Indiana Michigan Power P.O. Box 60 Fort Wayne, IN 46801 IndianaMichiganPower.com Received: March 28, 2017

IURC 30-Day Filing No.: 50044

Indiana Utility Regulatory Commission



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

March 28, 2017

Dear Secretary:

Pursuant to 170 IAC 1-6, I&M submits this thirty-day filing requesting approval of amendments to I&M's Rider D.R.S.1 (Demand Response Service - Emergency). In support of this thirty-day filing, I&M represents that on April 27, 2011 in Cause No. 43566 PJM1, the Commission approved I&M's Rider D.R.S.1. Included in the approval of Rider D.R.S.1, was the methodology to be used in determining the Curtailment Demand Credit. The Curtailment Demand Credit is based on PJM Interconnection, L.L.C¹ (PJM) prices that change annually on June 1st of each year. I&M requests to amend this rider to reflect the Curtailment Demand Credit based on the new PJM prices effective June 1, 2017. The PJM pricing information utilized in the calculation of the Curtailment Demand Credits is included in Attachment A. The derivations of the Curtailment Demand Credits are shown in Attachment B.

Included in the approval of Rider D.R.S.1, was Rider language stating, "The Company reserves the right to make changes to this Rider in order to continue to qualify under the PJM Emergency Demand Response Program, or otherwise, as appropriate." I&M represents that on April 15, 2016, the United States Environmental Protection Agency issued guidance on Vacatur of RICE NESHAP and NSPS Provisions for Emergency Engines. Subsequently, PJM issued its guidance regarding Behind the Meter Generation (BTMG) used in conjunction with PJM demand response programs. To address the PJM BTMG guidance, language has been added regarding customer's responsibility for complying with all laws, including environmental permits, for behind the meter generation used for demand response. Additionally, a clarification regarding treatment of individual customers within an aggregate group for testing purposes has been added.

The proposed modifications to Rider D.R.S.1 will properly indicate the new Curtailment Demand Credit rates to be effective June 1, 2017 and the new contract termination dates to be effective June 1, 2017 that are shown in the rider, clarifying language regarding treatment of individual customers within an aggregate group and language to address the BTMG issue described above.

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¹ PJM is a FERC-approved regional transmission organization (RTO), which AEP and I&M joined to fulfill its regulatory obligation to join an RTO. PJM is a long-established organization that manages the transmission grid for numerous companies in the eastern United Sates and fulfills the functions defined in FERC Order 2000. The AEP System–East Zone integrated its operations with PJM and began participating in the PJM energy market on October 1, 2004.

In support of this 30-Day filing, I&M is submitting the following information:

- Indiana Michigan Power Company's Rider D.R.S.1 (Demand Response Service -Emergency), Tariff Sheets THIRD REVISED SHEET NO. 29.1, FIFTH REVISED SHEET NO. 29.2, FIFTH REVISED SHEET NO. 29.3 and SECOND REVISED SHEET NO. 29.8 (clean and redline format).
- 2. Supporting PJM documentation, Attachment A.
- 3. Tables showing the derivation of the Curtailment Demand Credit rates, Attachment B.
- 4. Supporting United States EPA and PJM BTMG documentation, Attachment C, and
- 5. Verified Statement of Publication.

Upon completion of your review, please return to us one set of the stamped approved tariff sheets.

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

Sincerely,

William W. Hix

Regulatory Consultant Staff

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Enclosures

CC:

Jane Steinhauer-IURC William I. (Bill) Fine-OUCC

(Cont'd from Sheet No. 29)

- (5) In no event shall the customer be subject to PJM initiated load curtailment (PJM event) under the provisions of this Rider for more than the amount designated under the DRS Product Type Option selected by customer during delivery year. The customer must agree to be subject to DRS curtailments pursuant to the DRS Product Type Option selected by customer from the DRS Product Type Option table herein
- (6) The Company will inform the participant regarding the communication process for notices to curtail. The customer is ultimately responsible for receiving and acting upon a curtailment notification from the Company. The customer is not responsible in the event the Company fails to properly issue a curtailment notification.
- (7) All customer metering demand data required under this Rider shall be determined from 15-minute integrated metering with remote interrogation capability and demand recording equipment owned, installed, operated and maintained by the Company. When required, the Company will install such metering equipment for individual accounts contracting for 50 kW or more at no cost to the customer and for accounts contracting for less than 50 kW, a fee of \$750.00 paid in advance shall be required.
- (8) During each delivery year the Company will conduct a test and verify the customer's ability to curtail as required by PJM. However, if a curtailment event is called by PJM prior to the test, then the event shall be considered the test for the delivery year. The Company reserves the right to re-test all customers if the Company does not achieve the minimum 75% compliance testing standards for all of the Company's DRS customers as required by PJM. Additionally, the Company reserves the right to retest individual customers, and/or aggregated groups, that fail to comply during a test. These tests must be conducted for one hour on a weekday between 12 noon and 8 p.m., Eastern Time, from June 1 through September 30 during the delivery year.
- (9) If the customer fails to comply with the provisions of curtailment under this Rider, including the test provisions as indicated above, the Company and the customer will discuss methods to comply during future events. If the problem cannot be resolved to the Company's satisfaction, the Company reserves the right to adjust the customer's committed kW amount or discontinue service to the customer under this Rider. Such adjustments or terminations will be charged as outlined under the Annual Non-Compliance Charge provision.
- (10) The minimum DRS capacity contracted for under this Rider will be 100 kW. Customers with multiple electric service accounts may aggregate those individual accounts to meet the 100 kW minimum DRS capacity requirement under this Rider; however, the DRS capacity committed for each individual account shall not be less than 25 kW and no more than one site may be 100 kW or greater. Aggregation with multiple individual electric service accounts, not under common ownership, must designate a PJM qualified CSP who shall be responsible to facilitate all of the customer notifications and transactions under this Rider. A CSP that creates an aggregation may provide to the Company both a Registered kW and Committed kW amount of such aggregation. The Registered kW represents

(Cont'd on Sheet No. 29.2)

ISSUED BY TOBY L. THOMAS PRESIDENT FORT WAYNE, INDIANA EFFECTIVE FOR ELECTRIC SERVICE RENDERED ON AND AFTER JUNE 1, 2017

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

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(Cont'd from Sheet No. 29.1)

the amount of Curtailed Demand CSP desires the Company to register with PJM. The Committed kW shall be the amount of Curtailed Demand that is the basis upon which participants are paid under this Rider. Registered kW shall be equal to or greater than Committed kW. Committed kW shall not exceed the Registered kW.

- (11) In addition to curtailments under Item 2 above, the Company reserves the right to call for (request) customers to curtail their DRS load when, in the sole judgment of the Company, an emergency condition exists on the American Electric Power (AEP) System. The Company shall determine that an emergency condition exists if curtailment of load served under this Rider is necessary in order to maintain service to the Company's other firm service customers according to the AEP System Emergency Operating Plan. During such event, the customer must make best efforts to voluntarily curtail DRS load.
- (12) NO RESPONSIBILITY OR LIABILITY OF ANY KIND SHALL ATTACH TO OR BE INCURRED BY THE COMPANY OR THE AEP SYSTEM FOR, OR ON ACCOUNT OF, ANY LOSS, COST, EXPENSE, OR DAMAGE CAUSED BY OR RESULTING FROM, EITHER DIRECTLY OR INDIRECTLY, ANY CURTAILMENT OF SERVICE UNDER THE PROVISIONS OF THIS RIDER.

