#### STATE OF INDIANA

### FILED INDIANA UTILITY REGULATORY COMMISSION

July 26, 2017

PETITION OF INDIANA MICHIGAN POWER ) **INDIANA UTILITY** COMPANY, AN INDIANA CORPORATION, FOR ) (1) AUTHORITY TO INCREASE ITS RATES AND ) **REGULATORY COMMISSION** CHARGES FOR ELECTRIC UTILITY SERVICE THROUGH A PHASE IN RATE ADJUSTMENT: (2) APPROVAL OF: REVISED DEPRECIATION RATES; ACCOUNTING RELIEF; INCLUSION IN BASIC RATES AND CHARGES OF QUALIFIED CAUSE NO. 44967-NONE POLLUTION CONTROL PROPERTY, CLEAN ENERGY PROJECTS AND COST OF BRINGING I&M'S SYSTEM TO ITS PRESENT STATE OF EFFICIENCY; RATE ADJUSTMENT MECHANISM PROPOSALS: COST DEFERRALS: MAJOR STORM DAMAGE RESTORATION RESERVE AND DISTRIBUTION VEGETATION MANAGEMENT PROGRAM RESERVE; AND AMORTIZATIONS; AND (3) FOR APPROVAL OF NEW SCHEDULES OF RATES, RULES AND REGULATIONS.

### SUBMISSION OF DIRECT TESTIMONY OF MATTHEW W. NOLLENBERGER

Petitioner, Indiana Michigan Power Company (I&M), by counsel, respectfully submits the direct testimony and attachments of Matthew W. Nollenberger in this Cause.

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#### CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing was served upon the following via electronic email, hand delivery or First Class, or United States Mail, postage prepaid this 26th day of July, 2017 to:

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#### **INDIANA MICHIGAN POWER COMPANY**

# PRE-FILED VERIFIED DIRECT TESTIMONY OF MATTHEW W. NOLLENBERGER

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### PRE-FILED VERIFIED DIRECT TESTIMONY OF MATTHEW W. NOLLENBERGER ON BEHALF OF INDIANA MICHIGAN POWER COMPANY

- 1 Q. Please state your name and business address.
- 2 A. My name is Matthew W. Nollenberger, and my business address is 1 Riverside
- 3 Plaza, Columbus, Ohio 43215.
- 4 Q. By whom are you employed and what is your position?
- 5 A. I am employed by the American Electric Power Service Corporation (AEPSC) as
- 6 Manager, Regulated Pricing and Analysis. AEPSC supplies engineering,
- financing, accounting, planning, advisory, and other services to the subsidiaries of
- 8 the American Electric Power (AEP) system, one of which is Indiana Michigan
- 9 Power Company (I&M or the Company).
- 10 Q. Please describe your educational and professional background.
- 11 A. I graduated from Bowling Green State University in 1989 with a Bachelor of
- Science degree in Technology, with a major in Construction Technology. From
- 13 1990 to 1996 I was employed as a Project Engineer in the construction services
- industry. In 1998, I earned a Master of Business Administration degree from the
- 15 Ohio State University.
- In 1998, I joined AEPSC as an Energy Associate in its Energy Trading and
  Marketing organization. In 2000, I transitioned from Energy Associate to Energy
- 18 Trader. In 2002, I joined AEP's Fundamental Analysis organization where I
- supported the Trading and Marketing organization by providing various power and
- fuel market fundamental analyses. In 2005, I was promoted to Manager, Marketing
- Administration, where I managed AEP's wholesale power marketing contract

administration process. In 2008, I joined AEP's RTO Operations department as

Manager, Market Operations, where I represented AEP in the MISO and PJM RTO

stakeholder processes.

In 2010, I joined AEPSC's Regulatory Services as Manager, Regulatory Support, supporting AEP's Commercial Operations organization. In May of 2011, I was promoted to my current position of Manager, Regulated Pricing and Analysis. In 2013, I completed the EEI Advanced Electric Rate Course.

- 8 Q. What are your responsibilities as Manager, Regulated Pricing and Analysis?
- A. My responsibilities include the oversight and the preparation of cost of service and
   rate design analyses for the AEP System operating companies, and the oversight
   and preparation of special contracts and pricing for customers.
- 12 Q. Have you previously submitted testimony in any regulatory proceedings?
  - A. Yes. I have submitted testimony on behalf of I&M before the Indiana Utility Regulatory Commission (IURC or Commission) and the Michigan Public Service Commission. With respect to the IURC, I submitted testimony in Cause No. 43774 supporting I&M's PJM Cost Rider, in Cause No. 43775 supporting I&M's Off-System Sales Margin Sharing Rider, in Cause No. 44511 supporting the I&M's Solar Power Rider, and in Cause No. 44543 supporting I&M's petition for approval of a Transmission, Distribution, and Storage System Improvement Charge Rate Schedule.

#### **PURPOSE OF TESTIMONY**

1 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING							
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- 2 A. The purpose of my testimony is to describe and support the following:
- A ratemaking adjustment to account for the treatment of I&M's transmission
- 4 costs.
- The allocation of I&M's Indiana jurisdictional required rate relief to each tariff
- 6 class.
- The rate design supporting I&M's proposed tariffs.
- The rate design and factors for the Company's proposed Phase-in Rate
- 9 Adjustment.
- A billing comparison of rates.
- 11 Q. Are you sponsoring any attachments in this proceeding?
- 12 A. I am sponsoring the following Attachments:
- Attachment MWN-1: Transmission Cost and Revenue Adjustment
- Attachment MWN-2: Proposed Revenue Allocation
- Attachment MWN-3: Marginal Customer Connection Calculation
- Attachment MWN-4: Typical Electric Bill Comparison
- 17 Q. Are you sponsoring any workpapers in this proceeding?
- 18 A. I am sponsoring the following Workpapers:
- WP-MWN-1: Calculation of Proposed Class Revenue Requirements
- WP-MWN-2: Proposed Basic Rate Tariff Rate Design
- WP-MWN-3: Current Rider Rate Design

- WP-MWN-4: Proposed Rider Rate Design
- WP-MWN-5: Renewable Energy Option Calculation
- WP-MWN-6: Proposed Phase-In Rate Adjustment Factor Rate Design
- WP-MWN-7: Proposed Class Coincident Peak Per kWh Ratios
- 5 Q. Were the attachments and workpapers that you are supporting prepared by
- 6 you or under your direction?
- 7 A. Yes.

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#### RATEMAKING ADJUSTMENT FOR TRANSMISSION

- 9 Q. Please summarize the PJM transmission costs and revenues that I&M incurs.
- 10 A. Because I&M is a Load Serving Entity (LSE) in PJM, I&M incurs transmission-
- 11 related costs under PJM's FERC-approved Open Access Transmission Tariff
- 12 (OATT). As a Transmission owner, I&M also receives transmission-related
- revenues under the OATT. Company witness Ali explains the PJM transmission
- 14 costs in detail, while Company witness Lucas supports the PJM transmission
- 15 revenues.
- 16 Q. What are I&M's "embedded" transmission costs?
- 17 A. I&M's embedded transmission costs are those costs associated with the return on
- and of the Company's transmission capital investment, plus any related operating
- and maintenance expenses and taxes.

- Q. What is the Company's proposal regarding PJM transmission costs in this
   proceeding?
- A. As supported by Company witnesses Thomas and Williamson, I&M is proposing that 100% of I&M's PJM transmission costs be recovered in the PJM Cost Rider.

