Indiana Michigan Power P.O. Box 60 Fort Wayne, IN 46801 IndianaMichiganPower.com



A unit of American Electric Power

Secretary of the Commission Indiana Utility Regulatory Commission PNC Center 101 West Washington Street, Suite 1500 East Indianapolis, Indiana 46204

February 27, 2012

Dear Secretary:

Pursuant to 170 IAC 1-6, I&M submits this thirty-day filing requesting approval of amendments to I&M's Tariff COGEN/SPP (Cogeneration and/or Small Power Production Service) which is being submitted pursuant to 170 Ind. Admin. Code 4-4-1-10.

Enclosed for the Commission's review and approval, please find the following documents:

- Original and three copies of Indiana Michigan Power Company's proposed updates to Tariff COGEN/SPP (Cogeneration and/or Small Power Production Service) in clean and redline format.
- 2. Supporting workpapers, and
- 3. Verified Statement of Publication.

If you have any questions regarding I&M's report please contact me at (260) 408-3503 or wwhix@aep.com.

Sincerely,

William W. Hix Principal Regulatory Consultant

Enclosures

cc: Brad Borum-IURC David Stippler-OUCC INDIANA MICHIGAN POWER COMPANY STATE OF INDIANA

# FOURTH REVISED SHEET NO. 26.2 CANCELS THIRD REVISED SHEET NO. 26.2

#### TARIFF COGEN/SPP (Cogeneration and/or Small Power Production Service)

(Cont'd from Sheet No. 26.1)

## Additional Charges.

There shall be additional charges to cover the cost of special metering, safety equipment, and other local facilities installed by the Company due to COGEN/SPP facilities, as follows:

#### (1) Metering Charges

The additional charge for special metering facilities shall be as follows:

(a) Option 1

Where the customer does not sell electricity to the Company, a detent shall be used on the energy meter to prevent reverse rotation. The cost of such meter alteration shall be paid by the customer as part of the Local Facilities Charge.

(b) Options 2 & 3

Where energy meters are required to measure the excess energy and average on-peak capacity purchased by the Company or the total energy and average onpeak capacity produced by the customer's COGEN/SPP facilities, the cost of the additional metering facilities shall be paid by the customer as part of the Local Facilities Charge. In addition, a monthly metering charge shall be as follows to cover the cost of operation and maintenance of such additional facilities:

	Single Phase	Polyphase	
Standard Measurement	\$0.85	\$1.10	R
TOD Measurement	\$0.90	\$1.15	R

Under Option 3, when metering voltage for COGEN/SPP facilities is the same as the Company's delivery voltage, the customer shall, at his option, either route the COGEN/SPP totalized output leads through the metering point or make available at the metering point for the use of the Company and as specified by the Company metering current leads which will enable the Company to measure adequately the total electrical energy and average on-peak capacity produced by the qualifying COGEN/SPP facilities, as well as to measure the electrical energy consumption and capacity

(Cont'd on Sheet No. 26.3)

ISSUED BY PAUL CHODAK III PRESIDENT FORT WAYNE, INDIANA EFFECTIVE FOR ELECTRIC SERVICE RENDERED ON AND AFTER

ISSUED UNDER AUTHORITY OF THE INDIANA UTILITY REGULATORY COMMISSION CONFERENCE DATED 30-DAY FILING NO. INDIANA MICHIGAN POWER COMPANY STATE OF INDIANA

# FOURTH REVISED SHEET NO. 26.3 CANCELS THIRD REVISED SHEET NO. 26.3

#### TARIFF COGEN/SPP (Cogeneration and/or Small Power Production Service)

#### (Cont'd from Sheet No. 26.2)

requirements of the customer's total load. When metering voltage for COGEN/SPP facilities is different from the Company's delivery voltage, metering requirements and charges shall be determined specifically for each case.

#### (2) Local Facilities Charge

Additional charges to cover the cost of special metering facilities, safety equipment, and other local facilities installed by the Company shall be determined by the Company for each case and collected from the customer. The customer shall make a one-time payment for such charges upon completion of the required additional facilities or, at the customer's option, 12 consecutive equal monthly payments reflecting an annual interest charge equal to the maximum rate permitted by law not to exceed the prime rate in effect at the first billing for such installments.

