

Founded in 1852
by Sidney Davy Miller

MILLER CANFIELD

Sherri A. Wellman
TEL +1.517.483.4954
FAX +1.517.374.6304
E-MAIL Wellmans@MillerCanfield.com

Miller, Canfield, Paddock and Stone, P.L.C.
120 N. Washington Square, Suite 900
One Michigan Avenue Building
Lansing, Michigan 48933
TEL (517) 487-2070
FAX (517) 374-6304
millercanfield.com

MICHIGAN
ILLINOIS
NEW YORK
OHIO
WASHINGTON, D.C.
CALIFORNIA
CANADA
CHINA
MEXICO
POLAND
QATAR

March 31, 2022

Ms. Lisa Felice
Executive Secretary
Michigan Public Service Commission
7109 W. Saginaw Hwy.
Lansing, MI 48917

Re: Upper Michigan Energy Resources Corporation
2021 PSCR Reconciliation
Case No. U-20809

Dear Ms. Felice:

Enclosed for electronic filing in the above case please find Upper Michigan Energy Resources Corporation's Application and the supporting Direct Testimony and Exhibit of James M. Beyer. Also included is my Appearance.

Should you have any questions, please contact me.

Very truly yours,

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

By: _____
Sherri A. Wellman

SAW:ehk
Enclosures
cc w/enc: Richard Stasik
Ted Eidukas
Koby Bailey
Jim Beyer

38747696.2/156197.00047

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * * *

In the matter of the application of UPPER MICHIGAN)	
ENERGY RESOURCES CORPORATION for)	Case No. U-20809
reconciliation of its power supply cost recovery plan)	
<u>for the 12-month period ended December 31, 2021.</u>)	

APPLICATION

UPPER MICHIGAN ENERGY RESOURCES CORPORATION (“UMERC”) requests the Michigan Public Service Commission (“MPSC” or the “Commission”) to approve the reconciliation of UMERC’s power supply costs and revenues pursuant to 1982 PA 304 (“Act 304”) for the 12-month period January 2021 through December 2021, and represents to the Commission as follows:

1. UMERC is a public service corporation organized under the laws of Michigan with its principal offices located in Milwaukee, Wisconsin, and with service centers located at 800 Industrial Park Drive, Iron Mountain, Michigan, and 1717 Tenth Avenue, Menominee, Michigan. For the 2021 Power Supply Cost Recovery (“PSCR”) Plan year, UMERC provided retail electric service to the public in service areas located in the Upper Peninsula, including the counties of Alger, Baraga, Delta, Dickinson, Gogebic, Houghton, Iron, Marquette, Menominee, and Ontonagon.

2. On January 1, 2017, pursuant to a Settlement Agreement approved by the Commission on December 9, 2016 in Case No. U-18061 (“U-18061 Settlement Agreement”), UMERC was established as a Michigan regulated utility providing service only to electric and natural gas customers in the Upper Peninsula of Michigan.

3. UMERC's retail electric business in Michigan is subject to the Commission's jurisdiction 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.*

4. Incorporated in UMERC's rate schedules are PSCR clauses as authorized by the Commission in Case No. U-18061.

5. For the WEPCo Rate Zone, the 12-month reconciliation of UMERC's power supply costs and revenues for 2021 results in a cumulative under-recovery of \$4,743,197 inclusive of an interest amount of \$1,476. UMERC's WEPCo Rate Zone 2020 PSCR reconciliation approved in Case No. U-20534 reflected an under-recovery of \$157,173. The 2021 total cumulative under-recovery of \$4,743,197 includes the roll-in of the 2020 under-recovery, and UMERC requests approval to roll the 2021 cumulative under-recovery into its WEPCo Rate Zone 2022 PSCR reconciliation beginning balance.

6. For the WPSC Rate Zone, the 12-month reconciliation of UMERC's power supply costs and revenues for 2021 result in a net cumulative under-recovery of \$3,419,108 inclusive of an interest amount of \$578. UMERC's WPSC Rate Zone 2020 approved in Case No. U-20534 was an over-recovery amount of \$92,079. The 2021 net cumulative under-recovery of \$3,419,108 includes the roll-in of the 2020 over-recovery, and UMERC requests approval to roll the 2021 net cumulative under-recovery into its WPSC Rate Zone 2022 PSCR reconciliation beginning balance.

7. The testimony and exhibits of James M. Beyer are filed in support of this Application. UMERC represents that its proposals are just and reasonable and in the public interest.

WHEREFORE, Upper Michigan Energy Resources Corporation requests that this Commission:

A. Approve the reconciliation of UMERC's 12-month power supply costs and revenues as presented by UMERC;

B. Find and determine that the power supply costs incurred by UMERC during 2021, as included in this reconciliation, were reasonably and prudently incurred;

C. Find and determine that UMERC's total cumulative under-recovery of \$4,743,197, as of December 31, 2021, for its WEPCo Rate Zone, should be rolled into the beginning balance of its 2022 PSCR reconciliation for its WEPCo Rate Zone;

D. Find and determine that UMERC's net cumulative under-recovery of \$3,419,108, as of December 31, 2021, for its WPSC Rate Zone, should be rolled into the beginning balance of its 2022 PSCR reconciliation for its WPSC Rate Zone; and

E. Grant UMERC such other and additional relief as shall be lawful and proper.

Respectfully submitted,

UPPER MICHIGAN ENERGY RESOURCES
CORPORATION

Dated: March 31, 2022

By: _____

One of its Attorneys
Sherri A. Wellman (P38989)
Paul M. Collins (P69719)
MILLER, CANFIELD, PADDOCK
AND STONE, P.L.C.
One Michigan Avenue, Suite 900
Lansing, MI 48933
(517) 487-2070

38725616.1/156197.00001

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of)
UPPER MICHIGAN ENERGY RESOURCES)
CORPORATION for reconciliation of its power supply)
cost recovery plan for the 12-months)
ended December 31, 2021.)

Case No. U-20809

DIRECT TESTIMONY AND EXHIBIT OF

JAMES M. BEYER

ON BEHALF OF

UPPER MICHIGAN ENERGY RESOURCES CORPORATION

March 2022

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

2 A. My name is James M. Beyer. My business address is WEC Energy Group (“WEC”), 2830
3 South Ashland Avenue, Green Bay, WI 54304. I am a Project Specialist in the State
4 Regulatory Affairs Department of WEC. Upper Michigan Energy Resources Corporation
5 (“UMERC” or the “Company”) is a wholly owned subsidiary of WEC.

6
7 **Q. Please describe briefly your education, professional, and utility background.**

8 A. I graduated from Northern Michigan University, Marquette, Michigan, with a Bachelor of
9 Science Degree in Accounting in 2002; and from Lakeland College, Sheboygan,
10 Wisconsin, with a Master of Business Administration (“MBA”) degree in 2006. I have
11 been employed by WEC and its predecessors, first as a Pricing Analyst and currently as a
12 Project Specialist since 2004. In that position, I perform and am otherwise involved in rate
13 related studies, service and tariff administration, financial analyses, and rate development
14 and administration.

15
16 **Q. Have you testified before a regulatory agency?**

17 A. Yes. I have testified before the Public Service Commission of Wisconsin (“PSCW”) and
18 the Michigan Public Service Commission (“MPSC” or the “Commission”).

