I&M Exhibit: _____

Cause No. 45235

INDIANA MICHIGAN POWER COMPANY

PRE-FILED VERIFIED DIRECT TESTIMONY

OF

DANIEL E. HIGH

INDEX

PRE-FILED VERIFIED DIRECT TESTIMONY OF DANIEL E. HIGH
ON BEHALF OF
INDIANA MICHIGAN POWER COMPANY

Q. Please state your name and business address.

A. My name is Daniel E. High. My business address is 1 Riverside Plaza, Columbus, Ohio 43215.

Q. By whom are you employed and in what capacity?

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

Q. Please describe your educational and professional background.

A. In December 1989, I received a Bachelor of Science Degree in Energy Management from West Liberty University. In May 1997, I received a Master of Business Administration degree from Ashland University.

In February 1990, I joined Columbus Southern Power Company as a Marketing and Customer Services Representative in the Marketing and Customer Services Department of the Columbus Region. In August 1998, I joined the Regulated Pricing & Analysis Department as a Regulatory Consultant. From 2006 through 2008, I performed duties as a Regulatory Consultant in Transmission & Interconnection Services under the Regulatory Services Department, where I was responsible for rate design and maintaining wholesale contracts. In January 2009,

I returned to Regulated Pricing & Analysis under the Regulatory Services Department as a Regulatory Consultant.

Q. What are your responsibilities as a Staff Regulatory Consultant?

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

Q. Have you taken any courses in cost allocation and rate design?

A. Yes. In 1999, I attended the Edison Electric Institute's (EEI) school on cost allocation and rate design. In 2003, I attended EEI's advanced cost allocation and rate design school.

Q. Have you previously submitted testimony in any regulatory proceedings?

A. Yes. I have submitted testimony before the Public Service Commission of Kentucky on behalf of Kentucky Power Company; before the Michigan Public Service Commission (MPSC or Commission) and the Indiana Utility Regulatory Commission on behalf of I&M; and before the Public Utilities Commission of Ohio on behalf of Ohio Power Company.

PURPOSE OF TESTIMONY

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is to support and describe the development of the Company's class cost-of-service study, which allocates the total Indiana retail jurisdiction rate base, revenues, and expenses to each rate schedule. The cost allocation methodology used in the class cost-of-service study assigns costs

among the customer classes in a fair and equitable manner based on principles of cost causation. Customers who cause costs to be incurred are allocated such costs in the Company's class cost-of-service study.

Q. What is the test period used to prepare the class cost-of-service study in this proceeding?

A. The test period used to develop the class cost-of-service study in this proceeding is the twelve month period ending December 31, 2020 (Test Year).

Q. Are you sponsoring any attachments in this proceeding?

A. I am sponsoring the following attachment:

- Attachment DEH-1: Test Year class cost-of-service study

Q. Are you sponsoring any workpapers in this proceeding?

A. I am sponsoring the following workpapers:

- WP-DEH-1: Test Year Proposed Equalized ROR
- WP-DEH-2: Test Year Allocation Factors
- WP-DEH-3: Test Year Allocators
- WP-DEH-4: Test Year Transmission and Subtransmission
- WP-DEH-5: Summary Allocators
- WP-DEH-6: Customer and Demand Allocators
- WP-DEH-7: Revenue Allocators Summary
- WP-DEH-8: Revenue Allocators
- WP-DEH-9: Number of Customers Allocators
- WP-DEH-10: 6 CP Demand and Energy Allocators
- WP-DEH-11: Class Peak Data

- WP-DEH-12: Call Center Allocation (Account 903)
- WP-DEH-13: Meter Reading Allocation (Account 902)
- WP-DEH-14: Meter Allocation (Account 370)
- WP-DEH-15: Allocation of Forfeited Discounts (Account 450) and Miscellaneous Service Revenue (Account 451)
- WP-DEH-16: Allocation of Poles (Account 364), Overhead Conductors (Account 365), Underground Conductors (Account 367) and Transformers (Account 368)
- WP-DEH-17: Forecasted Plant Credit Phase-In Rate Adjustment Class Cost-of-Service study
- WP-DEH-18: Forecasted Plant Credit Phase-In Rate Adjustment Proposed Equalized ROR
- WP-DEH-19: Forecasted Plant Credit Phase-In Rate Adjustment Allocation Factors
- WP-DEH-20: Forecasted Plant Credit Phase-In Rate Adjustment Allocators

Q. Were the attachments and workpapers that you are sponsoring prepared by you or under your direction?

A. Yes.

OVERVIEW OF CLASS COST-OF-SERVICE STUDIES

Q. Briefly describe the nature and purpose of a cost-of-service study.

A. Cost studies are utilized to determine the revenue requirement for the services offered by the utility and to determine the costs that different classes of customers impose on the utility system. A cost-of-service study is a basic analytical tool used

in traditional utility rate design. When all of the jurisdictional costs are allocated to the various customer classes, the result is a fully allocated class cost study that is a guide in establishing rates based on costs.

Q. Please describe how you prepared the class cost-of-service study.

A. An Excel spreadsheet (Attachment DEH-1) was used to prepare the class cost-of-service study. The Excel spreadsheet permits the analyst to use two types of allocation factors – those which are generated externally and input to the program and those which are developed internally as a result of the allocation process. An example of an external allocation factor would be the total number of secondary customers served at distribution level (DIST_SERV). An example of an internal factor would be the rate base gross utility plant electric plant in service distribution allocation factor (RB_GUP_EPIS_D).

Q. What is the source of the data used in a cost-of-service study?

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

Q. Please describe the functionalization process.

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

- Production and Purchased Power Costs
- Transmission Costs

- Distribution Costs
- Customer Service Costs
- Administrative and General (A&G) Costs

The production function includes the costs associated with power generation and power purchases and their delivery to the bulk transmission system. The transmission function consists of costs associated with the high voltage system utilized for the transmission of power to and from interconnected utilities to the load centers of the utility's system. The distribution function includes the distribution system that connects the transmission system and the ultimate customer. The customer service function includes the costs associated with providing meter reading, billing and collection, and customer information and services. The A&G function is comprised of administrative costs that may not be directly assignable to other cost functions. These costs include such items as salaries, insurance, and administrative costs.

Q. Please describe the classification process.

A. The second step is to separate the functionalized costs into the following classifications:

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

Typical cost classifications used in cost-of-service studies are shown on Figure DEH-1:

Figure DEH-1
Cost Classifications

Function	Classification
Production	Demand, Energy
Transmission	Demand
Distribution	Demand, Customer
Customer Service	Customer
Administrative & General	Demand, Customer, Energy

Production plant costs, such as depreciation and return on investment, are considered to be demand-related costs because costs of this nature are incurred regardless of the amount of energy consumed or the number of customers served. Some production costs such as fuel costs and certain production operation and maintenance (O&M) expenses are energy-related because they vary with the quantity of electricity produced. Transmission costs are classified as demand-related costs because they are fixed costs and do not vary with energy usage and do not directly change with the number of customers utilizing the transmission system. Generally, the distribution system costs are affected either by the instantaneous peak demand imposed on the distribution facilities or by the number of customers served. Demand-related distribution costs typically vary with the size of the electrical load served, while customer-related distribution costs vary based on the number of customers receiving the service. Customer service costs are primarily related to the number of customers. The classification process provides

a basis on which to allocate different categories of costs (demand, energy, or customer costs) to the Company's classes.

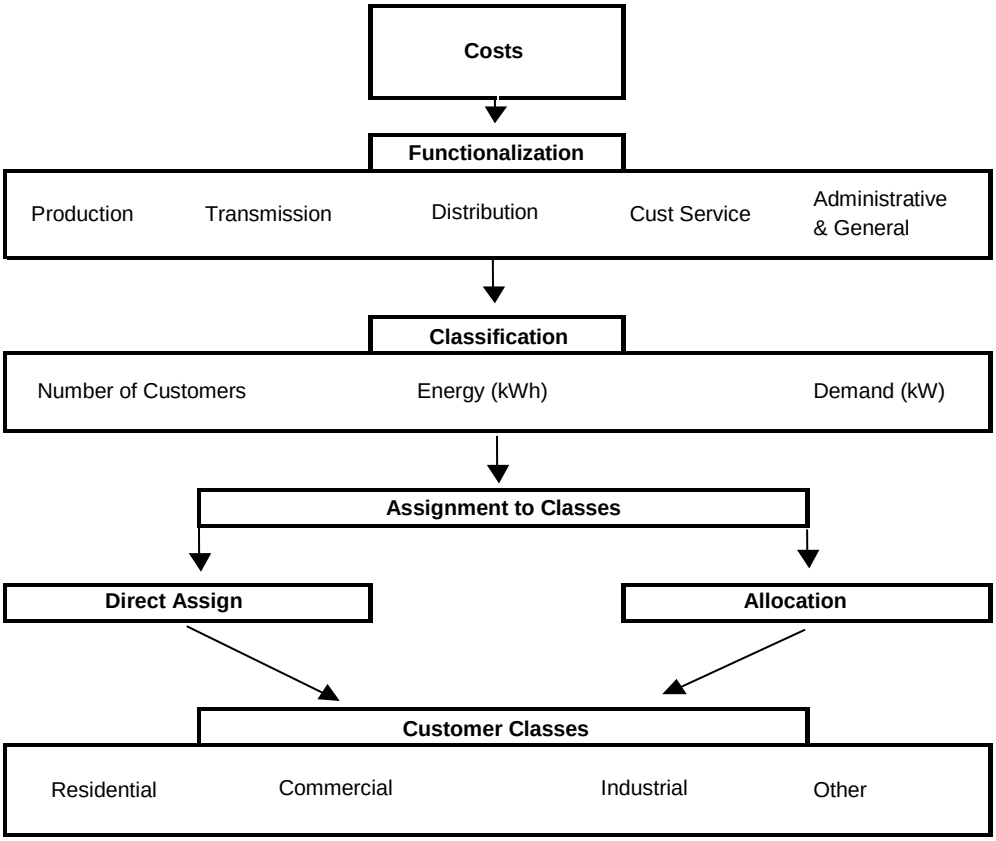
Q. Please describe the allocation process.

