

I&M Exhibit: _____

INDIANA MICHIGAN POWER COMPANY

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**INDIANA UTILITY
REGULATORY COMMISSION**

PRE-FILED VERIFIED DIRECT TESTIMONY

OF

MICHAEL S. SMALL

Cause No. 45933

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**DIRECT TESTIMONY OF MICHAEL S. SMALL
ON BEHALF OF
INDIANA MICHIGAN POWER COMPANY**

I. Introduction of Witness

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

2 My name is Michael S. Small and my business address is 1 Riverside Plaza,
3 Columbus, OH 43215.

4 **Q2. By whom are you employed and in what capacity?**

5 I am employed by American Electric Power Service Corporation (AEPSC) as a
6 Regulatory Consultant Senior in the Regulated Pricing and Analysis
7 Department. AEPSC supplies engineering, accounting, planning, advisory, and
8 other services to the subsidiaries of the American Electric Power (AEP) system,
9 one of which is Indiana Michigan Power Company (I&M or the Company).

10 **Q3. Briefly describe your educational background and professional
11 experience.**

12 I received a Bachelor of Arts degree in Economics, Accounting & Business from
13 Muskingum College in 2008. I received a Master of Business Administration
14 from Ohio Christian University in 2015. I attended the Practical Regulatory
15 Training held by the New Mexico State University in 2021. I attended the EEI
16 Electric Rates Advanced Course held by the University of Wisconsin in 2022.

17 I began my career working for the Ohio Valley Electrical Corporation as an
18 accountant. In May 2013, I joined AEPSC as a Fuel Accountant in the
19 Accounting Department. In 2016, I accepted the position of Financial Reporting
20 Senior Accountant in the AEPSC Financial Reporting Department. I accepted

1 my current position of Regulatory Consultant Senior in the AEPSC Regulated
2 Pricing and Analysis Department in September 2021.

3 **Q4. What are your responsibilities as Regulatory Consultant Senior?**

4 My responsibilities include preparation of cost-of-service studies, rate design
5 and tariff provisions for the AEP operating companies, as well as other projects
6 related to regulatory issues and proceedings, individual customer requests, and
7 general rate matters.

8 **Q5. Have you previously testified before any regulatory commissions?**

9 Yes. I have submitted testimony before the Indiana Utility Regulatory
10 Commission (Commission) on behalf of I&M in the following cases:

- 11 • Cause No. 44871 – ECR 6 & 7
- 12 • Cause No. 45245 – SPR 2

13 **II. Purpose of Testimony**

14 **Q6. What is the purpose of your testimony?**

15 The purpose of my testimony is to support and describe the development of the
16 Company's class cost-of-service study, which allocates the total Indiana retail
jurisdiction rate base, revenues, and expenses to each rate schedule.

17 The cost allocation methodology used in the class cost-of-service study assigns
18 costs among the customer classes in a fair and equitable manner based on
19 principles of cost causation. Customers who cause costs to be incurred are
20 allocated such costs in the Company's class cost-of-service study.

1 **Q7. What is the test period used to prepare the class cost-of-service study in**
2 **this proceeding?**

3 The test period used to develop the class cost-of-service study in this
4 proceeding is the twelve-month period ending December 31, 2024 (Test Year).

5 **Q8. Are you sponsoring any attachments?**

6 Yes, I am sponsoring the following attachment:

- 7
 - Attachment MSS-1: Test Year Class Cost-of-Service Study

8 **Q9. Are you sponsoring any workpapers?**

9 Yes, I am sponsoring the following workpapers:

- 10
 - WP-MSS-1: Class Cost-of Service Study - Proposed Equalized Rate of

11 Return (ROR)

 - WP-MSS-2: Class Cost-of Service Study - Allocation Factors

12

 - WP-MSS-3: Class Cost-of Service Study - Allocators

13

 - WP-MSS-4: Class Cost-of Service Study - Test Year Transmission and

14 Subtransmission

 - WP-MSS-5: Class Cost-of-Service Study Inputs

15

 - WP-MSS-6: Customer and Demand Allocation Factors

16

 - WP-MSS-7: Revenue Allocation Factors

17

 - WP-MSS-8: Revenue Allocation String

18

 - WP-MSS-9: Number of Customers - Allocation Factors

19

 - WP-MSS-10: Coincident Peak Demands at Time of Generation,

20 Transmission, Subtransmission and Distribution System Peaks

 - WP-MSS-11: Class Peak Data

21

 - WP-MSS-12: Allocation of Account 903

22

 - WP-MSS-13: Meter Reading Expense - Account 902

23

24

25

- 1 • WP-MSS-14: Calculation of Meter Allocator
- 2 • WP-MSS-15: Calculation of FORT Allocator and Calculation of
- 3 CUST_451 Allocator
- 4 • WP-MSS-16: Account 364 - Poles, Account 365 - Overhead Conductors,
- 5 Account 367 - Underground Conductors and Account 368 - Transformers
- 6 • WP-MSS-17: Class Cost-of Service Study - Phase-In
- 7 • WP-MSS-18: Proposed Equalized ROR - Phase-In
- 8 • WP-MSS-19: Class Cost-of Service Study - Allocation Factors - Phase-In
- 9 • WP-MSS-20: Class Cost-of Service Study - Allocators - Phase-In

10 **Q10. Were the workpapers and attachment that you sponsor prepared by you or**
11 **under your direction or supervision?**

12 Yes.

13 **Q11. Please summarize your testimony.**

14 A class cost-of-service study is a basic analytical tool used in traditional utility
15 rate design. Cost studies are utilized to determine the revenue requirement for
16 the services offered by the utility and to determine the costs that different
17 classes of customers cause to be incurred on the utility system. When the
18 jurisdictional costs are allocated to the various customer classes, the result is a
19 fully allocated class cost-of-service study that is a guide in establishing rates
20 based on costs.

21 This testimony describes the class cost-of-service allocation study for the Test
22 Year and presents the resulting class-by-class rates of return. The cost
23 allocation methods used to prepare the study meet the criteria identified in the
24 testimony and assign costs based on Commission approved cost causations
25 approaches. Customers who cause costs to be incurred are allocated such
26 costs in the Company's class cost-of-service study.

