

Founded in 1852
by Sidney Davy Miller

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September 29, 2017

Ms. Kavita Kale
Executive Secretary
Michigan Public Service Commission
7109 W. Saginaw Highway
Lansing MI 48917

**Re: Upper Michigan Energy Resources Corporation
2018 PSCR Plan
MPSC Case No. U-18408**

Dear Ms. Kale:

Enclosed for filing is the Application supported by the Direct Testimony and Exhibits of John G. Guntlisbergen on behalf of Upper Michigan Energy Resources Corporation.

Also, enclosed is my appearance.

Additionally, a draft proposed Notice of Hearing is being e-mailed to Angela McGuire at mcguirea@michigan.gov.

Very truly yours,

Miller, Canfield, Paddock and Stone, P.L.C.

By: _____
Michael C. Rampe

cc: Robert Garvin John Guntlisbergen Vickie Nugent
Theodore Eidukas Joel Gaughan Amy Winkler
Dennis M. Derricks Christine Kane
Catherine Phillips Meghan Count

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STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * * *

In the matter of the application of) UPPER MICHIGAN ENERGY RESOURCES) CORPORATION for approval of a power supply cost) recovery plan and authorization of monthly power supply) cost recovery factors for the calendar year 2018.) <hr style="width: 100%; border: 0.5px solid black;"/>	Case No. U-18408
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APPLICATION

UPPER MICHIGAN ENERGY RESOURCES CORPORATION (“UMERC” or the “Company”) applies for approval pursuant to § 6j of 1982 PA 304 (“Act 304”) of its Power Supply Cost Recovery (“PSCR”) plan and five-year forecast, and for authority to implement PSCR factors for the calendar year 2018. In support thereof, UMERC respectfully represents to the Michigan Public Service Commission (“Commission”) as follows:

1. UMERC is a public service corporation organized under the laws of Michigan with service centers located at 800 Industrial Park Drive, Iron Mountain, Michigan, and 1717 Tenth Avenue, Menominee, Michigan. By Order Approving Settlement Agreement dated December 9, 2016, in Case No. U-18061 (“U-18061 Order”), UMERC was granted the Michigan authority necessary to, among other things, provide retail electric service to the former Michigan electric customers of Wisconsin Electric Power Company (“WEPCo”) (except, initially, Tilden Mining Company L.C. (“Tilden”) and the Empire Iron Mining Partnership (“Empire”))

(collectively the “Mines”))¹ in service areas located in Alger, Baraga, Delta, Dickinson, Gogobic, Houghton, Iron, Marquette, Menominee, and Ontonagon Counties and to the former Michigan electric customers of Wisconsin Public Service Corporation (“WPS Corp”) in a service area located in Menominee County, Michigan.

2. Pursuant to 1909 PA 106, as amended, MCL 460.551 et seq.; 1909 PA 300, as amended, MCL 462.2 et seq.; 1919 PA 419, as amended, MCL 460.51 et seq.; and 1939 PA 3, as amended, MCL 460.1 et seq, the Commission has jurisdiction to regulate UMERC’s retail electric business.

3. UMERC’s tariffed Michigan retail electric rates were authorized by the Commission pursuant to the U-18061 Order, and incorporated in UMERC’s tariff rate schedules are the PSCR clauses previously authorized by the Commission pursuant to Section 6j(2) of Act 304 for WEPCo and WPS Corp, respectively, pursuant to which UMERC will recover PSCR costs via separate PSCR factors for the WEPCo Rate Zone and the WPS Corp Rate Zone. Specifically, the settlement agreement approved by U-18061 Order provides, in relevant part:

UMERC shall adopt the power supply cost recovery (“PSCR”) clauses of WEPCo and WPS Corp, pursuant to which UMERC will recover PSCR costs via separate PSCR factors for the WEPCo Rate Zone and the WPS Corp Rate Zone, respectively, subject to the Commission’s approval in annual PSCR plan and PSCR reconciliation cases. For the WEPCo Rate Zone, the PSCR base shall be \$45.47 per MWh at sales level, and for the WPS Corp Rate Zone the PSCR base shall be \$39.43 per MWh at generation level. UMERC shall apply for the WEPCo Rate Zone and the WPS Corp Rate Zone the current authorized rate of return on common equity (“ROE”) for WEPCo and WPS Corp, respectively, to any PSCR over-recoveries. Until UMERC files a Michigan retail electric rate case and receives authority to implement new PSCR base(s), it will exclude the

¹ The U-18061 Settlement Agreement states that WEPCo will continue to serve the Mines until termination of both of the 2015-2019 Large Curtailable Special Contracts between WEPCo and the Mines that were approved by the Commission’s April 23, 2015 Order in Case No. U-17862 (“Mines’ Special Contracts”), at which time the Mines would be transferred as customers of UMERC. In a signed letter appended as Attachment B to WEPCo’s September 1, 2016 Application Requesting Approval of Amendment in Case No. U-17862, WEPCo and Empire agreed that Empire’s special contract would terminate no later than October 15, 2016. The Commission approved the termination letter in its December 9, 2016 Order in Case No. U-17862. As a result, for the twelve months of 2018, WEPCo’s only PSCR customer will be Tilden. WEPCo’s 2018 PSCR plan will be addressed in Case No. U-18407.

generation-related ownership costs that are included in the capacity and energy rates of both the WEPCo PPA and the WPS Corp PPA for purposes of the PSCR factor calculations in its annual PSCR plan and reconciliation cases. UMERC is authorized to implement for the WEPCo Rate Zone and the WPS Corp Rate Zone, up to the 2017 PSCR factors authorized by law for WEPCo and WPS Corp, respectively, through December 31, 2017.

4. In accordance with Act 304 and the U-18061 Order, UMERC files the Direct Testimony and Exhibits of John G. Guntlisbergen, which constitute its 2018 PSCR plan and 5-year forecast. As fully described in Mr. Guntlisbergen's Direct Testimony, for the WEPCo Rate Zone, UMERC requests approval of a 2018 PSCR factor of \$0.67 per MWh, and for the WPS Corp Rate Zone, UMERC requests approval of a 2018 PSCR factor of (\$1.36) per MWh.

5. UMERC represents that its 2018 PSCR plan, factors and 5-year forecast, as filed in this case, are just, reasonable and in the public interest.

6. Absent a temporary order in this case, and pursuant to MCL 460.6j(9), effective January 1, 2018, UMERC will self-implement its proposed PSCR factors in the WEPCo and WPS Corp Rate Zones.

WHEREFORE, UMERC respectfully requests that this Commission:

- A. Make and issue a notice of hearing in this case, and after notice and hearing;
- B. Issue a final order pursuant to § 6j of Act 304 authorizing the implementation of a PSCR plan and factors for the 2018 calendar year consistent with the requests made in this Application, supporting testimony and exhibits, and the approvals granted in Case No. U-18061;
- C. Determine that the decisions underlying UMERC's five-year forecast are reasonable and prudent and that there are no costs unlikely to be permitted to be recovered in customer rates; and

D. Grant such other and further authority as is requested and may be lawful and proper.

Respectfully submitted,

UPPER MICHIGAN ENERGY RESOURCES
CORPORATION

Dated: September 29, 2017

By: _____
Its Attorney
Michael C. Rampe (P58189)
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STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

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In the matter of the application of)
UPPER MICHIGAN ENERGY RESOURCES)
CORPORATION for approval of a power supply cost)
recovery plan and authorization of monthly power supply) Case No. U-18408
cost recovery factors for the calendar year 2018.)
_____)

DIRECT TESTIMONY AND EXHIBITS OF
JOHN G. GUNT LISBERGEN
ON BEHALF OF
UPPER MICHIGAN ENERGY RESOURCES CORPORATION

September 2017

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

2 A. My name is John G. Guntlisbergen. My business address is WEC Energy Group, Inc.,
3 (“WEC”), 700 North Adams Street, P.O. Box 19001, Green Bay, Wisconsin 54307-9001.

4
5 **Q. By whom are you employed and what is your position?**

6 A. I am employed by WEC as the Manager of Electric Fuel Cost Recovery in the Regulatory
7 Affairs Department.

8
9 **Q. Please describe briefly your education, professional, and utility background.**

10 A. In 1981, I graduated from St. Norbert College - De Pere, Wisconsin, with a Bachelor of
11 Business Administration Degree in Accounting. After completing college I was
12 employed by Wisconsin Public Service Corporation (“WPS Corp”) as a Depreciation
13 Analyst and later as the Depreciation Supervisor in the Corporate Tax Department.
14 While in the Corporate Tax Department, I performed depreciation studies on utility plant
15 property, and determined book depreciation, tax depreciation and deferred taxes on an
16 actual and forecasted basis. In 1993, I moved to the Rates and Economic Evaluation
17 Department as a Rates Planner. I performed cost studies and rate impact studies for
18 generation planning and long-range corporate planning. I participated in the analysis of
19 transmission costs and the development of the transmission tariffs for filing with the
20 Federal Energy Regulatory Commission (“FERC”). I performed electric and gas cost of
21 service studies for the Michigan and Wisconsin jurisdictions. I have also worked with
22 the power supply areas for WPS Corp and Upper Peninsula Power Company to develop

1 Power Supply Cost Recovery (“PSCR”) plans and in the reconciliation of the PSCR costs
2 to revenues.

3

4 **Q. Have you testified before a regulatory agency?**

5 A. Yes. I have testified before the Public Service Commission of Wisconsin (“PSCW”) and
6 the Michigan Public Service Commission (“MPSC” or “Commission”) on numerous
7 occasions.