19
20 **Q. Please describe UMERC.**

21 A. UMERC is a Michigan jurisdictional regulated utility authorized to serve the former
22 Michigan electric customers of Wisconsin Electric Power Company (“WEPCO”) and
23 Wisconsin Public Service Corporation (“WPS Corp”) and the former Michigan natural gas

1 customers of WPS Corp. Michigan approvals for UMERC to provide retail electric and
2 natural gas service in the state of Michigan were granted by the Commission in its
3 December 9, 2016 Order in Case No. U-18061. The approvals granted in Case No. U-
4 18061 included, but were not limited to the, (i) transfer of the electric distribution assets
5 of WEPCO and WPS Corp used for providing retail electric service in Michigan, (ii) (at
6 least initially, with the exception of the Tilden Mining Company, L.C. (“Tilden”) and
7 Empire Iron Mining Partnership (collectively the “Mines”)) transfer of WEPCO’s and
8 WPS Corp’s Michigan retail tariff electric customers to UMERC, (iii) assumption of
9 WEPCO’s and WPS Corp’s PSCR clauses, and (iv) authority to provide electric service
10 under the current rates, terms, and conditions of service set forth in WEPCO’s and WPS
11 Corp’s Michigan electric tariff books.

12
13 **Q. What happened with the Mines’ load upon UMERC’s completion of the Upper**
14 **Peninsula (“UP”) generation solution?**

15 A. Consistent with the U-18061 Settlement Agreement, WEPCO continued to serve the
16 Mines until UMERC’s completion of the UP generation solution on March 31, 2019, and
17 the corresponding termination of both of the 2015-2020 Large Curtailable Special
18 Contracts between WEPCO and the Mines that were approved by the Commission’s
19 April 23, 2015 Order in Case No. U-17862 (“Mines’ Special Contracts”). Once those
20 events occurred, the Mines transferred to, and became customers of, UMERC. In a
21 signed letter appended as Attachment B to WEPCO’s September 1, 2016 Application
22 Requesting Approval of Amendment in Case No., U-17862, WEPCO and Empire agreed
23 that Empire’s special contract would terminate no later than October 15, 2016. The

1 Commission approved the termination letter in its December 9, 2016 Order in Case No.
2 U-17862. Therefore, upon the transfer of Tilden to UMERC, service has been pursuant to
3 a Special Contract between UMERC and Tilden, which was approved by the MPSC on
4 October 25, 2017, in Case No. U-18224. As I discuss later, Tilden is not a PSCR
5 customer.

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

8 A. The purpose of my testimony is to support the reconciliation of UMERC's actual power
9 supply costs to the revenues it collected pursuant to its authorized base rates and PSCR
10 factors for the 12-month period ended December 31, 2021.

11
12 **Q. What PSCR bases and loss factors were used for determining PSCR cost recovery for
13 the WEPCO and WPSC Rate Zones in 2021?**

14 A. As part of the approvals sought in Case No. U-18061, the PSCR clauses of WEPCO and
15 WPS Corp were transferred to UMERC. As such, this 2021 PSCR reconciliation filing
16 reflects that UMERC recovered PSCR costs via separate PSCR clauses for the customers
17 of the WEPCo Rate Zone and WPSC Rate Zone. Thus, each rate zone had its own PSCR
18 base and factor. The WEPCo Rate Zone reflected the current loss factor of 1.04 and the
19 PSCR base of \$45.47 per MWh, and the WPSC Rate Zone reflected the current loss factor
20 of 1.0276 and the PSCR base of \$40.52 per MWh. This filing reconciles 2021 PSCR
21 revenues and costs for each Rate Zone.

22
23 **UMERC POWER SUPPLY**

1 **Q. How does UMERC meet its customers' power supply and transmission service**
2 **requirements?**

3 A. The Company owns generation, participates in the Midcontinent Independent System
4 Operator, Inc. ("MISO") Market, receives transmission services from the American
5 Transmission Company LLC ("ATC") and purchases power from customer owned
6 generation to meet its customers' power supply and transmission service requirements.

7
8 **Q. Please describe UMERC's owned generation currently operating in the UP.**

9 A. As part of the UP generating solution, UMERC installed reciprocating natural gas-fueled
10 internal combustion engines ("RICE") at the following two facilities in the UP: (i) the
11 Kuester Power Plant, with seven generators, each with a capacity of approximately 18
12 MW, and (ii) the Mihm Power Plant, with three generators, each with a capacity of
13 approximately 18 MW.

14
15 **Q. How is UMERC recovering the PSCR costs related to its RICE generation, and its**
16 **participation in the MISO Market and the ATC for power supply and transmission**
17 **services?**

18 A. As is typical, fuel costs relating to the RICE generation, costs for participation in the MISO,
19 and transmission costs relating to ATC are being recovered from the WEPCO Rate Zone
20 and WPSC Rate Zone customers via the PSCR mechanism. Additionally, as a customer
21 of the Company, Tilden is paying UMERC for fuel costs to operate the RICE units for its
22 load, purchases and sales of power from MISO for its load, and transmission costs for
23 transmission services for its load, pursuant to the terms of the approved Tilden Special

1 Contract. UMERC credits the monthly revenues received from Tilden for energy and
2 transmission to the total UMERC PSCR fuel, purchased power, MISO and ATC costs.

3
4 The total UMERC generated and purchased MWh is also reduced by the Tilden load
5 requirements, resulting in the UMERC WEPCo and WPSC Rate Zones load requirements
6 excluding Tilden. The PSCR cost per MWh are determined by dividing the remaining
7 PSCR cost by the UMERC WEPCo and WPSC Rate Zone load requirements excluding
8 Tilden. Both Rate Zones are charged the same PSCR cost per MWh. However, as
9 discussed earlier, for the retail WEPCo Rate Zone the loss factor of 1.04 is being applied
10 to the PSCR cost per MWh to determine the UMERC PSCR system costs assigned to the
11 WEPCo Rate Zone sales. For the WPSC Rate Zone, the loss factor of 1.0276 is being
12 applied to the PSCR cost per MWh to determine the UMERC PSCR system costs assigned
13 to the WPSC Rate Zone sales.

14
15 **Q. Did any of the generating units at the Kuester or Mihm power plants experience**
16 **outages during 2021 lasting more than 90 days?**

17 A. Yes. Mihm Unit No. 1 (“M1”) had a planned maintenance outage August 30, 2021 through
18 September 1, 2021, which was extended to December 9, 2021. The planned maintenance
19 outage included the following (i) 14,000 hour maintenance interval work and (ii) start air
20 valve rebuild. Inspection of all 18 cylinder heads on the engine revealed excessive
21 recession in exhaust valves which required repair prior to returning the engine to
22 service. Repairs involved removing cylinder heads from the engine and shipping off site
23 for repair by a qualified vendor. Due to post-COVID supply chains issues including:

1 availability of parts, extended shipping times and balancing similar repairs throughout the
2 UMERC engine fleet M1's outage was extended until sufficient repaired parts were
3 available. Valve recession is expected to occur around 30,000 engine operating hours, but
4 due to a yet to be determined reason the wear started in the UMERC fleet around 14,000
5 engine operation hours.