1 The class cost-of-service study equitably allocates costs among customer
2 classes based on contributions to demand and energy levels and number of
3 customers. The Company proposes to continue using the 6 Coincident Peak
4 (CP) demand allocator, consistent with the 6 CP methodology used in I&M's last
5 four basic rate cases (Cause Nos. 45576, 45235, 44967, and 44075). The CP
6 cost allocation refers to the process of determining each class's hourly
7 contribution to the Company's monthly peak demand. The 6 CP is the most
8 appropriate demand allocator considering the load profile during the Test Year
9 continues to reflect six monthly peaks, three during the summer and three
10 during the winter. The benefit of the 6 CP demand allocator is that each
11 customer class is being allocated their fair share of demand costs based on their
12 contributions to the average of the six monthly peaks during the Test Year.

13 When the costs are allocated to the customer classes, the result is a fully
14 allocated cost-of-service study that establishes cost responsibility and the Test
15 Year rate of return earned from each class, making it possible to determine the
16 rates each class of customer should pay based on costs that are just and
17 reasonable. Company witness Fischer explains that the results of the study
18 help guide the allocation of the Test Year sales revenue to each customer class.

III. Overview of Class Cost-of-Service Studies

19 **Q12. Briefly describe the nature and purpose of a class cost-of-service study.**

20 Cost studies are utilized to determine the revenue requirement for the services
21 offered by the utility and to determine the costs that different classes of
22 customers cause to be incurred on the utility system.

23 A class cost-of-service study is a basic analytical tool used in traditional utility
24 rate design. When the jurisdictional costs are allocated to the various customer

1 classes, the result is a fully allocated class cost study that is a guide in
2 establishing rates based on costs.

3 **Q13. Please describe how you prepared the class cost-of-service study.**

4 Attachment MSS-1 was used to prepare the class cost-of-service study. This
5 spreadsheet permits the analyst to use two types of allocation factors – those
6 which are generated externally and input to the program and those which are
7 developed internally as a result of the allocation process.

8 An example of an external allocation factor would be the total number of
9 secondary customers served at distribution level (DIST_SERV). An example of
10 an internal factor would be the rate base gross utility plant electric plant in
11 service distribution allocation factor (RB_GUP_EPIS_D).

12 **Q14. What is the source of the data used in a class cost-of-service study?**

13 A jurisdictional allocation of rate base, revenue, and expenses was prepared for
14 the forecasted Test Year by Company witness Duncan. The Indiana retail rate
15 base and expense components and revenues were then assigned to the various
16 customer classes using the standard three-step process to assign costs:
17 functionalization, classification, and allocation.

18 **Q15. Please describe the functionalization process.**

19 Once the relevant data is gathered, the costs are then separated by major
20 electric system functions. Typically, functions in an electric utility are:

- 21 • *Production and Purchased Power Costs* - includes the costs associated
22 with power generation and power purchases and their delivery to the bulk
23 transmission system.

- 1 • *Transmission Costs* - consists of costs associated with the high voltage
2 system utilized for the transmission of power to and from interconnected
3 utilities to the load centers of the utility's system.
- 4 • *Distribution Costs* - includes the distribution system that connects the
5 transmission system and the ultimate customer.
- 6 • *Customer Service Costs* - includes the costs associated with providing
7 meter reading, billing and collection, and customer information and
8 services.
- 9 • *Administrative and General (A&G) Costs* - comprised of administrative
10 costs that may not be directly assignable to other cost functions. These
11 costs include such items as salaries, insurance, and administrative costs.

12 **Q16. Please describe the classification process.**

13 The second step is to separate the functionalized costs into the following
14 classifications:

- 15 • Demand costs (costs that vary with the demand or kW/kVa imposed by
16 the customer).
- 17 • Energy costs (costs that vary with the number of kilowatt hours used by
18 the customer).
- 19 • Customer costs (costs that are directly related to the number of
20 customers served).

21 *Figure MSS-1* shows the typical classifications used in class cost-of-service
22 studies:

Figure MSS-1. Cost Classification

<u>Function</u>	<u>Classification</u>
Production	Demand, Energy
Transmission	Demand
Distribution	Demand, Customer
Customer Service	Customer
Administrative & General	Demand, Customer, Energy

1 Production plant costs, such as depreciation and return on investment, are
2 considered to be demand-related costs because costs of this nature are
3 incurred regardless of the amount of energy consumed or the number of
4 customers served. Some production costs, such as fuel costs and certain
5 production operation and maintenance (O&M) expenses, are energy-related
6 because they vary with the quantity of electricity produced.

7 Transmission costs are classified as demand-related costs because they are
8 fixed costs, do not vary with energy usage, and do not directly change with the
9 number of customers utilizing the transmission system.

10 Generally, the distribution system costs are affected either by the instantaneous
11 peak demand imposed on the distribution facilities or by the number of
12 customers served. Demand-related distribution costs typically vary with the size
13 of the electrical load served, while customer-related distribution costs vary
14 based on the number of customers receiving the service.

15 Customer service costs are primarily related to the number of customers. The
16 classification process provides a basis on which to allocate different categories
17 of costs (demand, energy, or customer costs) to the Company's classes.

1 **Q17. Please describe the allocation process.**

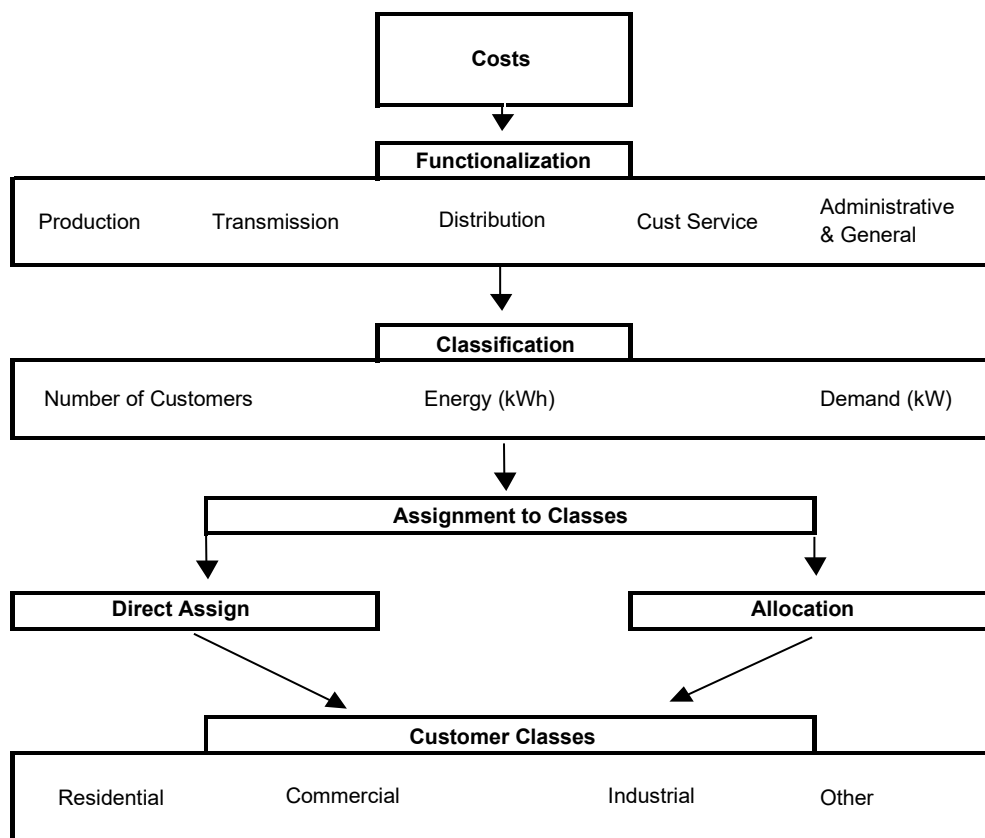
2 The third and final step is to allocate these costs among the classes of
3 customers based on how the costs are incurred for each class. Customer
4 classes are determined and grouped according to the nature of service
5 provided, voltage level, and load usage characteristics. In general, the five
6 principal customer classes are residential, commercial, industrial, outdoor
7 lighting, and street lighting.