DRS Product Type Options and Curtailment Demand Payment

Product Type	Curtailment Availability	Maximum Number of Curtailments	Hours of Day Required to Respond	Maximum Duration of Curtailments	2017/2018 DY Curtailment Demand Pymt \$/kW-month
Limited DRS	Any weekday during June – Sept. of DY	10	12 PM - 8 PM	6 Hours	\$3.741
Extended Summer DRS	Any day during June - October and following May of DY	Unlimited	10 AM – 10 PM	10 Hours	\$3.741
Annual DRS	Any day during DY	Unlimited	June – Oct. and following May of DY Nov. – April (6 AM-9 PM)	10 Hours	\$3.741

The current Limited, Extended Summer and Annual DRS products will be removed effective June 1, 2018. (Cont'd on Sheet No. 29.3)

ISSUED BY TOBY L. THOMAS PRESIDENT FORT WAYNE, INDIANA EFFECTIVE FOR ELECTRIC SERVICE RENDERED ON AND AFTER JUNE 1, 2017

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

(Cont'd from Sheet No. 29.2)

The Curtailment Demand Payment shall be calculated in \$ per kW-month as the greater of (a) the four-year average RPM Clearing price for the applicable locational delivery area and product type, calculated using the preceding delivery year, the delivery year and the subsequent two (2) delivery years and (b) 35% of the applicable PJM Reliability Pricing Model (RPM) Net Cost of New Entry (Net CONE) for the delivery year.

Beginning June 1, 2018 - DRS Product Type Options

Product Type	Curtailment Availability	Maximum Number of Curtailments	Hours of Day Required to Respond	Maximum Duration of Curtailments
Base Capacity Demand Resource (2018/2019 & 2019/2020 DY only)	Any day during June-Sept. of DY	Unlimited	10 AM-10 PM	10 Hours
Capacity Performance Demand Resource (Effective 2018/2019 DY)	Any day during DY (unless on an approved maint. Outage during OctApr.)	Unlimited	June – Oct. and following May of DY (10 AM-10 PM) Nov. – Apr. (6 AM-9 PM)	No Limit

Behind the Meter Generation.

Participating customers who operate Behind the Meter Generation (BTMG) for demand response purposes under this Rider shall adhere to PJM rules governing the use of BTMG, and operate and be in compliance with all local, state and federal laws including environmental permits. Adherence and compliance with PJM rules and all local, state and federal laws with regard to BTMG is the sole responsibility of the customer.

(Cont'd on Sheet No. 29.4)

ISSUED BY TOBY L. THOMAS PRESIDENT FORT WAYNE, INDIANA EFFECTIVE FOR ELECTRIC SERVICE RENDERE ON AND AFTER JUNE 1, 2017

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

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RIDER D.R.S.1 (Demand Response Service - Emergency)

(Cont'd from Sheet No. 29.7)

Term.

Contracts under this Rider shall be made for an initial period of four (4) delivery years and shall remain in effect until either party provides three (3) years' written notice prior to March 1 of its intention to discontinue service under the terms of this Rider for the fourth delivery year beginning after the notice is provided. Written notice deadlines through March 1, 2020 are as follows:

Written Notice Deadline	Effective Date of End of Service under Rider	
March 1, 2018	June 1, 2021	Т
March 1, 2019	June 1, 2022	T
March 1, 2020	June 1, 2023	Т
March 1, 2021	June 1, 2024	Т

If a customer becomes ineligible for service under this Rider during the term of a contract under this Rider, the Company reserves the right to terminate such contract immediately.

Special Terms and Conditions.

Customer specific information, including, but not limited to DRS contract capacity, shall remain confidential.

If a new peak demand is set by the customer in the hour following a curtailment event due to the customer resuming the level of activity prior to the curtailment, the customer may request, in writing, that the customer's billing demand be adjusted to disregard that new peak. The Company will promptly evaluate all such requests and approve reasonable requests. In specific circumstances and subject to reasonable conditions, the Company may approve requests in advance.

ISSUED BY TOBY L. THOMAS PRESIDENT FORT WAYNE, INDIANA EFFECTIVE FOR ELECTRIC SERVICE RENDERED **ON AND AFTER JUNE 1, 2017**

ISSUED UNDER AUTHORITY OF THE INDIANA UTILITY REGULATORY COMMISSION **CONFERENCE DATED** 30-DAY FILING NO.

(Cont'd from Sheet No. 29)

- (5) In no event shall the customer be subject to PJM initiated load curtailment (PJM event) under the provisions of this Rider for more than the amount designated under the DRS Product Type Option selected by customer during delivery year. The customer must agree to be subject to DRS curtailments pursuant to the DRS Product Type Option selected by customer from the DRS Product Type Option table herein.
- (6) The Company will inform the participant regarding the communication process for notices to curtail. The customer is ultimately responsible for receiving and acting upon a curtailment notification from the Company. The customer is not responsible in the event the Company fails to properly issue a curtailment notification.
- (7) All customer metering demand data required under this Rider shall be determined from 15-minute integrated metering with remote interrogation capability and demand recording equipment owned, installed, operated and maintained by the Company. When required, the Company will install such metering equipment for individual accounts contracting for 50 kW or more at no cost to the customer and for accounts contracting for less than 50 kW, a fee of \$750.00 paid in advance shall be required.
- (8) During each delivery year the Company will conduct a test and verify the customer's ability to curtail as required by PJM. However, if a curtailment event is called by PJM prior to the test, then the event shall be considered the test for the delivery year. The Company reserves the right to re-test all customers if the Company does not achieve the minimum 75% compliance testing standards for all of the Company's DRS customers as required by PJM. Additionally, the Company reserves the right to retest individual customers, and/or aggregated groups, including individual customers within an aggregate group, that fail to comply during a test. These tests must be conducted for one hour on a weekday between 12 noon and 8 p.m., Eastern Time, from June 1 through September 30 during the delivery year.
 - (9) If the customer fails to comply with the provisions of curtailment under this Rider, including the test provisions as indicated above, the Company and the customer will discuss methods to comply during future events. If the problem cannot be resolved to the Company's satisfaction, the Company reserves the right to adjust the customer's committed kW amount or discontinue service to the customer under this Rider. Such adjustments or terminations will be charged as outlined under the Annual Non-Compliance Charge provision.
 - (10) The minimum DRS capacity contracted for under this Rider will be 100 kW. Customers with multiple electric service accounts may aggregate those individual accounts to meet the 100 kW minimum DRS capacity requirement under this Rider; however, the DRS capacity committed for each individual account shall not be less than 25 kW and no more than one site may be 100 kW or greater. Aggregation with multiple individual electric service accounts, not under common ownership, must designate a PJM qualified CSP who shall be responsible to facilitate all of the customer notifications and transactions under this Rider. A CSP that creates an aggregation may provide to the Company both a Registered kW and Committed kW amount of such aggregation. The Registered kW represents

(Cont'd on Sheet No. 29.2)

ISSUED BY
TOBY L. THOMASPAUL CHODAK III
PRESIDENT
FORT WAYNE, INDIANA

EFFECTIVE FOR ELECTRIC SERVICE RENDERED ON AND AFTER JUNE 1, 2017FEBRUARY 24, 2016

ISSUED UNDER AUTHORITY OF THE INDIANA UTILITY REGULATORY COMMISSION CONFERENCE DATED FEBRUARY 24, 2016
30-DAY FILING NO. 3413

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(Cont'd from Sheet No. 29.1)

the amount of Curtailed Demand CSP desires the Company to register with PJM. The Committed kW shall be the amount of Curtailed Demand that is the basis upon which participants are paid under this Rider. Registered kW shall be equal to or greater than Committed kW. Committed kW shall not exceed the Registered kW.