6
7 **Q. Can you provide any further detail regarding the extended outage?**

8 A. Yes. The main reason for the M1 extended outage was insufficient replacement components
9 due to premature required maintenance on the exhaust valve and exhaust valve
10 seats. Wartsila, the RICE engine fabricator, prescribes routine maintenance on the exhaust
11 valve/seat at 30,000 operating hours, but due to excessive recession (wear between valve and
12 seat) UMERC performed this maintenance starting at about 14,000 operating hours. This
13 recession issue was unknown to UMERC until a routine inspection of Kuester Unit 2
14 performed on August 4, 2021 revealed 12 of the 18 cylinders had wear and one required
15 replacement prior to returning the engine to service. Initial inspections for all UMERC
16 Mihm engines were as follows:

17

Engine	Original Inspection Date	Engine Hours	Cylinders with Wear	Cylinders Replaced
M3	8/16/2021	14,220	0	0
M1	8/30/2021	14,223	16	18
M2	9/1/2021	13,907	13	6

18
19 The exhaust seat and valve require replacement to repair, and the only way to perform this
20 repair is to replace the entire cylinder head. Specialized tools, skills and spare parts are

1 required. U MERC does not have the ability to perform this work on site. Therefore, cylinder
2 heads are shipped to a qualified repair facility and are returned in about four weeks. U MERC
3 had 3 spare cylinder heads available when this issue was discovered, it became readily
4 apparent that multiple engines would be in extended outages while waiting for cylinder heads
5 to be repaired. U MERC evaluated options to reduce outage times and determined that the
6 least impactful approach was to purchase a complete set of new cylinder heads (18 total) and
7 remove all 18 cylinder heads from M1. Wartsila had sufficient new cylinder heads available
8 for purchase and U MERC had plans to purchase 18 new heads to support the upcoming
9 30,000 operating hour maintenance. Removing all 18 cylinder heads on M1 allowed some
10 to be transferred to M2 which enabled that engine to be returned to service quickly. A total
11 of 18 cylinder heads (the combination of heads from M1 and M2) were shipped off-site for
12 repairs and were returned to the site about four weeks later. M1 was returned to service on
13 12/9/2021 after 18 cylinder heads were available for installation. Balancing cylinder head
14 repairs and engine availability in the fleet was a challenge and the main reason for the
15 extended outage on M1.

16
17 **Q. Was the outage at Mihm Unit No. 1 caused or prolonged by the utility's negligence or**
18 **by unreasonable or imprudence?**

19 A. No. As stated, the cylinder wear was unexpected and was of such a nature that replacement
20 was required. Management and maintenance acted with the upmost speed to mediate,
21 given supply-chain related delays, the situation and return the unit to service as soon as
22 safely possible.

23

1 **Q. Did UMERC suspend operations of Kuester and/or Mihm for economic reasons in**
2 **2021?**

3 A. No. UMERC did not suspend operations of either plant due to economic reasons in 2021.
4

5 **Q. Do the costs in this reconciliation include Northern Natural Gas Pipeline (“NNG”)**
6 **reservation fees and transportation charges for transporting natural gas to the**
7 **Kuester and Mihm power plants?**

8 A. Yes. The Company has firm transportation contracts with NNG with a daily capacity of
9 24,610 Dth and a reservation rate of \$0.48/dth/day. The firm transportation contracts are
10 for a 20 year term and began on November 1, 2019. These contracts were approved by
11 FERC and include reservation fees and a NNG approved tariff gas transportation rate. The
12 total pipeline reservation fees were \$4.3 million and the gas transportation fees were about
13 \$140,000 for 2021.
14

15 **Q. Please explain why the Company contracts for firm transport from the pipelines.**

16 A. The interstate pipelines serving the UMERC area have much of their firm transportation
17 capacity sold and allocated to the various shippers for multiple years. During severe or
18 colder-than-normal weather consumption increases dramatically for many and it is likely
19 that contracted firm transportation capacity could be fully utilized. Unlike firm
20 transportation, released capacity or interruptible capacity is typically subject to recall under
21 such conditions, therefore any supplier relying on interruptible or released capacity would
22 likely be unable to deliver its supply to the Company’s service territory. The Company
23 secures firm transportation capacity to provide reliable transportation of supply, rather than

1 relying on interruptible or released capacity, which may potentially be lower priced but
2 which also carries the risk of being unavailable when it is most needed.

3
4 **Q. Please describe the Company's pipeline balancing services.**

5 A. The Company has contracted for balancing services for about 4,000 Dth/day with NNG.
6 UMERC's balancing fees for 2021 were approximately \$154,000.

7
8 **Q. Did UMERC incur any demurrage or penalty charges during the reconciliation
9 period?**

10 A. No.

11
12 **Q. Describe UMERC's natural gas fuel purchases.**

13 A. UMERC employed a mix of supply terms for natural gas fuel purchases: (1) term supplies,
14 which were supplies for longer than one month, (2) first of the month ("FOM") base-load
15 supplies and (3) daily purchases.

16
17 **Q. Has UMERC included cost associated with a risk management plan and if so, what is
18 the amount of gas risk management transaction costs included in this reconciliation?**

19 A. No. UMERC did not hedge natural gas costs because Tilden was responsible for most of the
20 cost of natural gas used as fuel for the RICE units.

21
22 **Q. Please describe MISO charges and payments for this reconciliation.**

1 A. For 2021, UMERC had MISO energy purchases of 1,207,344 MWh for \$48 million and
2 incurred MISO Market other charges and credits as follows:

Net Revenue Sufficiency Guarantee	\$68,290
Net Congestion Expense / (Revenue)	(\$1,604,300)
Net Losses Expense / (Revenue)	(\$1,283,839)
ASM Charges	\$250,828
<hr/>	
Total MISO Market Other Charges & Credits	(\$2,569,022)

4

5 **Q. Are you sponsoring any exhibits?**

6 A. Yes, I am sponsoring Exhibit A-1 (JMB-1) consisting of three pages.

7

8 **Q. Was Exhibit A-1 (JMB-1) prepared by you?**

9 A. Yes, it was.

10

11 **Q. Please describe Exhibit A-1 (JMB-1).**

12 A. Exhibit A-1 (JMB-1) details the UMERC 2021 WEPCo Rate Zone and WPSC Rate Zone
13 PSCR reconciliations, including interest calculations. Page 1 compares the 2021 actual
14 PSCR costs with the projected PSCR costs as approved in the Commission's March 19,
15 2021 Order Approving Settlement Agreement in the 2021 PSCR Plan in Case No. U-
16 20808. Page 2 details the calculation of PSCR revenues as well as PSCR costs, interest,
17 and over/(under) recovery for the months of January through December 2021, resulting in
18 a net under-recovery of \$4,743,197 in the WEPCo Rate Zone and an under-recovery of
19 \$3,419,108 in the WPSC Rate Zone for the reconciliation period. Page 3 details the
20 UMERC RICE generation dispatch, the MISO Market purchases and opportunity sales
21 (which include sales to Tilden), and the related PSCR system costs and MWh by month for

1 2021, and the determination of the Rate Zone power supply costs based on the cost per
2 MWh of the monthly power supply sources.

3
4 **Q. Please describe what “Purchased Power Agreements” is at line 8 on page 3 of Exhibit
5 A-1 (JMB-1).**

6 A. Purchased Power Agreements are purchased power charges and credits received by UMERC
7 under the WEPCO and WPS Corp PPAs related to true-ups of prior year capacity and
8 energy charges.

9
10 **Q. Please describe what “Other Purchased Power” is at line 9 on page 3 of Exhibit A-1
11 (JMB-1).**

12 A. Other Purchased Power includes costs for purchases of power from customer owned
13 generation.

14
15 **Q. Please describe the “Economic Buyouts” that appear on page 3, line 12 of Exhibit A-1
16 (JMB-1).**

17 A. The UMERC-WPSC Rate Zone has an electric interruptible program for its Large
18 Commercial and Industrial customers, which allows the Company to interrupt service for
19 two types of electric system conditions. The first condition is known as emergency
20 interruption, and occurs when system demand, required operating reserves and firm
21 transaction sales cannot be supplied by available generating capacity plus purchased
22 energy. Customers are required to interrupt load during emergency interruptions. The
23 second condition is known as "economic interruption" and occurs when purchased energy

1 is available but at a market price higher than the cost of typical peaking generation. When
2 an economic interruption is declared, the customer is required to reduce load to its firm
3 nomination, or the customer may choose to "buyout" of the interruption and continue to
4 purchase energy above its firm nomination, with the "buyout" energy being priced at the
5 higher market price. The intent of the buyout provision is to allow the interruptible
6 customers the option of purchasing the higher cost power.