8 The allocation process involves dividing the functionalized and classified costs
9 among the customer classes. The objective in this process is to determine a
10 reasonable, appropriate, and understandable method to assign the costs. Some
11 costs are directly assignable to a single class, or even a single customer. For
12 instance, the equipment used wholly for public street and highway lighting are
13 directly assigned to the street lighting class.

14 Most costs, however, are attributable to more than one customer class. These
15 are joint costs and must be allocated to customers by an allocation methodology
16 that is based on the manner in which the costs are caused by the different
17 customers. The joint costs are incurred based on the capacity demanded, the
18 energy used, or the number of customers.

1 *Figure MSS-2* illustrates how costs are allocated to customer classes.

Figure MSS-2. Example of Cost Allocation



2 In *Figure MSS-2*, costs are functionalized into production, transmission,
 3 distribution, customer service, and A&G. Some of these costs can be directly
 4 assigned to a customer class as mentioned previously. The remaining joint
 5 costs are incurred based on the number of customers, the energy used, or by
 6 the capacity demanded.

7 In many instances, the classification process will lead to an allocation
 8 methodology. For example, costs associated with the customer call center will
 9 vary with the number of customers, so those costs associated with maintaining

1 and staffing the customer call center are allocated to the classes based on a
2 weighted number of customers.

3 A weighted number of customers allocation factor is developed by multiplying
4 the number of customers in each class by a factor representing the difference in
5 cost associated with providing that service to different types of customers.

6 Similarly, the cost of fuel varies by the number of kilowatt hours consumed and,
7 therefore, is allocated based on the proportion of total energy used by a
8 customer class.

9 When this process is complete and all of the costs are allocated to the customer
10 classes, the result is a fully allocated class cost-of-service study that establishes
11 cost responsibility and the Test Year rate of return earned from each class,
12 making it possible to determine the rates each class of customer should pay
13 based on costs that are just and reasonable.

14 **Q18. What criteria must be established to ensure the allocation of costs to**
15 **customers is appropriate?**

16 Generally, the following criteria should be used to determine the
17 appropriateness of an allocation method:

- 18 • The method should match customer benefit from the use of the system
19 with the appropriate cost responsibility for the system.
- 20 • The method should reflect the planning and operating characteristics of
21 the utility's system.
- 22 • The method should recognize customer class characteristics such as
23 energy usage, peak demand on the system, diversity characteristics,
24 number of customers, etc.
- 25 • The method should produce stable results on a year-to-year basis.

1 **Q19. Does the allocation method employed by the Company meet these**
2 **objectives?**

3 Yes, it does. The allocation methodology utilized in the Company's class cost-of-
4 service study was chosen while considering each of the criteria listed above.

5 The results of the class cost-of-service study for the forecast period can be
6 relied upon to determine the appropriate revenue requirement for I&M's
7 customer classes.

IV. Allocation of Components of Rate Base

8 **Q20. Please describe the allocation of production electric plant in service.**

9 From the jurisdictional separation study, as prepared by Company witness
10 Duncan, electric plant in service is identified and functionalized into production,
11 transmission, distribution, intangible plant, and general plant.

12 Production plant is classified as demand-related and is allocated using the
13 production demand allocation factor (PROD_DEMAND). The production
14 demand allocation factor assigns costs based on the class contribution to the
15 average of I&M's six monthly coincident peaks on the production facilities.

16 **Q21. Please briefly describe Coincident Peak (CP) Cost Allocation method and**
17 **what CP demand allocator the Company is proposing in this proceeding?**

18 CP cost allocation refers to the process of determining each class's hourly
19 contribution to the Company's monthly peak demand. The Company is
20 proposing to continue using the 6 CP demand allocator, consistent with the 6
21 CP methodology used in I&M's last four basic rate cases (Cause Nos. 45576,
22 45235, 44967, and 44075).

1 More specifically, the six months that were used to derive the production,
2 transmission, and primary distribution demand allocation factors were the three
3 summer months of June, July, and August and the three winter months of
4 December, January, and February for the Test Year.

5 **Q22. Is the 6 CP demand allocator the most appropriate demand allocator to**
6 **assign demand-related costs among the customer classes in this**
7 **proceeding?**

8 Yes. The 6 CP is the most appropriate demand allocator considering the load
9 profile during the Test Year continues to reflect six monthly peaks, three during
10 the summer and three during the winter. Coincident peak load data is provided
11 in WP-MSS-10.

12 The importance of these six months is that Company engineers plan and size
13 equipment (e.g., poles, lines, and transformers) to meet customers' maximum
14 expected demand on those facilities during the peak months in the summer and
15 winter. The benefit of the 6 CP demand allocator is that each customer class is
16 being allocated their fair share of demand costs based on their contributions to
17 the average of the six monthly peaks during the Test Year.

