OFFICIAL EXHIBITS STATE OF INDIANA FILED October 15, 2024 INDIANA UTILITY REGULATORY COMMISSION

INDIANA UTILITY REGULATORY COMMISSION

IN THE MATTER OF THE VERIFIED PETITION OF) INDIANA MICHIGAN POWER COMPANY FOR) APPROVAL OF MODIFICATIONS TO ITS) INDUSTRIAL POWER TARIFF – TARIFF I.P.)

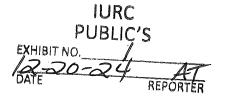
CAUSE NO. 46097

INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR

PUBLIC'S EXHIBIT NO. 1

TESTIMONY OF OUCC WITNESS PATRICK A. KELLEY

October 15, 2024



Respectfully submitted,

Indiana Office of Utility Consumer Counselor

Lorraine Hitz Attorney No. 18006-29 Senior Deputy Consumer Counselor

TESTIMONY OF OUCC WITNESS PATRICK A. KELLEY CAUSE NO. 46097 INDIANA MICHIGAN POWER COMPANY

I. INTRODUCTION

1 **Q**: Please state your name, business address, and employment capacity. 2 A: My name is Patrick A. Kelley, and my business address is 115 West Washington 3 Street, Suite 1500 South, Indianapolis, Indiana 46204. I am employed by the 4 Indiana Office of Utility Consumer Counselor ("OUCC") as a Utility Analyst. My 5 qualifications are set forth in Appendix A of this document. 6 **O**: What is the purpose of your testimony? 7 A: My testimony evaluates Indiana Michigan Power Company's ("I&M" or 8 "Petitioner") request for the Indiana Utility Regulatory Commission 9 ("Commission") to approve the proposed modifications in its Industrial Power 10 Tariff - Tariff IP ("Tariff IP"). My testimony provides an analysis of the impact 11 these large load customers are creating on national, state, and local electric demand. 12 **O**: What are your key observations regarding data centers and Petitioner's case in chief? 13 14 A: The OUCC strongly supports economic development and recognizes the benefits 15 of data center investment. But current utility ratepayers in all classes should be 16 shielded from any stranded costs that may occur. I&M's proposed tariff includes 17 some safeguards for existing residential, commercial, and industrial customers. 18 However, additional safeguards are needed as discussed in my testimony and that

19 of OUCC witness Derek J. Leader.

1		Additionally, it is crucial that the principle of cost causation be applied to the data
2		center loads. Current I&M ratepayers should not be required to subsidize utility
3		investment to accommodate large load requirements.
4	Q:	Please describe the review you conducted to prepare your testimony.
5	A:	I reviewed I&M's Verified Petition and prefiled testimony in this proceeding. I also
6		met with other OUCC staff members to discuss issues this case presents.
7		Additionally, I reviewed relevant news articles and other industry materials about
8		the impact of "large load customers" and "hyperscalers" ¹² and the impact
9		hyperscaler projects will have on I&M and its customers.
10	Q:	Are you sponsoring any attachments?
11	A:	No.
12		II. <u>BACKGROUND</u>
12 13	Q:	
	Q: A:	II. <u>BACKGROUND</u>
13	-	II. <u>BACKGROUND</u> What customers is the modified proposed Tariff IP directed at?
13 14	-	II. <u>BACKGROUND</u> What customers is the modified proposed Tariff IP directed at? The Tariff IP modifications at issue in this Cause are directed at "large load
13 14 15	-	II. <u>BACKGROUND</u> What customers is the modified proposed Tariff IP directed at? The Tariff IP modifications at issue in this Cause are directed at "large load customers," defined in I&M's modified Tariff IP as customers with loads that
13 14 15 16	A:	II. BACKGROUND What customers is the modified proposed Tariff IP directed at? The Tariff IP modifications at issue in this Cause are directed at "large load customers," defined in I&M's modified Tariff IP as customers with loads that aggregate to 150 MW or that are expected to exceed 150 MW.
13 14 15 16 17	A: Q:	II. BACKGROUND What customers is the modified proposed Tariff IP directed at? The Tariff IP modifications at issue in this Cause are directed at "large load customers," defined in I&M's modified Tariff IP as customers with loads that aggregate to 150 MW or that are expected to exceed 150 MW. What are I&M's proposed modifications to the tariff?