7 Consistent with the UMER-C-WPSC interruptible tariffs, the Company declared several
8 economic interruptions and, as a result, recorded buyout volumes of 1,729 MWhs and
9 related revenues of \$202,047 in 2021. Because the cost of purchasing energy to supply
10 these sales was included in purchased power costs, the total revenues received from the
11 buyout sales have been credited to the 2021 PSCR costs and the buyout volumes have been
12 removed from the PSCR requirement sales as non-firm sales.

13
14 **Q. Please describe the "Opportunity Sales and Mines Revenues" that appear on page 3,
15 line 13 of Exhibit A-1 (JMB-1).**

16 A. As described previously, UMER-C credits the monthly revenues received from Tilden for
17 energy and transmission to the UMER-C PSCR fuel, purchased power, MISO and ATC
18 costs. Page 3, line 13 of Exhibit A-1 (JMB-1) includes these PSCR related revenues from
19 Tilden, as well as any opportunity sales revenue received by UMER-C for sales of energy
20 and related ancillary services to the MISO Market.

1 **Q. Is UMERC’s 2021 beginning over/(under) recovery balance for the WEPCo Rate**
2 **Zone the same as the as-settled amount in the 2020 PSCR Reconciliation in Case No.**
3 **U-20534?**

4 A. Yes. The 2020 PSCR Reconciliation under-recovery amount of \$157,173, shown as the
5 beginning over/(under) recovery balance for 2021, on Page 2, line 23, is the amount
6 approved for the UMERC WEPCo Rate Zone in the 2020 PSCR Reconciliation in Case
7 No. U-20534.

8

9 **Q. Is UMERC’s 2021 beginning over/(under) recovery balance for the WPSC Rate Zone**
10 **the same as the as-settled amount in the 2020 PSCR Reconciliation in Case No. U-**
11 **20534?**

12 A. Yes. The 2020 PSCR Reconciliation over-recovery amount of \$92,079, shown as the
13 beginning over/(under) recovery balance for 2021, on Page 2, line 57, is the amount
14 approved for the UMERC WPSC Rate Zone in the 2020 PSCR Reconciliation in Case No.
15 U-20534.

16

17 **Q. Please describe in more detail the under-recoveries experienced by UMERC in the**
18 **WEPCo and WPS Rate Zones for the 12-month period ending December 31, 2021.**

19 A. In February 2021 most of the United States experienced extreme cold weather. This cold
20 weather resulted in natural gas supply disruptions in key portions of the continental United
21 States – particularly in Oklahoma and Texas simultaneously with higher demand for
22 natural gas, causing an unprecedented spike in daily natural gas prices. This extreme
23 weather event also resulted in the inability of some gas pipeline companies to deliver

1 sufficient gas to operate gas fired generation, which gave rise to the operation of other
2 higher cost generation in the MISO Market to meet electric customer demand. The
3 combination of high fuel costs for gas fired generation and the operation of other higher
4 cost generation, resulted in high Locational Marginal Prices in the MISO Market.

5 Another contributing factor regarding the under-recoveries were the wild fires out West.
6 The wild fires put pressure on coal deliveries, resulting in coal conservation, which in turn
7 drove up LMPs in the summer of 2021. The high natural gas prices and LMPs continued
8 throughout 2021. As stated above, Page 2 of Exhibit A-1 (JMB-1) details the over/under-
9 recovery balance by month as well as the monthly interest calculation for the reconciliation
10 period. Interest is calculated on the average recovery balance for each month. The WEPCo
11 Rate Zone's net under-recovery interest was \$1,476 for the year 2021. The 2021 under-
12 recovery balance of \$4,741,721 as shown on line 24, plus the plan year net under-recovery
13 interest of \$1,476 on line 30, results in a net cumulative under-recovery in the amount of
14 \$4,743,197 for the WEPCo Rate Zone, as shown on line 32. The WPSC Rate Zone's net
15 under-recovery interest was \$578 for the year 2021. The 2021 under-recovery balance of
16 \$3,418,530 as shown on line 58, plus the plan year under-recovery interest of \$578 on line
17 64, results in a cumulative under-recovery in the amount of \$3,419,108 for the WPSC Rate
18 Zone, as shown on line 66.

19
20 **Q. How does UMERC propose to address the PSCR over/under-recovery balances at the**
21 **end of 2021?**

22 A. UMERC proposes to roll-in the WEPCo Rate Zone net cumulative under-recovery balance
23 of \$4,743,197 into the WEPCo Rate Zone PSCR over/(under) recovery beginning balance

1 for 2022. Similarly, UMERC proposes to roll-in the WPSC Rate Zone net cumulative
2 under-recovery balance of \$3,419,108 into the WPSC Rate Zone PSCR over/(under)
3 recovery beginning balance for 2022.

4
5 **DETERMINATION OF PSCR COSTS**

6 **Q. What system power supply costs and related system power supply MWh were used in**
7 **the calculation of the average PSCR system cost per MWh for the WEPCo and WPSC**
8 **Rate Zones for 2021?**

9 A. For 2021, the UMERC system power supply costs and related UMERC system supply
10 MWh were used in the calculation of the average PSCR system cost per MWh for both
11 the WEPCo and WPSC Rate Zones.

12
13 The UMERC system power supply costs and related UMERC system supply MWh are
14 shown on Page 3 of Exhibit (A-1) (JMB-1), lines 2 through 31. The total UMERC system
15 power supply costs, line 16 was divided by the total UMERC system supply MWh, line
16 29, resulting in the average UMERC PSCR System Cost per MWh, as shown on line 31.

17 The UMERC PSCR System Cost per MWh are shown as being used for the WEPCO
18 Rate Zone on line 34 and for the WPSC Rate Zone on line 42.

19
20 **Q. How were the WEPCo and WPSC Rate Zone PSCR costs determined?**

21 A. As shown on Page 3 of Exhibit (A-1) (JMB-1), the WEPCo Rate Zone loss factor of 1.04
22 (line 35), was applied to the average PSCR system costs per MWh on supply (line 34)
23 resulting in the PSCR costs per MWh on sales (line 36). The PSCR costs per MWh on

1 sales (line 36) was then applied to the WEPCo Rate Zone sales (line 38), resulting in the
2 WEPCO Rate Zone PSCR costs (line 39). The WEPCo Rate Zone PSCR costs are also
3 shown on Page 2 of Exhibit (A-1) (JMB-1), line 20.

4
5 As shown on Page 3 of Exhibit (A-1) (JMB-1), the WPSC Rate Zone loss factor of
6 1.0276 (line 43), was applied to the average PSCR system costs per MWh on supply (line
7 42) resulting in the PSCR costs per MWh on sales (line 44). The PSCR costs per MWh
8 on sales (line 44) was then applied to the WPSC Rate Zone sales (line 46), resulting in
9 the WPSC Rate Zone PSCR costs (line 47). The WPSC Rate Zone PSCR costs are also
10 shown on Page 2 of Exhibit (A-1) (JMB-1), line 54.