18 **Q23. Please explain why it is reasonable to utilize a different demand allocator**
19 **in the class cost-of-service study from what is used in the jurisdictional**
20 **separation study.**

21 For class cost-of-service, one must consider the individual retail class load
22 shapes in addition to the jurisdictional load shape. It is the combination of the
23 variability of the load shapes by class and the seasonality of the retail class load
24 shapes that supports the Company's proposed 6 CP demand allocator as the
25 best method to allocate demand costs among the customer classes.

1 **Q24. How were the portions of the transmission plant allocated?**

2 The functional components of transmission plant were obtained directly from the
3 jurisdictional study and are classified as demand-related; the functional
4 components were then allocated to the classes based on their contribution to
5 the average of the six monthly peak demands on the power supply transmission
6 (BULK_TRANS) and sub-transmission systems (SUB_TRANS), respectively.

7 Generator step-up transformers are included in transmission plant based on the
8 FERC accounts but are separately identified and allocated using the production
9 demand allocation factor since they are related to the production function.

10 **Q25. How are transmission costs and revenues treated in your class cost-of-**
11 **service study?**

12 As explained by Company witness Fischer and consistent with the previous four
13 rate cases, the Company's traditional cost of transmission, net of the revenue
14 the Company receives from PJM as a transmission owner, have been removed
15 from the cost of service.

16 WP-MSS-4 and Attachment JLF-1 calculate in total the transmission owner cost
17 and revenue adjustment, while WP-JLF-3 determines the transmission owner
18 cost and revenue adjustment for each customer class for revenue allocation
19 purposes. The transmission costs that remain in the class cost-of-service study
20 are those related to I&M's role as a PJM Load Serving Entity as reflected in the
21 jurisdictional separation study.

22 **Q26. How were the portions of distribution plant allocated?**

23 Distribution plant is classified as demand- and customer-related and allocated to
24 the customer classes using factors based on demand levels or number of
25 customers. Distribution plant Accounts 360 through 368 were classified solely as
26 demand-related for class allocation purposes. Accounts 360 (Land and Land

1 Rights), Account 361 (Structures and Improvements), and Account 362 (Station
2 Equipment) were allocated to the distribution customer classes based on their
3 contributions to the average of I&M's six monthly peak demands on the primary
4 distribution system (DIST_CPD).

5 Costs included in Accounts 364 through 368 are incurred based on peak
6 demand; therefore, the costs included in these accounts should be classified as
7 demand-related and allocated using I&M's demand allocation factors. The
8 allocation of distribution plant continues to be an appropriate method due to its
9 foundation in cost-causation.

10 Accounts 364 through 367, Overhead and Underground Lines, are split into
11 primary and secondary voltage functions based upon information contained in
12 the Company's records and the expertise of the Company's distribution
13 engineers. The primary portions of Accounts 364 through 367 were allocated
14 using the DIST_CPD, and the secondary component of Accounts 364 through
15 367 were allocated based on a combination of each class's 12-month maximum
16 demand and the summation of individual customers' annual maximum demands
17 (DIST_POLES, DIST_OHLINES, and DIST_UGLINES). This recognizes that
18 some secondary facilities serve only one customer, while others serve two or
19 more customers.

20 Account 368, Distribution Transformers and Devices, are split into primary and
21 secondary voltage functions based upon information contained in the
22 Company's records and the expertise of the Company's distribution engineers
23 as to the determination of the functional use of the equipment. The primary
24 portion of Account 368 – cutouts, arresters, capacitors, voltage regulators, and
25 network protectors – was allocated using the DIST_CPD allocator.

26 The secondary portion – primary-to-secondary transformers – is allocated using
27 the appropriate secondary voltage demand allocation factor, which is based on

1 a combination of each class's 12-month maximum demand and the summation
2 of individual customers' annual maximum demands (DIST_TRANSF).

3 Account 369, Services, was classified as customer-related and was allocated
4 using the average number of secondary customers served (DIST_SERV).

5 Account 370, Meter Plant, was allocated using the average number of
6 customers weighted by a factor that considers the cost differential of various
7 metering installations (DIST_METERS). Account 371 was directly assigned to
8 the outdoor lighting class (DIST_OL), and Account 373 was directly assigned to
9 the street lighting class (DIST_SL).

10 **Q27. Has the Company made the appropriate classification of distribution**
11 **plant?**

12 Yes. The Company is continuing to classify services and meters as customer-
13 related and classify primary and secondary poles, lines, and transformers as
14 demand-related as reflected in Cause No. 45576.

15 This classification recognizes the standard engineering practice to plan the
16 distribution facilities to meet the maximum expected demand on the system, not
17 necessarily the number of customers being served by the facilities. It is more
18 appropriate to classify services and meters as customer-related since a single
19 service is required to serve each customer.

20 For other distribution facilities, a diversified mix of commercial and residential
21 customers will be served from those facilities. It is the customers' demand
22 placed on those facilities that drives the size and cost of the distribution facilities,
23 not the absolute number of customers served from those facilities.

24 The benefit of the Company's approach in classifying distribution plant is that
25 each customer class is being allocated its equitable share of distribution facilities
26 based on contributions to peak demand associated with Accounts 360-368, and
27 based on the number of customers with Accounts 369-373.

1 **Q28. How was the general and intangible portion of electric plant classified and**
2 **allocated?**

3 General and intangible plant investment was classified as labor-related. It was
4 allocated to the customer classes on the basis of a payroll labor allocator
5 (LABOR_M), constructed by first allocating the functional components of O&M
6 expense by the applicable class demand, energy, and customer allocation
7 factors, and then summing the allocated components by class to create a set of
8 labor expense ratios.

9 **Q29. Please describe the allocation of accumulated provision for depreciation**
10 **and amortization.**

11 The functionalized components of accumulated provision for depreciation and
12 amortization were obtained directly from the jurisdictional study and classified
13 and allocated in a fashion similar to electric plant in service.

14 **Q30. Please describe the allocation of working capital.**

15 Fuel inventory and allowances were allocated using the energy allocation factor
16 (PROD_ENERGY). The energy allocation factor allocates costs based on the
17 loss adjusted class energy used during the period compared to the total energy
18 used by all classes. The functional components of material and supplies were
19 allocated on the corresponding plant items.

20 **Q31. How were the other rate base items allocated?**

21 The rate base elements of prepaid pension and OPEB expenses were allocated
22 on O&M labor expense. The individual components of other rate base items
23 were allocated as well using internally and externally derived allocation factors
24 deemed to best reflect the causative nature of that particular item.

