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by Sidney Davy Miller

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March 29 2017

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

Re: Upper Michigan Energy Resources Corporation
2016 PSCR Reconciliation (for the former WPS Corp Service Territory)
MPSC Case No. U-17914-R

Dear Ms. Kale:

Enclosed for electronic filing are the Application and Direct Testimony and Exhibit of John G. Guntlisbergen. Also enclosed are the Appearances of Sherri A. Wellman and Michael C. Rampe.

A marked-up copy of the Notice of Hearing has been e-mailed to Angela McGuire of your office.

Very truly yours,

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

Sherri A. Wellman

Digitally signed by: Sherri A. Wellman
DN: CN = Sherri A. Wellman C = AD O = MillerCanfield
Date: 2017.03.29 16:15:14 -05'00'

By: ______________________________
Sherri A. Wellman

SAW/kld
Enclosures

cc: John G. Guntlisbergen
Koby Bailey
Dennis M. Derricks
Ted Eidukas

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S T A T E O F M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

*** * * * ***

In the matter of the application of **UPPER MICHIGAN ENERGY RESOURCES CORPORATION** for a power supply cost reconciliation proceeding for the 12-month period ended December 31, 2016 for the former Wisconsin Public Service Corporation Michigan service territory.	)))))))	Case No. U-17914-R

APPLICATION

Upper Michigan Energy Resources Corporation ("UMERC" or the "Company") requests the Michigan Public Service Commission ("Commission") to approve the reconciliation of Wisconsin Public Service Corporation's ("WPS Corp") power supply costs and revenues pursuant to 1982 PA 304 ("Act 304") for the 12-month period, January 2016 through December 2016, and respectfully represents to the 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 dated December 9, 2016, in Case No. U-18061 ("U-18061 Order") UMERC was granted authority by the Commission to, among other things, provide retail electric service to the former Michigan electric customers of Wisconsin Electric Power Company (WEPCo") in service areas located in Alger, Baraga, Delta, Dickinson, Gogebic, Houghton, Iron, Marquette, Menominee, and Ontonagon Counties and to the former Michigan electric customers of WPS Corp in a service area located in Menominee County, Michigan.

2. UMERC's Michigan retail electric business is subject to the jurisdiction of the Commission 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.; 1939 PA 3, as amended, MCL 460.1 et seq; 1982 PA 304, as amended, MCL 460.6j et seq; and 1969 PA 306, as amended, MCL 24.201 et seq. 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 power supply cost recovery ("PSCR") costs via separate PSCR factors for the WEPCo Rate Zone and the WPSC Rate Zone.

3. During 2016, WPS Corp provided retail electric service to its customers in the State of Michigan pursuant to electric rate schedules approved April 14, 2016, in Case No. U-17669 and pursuant to a PSCR factor approved on April 14, 2016, in Case No. U-17914.

4. Pursuant to Section 6j(12) of Act 304, power supply costs and revenues are required to be reconciled for the twelve-month period during which the 2016 factors were in effect. This application is filed pursuant to Section 6j(12).

5. UMERC represents that reconciliation of WPS Corp's power supply costs and revenues for the 12-months ending December 31, 2016 results in a total net under recovery of $28,874 including interest.

6. UMERC proposes to roll-in the net under recovery of $28,874 into the beginning balance of its 2017 PSCR reconciliation for its WPSC Rate Zone.

7. UMERC is concurrently filing testimony and an exhibit in support of this Application. UMERC represents that its proposals are just and reasonable and in the public interest.

WHEREFORE, UMERC prays that this Commission:

1. Make and publish its notice of hearing, and after notice of hearing;
2. Approve the reconciliation of the 12-month power supply costs and revenues as presented by UMERC;
3. Approve the reconciliation of the amount under-recovered;
4. Find and determine that the power supply costs charged to the then WPS Corp's ratepayers during 2016 were reasonably and prudently incurred;
5. Find and determine that UMERC should be authorized to roll-in the total net under-recovered amount of $28,874 into the beginning balance of its 2017 PSCR plan reconciliation for its WPSC Rate Zone; and
6. Grant UMERC such other and additional relief as shall be lawful and proper.

Respectfully submitted,

UPPER MICHIGAN ENERGY RESOURCES CORPORATION

Dated: March 29, 2017

By: Sherri A. Wellman

Digitally signed by: Sherri A. Wellman
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Attorneys for UPPER MICHIGAN ENERGY RESOURCES CORPORATION

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S T A T E   O F   M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of	)	
UPPER MICHIGAN ENERGY RESOURCES	)	
CORPORATION	)	Case No. U-17914-R
for a power supply cost reconciliation	)	
proceeding for the 12-month period	)	
ended December 31, 2016 for the former Wisconsin	)	
Public Service Corporation Michigan service	)	
territory.	)	
	)	

DIRECT TESTIMONY AND EXHIBIT
OF JOHN G. GUNTLISBERGEN
ON BEHALF OF UPPER MICHIGAN ENERGY RESOURCES CORPORATION

Dated: March 29, 2017

DIRECT TESTIMONY OF
JOHN G. GUNTLISBERGEN

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

A. My name is John G. Guntlisbergen. My business address is Wisconsin Public Service Corporation ("WPS Corp"), 700 North Adams Street, P.O. Box 19001, Green Bay, WI 54307-9001. I am the Manager of Electric Fuel Cost Recovery in the State Regulatory Affairs Department of the WEC Energy Group ("WEC"). WPS Corp and Upper Michigan Energy Resources Corporation ("UMERC" or the "Company") are wholly owned subsidiaries of WEC.

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

A. In 1981, I graduated from St. Norbert College - De Pere, Wisconsin, with a Bachelor of Business Administration Degree in Accounting. After completing college I was employed by WPS Corp as a Depreciation Analyst and later as the Depreciation Supervisor in the Corporate Tax Department. While in the Corporate Tax Department, I performed depreciation studies on utility plant property, and determined book depreciation, tax depreciation and deferred taxes on an actual and forecasted basis. In 1993, I moved to the Rates and Economic Evaluation Department as a Rates Planner. I performed cost studies and rate impact studies for generation planning and long-range corporate planning. I participated in the analysis of transmission costs and the development of the transmission tariffs for filing with the Federal Energy Regulatory Commission. I performed electric and gas cost of service studies for the Michigan and Wisconsin jurisdictions. I have also worked with the power supply areas for WPS Corp and Upper Peninsula Power Company to develop Power Supply Cost Recovery ("PSCR") plans and in the reconciliation of the PSCR costs to revenues.