.

٢

¹ Hyperscalers are a distributed environment and architecture that is designed to provide extreme scalability to accommodate workloads of massive scale.

² Powell, P., & Smalley, I. What is hyperscale? IBM. <u>https://www.ibm.com/topics/hyperscale</u> (Aug. 19, 2024).

1 2 3		the customer's permanent closure, subject to a one-time payment of a Contract Termination Fee at the time service ends that equals five years of minimum billing under the contract;
4 5 6 7		c) A customer may reduce its maximum contract capacity established during the contract by no more than 20%, unless mutually agreed otherwise, by giving at least five years prior written notice, unless the parties mutually agree to a shorter notice period;
8 9 10		d) A customer will be charged as if it uses 90% of the contracted load. Using more than the contracted load, either one-time or as an increase, will be negotiated and billed; and
11 12 13		e) The customer will provide an amount equivalent to two years of bills as collateral in a form acceptable to I&M. The amount of the collateral will be recalculated each year and trued up to within a ten percent buffer.
14		
15	Q:	Who are the prospective large load customers in I&M's territory?
15 16	Q: A:	Who are the prospective large load customers in I&M's territory? The State of Indiana has announced two separate hyperscaler projects to be built
	-	
16	-	The State of Indiana has announced two separate hyperscaler projects to be built
16 17	-	The State of Indiana has announced two separate hyperscaler projects to be built and operated by Amazon Web Service ("AWS") and Google that are large load
16 17 18 19	A:	The State of Indiana has announced two separate hyperscaler projects to be built and operated by Amazon Web Service ("AWS") and Google that are large load customers I&M plans to serve. What is the announced capital investment in Indiana related to these two
16 17 18 19 20	A: Q:	The State of Indiana has announced two separate hyperscaler projects to be built and operated by Amazon Web Service ("AWS") and Google that are large load customers I&M plans to serve. What is the announced capital investment in Indiana related to these two projects?
16 17 18 19 20 21	A: Q:	The State of Indiana has announced two separate hyperscaler projects to be built and operated by Amazon Web Service ("AWS") and Google that are large load customers I&M plans to serve. What is the announced capital investment in Indiana related to these two projects? AWS is constructing an \$11 billion hyperscaler facility in New Carlisle, Indiana,

ų

Customer	Announced Investment	Proposed Demand	Proposed Jobs Created	Indiana Location
AWS	\$11 billion ³	(Unspecified)	1,000	New Carlisle

 $\label{eq:services-plans-to-invest-11b-to-create-announces-amazon-web-services-plans-to-invest-11b-to-create-announces-amazon-amazon-amazon-amazon-amazon-amazon-amazon-amazon-amazon-am$

	\$14 billion	4,500 MW	1.400	
Google	\$2 billion ⁴	(Unspecified)	200	Fort Wayne

1Q:How does the projected power demand of these two customers compare to2I&M's current industrial customer load?

- 3 A: The projected demand of the smallest hyperscaler projects I&M plans to serve will
- 4 each exceed by a factor of more than 10 times the demand of I&M's current largest
- 5 single industrial customer.

6 Q: How does the size of the known hyperscaler projects planning to locate in
 7 I&M's service territory compare to current hyperscalers outside Indiana?

8 A: As of 2022, Switch's Citadel Campus in Nevada has a current demand of 130 MW.

9 Switch is building its own 100% renewable energy supply and the Citadel Campus

10 is one of the largest hyperscaler projects in the United States.⁵ Citadel Campus is

11 expected to expand to 7.3 million square feet and require 650 MW when completed,

- 12 making it the world's largest data center. The Table below lists several of the largest
- 13 hyperscalers.