V. Allocation of Revenues, O&M and A&G Expenses

1 **Q32. How were revenues developed for each class?**

2 Forecasted sales revenue was directly assigned to each class. Demand-related
3 system sales and interruptible sales revenues were allocated based on the
4 PROD_DEMAND allocation factor. Energy-related system sales and
5 interruptible sales revenues were allocated based on the PROD_ENERGY
6 allocation factor.

7 Forfeited discounts and miscellaneous service revenues were directly assigned
8 based on an analysis of accounting records.

9 The functional components of rent from electric property and other electric
10 revenue were obtained directly from the jurisdictional study and allocated to
11 classes based on corresponding functional plant ratios.

12 **Q33. Please describe the allocation of production O&M expense.**

13 Production-related O&M was classified as either demand- or energy-related in
14 the jurisdictional study. The demand component was allocated using the
15 production demand allocation factor (PROD_DEMAND) and the energy
16 component was allocated using the energy allocation factor (PROD_ENERGY).

17 **Q34. Please describe the allocation of transmission O&M.**

18 The functional components of transmission-related O&M were obtained directly
19 from the jurisdictional study and classified as demand-related and allocated
20 using the transmission demand allocation factor (TRAN_TO). O&M expense
21 associated with generator step-up transformers was separately identified and
22 allocated using the production demand allocation factor (PROD_DEMAND).

1 **Q35. Please describe the allocation of distribution O&M between the various**
2 **customer classes.**

3 Distribution O&M expenses were functionalized and classified according to the
4 associated distribution plant accounts and allocated accordingly.

5 Account 581, Load Dispatching, and Account 582, Station Expenses, were
6 allocated using the distribution demand allocation factor (DIST_CPD). Account
7 583, Overhead Line Expense, was allocated based upon the same allocation
8 used for plant Account 365, Overhead Lines (DIST_OHLINES).

9 Account 584, Underground Line Expense, was allocated based upon the same
10 allocation used for plant Accounts 366, Underground Conduit, and Account 367,
11 Underground Lines (DIST_UGLINES).

12 Account 585, Street Lighting and Signal System Expense, was classified as
13 customer-related and directly assigned to the street lighting class. Meter
14 Expense, Account 586, was classified as customer-related and allocated in the
15 same manner as meter plant. Account 587, Customer Installation Expense, was
16 classified as customer-related and allocated based on primary customers
17 (DIST_PCUST).

18 Accounts 588 and 589 were allocated on total distribution plant and classified
19 accordingly. Account 580, Operation Supervision and Engineering, was
20 classified demand- and customer-related and allocated using the allocated
21 subtotal of Accounts 581 through 589.

22 Account 591, Maintenance of Structures, and Account 592, Maintenance of
23 Station Equipment, were classified as demand-related and allocated on the
24 distribution demand allocation factor DIST_CPD. Account 593, Maintenance of
25 Overhead Lines, Account 594, Maintenance of Underground Lines, and Account
26 595, Maintenance of Line Transformers, were functionalized and classified
27 according to the associated distribution plant accounts and allocated
28 accordingly.

1 Account 596, Maintenance of Street Lighting and Signal Systems, was classified
2 customer-related and directly assigned to the street lighting class. Account 597,
3 Maintenance of Meters, was classified customer-related and allocated in the
4 same manner as meter plant. Account 598, Maintenance of Miscellaneous
5 Distribution Plant, was classified customer-related and directly assigned to the
6 outdoor lighting class. Account 590, Maintenance Supervision and Engineering,
7 was classified and allocated based on the sum of the allocated O&M expense
8 Accounts 591 through 598.

9 **Q36. Please explain how customer accounting (Accounts 901-905), customer**
10 **services, and sales expense (Accounts 907-912) were allocated?**

11 Account 902, Meter Reading Expense, was allocated to those classes with
12 meter installations based upon an average number of customers weighted to
13 reflect differences in meter reading requirements.

14 Account 903, Customer Records Expense, was divided into two categories of
15 cost which included the call center and other. Call center costs were first split
16 into residential and other based on the actual number of calls received by the
17 call center and then other call center expenses were allocated based on the
18 number of customers.

19 Account 904, Uncollectibles, was allocated based on revenue for each class.
20 Accounts 901 and 905 were allocated based on the sum of the allocated
21 Accounts 902, 903, and 904. Accounts 907-912 were allocated using the
22 allocated total of Accounts 901-905. All customer accounting, customer
23 services, and sales expense accounts were classified as customer-related.

24 **Q37. Please describe the allocation of A&G expense.**

25 The regulatory expense associated with the Nuclear Regulatory Commission
26 (NRC) was allocated based on the production demand allocation factor.

1 The functional components of property insurance were taken directly from the
2 jurisdictional study and allocated based on the appropriate plant allocation
3 factor. The regulatory expense associated with retail rate case proceedings and
4 all other A&G expenses were allocated based on payroll labor.

VI. Allocation of Depreciation, Taxes and Other O&M Expenses

5 **Q38. Please describe the allocation of depreciation and amortization expense.**

6 The functionalized components of depreciation and amortization expense were
7 allocated using the corresponding plant items.

8 **Q39. How were other O&M and regulatory expense items allocated?**

9 The functional components of regulatory debit and credit expense were obtained
10 directly from the jurisdictional study and allocated using the appropriate plant
11 allocation factor. Electric plant in service accretion expenses are allocated to the
12 appropriate Distribution and Production factors. Line of credit expenses
13 assigned to rate base and factoring expenses allocated to revenue sales.

14 **Q40. How were taxes assigned to the retail classes?**

15 Individual other tax items were allocated and classified using the appropriate
16 demand, revenue, or plant allocator.

17 Interest expense was calculated on rate base and individual Schedule M items
18 were allocated using the appropriate allocators. State and current Federal
19 income taxes were computed by class. Deferred Federal Income Tax and
20 Deferred Investment Tax Credit were allocated using the appropriate allocation
21 factors.

VII. Earned Returns

1 **Q41. Please summarize the resulting earned rate of return for each class shown**
 2 **in the class cost-of-service study.**

3 *Figure MSS-3* shows the resulting earned rates of return for the class cost-of-
 4 service study in Attachment MSS-1.

Figure MSS-3. Rates of Return for Classes in Projected Class Cost of Service Study

Residential	4.02%
General Service	6.20%
Large General Service	4.66%
Industrial Power	6.08%
Municipal and School Service	3.97%
Water and Sewage Service	4.46%
Electric Heating General	3.40%
Irrigation Service	3.60%
Outdoor Lighting	6.22%
<u>Street Lighting</u>	<u>5.37%</u>
Total I&M Jurisdictional Class	4.78%

5 **Q42. How were these rates of return used in this proceeding?**

6 Company witness Fischer utilized the earned rates of return for each class as an
 7 input for the allocation of the revenue increase required for each class.