8

9 **Q. On whose behalf are you testifying in this proceeding?**

10 A. I am testifying on behalf of Upper Michigan Energy Resources (“UMERC”). UMERC is
11 a subsidiary of WEC.

12

13 **Q. Please describe UMERC.**

14 A. UMERC is a Michigan jurisdictional regulated utility authorized to serve the former
15 Michigan electric customers of Wisconsin Electric Power Company (“WEPCo”) and
16 WPS Corp and the former Michigan natural gas customers of WPS Corp. Michigan
17 approvals for UMERC to provide retail electric and natural gas service in the state of
18 Michigan were granted by the Commission in its December 9, 2016 Order in Case No. U-
19 18061. The approvals granted in Case No. U-18061 included, but were not limited to, (i)
20 the transfer of the electric distribution assets of WEPCo and WPS Corp used for
21 providing retail electric service in Michigan, (ii) (at least initially, with the exception of
22 the Tilden Mining Company, L.C. and Empire Iron Mining Partnership (collectively the
23 “Mines”)) the transfer of WEPCo’s and WPS Corp’s Michigan retail tariff electric

1 customers to UMERC, (iii) the assumption of WEPCo's and WPS Corp's PSCR clauses,
2 and (iv) the authority to provide electric service under the current rates, terms and
3 conditions of service set forth in WEPCo's and WPS Corp's Michigan electric tariff
4 books.

5
6 **Q. What is the purpose of your testimony in this proceeding?**

7 A. The purpose of my testimony is to support (i) UMERC's 2018 PSCR plan, and (ii)
8 sponsor the proposed 2018 PSCR factors for the UMERC WEPCo Rate Zone and the
9 WPSC Rate Zone. Specifically, I will describe UMERC's purchased power sources
10 which consist of two purchase power agreements between (i) WPS Corp and UMERC for
11 electric supply for the legacy WPSC Rate Zone ("WPS Corp PPA"), and (ii) WEPCo and
12 UMERC for electric supply for the legacy WEPCo rate zone ("WEPCo PPA").
13 Additionally, I will sponsor the 5-year forecast.

14
15 **Q. Are you sponsoring any exhibits in the proceeding?**

16 A. Yes, I am sponsoring Exhibits A-1 (JGG-1) through A-7 (JGG-7)

17
18 **Q. Were these exhibits prepared by you or under your supervision?**

19 A. Yes.

20
21 **Wholesale Purchase Power Agreements**

22 **Q. As reflected in Case No. U-18061, UMERC will not own any generation assets until**
23 **the long-term Upper Peninsula ("UP") generation solution is in service. In the**

1 **interim, what will be UMEREC's power supply source?**

2 A. The geographic areas in which UMEREC provides electric service to former WEPCo
3 Michigan retail customers are known as the WEPCo Rate Zone, and the geographic areas
4 in which UMEREC provides electric service to former WPS Corp Michigan retail
5 customers are known as the WPSC Rate Zone. As previously identified, UMEREC will
6 continue to have two purchase power agreements in place, (i) the WEPCo PPA, and (ii)
7 the WPS Corp PPA (collectively the "PPAs"). These PPAs, as previously presented and
8 approved in Case No. U-18061, provide "slice of system" benefits and costs from the
9 WEPCo and WPS Corp generation systems, similar to the allocation of generation costs
10 in a retail rate case, to the WEPCo Rate Zone and WPSC Rate Zone, respectively. The
11 PPAs are formula-based, with two formulas – one for capacity costs and one for energy
12 costs.

13
14 **Q. Are these PPAs subject to FERC regulation?**

15 A. Yes. These PPAs are wholesale transactions that are subject to FERC regulation. Both
16 PPAs are utilizing cost-based formula rates that FERC approved in WEPCo and WPS
17 Corp FERC rate cases. WEPCo's FERC rate case was docket number ER06-1320, and
18 was approved by FERC's order dated September 14, 2007. WPS Corp's FERC rate case
19 was docket number ER03-606, and was approved by FERC's order dated November 19,
20 2004. In both orders, FERC found the formula rates to be just and reasonable.

21
22 **Q. Are the FERC-approved cost-based formula rates based on tariffs?**

23 A. Yes. The capacity and energy formulas that are used in the WEPCo PPA are contained in

1 WEPCo's Formula Rate Wholesale Sales Tariff, FERC Electric Tariff Volume No. 9.
2 The capacity and energy formulas that are used in the WPS Corp PPA are contained in
3 WPS Corp's FERC Rate Schedule W-1A for Full Requirements Service to Wholesale
4 Customers, Volume 2.

5
6 **Q. Please provide a general description of the capacity rate.**

7 A. The capacity rate is intended to recover the generation ownership costs and purchase
8 capacity costs of the providing utility, *i.e.*, WEPCo and WPS Corp, respectively.
9 Generation ownership costs include the return on and of the generation assets. This is
10 accomplished by taking the corporate purchase capacity and generation ownership costs
11 for each company and dividing by the summation of the 12 system monthly peaks in a
12 year for each company. This creates a dollar per kilowatt ("kW") per month charge or
13 rate that is charged to the customer's load at the time of the company's monthly peak.
14 Customers are billed on estimated rates that are trued-up the following year once the
15 supplier's FERC Form 1 that provides the audited actual company costs is filed.

16
17 **Q. Please provide a general description of the energy formula rate.**

18 A. The energy rate is intended to recover each of WEPCo's and WPS Corp's fuel, energy
19 purchases, and variable generation operation and maintenance ("O&M") costs. The
20 energy formula rate is intended to recover the fuel and energy purchases. This is
21 accomplished by taking the corporate fuel and energy purchase costs for each and
22 dividing by the system sales in megawatt hours ("MWh") for each company. This
23 provides a system average dollar per MWh rate. For WPS Corp, the on peak energy rate

1 is calculated by multiplying the system dollar per MWh rate by 1.2. Similarly, the off
2 peak energy rate is calculated by multiplying the system dollar per MWh rate by 0.8. For
3 WEPCo, the on peak energy rate is calculated by multiplying the system dollar per MWh
4 rate by 1.14. Similarly, the off peak energy rate is calculated by multiplying the system
5 dollar per MWh rate by 0.9. The customer (*i.e.*, UMERC) is billed using on peak and off
6 peak rates determined using forecasted system costs and sales and are trued up with
7 actual system costs and sales on a two-month lag for WPS Corp and for WEPCo on a one
8 month lag for Energy Rate Part 1 and on an annual basis for Energy Rate Part 2.

9
10 **Q. Can you provide a general description of the transmission charges?**

11 A. The transmission charges are intended to pass-through to UMERC, the actual
12 transmission, ancillary, and certain market charges incurred by WEPCo and WPS Corp
13 from the Midcontinent Independent System Operator, Inc. (“MISO”) to serve UMERC.
14 This is required since the WEPCo and WPS Corp formula rates do not include
15 transmission cost recovery mechanisms and UMERC will not be charged directly by
16 MISO for any applicable transmission costs since UMERC is not a registered MISO
17 Market Participant.

18
19 **Q. The WEPCo FERC-approved energy rates are billed in two parts, Energy Rate Part
20 1 and Energy Rate Part 2. Would you please explain the difference?**

21 A. Energy Rate Part 1 recovers fuel and energy related purchased power cost that would
22 essentially be included in the FERC fuel clause: Fuel and Purchased Power (energy-
23 related), less Opportunity Sales Revenue (energy related). Energy Rate Part 2 recovers

1 O&M costs defined by the FERC “Predominance Method” as energy-related, and are not
2 included in the Energy Rate – Part I (some maintenance-related accounts).

3
4 **Q. Please explain the interruptible credit calculation.**

5 A. Both the WEPCo and WPSC Rate Zones have retail customers that take service under a
6 tariff that provides UMERC the right to interrupt load under certain conditions, and
7 UMERC is of the opinion that this serves to minimize costs to its PSCR customers. This
8 interruptible retail load reduces the firm generation capacity that is needed to satisfy
9 resource adequacy requirements with respect to generation capacity. UMERC will
10 receive a credit for the amount of retail interruptible load that will be registered as a Load
11 Modifying Resource (“LMR”) with MISO for a planning year. The credit for this
12 interruptible load in the WPSC – W-1A tariff is \$7.00 per kW per month. The legacy
13 WPSC Rate Zone has approximately 14,000 kW of monthly retail interruptible load that
14 is registered as an LMR. This provides an annual credit of approximately \$1.2 million.
15 For the WEPCo PPA, the interruptible credit will be based on the MISO published cost of
16 new generation capacity - Cost of New Entry (“Cone”). For the 2017 MISO planning
17 year, this amount is \$7.926 per kW per month. The legacy WEPCo Rate Zone has
18 approximately 6,000 kW of monthly retail interruptible load registered as an LMR. This
19 provides an annual credit of approximately \$571,000.

20
21 **Q. Are there capacity charges associated with the WEPCo and WPS Corp PPAs that**
22 **would require Commission approval under MCL 460.6j(13)(b)?**

1 A. Yes. Both PPAs have associated capacity charges exceeding six months. The
2 Commission approved the capacity charges associated with the WEPCo PPA and the
3 WPS Corp PPA in its December 9, 2016 Order in Case No. U-18061.

4
5

FORECASTS AND PSCR FACTORS

6 **Q. How will UMEREC recover the costs associated with the PPAs?**

7 A. As part of the approvals sought in Case No. U-18061, the PSCR clauses of WEPCo
8 (except as needed for WEPCo to continue to serve the Mines) and WPS Corp were
9 transferred to UMEREC. As such, this 2018 PSCR plan filing reflects that UMEREC will
10 recover PSCR costs via separate PSCR clauses for the customers of the WEPCo Rate
11 Zone and WPS Rate Zone. Thus, each Rate Zone will have its own PSCR base and
12 factor. The WEPCo Rate Zone reflects the current PSCR base of \$45.47 per MWh, and
13 the WPS Rate Zone reflects the current PSCR base of \$40.52 per MWh. The purpose
14 of this filing is to establish a 2018 PSCR factor for each Rate Zone.