- (11) In addition to curtailments under Item 2 above, the Company reserves the right to call for (request) customers to curtail their DRS load when, in the sole judgment of the Company, an emergency condition exists on the American Electric Power (AEP) System. The Company shall determine that an emergency condition exists if curtailment of load served under this Rider is necessary in order to maintain service to the Company's other firm service customers according to the AEP System Emergency Operating Plan. During such event, the customer must make best efforts to voluntarily curtail DRS load.
- (12) NO RESPONSIBILITY OR LIABILITY OF ANY KIND SHALL ATTACH TO OR BE INCURRED BY THE COMPANY OR THE AEP SYSTEM FOR, OR ON ACCOUNT OF, ANY LOSS, COST, EXPENSE, OR DAMAGE CAUSED BY OR RESULTING FROM, EITHER DIRECTLY OR INDIRECTLY, ANY CURTAILMENT OF SERVICE UNDER THE PROVISIONS OF THIS RIDER.

DRS Product Type Options and Curtailment Demand Payment

Product Type	Curtailment Availability	Maximum Number of Curtailments	Hours of Day Required to Respond	Maximum Duration of Curtailments	201 <mark>67</mark> /201 <mark>78</mark> DY Curtailment Demand Pymt \$/kW-month
Limited DRS	Any weekday during June – Sept. of DY	10	12 PM - 8 PM	6 Hours	\$3.519 <u>\$3.741</u>
Extended Summer DRS	Any day during June – October and following May of DY	Unlimited	10 AM – 10 PM	10 Hours	\$ 3.519 \$3.741
Annual DRS	Any day during DY	Unlimited	June – Oct. and following May of DY Nov. – April (6 AM-9 PM)	10 Hours	\$3.651 <u>\$3.741</u>

The current Limited, Extended Summer and Annual DRS products will be removed effective June 1, 2018. (Cont'd on Sheet No. 29.3)

ISSUED BY
TOBY L. THOMASPAUL CHODAK III
PRESIDENT
FORT WAYNE, INDIANA

EFFECTIVE FOR ELECTRIC SERVICE RENDERED ON AND AFTER JUNE 1, 20162017

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ISSUED UNDER AUTHORITY OF THE INDIANA UTILITY REGULATORY COMMISSION CONFERENCE DATED MAY 18, 2016
30-DAY FILING NO. 3435

(Cont'd from Sheet No. 29.2)

The Curtailment Demand Payment shall be calculated in \$ per kW-month as the greater of (a) the four-year average RPM Clearing price for the applicable locational delivery area and product type, calculated using the preceding delivery year, the delivery year and the subsequent two (2) delivery years and (b) 35% of the applicable PJM Reliability Pricing Model (RPM) Net Cost of New Entry (Net CONE) for the delivery year.

Beginning June 1, 2018 - DRS Product Type Options

Product Type	Curtailment Availability	Maximum Number of Curtailments	Hours of Day Required to Respond	Maximum Duration of Curtailments
Base Capacity Demand Resource (2018/2019 & 2019/2020 DY only)	Any day during June-Sept. of DY	Unlimited	10 AM-10 PM	10 Hours
Capacity Performance Demand Resource (Effective 2018/2019 DY)	Any day during DY (unless on an approved maint. Outage during OctApr.)	Unlimited	June – Oct. and following May of DY (10 AM-10 PM) Nov. – Apr. (6 AM-9 PM)	No Limit

Behind the Meter Generation.

Participating customers who operate Behind the Meter Generation (BTMG) for demand response purposes under this Rider shall adhere to PJM rules governing the use of BTMG, and operate and be in compliance with all local, state and federal laws including environmental permits. Adherence and compliance with PJM rules and all local, state and federal laws with regard to BTMG is the sole responsibility of the customer.

(Cont'd on Sheet No. 29.4)

ISSUED BY
TOBY L. THOMASPAUL CHODAK III
PRESIDENT
FORT WAYNE, INDIANA

EFFECTIVE FOR ELECTRIC SERVICE RENDERE ON AND AFTER JUNE 1, 2017 FEBRUARY 24, 201

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ISSUED UNDER AUTHORITY OF THE INDIANA UTILITY REGULATORY COMMISSION CONFERENCE DATED FEBRUARY 24, 2016
30-DAY FILING NO. 3413

(Cont'd from Sheet No. 29.7)

Term.

Contracts under this Rider shall be made for an initial period of four (4) delivery years and shall remain in effect until either party provides three (3) years' written notice prior to March 1 of its intention to discontinue service under the terms of this Rider for the fourth delivery year beginning after the notice is provided. Written notice deadlines through March 1, 2020 are as follows:

Written Notice Deadline	Effective Date of End of Service under Rider	
March 1, 20178	June 1, 202 <mark>01</mark>	Т
March 1, 201 <mark>89</mark>	June 1, 202 <mark>42</mark>	Т
March 1 201920	.lune 1 202 <mark>23</mark>	Т

March 1, 201920 June 1, 20223 March 1, 20201 June 1, 20234

If a customer becomes ineligible for service under this Rider during the term of a contract under this Rider, the Company reserves the right to terminate such contract immediately.

Special Terms and Conditions.

Customer specific information, including, but not limited to DRS contract capacity, shall remain confidential.

If a new peak demand is set by the customer in the hour following a curtailment event due to the customer resuming the level of activity prior to the curtailment, the customer may request, in writing, that the customer's billing demand be adjusted to disregard that new peak. The Company will promptly evaluate all such requests and approve reasonable requests. In specific circumstances and subject to reasonable conditions, the Company may approve requests in advance.

ISSUED BY TOBY L. THOMASPAUL CHODAK III PRESIDENT FORT WAYNE, INDIANA

EFFECTIVE FOR ELECTRIC SERVICE RENDERED ON AND AFTER JUNE 1, 20167

ISSUED UNDER AUTHORITY OF THE INDIANA UTILITY REGULATORY COMMISSION CONFERENCE DATED MAY 18, 2016 30-DAY FILING NO. 3435



2019/2020 RPM Base Residual Auction Results

Table 4 contains a summary of the clearing results in the LDAs from the 2019/2020 RPM Base Residual Auction.

Table 4 - RPM Base Residual Auction Clearing Results in the LDAs

Auction Results	RTO	MAAC	SWMAAC	PEPEO	BEE	EMAAC	DPL-SOUTH	PSEG	PS-NORTH	ATSI	ATSI-CLEVELAND	PPL	COMED
Offered MW (UCAP)	185,539.5	74,633.0	13,299.9	6,786.6	4,100.7	33.228.2	1,721.4	6,634.0	3,726.5	11,847.7	2,486.7	12,106.3	26,588.7
Cleared MW (UCAP)	167,305 9	64,915.0	11,394.6	6,248.4	2,739.5	30.769.3	1.598.5	5,455.0	3,2053	10,291.1	2,089 0	9,849.6	22,9714
System Marginal Price	\$100,00	\$100,00	\$100,00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00
Locational Price Adder*			-	12.12	\$0.30	\$19.77	\$19.77	\$19.77	\$19.77				\$102.77
Base Capacity Resource Price Decrement**	(\$20.00)	(\$20.00)	(\$20.00)	(\$20.00)	(\$20.00)	(\$20.00)	(\$20.00)	(\$20.00)	(\$20.00)	(\$20.00)	(\$20.00)	(\$20.00)	(\$20.00)
Base DR/EE Capacity Price Decrement	OF STA			(\$79.99)								GEL MAD	
RCP for Base DR/EE Resources	\$80.00	\$80.00	\$80,00	\$0,01	\$80.30	\$99.77	\$99.77	\$99.77	\$99.77	\$80.00	\$80.00	\$80.00	\$182.77
RCP for Base Generation Resources	\$80.00	\$80.00	\$80.00	\$80.00	\$80.30	\$99.77	\$99.77	\$99.77	\$99.77	\$80.00	\$80.00	\$80.00	\$182.77
RCP for Capacity Performance Resources	\$100.00	\$100.00	\$100.00	\$100,00	\$100,30	\$119.77	\$119.77	\$119.77	\$119.77	\$100.00	\$100.00	\$100.00	\$202.77

^{*}Locational Price Adder is with respect to the immediate parent LDA

Since the EMAAC LDA, ComEd LDA and BGE LDAs were constrained LDAs, Capacity Transfer Rights (CTRs) will be allocated to loads in these constrained LDA for the 2019/2020 Delivery Year. CTRs are allocated by load ratio share to all Load Serving Entities (LSEs) in a constrained LDA that has a higher clearing price than the unconstrained region. CTRs serve as a credit back to the LSEs in the constrained LDA for use of the transmission system to import less expensive capacity into that constrained LDA and are valued at the difference in the clearing prices of the constrained and unconstrained regions.