Q. Have you testified before a regulatory agency?

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

Q. On whose behalf are you testifying in this proceeding and what is the purpose of your testimony?

A. I am testifying on behalf of UMERC in this proceeding. The purpose of my testimony is to support the reconciliation of WPS Corp's actual power supply costs to the revenues collected pursuant to WPS Corp's authorized Michigan base rates and PSCR clause for the 12-month period ended December 31, 2016. Pursuant to the Commission's Order approving settlement dated December 9, 2016, in Case No. U-18061, UMERC was granted authority to, among other things, provide retail electric service to the former Michigan electric customers of WPS Corp effective January 1, 2017. Further, in accordance with the U-18061 Order, UMERC assumed WPS Corp's previously authorized PSCR factor for its WPSC Rate Zone.

Q. What is UMERC requesting in this proceeding?

A. UMERC requests Commission approval of the reconciliation of WPS Corp's 2016 power supply cost revenues received, whether included in base rates or collected pursuant to WPS Corp's PSCR clause, with the power supply costs booked by WPS Corp during 2016.

Q. Could you provide a brief description of the WPS Corp generation portfolio during the 2016 PSCR plan period?

A. Yes. During 2016 WPS Corp had generating facilities with a current Midcontinent Independent System Operator ("MISO") Unforced Capacity ("UCAP") of approximately

2,308.5 MW. WPS Corp owned and operated 4 coal fired units with a total capacity of 831.6 MW and jointly owns 3 coal fired units with a WPS Corp assigned capacity of 430.3 MW that are operated by Wisconsin Power and Light Company. WPS Corp also had a 540.9 MW combined cycle plant (inclusive of 50 MW of duct fired peaking), 457.7 MW of simple cycle gas-fired combustion turbines, 30.3 MW of hydro generation and approximately 108 MW of wind generation, of which 17.7 MW of the capacity is currently counted as MISO qualified UCAP.

Q. Are you sponsoring any exhibits?

A. Yes, I am sponsoring Exhibit A-1 (JGG-1).

Q. Was this exhibit prepared by you or under your direction and supervision?

A. Yes.

Q. Please describe Exhibit A-1 (JGG-1)?

A. Exhibit A-1 (JGG-1) shows the reconciliation calculation, including interest calculations, prepared by the Company in accordance with the provisions of 1982 PA 304.

Q. Please describe the under-recovery experienced by WPS Corp for the 12-month period ending December 31, 2016.

A. WPS Corp under recovered the net "principal amount" of $261,022 as shown on line 1 of page 1 of Exhibit A-1 (JGG-1), through operation of its PSCR clause during 2016. WPS Corp had a roll-in of the over collection from the 2015 PSCR reconciliation of $206,520 as shown on line 2 of Exhibit A-1 (JGG-1). The resulting net under collection balance at the end of 2016, excluding interest, was $54,502 as shown on line 3 of page 1. Page 2 of Exhibit A-1 (JGG-1) shows the over/under-recovery by month and the monthly interest calculation.

The average monthly balances for January through September 2016 were over collections. The interest rate applied was the Company's authorized rate of return on common equity of 10.20% and result in a credit of $25,709 to be returned to the customers. The return on common equity of 10.20% was authorized in MPSC Case No. U-17669. The average monthly balances for October through December 2016 were under collections. The interest rate applied was the Company's short term debt rate and results in a charge of $81 that is to be collected from customers. The net interest impact for 2016 is a credit to customers of $25,628.

Page 1, line 3 of Exhibit A-1 (JGG-1) shows the cumulative 2016 under-recovery balance of $54,502, less the plan year net interest credit of $25,628 on line 4, resulting in a net cumulative under recovered amount of $28,874 on line 5.

Q. What is the resulting net under recovery that will be rolled into UMERC's WPSC Rate Zone beginning 2017 PSCR balance?

A. The net under recovery balance that will be rolled into the WPSC Rate Zone beginning 2017 PSCR balance is $28,874, as shown on page 1 of Exhibit A-1 (JGG-1), line 6.

Q. What was the major factor which contributed to the principal under recovered amount of $261,022 in 2016?

A. The primary factor which contributed to the principal under recovered amount of $261,022 was the implementation of lower PSCR factors than authorized, in order to reduce the prior period over-recovery of power supply costs.

Q. Section 6j(13) of 1982 PA 304 lists a series of costs or items the Commission shall disallow in a power supply cost reconciliation. Please comment on these as they relate to the reconciliation as shown in Exhibit A-1 (JGG-1).

A. UMERC does not believe that any of these statutory disallowances would apply to this 2016 PSCR Reconciliation. Additionally, WPS Corp had received approval, pursuant to Section 6j(13)(b) of 1982 PA 304, of capacity charges in excess of six months associated with applicable purchased power agreements in MPSC Case Nos. U-14422, U-16882, U-17672, and U-17914 respectively.

Q. What was the WPS Corp's overall process that it used to manage power supply costs in 2016?

A. The following describes the extensive in-house procedures utilized by WPS Corp to manage power supply costs:

Within the Wholesale Energy and Fuels Department, which is directly responsible for fuel procurement, policies and procedures were in place to outline a series of rules and directives by which the fuel procurement operations are conducted. The procedures and policies included, but were not limited to:

1. Selection of a vendor through a competitive bid process;
2. Test burning of new coals at the facility to assure plant compatibility; and
3. The use of a bid security system to ensure fair competition.

WPS Corp reviewed its ability to purchase economic energy from the MISO Energy Market or on a bilateral basis and purchases capacity for its system as required to meet reserve requirements.

As a participant in the MISO Energy Market, the Company was able to submit a generation offer for each generating asset and, if accepted, received the locational marginal price ("LMP") at each location for the power supplied to the market. At the same time, WPS Corp also purchased from the market all power required to meet its load obligations and pays the LMP at its load zone. The credits received by WPS Corp for the sale of all of its generation to the MISO market acted as an offset to the payments made by WPS Corp to purchase all of its load requirements from the MISO market.

The LMP price paid to generators, and paid by the Load Serving Entity ("LSE"), is based on the highest cost generation offer that is accepted by the MISO for each hour. When there is congestion, the LMP rises on the "congested" side to reflect what is essentially a re-dispatch to accommodate the congestion. The LMP price paid also reflects the marginal cost of losses based on where and when the generation is being supplied to the market and where it is being delivered. This process assures that the lowest priced generators within the MISO market are operating, that generators are paid a reasonable market price and that the LSEs pay a market price that reflects marginal energy costs, marginal congestion and marginal loss costs.