11 12 **COMPARISON OF ACTUAL PSCR COSTS TO PSCR PLAN**

13 **Q. Please summarize the primary reasons for the variance in the UMERC PSCR system**
14 **costs between the 2021 PSCR plan as approved compared to the 2021 actual UMERC**
15 **PSCR system costs incurred.**

16 A. As shown on Exhibit A-1 (JMB-1), page 1, line 27, the actual average UMERC PSCR
17 system cost per MWh was \$19.06/MWh (or 52.6%) higher than the 2021 plan, primarily
18 due to higher prices for natural gas used as fuel for generation starting in June of 2021 and
19 higher market prices for power purchased in the MISO Market throughout 2021. Overall,
20 UMERC's PSCR system costs were higher than planned by \$14 million (line 12).

21
22 **Q. How did natural gas prices throughout 2021 impact PSCR costs in both the WEPCo**
23 **and WPSC Rate Zones?**

1 A. During 2021, increasing demand for natural gas resulted in higher natural gas prices.
 2 Higher gas prices increased Locational Marginal prices in the MISO Market and
 3 contributed to higher purchased power for UMEREC customers, which results in higher
 4 PSCR costs for the year. Consider the following comparison between the NYMEX futures
 5 market on July 29, 2020 (the data used for determining PSCR Plan costs) and actual
 6 NYMEX settlement prices in 2021.

	7-29-2020 NYMEX	Actual	Difference	
			\$	%
Jan-21	\$ 3.010	\$ 2.467	\$ (0.543)	-18%
Feb-21	\$ 2.975	\$ 2.760	\$ (0.215)	-7%
Mar-21	\$ 2.871	\$ 2.854	\$ (0.017)	-1%
Apr-21	\$ 2.609	\$ 2.586	\$ (0.023)	-1%
May-21	\$ 2.576	\$ 2.925	\$ 0.349	14%
Jun-21	\$ 2.615	\$ 2.984	\$ 0.369	14%
Jul-21	\$ 2.662	\$ 3.617	\$ 0.955	36%
Aug-21	\$ 2.673	\$ 4.044	\$ 1.371	51%
Sep-21	\$ 2.656	\$ 4.370	\$ 1.714	65%
Oct-21	\$ 2.671	\$ 5.841	\$ 3.170	119%
Nov-21	\$ 2.717	\$ 6.202	\$ 3.485	128%
Dec-21	\$ 2.839	\$ 5.447	\$ 2.608	92%

7
 8
 9 Fuel costs for the Kuester generation facility were up by \$6.9 million (line 2) due to higher
 10 generation and to the above mentioned higher prices for natural gas in 2021. Fuel costs for
 11 the Mihm generation facility were up by \$3.4 million (line 3) due to higher generation and
 12 to the above mentioned higher prices for natural gas in 2021. Generation was higher than
 13 planned at both facilities because MISO LMPs were higher than anticipated due to higher
 14 natural gas prices combined with increased coal conservation taking place across the MISO
 15 footprint. As a result, the Kuester and Mihm units were dispatched by MISO more
 16 frequently than originally forecasted.

1 **Q. How did MISO LMPs impact UMERC PSCR costs?**

2 A. MISO Market purchase costs were up by \$14.4 million (line 4) due to higher MISO Market
3 prices for power. Consider the following comparison between the average monthly
4 forecasted 2021 LMPs used in the creation of the 2021 PSCR plan (May-December uses
5 the updated forecast shown in the PSCR Plan reopener filed at the end of May 2021) and
6 average monthly actual LMPs.

	Plan	Actual	Difference	
			\$	%
Jan-21	\$26.36	\$28.64	\$2.28	9%
Feb-21	\$25.96	\$29.14	\$3.18	12%
Mar-21	\$24.76	\$29.41	\$4.65	19%
Apr-21	\$23.30	\$27.40	\$4.10	18%
May-21	\$24.16	\$26.57	\$2.41	10%
Jun-21	\$25.98	\$30.08	\$4.10	16%
Jul-21	\$30.34	\$37.86	\$7.52	25%
Aug-21	\$29.49	\$39.15	\$9.66	33%
Sep-21	\$26.00	\$37.34	\$11.34	44%
Oct-21	\$25.69	\$43.25	\$17.56	68%
Nov-21	\$26.80	\$46.63	\$19.83	74%
Dec-21	\$30.65	\$47.07	\$16.42	54%

7

8

9 ATC and MISO Transmission Charges were higher by \$3 million (line 8) due to higher
10 than forecasted charges from the ATC and MISO for transmission service.

11

12 Credits from opportunity sales, including sales to Tilden, were higher by \$13.6 million
13 (line 11) due to higher prices for opportunity sales.

14

15 **Q. Were the costs of power supply incurred through reasonable and prudent actions on**
16 **the part of UMERC?**

1 A. Yes. The PSCR costs that UMERC incurred in 2021 through the operation of its owned
2 generation and its activity in the MISO Market were reasonable and prudent.

3

4 **PSCR COST RECONCILIATION APPROVAL**

5 **Q. What is UMERC requesting the Commission to approve in this PSCR reconciliation**
6 **filing?**

7 A. UMERC requests that for both the WEPCo and WPSC Rate Zones, the Commission
8 approve the 2021 reconciliation of all power supply revenues received, whether included
9 in base rates or collected through the PSCR clause, with the power supply costs incurred
10 by UMERC in 2021, and authorize the roll-in of the 2021 ending WEPCo and WPSC Rate
11 Zone PSCR over/under-recovery balances into the 2022 beginning WEPCo and WPSC
12 Rate Zone PSCR over/under recovery balances, respectively.

13

14 **Q. Does this conclude your direct testimony?**

15 A. Yes, it does.

16

Upper Michigan Energy Resources Corporation
2021 Power Supply Cost Recovery Reconciliation
Comparison of Actual to Plan

Case No: U-20809
Exhibit: A-1 (JMB-1)
Witness: James M. Beyer
Page: 1 of 3

	2021	2021		%
	<u>PSCR Plan</u>	<u>PSCR Actual</u>	<u>Variance</u>	<u>Variance</u>
1 <u>UMERC PSCR System Costs</u>				
2 Kuester Fuel Costs	\$13,677,862	\$20,606,883	\$6,929,021	50.7%
3 Mihm Fuel Costs	\$5,296,438	\$8,702,311	\$3,405,873	64.3%
4 MISO Market Purchases Cost	\$33,499,169	\$47,964,001	\$14,464,832	43.2%
5 MISO Market Other Charges & Credits	(\$2,565,376)	(\$2,569,022)	(\$3,645)	0.1%
6 Purchased Power Agreements	\$0	\$0	\$0	0.0%
7 Other Purchased Power	\$0	\$47,114	\$47,114	0.0%
8 ATC & MISO Transmission Charges	\$18,015,668	\$21,004,811	\$2,989,143	16.6%
9 Voluntary Green Program Credits	(\$8,573)	(\$3,924)	\$4,649	-54.2%
10 Economic Buyouts	\$0	(\$202,047)	(\$202,047)	0.0%
11 Opoortunity Sales	(\$44,742,699)	(\$58,382,962)	(\$13,640,263)	30.5%
12 UMERC PSCR System Costs	\$23,172,490	\$37,167,166	\$13,994,675	60.4%
13				
14 Kuester Generation (MWh)	426,602	527,826	101,224	23.7%
15 Mihm Generation (MWh)	153,552	237,478	83,926	54.7%
16 MISO Purchased Power (MWh)	1,358,550	1,207,344	(151,206)	-11.1%
17 Other Purchased Power (MWh)	-	621	621	0.0%
18 Economic Buyouts (MWh)	-	(1,729)	(1,729)	0.0%
19 Opoortunity Sales (MWh)	(1,299,047)	(1,299,298)	(251)	0.0%
20 UMERC PSCR System (MWh)	639,657	672,241	32,585	5.1%
21				
22 Kuester Fuel Cost (\$/MWh)	\$32.06	\$39.04	\$6.98	21.8%
23 Mihm Fuel Cost (\$/MWh)	\$34.49	\$36.64	\$2.15	6.2%
24 MISO Market Purchases Cost (\$/MWh)	\$24.66	\$39.73	\$15.07	61.1%
25 Economic Buyouts (\$/MWh)	\$0.00	\$116.84	\$116.84	0.0%
26 Opoortunity Sales (\$/MWh)	\$34.44	\$44.93	\$10.49	30.5%
27 PSCR System Cost on Supplied (\$/MWh)	\$36.23	\$55.29	\$19.06	52.6%
28				
29 <u>UMERC WEPCO Rate Zone</u>				
30 WEPCO Rate Zone PSCR Costs	<u>Plan</u> \$13,127,739	<u>Actual</u> \$19,822,427	<u>Variance</u> \$6,694,688	<u>%</u> 51.0%
31 WEPCO Rate Zone Sales (MWh)	348,442	344,314	(4,128)	-1.2%
32 WEPCO Rate Zone PSCR Cost (\$/MWh)	\$37.68	\$57.57	\$19.90	52.8%
33				
34 <u>UMERC WPSC Rate Zone</u>				
35 WPSC Rate Zone PSCR Costs	<u>Plan</u> \$9,945,166	<u>Actual</u> \$15,101,073	<u>Variance</u> \$5,155,907	<u>%</u> 51.8%
36 WPSC Rate Zone Sales (MWh)	267,154	268,016	862	0.3%
37 WPSC Rate Zone PSCR Cost (\$/MWh)	\$37.23	\$56.34	\$19.12	51.4%