  Under this proposal, I&M's basic rates would not include any level of PJM transmission costs.
- Q. Please explain the ratemaking adjustment you are supporting to address
   transmission costs.

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Following the same methodology as in Cause No. 44075,<sup>1</sup> I&M's entire traditional embedded cost of transmission, as well as the revenues the Company receives from PJM as a Transmission Owner, have been excluded from the Company's Class Cost of Service study, as supported by Company witness High and removed from the Company's revenue requirement in this proceeding, as shown on Exhibit A-1. The calculations supporting this adjustment are provided in Attachment MWN-1.

It is important to note that changes made to the Company's proposed cost of service in this proceeding may result in a change to the amount of the proposed transmission adjustment since it is based on the transmission cost of service.

<sup>&</sup>lt;sup>1</sup> Referred to as "OATT Costs" and "Adjust for Trans OATT" in Cause No. 44075, Exhibit A-1 and Exhibit DMR-1, respectively.

#### **REVENUE ALLOCATION**

Q. What is the starting point of the rate relief allocations and rate design thatyou are sponsoring?

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- A. The tariff class rate relief allocations and rate design supporting I&M's tariffs are based on the class cost of service study performed by Company witness High for the forward-looking test period ended December 31, 2018 (Test Year). The Phase-In Rate Adjustment factor rate design, which I discuss later in my testimony, was computed separately based on the respective class cost of service studies also presented by witness High.
- 10 Q. Do the rate relief allocation methodologies presented in your testimony
  11 follow the same methodologies that would be used in a basic rate
  12 proceeding involving a historical test period?
- 13 A. Yes. The rate relief allocation methodologies that I support in this proceeding are
  14 consistent with those that the Company would have proposed in a basic rate
  15 proceeding involving a historical test period. In particular, they are comparable to
  16 the methodologies used in I&M's most recent basic rate case, Cause No. 44075.
- 17 Q. Please explain the principles or guidelines that you followed in allocating the 18 proposed revenue increase among the tariff classes.
- A. One key objective of ratemaking is to design rates such that they reflect as nearly as possible the actual costs of serving the customer. To fully meet this objective would require that the rates of return for all tariff classes be equalized.

Α.

As shown in Column (3) of page 1 of Attachment MWN-2, the rates of return for the Industrial Power (IP), Municipal and School Service (MS) and Irrigation Service (IS) are below the total retail current rate of return of 2.30%. On the other hand, the rates of return for the Residential (RS), General Service (GS), Water and Sewage Service (WSS), Electric Heating General (EHG), Outdoor Lighting (OL) and Streetlighting Services (SL) classes are above the total retail current rate of return.

In light of this variation in class rates of return, I&M proposes to apply the firm basic rate increase, in a manner that provides above-average increases to those classes with rates of return below the total retail current rate of return and below-average increases to those classes with rates of return in excess of the total retail current rate of return. The actual rate increase for each class was determined by using an equal percentage subsidy reduction methodology, as shown on Attachment MWN-2.

- Q. Please explain the equal percentage subsidy reduction method of revenue allocation shown on Attachment MWN-2.
  - The first step is to calculate the current subsidy for each class. This is shown on Attachment MWN-2, Page 2, Column (12). The current subsidy is defined as the difference between the equalized revenues (revenues if the class rate of return were set equal to the total retail current rate of return of 2.30%) and current class revenues. For example, the current subsidy for the residential class is positive \$490,331, which means that residential rates would have to be decreased by that

amount to lower the class rate of return to 2.30%. Similarly, the current subsidy for the MS class is negative \$193,040, which means that MS rates would have to be increased by that amount to raise the class rate of return to 2.30%.

The second step is to calculate the revenues for each class at the total retail proposed rate of return. This is shown on Attachment MWN-2, Page 3, Column (11). This second step shows what each class would pay if all subsidies were eliminated and each class fully paid its actual costs at the proposed revenue level.

The third step is to exercise the principle of gradualism. The Company has chosen not to eliminate all subsidies in this Cause. However, it is important to make progress toward eliminating interclass subsidies. The amount of such progress should be tempered by considering the rate impacts on the various tariff classes. As such, I&M proposes to eliminate 50% of the current subsidies from all classes. To accomplish this, 50% of the current subsidy is added back (or deducted, as appropriate) to the class rate increases at proposed equalized rates of return. This is shown on Attachment MWN-2, Page 3, Column (12).

The final step is simply to recalculate the results using the increase determined in the third step. This is shown on Attachment MWN-2, Page 4, Columns (6) through (10).

Q.

## Did you make any additional adjustments once the revenue allocation was completed?

21 A.

Yes. Following the subsidy reduction method described above, an additional adjustment was applied to limit all tariff class total revenue increases to no more

than 30%. Following the initial 50% subsidy elimination process, Tariff Classes MS and IS were the only classes that received proposed revenue increases in excess of 30%. In order to limit the MS and IS increases to no more than 30%, pro-rated amounts of revenues from these classes were reallocated to the remaining classes. These adjustments are provided on Attachment MWN-2, page 3. Also, as shown on Attachment MWN-2, page 4, an additional adjustment was made to include an increase of \$16.6M to establish the cost of transmission service based upon PJM OATT charges instead of the embedded cost of transmission, as discussed earlier in my testimony.

A.

RATE DESIGN

Q. Please describe the process used to develop the Company's proposed rates.

In general, the Company's approach is to design rates and rate components that reflect the underlying costs of the Company. This includes collecting basic service-related costs through service charges and recognizing the differences in the costs to serve customers at different service delivery voltages.

The rate design process involved a number of steps that varied with each tariff. The cost components developed by Company witness High in the Test Year class cost of service study and detailed in WP-MWN-1 provided guidance as to the relative amounts of revenue that should be recovered through service charges, energy charges, and demand charges. In general, where sufficient metering data is available, full cost service charges, energy and demand rates were developed for each class by dividing the component-allocated proposed revenues by the Test

Year billing units. These initial rates were then compared to the current rates to determine which price changes would need to be moderated to mitigate rate impacts that could cause individual bill impacts that might be considered too severe.

- 5 Q. Please describe the calculations shown on Workpaper WP-MWN-1.
- A. Workpaper WP-MWN-1 provides the functional detail, by tariff class, of the proposed sales revenue requirements, adjusted for Transmission Owner costs and revenues used to design the Company's proposed basic rates. In addition, WP-MWN-1 provides the Company's proposed firm load revenue allocation factors that I&M would propose in a future Transmission, Distribution, Storage System Improvement Charge proceeding following this basic rate case.
- 12 Q. Please explain the changes to the residential tariffs in this proceeding.
- 13 A. The Company is proposing to increase the standard residential<sup>2</sup> service charge to \$18.00 per month from \$7.30. This increase in the residential service charge reduces the proposed increase needed for the residential energy charge, which is a volumetric charge assessed based on the number of kilowatt-hours the customer uses in each billing period.
- Q. Please describe the analysis you prepared in support of the proposed
   residential service charge.
- A. To arrive at the proposed service charge, I prepared a marginal cost of connection analysis that computes the costs associated with connecting the marginal or

<sup>&</sup>lt;sup>2</sup> For purposes of discussing I&M's proposed Residential service charge, my testimony refers to the Standard Residential tariff classes, unless noted otherwise.

- incremental residential customer to I&M's system. The analysis, as presented in

  Attachment MWN-3, is based on actual work order cost data provided by I&M's

  Distribution Regional Planning organization, as well as customer-related account

  detail from the proposed class cost of service study.
- Q. What costs were considered in developing the proposed residential servicecharge?
- A. My calculation included only the marginal distribution plant costs associated with service drops and meters, as well as the customer-related operation and maintenance and customer account expenses from the class cost of service study.