Often in order to mitigate some of the effects of the day-ahead congestion pricing, WPS Corp purchases Financial Transmission Rights ("FTRs"). FTRs are future rights that are used to offset some of the effects of higher or lower prices that are reflected in the MISO LMP's due to congestion. FTRs are obtained by using Auction Revenue Rights ("ARR") that are assigned based on specific generation and purchase power contracts. However, not all generation and purchase power contracts are eligible to receive ARRs. Beginning with the June 2008 planning year, the MISO established a process of allocating ARR entitlements based on generation and purchase power contracts in place during the Reference Year identified by the MISO as March 2004 through February 2005. The ARR entitlements remain fixed and do not change with changes in a Market Participant's ("MP") generation and purchase power contract portfolio. ARR entitlements give the MP an entitlement to request, subject to pro-ration due to transmission limitations, a direct allocation of ARRs. Auction Revenue generated by the ARRs can be used to purchase FTRs in the Annual FTR Auction. FTRs, auction revenue, or both are used to hedge congestion risk from scheduling energy in the Day Ahead Market. Attempts to purchase FTRs in the FTR Auction for generation and purchased power without ARR entitlements are made.

Q. Please provide a narrative comparison of the differences between WPS Corp's 2016 planned and actual supply sources and costs, as shown on page 3 of Exhibit A-1 (JGG-1).

A. In total, the actual power supply expenses on a $/MWh basis were lower by $3.46/MWh than forecasted in the plan. The lower PSCR cost is primarily the result of lower natural gas prices, resulting in increased gas fired generation at a lower cost, lower coal-fired generation and lower market prices for power. In addition, in 2016 WPS Corp also reversed 2011 through 2015 minimum rail contract obligation costs of about $9 million that had been accrued for below contracted minimum coal tonnage shipments. The Company was able to show force majeure issues, primarily the early retirement of generating units at Pulliam and Weston resulting from a Consent Decree with the EPA, that caused the lower coal use and lower coal shipments, allowing for the avoidance of paying the minimum rail contract obligation costs. All variations in fuel and purchased power costs resulted from reasonable and prudent management actions.

Hydro

The hydro generation is variable based upon water flows. The hydro generation was 27.76% higher than projected in 2016 due to higher than normal rainfall. The 2016 PSCR Plan reflected forecasted hydro generation based on a 30-year average.

Wind

Total wind generation from WPS Corp owned facilities was lower than forecasted by 31,732 MWhs, or 9.9% lower, primarily due to increased curtailments in response to negative LMPs. In addition, wind speeds for the year were also lower, averaging 7.4 m/s, also resulting in lower wind generation. Wind speeds for the 4 previous years averaged 7.65 m/s.

Fossil

Coal-fired generation was lower primarily due to several unplanned or extended outages. In addition, lower natural gas prices and lower market prices for power made the dispatch of coal-fired generation less economic, resulting in less coal-fired generation than forecasted. Total fossil generation was lower in 2016 compared to the 2016 PSCR Plan by 2,963,998 MWh or 36.46%, resulting in lower PSCR costs of $100.1 million. Listed below are specific details regarding plants with significant variations:

Pulliam (Generation MWh): Generation from the Pulliam units was lower in 2016 compared to the 2016 PSCR Plan by 224,475 MWhs or 39.79% mainly due to lower natural gas prices and lower market prices for power, which made the units less economical to generate.

Weston 2 (Generation MWh): Generation from Weston 2 was lower in 2016 compared to the 2016 PSCR Plan by 68,228 MWhs or 93.21%. Weston 2 is a gas fired peaking unit, which dispatches mostly for system reliability and during periods of high LMP prices. Due to limited need for dispatch for system reliability and lower LMPs than forecasted, Weston 2 was dispatched less than expected.

Weston 3 (Generation MWh): Generation from Weston 3 was lower in 2016 compared to the 2016 PSCR Plan by 1,444,631 MWhs or 65.44%. Weston 3 had a 4 week planned outage in the month of March to allow for the tie-in of the newly installed Regenerated Activated Coke Technology ("ReACT") environmental control equipment and process. The outage was extended for an additional 22 weeks due to mechanical problems with Hot and Cold Z-Belt conveyors and cartridge conveyors, resulting in lower generation of about 1,033,720 MWhs as discussed later in this testimony. Weston 3 also had lower generation of about 410,911 MWhs due to lower natural gas prices and lower market prices for power, which made the unit less economical to generate in 2016.

Weston 4 (Generation MWh): Generation from Weston 4 was lower in 2016 compared to the 2016 PSCR Plan by 621,347 MWhs or 22.73% due primarily to a 9 week outage to disassemble the HP/IP (high pressure/intermediate pressure) steam turbine and procure and repair the snout rings and snout pipes, resulting in lower generation of about 357,000 MWhs. In addition Weston 4 generation was lower by about 264,000 MWhs due to lower natural gas prices and lower market prices for power, which made the unit less economical to generate.

Columbia 1: (Generation MWh): Generation from Columbia 1 was lower in 2016 compared to the 2016 PSCR Plan by 357,901 MWhs or 34.06%. Columbia 1 experienced a generator step-up transformer failure resulting in an 8 week outage in 2016, which continued into 2017 for an additional 3 weeks, and resulted in an estimated loss of 179,000 MWhs of generation in 2016. The extended outage was required to allow for materials for the iso phase bus duct to be engineered and installed before the new transformer could be placed into service. In addition, lower natural gas prices and lower market prices for power made the unit less economical to generate, resulting in lower generation of about 179,000 MWhs in 2016.

Columbia 2: (Generation MWh): Generation from Columbia 2 was lower in 2016 compared to the 2016 PSCR Plan by 73,464 MWhs or 7.67% mainly due to lower natural gas prices and lower market prices for power, which made the unit less economical to generate.

Edgewater (Generation MWh): Generation from Edgewater was lower in 2016 compared to the 2016 PSCR Plan by 173,951 MWhs or 32.17%. Two forced outages occurred in 2016; (1) A tube failure occurred on the boiler cyclone riser tube which required removal and replacement with a section of new tubing resulting in a 4 week outage with a loss in generation of about 36,000 MWhs. And (2) A maintenance outage was required to clean the precipitator and boiler back pass and to perform mechanical and electrical repairs needed in the precipitator to improve the overall ash removal effectiveness, resulting in a 5 week outage with a loss in generation of about 43,000 MWhs. In addition, lower natural gas prices and lower market prices for power, made the unit less economical to generate, resulting in lower generation of 95,000 MWhs.