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

The allocation process involves dividing the functionalized and classified costs among the customer classes. The objective in this process is to determine a reasonable, appropriate, and understandable method to assign the costs. Some costs are directly assignable to a single class, or even a single customer. For instance, the equipment used wholly for public street and highway lighting are directly assigned to the street lighting class. Most costs, however, are attributable to more than one customer class. These are joint costs and must be allocated to customers by an allocation methodology that is based on the manner in which the costs are caused by the different customers. The joint costs are incurred based on the capacity demanded, the energy used, or the number of customers.

The following flowchart, Figure DEH-2, provides an overview of how the allocation of costs to customer classes is determined:

Figure DEH-2
Cost Allocation Example



In Figure DEH-2, costs are functionalized into production, transmission, distribution, customer service, and A&G. Some of these costs can be directly assigned to a customer class as mentioned previously. The remaining joint costs are incurred based on the number of customers, the energy used, or by the capacity demanded. In many instances, the classification process will lead to an allocation methodology. For example, costs associated with reading customer meters will vary with the number of customers as well as the complexity of reading the meter, so those costs associated with reading customer's meters are allocated to the classes based on a weighted number of customers. A weighted number of

customers allocation factor is developed by multiplying the number of customers in each class by a factor representing the difference in cost associated with providing that service to different types of customers. Similarly, the cost of fuel varies by the number of kilowatt hours consumed and therefore is allocated based on the proportion of total energy used by a customer class.

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

Q. What criteria must be established to ensure that the allocation of costs to the customers is appropriate?

A. Generally, the following criteria should be used to determine the appropriateness of an allocation methodology:

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

Q. Does the allocation method employed by the Company meet these objectives?

A. Yes, it does. The allocation methodology utilized in the Company's cost-of-service study was chosen while considering each of the criteria listed above. The results of the cost-of-service study for the forecast period can be relied upon to determine the appropriate revenue requirement for I&M's customer classes.

ALLOCATION OF COMPONENTS OF RATE BASE

Q. Please describe the allocation of electric plant in service.

A. From the jurisdictional cost-of-service allocation study, as prepared by Company witness Duncan, Electric Plant in Service is identified and functionalized into production, transmission, distribution, and general plant. Production plant is classified as demand-related and is allocated using the production demand allocation factor (PROD_DEMAND). The production demand allocation factor assigns costs based on the class contribution to the average of I&M's six monthly coincident peaks on the production facilities.

Q. Please explain coincident peak cost allocation.

A. Coincident peak cost allocation refers to the process of determining each class's hourly demand contribution to the Company's monthly peak demand. For instance, a single coincident peak method (1 CP) would allocate costs to the customer classes according to the load of that class at the time of the utility's highest measured one-hour peak demand in the Test Year. Conversely, an allocator based on the class contribution to the 12 monthly maximum system peaks (12 CP) might be used when the monthly peaks lie within a narrow range and there

are no definite spikes in the load curve. The summer and winter peak method (6 CP) assigns costs to the customer classes based on each customer classes' contribution to the six monthly peaks during the test period.

Q. What CP demand allocator is the Company proposing in this proceeding?

A. The Company is proposing to continue using the 6 CP demand allocator, consistent with the 6 CP methodology found appropriate in Cause No. 44075 and that which was used by I&M in Cause No. 44967, the Company's most recent basic rate case. More specifically, the six months that were used to derive the production, transmission, and primary distribution demand allocation factors were the three summer months of June, July, and August and the three winter months of December, January, and February for the Test Year.

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

A. Yes. The 6 CP is the most appropriate demand allocator considering the load profile during the Test Year continues to reflect six monthly peaks, three during the summer and three during the winter. Coincident peak load data is provided in WP-DEH-10 CPDEM. The importance of these six months is that Company engineers plan and size equipment (*e.g.*, poles, lines, and transformers) to meet customers' maximum expected demand on those facilities during the peak months in the summer and winter. The benefit of the 6 CP demand allocator is that each customer class is being allocated their fair share of demand costs based on their contributions to the average of the six monthly peaks during the Test Year.

Q. Please explain why it is reasonable to utilize a different demand allocator (6 CP) in the class cost-of-service study from what is used in a jurisdictional separation study.

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

Q. How were the portions of the transmission plant allocated?

A. The functional components of transmission plant were obtained directly from the jurisdictional study and are classified as demand-related and allocated to the classes based on their contribution to the average of the six monthly peak demands on the power supply transmission (BULK_TRANS) and sub-transmission systems (SUB_TRANS), respectively. Generator step-up transformers are included in transmission plant based on the FERC accounts, but are separately identified and allocated using the production demand allocation factor since they are related to the production function.

Q. How are transmission costs and revenues treated in your cost-of-service study?

A. As explained by Company witness Nollenberger and consistent with the previous two rate cases, the Company's traditional cost of transmission, net of the revenue the Company receives from PJM as a transmission owner, have been removed from the cost of service. WP-DEH-4 Transmission and Attachment MWN-1

calculates in total the transmission owner cost and revenue adjustment, while WP-MWN-1 determines the transmission owner cost and revenue adjustment for each customer class for revenue allocation purposes. The transmission costs that remain in the class cost-of-service study are those related to I&M's role as a PJM Load Serving Entity (LSE) as reflected in the jurisdictional cost-of-service study.

Q. How were the portions of distribution plant allocated?

A. Distribution plant is classified as demand- and customer-related and allocated to the customer classes using factors based on demand levels or number of customers. Distribution plant Accounts 360 through 368 were classified solely as demand-related for class allocation purposes. Accounts 360 (Land and Land Rights), Account 361 (Structures and Improvements), and Account 362 (Station Equipment) were allocated to the distribution customer classes based on their contributions to the average of I&M's six monthly peak demands on the primary distribution system (DIST_CPD).

Accounts 364 through 367, Overhead and Underground Lines, were split into primary and secondary voltage functions based upon information contained in the Company's records and the expertise of the Company's distribution engineers. The primary portions of Accounts 364 through 367 were allocated using the DIST_CPD, and the secondary component of Accounts 364 through 367 were allocated based on a combination of each class's 12-month maximum demand and the summation of individual customers' annual maximum demands (DIST_POLES, DIST_OHLINES, and DIST_UGLINES). This recognizes that

some secondary facilities serve only one customer, while others serve two or more customers.

Account 368, Distribution Transformers and Devices, was split into primary and secondary voltage functions based upon information contained in the Company's records and the expertise of the Company's distribution engineers as to the determination of the functional use of the equipment. The primary portion of Account 368 – cutouts, arresters, capacitors, voltage regulators, and network protectors – was allocated using the DIST_CPD allocator. The secondary portion – primary-to-secondary transformers – was allocated using the appropriate secondary voltage demand allocation factor, which is based on a combination of each class's 12-month maximum demand and the summation of individual customers' annual maximum demands (DIST_TRANSF).

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

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

Q. Has the Company made the appropriate classification of distribution plant?

A. Yes. The method of classification of services and meters as customer-related – and primary and secondary poles, lines, and transformers as demand-related is a

method that has been adopted in cases before this and other Commissions. This classification recognizes the standard engineering practice to plan the distribution facilities to meet the maximum expected demand on the system, not necessarily the number of customers being served by the facilities. It is more appropriate to classify services and meters as customer-related since a single service is required to serve each customer. For other distribution facilities, a diversified mix of commercial and residential customers will be served from those facilities. It is the customers' demand placed on those facilities that drives the size and cost of the distribution facilities, not the absolute number of customers served from those facilities. The benefit of the Company's approach in classifying distribution plant is that each customer class is being allocated its equitable share of distribution facilities based on contributions to peak demand associated with Accounts 360-368, and based on the number of customers with Accounts 369-373.

Q. How was the general and intangible portion of electric plant classified and allocated?

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

Q. Please describe the allocation of Accumulated Provision for Depreciation and Amortization.

A. The functionalized components of Accumulated Provision for Depreciation and Amortization were obtained directly from the jurisdictional study and classified and allocated in a fashion similar to Electric Plant in Service.