  The costs associated with the marginal service drop were weighted based on I&M's actual 2016 overhead and underground residential connections. An annual carrying charge was applied to the service drop and meter costs to solve for an annualized cost of investment for each.
- Q. How does I&M's current residential service charge compare to other Indiana
   utility residential service charges?
- A. As illustrated in Figure MWN-1, I&M's current residential service charge is the lowest of any Indiana investor-owned electric utility (IOU) at \$7.30 per month, based on a review of each IOU's residential tariffs as of July 3, 2017.

**Indiana IOU Monthly Residential Service Charges** \$20.00 \$17.00 \$14.00 \$15.00 \$11.00 \$11.25 \$9.40 \$10.00 \$7.30 \$5.00 \$0.00 **I&M** DEI **SIGEC** IPL\* NIPSCo IPL\*\* \*Residential Customer Charge for bills of 0-325kWh \*\*Residential Customer Charge for bills of 326+kWh

Figure MWN-1
Indiana IOU Monthly Residential Service Charges

#### 1 Q. What is the rationale for increasing the residential service charge?

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The goal is to institute a service charge for residential customers that more accurately reflects the Company's customer costs – i.e., the actual cost of connecting a customer to the Company's system. As shown on Attachment MWN-3, connecting each residential customer to I&M's system causes the Company to incur costs to install the service drop and meter (\$1,651.02 per service drop and \$112.74 per meter, or \$15.80 per customer per month), and to maintain and read the meter and engage in other customer-related tasks such as customer service (\$22.2M per year, or \$4.66 per customer, per month). I&M incurs these customer connection costs for each customer regardless of the amount of energy the

customer uses, or how much demand the customer places on the system. I&M's proposed increase in the residential service charge better reflects the fixed, customer-specific nature of these customer costs and provides increased customer rate stability. The proposed increase in the residential service charge also brings I&M's rates more in line with principles of cost causation, thereby eliminating subsidies within the residential class.

Α.

# 7 Q. How does the proposed service charge increase bring I&M's rates more in 8 line with principles of cost causation?

- I&M's current residential service charge of \$7.30 per customer per month recovers less than half of I&M's marginal cost of connection of \$20.46 per customer per month as shown on Attachment MWN-3. The remaining customer costs are being recovered through I&M's volumetric energy charges. This means that low-usage customers are paying far less than their share of the Company's marginal costs of service drops, meters, and other customer costs. It also means that high-usage customers are paying far more than their share of these customer costs. The current residential service charge causes high-usage customers to subsidize low-usage customers, and the proposed residential service charge will substantially reduce this subsidy.
- 19 Q. How does the proposed service charge provide increased customer rate20 stability?
- 21 A. By recovering more of I&M's customer costs through the fixed residential service 22 charge, a residential customer's bill will vary less from month to month as the

customer's usage fluctuates. This rate stabilization effect will be most beneficial during times of extreme weather.

Q. Does the proposed service charge comport with the principle of gradualism
 and account for the impact on low-usage customers?

A. Yes. While the Company's analysis shown on Attachment MWN-3 would support an increase in the customer charge of \$13.16 per customer per month, the Company is proposing a smaller increase of \$10.70. By deviating from strict adherence to the principle of cost causation in this way, the Company was cognizant of the effect that recovering the full \$20.46 per month would have on low-usage customers.

In addition, gradualism – and the impact on low-usage customers – should be judged based on the *total* bill, not just one element of it. That is, the proposed increase to the residential service charge must be evaluated in concert with the incremental decrease in the residential energy charge (i.e. a lower increase than otherwise, absent the increase in the service charge), as well as with all other rate changes in this proceeding.

- Q. What effect will the proposed service charge have on low-income, middle-income, and high-income customers?
- A. By better aligning I&M's rates to its actual costs, the proposed increase in the residential service charge will tend, on average, to increase the bills of low-usage customers and decrease the bills of high-usage customers. But it is critical to keep in mind that low-usage does not always equate to low-income, and high-usage

does not always equate to high-<u>income</u>. Because low-, middle-, and high-income customers fall on the entire range of usage from low-usage to high-usage, the impact of the proposed residential service charge will be spread among all income groups and can vary considerably from customer to customer within these groups. The point of the Company's proposal is not to create a specific impact on any income group but, rather, to better align the Company's rates with the true cost of serving customers, no matter their income level.

While I support I&M's proposed residential service charge in the broader context of cost causation and rate design, it is important to recognize, that the Company takes various steps to provide more targeted offerings to assist low income customers. For example, the Company offers a low income weatherization program that can help reduce a household's overall energy use and save customers money. The Company also participates in the Indiana Energy Share program, which provides assistance to eligible low-income customers who may need help in maintaining electric service. And the Company offers alternative payment plans, such as the Average Monthly Payment Plan and the Equal Payment Plan, which can help eligible customers level out monthly payments and make monthly electricity costs more predictable.

- Q. Please explain the proposed changes to the General Service (GS) tariffs in
   this proceeding.
- A. Similar to the residential tariff changes, the Company is proposing to increase the secondary voltage level service charges for Tariff G.S.<sup>3</sup> The GS basic service charge is currently slightly higher than that of the residential schedules. The Company proposes to increase the basic service charge for Tariff G.S. by \$9.30 to \$19.00 per month to maintain a similar relationship between the proposed GS and residential tariff service charges. The Company is proposing this change for the same reasons discussed above regarding the residential service charge.
- 10 Q. Please explain the proposed changes to I&M's lighting tariffs in this proceeding.
- A. As described by Company witness Cooper, I&M is proposing to change Tariff

  S.L.C. so that customers will be responsible for maintaining customer-owned

  lamps and glassware. Accordingly, I have removed I&M's cost of maintaining

  customer-owned lamps and glassware from the proposed Tariff S.L.C. monthly

  rates.
- 17 Q. Please describe the basic rate design proposal shown on Workpaper WP18 MWN-2.
- A. Workpaper WP-MWN-2 provides the Company's proposed basic rate design
   computations based on the proposed sales revenues contained in Workpaper WP MWN-1.

<sup>&</sup>lt;sup>3</sup> For purposes of discussing I&M's proposed G.S. service charge, my testimony refers to the G.S. tariff classes served at the secondary voltage-level, unless noted otherwise.

- Q. Please describe the rider factor computations for current rider rate designs
   shown on Workpaper WP-MWN-3.
- A. Workpaper WP-MWN-3 provides the rider factor computations for each of the
  Company's existing riders during the Test Year under the current rider rate
  designs. The rider revenue requirements are based on the costs contained in the
  Company's financial forecast and are supported by Company witness Halsey. The
  resulting factors are used to compute the current revenues in Company witness
  Stegall's Detail of Present and Proposed Revenues schedule, Attachment JMS-2.

#### 9 Q. Does I&M propose any rate design changes to its proposed riders?

A.

