

**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.)**

DIRECT TESTIMONY OF KENDALL LUDWIG

**ON BEHALF OF
INDIANA DISTRIBUTED ENERGY ALLIANCE**

AUGUST 17, 2021

I. INTRODUCTION

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

2 A. My name is Kendall Ludwig, and I am the Director of Operations for Jefferson
3 Electric LLC. My business address is 2114 E. Washington Street, Indianapolis,
4 Indiana, 46201.

5 **Q. Please describe your business activity.**

6 A. Jefferson Electric LLC is an electrical contracting firm that specializes in renewable
7 energy installations and electric vehicle support, as well as providing other
8 electrical services. I have been in the renewable energy business since 2016.

9 **Q. Please describe your educational background, training, and experience.**

10 A. I have a Bachelor's Degree in Business Administration. I am a licensed Master
11 Electrician. I have attended numerous solar conferences and training programs. My
12 experience includes 10 years in education, 7 years in the solar business, and 20
13 years in electrical.

14 **Q. Please describe your professional background.**

15 A. I have worked for two different providers of renewable energy solutions within the
16 Indianapolis area. In my current role with Jefferson Electric, our company has
17 grown to employ 40 full-time employees, 8 part-time employees internally, and 4
18 other positions with subcontractors and suppliers. I hope the regulatory
19 environment in Indiana will allow the continued growth of our solar business and
20 number of employees.

1 **Q. What are your duties, responsibilities, and goals with Jefferson Electric?**

2 A. I oversee the Operations Department and am responsible for the execution of both
3 electrical and solar projects. I am very familiar with our solar marketing and
4 customer interaction efforts and feedback. I assist in the design and engineering of
5 roof mounted, ground mounted, battery backup, and off-grid solar systems. I
6 consult with our project managers to create and deliver innovative electrical
7 solutions to meet the needs of our customers in a constantly changing environment.

8 **Q. Have you previously testified before the Indiana Utility Regulatory**
9 **Commission (“IURC”)?**

10 A. No.

II. SUMMARY

11 **Q. What is the purpose of your testimony in this Cause?**

12 A. My testimony will explain the adverse impacts that AES’s excess distributed
13 generation (“EDG”) proposals would have on our business, other Indiana solar
14 companies, our prospective customers, ratepayers served by AES, and Indiana’s
15 economy.

III. NEGATIVE IMPACTS OF AES’S PROPOSAL

16 **Q. Please describe the Hoosiers that express interest in solar installation and**
17 **those who own solar generation.**

18 A. Those who own and those who are interested in owning solar generation units
19 represent a cross section of Indiana. They include small residential customers,
20 farms, municipal governments, schools, commercial business customers, and
21 industrial customers. The vast majority of our customers purchase a solar energy

1 system to provide a long term, cost-effective, fuel-less energy supply that, over a
2 reasonable time, generates savings that offset the system’s cost, i.e. investment
3 payback period. Without a reasonable investment payback period, there would be
4 very little demand for solar energy systems.

5 **Q. What are the common critical considerations for prospective solar installation**
6 **customers?**

7 A. The most critical consideration generally is system cost and the period over which
8 the solar equipment and installation costs will be recovered. Most customers want
9 approximately no more than a 10 year payback period.

10 **Q. How would AES’s no netting proposal and approximate 2.7 cents per kWh**
11 **EDG proposal impact customer payback periods?**

12 A. As Mr. Inskeep explains, AES’s proposals would increase the customer payback
13 period to over 20 to 30 years.

14 **Q. What is the current status of the federal tax credit for solar installations?**

15 A. The federal Investment Tax Credit (“ITC”) currently is 26%. The 26% credit would
16 have expired but was briefly extended with the December 2020 Covid Stimulus
17 Bill. In 2023, or only six months after AES’s EDG Rider is scheduled to go into
18 effect, the ITC will step down to a 22% tax credit. Beginning in 2024, the
19 commercial ITC drops down to 10%, and the residential ITC will be eliminated for
20 new systems. As ITC steps down and later ends, customer payback periods
21 increase.