[&]quot;Base Generation and Base DR/EE receive the Base Capacity Resource Price Decrement

119-2020 RPM Base Residual Auction Planning	Parameters					6/7/2016							
dated on 6/7/2016 to add Post Clearing BRA Credit Rates													
c#7333988	RTO	Notes:											
ca2ed Reserve Marcin (IRIV)	16.5%	2015 IRM Study											
ol-Wide Average EFORd	6,60%	2015 IRM Study											
	1.0001	2015 IRM Study											
recast Poot Requiemers (FPR)													
shminary Forecast Peak Load	157,188.5	Load data: from 20	116 Load Report v	nth adjustments o	tue to load served	outside PJM							
							Locations	d Deliverability Are					
	RTO	MAAC	EMAAC	SWMAAC	P8	PS NORTH	DPL SOUTH	PEPCO	ATBI	ATSI-Cleveland	COMED	BGE	PL
	RIG	MACAGE		BALIMONIC				140.00					
то	NA.	-6,930.0	1,580 0	3,920.0	5,590.0	2,260 0	1,230.0	2,670.0	4,490.0	3,390.0	610.0	4,060.0	
TL .	NA.	7,365.0	8,656.0	9,400.0	7.856.0	3,827 0	1,896.0	6,985.0	9,212.0	5,501.0	5,160.0	6,234.7	
ristricty Requirement	171,036.6		37.633.0	15.883.0	12,174.0	6.375.0	3,060,0	8.074.0	15,742.0	5,979.0	26,509.0	8,401.0	- 1
				10,000.0	12,174.0	0	0,000.0	0,0,110		0	0.0		
tel Peak Load of FRR Entities	12,615.4							u u				- 0	
eliminary FRR Obligation	13,944.4	0	0		g.		0	0		C	0.0	C	
habity Requiement adjusted for FRR	157,092.4	67,682.0	37,633.0	15,883.0	12,174.0	8,375.0	3,060.0	8,074.0	16,742.0	5,979.0	25,509.0	8,401.0	1
d CONE, MWW-Day (UCAP Price)	\$299.30	\$262.02	5283.63	\$229.83	\$303.30	\$363.30	\$262.27	\$244.23	\$264.08	\$264.06	\$328.44	\$216.62	
	1,738.3	600.6	2047	307.6	46.0	9.2	1.2	121.5	49.5	0.5	666.4	186.1	
Addback (ICAP), MW								132.2	53.9	0.5	725.1	202.5	
Addback (UCAP), MW	1,891.4	663.3	222.7	334.7	50.9	10.0	1.3	132.2	53.9	U.54	729.1	202.5	
riable Resource Requirement Curve:													
et (a) UCAP Pros. SMW-Day	\$448.95	1393 G3	\$425.45	\$392.67	\$454.96	\$454.95	\$393.41	\$392.67	\$396.09	\$396.09	\$492.66	\$392.87	
et (b) UCAP Price, \$MW-Day	\$224.46	\$196.52	\$212.72	\$172.45	\$227.48	\$227,48	\$196.70	\$183.17	\$198.05	\$196.05	\$248.33	\$161.72	
	50.00		30.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
int (c) UCAP Price, \$/MW-Day										5 999 2	27 168.6	8 589 1	
es (a) UCAP Level MW	158,714 1		37,791.1	16,190.4	12,204.0	6,374 1	3,056.0	8,192.3	15,768.9				
ers (b) UCAP Level, MW	162,894 3		38.792.5	16.613.1	12,527.9	6,543.7	3,137 5	8,407.2	16,187.8	6,128.3	27.894.0	8,812.6	1
eri (c) UCAP Level. MW	170,850 0	73,436.2	40,598.4	17,417.4	13,144.5	6,866.5	3,292 4	8,816.1	16,985 0	6,431.1	29,236.5	9.230.1	- 1
rticipant-Funded ICTRs Awarded	N		NA	NA.	NA.	NA.	72.0	NA	NA.	NA.	NA.	65.7	
	, NO	6020	-64	765			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	:34				46.1	
UR Load Requirement (% Obligation):											20 m/T		
nerum Internal Resource Requirement	N/	970%	85.3%	45.3%	40.2%	NA.	NA.	NA	47.6%	NA	89.8%	NA	
A CETO/CETL Data; Zonal Peak Loads, Base Zonal Fl	RR Scaling Facto	rs, and FRR load.								F			
ON OLIVOURIE DESIGNATION OF THE COMMENT OF THE PARTY OF T	1	1											
	•	1		2015 Zonal WN	Preliminary	Base Zonal	FRR Partion of	Prelimmary					
LDA/Zene	CETO	CETL	CETL to CETO	Coincident	Zorul Peak	FRR Scaling		Zonal Peat Load		E 1			
LLMIZON	LEIG	CEIL	Ratio %	Peak Loads	Load Forecast	Factor	Peak Load	Forecast less		1	- 1	10	
	1			Proper Comme	LORG TOTAL		Forecast	FRR load			- 1		
		l		159,518,2	167 188 5	NA.	12.815.4	144,373.1					
RTC			NA .										
Al Al	520.0		> 115%	2,450.0	2,445.0		0.0	2,445.0					
AEI	740.0	>961	> 115%	22,290 0	22,901.0	1.02741	11,947.5	10.963.5					
APS	2,680		> 115%	8,350.0	8,891.0	1.06479	0.0	8,891.0					
ATS	4.490		205%	12,640.0	12,617.0	0.99018	0.0						
			162%	NA.	A 221.6		00	4,221.6					
ATSI-CLEVELAND													
BGE	4,060.		154%	6,490.0	6,758.0		0.0						
COMED	610.	5,160.0	846%	20 900 0	21,855.0	1,04569	0.0					1	
DAYTON			> 115%	3.170.0	3,344.0	1,05489	0.0	3,344.0					
DEO			> 115%	5,080.0	5,374.0		848.5	4.525.5					
DLCC			> 115%	2,780.0	2.627 0		00						
DON	-2,360	a 1		18,350.0	20,104.0		0.0	20,104.0					
DP	960	>1104	> 115%	3,750.0	3,916.0	1.04427	0.0	3,916.0					
OPL SOUTH	1,230	1,898.0	154%	NA.	2,279.5	NA.	0.0	2,279.5					
				2.053.2			19.4	2,119.1			- 1	1	
EKP	750		> 115%							-			
JCP	2,670	>3071	> 115%	5,740.0	5,891.0	1.02631	0.0	5,891.0				1	
	4 200	-1											
METEL	1 1,220	0 >1403	> 115%	2,800.0	2,937.0	1.04893	0.0	2,937.0					
METEL			> 115%	2,800.0 8,060.0	2,937.0 8,497.0								
PECC	2,780.	3197	> 115%	8,060.0	8,497.0	1.05422	0.0	8,497.0					
PECC PENLS	2,780	0 >3197	> 115% > 115%	8.060.0 2,670.0	8,497.0 2,779.0	1.05422 0.96829	0.0	8,497.0 2,779.0					
PECC PENLS PEPCS	2,780 140 2,870	0 >3197 0 >161 0 8,885.0	> 115%	8,060,0 2,670,0 5,910,0	8,497.0 2,779.0 6,387.0	1.05422 0.96829 1.08071	0.0	8,497.0 2,779.0 6,367.0					
PECC PENLS	2,780 140 2,670 170	0 >3197 0 >161 0 4,886.0 0 4,184.0	> 115% > 115% > 143%	8,060.0 2,870.0 5,910.0 6,960.0	8,497.0 2,779.0 6,367.0 7,266.0	1.05422 0.96829 1.08071 1.04387	0.0	8,497.0 2,779.0 6,367.0 7,266.0					
PECC PENLS PEPCS	2,780 140 2,670 170	0 >3197 0 >161 0 4,886.0 0 4,184.0	> 115% > 115%	8,060,0 2,670,0 5,910,0	8,497.0 2,779.0 6,367.0 7,266.0	1.05422 0.96829 1.08071 1.04387	0.0 0.0 0.0	8,497.0 2,779.0 6,367.0 7,266.0					
PECC PENC PEPCC PL (not US)	2,780. 140. 2,670. 170. 5,590.	0 >3197 0 >161 0 6,885.0 0 6,168.0 0 7,856.0	> 115% > 115% 243%	8.060.0 2,670.0 5,910.0 6.960.0 9,490.0	8,497.0 2,779.0 6,387.0 7,266.0 9,668.0	1.05422 0.96829 1.08071 1.04387	0.0 0.0 0.0	8,497.0 2,779.0 6,367.0 7,266.0 9,868.0					