Hyperscaler	Owner	Square Footage (million sq ft)	Current Power Demand (MW)	Location
Inner Mongolia Information Park	Telecom	10.7	150	Hohhot, Inner Mongolia, China
Hohhot Data Center	China Mobile	7.7	130	Hohhot, Inner Mongolia, China

⁴ <u>https://iedc.in.gov/events/news/details/2024/04/26/gov.-holcomb-announces-google-is-building-a-2b-data-center-in-northeast-indiana</u>

 $[\]label{eq:shttps://www.datacenterfrontier.com/featured/article/11436953/the-new-megacampuses-the-worlds-largest-data-center-projects$

Citadel Campus	Switch	1.3	130	Sparks, Nevada, USA
Utah Data Center	National Security Agency	1.1	90	Bluffdale, Utah, USA
Lakeside Technology Center	Digital Realty	1.1	85	Chicago, Illinois, USA

1 The smallest announced large load customer to be served by I&M will require 1,000 2 MW, or 1 GW. That is 6.7 (1,000 divided by 150) times larger than the world's 3 largest hyperscaler as of 2024 and will be 1.5 (1,000 divided by 650) times larger 4 than the completed Citadel Campus.

5 Q: What is the projection for power demand driven largely by hyperscaler 6 construction?

7 Future hyperscaler projects are predicted to require large amounts of power. A: 8 Presently, the announced hyperscalers in I&M's service territory are projected to 9 demand more than 10 times more power than the demand of I&M's largest 10 industrial customer. I&M witness Williamson testified that "I&M's current Indiana 11 peak load of approximately 2,800 MW [will grow] to more than 7,000 MW by approximately 2030,"⁶ more than double I&M's current total power demand. 12 13 Nationally, power supply to hyperscalers almost tripled (290%) from 2021 to 2022 and increased approximately an additional 146% in 2023.⁷ The Federal Energy 14 15 Regulatory Commission ("FERC") shows 4.7% demand growth, double its 2022

⁶ Direct Testimony of Andrew Williamson, p. 5, ll. 5-7.

⁷ https://www.statista.com/statistics/1224987/data-centers-construction-in-the-usa/.

1

2

estimate, and forecasts peak demand to increase by an additional 38,000 MW over the next five years.⁸

3 Q: What are the power concerns of the proposed Tariff IP modifications?

A: 4 AWS' hyperscaler project will be the largest customer to date in I&M's service 5 territory. A decrease of 20% of AWS' anticipated energy use of 2,250 MW would 6 reduce I&M's load by 450 MW. A loss of that amount, using U.S. Energy 7 Information Agency's average household power demand of 1.2 kW, would be 8 roughly equivalent to powering 375,000 homes. Again, this is concerning as that 9 would be comparable to turning off the electrical demand to practically all 10 Indianapolis residents with a reported 361,641 occupied households as of the 2020 11 U.S. Decennial Census.

12 Q: Is I&M seeking approval for more generation resources as part of this case?

A: No, but the demands of potential hyperscaler customers are relevant to whether the
proposed terms of I&M's modified Tariff IP are sufficient to protect I&M's other
captive ratepayers. Hyperscaler operations plan to run at full capacity 24/7/365.
Unlike other industrial customers, an interruptible tariff is not an option for
hyperscalers, meaning I&M will have to provide a high volume of energy at all
times.

19

III. LOCAL ECONOMIC IMPACTS

- 20 Q: Are companies being incentivized to build hyperscaler projects in Indiana?
- 21 A: Yes. The Indiana Data Center Tax Incentive offers tax exemptions on energy and

⁸<u>https://www.utilitydive.com/news/electricity-load-growing-twice-as-fast-as-expected-Grid-Strategies-report/702366/</u>.