15

16 **Q. How is UMEREC addressing in this plan filing, from a customer rate perspective, the
17 fact that legacy WEPCO and WPS Corp retail rates include generation ownership
18 costs, and the new PPAs will also include generation ownership costs?**

19 A. As previously addressed in Case No. U-18061, until UMEREC files a Michigan retail rate
20 case and implements new PSCR base(s), the Company will exclude the generation-
21 related ownership costs that are included in the capacity (depreciation, return, taxes, etc.)
22 and energy (O&M) rates for both the WEPCO and the WPS Corp PPA for purposes of
23 the PSCR factor calculations in its annual PSCR plan and reconciliation cases. For

1 purposes of calculating the power supply costs to be recovered through the 2018 PSCR
2 factors these generation related ownership costs have not been included.

3
4 **Q. Please describe Exhibit A-1 (JGG-1).**

5 A. Exhibit A-1 (JGG-1) reflects UMERC's forecasted Monthly Energy Obligation (MWh),
6 separated into the WEPCo and WPSC Rate Zones, for the 2018 PSCR period.

7
8 **Q. How were the forecasted UMERC energy requirements set forth in Exhibit A-1
9 (JGG-1) determined?**

10 A. The general approach was to construct forecast models for the rate classes in each of the
11 rate zones that statistically relate sales to weather, economic and demographic data (e.g.
12 income, employment, industrial production, Gross State Product, price, population, etc.),
13 historical sales data, energy efficiency data, trend variables, and binary variables as
14 appropriate. The models come in a variety of forms, but may be generally described as
15 regression-based econometric models or more statistically based (e.g. ARIMA,
16 exponential smoothing) time series models. The models are evaluated on their ability to
17 replicate historical sales and their ability to produce forecasts which reflect expected
18 seasonal and longer term trends. Typical statistical tests are used to evaluate the various
19 models such as R^2 , T-test, F-Test, P-value, MAPE, Durbin-Watson, etc.

20
21 **Q. Was the effect of the Michigan Energy Optimization initiative for energy efficiency
22 reflected in the WEPCo and WPSC Rate Zone energy obligations?**

23 A. Yes, the effect has been reflected based on sales impact trends experienced since the start

1 of the initiative for the WEPCo and WPS Corp legacy Michigan service areas.

2

3 **Q. Please describe Exhibit A-2 (JGG-2).**

4 A. Exhibit A-2 (JGG-2) reflects the 5-year sales forecast for UMEREC's WEPCo and WPSC
5 Rate Zones through 2022. The forecasted requirements for 2018-2022 were developed in
6 the same manner as previously described for the 2018 requirements.

7

8 **Q. Please describe Exhibit A-3 (JGG-3).**

9 A. Exhibit A-3 (JGG-3) shows the January through July 2017 actual over/under-recovery of
10 power supply costs as requested in item 5 of the Commission Staff Additional Filing
11 Requirements - PSCR Plans. Page 1 is for the legacy WEPCo Michigan service area and
12 page 2 is the legacy WPS Corp Michigan service area. Exhibit A-3 (JGG-3) also shows
13 the 2017 over/under-recovery of power supply costs. For purposes of this PSCR plan
14 filing, neither of the two rate zones are forecasted to have a PSCR over/under recovery
15 balance at the end of 2017, as shown on page 1, line 39 and on page 2, line 39 of Exhibit
16 A-3 (JGG-3).

17

18 **Q. Please describe Exhibit A-4 (JGG-4).**

19 A. Exhibit A-4 (JGG-4) shows the calculation of the uniform PSCR factors for January
20 through December 2018 for the WEPCo and WPSC Rate Zones respectively.

21

22 **Q. What is the proposed PSCR factor for 2018 for UMEREC's WEPCo Rate Zone?**

1 A. As shown on Exhibit A-4 (JGG-4), line 11, the 2018 PSCR factor for the WEPCo Rate
2 Zone is \$0.67 per MWh. UMERC proposes to apply this factor to retail electric sales in
3 the WEPCo Rate Zone for each month of the plan year of 2018.

4
5 **Q. What is the proposed PSCR factor for 2018 for UMERC’s WPSC Rate Zone?**

6 A. As shown on Exhibit A-4 (JGG-4), line 24, the proposed 2018 PSCR factor for the
7 WPSC Rate Zone is (\$1.36) per MWh. UMERC proposes to apply this factor to retail
8 electric sales in the WPSC Rate Zone for each month of the plan year of 2018.

9

10 **Q. How was the proposed \$0.67 per MWh PSCR factor determined for the WEPCo**
11 **Rate Zone?**

12 A. As previously discussed, UMERC adopted the legacy WEPCo PSCR base of \$45.47 per
13 MWh for the WEPCo Rate Zone. Referring to the total column on Exhibit A-4 (JGG-4),
14 the proposed positive \$0.67 per MWh power supply cost recovery factor (line 11) was
15 determined by: (a) dividing the total system costs for recovery on line 3 of \$16,234,649,
16 by the net requirements sales of 351,856 MWh on line 4, resulting in the WEPCo Rate
17 Zone average power supply cost of \$46.14 per MWh on line 5; (b) comparing the \$46.14
18 per MWh of power supply cost to the base power supply costs included in base rates of
19 \$45.47 per MWh on line 6, results in the \$0.67 per MWh power supply cost recovery
20 factor on line 7; (c) dividing the forecasted 2017 over/under-collection amount of \$0
21 shown on line 8, by the 2018 forecasted WEPCo Rate Zone PSCR sales of 351,856 MWh
22 on line 9, resulting in the roll-in PSCR factor of \$0.00 per MWh (line 10); and (d) the
23 addition of the forecasted roll-in factor of \$0.00 per MWh for 2017 to the 2018 PSCR

1 factor, resulting in the proposed 2018 PSCR factor of \$0.67 per MWh as shown on line
2 11.

3
4 **Q. How was the proposed (\$1.36) per MWh PSCR factor for 2018 determined for the**
5 **WPS Rate Zone?**

6 A. Again, as previously discussed, UMEREC adopted the legacy WPS Corp PSCR base of
7 \$40.52 per MWh for the WPSC Rate Zone. Referring to the total column on Exhibit A-4
8 (JGG-4), the proposed (\$1.36) per MWh power supply cost recovery factor was
9 determined by: (a) dividing the total system costs for recovery on line 16 of \$10,205,897,
10 by the net requirements sales of 260,620 MWh on line 17, resulting in the WPSC Rate
11 Zone average power supply cost of \$39.16 per MWh on line 18; (b) comparing the
12 \$39.16 per MWh of power supply cost to the base power supply costs included in base
13 rates of \$40.52 per MWh on line 19, results in the (\$1.36) per MWh power supply cost
14 recovery factor on line 20; (c) dividing the forecasted 2017 over/under-collection amount
15 of \$0 shown on line 21, by the 2018 forecasted legacy WPSC Rate Zone PSCR sales of
16 260,620 MWh on line 22, resulting in the roll-in PSCR factor of \$0.00 per MWh (line
17 23); and (d) the addition of the forecasted roll-in factor of \$0.00 per MWh for 2017 to
18 the proposed 2018 PSCR factor, resulting in the proposed 2018 PSCR factor of (\$1.36)
19 per MWh as shown on line 24.

20
21 **Q. Please describe Exhibit A-5 (JGG-5).**

22 A. Exhibit A-5 (JGG-5) consists of two pages.

1 Page 1 of Exhibit A-5 (JGG-5) shows the forecasted UMERC purchase power costs
2 under the WEPCo Rate Zone PPA (line 6), broken down by energy (line 2), capacity (line
3 3), and transmission (line 4) for each of the 5 years between 2018 and 2022. Line 24 of
4 Page 1 of Exhibit A-5 (JGG-5) shows the forecasted UMERC purchase power costs
5 under the WPS Rate Zone PPA, broken down by energy (line 20), capacity (line 21),
6 and transmission (line 22) for each of the 5 years between 2018 and 2022. While it is not
7 anticipated that the PPAs will be needed for the full five year period, they are being
8 shown to meet the statutory requirements of Act 304.

9
10 As previously discussed, the capacity payments for the WEPCo and WPS Corp PPAs
11 were approved in Case No. U-18061. The capacity and energy costs under these PPAs
12 would typically be recovered through the PSCR process. However, the Company has
13 agreed to only include the portion of the UMERC purchase power costs under the
14 WEPCo and WPS Rate Zone PPAs that have been historically included in WEPCo's
15 and WPS Corp's PSCR, until new UMERC PSCR base(s) can be established in a full rate
16 case. In order to identify the portion of the UMERC purchase power costs that have been
17 historically included in WEPCo's and WPS Corp's PSCRs, the WEPCo and WPS Corp
18 PSCR system costs, the related PSCR system sales and the resulting PSCR cost per Mwh
19 need to be determined. The UMERC purchase power costs that have historically been
20 included in the PSCR can then be calculated by applying the WEPCo and WPS Corp
21 PSCR cost per Mwh to the WEPCo and WPS Rate Zone sales respectively.

22
23 Line 8 of page 1 of Exhibit A-5 (JGG-5) shows the total WEPCo PSCR system costs.