#### Monthly Credits or Payments for Energy and Capacity Deliveries.

#### (1) Energy Credit

The following credits or payments from the Company to the customer shall apply for the electrical energy delivered to the Company:

Standard Meter All kWh	2.55¢	R
TOD Meter		
On-peak kWh	2.74¢	R
Off-peak kWh	2.41¢	R

#### (2) Capacity Credit

If the customer contracts to deliver a specified average capacity during the on-peak monthly billing period (on-peak contract capacity), then the first-year monthly capacity credit or payment from the Company to the customer shall be \$8.70/kW times the lowest of:

R

- (a) monthly on-peak contract capacity, or
- (b) current month on-peak metered average capacity, i.e., on-peak kWh delivered to the Company divided by 305, or

(Cont'd on Sheet No. 26.4)

ISSUED BY PAUL CHODAK III PRESIDENT FORT WAYNE, INDIANA

EFFECTIVE FOR ELECTRIC SERVICE RENDERED ON AND AFTER

ISSUED UNDER AUTHORITY OF THE INDIANA UTILITY REGULATORY COMMISSION CONFERENCE DATED 30-DAY FILING NO. I.U.R.C. NO. 15 INDIANA MICHIGAN POWER COMPANY STATE OF INDIANA

# THIRD FOURTH REVISED SHEET NO. 26.2 CANCELS SECOND THIRD REVISED SHEET NO. 26.2

# TARIFF COGEN/SPP (Cogeneration and/or Small Power Production Service)

(Cont'd from Sheet No. 26.1)

#### Additional Charges.

There shall be additional charges to cover the cost of special metering, safety equipment, and other local facilities installed by the Company due to COGEN/SPP facilities, as follows:

#### (1) Metering Charges

The additional charge for special metering facilities shall be as follows:

(a) Option 1

Where the customer does not sell electricity to the Company, a detent shall be used on the energy meter to prevent reverse rotation. The cost of such meter alteration shall be paid by the customer as part of the Local Facilities Charge.

(b) Options 2 & 3

Where energy meters are required to measure the excess energy and average on-peak capacity purchased by the Company or the total energy and average onpeak capacity produced by the customer's COGEN/SPP facilities, the cost of the additional metering facilities shall be paid by the customer as part of the Local Facilities Charge. In addition, a monthly metering charge shall be as follows to cover the cost of operation and maintenance of such additional facilities:

	Single Phase	Polyphase	
Standard Measurement	\$ <del>1.30<u>0.85</u></del>	\$1.70 <u>1.10</u>	IR
TOD Measurement	\$1.350.90	\$1.751.15	IR

Under Option 3, when metering voltage for COGEN/SPP facilities is the same as the Company's delivery voltage, the customer shall, at his option, either route the COGEN/SPP totalized output leads through the metering point or make available at the metering point for the use of the Company and as specified by the Company metering current leads which will enable the Company to measure adequately the total electrical energy and average on-peak capacity produced by the qualifying COGEN/SPP facilities, as well as to measure the electrical energy consumption and capacity

(Cont'd on Sheet No. 26.3)

ISSUED BY PAUL CHODAK III PRESIDENT FORT WAYNE, INDIANA

#### EFFECTIVE FOR ELECTRIC SERVICE RENDERED ON AND AFTER MARCH 30, 2011

ISSUED UNDER AUTHORITY OF THE INDIANA UTILITY REGULATORY COMMISSION CONFERENCE DATED MARCH 30, 2011 30-DAY FILING NO. 2821 I.U.R.C. NO. 15 INDIANA MICHIGAN POWER COMPANY STATE OF INDIANA

# THIRD FOURTH REVISED SHEET NO. 26.3 CANCELS SECOND THIRD REVISED SHEET NO. 26.3

# TARIFF COGEN/SPP (Cogeneration and/or Small Power Production Service)

#### (Cont'd from Sheet No. 26.2)

requirements of the customer's total load. When metering voltage for COGEN/SPP facilities is different from the Company's delivery voltage, metering requirements and charges shall be determined specifically for each case.