1		equipment for new data centers built in Indiana for up to 50 years. This was the
2		longest exemption period in any state when it was passed. The incentive exempts
3		servers, routers, wiring, software, and other equipment from business personal
4		property tax and state sales tax. Electricity purchases for these facilities are also
5		exempt from state sales tax.
6 7	Q:	Have there been news stories highlighting benefits AWS projects will be providing to the local community?
8	A:	Yes. AWS agreed to provide one-time funding fees totaling \$122,675,300 to pay
9		for certain services, including, but not limited to: ⁹
10 11 12 13		• Fire services, "student success" projects, and "park/green space" projects. Each fund will receive 10 cents per square foot of shell. ¹⁰ If all 16 shells are completed, there will be a one-time payment of \$345,600 in each fund, totaling \$1,036,800;
14 15 16 17 18 19		• \$114 million for expansion of the water and sewer infrastructure, detailed in a separate agreement that the St Joseph Redevelopment Commission recently approved. ¹¹ The agreement also passes on to AWS any "latecomer" fees collected by the county at a maximum of \$11.44 million over the next 10 years from new users who move into certain nearby boundaries and draw more than 400,000 gallons of water per day from the system; and
20 21 22 23		• Unspecified amount for AWS to install monitoring wells on its project sites, including four wells each on three parcels. AWS also agreed to limit the total water drawn from two water treatment plants that New Carlisle owns to 24 million gallons per day.

⁹ <u>https://www.southbendtribune.com/story/news/local/2024/08/13/tax-breaks-for-amazon-data-center-pass-st-joseph-county-commissioners/74774385007/</u>

¹⁰ A shell is defined as a 216,000-square-foot structure to house hyperscaler components.

¹¹<u>https://www.southbendtribune.com/story/news/local/2024/07/23/amazon-to-help-pay-for-water-sewer-infrastructure-in-st-joseph-county/74513537007/</u>

1		Further, AWS projects to employ 400 people when all 16 shells are complete. St.
2		Joseph Council member Bryan Tanner estimated AWS will pay about \$1 billion in
3		wages over the 35-year term for the 400 employees in all 16 building shells. ¹² In
4		addition, AWS and St. Joseph County expect the AWS investment to create 600
5		new jobs for third-party contractors. ¹²
6	Q:	Will these publicized investments help I&M or I&M's ratepayers?
7	A:	No. The large investments announced by AWS do not reduce the large power
8		demand, power demand variability, or early termination risks. These are the
9		measures I&M is attempting to address in the Tariff IP modifications.
10		IV. <u>HYPERSCALER PROJECTS IN OTHER STATES</u>
11 12	Q:	Are other state utility commissions reviewing proceedings regarding large load customers?
	Q: A:	• • • • • • • • •
12		load customers?
12 13		load customers? Yes. Several states currently have pending proceedings addressing large load data
12 13 14		load customers? Yes. Several states currently have pending proceedings addressing large load data centers. I have examined six states to determine how they each have addressed the
12 13 14 15		load customers? Yes. Several states currently have pending proceedings addressing large load data centers. I have examined six states to determine how they each have addressed the large load demand and worked to ascertain issues they may have encountered: 1)
12 13 14 15 16	A:	load customers? Yes. Several states currently have pending proceedings addressing large load data centers. I have examined six states to determine how they each have addressed the large load demand and worked to ascertain issues they may have encountered: 1) Virginia; 2) Ohio; 3) North Dakota; 4) Georgia; 5) Pennsylvania; and 6) Texas.
12 13 14 15 16 17	A: Q :	 load customers? Yes. Several states currently have pending proceedings addressing large load data centers. I have examined six states to determine how they each have addressed the large load demand and worked to ascertain issues they may have encountered: 1) Virginia; 2) Ohio; 3) North Dakota; 4) Georgia; 5) Pennsylvania; and 6) Texas. What are some of the issues you identified through other states' proceedings?
12 13 14 15 16 17 18	A: Q :	 load customers? Yes. Several states currently have pending proceedings addressing large load data centers. I have examined six states to determine how they each have addressed the large load demand and worked to ascertain issues they may have encountered: 1) Virginia; 2) Ohio; 3) North Dakota; 4) Georgia; 5) Pennsylvania; and 6) Texas. What are some of the issues you identified through other states' proceedings? Based on my research, other jurisdictions are dealing with having enough power to

.