Upper Michigan Energy Resources Corporation
 2021 Power Supply Cost Recovery Reconciliation
 Determination of Over/(Under) Recovery and Interest

Case No: U-20809
 Exhibit: A-1 (JMB-1)
 Witness: James M. Beyer
 Page 2 of 3

	2021 1	2021 2	2021 3	2021 4	2021 5	2021 6	2021 7	2021 8	2021 9	2021 10	2021 11	2021 12	2022 1	Total
UMERC - WEPCO Rate Zone														
1 Sales Subject to PSCR Billed (Mwh)	35,591	28,777	32,359	25,033	19,745	29,028	32,304	30,407	33,116	26,381	22,352	35,151		350,244
2 Unbilled Sales Subject to PSCR (Mwh)	17,135	20,658	19,354	16,879	22,344	23,857	20,903	20,479	13,678	14,056	17,983	17,106		224,432
3 Unbilled Prior Month Sales Subject to PSCR (Mwh)	(23,036)	(17,135)	(20,658)	(19,354)	(16,879)	(22,344)	(23,857)	(20,903)	(20,479)	(13,678)	(14,056)	(17,983)		(230,361)
4 Sales Subject to PSCR Calendar (Mwh)	29,691	32,300	31,054	22,559	25,209	30,541	29,350	29,984	26,316	26,759	26,279	34,274		344,314
5														
6 PSCR Base Incl. Losses (\$/Mwh)	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	45.47
7 PSCR Factor Applied (\$/Mwh)	(7.79)	(7.79)	(7.79)	(7.79)	(7.79)	(7.79)	(7.79)	(7.79)	6.30	6.30	6.30	6.30	6.30	3.15
8														
9 PSCR Revenue Billed (\$)	\$1,341,072	\$1,084,323	\$1,219,270	\$943,250	\$743,975	\$1,093,762	\$1,217,209	\$1,574,187	\$1,714,425	\$1,365,735	\$1,157,176	\$1,819,792		\$15,274,176
10 PSCR Revenue Unbilled Current Month (\$)	\$645,663	\$778,406	\$729,241	\$636,015	\$841,909	\$898,914	\$1,082,123	\$1,060,185	\$708,118	\$727,680	\$930,988	\$831,699		\$9,870,941
11 PSCR Revenue Unbilled Prior Month (\$)	(\$867,996)	(\$645,663)	(\$778,406)	(\$729,241)	(\$841,909)	(\$898,914)	(\$1,082,123)	(\$1,060,185)	(\$708,118)	(\$727,680)	(\$930,988)	(\$831,699)		(\$9,907,238)
12 Total PSCR Revenue (\$)	\$1,118,739	\$1,217,066	\$1,170,105	\$850,024	\$949,869	\$1,150,767	\$1,400,418	\$1,552,249	\$1,362,358	\$1,385,297	\$1,360,484	\$1,720,503		\$15,237,879
13														
14 UMERC PSCR System Costs	\$2,459,382	\$4,456,896	\$2,246,587	\$2,474,260	\$1,703,936	\$3,266,565	\$2,498,108	\$3,510,625	\$3,187,424	\$4,088,144	\$4,251,778	\$3,023,460		\$37,167,166
15 UMERC PSCR System Supply (MWh)	61,634	56,837	56,076	53,007	50,450	56,369	56,647	58,937	48,975	56,320	62,317	54,672		672,241
16 UMERC PSCR System Cost (\$/MWh)	\$39.90	\$78.41	\$40.06	\$46.68	\$33.77	\$57.95	\$44.10	\$59.57	\$65.08	\$72.59	\$68.23	\$55.30		
17 UMERC-WEPCO PSCR Loss Factor	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 UMERC-WEPCO PSCR Cost/Mwh on Sales	\$41.50	\$81.55	\$41.67	\$48.55	\$35.13	\$60.27	\$45.86	\$61.95	\$67.69	\$75.49	\$70.96	\$57.51		
19 UMERC-WEPCO Rate Zone PSCR Costs (\$)	\$1,232,157	\$2,634,067	\$1,294,010	\$1,095,240	\$885,587	\$1,840,679	\$1,345,983	\$1,857,482	\$1,781,303	\$2,020,012	\$1,864,784	\$1,971,123		\$19,822,427
20														
21 Over/(Under) Recovery (\$)	(\$113,418)	(\$1,417,001)	(\$123,905)	(\$245,216)	\$64,282	(\$689,912)	\$54,435	(\$305,233)	(\$418,945)	(\$634,715)	(\$504,300)	(\$250,620)		(\$4,584,548)
22 Beginning Recovery Balance (\$)	(\$157,173)	(\$270,591)	(\$1,687,592)	(\$1,811,497)	(\$2,056,713)	(\$1,992,431)	(\$2,682,343)	(\$2,627,908)	(\$2,933,141)	(\$3,352,086)	(\$3,986,801)	(\$4,491,101)		(\$157,173)
23 Ending Recovery Balance (\$)	(\$270,591)	(\$1,687,592)	(\$1,811,497)	(\$2,056,713)	(\$1,992,431)	(\$2,682,343)	(\$2,627,908)	(\$2,933,141)	(\$3,352,086)	(\$3,986,801)	(\$4,491,101)	(\$4,741,721)		(\$4,741,721)
24 Average Recovery Balance (\$)	(\$213,882)	(\$979,092)	(\$1,749,545)	(\$1,934,105)	(\$2,024,572)	(\$2,337,387)	(\$2,655,126)	(\$2,780,525)	(\$3,142,614)	(\$3,669,444)	(\$4,238,951)	(\$4,616,411)		
25														
26 Interest Rate Undercollection (%)	0.08%	0.06%	0.07%	0.04%	0.10%	0.04%	0.05%	0.05%	0.05%	0.05%	0.06%	0.07%		
27 Interest Rate Overcollection (%)	10.10%	10.10%	10.10%	10.10%	10.10%	10.10%	10.10%	10.10%	10.10%	10.10%	10.10%	10.10%		
28 Days in Month	31	28	31	30	31	30	31	31	30	31	30	31		365
29 Monthly Interest (\$)	(\$15)	(\$45)	(\$104)	(\$64)	(\$172)	(\$77)	(\$113)	(\$118)	(\$129)	(\$156)	(\$209)	(\$274)		(\$1,476)
30 Interest Balance (\$)	(\$15)	(\$60)	(\$164)	(\$228)	(\$400)	(\$477)	(\$590)	(\$708)	(\$837)	(\$993)	(\$1,202)	(\$1,476)		