PECC PENC PERC PL (not 100 PL P P PS NORTS	2,780 140 2,670 170 5,590 1 2,290	0 >3197 0 >161 0 4,886.0 0 4,184.0 0 7,886.0 0 3,827.0	> 115% > 115% 243% 141% 168%	8,060.0 2,670.0 5,910.0 6,960.0 9,490.0	8,497.0 2,779.0 6,387.0 7,266.0 9,868.0 4,921.2	1,05422 0,96825 1,08071 1,04397 1,03983	0.0 0.0 0.0 0.0 0.0	6,497.0 2,779.0 6,367.0 7,266.0 9,868.0 4,921.2					
PECC PENLC PEPCC PLyed UG P PS MORTH RECC	2,780 140 2,670 170 5,590 1 2,280	0 >3197 0 >161 0 8,886.0 0 8,188.0 0 7,866.0 0 3,827.0	> 115% > 115% > 115% 243% 141% 168%	8,060,0 2,670,0 5,910,0 6,960,0 9,490,0 NA	8,497.0 2,779.0 6,367.0 7,266.0 9,868.0 4,921.2 393.0	1.05422 0.96829 1.08071 1.04397 1.03983 NA	0.0 0.0 0.0 0.0 0.0	8,497 0 2,779.0 6,387.0 7,266.0 9,868.0 4,921.2 393.0					
PECC PENC PENC PL pot UG PS HORTI RECC EMARCE	2,780 140 2,670 170 5,590 4 2,280 No 1,580	0 >3197 0 >161 0 4,885.0 0 6,168.0 0 7,856.0 0 3,827.0 A NA 0 8,856.0	> 115% > 115% > 115% 243% 141% 168% NA 561%	8,060,0 2,670,0 5,910,0 6,960,0 9,490,0 NA 365,0	8,497.0 2,779.0 6,367.0 7,266.0 9,868.0 4,921.3 383.0 31,010.0	1.05422 0.96825 1.08071 1.04367 1.03983 NA 1.02078	0.0 0.0 0.0 0.0 0.0 0.0	8,497 0 2,779.0 6,387 0 7,266 0 9,868 0 4,921.2 363.0					
PECC PENAL VIG PEPCC PL (NO LVG PL NORTH RECT EMARA SWAMAN	2,780. 140. 2,670. 170. 5,590. 2,280. No. 1,580. 3,920.	0 25/07 0 3,886.0 0 4,886.0 0 6,886.0 0 7,886.0 0 7,887.0 0 8,887.0 0 8,888.0 0 9,040.0	> 115% > 115% > 115% 243% 141% 168%	8,060,0 2,670,0 5,910,0 6,960,0 9,490,0 NA 365,0	8,497.0 2,779.0 6,367.0 7,266.0 9,968.0 4,921.3 393.0 31,010.0 12,145.0	1.05422 0.96825 1.08071 1.04367 1.03983 NA 1.02078 NA	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8,497 0 2,779.0 6,367 0 7,266 0 9,968 0 4,921.2 393 0					
PECC PENAL VIG PEPCC PL (NO LVG PL NORTH RECT EMAKE SIMMAK	2,780. 140. 2,670. 170. 5,590. 2,280. No. 1,580. 3,920.	0 25/07 0 3,886.0 0 4,886.0 0 6,886.0 0 7,886.0 0 7,887.0 0 8,887.0 0 8,888.0 0 9,040.0	> 115% > 115% > 115% 243% 141% 168% NA 561%	8,060,0 2,670,0 5,910,0 6,960,0 9,490,0 NA 365,0	8,497.0 2,779.0 6,367.0 7,266.0 9,968.0 4,921.3 393.0 31,010.0 12,145.0	1.05422 0.96825 1.08071 1.04367 1.03983 NA 1.02078 NA	0.0 0.0 0.0 0.0 0.0 0.0	8,497 0 2,779.0 6,367 0 7,266 0 9,968 0 4,921.2 393 0					
PECC PENS PENS PENS PENS PENS PENS PENS PENS	2,780. 140. 2,870. 3 -170. 5,590. 1 2,280. 1 1,580. 3,920. 4,310.	0 >3197 0 >161 0 8,886.0 0 8,168.0 0 7,868.0 0 3,827.0 A NA 0 8,456.0 0 9,400.0	> 115% > 115% > 115% 243% 141% 168% NA 561%	8,060.0 2,670.0 5,910.0 9,490.0 NA 385.0 NA	8,497.0 2,779.0 6,387.0 7,266.0 9,663.0 4,921.2 393.0 31,010.0 13,145.0 12,982.0	1.05422 0.96825 1.08071 1.04387 1.03983 NA 1.02078 NA	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8,497 0 2,779.0 6,367.0 7,266.0 9,868.0 4,921.2 393.0					
PECC PENAL PEPCC PENAL PEPCC PLICAL PEPCC PLICAL PEPCC PRORTI RECCE EMMAC SYMMAC Viviation MAA	2,780. 140. 2,670. 1,170. 5,590. 2,280. 1,590. 1,590. 3,920. 4,310.	0 >3197 0 >161 0 4,885,0 0 6,188,0 0 7,856,0 0 3,827,0 0 8,856,0 0 9,400,0	> 115% > 115% > 115% 243% 141% 168% NA 561%	8,080.0 2,870.0 5,910.0 6,980.0 9,490.0 NA 385.0 NA NA	8,497.0 2,779.0 6,367.0 7,266.0 9,063.0 4,921.2 333.0 31,010.0 12,145.0 12,962.0 57,137.0	1,05422 0,96825 1,08071 1,04397 1,03983 NA 1,02078 NA NA	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8,497 0 2,779.0 6,387 0 7,266 0 9,868 0 4,921.2 393.0					
PECC. PENAL	2780. 140. 2,670. 7 -170. 6 5,590. 8 2,280. 1,590. 3,920. 4,310. 4,690.	0 >3197 0 +161 0 4,885,0 0 7,886,0 0 7,886,0 0 3,827,6 A NA 0 8,800,0 0 9,400,0	> 115% > 115% > 115% 243% 141% 168% NA 561%	8,060.0 2,670.0 5,910.0 9,490.0 NA 385.0 NA	8,497.0 2,779.0 6,367.0 7,266.0 9,063.0 4,921.2 333.0 31,010.0 12,145.0 12,962.0 57,137.0	1,05422 0,96825 1,08071 1,04397 1,03983 NA 1,02078 NA NA	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8,497 0 2,779.0 6,387 0 7,266 0 9,868 0 4,921.2 393.0					
PECC. PENAL	2780. 140. 2,670. 7 -170. 6 5,590. 8 2,280. 1,590. 3,920. 4,310. 4,690.	0 >3197 0 >161 0 4,885,0 0 6,188,0 0 7,856,0 0 3,827,0 0 8,856,0 0 9,400,0	> 115% > 115% > 115% 243% 141% 168% NA 561%	8,080.0 2,870.0 5,910.0 6,980.0 9,490.0 NA 385.0 NA NA	8,497.0 2,779.0 6,367.0 7,266.0 9,063.0 4,921.2 333.0 31,010.0 12,145.0 12,962.0 57,137.0	1,05422 0,96825 1,08071 1,04397 1,03983 NA 1,02078 NA NA	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8,497 0 2,779.0 6,387 0 7,266 0 9,868 0 4,921.2 393.0					
PECC PENAL P	2780. 140. 2,670. 7 -170. 6 5,590. 8 2,280. 1,590. 3,920. 4,310. 4,690.	0 >3197 0 >161 0 4,885,0 0 6,188,0 0 7,856,0 0 3,827,0 0 8,856,0 0 9,400,0	> 115% > 115% > 115% 243% 141% 168% NA 561%	8,080.0 2,870.0 5,910.0 6,980.0 9,490.0 NA 385.0 NA NA	8,497.0 2,779.0 6,367.0 7,266.0 9,063.0 4,921.2 333.0 31,010.0 12,145.0 12,962.0 57,137.0	1,05422 0,96825 1,08071 1,04397 1,03983 NA 1,02078 NA NA	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8,497 0 2,779.0 6,387 0 7,266 0 9,868 0 4,921.2 393.0					
PECCE PENANCE	2780. 1400. 2.670. 1-700. 5.590. 2.280. No. 1,590. 3,920. 4,310. 4,590. 4,200. builty critarion.	0 >3197 1 1 1 1 1 1 1 1 1	> 115% > 115% > 115% 243% 141% 168% NA 561%	8,080.0 2,870.0 5,910.0 6,980.0 9,490.0 NA 385.0 NA NA	8,497.0 2,779.0 6,367.0 7,266.0 9,063.3 4,921.2 333.0 31,010.0 12,145.0 12,962.0 57,137.0	1,05422 0,96825 1,08071 1,04397 1,03983 NA 1,02078 NA NA	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8,497 0 2,779.0 6,387 0 7,266 0 9,868 0 4,921.2 393.0					