÷

.....

¹²<u>https://www.southbendtribune.com/story/news/local/2024/08/13/amazon-tax-abatement-passes-council-im-talks-about-electricity-demand/74779431007/</u>

1 under an interruptible tariff.

2 Virginia

3 Q: Does Virginia claim to host the largest data center market in the world?

- 4 A: Yes. As of 2024, according to the Virginia Economic Development Corporation,
 - "Virginia hosts the largest data center market in the world and is home to 35%

6 (almost 150) of all known hyperscale data centers worldwide."¹³

7 8

Q:

5

Are Virginia local governments taking steps to regulate the large number of data centers?

9 A: Yes. Fairfax County, Virginia, recently limited the size and location of data centers
10 near residential areas and metro stations.¹⁴ The Board of Supervisors of Loudoun
11 County, Virginia, with about 80% of the state's data centers, has begun rolling out
12 zoning amendments, with Loudoun Supervisor Michael R. Turner leading the
13 proposition that data center facilities be required to provide plans to supply their
14 own electricity due to fears of power failure.¹⁵

15Q:Has the State of Virginia raised precautionary measures due to the large16power demand of data centers?

A: Yes. At one point, Virginia's Department of Environmental Quality ("DEQ")
proposed that data centers use back-up diesel generators in times of strain on PJM's
energy grid. Although DEQ has since withdrawn this proposal because of
environmental air quality permit concerns, the growing energy demand and

¹³https://www.vedp.org/industry/data-centers

¹⁴<u>https://www.costar.com/article/1142026032/dcs-biggest-suburban-county-puts-new-limits-on-data-center-locations</u>

¹⁵<u>https://www.washingtonpost.com/dc-md-va/2024/07/29/fairfax-data-centers-zoning/;</u> <u>https://www.loudounnow.com/news/supervisors-move-to-limit-data-center-locations/article_e32dd11c-393b-11ef-8e01-136fca8bb3c7.html</u>

1		possible strain on PJM is still a potential risk. ¹⁶
2	Q:	How is PJM addressing the increase in demand by data centers?
3	A:	Notwithstanding Virginia's Clean Economy Act (HB 1526/SB 851), which plans
4		to have a zero-carbon electricity grid in Virginia by 2050, PJM approved \$5.2
5		billion in transmission projects to make it possible to connect coal power plants in
6		West Virginia to feed the energy demands of Northern Virginia. ¹⁷
7 8	Q:	Is Appalachian Power Company, an affiliate company of I&M, taking any measures in its Virginia service territory?
9	A:	Yes. Appalachian Power Company, a subsidiary of AEP, is pursuing a tariff
10		practically the same as I&M's proposal, but for customers over 200 MWs (Public
11		Service Commission of West Virginia Case No. 24-0611-E-T-PW).
12		Texas
13	Q:	What type of data centers are operating in Texas?
14	A:	Texas leads the country in data centers dedicated to cryptocurrency miners, with
15		more than most other states combined. ¹⁸ The state expects its electric load to double
16		by 2030, with anticipated growth in cryptocurrency mining as a major contributor. ¹⁹
17	Q:	Did Texas have a resilience issue during Winter Storm Uri?
18	A:	Yes. Winter Storm Uri (2021) resulted in a failure of the Electric Reliability
19		Council of Texas ("ERCOT") and demonstrated the lack of resilience of Texas's

.

,

¹⁶<u>https://virginiamercury.com/briefs/department-of-environmental-quality-withdraws-proposed-variance-for-data-centers/</u>

¹⁷<u>https://www.washingtonpost.com/business/interactive/2024/data-centers-internet-power-source-coal/</u>

¹⁸https://www.economist.com/united-states/2024/08/27/why-texas-republicans-are-souring-on-crypto

¹⁹<u>https://www.austinchronicle.com/daily/news/2024-06-18/ercot-says-texas-power-demand-to-double-by-2030-with-bitcoin-to-blame/</u>

1 independent grid operator.