Pulliam (Costs $/MWh): The average cost per MWh of generation at Pulliam was lower by $7.42/MWh or 25.11%. The reversal of minimum rail contract obligation costs, as described above, caused a decrease of $11.01/MWh, with the offsetting cost per MWh increase of $3.59/MWh due to operation of the generating units at less efficient levels to allow for the continued operation for system reliability, since gas-fired generation and purchases from the MISO market were more economic, but did not provide the localized transmission system support needed.

Weston 2 (Costs $/MWh): The average cost per MWh of generation at Weston unit 2 was higher by $10.87/MWh or 24.17% due to fixed gas supply costs with low generation output at the unit.

Weston 3 (Costs $/MWh): The average cost per MWh of generation at Weston units 3 was lower than forecasted by $10.21/MWh or -33.48% mainly due to the reversal of minimum rail contract obligation costs discussed above. The reversal of previously accrued minimum rail contract obligation costs caused a decrease in the cost of $6.05/MWh. In addition, WPS Corp did not experience to the full extent the forecasted higher cost of generation due to the emission control process and required chemicals used to control emissions as a result of the delayed startup of the ReACT process as discussed later in this testimony.

Columbia 1 (Costs $/MWh): The average cost per MWh of generation at Columbia 1 was lower by $2.81/MWh or 9.53%, due to lower coal and rail transportation costs.

Columbia 2 (Costs $/MWh): The average cost per MWh of generation at Columbia 2 was lower by $3.48/MWh or 12%, due to lower coal and rail transportation costs.

Peakers

WPS Corp's peakers are primarily gas-fired combustion turbine generation, which are highly variable and are affected by baseload unit outage schedules, market conditions and peak demands. Peaker generation was 23,909 MWhs or 9.56% higher than forecasted due to market conditions and baseload unit outages. The actual $/MWh costs of generation were lower than the 2016 PSCR Plan by $5.01/MWh or 10.44% due to lower natural gas prices. The average gas price for the peakers was $2.88/dekatherm in 2016 compared to the projected cost of $3.47/dekatherm, which is approximately 17% lower.

Combined Cycle

Fox Energy Center - Gas fired combined cycle generation was higher than forecasted by 297,598 MWhs or 9.13% due to low natural gas prices, making the units more economic to dispatch. The average cost of combined cycle generation was lower by $7.68/MWh or 29.64% mainly due to lower natural gas prices. The average price for natural gas was $2.46/MMBtu compared to a forecasted average price of $3.27/MMBtu, which was 24.77% lower than forecasted.

Purchased Power

The volume of purchased power was higher than the plan by 1,843,534 MWhs, due to more economic opportunities to purchase power from the MISO market due to lower market prices for power and lower generation from Company owned generating units. Purchase power costs were higher in 2016 compared to the plan by about $47 million, with an increase in cost of $76.8 million being attributed to the higher purchase power volumes, with an offset of $29.8 million resulting from lower purchased power prices. The cost of purchased power was lower by $6.06/MWh as compared to the plan. The increased purchased power costs due to increased purchase power volumes were more than offset by the lower fuel costs resulting from the lower Company owned generation discussed previously.

Non-Firm Sales

Non-firm energy sales are affected by a number of factors, primarily:

1. The availability of excess generation that could be sold into the peak and off-peak spot markets,
2. The prevailing market price of the energy product, and
3. With the implementation of the MISO Energy Market, the MISO dispatch of those resources to serve the energy market.

As a participant in the MISO Energy Market, WPS Corp made non-firm sales whenever the Company's total generation, plus purchased power dispatched by the MISO on an offer basis, exceeded its load requirements. Depending on unit availability and market dynamics, WPS Corp generation was dispatched to sell excess energy into the energy market. For the 2016 PSCR Plan period, WPS Corp had lower non-firm sales of

314,587 MWhs, primarily due to lower market prices for power and generating unit outages. Non-firm opportunity sales revenue was lower by $15.4 million due to lower volumes ($13.9 million) and lower prices ($1.5 million).

Q. How did the MISO Energy Market affect WPS Corp's 2016 purchased power costs?

A. WPS Corp incurred administrative charges of $1.8 million in 2016 from the MISO Energy Market compared to $1.7 million included in the 2016 PSCR Plan.

WPS Corp paid $5.3 million for FTRs, incurred Marginal Congestion charges of $9.9 million and received $13.5 million in FTR credits, resulting in a net Marginal Congestion charge of $1.7 million from the MISO Energy Market in 2016. WPS Corp had forecasted that FTR credits would exceed Marginal Congestion and FTR purchase costs for a credit of $2.4 million. Marginal Congestion costs can vary significantly depending on transmission and generation availability and dispatch.

WPS Corp incurred Revenue Neutrality Uplift ("RNU") charges of $1.5 million in 2016 from the MISO Energy Market compared to $2.3 million included in the 2016 PSCR Plan. RNU charges represent a load ratio share allocation of costs incurred by the MISO that are not covered by other charge types.

WPS Corp received Revenue Sufficiency Guarantee ("RSG") Make Whole Payments of $2.9 million from the MISO Energy Market compared to $121,000 included in the 2016 PSCR Plan. RSG Make Whole Payments are received for dispatch of company controlled generation to address system reliability issues and are used to offset incremental costs that exceed the LMP in the MISO Market. The MISO dispatch of WPS Corp generation for reliability purposes in 2016 was higher than forecasted.

WPS Corp incurred RSG charges of $1.2 million in 2016 from the MISO Energy Market compared to $977,000 included in the 2016 PSCR Plan. WPS Corp's allocated RSG charges for system reliability by the MISO were higher than forecasted for 2016 due to higher uneconomic dispatch costs for MISO Market Participant generation required to be dispatched for transmission system reliability.

WPS Corp incurred net Marginal Loss costs of $2.4 million in 2016 from the MISO Energy Market compared to $2.6 million included in the 2016 PSCR Plan. The lower Marginal Loss costs for 2016 were likely influenced by items such as smaller volumes of energy being imported into WPS Corp's load zone relative to the broader MISO market.

Q. Please describe the transmission costs shown separately on page 3 of Exhibit A-1 (JGG-1) and explain any variance between the 2016 plan and actual costs.