31 Ending Recovery Balance + Interest (\$)	(\$270,606)	(\$1,687,652)	(\$1,811,661)	(\$2,056,941)	(\$1,992,831)	(\$2,682,820)	(\$2,628,498)	(\$2,933,849)	(\$3,352,923)	(\$3,987,794)	(\$4,492,303)	(\$4,743,197)		(\$4,743,197)
32														
33														
34														
UMERC - WPSC Rate Zone														
35														
36 Sales Subject to PSCR Billed (Mwh)	24,744	21,263	22,799	22,223	21,443	22,744	23,069	24,074	20,819	21,645	21,084	22,832		268,471
37 Unbilled Sales Subject to PSCR (Mwh)	5,791	6,047	5,964	5,534	5,787	6,431	6,137	6,591	4,962	5,097	5,527	5,685		69,551
38 Unbilled Prior Month Sales Subject to PSCR (Mwh)	(6,140)	(5,791)	(6,047)	(5,964)	(5,534)	(5,787)	(6,431)	(6,137)	(6,591)	(4,962)	(5,097)	(5,527)		(70,006)
39 Sales Subject to PSCR Calendar (Mwh)	24,395	21,519	22,716	21,793	21,696	23,118	22,775	24,529	19,191	21,780	21,513	22,991		268,016
40														
41 PSCR Base Incl. Losses (\$/Mwh)	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	40.52
42 PSCR Factor Applied (\$/Mwh)	(3.29)	(3.29)	(3.29)	(3.29)	(3.29)	(3.29)	(3.29)	10.77	10.77	10.77	10.77	10.77	10.77	7.13
43														
44 PSCR Revenue Billed (\$)	\$921,227	\$791,634	\$848,791	\$827,371	\$798,332	\$836,711	\$858,876	\$1,234,759	\$1,067,827	\$1,110,175	\$1,081,396	\$1,171,076		\$11,548,175
45 PSCR Revenue Unbilled Current Month (\$)	\$215,582	\$225,117	\$222,041	\$206,021	\$215,439	\$239,419	\$314,742	\$338,064	\$254,525	\$261,436	\$283,458	\$270,880		\$3,046,724
46 PSCR Revenue Unbilled Prior Month (\$)	(\$228,591)	(\$215,582)	(\$225,117)	(\$222,041)	(\$206,021)	(\$215,439)	(\$239,419)	(\$314,742)	(\$338,064)	(\$254,525)	(\$261,436)	(\$283,458)		(\$3,004,435)
47 Total PSCR Revenue (\$)	\$908,218	\$801,169	\$845,715	\$811,351	\$807,750	\$860,691	\$934,199	\$1,258,081	\$984,288	\$1,117,086	\$1,103,418	\$1,158,498		\$11,590,464
48														
49 UMERC PSCR System Costs	\$2,459,382	\$4,456,896	\$2,246,587	\$2,474,260	\$1,703,936	\$3,266,565	\$2,498,108	\$3,510,625	\$3,187,424	\$4,088,144	\$4,251,778	\$3,023,460		\$37,167,166
50 UMERC PSCR System Supply (MWh)	61,634	56,837	56,076	53,007	50,450	56,369	56,647	58,937	48,975	56,320	62,317	54,672		672,241
51 UMERC PSCR System Cost (\$/MWh)	\$39.90	\$78.41	\$40.06	\$46.68	\$33.77	\$57.95	\$44.10	\$59.57	\$65.08	\$72.59	\$68.23	\$55.30		
52 UMERC-WPSC PSCR Loss Factor	1.0276	1.0276	1.0276	1.0276	1.0276	1.0276	1.0276	1.0276	1.0276	1.0276	1.0276	1.0276		
53 UMERC-WPSC PSCR Cost/Mwh on Sales	\$41.00	\$80.58	\$41.17	\$47.97	\$34.71	\$59.55	\$45.32	\$61.21	\$66.88	\$74.59	\$70.11	\$56.83		
54 UMERC-WPSC Rate Zone PSCR Costs (\$)	\$1,000,186	\$1,734,038	\$935,215	\$1,045,408	\$753,075	\$1,376,690	\$1,032,171	\$1,501,406	\$1,283,470	\$1,624,556	\$1,508,299	\$1,306,559		\$15,101,073
55														
56 Over/(Under) Recovery (\$)	(\$91,968)	(\$932,869)	(\$89,500)	(\$234,057)	\$54,675	(\$515,999)	(\$97,972)	(\$243,325)	(\$299,182)	(\$507,470)	(\$404,881)	(\$148,061)		(\$3,510,609)
57 Beginning Recovery Balance (\$)	\$92,079	\$111	(\$932,758)	(\$1,022,258)	(\$1,256,315)	(\$1,201,640)	(\$1,717,639)	(\$1,815,611)	(\$2,058,936)	(\$2,358,118)	(\$2,865,588)	(\$3,270,469)		\$92,079
58 Ending Recovery Balance (\$)	\$111	(\$932,758)	(\$1,022,258)	(\$1,256,315)	(\$1,201,640)	(\$1,717,639)	(\$1,815,611)	(\$2,058,936)	(\$2,358,118)	(\$2,865,588)	(\$3,270,469)	(\$3,418,530)		(\$3,418,530)
59 Average Recovery Balance (\$)	\$46,095	(\$466,324)	(\$977,508)	(\$1,139,287)	(\$1,228,978)	(\$1,459,640)	(\$1,766,625)	(\$1,937,274)	(\$2,208,527)	(\$2,611,853)	(\$3,068,029)	(\$3,344,500)		
60														
61 Interest Rate Undercollection (%)	0.080%	0.060%	0.070%	0.040%	0.100%	0.040%	0.050%	0.050%	0.050%	0.050%	0.060%	0.070%		
62 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%		
63 Days in Month	31	28	31	30	31	30	31	31	30	31	30	31		365
64 Monthly Interest (\$)	\$399	(\$21)	(\$58)	(\$37)	(\$104)	(\$48)	(\$75)	(\$82)	(\$91)	(\$111)	(\$151)	(\$199)		(\$578)
65 Interest Balance (\$)	\$399	\$378	\$320	\$283	\$179	\$131	\$56	(\$26)	(\$117)	(\$228)	(\$379)	(\$578)		
66 Ending Recovery Balance + Interest (\$)	\$510	(\$932,380)	(\$1,021,938)	(\$1,256,032)	(\$1,201,461)	(\$1,717,508)	(\$1,815,555)	(\$2,058,962)	(\$2,358,235)	(\$2,865,816)	(\$3,270,848)	(\$3,419,108)		(\$3,419,108)