Yes. In general, the Company requests to simplify and standardize its proposed rider rate design and cost allocation methodologies. In addition, I&M's proposed changes better align the allocation and recovery of its rider costs with the methods utilized in setting the Company's basic rates. Except for its Demand-side Management / Energy Efficiency Program Cost Rider (DSM) Rider, I&M is proposing the following changes: First, any demand-related rider revenue assignments will be allocated among the tariff classes based on the class Coincident Peak per kilowatt hour (CP/kWh) allocation factors derived in this Cause as shown on Workpaper WP-MWN-7, similar to the method used by the Company in today's PJM and OSS Riders. Second, any energy-related rider revenue assignments will be allocated among the tariff classes based on the rider's forecasted billing energy. Third, demand-related revenue assignments to Tariffs L.G.S. and I.P. will be divided by class billing demands to compute a \$/kW or \$/kVA

charge. Demand-related revenue assignments to all other classes will be divided by class billing energy to compute a cents/kWh charge. Finally, energy-related rider revenue assignments for all classes will be divided by billing energy to compute a cents/kWh charge.

Q. Please explain the Company's proposed rate design changes to the DSM Rider.

Α.

In its DSM Rider, the Company proposes to simplify the existing rate design by consolidating the non-Residential Tariff Class groupings based on a small, medium and large customer-basis. Specifically, the Company's proposed DSM Rider rate design consolidates Tariff Classes GS, IS and EHG into one rate class and Tariff Classes LGS, MS, WSS and SL into a separate rate class. Tariff Class IP/IRP remains its own rate class under the proposed rate design. Likewise, Tariff Class RS remains a rate class of its own. The proposed class consolidations also apply to any opt-in or opt-out customer classes. In addition to simplifying the number of rate classes and resulting rider factors, the proposed DSM rider rate design is intended to reduce the need to apply single class rate mitigation measures for smaller Tariff Classes, such as Tariff IS that is comprised of a relatively small number of customers<sup>4</sup>.

<sup>&</sup>lt;sup>4</sup> In Cause Number 43827, DSM 6, I&M's most recent DSM Rider update, the Company limited the proposed Tariff I.S. rider factor to address resulting rate impacts and relative class factor relationships.

- Q. Does the Company propose any changes to the DSM Rider's current costallocation or rate design methodologies?
- A. No. Other than class consolidation changes discussed above, I&M does not request to change the rider's current allocation methodologies or the existing energy-based (¢/kWh) factor design.
- Q. Does the Company propose to reset the DSM Rider's amount of Net Lost
   Revenue in this Cause?
- A. Yes. As part of its proposal, I&M includes a Test Year amount of \$0.00 net lost revenues in the proposed 2018 DSM Rider rate design in accordance with the settlement agreement filed in Cause No. 44841. Company witnesses Williamson and Halsey describe the 2019 DSM revenue requirement which includes an amount of projected net lost revenues.
- Q. Please describe the rider factor computations for proposed rider rate
   designs shown on Workpaper WP-MWN-4.
- 15 A. Workpaper WP-MWN-4 provides the proposed rate designs and resulting rider
  16 factors for each of the Company's riders that it proposes to continue after new
  17 basic rates are implemented, as supported by Company witnesses Williamson and
  18 Halsey. The rider revenue requirements are based on the costs contained in the
  19 Company's financial forecast and are supported by Company witness Halsey. The
  20 resulting factors are used to compute the proposed revenues in Company witness
  21 Stegall's Detail of Present and Proposed Revenues schedule, Attachment JMS-2.

- 1 Q. Please explain the DSM Rider rates presented in WP-MWN-4.
- 2 A. As supported by Company witnesses Williamson and Halsey, I&M is proposing
- 3 two sets of DSM Rider factors in this proceeding. One set of proposed factors will
- 4 be implemented when new base rates are implemented, while the second set of
- 5 proposed factors will be implemented during the first billing cycle January 2019.
- 6 WP-MWN-4 provides both sets of DSM Rider factors, based on the rate design
- 7 methods described above.

Option rate.

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- 8 Q. Please explain the rate design for I&M's proposed Renewable Energy Option.
- 9 As supported by Company witness Cooper, the voluntary Renewable Energy Α. 10 Option will be offered on a per kWh basis to customers that desire to purchase 11 renewable energy for all or a portion of their monthly energy usage. The tariff rate 12 applicable to all classes and applied to a customer's monthly renewable election 13 is based on the Company's Test Year cost of service and generation resource 14 capacity parameters. I&M's renewable energy value of \$35.80/MWh recognizes 15 the capacity value and energy value differences between the Company's total 16 generation portfolio and its renewable generation portfolio. The resulting 17 difference between the two portfolio values results in the renewable energy 18 premium that serves as the rider's rate once it is converted to a dollar per kWh 19 basis. Workpaper WP-MWN-5 provides the calculation for the Renewable Energy

#### RATE DESIGN OF PHASE-IN RATE ADJUSTMENT

Q. Please provide an overview of the rate design associated with I&M's
 proposed Phase-In Rate Adjustment (PRA) factors.

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- 4 Using the Phase-in Rate Adjustment sponsored by Company witness Stegall, one Α. 5 distinct set of adjustment factors was computed to coincide with the step rate 6 changes supported by Company witness Williamson. The adjustments provided 7 the direct assignments of revenues to the tariff classes used to design the factors. 8 Similar to the Company's proposed riders, the proposed Phase-In Rate Adjustment 9 factors include demand charges in the rate design for the L.G.S. and I.P. tariff 10 classes where demand metering infrastructure is available. The proposed demand 11 charges will apply only to demand-related credits under the rider, while all energy-12 related credits will be provided to those customers through energy charges. All 13 other tariff class rate factors were designed to credit both demand- and energy-14 related costs through energy charges. Workpaper WP-MWN-6 provides the PRA 15 factor rate design.
- 16 Q. Who explains the implementation of the PRA factors?
- 17 A. Company witness Williamson addresses the implementation of I&M's PRA factors.

#### COMPARATIVE BILLING ANALYSIS AND TYPICAL BILLS

- 19 Q. Have you prepared a comparison of billing under forecast current and 20 proposed rates?
- 21 A. Yes, Attachment MWN-4 presents a comparison of typical bills under present and 22 proposed rate structures at the end of the Test Year for each of the major tariff

#### MATTHEW NOLLENBERGER - 22

classes at a range of usage levels. The current rates on Attachment MWN-4 reflect

l&M's basic rates as of this filing and the Company's existing riders as presented

in Workpaper WP-MWN-3. The proposed rates on Attachment MWN-4 reflect the

Company's proposed end of period basic rates and the riders proposed to be in

effect after new basic rates are implemented as presented in WP-MWN-4.

- 6 Q. Does this conclude your pre-filed verified direct testimony?
- 7 A. Yes.

#### **VERIFICATION**

I, Matthew W. Nollenberger, Manager, Regulated Pricing and Analysis of American Electric Power Service Corporation (AEPSC), affirm under penalties of perjury that the foregoing representations are true and correct to the best of my knowledge, information, and belief.