PECCE PENAM	2.780. 140. 2.670. 3.670. 5.590. 4.280. 1.590. 5.590. 4.280. 2.280. 5.590. 6.3920. 5.48,310. 6.930.	0 >3397 >161 0 +161 0 -8,883,0 0 7,883,0 0 3,827,0 A NA 0 8,883,0 0 9,400,0 0 7,385,0 0 7,385,0	> 115% > 115% 243% 141% 141% 168% NA 561% 240%	8,080.0 2,870.0 5,910.0 6,980.0 9,490.0 NA 385.0 NA NA	8,497.0 2,779.0 6,367.0 7,266.0 9,063.3 4,921.2 333.0 31,010.0 12,145.0 12,962.0 57,137.0	1,05422 0,96825 1,08071 1,04397 1,03983 NA 1,02078 NA NA	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8,497 0 2,779.0 6,387 0 7,266 0 9,868 0 4,921.2 393.0					
PECC. PENA.	2.780. 140. 2.670. 1-70. 5.590. 1,580. 1,580. 3,920. 4,310. 4,310. 4,310. 4,310. 4,100. 1,580. 1,580. 4,310	3 >3/97 10 10 10 10 10 10 10 1	> 115% > 115% > 115% 243% 141% 168% NA 261% 240% - 115%	8,080.0 2,870.0 5,910.0 6,980.0 9,490.0 NA 385.0 NA NA	8,497.0 2,779.0 6,367.0 7,266.0 9,063.3 4,921.2 333.0 31,010.0 12,145.0 12,962.0 57,137.0	1,05422 0,96825 1,08071 1,04397 1,03983 NA 1,02078 NA NA	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8,497 0 2,779.0 6,387 0 7,266 0 9,868 0 4,921.2 393.0					
PECC PENAL DE PENAL UG PENAL U	2.780. 140. 2.670. 1-70. 5.590. 1,580. 1,580. 3,920. 4,310. 4,310. 4,310. 4,310. 4,100. 1,580. 1,580. 4,310	0 >3397 >161 0 +161 0 -8,883,0 0 7,883,0 0 3,827,0 A NA 0 8,883,0 0 9,400,0 0 7,385,0 0 7,385,0	> 115% > 115% > 115% 243% 141% 168% NA 261% 240% - 115%	8,080.0 2,870.0 5,910.0 6,980.0 9,490.0 NA 385.0 NA NA	8,497.0 2,779.0 6,367.0 7,266.0 9,063.3 4,921.2 333.0 31,010.0 12,145.0 12,962.0 57,137.0	1,05422 0,96825 1,08071 1,04397 1,03983 NA 1,02078 NA NA	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8,497 0 2,779.0 6,387 0 7,266 0 9,868 0 4,921.2 393.0					
PECC PENAL P	2,780. 140. 2,870. 170. 5,590. 1,590. 1,590. 2,800. 4,310. 4,310. 4,310. 4,310. 4,310. 1,590.	0 >3/97/ 0 >101 0 e,886.0 0 7,886.0 0 7,887.0 0 3,887.0 0 9,400.0 0 7,385.0 0 7,385.0 0 7,385.0 0 7,385.0 0 7,385.0 0 7,385.0	> 115% > 115% > 115% 243% 141% 168% NA 261% 240% - 115%	8,080.0 2,870.0 5,910.0 6,980.0 9,490.0 NA 385.0 NA NA	8,497.0 2,779.0 6,367.0 7,266.0 9,063.3 4,921.2 333.0 31,010.0 12,145.0 12,962.0 57,137.0	1,05422 0,96825 1,08071 1,04397 1,03983 NA 1,02078 NA NA	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8,497 0 2,779.0 6,387 0 7,266 0 9,868 0 4,921.2 393.0					
PECC. PENNS	2,780. 140. 2,670. 140. 2,670. 170. 5,590. 1,590. 1,590. 2,390. 3,920. 2,6,310. 2,6,310. 2,6,310. 2,6,310. 2,6,310. 2,700	0 >3)97 >101 0 4,885.0 0 6,188.9 0 7,886.0 0 7,886.0 0 3,827.6 0 9,400.0 0 9,400.0 0 7,385.0 0 7,385.0 0 7,385.0 0 9,400.0 0	> 115% > 115% > 115% 243% 141% 166% NA S61% 240% - 115%	8,080.0 2,870.0 5,910.0 6,980.0 9,490.0 NA 385.0 NA NA	8,497.0 2,779.0 6,367.0 7,266.0 9,063.3 4,921.2 333.0 31,010.0 12,145.0 12,962.0 57,137.0	1,05422 0,96825 1,08071 1,04397 1,03983 NA 1,02078 NA NA	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8,497 0 2,779.0 6,387 0 7,266 0 9,868 0 4,921.2 393.0					
PECC PENAL P	2.780.00 2.780.00 140.00 2.670.00 140.00 2.670.00 170.	0 >3197 0 >161 0 e,ss.0 0 5 161 0 e,ss.0 0 5,ss.0 0 7,ss.0 0 7,ss.0 0 3,ss7.6 0 9,400.6 0 7,385.6 0 7,385.6 0 7,385.6 0 9,400.6 0 7,385.6 0 9,400.	> 115% > 15% > 15% > 15% > 15%	8,080.0 2,870.0 5,910.0 6,980.0 9,490.0 NA 385.0 NA NA	8,497.0 2,779.0 6,367.0 7,266.0 9,063.3 4,921.2 333.0 31,010.0 12,145.0 12,962.0 57,137.0	1,05422 0,96825 1,08071 1,04397 1,03983 NA 1,02078 NA NA	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8,497 0 2,779.0 6,387 0 7,266 0 9,868 0 4,921.2 393.0					
PECC PENAL PENAL PENAL PENAL PENAL PENAL PL pad 100 PL pad 100 PS NORTH RECC EMAA SYMMAA Western 56AA Western 56AA Western 56AA LDA has adequate infamal resources to meet the wall retifing conditions at the CETL for modeled LDAs: LD MAAA EMAAA PA PASAGET	2,780.00 2,780.00 2,870.70 1,60.00 1,70.00 1,70.00 1,5	0 >3)97 0 951 0 961 0 9,858.0 0 7,868.0 0 7,868.0 0 3,827.0 0 9,400.0 0 7,388.0 0 7,	> 115% > 115% > 115% 243% 243% 243% 141% 168% NA NA 245% 245% 215% 25% 245%	8,080.0 2,870.0 5,910.0 6,980.0 9,490.0 NA 385.0 NA NA	8,497.0 2,779.0 6,367.0 7,266.0 9,063.3 4,921.2 333.0 31,010.0 12,145.0 12,962.0 57,137.0	1,05422 0,96825 1,08071 1,04397 1,03983 NA 1,02078 NA NA	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8,497 0 2,779.0 6,387 0 7,266 0 9,868 0 4,921.2 393.0					
PECC PENAL PENAL PENAL PENAL PENAL PENAL PL pad 100 PL pad 100 PS NORTH RECCI EMACA Weeken SAAA Weeken SAAA Weeken SAAA Weeken SAAA Weeken SAAA Meeken SAAAA Meeken SAAAA Meeken SAAAA Meeken SAAAAA PAAAAAA PAAAAAAAAAAAAAAAAAAAAAAA	2,780.00 2,780.00 2,870.70 1,60.00 1,70.00 1,70.00 1,5	0 >3197 0 >161 0 e,ss.0 0 5 161 0 e,ss.0 0 5,ss.0 0 7,ss.0 0 7,ss.0 0 3,ss7.6 0 9,400.6 0 7,385.6 0 7,385.6 0 7,385.6 0 9,400.6 0 7,385.6 0 9,400.	> 115% > 115% > 115% 243% 243% 243% 141% 168% NA NA 245% 245% 215% 25% 245%	8,080.0 2,870.0 5,910.0 6,980.0 9,490.0 NA 385.0 NA NA	8,497.0 2,779.0 6,367.0 7,266.0 9,063.3 4,921.2 333.0 31,010.0 12,145.0 12,962.0 57,137.0	1,05422 0,96825 1,08071 1,04397 1,03983 NA 1,02078 NA NA	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	8,497 0 2,779.0 6,387 0 7,266 0 9,868 0 4,921.2 393.0					
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Derivation of Rider D.R.S.1 Curtailment Demand Credits