#### (2) Local Facilities Charge

Additional charges to cover the cost of special metering facilities, safety equipment, and other local facilities installed by the Company shall be determined by the Company for each case and collected from the customer. The customer shall make a one-time payment for such charges upon completion of the required additional facilities or, at the customer's option, 12 consecutive equal monthly payments reflecting an annual interest charge equal to the maximum rate permitted by law not to exceed the prime rate in effect at the first billing for such installments.

# Monthly Credits or Payments for Energy and Capacity Deliveries.

#### (1) Energy Credit

The following credits or payments from the Company to the customer shall apply for the electrical energy delivered to the Company:

Standard Meter All kWh	2.68 <u>2.55</u> ¢	II
TOD Meter		
On-peak kWh	2.892.74¢	ŦR
Off-peak kWh	2.53 <u>2.41</u> ¢	Image: Text state     Image: Text state     Image: Text state

## (2) Capacity Credit

If the customer contracts to deliver a specified average capacity during the on-peak monthly billing period (on-peak contract capacity), then the first-year monthly capacity credit or payment from the Company to the customer shall be \$9.978.70/kW times the lowest of:

- (a) monthly on-peak contract capacity, or
- (b) current month on-peak metered average capacity, i.e., on-peak kWh delivered to the Company divided by 305, or

(Cont'd on Sheet No. 26.4)

EFFECTIVE FOR ELECTRIC SERVICE RENDERED ON AND AFTER MARCH 30, 2011

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ISSUED UNDER AUTHORITY OF THE INDIANA UTILITY REGULATORY COMMISSION CONFERENCE DATED MARCH 30, 2011 30-DAY FILING NO. 2821

ISSUED BY PAUL CHODAK III PRESIDENT FORT WAYNE, INDIANA

#### Indiana Michigan Power Company Calculation of COGEN/SPP Charges/Credits Per Final Rule in IURC Cause No. 37494

J.	Assump	tions	Variable	Value
	A)	Capital Cost per kW of Capacity	V	1773 /kW
	B)	Weighted Cost of Capital **	R	8.45%
			Weighted cost of Debt	
		1)         Long Term Debt         1,312,000,000         48.58%         6.33%           2)         Preferred Equity         8,080,200         0.31%         0.00%           3)         Common Equity         1,380,402,854         51.12%         10.50%	3.08% 0.00% 5.37%	
		4) Total 2,700,483,054 100.00%	8.45%	
	C)	Carrying Charge Rate	CCR	13.55%
	D)	Operation & Maintenance Cost per Year (Fixed & Variable)	o	\$16.29 /kW
	E)	Line Losses	L	8.30%
	F)	Estimated Unit Life	Ň	00 years
	G)	Present Value of Carrying Charge for \$1 Investment for N years	D	1.4629
	H)	Fixed Operation and Maintenance Cost Escalation Rate	10	1.40%
	1)	Construction Cost Escalation Rate	IP	1.40%

\* Per settlement in last filed rate case (IURC Cause No. 43306, Exhibit KDC-S3) \*\* I&M agreed to use 100% embedded capital cost

# II. Calculation of Present Value of Carrying Charge

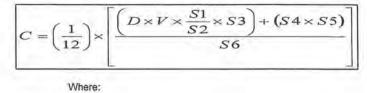
$$D = CCR \times \frac{(1+R)^{N} - 1}{R \times (1+R)^{N}}$$

$$D = 13.55\% \times \frac{10.3995}{0.9633} = 1.4629$$

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Indiana Michigan Power Company Calculation of COGEN/SPP Charges/Credits Per Final Rule in IURC Cause No. 37494

# III. Calculation of Unadjusted Monthly Avoided Cost of Capacity



$$S1 = 1 - \frac{1 + IP}{1 + R}$$

$$S2 = 1 - \left(\frac{1 + IP}{1 + R}\right)^{N}$$

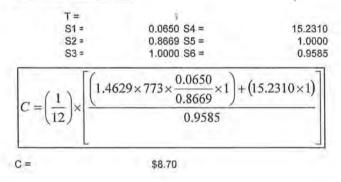
$$S3 = \left(1 + IP\right)^{(T-1)}$$

$$S4 = O \times \left(\frac{1 + IO}{1 + R}\right)$$

$$S5 = (1 + IO)^{(T-1)}$$

$$S6 = 1 - \frac{L}{2}$$

**Calculation for First Year** 



Indiana Michigan Power Company Calculation of COGEN/SPP Charges/Credits Per Final Rule in IURC Cause No. 37494