Q. Please describe the allocation of working capital.

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

Q. How were the other rate base items functionalized, classified, and allocated?

A. The rate base elements of prepaid pension expenses were functionalized, classified, and allocated on O&M labor expense. The balance of the deferred gain from the sale of Rockport Unit 2 Sales was classified as demand-related and allocated to the retail classes based on the production demand allocation factor. The individual components of other rate base items were allocated as well using internally and externally derived allocation factors deemed to best reflect the causative nature of the particular other rate base items.

ALLOCATION OF REVENUES, O&M, AND A&G EXPENSES

Q. How were revenues developed for each class?

A. Forecasted sales revenue was directly assigned to each class. Demand-related system sales and interruptible sales revenues were allocated based on the

PROD_DEMAND allocation factor. Energy-related system sales and interruptible sales revenues were allocated based on the PROD_ENERGY allocation factor.

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

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

Q. Please describe the allocation of production O&M expense.

A. Production-related O&M was classified as either demand- or energy-related in the jurisdictional study. The demand component was allocated using the production demand allocation factor (PROD_DEMAND) and the energy component was allocated using the energy allocation factor (PROD_ENERGY). Non-fuel nuclear O&M was allocated using the production demand allocation factor (PROD_DEMAND), and nuclear fuel expense was allocated using the energy allocation factor (PROD_ENERGY).

Q. Please describe the allocation of transmission O&M.

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

Q. Please describe the allocation of distribution O&M between the various customer classes.

A. Distribution O&M expenses were functionalized and classified according to the associated distribution plant accounts and allocated accordingly. Accounts 581, Load Dispatching, and Account 582, Station Expenses, were allocated using the distribution demand allocation factor (DIST_CPD). Account 583, Overhead Line Expense, was allocated based upon the same allocation used for plant Account 365, Overhead Lines (DIST_OHLINES). Account 584, Underground Line Expense, was allocated based upon the same allocation used for plant Accounts 366, Underground Conduit, and Account 367, Underground Lines (DIST_UGLINES).

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

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

Account 591, Maintenance of Structures, and Account 592, Maintenance of Station Equipment, were classified as demand-related and allocated on the distribution demand allocation factor DIST_CPD. Account 593, Maintenance of

Overhead Lines, Account 594, Maintenance of Underground Lines, and Account 595, Maintenance of Line Transformers, were functionalized and classified according to the associated distribution plant accounts and allocated accordingly. Account 596, Maintenance of Street Lighting and Signal Systems, was classified customer-related and directly assigned to the street lighting class. Account 597, Maintenance of Meters, was classified customer-related and allocated in the same manner as meter plant. Account 598, Maintenance of Miscellaneous Distribution Plant, was classified customer-related and directly assigned to the outdoor lighting class. Account 590, Maintenance Supervision and Engineering, was classified and allocated based on the sum of the allocated O&M expense Accounts 591 through 598.

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

A. Account 902, Meter Reading Expense, was allocated to those classes with meter installations based upon an average number of customers weighted to reflect differences in meter reading requirements. Customer Records Expense, Account 903 was divided into two categories of cost which included the call center and other. Call center costs were first split into residential and other based on the actual number of calls received by the call center and then other call center expenses were allocated based on the number of customers. Account 904, Uncollectibles, was allocated based on revenue for each class. Accounts 901 and 905 were allocated based on the sum of the allocated Accounts 902, 903, and 904. Accounts 907-912 were allocated using the allocated total of Accounts 901-905.

All customer accounting, customer services, and sales expense accounts were classified as customer-related.

Q. Please describe the allocation of A&G expense.

A. The regulatory expense associated with the Nuclear Regulatory Commission (NRC) was allocated based on the production demand allocation factor. The functional components of property insurance were taken directly from the jurisdictional study and allocated based on the appropriate plant allocation factor. The regulatory expense associated with retail rate case proceedings and all other A&G expenses were allocated based on payroll labor.

ALLOCATION OF DEPRECIATION AND TAXES

Q. Please describe the allocation of depreciation and amortization expense.

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

Q. How were other regulatory expense items allocated?

A. The functional components of regulatory debit and credit expense were obtained directly from the jurisdictional study and allocated using the appropriate plant allocation factor.

Q. How were taxes assigned to the retail classes?

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

Interest expense was calculated on rate base and individual Schedule M items were allocated using the appropriate allocators. State and current Federal income taxes were computed by class. Deferred Federal Income Tax and

Deferred Investment Tax Credit were allocated using the appropriate allocation factors.

Q. Were any allocation factor additions required in the I&M Indiana class cost-of-service study as a result of Company witness Duncan adding four new demand and energy allocation factors in the jurisdictional cost-of-service study?

A. No. None of the allocation factors in the class cost-of-service study were affected by changes or additions to allocation factors in the jurisdictional cost-of-service study.

EARNED RETURNS

Q. Please summarize the resulting earned rate of return for each class shown in the class cost-of-service study.

A. The resulting earned rates of return for the class cost-of-service study under Attachment DEH-1 are shown on Figure DEH-3:

Figure DEH-3
Rates of Return for Projected Class Cost-of-Service Study

Customer Class	Rate of Return
Residential	3.18%
General Service	4.38%
Large General Service	3.48%
Industrial Power	2.93%
Municipal and School Service	3.55%
Water and Sewage Service	4.01%
Electric Heating General	5.38%
Irrigation Service	11.38%
Outdoor Lighting	8.53%
Street Lighting	11.27%
Total I&M Jurisdictional Class	3.41%

Q. How are these rates of return used in this proceeding?

A. Company witness Nollenberger utilized the earned rates of return for each class as an input for the allocation of the revenue increase required for each class.

PHASE-IN RATE ADJUSTMENT (PRA) COST-OF-SERVICE STUDY

Q. Please describe the additional cost-of-service study you completed related to the Forecasted Plant Credit Phase-In Rate Adjustment (PRA) mechanism.

A. In addition to the Test Year class cost-of-service study (Attachment DEH-1) developed in this filing, I performed an additional class cost-of-service study in support of the Company's proposed PRA mechanism, which is supported by Company witness Duncan. This additional cost-of-service study is shown in Workpaper WP-DEH-17. It uses as its inputs the PRA jurisdictional separation study prepared by Company witness Duncan.

Q. How did you complete this additional cost-of-service study in support of the PRA?

A. I prepared the additional cost-of-service study shown on WP-DEH-17 in a manner that was consistent with the Test Year class cost-of-service study shown on Attachment DEH-1. All differences between this additional study and Attachment DEH-1 are due to the different inputs provided by the jurisdictional separation studies supported by Company witness Duncan.

CONCLUSION

Q. Please summarize your testimony in this proceeding.

A. My testimony describes the class cost-of-service allocation study for the Test Year and presents the resulting class-by-class rates of return. The cost allocation

methods used to prepare the study meet the criteria identified in my testimony and assign costs to the cost causers. The class cost-of-service study equitably allocates costs among the customer classes based on contributions to demand and energy levels and number of customers.

The results of the study help guide the allocation of the proposed changes in sales revenue to each customer class, as explained by Company witness Nollenberger.

Q. Does this conclude your pre-filed verified direct testimony?

A. Yes.

VERIFICATION

I, Daniel E. High, Staff Regulatory Consultant in the Regulatory Pricing & Analysis Department 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: 5-3-19