1 Line 9 shows the WEPCo system supplied Mwths. Dividing the total WEPCo PSCR
2 system costs (line 8) by the WEPCo system supplied Mwths (line 9) results in a PSCR
3 cost per Mwh on supplied Mwths (line 10). Applying the loss factor (line 11) to the
4 PSCR cost per Mwh on supplied Mwths (line 10) results in a PSCR cost per Mwh on sales
5 (line 12). Multiplying the PSCR cost per Mwh on sales (line 12), by the UMER
6 WEPCo Rate Zone sales (line 14) results in the WEPCo PSCR costs assigned to the
7 UMER WEPCo Rate Zone (line 15). The WEPCo PSCR costs assigned to the UMER
8 WEPCo Rate Zone represent the portion of the UMER purchase power costs under the
9 WEPCo Rate Zone PPA that have been historically included in WEPCo's PSCR.

10
11 Line 26 of page 1 of Exhibit A-5 (JGG-5) shows the total WPS Corp PSCR system costs.
12 Line 27 shows the WPS Corp system sales Mwths. Dividing the total WPS Corp PSCR
13 system costs (line 26) by the WPS Corp system sales Mwths (line 27) results in a PSCR
14 cost per Mwh on sales (line 28). Multiplying the PSCR cost per Mwh on sales (line 28),
15 by the UMER WPS Rate Zone sales (line 30) results in the WPS Corp PSCR costs
16 assigned to the UMER WPS Rate Zone (line 31). The WPS Corp PSCR costs
17 assigned to the UMER WPS Rate Zone represent the portion of the UMER purchase
18 power costs under the WPS Rate Zone PPA that have been historically included in WPS
19 Corp's PSCR.

20
21 Page 2 of Exhibit A-5 (JGG-5) shows the 2018 monthly forecasted UMER purchase
22 power costs under the WEPCo Rate Zone PPA (line 5), broken down by energy (line 2),
23 capacity (line 3), and transmission (line 4). Line 16 of Page 2 shows the 2018 monthly

1 forecasted UMERC purchase power costs under the WPSC Rate Zone PPA, broken down
2 by energy (line 13), capacity (line 14), and transmission (line 15).

3
4 Line 7 of page 2 of Exhibit A-5 (JGG-5) shows the UMERC WEPCo Rate Zone PSCR
5 PPA cost per Mwh of \$46.14 as calculated on page 1 of Exhibit A-5 (JGG-5), line 12.

6 Applying the \$46.14/Mwh cost to the UMERC WEPCo Rate Zone sales on line 8, page
7 2, results in the UMERC WEPCo Rate Zone PSCR PPA costs on line 9. The total
8 UMERC WEPCo Rate Zone sales on line 8 are 351,856 Mwths and the resulting total
9 UMERC WEPCo Rate Zone PSCR PPA costs on line 9 are \$16,234,649. These costs are
10 also shown on Exhibit A-4 (JGG-4), line 3.

11
12 Line 18 of page 2 of Exhibit A-5 (JGG-5) shows the UMERC WPSC Rate Zone PSCR
13 PPA cost per Mwh of \$39.16 as calculated on page 1 of Exhibit A-5 (JGG-5), line 28.

14 Applying the \$39.16/Mwh cost to the UMERC WPSC Rate Zone sales on line 19, page 2,
15 results in the UMERC WPSC Rate Zone PSCR PPA costs on line 20. The total UMERC
16 WPSC Rate Zone sales on line 19 are 260,620 Mwths and the resulting total UMERC
17 WPSC Rate Zone PSCR PPA costs on line 20 are \$10,205,897. These costs are also
18 shown on Exhibit A-4 (JGG-4), line 16.

19
20 **Q. What are the power supply costs that have historically been included in the**
21 **calculation of the PSCR factors for the WEPCo PSCR?**

1 A. The following power supply costs:

	WEPCO PSCR	WEPCO PSCR	WEPCO PSCR
	<u>System Costs</u>	<u>System Mwths</u>	<u>Cost/ Mwh</u>
Generation-Fuel Related Costs	\$576,371,995	26,841,406	
Renewable Generation Transfer Prices	45,713,019	587,969	
Purchased Power Costs	\$485,756,649	10,015,216	
Opportunity Sales	(\$277,877,085)	(10,646,093)	
Transmission Costs	\$358,982,441	-	
Power Supply Costs on Generation	\$1,188,947,018	26,798,497	\$44.37

2

3 **Q. What are the power supply costs that have historically been included in the**
 4 **calculation of the PSCR factors for the WPS Corp PSCR?**

5 A. The following power supply costs:

	WPSC PSCR	WPSC PSCR	WPSC PSCR
	<u>System Costs</u>	<u>System Mwths</u>	<u>Cost/Mwh</u>
Generation-Fuel Related Costs	\$253,579,329	11,277,736	
Purchased Power Costs	\$141,528,365	3,490,661	
Opportunity Sales	(\$59,971,247)	(1,781,417)	
Less Distribution Losses & Company Use	\$0	(391,569)	
Transmission Costs	\$158,056,000	-	
Power Supply Costs on Requirement Sales	\$493,192,447	12,595,411	\$39.16

6

7 **Q. Both Exhibits A-2 (JGG-2) and A-5 (JGG-5) provide 5-year forecasts reflective of**
 8 **the PPAs. Do these forecasts reflect expected sources of electric generation to be**
 9 **built in Michigan’s Upper Peninsula (“UP”)?**

10 A. No. Although UMERC has filed for a certificate of public convenience and necessity to
 11 build generation in the UP as envisioned by the settlements approved in Case Nos. U-
 12 17682 and U-18061, construction of the generation has not been approved at this time,
 13 therefore UMERC continues to show the PPAs as its power supply source through the 5-
 14 year forecast.

1 **Q. Please describe Exhibit A-6 (JGG-6).**

2 A. Exhibit A-6 (JGG-6) shows the comparison of power supply costs approved in the
3 UMERC 2017 PSCR Plan to the forecasted power supply costs included in this 2018
4 PSCR Plan filing. Since all power supply for UMERC is being supplied through purchase
5 power agreements with WEPCo and WPS Corp for both 2017 and 2018, all changes in
6 power supply costs between plans are the result of changes in energy, capacity and
7 transmission formula rates and related historical PSCR cost assignments under the PPAs.

8

9 **Q. Please describe Exhibit A-7 (JGG-7).**

10 A. Exhibit A-7 (JGG-7), page 1 of 2 is the PSCR schedule Sheet No. D-3.00 of UMERC's
11 Michigan rate book for the WEPCo Rate Zone revised to reflect the proposed 2018 PSCR
12 factor of \$0.00067 per kilowatt-hour and an estimate of the Prior Period PSCR
13 reconciliation factor of \$0.00000 per kilowatt-hour. Exhibit A-7 (JGG-7) also shows the
14 sum of the 2018 PSCR Plan factor and the Prior Period PSCR over/under-recovery factor,
15 for a proposed PSCR factor of \$0.00067 per kilowatt-hour to be applied for all billing
16 months during 2018.

17

18 Page 2 of 2 is the PSCR schedule Sheet No. D-100.00 of UMERC's Michigan rate book
19 for the WPS Rate Zone revised to reflect the proposed 2018 PSCR factor of a credit of
20 (\$0.00136) per kilowatt-hour and an estimate of the Prior Period PSCR reconciliation
21 factor of \$0.00000 per kilowatt-hour. Exhibit A-7 (JGG-7) page 2 of 2 also shows the
22 sum of the 2018 PSCR Plan factor and the Prior Period PSCR over/under-recovery factor,
23 for a proposed PSCR credit factor of (\$0.00136) per kilowatt-hour to be applied for all

1 billing months during 2018.

2
3 **Q. How would UMERC recover its costs to comply with the 38,400 REC portfolio**
4 **requirement in the WEPCo Rate Zone?**

5 A. UMERC would continue to utilize the cost recovery mechanisms approved in WEPCo's
6 2015 renewable energy ("RE") Plan, which arranges RE into categories. UMERC and
7 WEPCo filed revised RE plans in Case Nos. U-18236 and U-18237 respectively, on
8 March 9, 2017 and they anticipate decisions in those cases by March 2018. UMERC
9 would then consider the cost recovery mechanisms approved in those revised RE plans in
10 future PSCR plan and reconciliation filings.

11
12 **Q. Can you provide more detail for the recovery of RE costs between the PSCR and**
13 **RE surcharge?**

14 A. Yes. The first category of RE includes the existing pre-Act 295 RE either WEPCo-
15 owned, or purchased under a CGS tariff or pre-Act 295 PPA. These costs would be
16 incurred by UMERC pursuant to the WEPCo PPA, and UMERC would recover them via
17 traditional rate mechanisms, *i.e.*, its base rates and the PSCR mechanism, just as WEPCo
18 does currently.

19 The second category includes: (i) post-Act 295 RE purchased by WEPCo under
20 PPAs, of which UMERC would receive its allocated share under the WEPCo PPA; and
21 (ii) post-Act 295 Company-owned resources, of which UMERC would receive its
22 allocated share under the WEPCo PPA. The costs of RE purchased under post-Act 295
23 PPAs are not incremental costs of compliance with Act 295 RE requirements to be

1 recovered via Act 295 rate mechanisms. Rather, these costs are to be recovered via
2 traditional rate mechanisms, as under the WEPCo 2015 RE Plan. As I stated, this second
3 category also includes RE from post-Act 295 WEPCo-owned resources, which consist of
4 the Glacier Hills Wind Farm (“Glacier Hills”), the Montfort Energy Center (“Montfort”),
5 and the Rothschild Bio-mass Energy Project (“Rothschild”). The costs of these three RE
6 sources would be recovered using the Act 295 cost recovery mechanisms (*i.e.*, the
7 transfer price and RE surcharge).