#### Cost Calculations (Support Page 1, Assumptions A & D)

# I. Fixed Operations & Maintenance Cost per kW (2012 Dollars)

Fixed Operations & Maintenance Cost		9.52 mills/kWh
Hours per Year	x	8,784 hours
Unit Size	x	171,000 kW
Capacity Factor	x	\$0.00%
Total Fixed O&M Cost		\$1,429,965 /year
Unit Size	1	171,000 kW
Per Unit Fixed O&M Cost		\$8.36 /kW

#### II. Variable Operations & Maintenance Cost per kW (2012 Dollars)

Variable Operations & Maintenance Cost		9.03 mills/kWh
Hours per Year	x	8,784 hours
Unit Size	x	171,000 kW
Capacity Factor	х	10.00%
Total Variable O&M Cost		\$1,356,364 /year
Unit Size	1	171,000 kW
Per Unit Variable O&M Cost		\$7.93 /kW

#### III. Total Operations & Maintenance Cost per kW (2012 Dollars)

Fixed O&M Cost		\$8.36 /kW
Variable O&M Cost	*	7.93 /kW
Total O&M Cost (Page 1, Assumption D)		\$16.29 /kW

I,

#### Indiana Michigan Power Company Calculation of COGEN/SPP Charges/Credits Per Final Rule in IURC Cause No. 37494

on of Annual Carrying Charge Rate (Page 1, Assumptio	n C)		Variable	Value
Weighted Cost of Capital			R	8.45%
Property Tax Rate: Account 4081005 - State of Indiana, 12/11 Electric Plant in Service - State of Indiana, 12/11	,	19,891,767 3,870,292,258		
Property Tax Rate			а	0.54%
Insurance Rate: Account 9240000, 12/11 Electric Plant in Service - Total Company, 12/11	,	3,815,009 0,489,384,160		
Insurance Rate			p	0.06%
Depreciation Rate			d	1.68%
Composite Tax Rate			ct	39.73
Book Depreciation			bd	3.33%
Rate on Debt Capital			b	6.339
Debt Ratio from last filed rate case (IURC Cause No. 43	306)		dr	48.58

 $\frac{b \times dr}{R}$ R CCR = R + a + p + d +ct (R+d-bd)ct

CCR =

13.55%

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#### Indiana Michlgan Power Company Calculation of COGEN/SPP Charges/Credits Per Final Rule in IURC Cause No. 37494

nergy	y Payment Calculation *		On-Peak	Off-Peak	Non-TOD
	Potential Loss Savings				
	Primary Losses				5.60%
	Divided by 2		- /		2
	Loss Adjustment (Potential Loss Sav	ings)			2.80%
в.	Time-of-Day Energy Payments				
	Avoided Energy Costs		2.66	2.34	¢/kWh
	Divided by (1 - Loss Savings)	1	0.9720	0.9720	
	Time-of-Day Energy Payments		2.74	2.41	¢/kWh
<b>)</b> .	Non-Time-of-Day Energy Payment				
	Time-of-Day Energy Payments		2.74	2.41	¢/kWh
	Hours per Year	x	3,654	5,130	hours
	Weighted Average of Hourly TOD Pa Hours Per Year	ayments	10,012	12,363	22,375 8,784
	Non-Time-of-Day Energy Payment				2.55 ¢/kWh

\* On-Peak Period is 7am - 9pm, Monday through Friday Off-Peak Period is all other hours

#### II. Demand and Energy Loss Calculations \*\*

System	Demand	Energy
Transmission	4,504%	2,998%
Subtransmission	0.717%	0.698%
Primary Transformer Line	0.738% 2.125%	0.611%
Compound Loss Factor	8.3%	5.6%