Daniel E. High

Daniel E. High

Label	Constant	Allocation Factor	Function	Total Retail	RS	Total GS	Total LGS	Total IP	MS	Total WSS	EHG	IS	OL	SL
				1	2				14		18	19	20	21
Rate Base														
P-T-D Plant in Service														
Production														
Demand	3,542,591,993	PROD_DEMAND	TOTAL	3,542,591,993	1,482,807,921	445,923,224	740,974,629	832,441,260	9,640,664	27,101,471	1,953,989	145,847	601,997	1,000,990
GSU	40,767,880	PROD_DEMAND	TOTAL	40,767,880	17,064,041	5,131,651	8,527,080	9,579,671	110,944	311,882	22,486	1,678	6,928	11,519
Total	3,583,359,872		TOTAL	3,583,359,872	1,499,871,962	451,054,875	749,501,708	842,020,931	9,751,608	27,413,353	1,976,476	147,526	608,925	1,012,509
Transmission														
Transmission	1,201,415,364	TRAN_TO	TOTAL	1,201,415,364	522,168,419	141,181,538	245,891,721	276,940,981	3,011,758	9,602,980	647,527	47,650	727,654	1,195,137
Total	1,201,415,364		TOTAL	1,201,415,364	522,168,419	141,181,538	245,891,721	276,940,981	3,011,758	9,602,980	647,527	47,650	727,654	1,195,137
Distribution														
360 Land and Land Rights	20,747,275	DIST_CPD	TOTAL	20,747,275	10,528,854	2,290,189	4,414,053	3,200,411	47,313	167,607	11,637	831	32,747	53,634
361 Structures and Improvements	30,110,030	DIST_CPD	TOTAL	30,110,030	15,280,277	3,323,697	6,406,011	4,644,680	68,665	243,244	16,889	1,205	47,525	77,838
362 Station Equipment	355,555,741	DIST_CPD	TOTAL	355,555,741	180,437,889	39,248,035	75,645,685	54,846,931	810,829	2,872,357	199,433	14,233	561,200	919,151
363 Storage Battery Equipment	5,606,730	DIST_POLES	TOTAL	5,606,730	3,069,000	696,978	1,116,395	632,456	15,186	40,747	3,327	1,082	12,469	19,090
364 Poles	259,463,715	DIST_POLES	TOTAL	259,463,715	142,024,671	32,254,184	51,663,637	29,268,287	702,754	1,885,664	153,950	50,089	577,053	883,427
365 Overhead Lines	404,864,915	DIST_OHLINES	TOTAL	404,864,915	223,808,740	51,095,204	79,865,358	43,389,622	1,120,117	2,897,763	242,006	86,576	935,945	1,423,584
366 Underground Conduit	136,575,471	DIST_UGLINES	TOTAL	136,575,471	76,489,573	17,582,104	26,602,786	13,607,347	388,486	957,379	82,443	33,005	331,763	500,584
367 Underground Lines	270,099,434	DIST_UGLINES	TOTAL	270,099,434	151,270,139	34,771,372	52,611,185	26,910,665	768,292	1,893,367	163,044	65,273	656,113	989,984
368 Transformers	342,418,503	DIST_TRANSF	TOTAL	342,418,503	206,294,062	49,150,105	61,734,501	19,027,749	1,129,795	2,105,147	218,504	138,445	1,066,787	1,553,406
369 Services	183,960,290	DIST_SERV	TOTAL	183,960,290	155,440,720	17,600,317	1,683,777	29,418	112,782	138,908	48,401	11,333	8,518,023	376,612
370 Meters	85,751,590	DIST_METERS	TOTAL	85,751,590	47,155,470	25,004,203	9,187,363	2,784,159	345,351	685,694	114,707	47,118	-	427,524
371 Installations on Cust Premises	22,851,697	DIST_OL	TOTAL	22,851,697	-	-	-	-	-	-	-	-	22,851,697	-
373 Street Lighting	19,873,534	DIST_SL	TOTAL	19,873,534	-	-	-	-	-	-	-	-	-	19,873,534
Total	2,137,878,926		TOTAL	2,137,878,926	1,211,799,396	273,016,387	370,930,751	198,341,725	5,509,569	13,887,876	1,254,341	449,191	35,591,323	27,098,368
Total P-T-D Plant in Service	6,922,654,163		TOTAL	6,922,654,163	3,233,839,777	865,252,800	1,366,324,181	1,317,303,637	18,272,935	50,904,209	3,878,343	644,366	36,927,902	29,306,014
General & Intangible Plant	324,466,279	LABOR_M	TOTAL	324,466,279	149,467,392	39,692,233	62,825,396	67,741,200	825,843	2,358,965	172,643	19,920	976,123	386,564
Total Electric Plant in Service	7,247,120,442		TOTAL	7,247,120,442	3,383,307,169	904,945,034	1,429,149,577	1,385,044,836	19,098,778	53,263,174	4,050,986	664,286	37,904,024	29,692,578
Electric Utility Plant	7,247,120,442		TOTAL	7,247,120,442	3,383,307,169	904,945,034	1,429,149,577	1,385,044,836	19,098,778	53,263,174	4,050,986	664,286	37,904,024	29,692,578
Accum. Depreciation and Amortization														
Steam & Hydro	(431,782,881)	RB_GUP_EPIS_P	TOTAL	(431,782,881)	(180,729,555)	(54,350,604)	(90,312,449)	(101,460,706)	(1,175,036)	(3,303,217)	(238,159)	(17,776)	(73,373)	(122,004)
Nuclear	(1,018,856,882)	RB_GUP_EPIS_P	TOTAL	(1,018,856,882)	(426,458,666)	(128,248,454)	(213,105,856)	(239,411,851)	(2,772,675)	(7,794,440)	(561,971)	(41,946)	(173,136)	(287,887)
ARO Steam & Hydro	-	RB_GUP_EPIS_P	TOTAL	-	-	-	-	-	-	-	-	-	-	-
ARO Nuclear	-	RB_GUP_EPIS_P	TOTAL	-	-	-	-	-	-	-	-	-	-	-
GSU	(12,036,581)	RB_GUP_EPIS_P	TOTAL	(12,036,581)	(5,038,101)	(1,515,103)	(2,517,592)	(2,828,366)	(32,756)	(92,082)	(6,639)	(496)	(2,045)	(3,401)
Transmission	(354,713,898)	TRAN_TO	TOTAL	(354,713,898)	(154,168,492)	(41,683,380)	(72,598,714)	(81,765,905)	(889,212)	(2,835,248)	(191,180)	(14,068)	(214,837)	(352,860)
Distribution	(585,525,838)	RB_GUP_EPIS_D	TOTAL	(585,525,838)	(331,889,635)	(74,774,183)	(101,591,131)	(54,322,162)	(1,508,970)	(3,803,635)	(343,541)	(123,025)	(9,747,811)	(7,421,746)
General & Intangible	(122,871,797)	RB_GUP_EPIS_G	TOTAL	(122,871,797)	(56,601,651)	(15,031,010)	(23,791,284)	(25,652,844)	(312,738)	(893,314)	(65,378)	(7,543)	(369,647)	(146,388)
Total	(2,525,787,876)		TOTAL	(2,525,787,876)	(1,154,886,101)	(315,602,734)	(503,917,027)	(505,441,834)	(6,691,386)	(18,721,936)	(1,406,868)	(204,855)	(10,580,849)	(8,334,286)
Net Electric Plant in Service	4,721,332,565		TOTAL	4,721,332,565	2,228,421,068	589,342,300	925,232,550	879,603,002	12,407,392	34,541,238	2,644,118	459,431	27,323,175	21,358,292
Working Capital														
Fuel Inventory	23,146,671	PROD_ENERGY	TOTAL	23,146,671	7,973,862	2,399,117	5,381,120	6,881,006	56,697	256,632	11,149	1,426	71,399	114,262
Allowance Inventory-Current	17,043,356	PROD_ENERGY	TOTAL	17,043,356	5,871,314	1,766,518	3,962,226	5,066,622	41,747	188,963	8,209	1,050	52,573	84,133
Materials & Supplies - Prod	101,031,264	RB_GUP_EPIS_P	TOTAL	101,031,264	42,288,234	12,717,295	21,131,873	23,740,412	274,942	772,907	55,726	4,159	17,168	28,547
Materials & Supplies - Trans	6,147,446	RB_GUP_EPIS_T	TOTAL	6,147,446	2,671,851	722,403	1,258,188	1,417,062	15,411	49,137	3,313	244	3,723	6,115
Materials & Supplies - Dist	9,632,401	RB_GUP_EPIS_D	TOTAL	9,632,401	5,459,869	1,230,099	1,671,261	893,646	24,824	62,573	5,652	2,024	160,360	122,094
Total Working Capital	157,001,138		TOTAL	157,001,138	64,265,130	18,835,431	33,404,669	37,998,747	413,622	1,330,213	84,049	8,903	305,223	355,151
Rate Base Offsets														
Cook Plant Turbine Replacement (1823308)	15,600,998	PROD_DEMAND	TOTAL	15,600,998	6,530,045	1,963,773	3,263,132	3,665,936	42,456	119,350	8,605	642	2,651	4,408
Rockport DSI Deferrals	9,974,714	PROD_DEMAND	TOTAL	9,974,714	4,175,074	1,255,566	2,086,328	2,343,867	27,145	76,308	5,502	411	1,695	2,818
Rate Case Expense Deferral (1823xxx)	776,941	LABOR_M	TOTAL	776,941	357,903	95,044	150,437	162,208	1,977	5,649	413	48	2,337	926
Prepaid Pension Expense	64,018,690	LABOR_M	TOTAL	64,018,690	29,490,604	7,831,460	12,395,740	13,365,650	162,943	465,435	34,063	3,930	192,594	76,271
Deferred Gain Rockport Unit 2 Sale	(5,061,526)	PROD_DEMAND	TOTAL	(5,061,526)	(2,118,582)	(637,119)	(1,058,677)	(1,189,362)	(13,774)	(38,722)	(2,792)	(208)	(860)	(1,430)
Cook Uprate Project Deferral (1823418)	19,706,028	PROD_DEMAND	TOTAL	19,706,028	8,248,270	2,480,493	4,121,747	4,630,539	53,627	150,755	10,869	811	3,349	5,568
Deferred Cook Nuc Plnt 316(b) Comply Costs (182	7,060,556	PROD_DEMAND	TOTAL	7,060,556	2,955,308	888,746	1,476,798	1,659,095	19,214	54,015	3,894	291	1,200	1,995
Baffle Bolt Deferral (1823295) - Direct IN	5,148,905	PROD_DEMAND	TOTAL	5,148,905	2,155,156	648,118	1,076,954	1,209,894	14,012	39,390	2,840	212	875	1,455
Accum DFIT FIT (281 - 283) - Direct IN	(46,007,835)	RB_GUP	TOTAL	(46,007,835)	(21,478,688)	(5,744,980)	(9,072,856)	(8,792,860)	(121,247)	(338,138)	(25,717)	(4,217)	(240,631)	(188,501)