IV. HARM TO INDIANA'S ECONOMY

1 **Q. What would be the impact of AES's proposals on customers' interest in**
2 **investing in solar generation?**

3 A. The resulting augmentation of customer investment payback periods would make
4 AES customers extremely reluctant or unwilling to make the investment in solar.
5 This and similar proposals would be devastating to Indiana's solar industry,
6 resulting in job losses and market contraction to an industry that was just beginning
7 to blossom. This will push Indiana's solar jobs and new job opportunities
8 backwards instead of moving forward.

9 **Q. What would be the impact of AES's current EDG proposal on your company**
10 **and other Indiana solar installation companies?**

11 A. It will be very detrimental to both our and other Indiana solar businesses. Our
12 company alone currently employs 48 people, and we are currently working to hire
13 more. In addition, we engage many subcontract workers. AES's proposals could
14 force us to lay off workers and possibly cease installation of solar energy systems
15 in AES's service area. Instead of focusing on investing our time and resources in
16 Indiana, we and other Indiana solar companies would have to shift focus to
17 neighboring states that treat solar installations reasonably, rather than punishing
18 solar participants. For example, in Michigan, new residential DG customers receive
19 substantially higher export credits. The credit rate for Indiana Michigan Power
20 Company's new Michigan customers' exports is \$0.10024/kWh, about four times
21 as much as AES's proposed compensation rate. Similarly, Consumers Energy's
22 new residential customers' credit is \$0.119655/kWh for summer on-peak,
23 \$0.080485/kWh for summer off-peak, and \$0.084785/kWh for all exports in non-
24 summer months. If after July 1, 2022, the Indiana regulatory framework for EDG

1 will be like that proposed by AES, we will likely shift our business focus out of
2 Indiana. We will be forced to cut our Indiana workforce and may replace them
3 with out of state workers. Other Indiana solar installation companies will suffer the
4 same financial harm from EDG proposals like AES's and will logically shift their
5 solar business focus, employment opportunities, and financial stimulus to
6 neighboring states that treat solar customers reasonably.

7 In neighboring states, we have seen governments work to promote the
8 implementation of solar energy by the creation of solar renewable energy
9 certificates' markets, state tax credits, and other local incentive programs which
10 have motivated utilities to diversify their means of energy generation and provide
11 incentives to their customers. If AES is allowed to implement their EDG proposals,
12 their customers will experience unreasonably longer "payback" periods for the cost
13 of new solar energy systems. This will, to a large degree, end customer interest in
14 solar installations and force solar installation companies to focus their efforts
15 elsewhere and possibly lay off Indiana workers. Solar jobs provide a stable income
16 for many families throughout Indiana, my own included. Jobs in the renewable
17 energy sector are generally safer and provide for a better quality of life than jobs in
18 other antiquated forms of energy generation such as coal mining or work in oil
19 fields. The renewable energy sector is currently one of the fastest growing
20 throughout the United States. Proposals like AES's will reduce Indiana solar jobs
21 rather allow their continued growth.

1 **Q. What economic contribution does your solar business alone make to the**
2 **wellbeing of AES's service area and in Indiana as a whole?**

3 A. Last year, our solar business did approximately \$2,500,000.00 of projects in Indiana
4 as a whole and approximately \$1,000,000.00 of projects in AES's service area. We
5 paid approximately \$625,000.00 in Indiana wages with benefits estimated at an
6 additional 30%. We also regularly hire local electricians and contractors. When
7 possible, we purchase materials and supplies locally. The money we inject into
8 Indiana's economy gets re-spent and invested by the Hoosier recipients several
9 times before those dollars leave Indiana. The business pays state and local taxes
10 improving the ability of the government to provide public services. I believe our
11 solar business makes a substantial contribution to the economic well-being of
12 Indiana and Hoosiers in AES's service area.

13 The Indiana operations of other Indiana solar installation companies provide the
14 same types of economic benefits. Some have business operations larger than ours.
15 EDG proposals like AES's will financially harm Indiana solar businesses and the
16 jobs, economic development, and stimulus they currently create.

17 **Q. Does Indiana and local government benefit from your solar business activity?**

18 A. Yes. Our company, employees, and contract workers pay local and state income
19 taxes and sales taxes. The economic stimulus we create spurs more tax revenues
20 from ripple effect beneficiaries as wages and profits get spent in local economies.