\*\* Assuming COGEN/SPP Service at Primary

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#### Indiana Michigan Power Company Calculation of COGEN/SPP Charges/Credits Per Final Rule in IURC Cause No. 37494

Variable	Value
	0.0%
	1.5%
CC	1.5%
	Vanabio

#### 11. Charges

Contingencies Stores Expense		5% 18%
Total Charges on Material	MC	23%
Labor		70%
Transportation Expense		41%
Total Charges on Labor	LC	111%

#### Overheads 111.

Company
---------

#### Monthly Charge on Incremental Material IV.

IM =	Incremental Material Cost
1L =	Incremental Labor Cost (50% of Materia

Incremental Labor Cost (50% of Material) = 0.5 x IM

CC MonthlyCharge on  $IM = (1+O\dot{Q} \times [(1+M\dot{Q} \times IM + (1+L\dot{Q} \times II))]$ 12

Monthly Charge on IM =

0.34% of Incremental Material Cost

OC

19%

# Indiana Michigan Power Company Calculation of COGEN/SPP Charges/Credits Per Final Rule in IURC Cause No. 37494

Monthly Meter Charges	Incremental Material (IM)	Monthly Charge 0.34%			Average Charge
Standard Measurement		1000			
Single Phase					
Option 2-1 - Primary - Transformer Rated	387	\$1.32			
Option 2-3 - Secondary - Self-Contained	41	0.14			
Option 3-1 - Primary - Transformer Rated	387	1.32			
Option 3-3 - Secondary - Transformer Rated	387	1.32			
Option 3-5 - Secondary - Self Contained	41	0.14		_	
Total		\$ 4.24	1 5	-	\$0.85
			Use:		\$0.84
Polyphase					
	587	64 00			
Option 2-2 - Primary - Transformer Rated	387	\$1.32			
Option 2-4 - Secondary - Self-Contained	230 387	0.78			
Option 3-2 - Primary - Transformer Rated (or Sec. >200 Amps)	387				
Option 3-4 - Secondary - Transformer Rated (Below 200 Amps)		1,32			
Option 3-6 - Secondary - Self Contained (Below 200 Amps) Total	230		1 5		\$1.1
Total		a 0.02	Use:		\$1.10
			Use.		\$1.1
Time-of-Day Measurement					
Single Phase					
Option 2-5 - Primary - Transformer Rated	398	\$1.3	5		
Option 2-7 - Secondary - Self-Contained	93	0.3	2		
Option 3-7 - Primary - Transformer Rated	3.98	1.3	5		
Option 3-9 - Secondary - Transformer Rated	398	1.3			
Option 3-11 - Secondary - Self Contained	41	0.1	4		
Total		\$ 4.51		=	\$0.9
			Use:		\$0.9
Polyphase	1000		2		
Option 2-6 - Primary - Transformer Rated	396	\$1.3			
Option 2-8 - Secondary - Self-Contained	239	0.8			
Option 3-8 - Primary - Transformer Rated	396	1.3	-		
Option 3-10 - Secondary - Transformer Rated	306	1.3			
그는 것 같은 것 같은 것 같은 것 같은 것 같은 것을 하는 것 같은 것 같은 것 같은 것 같은 것 같은 것 같은 것 같이 있다.	239	0.8	1		
Option 3-12 - Secondary - Self Contained	200			_	
Option 3-12 - Secondary - Self Contained Total	205		/ 5 Use:		\$1.1 \$1.1

Indiana Michigan Power Company Calculation of COGEN/SPP Charges/Credits Per Final Rule in IURC Cause No. 37494

#### I. Diversity Ratio Development \*

Annual Total MGS-Secondary Billing Demand Divided by 12	9,283,016	
Average Monthly Billing Demand	773,585	kW
Average Monthly Coincident Peak Demand	435,690	kW
Diversity Ratio	1.776	i.

