good sense. It will allow AES Indiana to (a) more thoroughly consider methods
21 for calculating EDG alternative to simply mimicking net metering, as AES Indiana
22 understands is the purpose of the new statutory construct and the proscribed termination of
23 net metering; and (b) identify and analyze any technological issues associated with those

1 potential, alternative calculation methods. The additional time will also likely permit a
2 more robust presentation of AES Indiana's chosen EDG calculation method to the
3 Commission.²

4 **Q18. Will Ind. Code §§ 8-1-40-10 and -12 affect AES Indiana's proposal to file**
5 **supplemental testimony in 90 days?**

6 A18. No. The aggregate amount of net metering facility nameplate capacity under AES
7 Indiana's net metering tariff was only 0.2% of its most recent summer peak load and thus
8 is not expected to equal 1.5% of AES Indiana's most recent summer peak load before July
9 1, 2022.³ Consequently, AES Indiana reasonably expects that its current net metering tariff
10 will remain available until July 1, 2022. The approach proposed herein will allow the
11 Commission to determine the relevant issues in an orderly manner and in advance of July
12 1, 2022.

13 **Q19. Ind. Code § 8-1-40-19 provides that an electricity supplier may request Commission**
14 **approval of the recovery of energy delivery costs attributable to serving customers**
15 **that produce distributed generation. This statute provides that this provision exists**
16 **to ensure that customers that produce distributed generation are properly charged**
17 **for the costs of the electricity delivery system through which an electricity supplier:**
18 **(1) provides retail electric service to those customers; and (2) procure excess**

² AES Indiana intends to submit a proposed Rider with its supplemental testimony, identifying its proposed EDG rate, its proposed method for calculating EDG and its proposed method for applying EDG credits.

³ Ind. Code § 8-1-40-10 provides: "Before July 1, 2022, if an electricity supplier reasonably anticipates, at any point in a calendar year, that the aggregate amount of net metering facility nameplate capacity under the electricity supplier's net metering tariff will equal at least one and one-half percent (1.5%) of the most recent summer peak load of the electricity supplier, the electricity supplier shall, in accordance with section 16 of this chapter, petition the commission for approval of a rate for the procurement of excess distributed generation."

1 **distributed generation from those customers. Does AES Indiana seek such relief in**
2 **this Cause?**

3 A19. No. AES Indiana may address this issue in its next general rate case as necessary or
4 appropriate, at which time AES Indiana will present an updated cost of service study as is
5 customary in general rate cases.

6 **4. CONCLUSION**

7 **Q20. What is your recommendation to the Commission?**

8 A20. That the Commission allow AES Indiana to submit supplemental testimony on or before
9 June 1, 2021, to address calculation of excess distributed generation and application of
10 customer excess distributed generation credits and then approve AES Indiana's requested
11 rate for the procurement of excess distributed generation and its methods for calculating
12 excess distributed generation and for applying excess distributed generation credits.

13 **Q21. Does this conclude your pre-filed testimony?**

14 A21. Yes.

VERIFICATION

I, Matthew Fields, Senior Engineer, Regulatory Affairs, affirm under penalties of perjury that the foregoing representations are true and correct to the best of my knowledge, information and belief.

Dated: March 1, 2021


Matthew Fields

AES Indiana Attachment MDF-1

[Verified Petition – Not Reproduced Herein]