Date: 7/25/2017

Matthew W. Nollenberger (

#### Test Year Transmission Owner (TO) Cost and Revenue Calculation 1/

1. Remove Embedded Cost of Service - Transmission (BulkTran + SubTran)

Total Rate Base	\$719,995,465
Proposed Rate of Retu	rn 5.84% 2/
Income Requirement	\$42,071,912
Total Expense	\$45,191,012
Incremental Taxes	\$16,608,698
Embedded COS TO Revenue Requiremen	t \$103,871,622
2. Remove PJM and Other TO Revenues -	Transmission (BulkTran + SubTran)
Total Other Revenues	\$120,517,226
TO Cost & Revenue Ac	ljustment \$16,645,604

<sup>1/</sup> Source: WP-DEH-4, unless noted otherwise

<sup>2/</sup> Source: Attachment MWN-2, = Proposed Operating Income/Proposed Rate Base

#### Indiana Michigan Power Company Attachment MWN-2 Page 1 of 4

#### Indiana Michigan Power Company Proposed Revenue Allocation Twelve Months Ending December 31, 2018

Current <u>Class</u> (1)	Current <u>Revenue</u> (2)	Current ROR % (3)	Current ROR <u>Index</u> (4)	Proposed <u>Increase</u> (5) = (7) - (2)	Proposed Increase % (6)	Proposed Revenue (7)	Proposed ROR % (8)	Proposed ROR <u>Index</u> (9)
RS	417,018,661	2.31	100	113,878,564	27.31	530,897,225	5.85	100
GS	173,142,257	2.45	107	46,386,770	26.79	219,529,027	5.92	101
LGS	166,886,974	2.30	100	43,302,795	25.95	210,189,769	5.84	100
IP	206,410,819	1.92	83	53,558,594	25.95	259,969,413	5.66	97
MS	2,591,457	1.33	58	777,437	30.00	3,368,894	4.79	82
WSS	8,223,264	2.73	119	1,844,737	22.43	10,068,001	6.06	104
IS	152,254	0.06	3	45,676	30.00	197,930	2.37	41
EHG	619,006	3.12	136	142,775	23.07	761,781	6.25	107
OL	6,213,544	6.25	272	746,868	12.02	6,960,412	7.82	134
SL	4,926,041	3.82	166	1,168,732	23.73	6,094,773	6.61	113
Subtotal	986,184,277	2.30	100	261,852,948	26.55	1,248,037,225	5.84	100
Interruptible	87,310,694			2,534,716	2.90	89,845,410		
Total Basic Rates	1,073,494,971			264,387,664	24.63	1,337,882,635	5.88	
Riders	259,760,550 <sup>1</sup>			(1,187,247)		258,573,303	I	
Total	1,333,255,521			263,200,417	19.74	1,596,455,937		
Jurisdictional Reven Transmission Owne	ue Deficiency r (TO) Cost and Reven	ue Adjustment		247,742,060 16,645,604 264,387,664				

<sup>&</sup>lt;sup>1</sup>The Rider Amounts shown in Columns 2 and 7 are calculated in Workpaper WP-JMS-19

#### Indiana Michigan Power Company Proposed Revenue Allocation Twelve Months Ending December 31, 2018

						C	urrent Equalized	Rate of Return	n		
Current	Current	Rate	Current	Current	Percent	Revenue	Income			Sales	Current
<u>Class</u>	<u>Revenue</u>	<u>Base</u>	<u>Income</u>	ROR %	<u>Increase</u>	<u>Increase</u>	<u>Increase</u>	<u>Income</u>	ROR %	<u>Revenue</u>	<u>Subsidy</u>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)=(2)-(11)
RS	417,018,661	1,837,894,208	42,542,642	2.31	-0.12	(490,331)	(296,649)	42,245,993	2.30	416,528,330	490,331
RS	417,018,661	1,837,894,208	42,542,642	2.31	-0.12	(490,331)	(296,649)	42,245,993	2.30	416,528,330	490,331
GS Sec	168,431,843	742,721,373	18,006,464	2.42	-0.92	(1,544,153)	(934,208)	17,072,256	2.30	166,887,690	1,544,153
GS Pri	4,597,781	17,460,382	644,531	3.69	-8.74	(401,961)	(243,185)	401,346	2.30	4,195,820	401,961
GS Sub	112,633	635,601	(8,174)	-1.29	33.44	37,660	22,784	14,610	2.30	150,293	(37,660)
GS	173,142,257	760,817,356	18,642,821	2.45	-1.10	(1,908,454)	(1,154,609)	17,488,213	2.30	171,233,803	1,908,454
LGS Sec	158,388,806	657,789,833	14,923,633	2.27	0.20	324,596	196,379	15,120,012	2.30	158,713,402	(324,596)
LGS Pri	8,231,633	31,086,917	899,618	2.89	-3.72	(305,870)	(185,051)	714,567	2.30	7,925,763	305,870
LGS Sub	246,789	990,702	16,783	1.69	4.01	9,900	5,989	22,772	2.30	256,689	(9,900)
LGS Tran	19,746	79,546	1,372	1.72	3.82	754	456	1,828	2.30	20,500	(754)
LGS	166,886,974	689,946,997	15,841,405	2.30	0.02	29,380	17,775	15,859,180	2.30	166,916,354	(29,380)
IP Sec	36,276,568	147,452,963	3,285,836	2.23	0.47	171,125	103,530	3,389,366	2.30	36,447,693	(171,125)
IP Pri	106,439,139	420,558,832	8,002,253	1.90	2.59	2,751,661	1,664,750	9,667,003	2.30	109,190,800	(2,751,661)
IP Sub	36,953,230	135,844,208	2,687,376	1.98	1.95	719,262	435,151	3,122,527	2.30	37,672,492	(719,262)
IP Tran	26,741,882	91,257,681	1,317,594	1.44	4.82	1,289,366	780,063	2,097,657	2.30	28,031,248	(1,289,366)
IP	206,410,819	795,113,685	15,293,059	1.92	2.39	4,931,414	2,983,492	18,276,551	2.30	211,342,233	(4,931,414)
MS	2,591,457	12,061,801	160,465	1.33	7.45	193,040	116,789	277,254	2.30	2,784,497	(193,040)
WSS Sec	4,882,647	19,398,023	498,705	2.57	-1.79	(87,306)	(52,820)	445,885	2.30	4,795,341	87,306
WSS Pri	2,802,699	10,250,107	290,405	2.83	-3.23	(90,570)	(54,795)	235,610	2.30	2,712,129	90,570
WSS Sub	537,918	1,774,733	68,131	3.84	-8.40	(45,186)	(27,337)	40,794	2.30	492,732	45,186
WSS	8,223,264	31,422,863	857,241	2.73	-2.71	(223,062)	(134,952)	722,289	2.30	8,000,202	223,062
IS	152,254	978,714	579	0.06	23.79	36,228	21,918	22,497	2.30	188,482	(36,228)
EHG	619,006	2,619,836	81,645	3.12	-5.72	(35,414)	(21,425)	60,220	2.30	583,592	35,414
OL	6,213,544	29,137,058	1,820,715	6.25	-30.62	(1,902,436)	(1,150,968)	669,747	2.30	4,311,108	1,902,436
SL	4,926,041	25,064,386	957,501	3.82	-12.80	(630,365)	(381,369)	576,132	2.30	4,295,676	630,365
Total	986,184,277	4,185,056,905	96,198,075	2.30	0.00	0	0	96,198,076	2.30	986,184,277	0