Label	Constant	Allocation Factor	Function	Total Retail	RS	GS	LGS	IP	MS	WSS	EHG	IS	OL	SL
				1	2				14		18	19	20	21
Over Recovered Storm Expense (2540123) - Direct	(2,588,975)	DIST_OHLINES	TOTAL	(2,588,975)	(1,431,182)	(326,737)	(510,712)	(277,462)	(7,163)	(18,530)	(1,548)	(554)	(5,985)	(9,103)
Total	68,628,497		TOTAL	68,628,497	28,883,908	8,454,365	13,928,890	16,777,506	179,190	515,512	36,130	1,366	(42,776)	(105,594)
Total Rate Base	4,946,962,201		TOTAL	4,946,962,201	2,321,570,105	616,632,096	972,566,108	934,379,255	13,000,204	36,386,963	2,764,297	469,700	27,585,622	21,607,850
Operating Revenues														
Firm Sales of Electricity	1,148,678,098	RSALE	TOTAL	1,148,678,098	500,722,762	149,660,353	233,811,510	239,751,610	3,058,727	9,222,581	701,451	137,952	6,169,229	5,441,923
Interruptible														
Demand	1,372,861	PROD_DEMAND	TOTAL	1,372,861	574,633	172,809	287,150	322,596	3,736	10,503	757	57	233	388
Energy	92,972,152	PROD_ENERGY	TOTAL	92,972,152	32,028,241	9,636,420	21,614,095	27,638,615	227,734	1,030,803	44,783	5,727	286,785	458,949
Interruptible - Indiana Specific	-	PROD_ENERGY	TOTAL	-	-	-	-	-	-	-	-	-	-	-
Total	94,345,014		TOTAL	94,345,014	32,602,874	9,809,229	21,901,246	27,961,211	231,470	1,041,306	45,540	5,783	287,018	459,337
Sales for Resale														
Demand	-	PROD_DEMAND	TOTAL	-	-	-	-	-	-	-	-	-	-	-
Energy	124,696,131	PROD_ENERGY	TOTAL	124,696,131	42,956,925	12,924,562	28,989,262	37,069,469	305,441	1,382,534	60,064	7,681	384,642	615,552
Total	124,696,131		TOTAL	124,696,131	42,956,925	12,924,562	28,989,262	37,069,469	305,441	1,382,534	60,064	7,681	384,642	615,552
Other Operating Revenues														
Forfeited Discounts (Acct. 450)	4,545,659	FORF_DISC	TOTAL	4,545,659	3,383,383	678,425	319,776	141,585	725	7,703	2,511	-	9,243	2,308
Miscellaneous Service Revenue (Acct. 451)	4,181,510	MISC_SERV_REV	TOTAL	4,181,510	3,921,510	245,158	8,236	3,451	-	803	143	-	1,321	889
Rent Assoc Co - Prod	2,256	RB_GUP_EPIS_P	TOTAL	2,256	944	284	472	530	6	17	1	0	0	1
Rent Assoc Co - Trans	525,404	RB_GUP_EPIS_T	TOTAL	525,404	228,355	61,742	107,534	121,112	1,317	4,200	283	21	318	523
Rent Assoc Co - Dist	2,672,731	RB_GUP_EPIS_D	TOTAL	2,672,731	1,514,966	341,319	463,730	247,963	6,888	17,362	1,568	562	44,496	33,878
Rent Non-Assoc Co - Prod	336,491	RB_GUP_EPIS_P	TOTAL	336,491	140,843	42,356	70,381	79,069	916	2,574	186	14	57	95
Rent Non-Assoc Co - Trans	57,694	RB_GUP_EPIS_T	TOTAL	57,694	25,075	6,780	11,808	13,299	145	461	31	2	35	57
Rent Non-Assoc Co - Dist	(5,651)	RB_GUP_EPIS_D	TOTAL	(5,651)	(3,203)	(722)	(980)	(524)	(15)	(37)	(3)	(1)	(94)	(72)
Rent ABD - Trans	256,913	RB_GUP_EPIS_T	TOTAL	256,913	111,661	30,190	52,582	59,222	644	2,054	138	10	156	256
Rent ABD - Dist	3,318,310	RB_GUP_EPIS_D	TOTAL	3,318,310	1,880,895	423,763	575,740	307,856	8,552	21,556	1,947	697	55,243	42,061
Other Electric Revenue - Prod	137,522	RB_GUP_EPIS_P	TOTAL	137,522	57,562	17,311	28,764	32,315	374	1,052	76	6	23	39
Other Electric Rev. Production-Retail Demand (456)	(2,542,132)	PROD_DEMAND	TOTAL	(2,542,132)	(1,064,050)	(319,991)	(531,717)	(597,352)	(6,918)	(19,448)	(1,402)	(105)	(432)	(718)
Other Electric Rev. Production-Retail Energy (456)	-	PROD_ENERGY	TOTAL	-	-	-	-	-	-	-	-	-	-	-
Other Electric Revenue - Transmission	115,117,819	TRAN_TO	TOTAL	115,117,819	50,033,395	13,527,803	23,560,976	26,536,069	288,582	920,143	62,045	4,566	69,723	114,516
Other Electric Revenue - Dist	1,157,821	RB_GUP_EPIS_D	TOTAL	1,157,821	656,280	147,859	200,887	107,417	2,984	7,521	679	243	19,275	14,676
Other Electric Revenue - Local Facil Charge	224,875	RB_GUP_EPIS_D	TOTAL	224,875	127,465	28,718	39,017	20,863	580	1,461	132	47	3,744	2,850
Total - Other Operating Revenues	129,987,221		TOTAL	129,987,221	61,015,082	15,230,994	24,907,206	27,072,874	304,779	967,424	68,335	6,062	203,108	211,358
43090=490004.604078975-2738246.43962546	349,028,366		TOTAL	349,028,366	136,574,882	37,964,785	75,797,713	92,103,554	841,690	3,391,263	173,939	19,526	874,768	1,286,247
Gain on Disp of Emission Const. Allow.	35,671	PROD_ENERGY	TOTAL	35,671	12,288	3,697	8,293	10,604	87	395	17	2	110	176
Total Operating Revenues	1,497,742,135		TOTAL	1,497,742,135	637,309,933	187,628,835	309,617,516	331,865,768	3,900,504	12,614,239	875,407	157,480	7,044,107	6,728,346
Operating Expense														
O&M Expense														
Production														
Demand	392,698,984	PROD_DEMAND	TOTAL	392,698,984	164,370,372	49,430,924	82,137,594	92,276,739	1,068,675	3,004,218	216,601	16,167	66,732	110,960
Energy	350,060,590	PROD_ENERGY	TOTAL	350,060,590	120,593,369	36,283,240	81,381,821	104,065,460	857,468	3,881,199	168,617	21,563	1,079,809	1,728,045
GSU	505,191	PROD_DEMAND	TOTAL	505,191	211,456	63,591	105,667	118,710	1,375	3,865	279	21	86	143
Total	743,264,766		TOTAL	743,264,766	285,175,197	85,777,756	163,625,082	196,460,909	1,927,517	6,889,283	385,497	37,751	1,146,626	1,839,148
Transmission														
Transmission	14,887,804	TRAN_TO	TOTAL	14,887,804	6,470,652	1,749,506	3,047,062	3,431,821	37,321	118,999	8,024	590	9,017	14,810
Transmission O&M - LSE Demand	28,624,827	PROD_DEMAND	TOTAL	28,624,827	11,981,374	3,603,146	5,987,218	6,726,286	77,898	218,985	15,789	1,178	4,864	8,088
Total	43,512,631		TOTAL	43,512,631	18,452,026	5,352,651	9,034,281	10,158,107	115,220	337,984	23,813	1,769	13,881	22,898
Distribution Operation														
580 Supervision & Engineering	3,315,127	TOTOXEXP	TOTAL	3,315,127	1,867,029	485,027	560,932	294,187	9,146	22,470	2,237	815	40,359	32,926
581 Load Dispatching	790,963	DIST_CPD	TOTAL	790,963	401,399	87,310	168,280	122,012	1,804	6,390	444	32	1,248	2,045
582 Station Expenses	-	DIST_CPD	TOTAL	-	-	-	-	-	-	-	-	-	-	-
583 Overhead Lines	1,447,544	DIST_OHLINES	TOTAL	1,447,544	800,200	182,684	285,549	155,134	4,005	10,361	865	310	3,346	5,090
584 Underground Lines	1,748,490	DIST_UGLINES	TOTAL	1,748,490	979,248	225,093	340,579	174,206	4,974	12,257	1,055	423	4,247	6,409
585 Street Lighting	-	DIST_SL	TOTAL	-	-	-	-	-	-	-	-	-	-	-
586 Meters	2,520,861	DIST_METERS	TOTAL	2,520,861	1,386,241	735,055	270,083	81,847	10,152	20,158	3,372	1,385	-	12,568
587 Customer Installations	160,841	DIST_PCUST	TOTAL	160,841	135,838	15,394	1,494	65	99	126	42	10	7,444	329
588 Miscellaneous Distribution	13,066,273	RB_GUP_EPIS_D	TOTAL	13,066,273	7,406,267	1,668,620	2,267,052	1,212,224	33,673	84,880	7,666	2,745	217,527	165,620
588 Miscellaneous Distribution - Misc Distribution IN	156,225	RB_GUP_EPIS_D	TOTAL	156,225	88,552	19,951	27,106	14,494	403	1,015	92	33	2,601	1,980
589 Rents	1,283,777	RB_GUP_EPIS_D	TOTAL	1,283,777	727,674	163,944	222,741	119,102	3,308	8,340	753	270	21,372	16,272
Total	24,490,102		TOTAL	24,490,102	13,792,449	3,583,078	4,143,815	2,173,271	67,563	165,994	16,527	6,022	298,144	243,239