•

2	Q:	How did ERCOT try to compensate for this issue?
3	A:	After Uri, cryptocurrency miners signed long-term contracts at fixed rates. Since
4		cryptocurrency miners can temporarily shut down and restart with little harm,
5		ERCOT will pay them to shut down on the hottest and/or coldest days.
6		Ohio
7	Q:	Is a hyperscaler project being constructed in Ohio?
8	A:	AEP Ohio proposed a new tariff (Public Utilities Commission of Ohio Case No.
9		24-508-EL-ATA) for Mobile Data Center customers, targeting cryptocurrency
10		miners that will use 1 MW or more at a single location, perhaps intermittently.
11		Mobile Data Center customers operate out of shipping containers or other easily
12		relocatable structures. AEP Ohio notes in its new tariff application that miners ramp
13		up usage in time with the market price, which is unpredictable. Therefore, the load
14		has "no set business hours, no stable demand curves and no permanency."
15	Q:	Is the Ohio proposal similar to I&M's Indiana request?
16	A:	Yes. However, unlike I&M's proposal, AEP Ohio's proposed new tariff is for
17		customers over a maximum of 25 MW monthly. ²⁰
18		Georgia
19 20	Q:	How have the State of Georgia and the City of Atlanta responded to the hyperscaler issue?
21	A:	The Atlanta City Council has restricted data center development near its MARTA

²⁰ Public Utilities Commission of Ohio Case No. 24-508-EL-ATA: Application for Approval of New Tariffs by Ohio Power Company, "(1) the Data Center Power tariff for new data center customers that will use a monthly maximum demand of 25 MW or greater at a single location"

1		rail stations and the Atlanta Beltline, a 22-mile network of parks and trails. ²¹
2		Georgia's state legislature passed a bill that would have discontinued data center
3		sales tax exemptions for two years. Georgia has allowed the exemptions since 2018
4		to attract hyperscaler investment. House Bill 1192 was based on concerns that
5		Georgia Power may not be able to provide the necessary energy for all the
6		prospective data centers. ²² However, Governor Brian Kemp vetoed the bill on
7		May 7, 2024. ²³
8		Pennsylvania
8 9	Q:	<i>Pennsylvania</i> What is the situation in Pennsylvania?
	Q: A:	
9	-	What is the situation in Pennsylvania?
9 10	-	What is the situation in Pennsylvania? AWS bought a (up to) 960 MW data center near the Susquehanna nuclear power
9 10 11	-	What is the situation in Pennsylvania? AWS bought a (up to) 960 MW data center near the Susquehanna nuclear power plant in Pennsylvania. ²⁴ AWS signed an interconnection service agreement ("ISA")
9 10 11 12	-	What is the situation in Pennsylvania? AWS bought a (up to) 960 MW data center near the Susquehanna nuclear power plant in Pennsylvania. ²⁴ AWS signed an interconnection service agreement ("ISA") with Talen Energy to buy power in increments of 120 MW up to a maximum of

*

²¹https://www.govtech.com/policy/atlanta-city-council-bans-data-centers-in-some-areas

²³<u>https://apnews.com/article/georgia-kemp-veto-tax-breaks-data-centers-ee11e95f3a5ac9f6e9019401c35c2e88</u>

²²<u>https://www.datacenterdynamics.com/en/news/georgia-senate-passes-bill-to-suspend-data-center-tax-exemptions/</u>

²⁴https://www.datacenterdynamics.com/en/news/aws-acquires-talens-nuclear-data-center-campus-inpennsylvania/

²⁵<u>https://www.utilitydive.com/news/aep-exelon-pjm-interconnection-amazon-data-center-talen-ferc-isa/719869/</u>