#### Indiana Michigan Power Company Proposed Revenue Allocation Twelve Months Ending December 31, 2018

							Duanasad Faus	dined Date of Date			Retain	Lincia	
Current	Current	Rate	Current	Current	Percent	Revenue	Income	lized Rate of Retu Proposed	urn	Sales	50% of Current	Limit Increase	Proposed
Class	Revenue	<u>Base</u>	Income	ROR %	<u>Increase</u>	Increase	<u>Increase</u>	Income	ROR %	<u>Revenue</u>	Subsidy	to 30%	<u>Increase</u>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	$(14) = \overline{(7) + (12)} + (13)$
RS	417,018,661	1,837,894,208	42,542,642	2.31	25.70	107,194,025	64,852,093	107,394,735	5.84	524,212,686	245,166	0	
RS	417,018,661	1,837,894,208	42,542,642	2.31	25.70	107,194,025	64,852,093	107,394,735	5.84	524,212,686	245,166	66,531	107,505,722
GS Sec	168,431,843	742,721,373	18,006,464	2.42	24.92	41,972,757	25,393,404	43,399,868	5.84	210,404,600	772,076	0	
GS Pri	4,597,781	17,460,382	644,531	3.69	13.51	621,064	375,742	1,020,273	5.84	5,218,845	200,981	0	
GS Sub	112,633	635,601	(8,174)	-1.29	66.50	74,900	45,314	37,140	5.84	187,533	(18,830)	0	
GS	173,142,257	760,817,356	18,642,821	2.45	24.64	42,668,721	25,814,460	44,457,281	5.84	215,810,978	954,227	27,541	43,650,489
LGS Sec	158,388,806	657,789,833	14,923,633	2.27	24.54	38,865,267	23,513,381	38,437,014	5.84	197,254,073	(162,298)	0	
LGS Pri	8,231,633	31,086,917	899,618	2.89	18.41	1,515,548	916,902	1,816,520	5.84	9,747,181	152,935	0	
LGS Sub	246,789	990,702	16,783	1.69	27.53	67,946	41,107	57,890	5.84	314,735	(4,950)	0	
LGS Tran	19,746	79,546	1,372	1.72	27.42	5,415	3,276	4,648	5.84	25,161	(377)	0	
LGS	166,886,974	689,946,997	15,841,405	2.30	24.24	40,454,176	24,474,667	40,316,072	5.84	207,341,150	(14,690)	24,976	40,464,462
IP Sec	36,276,568	147,452,963	3,285,836	2.23	24.29	8,810,566	5,330,368	8,616,204	5.84	45,087,134	(85,563)	0	
IP Pri	106,439,139	420,558,832	8,002,253	1.90	25.74	27,392,693	16,572,505	24,574,758	5.84	133,831,832	(1,375,831)	0	
IP Sub	36,953,230	135,844,208	2,687,376	1.98	23.49	8,678,530	5,250,487	7,937,863	5.84	45,631,760	(359,631)	0	
IP Tran	26,741,882	91,257,681	1,317,594	1.44	24.82	6,636,259	4,014,919	5,332,513	5.84	33,378,141	(644,683)	0	10.001.100
IP	206,410,819	795,113,685	15,293,059	1.92	24.96	51,518,048	31,168,279	46,461,338	5.84	257,928,867	(2,465,708)	28,783	49,081,123
MS	2,591,457	12,061,801	160,465	1.33	34.72	899,754	544,349	704,814	5.84	3,491,211	(96,520)	(112,909)	690,325
WSS Sec	4,882,647	19,398,023	498,705	2.57	21.49	1,049,246	634,791	1,133,496	5.84	5,931,893	43,653	0	
WSS Pri	2,802,699	10,250,107	290,405	2.83	18.20	509,994	308,545	598,950	5.84	3,312,693	45,285	0	
WSS Sub	537,918	1,774,733	68,131	3.84	10.93	58,798	35,573	103,704	5.84	596,716	22,593	0	
WSS	8,223,264	31,422,863	857,241	2.73	19.68	1,618,038	978,909	1,836,150	5.84	9,841,302	111,531	1,138	1,730,707
IS	152,254	978,714	579	0.06	61.46	93,572	56,611	57,190	5.84	245,826	(18,114)	(38,117)	37,341
EHG	619,006	2,619,836	81,645	3.12	19.08	118,084	71,441	153,086	5.84	737,090	17,707	95	135,886
OL	6,213,544	29,137,058	1,820,715	6.25	-3.14	(195,261)	(118,132)	1,702,583	5.84	6,018,283	951,218	1,055	757,012
SL	4,926,041	25,064,386	957,501	3.82	17.02	838,187	507,101	1,464,602	5.84	5,764,228	315,183	907	1,154,277
Total	986,184,277	4,185,056,905	96,198,075	2.30	24.86	245,207,344 245,207,344	148,349,776	244,547,851 244,547,851	5.84	1,231,391,621	0	0	245,207,344

Gross Rev Conversion Factor:

1.6529

Jurisdictional Revenue Deficiency (A-1):

247,742,060

\*(Before TO Cost Revenue Adjustment)

#### Indiana Michigan Power Company Proposed Revenue Allocation Twelve Months Ending December 31, 2018

Indiana Michigan Power Company Attachment MWN-2 Page 4 of 4

					Proposed Revenue Allocation							
Current Class	Current Revenue	Rate Base	Current Income	Current ROR %	Percent Increase	Revenue Increase	Income Increase	Income	Proposed Revenue	Adjust for TO Cost/Revenue	Adj. Proposed Revenue	ROR %
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
RS	417,018,661	1,837,894,208	42,542,642	2.31	25.78	107,505,722	65,040,670	107,583,312	524,524,383	6,372,842	530,897,225	5.85
GS	173,142,257	760,817,356	18,642,821	2.45	25.21	43,650,489	26,408,427	45,051,248	216,792,746	2,736,281	219,529,027	5.92
LGS	166,886,974	689,946,997	15,841,405	2.30	24.25	40,464,462	24,480,889	40,322,294	207,351,436	2,838,333	210,189,769	5.84
IP	206,410,819	795,113,685	15,293,059	1.92	23.78	49,081,123	29,693,946	44,987,005	255,491,942	4,477,471	259,969,413	5.66
MS	2,591,457	12,061,801	160,465	1.33	26.64	690,325	417,645	578,110	3,281,782	87,112	3,368,894	4.79
WSS	8,223,264	31,422,863	857,241	2.73	21.05	1,730,707	1,047,073	1,904,314	9,953,970	114,030	10,068,001	6.06
IS	152,254	978,714	579	0.06	24.53	37,341	22,591	23,170	189,595	8,335	197,930	2.37
EHG	619,006	2,619,836	81,645	3.12	21.95	135,886	82,211	163,856	754,892	6,889	761,781	6.25
OL	6,213,544	29,137,058	1,820,715	6.25	12.18	757,012	457,990	2,278,705	6,970,556	(10,144)	6,960,412	7.82
SL	4,926,041	25,064,386	957,501	3.82	23.43	1,154,277	698,335	1,655,836	6,080,318	14,455	6,094,773	6.61
Total	986,184,277	4,185,056,905	96,198,075	2.30	24.86	245,207,344	148,349,777	244,547,852	1,231,391,621	16,645,604	1,248,037,225	5.84

Gross Rev Conversion Factor:

1.6529

					369 - Weighted	Average Ser	vice Drop
<b>Customer-related Investment Cost</b>	Resi	<u>dential</u>	Life (yrs)		Connection-type	% Installs	\$ / Install
369 - Service Drop (Wtd. Avg. OVR, URD)	\$ :	1,651.02	38	1/	OVR - 2016	13%	518.61 2/
Levelized Carrying Charge: 38 Yr		10.50%			URD - 2016	87%	1,826.30 2/
369 - Annualized Cost of Investment	\$	173.32				Wtd. Avg.	\$ 1,651.02
Monthly Cost of Investment	\$	14.44					
370 (586) - Meter	\$	112.74 2,	/ 15	1/	<u>Levelized Ca</u>		<u> </u>
Levelized Carrying Charge: 15 Yr		14.44%			Component	<u>15</u>	<u>40</u>
370 (586) - Annualized Cost of Investment	\$	16.28			Return	5.88	5.88 6/
Monthly Cost of Investment	\$	1.36			Depreciation	4.62	1.13
					FIT	1.88	1.43
RS - Customer-related O&M (\$)		4/			Property Tax, G&A	2.06	2.06
586 - Meters Operation		500,144			(%	) 14.44	10.50
597 - Meters Maintenance		23,021					
Total Customer-related O&M		523,165					
RS - Customer Account Expenses (\$)		4/					
901 - Supervision		772,421					
902 - Meter Read		,800,250					
903 - Customer Records	8	,636,479					
904 - Uncollectibles		0					
905 - Misc.	2	,688,942					
907 - Supervision		719,767					
908 - Customer Assistance	7	,533,185					
909 - Info & Instr		25,562					
910 - Misc.		0					
911 - Misc. Selling		0					
Total Customer Acct. Expense	\$ 22,	176,606					
I&M IN RS # Annual Bills	4	,871,736 5/					
Investment Cost / Customer / Month	\$	15.80					
O&M + Customer Account / Customer / Month	\$	4.66					
Calculated RS Monthly Service Charge	\$	20.46					
Proposed RS Monthly Service Charge	\$	18.00					