Label	Constant	Allocation Factor	Function	Total Retail	RS	GS	LGS	IP	MS	WSS	EHG	IS	OL	SL
				1	2				14		18	19	20	21
Distribution Maintenance														
590 Supervision & Engineering	-	TOTMXEXP	TOTAL	-	-	-	-	-	-	-	-	-	-	-
591 Structures	-	DIST_CPD	TOTAL	-	-	-	-	-	-	-	-	-	-	-
592 Station Equipment	929	DIST_CPD	TOTAL	929	471	103	198	143	2	8	1	0	1	2
593 Overhead Lines	23,855,798	TOTOHLINES	TOTAL	23,855,798	13,136,944	2,993,046	4,723,158	2,609,119	65,459	171,771	14,219	4,908	54,331	82,844
594 Underground Lines	931,885	TOTUGLINES	TOTAL	931,885	521,905	119,967	181,517	92,846	2,651	6,532	563	225	2,264	3,416
595 Line Transformers	-	DIST_TRANSF	TOTAL	-	-	-	-	-	-	-	-	-	-	-
596 Street Lighting	(5,288)	DIST_SL	TOTAL	(5,288)	-	-	-	-	-	-	-	-	-	(5,288)
597 Meters	67,981	DIST_METERS	TOTAL	67,981	37,383	19,822	7,283	2,207	274	544	91	37	-	339
598 Miscellaneous Distribution	166,564	DIST_OL	TOTAL	166,564	-	-	-	-	-	-	-	-	166,564	-
Total	25,017,868		TOTAL	25,017,868	13,696,704	3,132,938	4,912,156	2,704,315	68,385	178,855	14,873	5,170	223,161	81,313
Customer Accounts														
901 Supervision	868,032	TOTOX234	TOTAL	868,032	760,404	72,833	10,408	311	466	601	200	69	21,366	1,373
902 Meter Read	963,031	CUST_902	TOTAL	963,031	822,614	93,231	45,263	-	598	769	257	299	-	-
903 Customer Records	8,460,299	CUST_903	TOTAL	8,460,299	7,432,310	697,446	67,722	3,371	4,465	5,758	1,916	449	231,954	14,910
904 Uncollectibles	-	UNCOLFAC	TOTAL	-	-	-	-	-	-	-	-	-	-	-
905 Miscellaneous	3,073,115	TOTOX234	TOTAL	3,073,115	2,692,077	257,854	36,847	1,099	1,651	2,128	709	244	75,644	4,862
Total	13,364,477		TOTAL	13,364,477	11,707,404	1,121,364	160,240	4,781	7,180	9,256	3,082	1,060	328,964	21,146
Customer Service & Inf & Sales Exp														
907 Supervision	1,028,074	EXP_OM_CUSTACCT	TOTAL	1,028,074	900,602	86,262	12,327	368	552	712	237	82	25,306	1,627
908 Customer Assist	5,717,764	EXP_OM_CUSTACCT	TOTAL	5,717,764	5,008,814	479,757	68,556	2,045	3,072	3,960	1,319	454	140,742	9,047
909 Information & Instruction	29,668	EXP_OM_CUSTACCT	TOTAL	29,668	25,989	2,489	356	11	16	21	7	2	730	47
910 Miscellaneous Cust. Serv.	-	EXP_OM_CUSTACCT	TOTAL	-	-	-	-	-	-	-	-	-	-	-
911-916 Misc Selling	-	EXP_OM_CUSTACCT	TOTAL	-	-	-	-	-	-	-	-	-	-	-
Total	6,775,506		TOTAL	6,775,506	5,935,405	568,508	81,238	2,424	3,640	4,693	1,563	537	166,778	10,720
Administrative & General Expense														
Reg Commission - Prod	8,529,029	PROD_DEMAND	TOTAL	8,529,029	3,569,960	1,073,590	1,783,946	2,004,158	23,211	65,249	4,704	351	1,449	2,410
Reg Commission - Expense	1,267,174	LABOR_M	TOTAL	1,267,174	583,732	155,014	245,359	264,557	3,225	9,213	674	78	3,812	1,510
Insurance - Production	1,632,116	RB_GUP_EPIS_P	TOTAL	1,632,116	683,148	205,442	341,376	383,516	4,442	12,486	900	67	277	461
Insurance - Transmission	477,222	RB_GUP_EPIS_T	TOTAL	477,222	207,414	56,080	97,672	110,006	1,196	3,814	257	19	289	475
Insurance - Distribution	396,910	RB_GUP_EPIS_D	TOTAL	396,910	224,978	50,687	68,866	36,823	1,023	2,578	233	83	6,608	5,031
Misc General Expense - PJM Capacity Perf Ins	1,069,156	PROD_DEMAND	TOTAL	1,069,156	447,512	134,580	223,626	251,231	2,910	8,179	590	44	182	302
A&G - Labor Related	63,165,573	LABOR_M	TOTAL	63,165,573	29,097,611	7,727,098	12,230,553	13,187,539	160,771	459,232	33,609	3,878	190,027	75,255
Total	76,537,180		TOTAL	76,537,180	34,814,354	9,402,491	14,991,399	16,237,831	196,777	560,752	40,968	4,520	202,644	85,443
Total O&M Expense	932,962,529		TOTAL	932,962,529	383,573,538	108,938,786	196,948,210	227,741,638	2,386,283	8,146,817	486,322	56,830	2,380,199	2,303,907
Depreciation & Amortization Expense														
Production	75,424,081	RB_GUP_EPIS_P	TOTAL	75,424,081	31,569,942	9,493,995	15,775,830	17,723,214	205,256	577,008	41,602	3,105	12,817	21,312
Nuclear	105,026,267	RB_GUP_EPIS_P	TOTAL	105,026,267	43,960,406	13,220,165	21,967,474	24,679,161	285,814	803,470	57,929	4,324	17,847	29,676
GSU	1,006,002	RB_GUP_EPIS_P	TOTAL	1,006,002	421,078	126,630	210,417	236,391	2,738	7,696	555	41	171	284
Transmission	29,646,533	TRAN_TO	TOTAL	29,646,533	12,885,205	3,483,844	6,067,707	6,833,890	74,319	236,966	15,979	1,176	17,956	29,492
Distribution	76,154,419	RB_GUP_EPIS_D	TOTAL	76,154,419	43,166,093	9,725,249	13,213,104	7,065,227	196,259	494,707	44,681	16,001	1,267,816	965,284
General & Intangible	35,225,602	RB_GUP_EPIS_G	TOTAL	35,225,602	16,226,891	4,309,178	6,820,624	7,354,307	89,657	256,100	18,743	2,163	105,973	41,967
Total Depreciation & Amort Expense	322,482,905		TOTAL	322,482,905	148,229,614	40,359,060	64,055,157	63,892,189	854,043	2,375,948	179,489	26,810	1,422,579	1,088,015
Regulatory Debits/Credits														
Reg Debits / Credits - Generation	394,742	RB_GUP_EPIS_P	TOTAL	394,742	165,226	49,688	82,565	92,757	1,074	3,020	218	16	67	112
Reg Debits / Credits - Nuclear	915,919	RB_GUP_EPIS_P	TOTAL	915,919	383,372	115,291	191,575	215,223	2,493	7,007	505	38	156	259
Reg Debits / Credits - Transmission	-	RB_GUP_EPIS_T	TOTAL	-	-	-	-	-	-	-	-	-	-	-
Reg Debits / Credits - Distribution	-	RB_GUP_EPIS_D	TOTAL	-	-	-	-	-	-	-	-	-	-	-
Total Regulatory Debits/Credits	1,310,661		TOTAL	1,310,661	548,598	164,979	274,140	307,980	3,567	10,027	723	54	223	370
Taxes Other Than Income														
FICA	9,523,625	LABOR_M	TOTAL	9,523,625	4,387,117	1,165,033	1,844,030	1,988,317	24,240	69,240	5,067	585	28,651	11,346
Federal Unemployment Tax	46,771	LABOR_M	TOTAL	46,771	21,545	5,721	9,056	9,765	119	340	25	3	141	56
State Unemployment Tax	231,742	LABOR_M	TOTAL	231,742	106,753	28,349	44,871	48,382	590	1,685	123	14	697	276
Real & Personal Property Tax	49,248,957	NP	TOTAL	49,248,957	23,245,008	6,147,522	9,651,245	9,175,276	129,423	360,305	27,581	4,792	285,012	222,792
IN PSC Assessment	1,890,000	RSALE	TOTAL	1,890,000	823,874	246,247	384,706	394,480	5,033	15,175	1,154	227	10,151	8,954
Sales and Use Taxes	78,520	RB_GUP	TOTAL	78,520	36,657	9,805	15,484	15,007	207	577	44	7	411	322
Gross Receipts Tax	22,307,952	RSALE	TOTAL	22,307,952	9,724,308	2,906,485	4,540,746	4,656,106	59,402	179,108	13,623	2,679	119,810	105,685
Federal Excise Tax	-	PROD_DEMAND	TOTAL	-	-	-	-	-	-	-	-	-	-	-
Business Franchise Tax	-	RB_GUP	TOTAL	-	-	-	-	-	-	-	-	-	-	-
Regis Fee	-	RB_GUP	TOTAL	-	-	-	-	-	-	-	-	-	-	-
Taxes on Capital Leases	661,296	NP	TOTAL	661,296	312,125	82,547	129,593	123,202	1,738	4,838	370	64	3,827	2,992