8 The third category of RE consists of RECs-only purchases obtained solely to
9 achieve compliance with the Michigan REC portfolio requirement (“RECs Obtained for
10 Michigan RPS”). These RECs would be recovered via UMEREC’s RE surcharge.

11
12 **Q. Why wouldn’t UMEREC simply recover the costs of RE generated at Glacier Hills,
13 Montfort and Rothschild via the WEPCo base rates that it adopted?**

14 A. These three plants were not included in rate base for WEPCo when the current base rates
15 were established for WEPCo Michigan Retail customers, and so their revenue
16 requirements are not included in the WEPCo base rates that UMEREC adopted for the
17 WEPCo Rate Zone. UMEREC WEPCo Rate Zone would simply keep in place the same
18 PSCR recovery mechanisms that WEPCo has in place to recover the costs of these three
19 plants.

20
21 **Q. What transfer prices would apply to Glacier Hills, Montfort and Rothschild?**

22 A. UMEREC would apply the same transfer prices that the Commission approved in
23 WEPCo’s 2015 RE Plan for the WEPCo Rate Zone and that are requested in UMEREC’s

1 pending RE plan case. For Glacier Hills, UMEREC would use the transfer price of \$80.41
2 per MWh approved by the Commission in WEPCo's initial RE plan, and approved in
3 WEPCo's 2015 RE Plan. For Montfort and Rothschild, UMEREC would use the transfer
4 price schedule developed by the MPSC Staff and approved by the Commission in its
5 December 19, 2013 Order in Case No. U-16662, and approved for use in WEPCo's 2015
6 RE Plan.

7
8 **Q. Will UMEREC make any firm sales to out-of-state customers?**

9 A. No.

10
11 **Q. Do the amounts of projected power supply costs include any items of cost that the**
12 **Commission could reasonably anticipate disallowing under Section 6j(13) of Act**
13 **304?**

14 A. No.

15
16 **Q. What is your evaluation of the reasonableness and prudence of UMEREC's proposed**
17 **2018 PSCR plan?**

18 A. I believe that UMEREC's 2018 PSCR plan is reasonable and prudent. I base this
19 conclusion on existing sources of capacity and energy available to UMEREC and on my
20 knowledge of UMEREC's actions to meet its power supply requirements and to manage its
21 power supply costs.

1 **Q. Does this conclude your direct testimony at this time?**

2 A. Yes it does.

**Upper Michigan Energy Resources Corporation
 Monthly Michigan Energy Obligation
 2018 (MWhs)**

Line
 No.

1 WEPCO Rate Zone

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Total</u>
2													
3 Residential	16,408	14,266	14,615	12,757	12,146	11,854	13,446	12,845	11,415	12,390	13,381	15,630	161,151
4 General Secondary	9,008	8,374	8,512	8,128	8,398	8,617	9,037	8,992	8,551	8,339	8,176	8,807	102,939
5 General Primary	7,581	6,160	7,581	6,774	7,581	6,774	7,609	7,609	6,802	6,609	6,802	7,609	85,489
6 Public Authority	191	191	191	190	190	189	188	188	189	189	190	190	2,277
7 Michigan Retail Requirement Sales	33,188	28,990	30,899	27,850	28,315	27,435	30,280	29,634	26,956	27,526	28,548	32,235	351,856
8 Municipal Sales													0
9 Company Use	204	180	224	137	146	132	150	155	149	133	149	211	1,970
10 Michigan Sales + Company Use	33,393	29,171	31,122	27,987	28,460	27,567	30,430	29,789	27,106	27,659	28,697	32,446	353,827
11 Distribution Losses	1,311	1,161	1,203	1,081	1,074	1,055	1,164	1,135	1,034	1,067	1,115	1,264	13,666
12 Michigan Retail Sales with Losses	34,704	30,332	32,325	29,068	29,534	28,621	31,594	30,924	28,140	28,726	29,812	33,710	367,492

13

14 WPSC Rate Zone

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Total</u>
15													
16 Residential	6,744	5,726	5,711	4,913	4,819	5129	6046	5947	4940	4749	5163	6217	66,104
17 Small Commercial & Industrial	2,406	2,336	2,256	2,120	2,109	2260	2402	2309	2154	2110	2195	2353	27,010
18 Large Commercial & Industrial	14,115	13,384	14,051	14,064	14,015	14011	14104	14197	13150	14046	13988	13568	166,693
19 Street Lighting	82	67	65	55	49	44	47	55	59	70	75	81	749
20 Interdepartmental	6	6	6	5	5	5	5	5	5	5	5	6	64
21 Michigan Retail Requirement Sales	23,353	21,519	22,089	21,157	20,997	21,449	22,604	22,513	20,308	20,980	21,426	22,225	260,620
22 Distribution Losses	727	670	687	658	653	667	703	701	632	653	667	692	8,111
23 Michigan Retail Sales with Losses	24,080	22,189	22,776	21,816	21,650	22,116	23,308	23,214	20,940	21,633	22,093	22,916	268,731

**Upper Michigan Energy Resources Corporation
Annual Michigan Energy Obligation
2018-2022 (MWhs)**

Line
No.

WEPCO Rate Zone		<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
1	WEPCO Rate Zone					
2						
3	Residential	161,151	160,771	160,772	159,959	159,584
4	General Secondary	102,939	103,108	103,418	103,445	103,613
5	General Primary	85,489	85,822	86,962	86,487	86,820
6	Public Authority	2,277	2,267	2,257	2,247	2,236
7	Ultimate Retail Sales	351,856	351,968	353,408	352,137	352,253
8	Municipal Sales					
9	Company Use	1,970	1,970	1,970	1,970	1,970
10	Michigan Retail Requirement Sales	353,827	353,938	355,378	354,107	354,223
11	Distribution Losses	13,666	13,658	13,686	13,639	13,631
12	Michigan Retail Sales with Losses	367,492	367,595	369,063	367,746	367,854
13						
WPSC Rate Zone		<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
14	WPSC Rate Zone					
15						
16	Residential	66,104	65,587	64,972	64,120	63,780
17	Small Commercial & Industrial	27,010	27,139	27,239	27,318	27,399
18	Large Commercial & Industrial	166,693	166,693	166,692	166,692	166,692
19	Street Lighting	749	751	754	756	757
20	Interdepartmental	64	65	66	66	66
21	Michigan Retail Requirement Sales	260,620	260,235	259,723	258,952	258,694
22	Distribution Losses	8,111	8,099	8,083	8,059	8,051
23	Michigan Retail Sales with Losses	268,731	268,334	267,805	267,011	266,745

Upper Michigan Energy Resources Corporation
 WEPCO Rate Zone
 Estimated Prior Year's PSCR True-up