1		would shift up to \$140 million in transmission costs onto PJM. ²⁶ The PJM Open
2		Access Transmission Tariff specifies only two types of loads: network load and
3		self-paid-for point-to-point transmission load. Under the ISA, the existing
4		transmission lines from the nuclear power plant to the data center would not be
5		described as "network" and, thus, would bypass PJM transmission fees.
6		North Dakota
7	Q:	Is a hyperscaler project being constructed in North Dakota?
8	A:	Yes. In 2022, Atlas Power started constructing a hyperscaler project in Williston,
9		North Dakota. Mountrail-Williams Electric Cooperative ("MWEC") is supplying
10		electricity to Phase 1 of the Atlas Power Data Center (full demand will require 240
11		MW). ^{27,28}
12	Q:	Have other utilities filed complaints with the FERC about this project?
13	A:	Yes. Montana-Dakota Utilities ("MDU") filed complaints with the FERC about
14		strains and constraints imposed on the transmission lines by Atlas, which has cost
15		MDU's customers around \$12 million since Atlas Power initiated operations. ²⁷ The
16		Atlas Power project still has two more phases, with plans to expand its power
17		consumption to 500 MW and then to 700 MW.
18		V. <u>CONCLUSION</u>

19 Q: What is your position on I&M's request?

²⁷https://www.govtech.com/computing/north-dakota-prepares-for-data-centers-to-come-online

²⁶ <u>https://www.utilitydive.com/news/talen-amazon-data-center-interconnection-agreement-nuclear-pjm-aep-exelon/720139/</u>

²⁸<u>https://www.sidneyherald.com/business/atlas-power-data-center-plans-to-be-world-s-largest/article_2188f22e-8224-11ec-84fd-47988cad8eba.html</u>

1	A:	Existing utility customers need to be protected in the event a hyperscaler terminates
2		an electric service contract early, especially if the utility has invested vast resources
3		to specifically meet the data center's projected demands. In this docket, the OUCC
4		views most of I&M's proposed tariff terms as safeguards for current residential,
5		commercial, and industrial customers. However, the OUCC remains concerned
6		about the need for additional protections as discussed in Mr. Leader's testimony.
7		The massive demands of hyperscalers will inevitably require new electric power
8		generation and transmission. Accordingly, all construction and financing costs for
9		these assets - and retirement costs if applicable - should be directed to these large
10		load customers, since they will be the cost-causers. Consistent with the "user pays"
11		paradigm, the large load customers must also be accountable for increased
12		maintenance costs due to additional pressures on transmission systems.
12	0.	Does this conclude your testimony?

13 Q: Does this conclude your testimony?

14 A: Yes.

.

L.

1 2

<u>APPENDIX A</u> QUALIFICATIONS OF PATRICK A. KELLEY

3 Q: Please describe your educational background and experience.

A: 4 I graduated with a Bachelor of Science degree in Physics and Mathematics from 5 Purdue University in West Lafayette, Indiana, in 2015. I acquired a Master's degree 6 in Physics from Purdue University in Indianapolis, Indiana, in 2019. I am currently 7 finishing my Ph.D. in Physics from Purdue University in Indianapolis, Indiana, 8 with graduation expected by the end of 2024. During my Master's and Ph.D, 9 studies, I taught introductory physics laboratory, recitation, and course material. 10 Additionally, I participated in diverse research, from optical trapping for 11 ultrasensitive fundamental force measurements of gravity to molecular dynamical 12 simulation of biophysical model membranes. This demonstrates deep 13 understanding of basic principles of physical systems.

I began my career with the OUCC in July 2024. As part of my continuing
education, I will attend the New Mexico State University Center for Public Utilities
"The Basics" Practical Regulatory Training Courses scheduled for October 14-18,
2024.

AFFIRMATION

I affirm, under the penalties for perjury, that the foregoing representations are true.