A. The transmission costs shown on page 3 of Exhibit A-1 (JGG-1) are for network transmission service and related services from American Transmission Company LLC ("ATC") and the MISO. WPS Corp received approval for PSCR treatment of ATC and MISO charges beginning July 24, 2003, in its electric rate case order, Case No. U-13688, issued July 23, 2003.

The transmission costs included in the 2016 PSCR plan were based on estimates from the ATC and MISO. Actual costs charged by the ATC and MISO were higher by $5.1 million or 3.53% than what ATC and MISO had forecasted for 2016. The reasons for the higher transmission costs were: (1) Higher MISO Schedule 26a, Multi-Value Project costs of $2.1 million, (2) Higher MISO Schedule 1 and MISO Schedule 10, scheduling, control and dispatch charges of $1.3 million (3) Higher MISO Schedule 33, black start service charges of $823,000, (4) Higher MISO Schedule 26, RECB regional transmission project costs of $381,000, (5) Reimbursements to MISO for Southwest Power Pool transmission path charges of $290,000, and (6) Higher ATC network transmission charges of $212,000.

Q. Would you please explain the interruptible customer "buyout" process and how it affects this PSCR reconciliation?

A. WPS Corp has an electric interruptible program for its Large Commercial and Industrial customers, which allowed WPS Corp to interrupt service for two types of electric system conditions. The first condition is known as emergency interruption, and occurs when system demand, required operating reserves and firm transaction sales cannot be supplied by available generating capacity plus purchased energy. Customers are required to interrupt load during emergency interruptions. The second condition is known as "economic interruption", and occurs when purchased energy is available but at a market price higher than the cost of typical Company peaking generation. When an economic interruption is declared, the customer is required to reduce load to its firm nomination, or the customer may choose to "buyout" of the interruption and continue to purchase energy above its firm nomination, with the "buyout" energy being priced at the higher market price. The intent of the buyout provision is to allow the interruptible customers the option of purchasing the higher cost power.

Consistent with the WPS Corp interruptible tariffs, the Company declared several economic interruptions and as a result recorded buyout volumes of 14,000 MWhs and related revenues of $941,000 in 2016. Because the cost of purchasing energy to supply these sales was included in purchased power costs, the total revenues received from the buyout sales have been credited to the 2016 PSCR costs and the buyout volumes have been removed from the PSCR requirement sales as part of non-firm sales.

Q. Are all WPS Corp PSCR related renewable energy costs and revenues for 2016 included in this PSCR reconciliation?

A. Yes, WPS Corp received prior MPSC approval to forego implementing a separate surcharge for incremental renewable costs. Instead, WPS Corp included these costs and revenues in base rates, with renewable purchased power and purchased Renewable Energy Credit ("REC") costs being included in the PSCR process. UMERC has included all WPS Corp PSCR related renewable energy costs for 2016 in this PSCR reconciliation. WPS Corp made no sales of RECs in 2016, and therefore, no revenues have been included.

Q. What was the net effect of WPS Corp using financial instruments to hedge fuel costs related to natural gas price volatility in 2016?

A. Included in the 2016 fuel costs are realized hedging settlement costs and benefits and transaction fees for a total cost of $597,468, due to the decline in natural gas prices. WPS Corp's exposure to the price risk of natural gas for electric operations for 2016 was estimated in 2015 to be approximately 23.2 million MMBTU with a cost for natural gas of approximately $92.5 million based on NYMEX futures prices for 2016 in December 2015. Based on the historical volatility in natural gas prices, the potential for sharp rises in natural gas prices and the significant exposure to the economic impacts, WPS Corp reasonably used derivative instruments to manage, or hedge, a portion of the price risk of natural gas and its effects on fuel costs.

Q. What was the net effect of WPS Corp using financial instruments to hedge the volatility of rail surcharges included in rail contracts in 2016?

A. The net effect of WPS Corp using financial instruments to hedge the volatility of rail surcharges included in rail contracts in 2016 was an increase in fuel cost of $619,917 for realized hedging settlement costs and transaction fees due to the decline in diesel fuel prices. The estimated quantity of diesel fuel for which WPS Corp had price risk exposure was estimated to be 8.6 million gallons for 2016 in 2015 at a cost of $13.5 million. WPS Corp reasonably used derivative instruments to manage, or hedge, a portion of the price risk of rail surcharges in 2016.

Q. Please describe minimum rail contract obligation costs.

A. Some rail contracts entered into to transport coal used as fuel at WPS Corp generating units, required the transport of some minimum volume of coal over the length of the contract, otherwise WPS Corp would be subject to minimum contract obligation charges based on the shortfall tonnage volumes. Due to low natural gas prices and low market prices for power, WPS Corp determined that it was more economic to generate power with natural gas and purchase power at the lower cost and pay the minimum rail contract obligation costs. As a result, WPS Corp dispatched its coal-fired units less than expected and its use of coal fell below the minimum tonnage amounts required to be transported under a 5-year rail contract. Therefore, WPS Corp expected to be subject to rail contract obligation costs at the end of the 5-year contract term and therefore accrued minimum rail contract obligation costs of $9 million as part of fuel costs during the years 2011 through 2015.

Q. At the end of the 5-year contract, was WPS Corp required to pay the minimum rail contract obligation costs it had accrued as fuel costs over the years 2011 through 2015?

A. No. As discussed earlier the Company was able to show force majeure issues, primarily the early retirement of generating units, Pulliam 5 and 6 and Weston 1, and the conversion of Weston unit 2 to burn natural gas as agreed to in a Consent Decree with the EPA, that resulted in the lower use of coal and lower coal shipments, allowing for the avoidance of paying the minimum rail contract obligation costs. Therefore WPS Corp reversed the minimum rail contract obligation costs of $9 million that had been accrued for below contracted minimum coal tonnage shipments and reduced fuel costs in 2016 by that amount.

Q. Please describe the ReACT project.

A. Regenerated Activated Coke Technology, or ReACT, is a proprietary multi-pollutant emission control technology developed by J-Power, a Japanese energy company, and is licensed to Hamon Research-Cottrell, Inc. (“HRC”). ReACT is unique among other air pollution control technologies because it is capable of controlling sulfur dioxide, nitrogen oxides and mercury emissions from the combustion of coal. Historically, a different technology has been needed to control each of these emissions separately. ReACT works by adsorbing the pollutants on a moving bed of activated coke pellets as flue gas passes through it. The activated coke pellets are regenerated by thermal desorption of the pollutants. Sulfuric acid is produced as a byproduct from the sulfur-rich gases released by the process.