Line No.	Actual 2016 Balance	Actual 2017 Jan	Actual 2017 Feb	Actual 2017 Mar	Actual 2017 Apr	Actual 2017 May	Actual 2017 Jun	Actual 2017 Jul	Forecast 2017 Aug	Forecast 2017 Sep	Forecast 2017 Oct	Forecast 2017 Nov	Forecast 2017 Dec	2017 TOTAL
1		32,696	28,351	30,095	26,282	25,999	28,303	27,805	30,389	27,877	28,598	32,699	33,135	352,229
2		17,227	17,498	15,739	16,822	17,365	17,161	19,782						121,594
3		(20,038)	(17,227)	(17,498)	(15,739)	(16,822)	(17,365)	(17,161)						(121,850)
4		29,885	28,622	28,336	27,365	26,542	28,099	30,426	30,389	27,877	28,598	32,699	33,135	351,973
5														
6		45.47	45.47	45.47	45.47	45.47	45.47	45.47	45.47	45.47	45.47	45.47	45.47	45.47
7		2.43	2.43	(1.00)	(1.00)	(1.93)	(3.60)	(3.00)	(4.54)	1.24	1.24	1.24	1.24	1.24
8														
9		\$1,566,138	\$1,358,013	\$1,338,325	\$1,168,761	\$1,131,996	\$1,185,047	\$1,180,878	\$1,243,822	\$1,302,057	\$1,335,732	\$1,527,279	\$1,547,643	\$15,885,691
10		\$825,173	\$778,136	\$699,913	\$732,430	\$727,073	\$728,828	\$809,677	\$0	\$0	\$0	\$0	\$0	\$5,301,230
11		(\$959,820)	(\$825,173)	(\$778,136)	(\$699,913)	(\$727,073)	(\$728,828)	\$0	\$0	\$0	\$0	\$0	\$0	(\$5,451,373)
12		\$1,431,491	\$1,310,976	\$1,260,102	\$1,201,278	\$1,126,639	\$1,186,802	\$1,261,727	\$1,243,822	\$1,302,057	\$1,335,732	\$1,527,279	\$1,547,643	\$15,735,548
13														
14		\$72,162,896	\$81,124,362	\$88,472,560	\$82,641,957	\$97,843,272	\$103,394,268	\$115,155,327	\$125,513,412	\$108,168,460	\$94,689,546	\$93,380,732	\$99,701,859	\$1,162,248,651
15		2,325,108	2,015,426	2,205,528	2,002,239	2,089,484	2,361,287	2,545,465	2,525,511	2,217,411	2,116,216	2,087,574	2,236,580	26,727,830
16		\$31.04	\$40.25	\$40.11	\$41.27	\$46.83	\$43.79	\$45.24	\$49.70	\$48.78	\$44.74	\$44.73	\$44.58	\$44.58
17		1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
18		\$32.28	\$41.86	\$41.72	\$42.93	\$48.70	\$45.54	\$47.05	\$51.69	\$50.73	\$46.53	\$46.52	\$46.36	\$46.36
19														
20		29,885	28,622	28,336	27,365	26,542	28,099	30,426	30,389	27,877	28,598	32,699	33,135	351,973
21		\$964,688	\$1,198,117	\$1,182,178	\$1,174,779	\$1,292,595	\$1,279,628	\$1,431,543	\$1,570,807	\$1,414,200	\$1,330,665	\$1,521,157	\$1,536,139	\$15,896,498
22														
23		\$725,348	\$736,537	\$694,761	\$580,454	\$746,235	\$664,310	\$669,173	\$770,545	\$706,311	\$724,874	\$829,896	\$841,133	\$8,689,577
24		\$1,964,436	\$1,612,147	\$1,542,753	\$1,145,221	\$1,117,653	\$1,488,204	\$1,746,866	\$1,534,459	\$1,365,450	\$1,363,025	\$1,512,077	\$1,486,142	\$17,878,432
25		\$136,989	\$274,980	\$228,984	\$343,977	\$337,862	\$334,131	\$391,211	\$396,684	\$388,549	\$387,859	\$430,273	\$422,893	\$4,074,391
26		\$2,826,773	\$2,623,664	\$2,466,498	\$2,069,653	\$2,201,750	\$2,486,646	\$2,807,250	\$2,701,688	\$2,460,310	\$2,475,758	\$2,772,245	\$2,750,167	\$30,642,401
27														
28		\$466,803	\$112,859	\$77,924	\$26,499	(\$165,956)	(\$92,826)	(\$169,816)	(\$326,985)	(\$112,143)	\$5,067	\$6,122	\$11,504	\$11,504
29		\$123,105	\$589,908	\$702,767	\$780,691	\$807,190	\$641,234	\$548,407	\$378,591	\$51,605	(\$60,538)	(\$55,471)	(\$49,349)	(\$49,349)
30		\$589,908	\$702,767	\$780,691	\$807,190	\$641,234	\$548,407	\$378,591	\$51,605	(\$60,538)	(\$55,471)	(\$49,349)	(\$37,845)	(\$37,845)
31		\$356,507	\$646,338	\$741,729	\$793,941	\$724,212	\$594,820	\$463,499	\$215,098	(\$4,466)	(\$58,004)	(\$52,410)	(\$43,597)	(\$43,597)
32														
33		0.640%	0.610%	0.780%	0.830%	0.840%	1.020%	1.100%	1.100%	1.100%	1.100%	1.100%	1.100%	1.100%
34		10.10%	10.10%	10.10%	10.10%	10.10%	10.10%	10.10%	10.10%	10.10%	10.10%	10.10%	10.10%	10.10%
35		31	28	31	30	31	30	31	31	30	31	30	31	365
36		\$3,058	\$5,008	\$6,363	\$6,591	\$6,212	\$4,938	\$3,976	\$1,845	(\$4)	(\$54)	(\$47)	(\$41)	\$37,845
37		\$3,058	\$8,066	\$14,429	\$21,020	\$27,232	\$32,170	\$36,146	\$37,991	\$37,987	\$37,933	\$37,886	\$37,845	\$37,845
38														
39		\$592,966	\$710,833	\$795,120	\$828,210	\$668,466	\$580,577	\$414,737	\$89,596	(\$22,551)	(\$17,538)	(\$11,463)	\$0	\$0

Upper Michigan Energy Resources Corporation
 WPSC Rate Zone
 Estimated Prior Year's PSCR True-up

Line No.	Actual 2016 Balance	Actual 2017 Jan	Actual 2017 Feb	Actual 2017 Mar	Actual 2017 Apr	Actual 2017 May	Actual 2017 Jun	Actual 2017 Jul	Forecast 2017 Aug	Forecast 2017 Sep	Forecast 2017 Oct	Forecast 2017 Nov	Forecast 2017 Dec	2017 TOTAL
2017 PSCR Reconciliation														
1	Sales Subject to PSCR Billed (Mwh)	23,470	21,862	21,449	21,754	20,633	20,226	21,616	22,018	17,996	20,791	21,301	21,477	254,593
2	Unbilled Sales Subject to PSCR (Mwh)	5,942	5,386	5,367	5,120	4,658	4,582	5,376						36,431
3	Unbilled Prior Month Sales Subject to PSCR (Mwh)	(5,746)	(5,942)	(5,386)	(5,367)	(5,120)	(4,658)	(4,582)						(36,802)
4	Sales Subject to PSCR Calendar (Mwh)	23,666	21,306	21,430	21,507	20,172	20,150	22,409	22,018	17,996	20,791	21,301	21,477	254,223
5														
6	Fuel Base Incl. Losses (Mills/kwh)	40.52	40.52	40.52	40.52	40.52	40.52	40.52	40.52	40.52	40.52	40.52	40.52	40.52
7	PSCR Factor Applied (Mills/kwh)	0.55	0.55	0.00	(4.47)	(4.47)	(4.47)	(4.47)	(4.47)	0.06	0.06	0.06	0.06	0.06
8														
9	PSCR Revenue Billed (\$)	\$963,915	\$897,879	\$869,097	\$784,247	\$743,829	\$729,149	\$779,251	\$793,749	\$730,232	\$843,645	\$864,340	\$871,482	\$9,870,815
10	PSCR Revenue Unbilled Current Month	\$244,042	\$218,244	\$193,493	\$184,568	\$167,931	\$165,186	\$193,797	\$0	\$0	\$0	\$0	\$0	\$1,367,261
11	PSCR Revenue Unbilled Prior Month	(\$235,983)	(\$244,042)	(\$218,244)	(\$193,493)	(\$184,568)	(\$167,931)	(\$165,186)	\$0	\$0	\$0	\$0	\$0	(\$1,409,447)
12	Total PSCR Revenue (\$)	\$971,974	\$872,081	\$844,346	\$775,322	\$727,192	\$726,404	\$807,862	\$793,749	\$730,232	\$843,645	\$864,340	\$871,482	\$9,828,629
13														
14	WPSC PSCR Costs	\$35,594,286	\$36,020,867	\$38,525,731	\$38,784,002	\$40,050,398	\$44,139,262	\$44,086,302	\$46,364,705	\$43,046,812	\$42,480,927	\$41,919,104	\$44,087,915	\$495,100,312
15	WPSC PSCR Requirement Sales	1,108,224	983,073	1,047,549	976,538	999,599	1,092,721	1,200,687	1,174,803	1,079,855	1,034,484	1,023,827	1,087,478	12,808,840
16	WPSC PSCR Cost/Mwh on Requirement Sales	\$32.12	\$36.64	\$36.78	\$39.72	\$40.07	\$40.39	\$36.72	\$39.47	\$39.86	\$41.06	\$40.94	\$40.54	\$40.54
17	WPSC PSCR Loss Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
18	WPSC PSCR Cost/Mwh on Sales	\$32.12	\$36.64	\$36.78	\$39.72	\$40.07	\$40.39	\$36.72	\$39.47	\$39.86	\$41.06	\$40.94	\$40.54	\$40.54
19														
20	UMERC - WPSC Rate Zone Sales (Mwh)	23,666	21,306	21,430	21,507	20,172	20,150	22,409	22,018	17,996	20,791	21,301	21,477	254,223
21	UMERC - WPSC Rate Zone PSCR Costs	\$760,161	\$780,658	\$788,190	\$854,251	\$808,283	\$813,855	\$822,876	\$869,050	\$717,321	\$853,678	\$872,063	\$870,678	\$9,811,065
22														
23	UMERC - WPSC RZ PPA Energy Costs	\$791,229	\$736,537	\$694,396	\$580,182	\$746,009	\$664,037	\$667,777	\$679,902	\$555,705	\$642,013	\$657,762	\$663,196	\$8,078,746
24	UMERC - WPSC RZ PPA Demand Costs	\$493,728	\$522,390	\$567,150	\$557,350	\$477,941	\$731,859	\$503,494	\$615,755	\$542,935	\$520,669	\$531,815	\$515,730	\$6,580,817
25	UMERC - WPSC RZ PPA Transmission Costs	\$64,481	\$207,299	\$237,407	\$245,798	\$229,052	\$239,628	\$258,842	\$300,672	\$265,114	\$254,242	\$259,684	\$251,830	\$2,814,050
26	UMERC - WPSC RZ PPA Total Costs	\$1,349,439	\$1,466,226	\$1,498,953	\$1,383,330	\$1,453,002	\$1,635,524	\$1,430,114	\$1,596,330	\$1,363,754	\$1,416,924	\$1,449,260	\$1,430,757	\$17,473,613
27														
28	Over/(Under) Recovery (\$)	\$211,813	\$91,423	\$56,156	(\$78,929)	(\$81,091)	(\$87,451)	(\$15,014)	(\$75,301)	\$12,911	(\$10,033)	(\$7,723)	\$804	
29	Beginning Recovery Balance (\$)	(\$28,874)	\$182,939	\$274,362	\$330,518	\$251,589	\$170,498	\$83,046	\$68,032	(\$7,270)	\$5,642	(\$4,392)	(\$12,115)	(\$12,115)
30	Ending Recovery Balance (\$)	(\$28,874)	\$182,939	\$274,362	\$330,518	\$251,589	\$170,498	\$83,046	\$68,032	(\$7,270)	\$5,642	(\$4,392)	(\$12,115)	(\$11,310)
31	Average Recovery Balance (\$)	\$77,033	\$228,651	\$302,440	\$291,053	\$211,043	\$126,772	\$75,539	\$30,381	(\$814)	\$625	(\$8,253)	(\$11,712)	
32														
33	Interest Rate Undercollection (%)	0.640%	0.610%	0.780%	0.830%	0.840%	1.020%	1.100%	1.100%	1.100%	1.100%	1.100%	1.100%	1.100%
34	Interest Rate Overcollection (%)	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%
35	Days in Month	31	28	31	30	31	30	31	31	30	31	30	31	365
36	Monthly Interest (\$)	\$667	\$1,789	\$2,620	\$2,440	\$1,828	\$1,063	\$654	\$263	(\$1)	\$5	(\$7)	(\$11)	\$11,310
37	Interest Balance	\$667	\$2,456	\$5,076	\$7,516	\$9,344	\$10,407	\$11,061	\$11,324	\$11,323	\$11,328	\$11,321	\$11,310	
38														
39	Ending Recovery Balance & Interest	\$183,606	\$276,818	\$335,594	\$259,105	\$179,842	\$93,453	\$79,093	\$4,054	\$16,965	\$6,936	(\$794)	(\$0)	