INDIANA MICHIGAN POWER COMPANY - INDIANA
CLASS COST-OF-SERVICE STUDY
FORECAST TWELVE MONTHS ENDING DECEMBER 31, 2020

Label	Constant	Allocation Factor	Function	Total Retail	RS	Total GS	Total LGS	Total IP	MS	Total WSS	EHG	IS	OL	SL
				1	2				14		18	19	20	21
Total Taxes Other Than Income	83,988,863		TOTAL	83,988,863	38,657,387	10,591,708	16,619,733	16,410,535	220,752	631,267	47,988	8,372	448,699	352,422
Other O&M Expenses														
Line of Credit Fees	210,877	RATEBASE	TOTAL	210,877	98,963	26,286	41,458	39,830	554	1,551	118	20	1,176	921
Accretion Expense - Distribution	15,861	RB_GUP_EPIS_D	TOTAL	15,861	8,990	2,026	2,752	1,472	41	103	9	3	264	201
Factoring Expense	7,825,014	RSALE	TOTAL	7,825,014	3,411,019	1,019,515	1,592,769	1,633,234	20,837	62,826	4,778	940	42,026	37,071
Accretion Expense - Production	406,343	RB_GUP_EPIS_P	TOTAL	406,343	170,081	51,148	84,991	95,483	1,106	3,109	224	17	69	115
Accretion Expense - Nuclear	-	RB_GUP_EPIS_P	TOTAL	-	-	-	-	-	-	-	-	-	-	-
Total Other Expenses	8,458,095		TOTAL	8,458,095	3,689,053	1,098,974	1,721,970	1,770,018	22,537	67,589	5,130	980	43,535	38,308
Total Operating Expense Before Income Tax	1,349,203,053		TOTAL	1,349,203,053	574,698,191	161,153,508	279,619,210	310,122,361	3,487,183	11,231,647	719,651	93,045	4,295,235	3,783,023
Gross Operating Income	148,539,082		TOTAL	148,539,082	62,611,742	26,475,327	29,998,306	21,743,407	413,322	1,382,592	155,756	64,435	2,748,872	2,945,324
Interest Expense Factor	1.940000000%													
Interest Expense Synchronized	95,971,067		TOTAL	95,971,067	45,038,460	11,962,663	18,867,783	18,126,958	252,204	705,907	53,627	9,112	535,161	419,192
Net Operating Income Before Income Tax	52,568,015		TOTAL	52,568,015	17,573,282	14,512,665	11,130,523	3,616,449	161,118	676,685	102,128	55,323	2,213,711	2,526,131
Schedule M Income Adjustments														
Gross Plant Related	2,237,667	RB_GUP	TOTAL	2,237,667	1,044,651	279,417	441,273	427,655	5,897	16,446	1,251	205	11,703	9,168
Property Tax Adjustments	-	NP	TOTAL	-	-	-	-	-	-	-	-	-	-	-
Labor Related	(10,023,871)	LABOR_M	TOTAL	(10,023,871)	(4,617,558)	(1,226,229)	(1,940,891)	(2,092,757)	(25,513)	(72,876)	(5,334)	(615)	(30,156)	(11,942)
Production Plant Related	(15,710,777)	RB_GUP_EPIS_P	TOTAL	(15,710,777)	(6,575,994)	(1,977,592)	(3,286,093)	(3,691,732)	(42,755)	(120,190)	(8,666)	(647)	(2,670)	(4,439)
Production Demand Related	442,916	PROD_DEMAND	TOTAL	442,916	185,389	55,752	92,641	104,077	1,205	3,388	244	18	75	125
Rate Base Related	966,038	RATEBASE	TOTAL	966,038	453,354	120,415	189,922	182,465	2,539	7,106	540	92	5,387	4,220
Production Energy Related	25,215,975	PROD_ENERGY	TOTAL	25,215,975	8,686,723	2,613,597	5,862,191	7,496,165	61,766	279,575	12,146	1,553	77,782	124,477
Customer Related	-	EXP_OM_CUSTACCT	TOTAL	-	-	-	-	-	-	-	-	-	-	-
Distribution Related	3,916,636	RB_GUP_EPIS_D	TOTAL	3,916,636	2,220,040	500,171	679,552	363,366	10,094	25,443	2,298	823	65,204	49,645
General Plant Related	(8,135,468)	RB_GUP_EPIS_G	TOTAL	(8,135,468)	(3,747,653)	(995,219)	(1,575,245)	(1,698,501)	(20,707)	(59,147)	(4,329)	(499)	(24,475)	(9,692)
Transmission Plant Related	-	RB_GUP_EPIS_T	TOTAL	-	-	-	-	-	-	-	-	-	-	-
Provision for Uncollectibles	-	RSALE	TOTAL	-	-	-	-	-	-	-	-	-	-	-
Total Schedule M Income Adjustments	(1,090,884)		TOTAL	(1,090,884)	(2,351,048)	(629,687)	463,350	1,090,738	(7,474)	79,744	(1,849)	930	102,851	161,560
State Tax Adjustments														
Indiana - Gross Plant Related	-	RB_GUP	TOTAL	-	-	-	-	-	-	-	-	-	-	-
Indiana - Other (bonus depreciation adjustment)	(79,178,947)	RB_GUP	TOTAL	(79,178,947)	(36,964,571)	(9,887,043)	(15,614,279)	(15,132,409)	(208,665)	(581,931)	(44,259)	(7,258)	(414,123)	(324,408)
Indiana - Production Plant Related	-	RB_GUP_EPIS_P	TOTAL	-	-	-	-	-	-	-	-	-	-	-
Illinois - Other (bonus depreciation adjustment)	(74,712,875)	RB_GUP	TOTAL	(74,712,875)	(34,879,592)	(9,329,367)	(14,733,559)	(14,278,869)	(196,895)	(549,107)	(41,763)	(6,848)	(390,765)	(306,110)
Kentucky - Other (bonus depreciation adjustment)	(79,178,948)	RB_GUP	TOTAL	(79,178,948)	(36,964,572)	(9,887,044)	(15,614,279)	(15,132,409)	(208,665)	(581,931)	(44,259)	(7,258)	(414,123)	(324,408)
Kentucky - Production Plant Related	-	RB_GUP_EPIS_P	TOTAL	-	-	-	-	-	-	-	-	-	-	-
Michigan - Other (bonus depreciation adjustment)	(74,712,875)	RB_GUP	TOTAL	(74,712,875)	(34,879,592)	(9,329,367)	(14,733,559)	(14,278,869)	(196,895)	(549,107)	(41,763)	(6,848)	(390,765)	(306,110)
Michigan - Production Plant Related	-	RB_GUP_EPIS_P	TOTAL	-	-	-	-	-	-	-	-	-	-	-
Other - Gross Plant Related	-	RB_GUP	TOTAL	-	-	-	-	-	-	-	-	-	-	-
West Virginia - Other (bonus depreciation adjustmen	129	RB_GUP	TOTAL	129	60	16	25	25	0	1	0	0	1	1
Indiana Taxable Income	(27,701,816)		TOTAL	(27,701,816)	(21,742,337)	3,995,934	(4,020,406)	(10,425,222)	(55,021)	174,498	56,020	48,995	1,902,439	2,363,283
Tax Factor (Tax Rate x Apportionment)	4.0027625%													
Indiana Tax including Credit	(1,108,838)		TOTAL	(1,108,838)	(870,294)	159,948	(160,927)	(417,297)	(2,202)	6,985	2,242	1,961	76,150	94,597
Illinois Taxable Income	(23,235,744)		TOTAL	(23,235,744)	(19,657,358)	4,553,611	(3,139,685)	(9,571,682)	(43,251)	207,322	58,516	49,405	1,925,797	2,381,581
Tax Factor (Tax Rate x Apportionment)	0.1125655%													
Illinois Tax	(26,155)		TOTAL	(26,155)	(22,127)	5,126	(3,534)	(10,774)	(49)	233	66	56	2,168	2,681
Kentucky Taxable Income	(27,701,817)		TOTAL	(27,701,817)	(21,742,338)	3,995,934	(4,020,406)	(10,425,222)	(55,021)	174,498	56,020	48,995	1,902,439	2,363,283
Tax Factor (Tax Rate x Apportionment)	0.0694550%													
Kentucky Tax	(19,240)		TOTAL	(19,240)	(15,101)	2,775	(2,792)	(7,241)	(38)	121	39	34	1,321	1,641
Michigan Taxable Income	(23,235,744)		TOTAL	(23,235,744)	(19,657,358)	4,553,611	(3,139,685)	(9,571,682)	(43,251)	207,322	58,516	49,405	1,925,797	2,381,581
Tax Factor (Tax Rate x Apportionment)	0.9277980%													
Current Michigan Tax	(215,581)		TOTAL	(215,581)	(182,381)	42,248	(29,130)	(88,806)	(401)	1,924	543	458	17,868	22,096
Total Michigan Tax	(215,581)		TOTAL	(215,581)	(182,381)	42,248	(29,130)	(88,806)	(401)	1,924	543	458	17,868	22,096
West Virginia Taxable Income	51,477,260		TOTAL	51,477,260	15,222,294	13,882,994	11,593,899	4,707,212	153,644	756,430	100,279	56,253	2,316,563	2,687,692
Tax Factor (Tax Rate x Apportionment)	0.1434355%													
West Virginia Tax	73,837		TOTAL	73,837	21,834	19,913	16,630	6,752	220	1,085	144	81	3,323	3,855
Other Taxable Income	153	RB_GUP	TOTAL	153	71	19	30	29	0	1	0	0	1	1
Tax Factor (Tax Rate x Apportionment)	73.0422600%													