ReACT was installed at Weston 3 to comply with a consent decree WPS Corp entered into with the U.S. Environmental Protection Agency (“USEPA”) in January 2013. The consent decree specified ReACT as the control technology and established emission limits for sulfur dioxide, nitrogen oxides and mercury based on that technology’s expected performance. Although ReACT has a proven commercial track record in

Japan, WPS Corp's ReACT project represents the first time the technology has been installed commercially in the United States, and the first time it has been retrofitted to an existing coal-fired generating unit.

Q. Why did WPS Corp agree with USEPA to install ReACT on Weston 3?

A. Based on its research into various air pollution control technologies at the time it was negotiating the USEPA consent decree, WPS Corp concluded that ReACT offered the potential of a lower cost way to control multiple emissions from Weston 3. The cost estimate of the ReACT project compared favorably to the more common Flue Gas Desulfurization ("FGD") and Selective Catalytic Reduction ("SCR") technologies for control of sulfur dioxide and nitrogen oxides.

Q. Did the PSCW, who authorized the installation of the ReACT system, recognize the potential risks of installing ReACT on Weston 3?

A. Yes, it did. The Certificate of Authority ("CA") order dated April 12, 2013 and issued in Docket 6690-CE-197 (at p. 10) states that the Commission "considers the risks of the ReACT system reasonable." Acknowledging that "Weston 3 would be the first use of ReACT in the United States," the Commission concluded that "this does not indicate that ReACT is too risky a technology for electric generation. Other utilities may not yet have chosen this technology because of uncertainty from future air pollution laws, possible coal unit retirements rather than retrofits, or ReACT's limited application to coal plants that burn low-sulfur coal."

Q. Please discuss the extended outage on Weston 3 that occurred due to problems with the Activated Coke conveyor system that was part of the new ReACT process and the resulting loss in generation impact.

A. As discussed earlier, Weston 3 had a 4 week planned outage in the month of March to allow for the tie-in of the newly installed ReACT environmental control equipment and process. During the tie-in outage, ReACT was connected to the Weston 3 generating unit: (1) The flue gas ductwork from the Weston 3 unit was connected to the new ReACT ductwork. And (2) The Distributed Control System ("DCS") for ReACT and the DCS for the pre-existing Weston 3 generation process were merged together, resulting in one DCS controlling both the existing Weston 3 process and ReACT.

The tie-in outage of the HRC equipment included the commissioning of the Activated Coke conveyor transfer system. In testing the ReACT process and in particular the conveyor transfer system, mechanical problems with Hot and Cold Z-Belt conveyors and cartridge conveyors were identified. Initially efforts were made to work with the existing conveyor systems, but the mechanical problems persisted, which required stopping the commissioning and startup of ReACT and the Weston 3 generation.

In May 2016, HRC and Stock performed an investigation into the root cause of the conveyor problems, leading to the redesign of the conveyor systems, which required engineering, equipment procurement, installation, and commissioning, extending the outage over the months of June through August 2016. With the redesign and equipment replacement of the conveyor systems, the mechanical problems were addressed, allowing for the ReACT system to become operational and the Weston 3 generating unit to return to service on September 1, 2016.

The implementation of new technology and unforeseen issues with the conveyor system and its subsequent re-engineering and replacement resulted in the extended outage at Weston 3. As I have described, this outage was not caused or prolonged by WPS Corp's negligence or by unreasonable or imprudent management. As discussed, although the installed technology was new, it had been installed previously. Additionally, the conveyor system and related mechanical problems were wholly unforeseen, and once identified, WPS Corp acted swiftly to rectify the problems. Additionally, the cost of installing ReACT as compared to the expected cost of installing FGD and SCR technology resulted in economic benefits that exceeded the incremental replacement power costs incurred during the extended outage.

Further, the incremental replacement power cost for the 26 week outage at Weston 3 is estimated to be $342,000 on a corporate basis. The Michigan retail jurisdictional portion of the replacement power costs is approximately $6,840.

Q. Did the Grand Rapids hydro generating facility experience an outage that was greater than 90 days in 2016?

A. Yes. WPS Corp's Grand Rapids hydro generating facility, which is approximately 9.5 MWs total, was out of service from June 21, 2016 to October 24, 2016. The planned outage was for the installation of electrical generator protection and controls upgrades, was necessary to meet FERC licensing requirements, and was completed during the scheduled timeframe. The extent of the work required the extended time to install the new equipment and test the upgrades, which were needed to assure safe and reliable operation of the Grand Rapids hydro facility. The outage was planned during the time of year with lower water flows in order to minimize the lost opportunity for low cost generation from the hydro facility. The length of the outage was not caused, nor prolonged by negligence or by unreasonable or imprudent WPS Corp management.

The replacement power that was needed for the Grand Rapids hydro facility during the June through October 2016 outage was estimated to be 6,781 MWhs, for an estimated corporate cost of $208,000. The Michigan retail portion of these estimated replacement power costs is approximately $4,100.

Q. Did the Pulliam 31 combustion turbine generating unit experience an outage greater than 90 days in 2016?

A. Yes. Pulliam 31 had a 14 week planned outage for a Hot Gas Path (HGP) Inspection of its combustion turbine. The HGP inspection was due with the unit having 1,450 fired starts and GE recommending a HGP after 1,200 factored starts. The outage was extended to address compressor discharge casing repairs and the need to remove the rotor to facilitate the repairs. When the rotor was removed, damage was found on the compressor male rabbet fit as well as bearing wear. The rotor was sent to Greenville, SC for repairs and realignment of the generator. The planned outage was extended 5 weeks due to the needed repairs to the compressor discharge casing. GE's recommendation for the outage was based on fleet compressor issues with combustion turbines with this design. This outage was not caused, nor prolonged by negligence or by unreasonable or imprudent WPS Corp management. All repairs were completed to ensure safety and in a timely workman-like manner.

Although the Pulliam 31 combustion turbine generating unit outage has resulted in additional days that the unit was not available in 2016, the generator is a peaking unit that dispatches minimally on an economic basis, therefore, UMERC does not believe that the outage had any significant impact to the PSCR costs.