**Upper Michigan Energy Resources Corporation
Purchased Power Agreement Costs by Rate Zone
5 Year Forecast**

	<u>2018</u>	<u>2019*</u>	<u>2020*</u>	<u>2021*</u>	<u>2022*</u>
1 <u>UMERC WEPCO Rate Zone</u>					
2 UMERC WEPCO Rate Zone Energy PPA Costs	\$8,308,617	\$8,351,559	\$8,470,239	\$8,501,764	\$8,604,531
3 UMERC WEPCO Rate Zone Capacity PPA Costs	\$17,295,855	\$17,550,667	\$18,931,907	\$19,668,975	\$20,272,853
4 UMERC WEPCO Rate Zone Transmission PPA Costs	\$4,577,390	\$4,799,562	\$5,030,034	\$5,120,568	\$5,222,584
5					
6 UMERC WEPCO Rate Zone PPA Costs	\$30,181,862	\$30,701,789	\$32,432,180	\$33,291,307	\$34,099,968
7					
8 WEPCO PSCR Costs	\$1,188,947,018	\$1,217,008,885	\$1,275,634,134	\$1,304,938,893	\$1,325,762,118
9 WEPCO System Supplied (Mwhs)	26,798,497	26,654,116	26,583,312	26,349,795	26,086,911
10 WEPCO PSCR Costs on Supplied (\$/Mwh)	\$44.37	\$45.66	\$47.99	\$49.52	\$50.82
11 Loss Factor	1.04	1.04	1.04	1.04	1.04
12 WEPCO PSCR Costs on Sales (\$/Mwh)	\$46.14	\$47.49	\$49.91	\$51.50	\$52.85
13					
14 UMERC WEPCO Rate Zone Sales (Mwhs)	351,856	351,968	353,408	352,137	352,253
15 UMERC WEPCO Rate Zone PSCR PPA Costs	\$16,234,649	\$16,714,940	\$17,638,579	\$18,135,077	\$18,616,592
16 UMERC WEPCO Rate Zone PSCR PPA Costs (\$/Mwh)	\$46.14	\$47.49	\$49.91	\$51.50	\$52.85
17					
18					
19 <u>UMERC WPSC Rate Zone</u>					
20 UMERC WPSC Rate Zone Energy PPA Costs	\$7,550,892	\$7,619,783	\$7,737,117	\$8,060,159	\$8,230,853
21 UMERC WPSC Rate Zone Capacity PPA Costs	\$6,529,900	\$6,860,765	\$7,342,841	\$7,816,767	\$8,175,256
22 UMERC WPSC Rate Zone Transmission PPA Costs	\$3,096,542	\$3,223,939	\$3,369,061	\$3,419,550	\$3,432,130
23					
24 UMERC WPSC Rate Zone PPA Costs	\$17,177,334	\$17,704,486	\$18,449,019	\$19,296,476	\$19,838,239
25					
26 WPSC PSCR Costs	\$493,192,447	\$497,538,496	\$504,957,835	\$522,492,227	\$531,004,400
27 WPSC System Sales (Mwhs)	12,595,410	12,456,472	12,402,034	12,333,656	12,340,534
28 WPSC PSCR Costs on Sales (\$/Mwh)	\$39.16	\$39.94	\$40.72	\$42.36	\$43.03
29					
30 UMERC WPSC Rate Zone Sales (Mwhs)	260,620	260,235	259,723	258,952	258,694
31 UMERC WPSC Rate Zone PSCR PPA Costs	\$10,205,897	\$10,393,793	\$10,575,908	\$10,969,206	\$11,131,610
32 UMERC WPSC Rate Zone PSCR PPA Costs (\$/Mwh)	\$39.16	\$39.94	\$40.72	\$42.36	\$43.03

* Note that this 5 year UMERC PSCR Plan forecast does not consider the potential new generation proposed to be built in Upper Michigan by UMERC in Case No. U-18224.

Upper Michigan Energy Resources Corporation
 Purchased Power Agreement Costs by Rate Zone
 2018 Monthly Forecast

Line No.		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1	UMERC WEPCO Rate Zone													
2	UMERC WEPCO Rate Zone Energy PPA Costs	\$784,612	\$685,773	\$730,835	\$657,200	\$667,742	\$647,100	\$714,315	\$699,170	\$636,224	\$649,471	\$674,023	\$762,154	\$8,308,617
3	UMERC WEPCO Rate Zone Capacity PPA Costs	\$1,739,423	\$1,454,905	\$1,458,086	\$1,283,801	\$1,259,759	\$1,499,176	\$1,531,854	\$1,403,331	\$1,409,178	\$1,273,907	\$1,459,450	\$1,522,987	\$17,295,855
4	UMERC WEPCO Rate Zone Transmission PPA Costs	\$457,823	\$384,929	\$385,744	\$341,093	\$334,933	\$396,272	\$404,643	\$371,716	\$373,214	\$338,558	\$386,094	\$402,372	\$4,577,390
5	UMERC WEPCO Rate Zone PPA Costs	\$2,981,858	\$2,525,608	\$2,574,665	\$2,282,093	\$2,262,433	\$2,542,548	\$2,650,812	\$2,474,216	\$2,418,616	\$2,261,935	\$2,519,566	\$2,687,513	\$30,181,862
6														
7	UMERC WEPCO Rate Zone PSCR PPA Costs (\$/Mwh)	\$46.14	\$46.14	\$46.14	\$46.14	\$46.14	\$46.14	\$46.14	\$46.14	\$46.14	\$46.14	\$46.14	\$46.14	\$46.14
8	UMERC WEPCO Rate Zone Sales (Mwhs)	33,188	28,990	30,899	27,850	28,315	27,435	30,280	29,634	26,956	27,526	28,548	32,235	351,856
9	UMERC WEPCO Rate Zone PSCR PPA Costs	\$1,531,312	\$1,337,620	\$1,425,661	\$1,284,983	\$1,306,432	\$1,265,828	\$1,397,129	\$1,367,311	\$1,243,771	\$1,270,053	\$1,317,213	\$1,487,336	\$16,234,649
10														
11														
12	UMERC WPSC Rate Zone													
13	UMERC WPSC Rate Zone Energy PPA Costs	\$676,604	\$623,471	\$639,977	\$612,986	\$608,336	\$621,432	\$654,909	\$652,275	\$588,382	\$607,842	\$620,770	\$643,910	\$7,550,892
14	UMERC WPSC Rate Zone Capacity PPA Costs	\$580,037	\$561,225	\$543,909	\$530,961	\$503,674	\$599,582	\$652,303	\$605,454	\$506,506	\$483,278	\$463,164	\$499,808	\$6,529,900
15	UMERC WPSC Rate Zone Transmission PPA Costs	\$272,420	\$264,883	\$257,945	\$252,758	\$241,825	\$280,250	\$301,373	\$282,603	\$242,960	\$233,653	\$225,595	\$240,276	\$3,096,542
16	UMERC WPSC Rate Zone PPA Costs	\$1,529,061	\$1,449,580	\$1,441,831	\$1,396,704	\$1,353,835	\$1,501,264	\$1,608,585	\$1,540,332	\$1,337,847	\$1,324,773	\$1,309,530	\$1,383,994	\$17,177,334
17														
18	UMERC WPSC Rate Zone PSCR PPA Costs (\$/Mwh)	\$39.16	\$39.16	\$39.16	\$39.16	\$39.16	\$39.16	\$39.16	\$39.16	\$39.16	\$39.16	\$39.16	\$39.16	\$39.16
19	UMERC WPSC Rate Zone Sales (Mwhs)	23,353	21,519	22,089	21,157	20,997	21,449	22,604	22,513	20,308	20,980	21,426	22,225	260,620
20	UMERC WPSC Rate Zone PSCR PPA Costs	\$914,507	\$842,693	\$865,002	\$828,521	\$822,236	\$839,937	\$885,184	\$881,624	\$795,265	\$821,568	\$839,042	\$870,318	\$10,205,897

Upper Michigan Energy Resources Corporation
Power Supply Costs
PSCR Plan Cost Comparison