#### <u>ırces:</u>

AEP Property Accounting Policy & Research
I&M Dist Reg Planning - Work Request Cost Estimate Detail
AEP Corp. Finance, I&M Annual Investment Carrying Charges, As of 12/31/2016
Attachment DEH-1, Class Cost of Service
WP-MWN-2, Rate Design
Schedule A-1

Line <u>No.</u>	<u>Tariff</u>	<u>Demand</u>	Metered <u>Energy</u>	Current <u>Bill</u>	Proposed <u>Bill</u>	Bill <u>Increase</u>	% <u>Change</u>
	RS						
1			250	\$36.94	\$51.30	\$14.36	38.9%
2			500	\$66.59	\$84.59	\$18.00	27.0%
3			1,000	\$125.88	\$151.16	\$25.28	20.1%
4			2,000	\$244.42	\$284.32	\$39.90	16.3%
5 6			3,000 4,000	\$362.98 \$481.53	\$417.48 \$550.64	\$54.50 \$69.11	15.0% 14.4%
	RS-OPES						
7	On-Peak=25%		250	\$31.27	\$46.36	\$15.09	48.3%
8	Off-Peak=75%		500	\$54.06	\$72.82	\$18.76	34.7%
9			1,000	\$99.61	\$125.73	\$26.12	26.2%
10			2,000	\$190.67	\$231.56	\$40.89	21.4%
11 12		 	3,000 4,000	\$281.76 \$372.83	\$337.39 \$443.21	\$55.63 \$70.38	19.7% 18.9%
12			4,000	φ312.03	φ443.21	φ10.36	10.9 /0
13	RS-TOD On-Peak 35%		250	\$34.28	\$50.06	\$15.78	46.0%
14	Off-Peak 65%		500	\$60.08	\$80.21	\$20.13	33.5%
15	5.1. 1 Sain 5575		1,000	\$111.65	\$140.52	\$28.87	25.9%
16			2,000	\$214.77	\$261.12	\$46.35	21.6%
17			3,000	\$317.90	\$381.74	\$63.84	20.1%
18			4,000	\$421.03	\$502.34	\$81.31	19.3%
	RS-TOD2						
19	On-Peak 5%		250	\$36.41	\$50.30	\$13.89	38.1%
20	Off-Peak 95%		500	\$65.54	\$82.60	\$17.06	26.0%
21			1,000	\$123.78	\$147.18	\$23.40	18.9%
22 23			2,000 3,000	\$240.22 \$356.68	\$276.36 \$405.54	\$36.14 \$48.86	15.0% 13.7%
23 24		 	4,000	\$473.13	\$534.71	\$61.58	13.0%
			,	•	• • •	• • • • • • • • • • • • • • • • • • • •	
25	GS-SEC < 10 KW	3 kW	200	¢33.00	\$47.00	\$14.00	42.4%
25 26	Block 1 - up to 4,500 kWh Block 2 - all other kWh	3 kW	200 500	\$33.00 \$67.96	\$47.00 \$88.98	\$14.00 \$21.02	42.4% 30.9%
27	Block 2 all other kvvii	5 kW	1,000	\$126.23	\$158.98	\$32.75	25.9%
28		7 kW	2,500	\$300.99	\$368.92	\$67.93	22.6%
29		9 kW	5,000	\$582.54	\$701.93	\$119.39	20.5%
	GS-TOD2						
30	On-Peak 5%		1,000	\$124.29	\$152.93	\$28.64	23.0%
31	Off-Peak 95%		2,500	\$296.12	\$353.82	\$57.70	19.5%
32			5,000	\$582.58	\$688.64	\$106.06	18.2%
33			7,500	\$868.97	\$1,023.46	\$154.49	17.8%
	GS-OUSP			4		*	
34	Optional Unmetered		200	\$25.29	\$34.93 \$75.60	\$9.64	38.1%
35 36	Service Provision	 	500 1,000	\$55.66 \$106.28	\$75.62 \$143.45	\$19.96 \$37.17	35.9% 35.0%
37			2,500	\$258.10	\$346.91	\$88.81	34.4%
38			5,000	\$511.17	\$686.03	\$174.86	34.2%
	GS-SEC						
39	GS-SEC Block 1 - up to 4,500 kWh	10 kW	2,000	\$242.72	\$298.93	\$56.21	23.2%
40	Block 2 - all other kWh	10 kW	3,000	\$359.26	\$438.91	\$79.65	22.2%
41		10 kW	4,000	\$475.77	\$578.87	\$103.10	21.7%
42		10 kW	5,000	\$582.54	\$701.93	\$119.39	20.5%
43		100 kW	20,000	\$2,459.97	\$2,927.36	\$467.39	19.0%
44		100 kW	25,000	\$2,944.97	\$3,457.87	\$512.90	17.4%
45 46		100 kW 250 kW	30,000 50,000	\$3,429.91 \$6,074.04	\$3,988.35 \$7,166.93	\$558.44 \$1,092.89	16.3% 18.0%
-	00.707.676		· ,	. ,	. ,	. , , , , , ,	
47	GS-TOD-SEC On-Peak 40%		100	\$20.87	\$30.51	\$9.64	46.2%
48	Off-Peak 60%		250	\$35.80	\$47.81	\$12.01	33.5%
49			500	\$60.72	\$76.60	\$15.88	26.2%
50			1,000	\$110.55	\$134.22	\$23.67	21.4%
51			2,000	\$210.15	\$249.42	\$39.27	18.7%
52			4,000	\$409.42	\$479.85	\$70.43	17.2%