Q. Did the West Marinette 32 combustion turbine generating unit experience an outage greater than 90 days in 2016?

A. Yes. West Marinette 32 was out of service from September 23, 2015 through November 11, 2016. West Marinette 32 was experiencing high vibration for some time. As a result, a consultant was brought in with additional vibration analysis equipment. The analysis performed indicated high axial vibration in addition to radial vibration. Due to the levels of vibration, the unit was taken out of service to investigate the source. When the upper end shields and inner air baffles were removed from the generator, a catastrophic failure of the rotor fan was identified. There were two blades that were completely liberated and caused damage to the stator winding of the machine.

Based on the significant cost of the repairs and the limited financial impact of not having the unit available, the repairs were delayed until 2016. In 2016 the generator rotor was pulled and sent to the shop for inspection and repair. The cooling fans and shrouds were replaced and the stator repairs were made on site. This outage was not caused, nor prolonged by negligence or by unreasonable or imprudent WPS Corp management. All repairs were completed to ensure safety and in a timely workman-like manner.

Although the West Marinette 32 combustion turbine generating unit outage caused the unit not to be available for many days in 2016, the generator is a peaking unit that dispatches minimally on an economic basis, therefore, UMERC does not believe that the outage had any significant impact to the PSCR costs.

Q. What is your opinion as to the reasonableness and prudence of expenditures charged pursuant to the Company's PSCR plan during the reconciliation period?

A. The Company's actions during 2016 with regard to the management of the power supply and the resulting PSCR costs were reasonable and prudent and, therefore, all expenditures booked were reasonable and prudent.

Q. Does that conclude your direct testimony at this time?

A. Yes, it does.

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UPPER MICHIGAN ENERGY RESOURCES CORPORATION
WPSC Rate Zone
2016 Plan Year Reconciliation Summary

Line:			
1	Principal amount of 2016 under-recovery	($261,022)	
2	Roll-in of 2015 over-recovery (U-17299-R)	$206,520	
3	Net under recovery balance for 2016 before interest		($54,502)
4	Simple interest during 2016 plan year		$25,628
5	Net cumulative under recovery ending balance for 2016 including interest		($28,874)
6	Total under recovery to be rolled into the 2017 PSCR		($28,874)

Case No. U-17914-R
Witness: J G Guntlisbergen
Exhibit A-1 (JGG-1)

UPPER MICHIGAN ENERGY RESOURCES CORPORATION
WPSC Rate Zone
Calculation of PSCR Plan Year Interest - 2016

	PSCR Roll-in 2015	2016 Jan	2016 Feb	2016 Mar	2016 Apr	2016 May	2016 Jun	2016 Jul
1 Generation + Purchased Power Less Opp Sales (Mwhs)		1,176,068	1,092,489	1,112,286	1,028,219	1,053,734	1,184,043	1,260,028
2 Less Losses & Company Use (Mwhs)		39,462	39,287	41,731	37,880	36,865	56,850	32,566
3 Total Requirement Sales (Mwhs)		1,136,606	1,053,202	1,070,555	990,339	1,016,869	1,127,193	1,227,462
4 Power Supply Cost ($'s)		41,589,105	29,445,826	37,894,319	36,984,350	37,825,269	39,639,236	44,623,575
5 Power Supply Cost per Mwh Sale($/Mwh)		36.59	27.96	35.40	37.35	37.20	35.17	36.35
6								
7 Michigan Mwh sales Billed		10,149	35,718	21,728	21,535	8,167	23,252	22,730
8 Michigan Mwh sales Unbilled Current Month		16,577	5,055	5,115	4,305	17,280	14,801	14,154
9 Less Michigan Mwh Sales Unbilled Prior Month		(5,128)	(16,577)	(5,055)	(5,115)	(4,305)	(17,280)	(14,801)
10								
11 Michigan Mwh Calendar sales Subject to PSCR		21,598	24,195	21,788	20,726	21,142	20,773	22,083
12								
13 Power Supply Base Rates ($/Mwh)		40.52	40.52	40.52	40.52	40.52	40.52	40.52
14 Applied PSCR Factor ($/Mwh)		(0.55)	(0.55)	(0.55)	(9.00)	(9.00)	(9.00)	(9.00)
15								
16 Michigan Revenue Billed for PSCR		$405,656	$1,427,637	$868,470	$678,795	$257,438	$732,904	$716,454
17 Michigan Revenue Unbilled Current Month		$662,593	$202,034	$161,215	$135,698	$544,663	$466,523	$446,138
18 Michigan Revenue Unbilled Prior Month		($204,957)	($662,593)	($202,034)	($161,215)	($135,698)	($544,663)	($466,523)
19								
20 Total PSCR Calendar Revenues		$863,292	$967,078	$827,651	$653,278	$666,403	$654,764	$696,069
21								
22 PSCR Costs (Based on Calendar Sales)		$790,302	$676,456	$771,231	$774,010	$786,445	$730,510	$802,827
23								
24								
25 Over/(Under) Recovery	$206,520	$72,990	$290,622	$56,420	($120,732)	($120,042)	($75,746)	($106,758)
26								
27 Beginning Recovery Balance		$206,520	$279,510	$570,132	$626,552	$505,820	$385,778	$310,032
28 Ending Recovery Balance	$206,520	$279,510	$570,132	$626,552	$505,820	$385,778	$310,032	$203,274
29 Average Recovery Balance		$243,015	$424,821	$598,342	$566,186	$445,799	$347,905	$256,653
30								
31 Interest Rate % - (Undercollection)		0.58%	0.56%	0.57%	0.55%	0.56%	0.57%	0.63%
32 Interest Rate % - Overcollection		10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%
33 Interest Rate % Applied		10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%
34								
35 Monthly Interest		$2,066	$3,611	$5,086	$4,813	$3,789	$2,957	$2,182