Label	Constant	Allocation Factor	Function	Total Retail	RS	Total GS	Total LGS	Total IP	MS	Total WSS	EHG	IS	OL	SL
				1	2				14		18	19	20	21
Other Tax	112		TOTAL	112	52	14	22	21	0	1	0	0	1	0
Total State Income Tax	(1,295,866)		TOTAL	(1,295,866)	(1,068,017)	230,024	(179,732)	(517,345)	(2,470)	10,349	3,034	2,590	100,830	124,871
Federal Taxable Income	52,772,997		TOTAL	52,772,997	16,290,251	13,652,953	11,773,605	5,224,532	156,114	746,080	97,245	53,663	2,215,732	2,562,821
Tax Factor (Tax Rate x Apportionment)	21.00%													
Gross Current FIT	11,082,329		TOTAL	11,082,329	3,420,953	2,867,120	2,472,457	1,097,152	32,784	156,677	20,422	11,269	465,304	538,192
Parent Savings Allocation	(1,795,797)	RB_GUP	TOTAL	(1,795,797)	(838,365)	(224,240)	(354,135)	(343,207)	(4,733)	(13,198)	(1,004)	(165)	(9,392)	(7,358)
Total Current FIT	9,286,532		TOTAL	9,286,532	2,582,588	2,642,880	2,118,322	753,945	28,051	143,479	19,418	11,105	455,911	530,835
Deferred FIT														
Gross Plant Related	(24,611,605)	RB_GUP	TOTAL	(24,611,605)	(11,489,890)	(3,073,241)	(4,853,468)	(4,703,686)	(64,860)	(180,885)	(13,757)	(2,256)	(128,724)	(100,838)
Net Plant Related	-	NP	TOTAL	-	-	-	-	-	-	-	-	-	-	-
Production Plant	3,815,042	RB_GUP_EPIS_P	TOTAL	3,815,042	1,596,846	480,218	797,961	896,462	10,382	29,186	2,104	157	648	1,078
Distribution	(822,493)	RB_GUP_EPIS_D	TOTAL	(822,493)	(466,208)	(105,036)	(142,706)	(76,307)	(2,120)	(5,343)	(483)	(173)	(13,693)	(10,425)
Labor	2,317,191	LABOR_M	TOTAL	2,317,191	1,067,428	283,464	448,670	483,777	5,898	16,847	1,233	142	6,971	2,761
Rate Base	(202,868)	RATEBASE	TOTAL	(202,868)	(95,204)	(25,287)	(39,884)	(38,318)	(533)	(1,492)	(113)	(19)	(1,131)	(886)
Energy	(6,154,097)	PROD_ENERGY	TOTAL	(6,154,097)	(2,120,042)	(637,863)	(1,430,700)	(1,829,480)	(15,074)	(68,232)	(2,964)	(379)	(18,983)	(30,379)
Demand	(93,012)	PROD_DEMAND	TOTAL	(93,012)	(38,932)	(11,708)	(19,455)	(21,856)	(253)	(712)	(51)	(4)	(16)	(26)
Transmission	-	RB_GUP_EPIS_T	TOTAL	-	-	-	-	-	-	-	-	-	-	-
Revenue Related	-	RSALE	TOTAL	-	-	-	-	-	-	-	-	-	-	-
General Plant Related	1,708,448	RB_GUP_EPIS_G	TOTAL	1,708,448	787,007	208,996	330,801	356,685	4,348	12,421	909	105	5,140	2,035
Total Current Year DFIT	(24,043,394)		TOTAL	(24,043,394)	(10,758,995)	(2,880,457)	(4,908,779)	(4,932,722)	(62,212)	(198,210)	(13,123)	(2,427)	(149,788)	(136,680)
Deferred ITC														
Prior Year Feedback	(1,944,475)	RATEBASE	TOTAL	(1,944,475)	(912,527)	(242,376)	(382,281)	(367,271)	(5,110)	(14,302)	(1,087)	(185)	(10,843)	(8,493)
Solar Investment Tax Credit	(372,553)	RB_GUP_EPIS_P	TOTAL	(372,553)	(155,938)	(46,895)	(77,924)	(87,543)	(1,014)	(2,850)	(205)	(15)	(63)	(105)
Rockport	(1,953,730)	RB_GUP_EPIS_P	TOTAL	(1,953,730)	(817,765)	(245,925)	(408,646)	(459,089)	(5,317)	(14,946)	(1,078)	(80)	(332)	(552)
Cook Plant Simulator	(53,423)	RB_GUP_EPIS_P	TOTAL	(53,423)	(22,361)	(6,725)	(11,174)	(12,553)	(145)	(409)	(29)	(2)	(9)	(15)
Total Deferred ITC	(4,324,181)		TOTAL	(4,324,181)	(1,908,590)	(541,921)	(880,025)	(926,457)	(11,586)	(32,508)	(2,399)	(283)	(11,247)	(9,166)
Total Federal Income Tax	(19,081,043)		TOTAL	(19,081,043)	(10,084,998)	(779,499)	(3,670,482)	(5,105,234)	(45,747)	(87,239)	3,896	8,395	294,876	384,989
Total Income Tax	(20,376,909)		TOTAL	(20,376,909)	(11,153,015)	(549,474)	(3,850,214)	(5,622,579)	(48,217)	(76,890)	6,930	10,985	395,706	509,859
Total Expenses	1,328,826,145		TOTAL	1,328,826,145	563,545,176	160,604,033	275,768,996	304,499,782	3,438,966	11,154,756	726,581	104,030	4,690,941	4,292,882
Net Operating Income	168,915,990		TOTAL	168,915,990	73,764,757	27,024,802	33,848,520	27,365,985	461,538	1,459,483	148,826	53,450	2,353,166	2,435,464
Current Rate of Return	3.41%			3.41%	3.18%	4.38%	3.48%	2.93%	3.55%	4.01%	5.38%	11.38%	8.53%	11.27%
O&M Labor														
Production Demand	99,191,407	PROD_DEMAND	TOTAL	99,191,407	41,518,133	12,485,703	20,747,045	23,308,081	269,935	758,832	54,711	4,084	16,856	28,027
Production Energy	6,398,087	PROD_ENERGY	TOTAL	6,398,087	2,204,095	663,152	1,487,422	1,902,013	15,672	70,937	3,082	394	19,736	31,584
Transmission	5,321,751	TOTBSEXP	TOTAL	5,321,751	2,312,980	625,373	1,089,194	1,226,729	13,341	42,537	2,868	211	3,223	5,294
Distribution	11,843,225	EXP_OM_DIST	TOTAL	11,843,225	6,575,915	1,606,595	2,166,356	1,166,809	32,521	82,494	7,511	2,677	124,706	77,639
Customer Accounts	5,358,117	EXP_OM_CUSTACCT	TOTAL	5,358,117	4,693,760	449,580	64,244	1,917	2,879	3,711	1,236	425	131,889	8,478
Customer Service	4,119,317	EXP_OM_CUSTSERV	TOTAL	4,119,317	3,608,559	345,637	49,391	1,474	2,213	2,853	950	327	101,396	6,518
Total	132,231,904		TOTAL	132,231,904	60,913,442	16,176,040	25,603,652	27,607,022	336,561	961,365	70,358	8,118	397,806	157,539
Production Demand	99,191,407	PROD_DEMAND	TOTAL	99,191,407	41,518,133	12,485,703	20,747,045	23,308,081	269,935	758,832	54,711	4,084	16,856	28,027
Production Energy	6,398,087	PROD_ENERGY	TOTAL	6,398,087	2,204,095	663,152	1,487,422	1,902,013	15,672	70,937	3,082	394	19,736	31,584
Total Production	105,589,494		TOTAL	105,589,494	43,722,228	13,148,855	22,234,468	25,210,094	285,607	829,769	57,793	4,478	36,591	59,611