Line No.		2017	2018	
		PSCR	PSCR	
		<u>Plan</u>	<u>Plan</u>	<u>Difference</u>
1	<u>UMERC WEPCO Rate Zone</u>			
2	WEPCO Rate Zone PPA Energy Costs	\$9,253,454	\$8,308,617	(\$944,837)
3	WEPCO Rate Zone PPA Demand Costs	\$17,614,494	\$17,295,855	(\$318,639)
4	WEPCO Rate Zone PPA Transmission Costs	\$5,012,336	\$4,577,390	(\$434,946)
5	WEPCO Rate Zone PPA Total Costs	\$31,880,285	\$30,181,862	(\$1,698,422)
6				
7	WEPCO Rate Zone PSCR Costs	\$17,383,102	\$16,234,649	(\$1,148,452)
8	WEPCO Rate Zone Mwh	362,904	351,856	(11,048)
9	WEPCO Rate Zone PSCR Cost \$/Mwh	\$47.90	\$46.14	(\$1.76)
10				
11	<u>UMERC WPSC Rate Zone</u>			
12	WPSC Rate Zone PPA Energy Costs	\$7,833,296	\$7,550,892	(\$282,404)
13	WPSC Rate Zone PPA Demand Costs	\$6,881,752	\$6,529,900	(\$351,852)
14	WPSC Rate Zone PPA Transmission Costs	\$3,360,345	\$3,096,542	(\$263,803)
15	WPSC Rate Zone PPA Total Costs	\$18,075,393	\$17,177,334	(\$898,059)
16				
17	WPSC Rate Zone PSCR Costs	\$10,418,391	\$10,205,897	(\$212,494)
18	WPSC Rate Zone Mwh	253,674	260,620	6,946
19	WPSC Rate Zone PSCR Cost \$/Mwh	\$41.07	\$39.16	(\$1.91)

M.P.S.C. No. 1 – Electric
 Upper Michigan Energy Resources Corporation

WEPCo Rate Zone
 Twelfth Revised Sheet No. D-3.00
 Replaces Eleventh Revised Sheet No. D-3.00

POWER SUPPLY COST RECOVERY

PSCR FACTORS

All rates for metered electric service shall include an amount up to the Power Supply Cost Recovery (PSCR) Factor for the specified billing period as set forth below. The PSCR Factor includes an increase or decrease of 0.0104 mills per kWh for each full 0.01 mill increase or decrease in the projected annual power supply costs above or below a cost base of 45.47 mills per kWh, rounded to the nearest one-hundredth of a mill per kWh. The projected power supply costs per kWh shall equal the total projected annual net power cost divided by the projected annual net system energy requirements. Net system energy requirements shall be the sum of net generation and net purchased and interchange power.

An amount not exceeding the PSCR Factor for each month shall be placed into effect in the first billing cycle of that month and shall continue in effect until the first billing cycle of a subsequent month for which a subsequent PSCR Factor becomes operative.

The PSCR Factor shall be applicable to all Power Supply charges for the following Rate Schedules:

<u>Class of Service</u>	<u>Rate Schedule No.</u>
Residential	Rg 1 and Rg 2
General Secondary	Cg 1, Cg 2, Cg 3, Cg3C, Cg 5, TssM and TssU
General Primary	Cp 1, Cp 2, Cp 3, Cp 4, Schedule A & Cp LC
Lighting	Ms2, Ms3, GL1, LED1
Other	Mg 1, DS 1
ERER 1, ERER 3	
100% Renewable power	No adjustment for PSCR
50% Renewable power	(1-.50) x PSCR factor applicable to rate schedule customer is served under. Customer pays 50% of PSCR factor.
25% Renewable power	(1-.25) x PSCR factor applicable to rate schedule customer is served under. Customer pays 75% of PSCR factor.
ERER 2	
Kilowatt-hour in excess of nominated block	PSCR factor applicable to rate schedule customer is served under.
Customer Generating System	CGS Category 1, CGS Category 2, CGS Biogas

Power Supply Cost Recovery Factors

<u>Billing Month</u>	<u>2018 Plan Year PSCR Factor \$/kWh</u>	<u>Prior Period PSCR Reconciliation Factor \$/kWh</u>	<u>Maximum 2018 PSCR Factor \$/kWh</u>	<u>Actual Factor Billed \$/kWh</u>
Jan 2018	\$0.00067	\$0.00000	\$0.00067	
Feb 2018	\$0.00067	\$0.00000	\$0.00067	
Mar 2018	\$0.00067	\$0.00000	\$0.00067	
Apr 2018	\$0.00067	\$0.00000	\$0.00067	
May 2018	\$0.00067	\$0.00000	\$0.00067	
Jun 2018	\$0.00067	\$0.00000	\$0.00067	
Jul 2018	\$0.00067	\$0.00000	\$0.00067	
Aug 2018	\$0.00067	\$0.00000	\$0.00067	
Sep 2018	\$0.00067	\$0.00000	\$0.00067	
Oct 2018	\$0.00067	\$0.00000	\$0.00067	
Nov 2018	\$0.00067	\$0.00000	\$0.00067	
Dec 2018	\$0.00067	\$0.00000	\$0.00067	

Parentheses indicate a credit factor. Should the Company apply lesser factors than those above or if the factors are later revised pursuant to commission orders or 1982 PA 304, the Company will notify the commission if necessary and file a revision of the above list.

(Continued on Sheet No. D-4.00)

Issued December 15, 2017
 T. T. Eidukas
 Vice-President,
 Milwaukee, Wisconsin

Effective for bills rendered for
 the 2018 Plan year

Issued under authority of the
 Section 6j(9) of 1982 PA304
 For self-implementing
 in Case No. U-18408

M.P.S.C. No. 1 – Electric
 Upper Michigan Energy Resources Corporation

Wpsc Rate Zone
 Twelfth Revised Sheet No. D-100.00
 Replaces Eleventh Revised Sheet No. D-100.00

**SECTION D – Wpsc RATE ZONE
 RATE SCHEDULES**

D1. POWER SUPPLY COST RECOVERY

PSCRM

1. PSCR FACTORS

All rates for metered electric Power Supply service shall include an amount up to the Power Supply Cost Recovery Factor (the PSCR Factor) for the specified billing period as set forth below. The PSCR Factor for the period covered shall consist of an increase or decrease of .010276 mills per kwh for each full .01 mill per kwh increase or decrease in power supply costs above or below a base cost of 39.43 mills per kwh rounded to the nearest .01 mills per kwh. The projected power supply and transmission service costs per kwh shall equal the total projected net power costs in that month divided by that month's net system kwh requirements. MPSC Order dated April 23, 2015 in Case No. U-17669 established the PSCR base and loss factor effective for service on and after the beginning of the first business month following April 23, 2015, on a bill rendered basis.

An amount not exceeding the PSCR Factor for each month shall be placed into effect in the first billing cycle of that monthly billing period and shall continue in effect until the first billing cycle of a subsequent month for which a subsequent PSCR Factor becomes operative. This procedure shall apply to the following rate schedules:

<u>Class of Service</u>	<u>Schedule No.</u>
Residential	Rg-1M, RG-OTOUM
Commercial & Industrial	Cg-1M, Cg-3M, Cg-OTOUM, Cp-1M
Other	Mp-1M

Power Supply Cost Recovery Factors

<u>Billing Month</u>	<u>2018 Plan Year PSCR Factor \$/kWh</u>	<u>Prior Period PSCR Reconciliation Factor \$/kWh</u>	<u>Maximum 2018 PSCR Factor \$/kWh</u>	<u>Actual Factor Billed \$/kWh</u>
Jan 2018	(\$0.00136)	\$0.00000	(\$0.00136)	
Feb 2018	(\$0.00136)	\$0.00000	(\$0.00136)	
Mar 2018	(\$0.00136)	\$0.00000	(\$0.00136)	
Apr 2018	(\$0.00136)	\$0.00000	(\$0.00136)	
May 2018	(\$0.00136)	\$0.00000	(\$0.00136)	
Jun 2018	(\$0.00136)	\$0.00000	(\$0.00136)	
Jul 2018	(\$0.00136)	\$0.00000	(\$0.00136)	
Aug 2018	(\$0.00136)	\$0.00000	(\$0.00136)	
Sep 2018	(\$0.00136)	\$0.00000	(\$0.00136)	
Oct 2018	(\$0.00136)	\$0.00000	(\$0.00136)	
Nov 2018	(\$0.00136)	\$0.00000	(\$0.00136)	
Dec 2018	(\$0.00136)	\$0.00000	(\$0.00136)	

Parentheses indicate a credit factor.

(Continued on Sheet No. D-101.00)

Issued December 15, 2017
 T. T. Eidukas
 Vice-President,
 Milwaukee, Wisconsin

Effective for bills rendered for
 the 2018 Plan year

Issued under authority of the
 Section 6j(9) of 1982 PA304
 For self-implementing
 in Case No. U-18408

MICHIGAN DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
PUBLIC SERVICE COMMISSION

ENTRY OF APPEARANCE IN AN ADMINISTRATIVE HEARING

This form is issued as provided for by 1939 PA 3, as amended, and by 1933 PA 254, as amended. The filing of this form, or an acceptable alternative, is necessary to ensure subsequent service of any hearing notices, Commission orders, and related hearing documents.

General Instructions:

Type or print legibly in ink. For assistance or clarification, please contact the Public Service Commission at (517) 284-8090.

*Please Note: The Commission will provide **electronic** service of documents to all parties in this proceeding.*

THIS APPEARANCE TO BE ENTERED IN ASSOCIATION WITH THE ADMINISTRATIVE HEARING:

Case / Company Name: Upper Michigan Energy Resources Corporation Docket No. U-18408

Please enter my appearance in the above-entitled matter on behalf of:

1. (Name) Upper Michigan Energy Resources Corporation
2. (Name)
3. (Name)
4. (Name)
5. (Name)
6. (Name)
7. (Name)

Name Michael C. Rampe
Address One Michigan Avenue, Ste. 900

City Lansing State MI
Zip 48933 Phone (517) 483-4941
Email rampe@millercanfield.com
Date September 29, 2017

<input type="checkbox"/> I am not an attorney
<input checked="" type="checkbox"/> I am an attorney whose:
Michigan Bar # is P- <u>58189</u>
_____ Bar # is: _____
(state)

Signature: _____