June 2017 -	May 2018 - F	Rider DRS-1	"Limited" a	nd "Extende	ed Summer" DR
Planning <u>Year</u> (1)	RPM Clearing Price ^{1/} (2)	2017/2018 Net Cone ^{2/} (3)	35% of <u>Net Cone</u> (4)=(3)x35%		Curtailment Demand <u>Credit</u> (6)=[(5)x365] / [12 x 1,000 kW]
	\$/MW-day	\$/MW-day	\$/MW-day	\$/MW-day	\$/kW-month
2016/2017 2017/2018 2018/2019 2019/2020	59.37 106.02 149.98 80.00				
Average	\$98.84	351.39	122.99	122.99	3.741
1		ces, PJM RPM E			e)

	"Annual"		Rider DRS-1	May 2018 - I	<u>June 2017 -</u>
	Greater of (a) and (b) (5)=Max of (2) and (4)	35% of <u>Net Cone</u> (4)=(3)x35%	2017/2018 <u>Net Cone ^{2/}</u> (3)	RPM Clearing Price 1/ (2)	Planning Year (1)
\$/kW-month	\$/MW-day	\$/MW-day	\$/MW-day	\$/MW-day	
				59.37 120.00 164.77 100.00	2016/2017 2017/2018 2018/2019 2019/2020
3.741	122.99	122.99	351.39	\$111.04	Average
_	122.99	122.99	351.39	100.00	2019/2020

1/ RCP for Extended Summer and Annual Resources, PJM RPM BRA Results (PJM website)

2/ PJM RPM Base Residual Auction Planning Parameters (PJM website)

AND STANDARDS



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY RESEARCH TRIANGLE PARK, NC 27711

April 15, 2016

OFFICE OF AIR QUALITY PLANNING

MEMORANDUM

SUBJECT: Guidance on Vacatur of RICE NESHAP and NSPS Provisions for Emergency Engines

FROM:

Peter Tsirigotis

Director, Sector Policies and Programs Division Office of Air Quality Planning and Standards

TO:

EPA Regional Air Enforcement Managers

EPA Regional Air Directors

The U.S. Environmental Protection Agency is issuing this guidance to explain how the EPA intends to implement certain regulatory requirements after the U.S. Court of Appeals for the District of Columbia Circuit issues the mandate effectuating the vacatur in *Delaware v. EPA*. The statutory provisions and EPA regulations, as impacted by the impending issuance by the court of its mandate and described in this document, are themselves legally binding requirements. This document does not substitute for those provisions or regulations or modify them, nor is it a regulation itself. As such, this document does not impose legally binding requirements on the EPA, states, or the regulated community and may not apply to a particular situation based upon the circumstances. In appropriate circumstances, individual EPA decision makers may adopt approaches that differ from this guidance.

Background

On May 1, 2015, the U.S. Court of Appeals for the District of Columbia Circuit issued a decision² granting in part and denying in part petitions for review of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE), 40 CFR part 63 subpart ZZZZ, and the New Source Performance Standards (NSPS) for Stationary Compression Ignition and Spark Ignition Internal Combustion Engines, 40 CFR part 60 subparts IIII and JJJJ. The court decision, as modified on rehearing, vacated paragraphs 40 CFR 60.4211(f)(2)(ii)-(iii), 60.4243(d)(2)(ii)-(iii), and 63.6640(f)(2)(ii)-(iii). The vacated paragraphs specified that emergency engines may operate for a limited number of hours per year in two situations: (1) emergency demand response when the Reliability Coordinator has declared an Energy Emergency Alert Level 2, and (2) when there is a deviation of voltage or frequency of five percent or greater below standard voltage or frequency.³

¹ Delaware v. EPA, 785 F .3d 1 (D.C. Cir. 2015).

² Ibid

³ In a different case (*Conservation Law Foundation, et. al. v. EPA*, No. 13-1233 (DC. Cir.)), the EPA requested and received a voluntary remand without vacatur of the provisions in 40 CFR 60.4211(f)(3)(i), 60.4243(d)(3)(i), and 63.6640(f)(4)(ii), which allow emergency engines to operate for up to 50 hours per year if certain conditions are met. Those provisions are not affected by the vacatur in *Delaware v. EPA* and engines can continue to operate for the purpose specified in those paragraphs

The EPA requested and received a stay of the court's mandate effectuating the vacatur until May 1, 2016. May 1, 2016, falls on a Sunday, so we expect the court to issue the mandate on Monday, May 2, 2016.