	1	2	3	4	5	6	7	8	9	10	11	12	Total
1 UMERC PSCR System Costs													
2 Kuester Plant	\$830,556	\$1,039,596	\$965,306	\$1,156,639	\$968,085	\$1,647,257	\$1,626,772	\$1,912,814	\$2,232,067	\$3,005,802	\$3,184,253	\$2,037,736	\$20,606,883
3 Mihm Plant	\$573,767	\$511,669	\$469,194	\$743,907	\$457,219	\$725,988	\$774,830	\$884,367	\$658,874	\$925,174	\$924,797	\$1,052,526	\$8,702,311
4 UMERC System Fuel Costs	\$1,404,323	\$1,551,265	\$1,434,499	\$1,900,545	\$1,425,304	\$2,373,245	\$2,401,602	\$2,797,181	\$2,890,941	\$3,930,976	\$4,109,050	\$3,090,262	\$29,309,194
5													
6 MISO Market Purchases Cost	\$3,081,104	\$7,047,767	\$2,862,555	\$2,932,093	\$2,877,299	\$3,533,088	\$2,407,947	\$3,976,973	\$4,742,641	\$5,297,833	\$4,978,270	\$4,226,432	\$47,964,001
7 MISO Market Other Charges & Credits	(\$104,601)	(\$258,506)	(\$239,074)	(\$123,471)	(\$443,965)	(\$219,735)	(\$276,884)	(\$212,293)	(\$235,501)	(\$199,756)	(\$63,853)	(\$191,382)	(\$2,569,022)
8 Purchased Power Agreements	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9 Other Purchased Power	\$12,839	\$1,601	\$73	\$208	\$597	\$379	\$15,551	\$396	\$296	\$412	\$13,597	\$1,166	\$47,114
10 ATC & MISO Transmission Charges	\$1,692,272	\$1,706,600	\$1,826,419	\$1,752,217	\$1,654,308	\$1,755,461	\$1,743,005	\$1,755,063	\$1,710,301	\$1,761,061	\$1,846,456	\$1,801,646	\$21,004,811
11 Voluntary Green Program Credits	(\$486)	(\$370)	(\$331)	(\$288)	(\$256)	(\$338)	(\$366)	(\$338)	(\$284)	(\$289)	(\$244)	(\$335)	(\$3,924)
12 Economic Buyouts	\$0	(\$142,967)	\$0	\$0	\$0	\$8,144	(\$29,234)	(\$12,877)	(\$22,151)	(\$2,976)	\$668	(\$654)	(\$202,047)
13 Opportunity Sales & Mines Revenue	(\$3,626,069)	(\$5,448,494)	(\$3,637,554)	(\$3,987,045)	(\$3,809,353)	(\$4,183,680)	(\$3,763,512)	(\$4,793,480)	(\$5,898,819)	(\$6,699,117)	(\$6,632,165)	(\$5,903,674)	(\$58,382,962)
14 UMERC System Purchases & Sales	\$1,055,059	\$2,905,631	\$812,088	\$573,715	\$278,632	\$893,319	\$96,506	\$713,444	\$296,483	\$157,168	\$142,728	(\$66,801)	\$7,857,972
15													
16 UMERC PSCR System Costs	\$2,459,382	\$4,456,896	\$2,246,587	\$2,474,260	\$1,703,936	\$3,266,565	\$2,498,108	\$3,510,625	\$3,187,424	\$4,088,144	\$4,251,778	\$3,023,460	\$37,167,166
17													
18 UMERC System Supply (MWh)													
19 Kuester Plant(MWh)	29,469	29,228	37,599	38,240	36,405	50,401	46,555	50,475	49,090	60,668	58,892	40,804	527,826
20 Mihm Plant (MWh)	20,659	14,654	18,645	25,573	17,471	22,608	22,423	23,516	14,600	18,900	17,329	21,100	237,478
21 UMERC System Generation (MWh)	50,128	43,882	56,244	63,813	53,876	73,009	68,978	73,991	63,690	79,568	76,221	61,904	765,304
22													
23 MISO Purchased Power (MWh)	123,542	117,718	114,154	101,689	104,754	90,077	71,213	94,347	96,331	90,618	95,664	107,237	1,207,344
24 Other Purchase Power (MWh)	144	37	-	1	10	3	3	3	2	7	383	28	621
25 Economic Buyouts (MWh)	-	(911)	-	-	-	(28)	(398)	(124)	(192)	(44)	(16)	(16)	(1,729)
26 Opportunity & Mines Sales (MWh)	(112,180)	(103,888)	(114,322)	(112,496)	(108,190)	(106,692)	(83,149)	(109,280)	(110,857)	(113,829)	(109,935)	(114,481)	(1,299,298)
27 UMERC System Purchases & Sales (MWh)	11,506	12,955	(168)	(10,806)	(3,426)	(16,640)	(12,331)	(15,054)	(14,715)	(23,248)	(13,904)	(7,232)	(93,063)
28													
29 UMERC PSCR System Supply (MWh)	61,634	56,837	56,076	53,007	50,450	56,369	56,647	58,937	48,975	56,320	62,317	54,672	672,241
30													
31 UMERC PSCR System Cost (\$/MWh)	\$39.90	\$78.41	\$40.06	\$46.68	\$33.77	\$57.95	\$44.10	\$59.57	\$65.08	\$72.59	\$68.23	\$55.30	\$55.29
32													
33 UMERC - WEPCO Rate Zone													
34 UMERC PSCR System Cost (\$/MWh)	\$39.90	\$78.41	\$40.06	\$46.68	\$33.77	\$57.95	\$44.10	\$59.57	\$65.08	\$72.59	\$68.23	\$55.30	
35 UMERC-WEPCO PSCR Loss Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	
36 UMERC-WEPCO PSCR Cost/Mwh on Sales	\$41.50	\$81.55	\$41.67	\$48.55	\$35.13	\$60.27	\$45.86	\$61.95	\$67.69	\$75.49	\$70.96	\$57.51	
37													
38 UMERC WEPCO Rate Zone PSCR Sales (MWhs)	29,691	32,300	31,054	22,559	25,209	30,541	29,350	29,984	26,316	26,759	26,279	34,274	344,314
39 UMERC WEPCO Rate Zone PSCR Costs	\$1,232,157	\$2,634,067	\$1,294,010	\$1,095,240	\$885,587	\$1,840,679	\$1,345,983	\$1,857,482	\$1,781,303	\$2,020,012	\$1,864,784	\$1,971,123	\$19,822,427
40													
41 UMERC - WPSC Rate Zone													
42 UMERC PSCR System Cost (\$/MWh)	\$39.90	\$78.41	\$40.06	\$46.68	\$33.77	\$57.95	\$44.10	\$59.57	\$65.08	\$72.59	\$68.23	\$55.30	
43 UMERC-WPSC PSCR Loss Factor	1.0276	1.0276	1.0276	1.0276	1.0276	1.0276	1.0276	1.0276	1.0276	1.0276	1.0276	1.0276	
44 UMERC-WPSC PSCR Cost/Mwh on Sales	\$41.00	\$80.58	\$41.17	\$47.97	\$34.71	\$59.55	\$45.32	\$61.21	\$66.88	\$74.59	\$70.11	\$56.83	
45													
46 UMERC WPSC Rate Zone PSCR Sales (Mwhs)	24,395	21,519	22,716	21,793	21,696	23,118	22,775	24,529	19,191	21,780	21,513	22,991	268,016
47 UMERC WPSC Rate Zone PSCR Costs	\$1,000,186	\$1,734,038	\$935,215	\$1,045,408	\$753,075	\$1,376,690	\$1,032,171	\$1,501,406	\$1,283,470	\$1,624,556	\$1,508,299	\$1,306,559	\$15,101,073

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: _____ Docket No. U-_____

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

1. (Name)
2. (Name)
3. (Name)
4. (Name)
5. (Name)
6. (Name)
7. (Name)

Name _____

Address _____

City _____ State _____

Zip _____ Phone _____

Email _____

Date _____

Signature: _____

I am not an attorney

I am an attorney whose:

Michigan Bar # is P-_____

_____ Bar # is: _____
(state)