21 **Q. Is AES's electric service area the only area of Indiana in which Jefferson**
22 **Electric does business?**

23 A. No, it is not. But all the other Indiana investor-owned utilities have filed EDG cases
24 proposing harmful netting and low EDG rates that would also dramatically lengthen

1 customer investment payback periods. Approval of these punitive EDG proposals
2 would force our company and other solar companies to focus business efforts in
3 nearby states that do not discourage customer investments in solar energy
4 generation and offer substantially higher EDG rates, e.g. 9 to 11 cents / kWh.

V. **BENEFITS OF CUSTOMER-OWNED SOLAR GENERATION.**

5 **Q. Please describe the benefits that distributed customer-owned solar generation**
6 **bring to AES and all AES customers.**

7 A. Distributed solar generation has many benefits. First is the improvement to the
8 environment by displacing the need to burn carbon-emitting coal, diesel, or natural
9 gas to generate electricity. Second is the reduced load on the transmission system
10 and reduced transmission line loss. The current electrical infrastructure is aging and
11 is in disrepair in many areas. As electricity follows the path of least resistance, DG
12 export energy is consumed by other AES customers in the area it is generated in,
13 thus reducing loads on larger volatile transmission lines and line loss. Third is
14 reduced demand for electricity in daylight hours resulting in decreased purchased
15 power, including during peak demand hours. Customer-owned solar is an
16 extraordinary form of customer financed demand side management reducing or
17 eliminating solar customer peak period demand and shaving the utility's total peak
18 demand. But instead of solar customers receiving additional compensation for this
19 customer financed demand side management, AES treats solar customers
20 punitively. Fourth is avoided carbon-based fuel use and costs, among many other
21 benefits not listed here.

1 **Q. What direct economic benefits have customer-owned solar brought to all**
2 **Hoosiers and to state and local Indiana governments?**

3 A. Customer-owned solar brings jobs and the economic stimulus they create. The
4 Indiana solar industry has grown substantially over the past ten years. The number
5 of solar jobs has increased to approximately 3,400 in 2020. The solar industry also
6 engages in substantial contract work, often with union electrical workers. It buys
7 local goods and materials. All of those economic benefits are multiplied by the
8 ripple effect of solar employees' contractors and merchants spending their solar
9 industry earnings locally in Indiana. State, county and municipal governments all
10 thereby benefit from the various tax revenues that the solar economic stimulus
11 creates. The full Solar Foundation 2020 Report describing the growth in solar jobs
12 is available at <https://www.thesolarfoundation.org/national/>.

VI. OTHER REASONS WHY AES'S EDG PROPOSALS ARE UNJUST,
UNREASONABLE AND INEQUITABLE

13 **Q. Are there other aspects of AES's EDG proposals that, in your opinion, are**
14 **unjust and should be discussed?**

15 A. Yes, there are. Solar installation companies like ours endured the cost and struggle
16 of starting new Indiana businesses. We overcame all the challenges and created
17 successful solar installation businesses. At the same time, investor-owned electric
18 utilities were promoting high cost rates and increases in their base rates to fund coal
19 fired pollution control and huge new gas fired generation. Now their focus is on
20 customers paying for remaining net investments in old coal fired generation and
21 shifting to large scale solar and wind farms. But as they make the transition to
22 renewable energy, AES and others ask to deploy an EDG regime that clearly serves

1 to financially constrict, or end, new customer solar DG and the businesses that
2 install customer solar. It is one thing to have a monopoly service area for retail sales
3 of electricity, but it is completely inequitable and unfair to then seek regulatory
4 treatments that serve to prevent customers from using the sun to illuminate, cool,
5 and heat their homes with their own solar generation. The sun shines to sustain all
6 our lives, not to become the monopoly tool of AES and other utilities. So severely
7 restricting the value of customers' monthly solar generation exports moves AES
8 into monopolizing solar energy generation in its service area through its own
9 installation of solar farms. I believe AES's EDG proposals are punitive, seek to
10 prevent customers from installing solar generation, and are unjust and
11 unreasonable.

12 **Q. What are your recommendations to the Commission?**

13 A. The Commission should reject AES's "no netting" and overall EDG proposal.

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

15 A. Yes, it does at this time.

VERIFICATION

I, Kendall Ludwig, 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 cursive script that reads "Kendall Ludwig".

Kendall Ludwig

August 17, 2021