<u>Fatack Keller</u> Patrick A. Kelley Utility Analyse

Utility Analyst II Indiana Office of Utility Consumer Counselor Cause No. 46097 Indiana Michigan Power Company

Date: October 15, 2024

CERTIFICATE OF SERVICE

This is to certify that a copy of the foregoing Indiana Office of Utility Consumer

Counselor Public's Exhibit No. 1 Testimony of OUCC Witness Patrick A. Kelley has been served

upon the following counsel of record in the captioned proceeding by electronic service on October

15, 2024.

1 9

I&M - Petitioner Teresa Morton Nyhart Jeffrey M. Peabody **TAFT, STETTINIUS & HOLLISTER LLP** One Indiana Square, Suite 3500 Indianapolis, IN 46204-2023 <u>tnyhart@taftlaw.com</u> jpeabody@taftlaw.com

I&M - Petitioner Tammara D. Avant Indiana Michigan Power Company 110 E. Wayne Street Fort Wayne, IN 46802 tdavant@aep.com

Citizens Action Coalition - Intervenor Jennifer A. Washburn Citizens Action Coalition 1915 West 18th Street, Suite C Indianapolis, IN 46202 jwashburn@citact.org rkurtz@citact.org

GOOGLE - Intervenor Joseph P. Rompala Todd A. Richardson Emily R. Vlasak One American Square, Suite 2500 Indianapolis, Indiana 46282-0003 Email: JRompala@Lewis-Kappes.com TRichardson@Lewis-Kappes.com EVlasak@Lewis-Kappes.com Data Center Coalition (DCC) - Intervenor Liam H. Michener Carolyn P. Michener Michener Mullins & Arrington 117 S. Indiana Ave. Sellersburg, Indiana 47172 Email: <u>lhmichener@mmalawfirm.com</u> <u>cmichener@mmalawfirm.com</u>

Data Center Coalition (DCC) - Intervenor Nikhil Vijaykar Keyes & Fox LLP 580 California St. 12th Floor San Francisco, CA 94104 Email: <u>nvijaykar@keyesfox.com</u>

Data Center Coalition (DCC) – Courtesy Copy Corey Cochran Keyes & Fox LLP 1155 Kildaire Farm Road, Ste. 202-203 Cary, NC 27511 ccochran@keyesfox.com

Data Center Coalition (DCC) – Courtesy Copy Alicia Zaloga Keyes & Fox LLP 1155 Kildaire Farm Road, Ste. 202-203 Cary, NC 27511 azaloga@keyesfox.com Microsoft - Intervenor Phillip Casey Calfee, Halter & Griswold LLP 3900 Salesforce Tower 111 Monument Circle Indianapolis, IN 46204 Phillip Casey email: <u>pcasey@calfee.com</u>

Microsoft - Intervenor Taylor Carpenter Calfee, Halter & Griswold LLP 3900 Salesforce Tower 111 Monument Circle Indianapolis, IN 46204 Taylor Carpenter email: tcarpenter@calfee.com

Shala Coe Calfee, Halter & Griswold LLP 111 Monument Circle, Suite 3900 Indianapolis, IN 46204 <u>scoe@calfee.com</u> Data Center Coalition (DCC) – Courtesy Copy Mark Valentine Keyes & Fox LLP 1580 Lincoln St., Ste. 1105 Denver, CO 80203 <u>mvalentine@keyesfox.com</u>

Data Center Coalition (DCC) – Courtesy Copy Lucas Fykes **Data Center Coalition** Email: <u>lucas@datacentercoalition.org</u>

Data Center Coalition (DCC) – Courtesy Copy Aaron Tinjum Data Center Coalition Email: <u>aaron@datacentercoalition.org</u>

Data Center Coalition (DCC) – Courtesy Copy Kevin Higgins **Energy Strategies, LLC** Email: <u>khiggins@energystrat.com</u>

Locaine ?

Lorraine Hitz Senior Deputy Consumer Counselor

INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR

115 West Washington Street Suite 1500 South Indianapolis, IN 46204 infomgt@oucc.in.gov Ihitz@oucc.in.gov 317/232-2775 – Lorraine's No. 317/232-2494 – Phone 317/232-5923 – Facsimile