VIII. PRA Class Cost-of-Service Study

8 **Q43. Please describe the additional class cost-of-service study you completed**
 9 **related to the Phase-In Rate Adjustment (PRA) mechanism.**

10 In addition to the Test Year class cost-of-service study (Attachment MSS-1)
 11 developed in this filing, I performed an additional class cost-of service study in
 12 support of the Company's proposed PRA mechanism, which is supported by

1 Company witness Seger-Lawson. This additional class cost-of service study is
2 displayed in WP-MSS-17. The workpaper utilizes as its inputs the PRA
3 jurisdictional separation study prepared by Company witness Duncan.

4 **Q44. How did you complete this additional class cost-of-service study in**
5 **support of the PRA?**

6 I prepared the additional class cost-of-service study shown on WP-MSS-17 in a
7 manner consistent with the Test Year class cost-of-service study displayed in
8 Attachment MSS-1. The difference between this additional study and
9 Attachment MSS-1 are due to the different inputs provided by the jurisdictional
10 separation studies supported by Company witness Duncan.

11 **Q45. Does this conclude your pre-filed verified direct testimony?**

12 Yes.

VERIFICATION

I, Michael S. Small, Regulatory Consultant Senior for American Electric Power Service Corporation, affirm under penalties of perjury that the foregoing representations are true and correct to the best of my knowledge, information, and belief.