\* Data from Rate Design & Cost-of-Service in IURC Cause No. 43306 (WPH-13 & WPJ-74)

#### II. Back-Up Service Rate Calculation

Current MGS - Secondary Demand Charge	\$4 297 /kW
Diversity Ratio	1.776
Coincident Peak Demand Cost	\$7.631 /kW
Typical Unavailability Rate	15%
Back-Up Service Rate	\$1.145 /kW

# Indiana Michigan Power Company Calculation of COGEN/SPP Charges/Credits Per Final Rule in IURC Cause No. 37494

	4	Section 2	92.302(b)(1)	Q	
a	AND I&M POWER C ESTIMAT FOR ASSUMED	COST SHARI ED "AVOID LEVELS OF 2012	ED COSTS" OF	T (2014 - V ENERGY ON PURCHA	- 2017)
		Fi 10	D COGENERATI rst 10-MW Lock	Se 10	ASE LEVEL cond DO-MW lock
		Peak	Off-Peak	Peak	Off-Peak
2012		2.66	2,34	2.65	2,33
2013		2.95	2.68	2.95	2.68
2014		4.65	3.24	4.65	3.24
2015		5.55	3.51	5.57	3.52
2016		6.28	4.03	6.28	4.04
2017		6.45	4.29	6.45	4.29
lotes: A,		lay. All			local time Monday ise the off-peak
в.	Energy costs	are expr	essed in cu	rrent-yea	r dollars.

# STATE OF INDIANA INDIANA UTILITY REGULATORY COMMISSION

# VERIFIED STATEMENT OF PUBLICATION

William W. Hix, being duly sworn upon oath, deposes and says that:

1. I am a Principal Regulatory Consultant for Indiana Michigan Power Company (I&M).

2. Pursuant to 170 IAC 1-6-5(a), I affirm that affected customers have been notified of I&M's thirty-day filing of updated Tariff COGEN/SPP as required under 170 IAC 1-6-6.

3. Notification of the thirty-day filing of updated Tariff COGEN/SPP was made by publication of a Legal Notice in a newspaper of general circulation that has a circulation encompassing the highest number of I&M's customers, and posting the notice on I&M's website.

4. A true and correct copy of I&M's Legal Notice is attached hereto as Exhibit "A". Date: 2 - 24 - 12

William W. Hix Principal Regulatory Consultant Indiana Michigan Power Company

STATE OF INDIANA ) ) COUNTY OF ALLEN )

) ) ss:

Subscribed and sworn to before me, a Notary Public, in and for said County and State this  $\frac{24}{2}$  day of February 2012.

Regiana M. Sistevaris, Notary Public

I am a resident of Allen County, Indiana. My commission expires: March 6, 2015 Received On: February 29, 2012 IURC 30-Day Filing No. 2977 Indiana Utility Regulatory Commission

LEGAL NOTICE STATE OF INDIANA INDIANA UTILITY REGULATORY COMMISSION Indiana Michigan Power Company, an Indiana corporation, gives notice that on or before February 29, 2012, it will submit for approval under the Indiana Utility Regulatory Commission's thirty-day filing process an updated Tariff COGEN/SPP and a standard form contract for purchase of energy and capacity at rates derived from the application of regulations. The referenced filing will consist of Indiana Michigan Power Company's proposed 2012 Tariff COGEN/SPP (Cogeneration and/or Small Power Production Service) and standard contract forms. Customers potentially affected by this filing include alternate energy production facilities, cogeneration facilities, or small hydrofacilities located in the Indiana Michigan Power Company service territory. Those customers may be affected by changes in metering charges related to special metering facilities, and by monthly credits or payments for energy and capacity deliveries. A decision on the 2012 Tariff COGEN/SPP filing is expected from the Indiana Utility Regulatory Commission on or before June 1, 2012. Please direct inquiries to: Indiana Michigan Power Company Attn: Director of Regulatory Services P.O. Box 60 Fort Wayne, IN 46801 Objections to this filing can be made to the following: Indiana Utility Regulatory Commission Attn: Commission Secretary PNC Center 101 West Washington Street Suite 1500 South Indianapolis, Indiana 46204 Indiana Office of Utility Consumer Counselor National City Center 115 W. Washington Street Suite 1500 East Indianapolis, Indiana 46204 2--20 968546

Ad Id: 4237532 (0000968546-01) originally listed in Fort Wayne Newspapers on 02/20/2012

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