Impact of the Vacatur

Upon issuance of the court's mandate vacating 40 CFR 60.4211(f)(2)(ii)-(iii), 60.4243(d)(2)(ii)-(iii), and 63.6640(f)(2)(ii)-(iii), these provisions will cease to have any legal effect. It is the EPA's view that this change will mean that an engine may not operate in circumstances described in the vacated provisions for any number of hours per year unless it is in compliance with the emission standards and other applicable requirements for a non-emergency engine.⁴ After issuance of the mandate, operation of emergency engines will be limited to emergency situations as specified in 40 CFR 60.4211(f)(1), 60.4243(d)(1), and 63.6640(f)(1); maintenance checks and readiness testing for a limited number of hours per year as specified in 40 CFR 60.4211(f)(2)(i), 60.4243(d)(2)(i), and 63.6640(f)(2)(i); and certain non-emergency situations for a limited number of hours per year as specified in 40 CFR 60.4211(f)(3), 60.4243(d)(3), and 63.6640(f)(3)-(4).⁵

For an emergency engine that was operating for the purposes specified in paragraphs 40 CFR 60.4211(f)(2)(ii)-(iii), 60.4243(d)(2)(ii)-(iii), and 63.6640(f)(2)(ii)-(iii) before the vacatur mandate that becomes a non-emergency engine after the vacatur mandate solely as a result of the operation for those purposes after the vacatur mandate, regulatory requirements including numerical emission limits or work practice standards, notifications, and performance testing may apply. The applicability of regulatory requirements to a particular engine depends on criteria including the engine's type, horsepower, and age, and not every such engine will become subject to notification and testing requirements. The EPA's Regulation Navigation tools for the RICE NESHAP and NSPS can assist engine owners/operators in determining the applicable criteria and requirements for a specific engine. The tools can be found at https://www3.epa.gov/ttn/atw/icengines/imp.html#regnav.

Engines that are subject to initial performance testing requirements should conduct the initial performance test within 180 days of the date of the mandate (or by October 29, 2016, assuming the court issues the mandate on May 2, 2016). If an initial notification is required for the engine per 40 CFR 63.6645, notifications should be submitted no later than 120 days after the date of the mandate. If an initial notification is required for the engine according to 40 CFR 60.4214(a) or 60.4245(c), then such notification should be submitted no later than 30 days after the date of the mandate. The timelines for performance testing and initial notifications are specified in 40 CFR 60.7(a)(1), 60.8(a), 60.4214(a), 60.4245(c), 63.9(b), 63.6610, 63.6611, 63.6612, and 63.6645.

while the EPA addresses the Conservation Law Foundation, et. al. v. EPA remand. This guidance does not further address those remanded provisions.

⁴ In the EPA's motion asking the D.C. Circuit Court to stay the mandate, the EPA explained its understanding that the court's vacatur did not reinstate the provisions within the prior 2010 regulation that had previously allowed up to 15 hours per year of emergency demand response or mean that engines may operate for unlimited periods for emergency demand response and still qualify as emergency engines. See footnote 2 of the EPA's "Motion for Stay of the Mandate" in *Delaware v. EPA* which can be found at https://www3.epa.gov/ttn/atw/icengines/tech.html.

⁵ See footnote 3 regarding the voluntary remand without vacatur of the provisions in 40 CFR 60.4211(f)(3)(i), 60.4243(d)(3)(i), and 63.6640(f)(4)(ii).

⁶ This guidance with respect to notice and performance testing obligations only applies to the limited universe of engines that operate for the purposes specified in paragraphs 40 CFR 60.4211(f)(2)(ii)-(iii), 60.4243(d)(2)(ii)-(iii), and 63.6640(f)(2)(ii)-(iii) before and after the issuance of the vacatur mandate and for which the issuance of the vacatur mandate is the sole reason for the engine's change in status from an emergency engine to a non-emergency engine.

Reporting for Emergency Engines

Paragraph 40 CFR 63.6650(h) specifies that owners/operators of emergency engines that are used or contractually obligated to be available for the purposes specified in 40 CFR 63.6640(f)(2)(ii)-(iii), which are the paragraphs that were vacated, must submit an annual report that includes the hours the engine operated for those purposes. These reporting regulations provide that the first report must cover operation during 2015 and must be submitted no later than March 31, 2016. The deadline for this report occurred before the court is scheduled to issue the mandate, and owners/operators were required to submit this report by March 31, 2016. The NSPS regulations also contain similar reporting requirements in 40 CFR 60.4214(d) and 60.4245(e), and owners/operators were also required to submit the reports required by the NSPS regulations by March 31, 2016. Owners and operators will not be required to submit a report by March 31, 2017, for any such operations in 2016.

cc: Sheila Igoe, OGC Sara Ayres, OECA Robert Klepp, OECA



Demand Response Behind the Meter Generation (BTMG) and Environmental Permit Requirements

4/29/16

www.pjm.com PJM©2016



- EPA provided "Guidance on Vacatur of RICE NESHAP and NSPS Provisions for Emergency Engines" on 4/15/16
 - https://www3.epa.gov/ttn/atw/icengines/docs/RICEVa caturGuidance041516.pdf

CSPs with BTMG that will be used to reduce load when dispatched by PJM should understand these rules and take appropriate actions

- BTMG may only be used if it can operate when dispatched by PJM and comply with all Local, State and Federal laws (includes environmental permits)
- RPM auction
 - DR plan and associated officer certification
 - "Physical delivery" means BTMG can operate and be in compliance with all necessary permits
- DR Registrations
 - CSP must ensure accuracy of all information reported
 - CSP must report permit type (emergency or non-emergency) and permit status which enables BTMG to operate when dispatched by PJM.
 - CSP may only register locations that can reduce load and not violate any laws
- DR dispatched by PJM must perform or will receive penalty (there are no exceptions due to environmental permit status)



- OA/OATT,1.5A.5 on-site generators
 - May only be used as allowed by necessary permits
- OA/OATT, 8.4.5 Registrations
 - BTMG must be operated in compliance with all environmental permits.
- Manual 11, 10.2.2
 - CSP must provide environmental permit type and status that will allow BTMG to participate as DR in PJM.

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 Regulatory Consultant Staff 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 an updated Rider D.R.S.1 (Demand Response Service Emergency) to reflect the Curtailment Demand Credit rate applicable to service from June 1, 2017 through May 31, 2018 and language added regarding EPA rules for behind the meter generation used for demand response.
- 3. Notification of the thirty-day filing updating Rider D.R.S.1 (Demand Response Service Emergency) 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: March 28, 2017

VVIIIIam VV. Hix /

Regulatory Consultant Staff
Indiana Michigan Power Company

STATE OF INDIANA) ss:

COUNTY OF ALLEN

Subscribed and sworn to before me, a Notary Public, in and for said County and State this \mathcal{AP} day of March 2017.

Regiana M. Sistevaris, Notary Public

I am a resident of Allen County, Indiana. My commission expires: January 7, 2023

Public Notice - Legal Individual - 9906

LEGAL NOTICE STATE OF INDIANA INDIANA UTILITY REGULATORY COMMISSION Indiana Michigan Power Company (I&M), an Indiana corporation, gives notice that on or before March 27, 2017, it will submit for approval under the Indiana Utility Regulatory Commission's thirty-day filing process an updated Rider D.R.S.1 (Demand Response Service-Emergency) to reflect the Curtailment Demand Credit rates applicable to service from June 1, 2017 through May 31, 2018. The referenced filing will consist of I&M's updates to Rider D.R.S.1 curtailment demand credit as determined by changes in PJM RPM (Reliability Pricing Model) clearing price and Net Cone price as set forth in Rider D.R.S.1. The new contract termination dates that are shown in the rider will be updated as well. Additionally, operational changes are made regarding treatment of individual customers within an aggregate group for testing purposes and a section added regarding EPA rules for behind the meter generation used for demand response. Customers potentially affected by this filing include all customers registered for service under Rider D.R.S.1 located in the I&M service territory. A decision on the proposed revisions to Rider D.R.S.1 filing is expected from the Indiana Utility Regulatory Commission on or before April 26, 2017. 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 East Indianapolis, Indiana 46204 Indiana Office of Utility Consumer Counselor PNC Center 115 W. Washington Street Suite 1500 South Indianapolis, Indiana 46204 3--25 1281602 hspaxlp

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