Date: August 8, 2023

Michael Small

Michael S. Small

INDIANA MICHIGAN POWER COMPANY - INDIANA
CLASS COST-OF-SERVICE STUDY
FORECAST TWELVE MONTHS ENDING DECEMBER 31, 2024

Label	Constant	Allocation Factor	Function	Total Retail 1	RS 2	Total GS	Total LGS	Total IP	MS 15	Total WSS	EHG 19	IS 20	OL 21	SL 22	
Operating Revenues															
Firm Sales of Electricity	1,233,024,597	RSALE	TOTAL	1,233,024,597	539,225,575	156,377,327	262,479,304	251,349,906	2,611,543	9,736,349	565,983	156,212	5,777,686	4,744,712	
Interruptible															
Demand	2,905,105	PROD_DEMAND	TOTAL	2,905,105	1,240,637	336,563	654,795	639,151	6,776	24,383	1,483	93	482	743	
Energy	92,811,419	PROD_ENERGY	TOTAL	92,811,419	32,033,436	9,715,627	21,914,133	27,181,297	179,629	1,027,237	35,891	7,113	291,557	425,497	
Interruptible - Indiana Specific	-	PROD_ENERGY	TOTAL	-	-	-	-	-	-	-	-	-	-	-	
Total	95,716,524		TOTAL	95,716,524	33,274,073	10,052,190	22,568,928	27,820,448	186,405	1,051,620	37,375	7,206	292,039	426,240	
Sales for Resale															
Demand	25,941	PROD_DEMAND	TOTAL	25,941	11,078	3,005	5,847	5,707	61	218	13	1	4	7	
Energy	47,555,283	PROD_ENERGY	TOTAL	47,555,283	16,413,488	4,978,152	11,228,498	13,927,320	92,039	526,342	18,390	3,645	149,390	218,019	
Total	47,581,224		TOTAL	47,581,224	16,424,567	4,981,158	11,234,345	13,933,027	92,100	526,560	18,404	3,646	149,394	218,026	
Other Operating Revenues															
Forfeited Discounts (Acct. 450)	4,564,429	FORF_DISC	TOTAL	4,564,429	3,299,856	567,764	474,274	199,579	1,427	8,501	1,276	763	6,820	4,168	
Miscellaneous Service Revenue (Acct. 451)	450,133	MISC_SERV_REV	TOTAL	450,133	413,618	29,143	4,574	1,926	73	220	-	-	345	233	
Rent Assoc Co - Prod	-	RB_GUP_EPIS_P	TOTAL	-	-	-	-	-	-	-	-	-	-	-	
Rent Assoc Co - Trans	2,829,495	RB_GUP_EPIS_T	TOTAL	2,829,495	1,218,856	325,193	629,912	620,895	6,400	24,259	1,452	95	957	1,475	
Rent Assoc Co - Dist	3,328,621	RB_GUP_EPIS_D	TOTAL	3,328,621	1,850,774	421,840	634,763	299,009	7,398	20,551	1,848	1,366	47,039	44,034	
Rent Non-Assoc Co - Prod	137,588	RB_GUP_EPIS_P	TOTAL	137,588	58,758	15,940	31,012	30,271	321	1,155	70	4	23	35	
Rent Non-Assoc Co - Trans	128,347	RB_GUP_EPIS_T	TOTAL	128,347	55,288	14,751	28,573	28,164	290	1,100	66	4	43	67	
Rent Non-Assoc Co - Dist	18,084	RB_GUP_EPIS_D	TOTAL	18,084	10,055	2,292	3,449	1,624	40	112	10	7	256	239	
Rent From Elect Prop-Pole Atch Transmission	15,173	RB_GUP_EPIS_T	TOTAL	15,173	6,536	1,744	3,378	3,330	34	130	8	1	5	8	
Rent From Elect Prop-Pole Atch Distribution	3,581,508	RB_GUP_EPIS_D	TOTAL	3,581,508	1,991,384	453,888	682,988	321,726	7,960	22,112	1,989	1,470	50,613	47,379	
Other Electric Revenue - Prod	127,742	RB_GUP_EPIS_P	TOTAL	127,742	54,553	14,799	28,792	28,105	298	1,072	65	4	21	33	
Other Electric Rev. Production-Retail Demand (456)	(2,400,678)	PROD_DEMAND	TOTAL	(2,400,678)	(1,025,220)	(278,124)	(541,100)	(528,172)	(5,600)	(20,149)	(1,226)	(77)	(398)	(614)	
Other Electric Rev. Production-Retail Energy (456)	-	PROD_ENERGY	TOTAL	-	-	-	-	-	-	-	-	-	-	-	
Other Electric Revenue - Transmission	149,929,940	TRAN_TO	TOTAL	149,929,940	64,585,027	17,231,385	33,377,925	32,900,110	339,115	1,285,464	76,958	5,053	50,731	78,174	
Other Electric Revenue - Dist	1,878,950	RB_GUP_EPIS_D	TOTAL	1,878,950	1,044,730	238,121	358,313	168,786	4,176	11,601	1,043	771	26,553	24,856	
Other Electric Revenue - Local Facil Charge	504,103	RB_GUP_EPIS_D	TOTAL	504,103	280,291	63,886	96,132	45,283	1,120	3,112	280	207	7,124	6,669	
Total - Other Operating Revenues	165,093,436		TOTAL	165,093,436	73,844,506	19,102,621	35,812,984	34,120,635	363,053	1,359,241	83,839	9,668	190,133	206,575	
Total Other Revenues	308,391,184		TOTAL	308,391,184	123,543,146	34,135,968	69,616,257	75,874,110	641,558	2,937,420	139,618	20,519	631,565	851,022	
Gain on Disp of Emission Const. Allow.	1,618,627	PROD_ENERGY	TOTAL	1,618,627	558,662	169,440	382,182	474,041	3,133	17,915	626	124	5,085	7,421	
Total Operating Revenues	1,543,034,408		TOTAL	1,543,034,408	663,327,383	190,682,736	332,477,742	327,698,056	3,256,234	12,691,685	706,227	176,855	6,414,336	5,603,155	
Operating Expense															
O&M Expense															
Production															
Demand	284,141,427	PROD_DEMAND	TOTAL	284,141,427	121,343,767	32,918,395	64,043,909	62,513,793	662,789	2,384,838	145,081	9,072	47,140	72,642	
Energy	296,315,269	PROD_ENERGY	TOTAL	296,315,269	102,271,858	31,018,690	69,964,369	86,780,631	573,494	3,279,618	114,589	22,710	930,841	1,358,469	
GSU	613,398	PROD_DEMAND	TOTAL	613,398	261,954	71,063	138,256	134,953	1,431	5,148	313	20	102	157	
Total	581,070,094		TOTAL	581,070,094	223,877,580	64,008,149	134,146,534	149,429,377	1,237,714	5,669,605	259,984	31,802	978,083	1,431,267	
Transmission															
Transmission	19,629,564	TRAN_TO	TOTAL	19,629,564	8,455,789	2,256,017	4,370,002	4,307,444	44,399	168,299	10,076	662	6,642	10,235	
Transmission O&M - LSE Demand	24,870,742	PROD_DEMAND	TOTAL	24,870,742	10,621,153	2,881,329	5,605,728	5,471,798	58,014	208,744	12,699	794	4,126	6,358	
Total	44,500,305		TOTAL	44,500,305	19,076,941	5,137,346	9,975,730	9,779,242	102,412	377,043	22,775	1,456	10,768	16,593	
Distribution Operation															
580 Supervision & Engineering	3,097,001	TOTOXEXP	TOTAL	3,097,001	1,741,731	415,512	582,247	272,351	7,086	19,155	1,840	1,254	27,893	27,933	
581 Load Dispatching	507,960	DIST_CPD	TOTAL	507,960	242,930	62,641	120,244	75,544	1,174	4,147	288	21	383	590	
582 Station Expenses	1,059,209	DIST_CPD	TOTAL	1,059,209	506,563	130,620	250,735	157,526	2,447	8,648	600	43	798	1,230	
583 Overhead Lines	1,761,848	DIST_OHLINES	TOTAL	1,761,848	929,713	221,863	390,674	194,273	4,234	12,536	1,006	725	2,792	4,032	
584 Underground Lines	3,915,525	DIST_UGLINES	TOTAL	3,915,525	2,150,821	497,530	842,598	365,937	9,568	26,064	2,243	2,246	7,629	10,890	
585 Street Lighting	-	DIST_SL	TOTAL	-	-	-	-	-	-	-	-	-	-	-	
586 Meters	2,432,258	DIST_METERS	TOTAL	2,432,258	1,706,100	495,236	175,297	29,845	5,685	8,621	2,187	802	-	8,486	
587 Customer Installations	-	DIST_PCUST	TOTAL	-	-	-	-	-	-	-	-	-	-	-	
588 Miscellaneous Distribution	12,482,463	RB_GUP_EPIS_D	TOTAL	12,482,463	6,940,476	1,581,916	2,380,386	1,121,296	27,742	77,066	6,931	5,122	176,399	165,129	
588 Miscellaneous Distribution - Misc Distribution IN	914,592	RB_GUP_EPIS_D	TOTAL	914,592	508,530	115,907	174,411	82,158	2,033	5,647	508	375	12,925	12,099	
589 Rents	1,343,688	RB_GUP_EPIS_D	TOTAL	1,343,688	747,115	170,287	256,239	120,703	2,986	8,296	746	551	18,989	17,775	
Total	27,514,544		TOTAL	27,514,544	15,473,978	3,691,511	5,172,832	2,419,631	62,954	170,182	16,347	11,139	247,807	248,163	

INDIANA MICHIGAN POWER COMPANY - INDIANA
CLASS COST-OF-SERVICE STUDY
FORECAST TWELVE MONTHS ENDING DECEMBER 31, 2024

Indiana Michigan Power Company
 Witness: Michael S. Small
 Attachment MSS-1
 Page 5 of 5