Line <u>No.</u>	<u>Tariff</u>	<u>Demand</u>	Metered <u>Energy</u>	Current <u>Bill</u>	Proposed <u>Bill</u>	Bill <u>Increase</u>	% <u>Change</u>
	GS-LM-TOD						
53	On-Peak 30%		500	\$56.75	\$71.02	\$14.27	25.1%
54	Off-Peak 70%		1,000	\$102.62	\$123.06	\$20.44	19.9%
55			2,000	\$194.29	\$227.10	\$32.81	16.9%
			2,500	\$240.16	\$279.13	\$38.97	16.2%
56			3,000	\$286.02	\$331.16	\$45.14	15.8%
57			4,000	\$377.72	\$435.20	\$57.48	15.2%
58			5,000	\$469.45	\$539.28	\$69.83	14.9%
	GS-PRI						
59		250 kW	50,000	\$5,767.65	\$6,539.25	\$771.60	13.4%
	GS-SUB						
60		250 kW	50,000	\$5,153.62	\$5,617.02	\$463.40	9.0%
	100.050						
61	LGS-SEC Block 1 - 1st 300 kWh/kVA	100 kW	30,000	\$2,791.90	\$3,465.89	\$673.99	24.1%
62	Block 2 - all other kWh	100 kW	40,000	\$3,381.74	\$4,029.48	\$647.74	19.2%
63	Block 2 all other RVVII	100 kW	50,000	\$3,920.51	\$4,540.65	\$620.14	15.8%
64		100 kW	60,000	\$4,459.32	\$5,051.80	\$592.48	13.3%
65		500 kW	150,000	\$13,823.60	\$17,200.64	\$3,377.04	24.4%
66		500 kW	200,000	\$16,778.73	\$20,024.75	\$3,246.02	19.3%
67		500 kW	250,000	\$19,472.73	\$22,580.56	\$3,107.83	16.0%
68		500 kW	300,000	\$22,166.70	\$25,136.36	\$2,969.66	13.4%
	LGS-PRI						
69		500 kW	150,000	\$12,977.92	\$15,700.06	\$2,722.14	21.0%
70		500 kW	200,000	\$15,873.45	\$18,448.44	\$2,574.99	16.2%
71		500 kW	250,000	\$18,514.38	\$20,936.22	\$2,421.84	13.1%
72		500 kW	300,000	\$21,155.27	\$23,423.98	\$2,268.71	10.7%
	LGS-SUB						
73	200 002	500 kW	100,000	\$8,060.52	\$10,255.05	\$2,194.53	27.2%
74		500 kW	150,000	\$11,596.95	\$13,660.53	\$2,063.58	17.8%
75		500 kW	200,000	\$14,457.91	\$16,372.57	\$1,914.66	13.2%
76		500 kW	250,000	\$17,068.43	\$18,827.54	\$1,759.11	10.3%
	LGS-TRAN						
77	200	500 kW	100,000	\$7,999.73	\$10,179.26	\$2,179.53	27.2%
78		500 kW	150,000	\$11,508.65	\$13,550.00	\$2,041.35	17.7%
79		500 kW	200,000	\$14,348.79	\$16,233.99	\$1,885.20	13.1%
80		500 kW	250,000	\$16,940.98	\$18,663.38	\$1,722.40	10.2%
	LGS-LM-TOD						
81	On-Peak 25%		15,000	\$1,001.22	\$1,375.99	\$374.77	37.4%
82	Off-Peak 75%		30,000	\$1,967.10	\$2,716.66	\$749.56	38.1%
83			100,000	\$6,474.60	\$8,973.15	\$2,498.55	38.6%
	LGS-TOD-SEC						
84	On-Peak 45%	50 kW	15,000	\$1,286.56	\$1,795.85	\$509.29	39.6%
85	Off-Peak 55%	50 kW	20,000	\$1,630.71	\$2,191.47	\$560.76	34.4%
86		50 kW	25,000	\$1,974.91	\$2,587.11	\$612.20	31.0%
	LGS-TOD-PRI						
87	On-Peak 55%	200 kW	50,000	\$4,219.65	\$5,794.03	\$1,574.38	37.3%
88	Off-Peak 45%	200 kW	60,000	\$4,920.68	\$6,571.25	\$1,650.57	33.5%
89		200 kW	70,000	\$5,621.71	\$7,348.48	\$1,726.77	30.7%
	IP-SEC						
90	Block 1 - 1st 410 kWh/kVA	1,000 kVA	250,000	\$26,325.08	\$33,438.27	\$7,113.19	27.0%
91	Block 2 - all other kWh	1,000 kVA	350,000	\$31,535.11	\$39,980.78	\$8,445.67	26.8%
92		1,000 kVA	450,000	\$36,031.22	\$45,266.66	\$9,235.44	25.6%
93		1,000 kVA	550,000	\$38,400.31	\$46,808.53	\$8,408.22	21.9%
94		1,000 kVA	650,000	\$40,769.39	\$48,350.41	\$7,581.02	18.6%
	IP-PRI						
95		2,000 kVA	900,000	\$67,942.65	\$83,683.21	\$15,740.56	23.2%
96		2,000 kVA	1,100,000	\$72,580.46	\$86,687.85	\$14,107.39	19.4%
97		2,000 kVA	1,300,000	\$77,218.24	\$89,692.47	\$12,474.23	16.2%
	IP-SUB						
98	302	10,000 kVA	4,500,000	\$311,474.96	\$377,575.82	\$66,100.86	21.2%
99		10,000 kVA	5,500,000	\$334,384.06	\$392,434.89	\$58,050.83	17.4%
100		10,000 kVA	6,500,000	\$357,293.16	\$407,293.96	\$50,000.80	14.0%

#### Indiana Michigan Power Company - Indiana Typical Electric Bill Comparison

Line			Metered	Current	Proposed	Bill	%
No.	<u>Tariff</u>	Demand	<u>Energy</u>	Bill	Bill	<u>Increase</u>	Change
110.	IP-TRAN	Demana	Litergy	<u>DIII</u>	<u>DIII</u>	<u>mercase</u>	<u>Oriange</u>
101	11 110 114	10,000 kVA	4,500,000	\$309,077.31	\$374,269.02	\$65,191.71	21.1%
102		10,000 kVA	5,500,000	\$331,812.71	\$388,973.69	\$57,160.98	17.2%
103		10,000 kVA	6,500,000	\$354,548.11	\$403,678.36	\$49,130.25	13.9%
.00		10,000 1071	0,000,000	φοσ 1,0 10.11	Ψ 100,07 0.00	Ψ.0,.00.20	101070
	MS						
104			2,500	\$277.62	\$339.27	\$61.65	22.2%
105			10,000	\$1,046.51	\$1,293.13	\$246.62	23.6%
106			17,500	\$1,815.43	\$2,247.01	\$431.58	23.8%
			,000	Ψ.,σ.σσ	Ψ=,=	Ψ.σσσ	_0.070
	WSS-SEC						
107			5,000	\$394.69	\$470.47	\$75.78	19.2%
108			20,000	\$1,540.75	\$1,819.10	\$278.35	18.1%
109			50,000	\$3,832.90	\$4,516.40	\$683.50	17.8%
			•				
	WSS-PRI						
110			50,000	\$3,597.20	\$4,116.40	\$519.20	14.4%
111			350,000	\$24,847.70	\$28,218.40	\$3,370.70	13.6%
112			650,000	\$46,098.20	\$52,320.40	\$6,222.20	13.5%
			•				
	WSS-SUB						
113			50,000	\$3,232.20	\$3,554.40	\$322.20	10.0%
114			350,000	\$22,292.70	\$24,284.40	\$1,991.70	8.9%
115			650,000	\$41,353.20	\$45,014.40	\$3,661.20	8.9%
	WSS-TOD-SEC						
116	On-Peak 30%		5,000	\$339.23	\$423.78	\$84.55	24.9%
117	Off-Peak 70%		20,000	\$1,315.29	\$1,632.32	\$317.03	24.1%
118							
	IS						
119			1,000	\$170.84	\$209.40	\$38.56	22.6%
120			2,500	\$427.08	\$523.46	\$96.38	22.6%
121			4,000	\$683.29	\$837.54	\$154.25	22.6%
	EHG						
122			2,000	\$266.89	\$315.62	\$48.73	18.3%
123			5,000	\$650.44	\$763.51	\$113.07	17.4%
124			8,000	\$1,033.98	\$1,211.37	\$177.39	17.2%