Label	Constant	Allocation Factor	Function	Total Retail 1	RS 2	Total GS	Total LGS	Total IP	MS 15	Total WSS	EHG 19	IS 20	OL 21	SL 22
Federal Taxable Income	232,182,366		TOTAL	232,182,366	88,233,105	39,572,454	46,410,855	51,791,054	391,587	1,572,056	71,930	35,811	2,286,259	1,817,255
Tax Factor (Tax Rate x Apportionment)	21.00%													
Gross Current FIT	48,758,297		TOTAL	48,758,297	18,528,952	8,310,215	9,746,280	10,876,121	82,233	330,132	15,105	7,520	480,114	381,624
Parent Savings Allocation	(1,960,376)	RB_GUP	TOTAL	(1,960,376)	(932,522)	(234,255)	(415,020)	(337,896)	(4,457)	(14,902)	(1,031)	(331)	(10,317)	(9,644)
Research & Development Credit	-	RB_GUP_EPIS_P	TOTAL	-	-	-	-	-	-	-	-	-	-	-
Total Current FIT	46,797,921		TOTAL	46,797,921	17,596,430	8,075,960	9,331,259	10,538,226	77,776	315,229	14,075	7,190	469,797	371,979
Deferred FIT														
Gross Plant Related	(11,253,433)	RB_GUP	TOTAL	(11,253,433)	(5,353,093)	(1,344,729)	(2,382,402)	(1,939,671)	(25,587)	(85,546)	(5,918)	(1,898)	(59,225)	(55,363)
Net Plant Related	-	NP	TOTAL	-	-	-	-	-	-	-	-	-	-	-
Production Plant	12,614,587	RB_GUP_EPIS_P	TOTAL	12,614,587	5,387,111	1,461,427	2,843,258	2,775,328	29,425	105,876	6,441	403	2,093	3,225
Distribution	(3,307,132)	RB_GUP_EPIS_D	TOTAL	(3,307,132)	(1,838,825)	(419,116)	(630,665)	(297,079)	(7,350)	(20,418)	(1,836)	(1,357)	(46,736)	(43,750)
Labor	1,450,540	LABOR_M	TOTAL	1,450,540	679,901	167,074	303,221	279,959	3,184	11,255	718	118	3,659	1,450
Rate Base	(173,887)	RATEBASE	TOTAL	(173,887)	(83,976)	(20,852)	(36,431)	(28,767)	(393)	(1,304)	(92)	(33)	(1,057)	(983)
Energy	(2,448,672)	PROD_ENERGY	TOTAL	(2,448,672)	(845,148)	(256,330)	(578,167)	(717,132)	(4,739)	(27,102)	(947)	(188)	(7,692)	(11,226)
Demand	(5,754,901)	PROD_DEMAND	TOTAL	(5,754,901)	(2,457,654)	(666,718)	(1,297,123)	(1,266,132)	(13,424)	(48,302)	(2,938)	(184)	(955)	(1,471)
Transmission	-	RB_GUP_EPIS_T	TOTAL	-	-	-	-	-	-	-	-	-	-	-
Revenue Related	-	RSALE	TOTAL	-	-	-	-	-	-	-	-	-	-	-
General Plant Related	(913,665)	RB_GUP_EPIS_G	TOTAL	(913,665)	(428,255)	(105,237)	(190,992)	(176,341)	(2,006)	(7,089)	(453)	(74)	(2,304)	(913)
Total Current Year DFIT	(9,786,563)		TOTAL	(9,786,563)	(4,939,940)	(1,184,481)	(1,969,302)	(1,369,834)	(20,889)	(72,630)	(5,024)	(3,213)	(112,218)	(109,032)
Deferred ITC														
Prior Year Feedback	(995,314)	RATEBASE	TOTAL	(995,314)	(480,670)	(119,354)	(208,529)	(164,657)	(2,248)	(7,464)	(524)	(190)	(6,050)	(5,628)
Solar Investment Tax Credit	(375,233)	RB_GUP_EPIS_P	TOTAL	(375,233)	(160,245)	(43,472)	(84,575)	(82,555)	(875)	(3,149)	(192)	(12)	(62)	(96)
Rockport	(1,478,522)	RB_GUP_EPIS_P	TOTAL	(1,478,522)	(631,409)	(171,290)	(333,251)	(325,289)	(3,449)	(12,409)	(755)	(47)	(245)	(378)
Cook Plant Simulator	(22,674)	RB_GUP_EPIS_P	TOTAL	(22,674)	(9,683)	(2,627)	(5,111)	(4,988)	(53)	(190)	(12)	(1)	(4)	(6)
Total Deferred ITC	(2,871,743)		TOTAL	(2,871,743)	(1,282,007)	(336,742)	(631,465)	(577,489)	(6,625)	(23,213)	(1,482)	(250)	(6,362)	(6,108)
Total Federal Income Tax	34,139,615		TOTAL	34,139,615	11,374,484	6,554,737	6,730,492	8,590,902	50,261	219,387	7,568	3,727	351,217	256,840
Total Income Tax	43,447,820		TOTAL	43,447,820	14,650,365	8,280,384	8,558,825	10,805,730	64,356	280,140	9,862	5,123	455,398	337,637
Total Expenses	1,283,870,024		TOTAL	1,283,870,024	558,144,254	150,371,505	279,518,180	273,119,272	2,769,633	10,878,126	609,107	139,594	4,364,553	3,955,799
Net Operating Income	259,164,384		TOTAL	259,164,384	105,183,129	40,311,231	52,959,562	54,578,784	486,601	1,813,559	97,119	37,261	2,049,783	1,647,355
Current Rate of Return	4.78%			4.78%	4.02%	6.20%	4.66%	6.08%	3.97%	4.46%	3.40%	3.60%	6.22%	5.37%
O&M Labor														
Production Demand	98,757,617	PROD_DEMAND	TOTAL	98,757,617	42,174,847	11,441,282	22,259,421	21,727,607	230,362	828,886	50,425	3,153	16,384	25,248
Production Energy	3,668,055	PROD_ENERGY	TOTAL	3,668,055	1,266,013	383,977	866,082	1,074,248	7,099	40,598	1,418	281	11,523	16,816
Transmission	6,999,673	TOTBSEXP	TOTAL	6,999,673	3,015,235	804,469	1,558,291	1,535,984	15,832	60,014	3,593	236	2,368	3,650
Distribution	15,639,474	EXP_OM_DIST	TOTAL	15,639,474	8,449,406	2,016,491	3,272,096	1,593,551	36,919	105,848	9,060	6,415	76,166	73,524
Customer Accounts	4,978,676	EXP_OM_CUSTACC	TOTAL	4,978,676	4,320,756	444,467	71,374	1,656	2,558	3,882	1,103	460	124,345	8,074
Customer Service	4,329,576	EXP_OM_CUSTSER	TOTAL	4,329,576	3,757,433	386,519	62,069	1,440	2,224	3,376	959	400	108,134	7,022
Total	134,373,071		TOTAL	134,373,071	62,983,690	15,477,206	28,089,334	25,934,486	294,995	1,042,604	66,558	10,944	338,920	134,334
Production Demand	98,757,617	PROD_DEMAND	TOTAL	98,757,617	42,174,847	11,441,282	22,259,421	21,727,607	230,362	828,886	50,425	3,153	16,384	25,248
Production Energy	3,668,055	PROD_ENERGY	TOTAL	3,668,055	1,266,013	383,977	866,082	1,074,248	7,099	40,598	1,418	281	11,523	16,816
Total Production	102,425,672		TOTAL	102,425,672	43,440,860	11,825,259	23,125,503	22,801,855	237,462	869,484	51,844	3,434	27,907	42,064