	2016 Aug	2016 Sep	2016 Oct	2016 Nov	2016 Dec	2017 Jan	Total
1 Generation + Purchased Power Less Opp Sales (Mwhs)	1,306,267	1,135,130	1,083,720	1,044,306	1,147,653		13,623,942
2 Less Losses & Company Use (Mwhs)	48,796	52,952	49,299	14,150	52,509		502,347
3 Total Requirement Sales (Mwhs)	1,257,471	1,082,179	1,034,421	1,030,157	1,095,143		13,121,596
4 Power Supply Cost ($'s)	46,585,461	41,778,683	40,461,132	37,637,489	44,682,821		479,147,267
5 Power Supply Cost per Mwh Sale($/Mwh)	37.05	38.61	39.11	36.54	40.80		36.52
6							
7 Michigan Mwh sales Billed	33,334	22,374	19,987	10,355	30,773		260,102
8 Michigan Mwh sales Unbilled Current Month	5,605	4,273	4,152	14,171	5,746		111,233
9 Less Michigan Mwh Sales Unbilled Prior Month	(14,154)	(5,605)	(4,273)	(4,152)	(14,171)		(110,615)
10							
11 Michigan Mwh Calendar sales Subject to PSCR	24,785	21,042	19,865	20,374	22,348		260,720
12							1.99%
13 Power Supply Base Rates ($/Mwh)	40.52	40.52	40.52	40.52	40.52	40.52	
14 Applied PSCR Factor ($/Mwh)	(9.00)	(9.00)	(1.90)	(1.90)	(1.90)	0.55	
15							
16 Michigan Revenue Billed for PSCR	$1,050,678	$705,244	$771,884	$399,900	$1,188,444		$9,203,504
17 Michigan Revenue Unbilled Current Month	$176,673	$165,015	$160,333	$547,283	$235,983		$3,904,151
18 Michigan Revenue Unbilled Prior Month	($446,138)	($176,673)	($165,015)	($160,333)	($547,283)		($3,873,125)
19							
20 Total PSCR Calendar Revenues	$781,213	$693,586	$767,202	$786,850	$877,144		$9,234,530
21							
22 PSCR Costs (Based on Calendar Sales)	$918,197	$812,355	$777,030	$744,384	$911,805		$9,495,552
23							
24							
25 Over/(Under) Recovery	($136,984)	($118,769)	($9,828)	$42,466	($34,661)		($54,502)
26							
27 Beginning Recovery Balance	$203,274	$66,290	($52,479)	($62,307)	($19,841)		
28 Ending Recovery Balance	$66,290	($52,479)	($62,307)	($19,841)	($54,502)		
29 Average Recovery Balance	$134,782	$6,906	($57,393)	($41,074)	($37,172)		
30							
31 Interest Rate % - (Undercollection)	0.62%	0.65%	0.67%	0.66%	0.85%		0.62%
32 Interest Rate % - Overcollection	10.20%	10.20%	10.20%	10.20%	10.20%		
33 Interest Rate % Applied	10.20%	10.20%	0.67%	0.66%	0.85%		
34							
35 Monthly Interest	$1,146	$59	($32)	($23)	($26)		$25,628

Case No. U-17914-R
Witness: J G Guntlisbergen
Exhibit A-1 (JGG-1)

UPPER MICHIGAN ENERGY RESOURCES CORPORATION
WPSC Rate Zone
Differences Between 2016 Actual and 2016 Plan Year

Line			2016 ACTUAL	2016 PLAN	CHANGE	% CHANGE
1	Fossil	Generation (Mwh)				
2		Pulliam	339,716	564,191	(224,475)	-39.79%
3		Weston 2	4,967	73,195	(68,228)	-93.21%
4		Weston 3	763,057	2,207,688	(1,444,631)	-65.44%
5		Weston 4	2,112,131	2,733,478	(621,347)	-22.73%
6		Columbia 1	693,031	1,050,932	(357,901)	-34.06%
7		Columbia 2	884,739	958,203	(73,464)	-7.67%
8		Edgewater 4	366,729	540,680	(173,951)	-32.17%
9						
10		Total Generation	5,164,370	8,128,368	(2,963,998)	-36.46%
11						
12		Cost($'s)				
13		Pulliam	$7,518,312	$16,672,413	($9,154,101)	-54.91%
14		Weston 2	$277,478	$3,292,980	($3,015,502)	-91.57%
15		Weston 3	$15,473,637	$67,298,827	($51,825,190)	-77.01%
16		Weston 4	$48,903,745	$62,496,660	($13,592,915)	-21.75%
17		Columbia 1	$18,473,881	$30,964,447	($12,490,566)	-40.34%
18		Columbia 2	$22,602,182	$27,817,607	($5,215,425)	-18.75%
19		Edgewater 4	$9,114,418	$13,958,054	($4,843,637)	-34.70%
20						
21		Total Cost	$122,363,652	$222,500,987	($100,137,336)	-45.01%
22						
23		Cost/Mwh				
24		Pulliam	$22.13	$29.55	($7.42)	-25.11%
25		Weston 2	$55.86	$44.99	$10.87	24.17%
26		Weston 3	$20.28	$30.48	($10.21)	-33.48%
27		Weston 4	$23.15	$22.86	$0.29	1.27%
28		Columbia 1	$26.66	$29.46	($2.81)	-9.53%
29		Columbia 2	$25.55	$29.03	($3.48)	-12.00%
30		Edgewater 4	$24.85	$25.82	($0.96)	-3.73%
31						
32		Average Cost/Mwh	$23.69	$27.37	($3.68)	-13.44%
33						
34	Emission Allowance	Cost ($'s)	$658,160	$673,000	($14,840)	-2.21%
35						
36	Combined Cycle	Generation (Mwh)	3,556,050	3,258,452	297,598	9.13%
37		Cost ($'s)	$64,834,097	$84,434,000	($19,599,903)	-23.21%
38		Cost/Mwh	$18.23	$25.91	($7.68)	-29.64%
39						
40	Hydro	Generation (Mwh)	462,910	362,319	100,590	27.76%
41		Cost ($'s)	$0.00	$0.00	$0.00	
42		Cost/Mwh	-	-	-	
43						
44	Wind	Generation (Mwh)	289,384	321,116	(31,732)	-9.88%
45		Cost ($'s)	$0.00	$0.00	$0.00	
46		Cost/Mwh	-	-	-	
47						
48	Peakers	Generation (Mwh)	274,075	250,166	23,909	9.56%
49		Cost ($'s)	$11,785,716	$12,012,000	($226,284)	-1.88%
50		Cost/Mwh	$43.00	$48.02	($5.01)	-10.44%
51						
52						
53	Purchased Power	Mwh Purchased	4,927,418	3,083,884	1,843,534	59.78%
54		Cost ($'s)	$175,432,850	$128,477,000	$46,955,850	36.55%
55		Cost/Mwh	$35.60	$41.66	($6.06)	-14.54%
56						
57						
58	Transmission	Network Charge ($'s)	$148,921,248	$143,844,000	$5,077,248	3.53%
59						
60						
61	LESS:	Non-Firm Mwh Sales	(1,050,264)	(1,364,851)	314,587	-23.05%
62	Non-Firm Sales	Revenues ($'s)	($44,848,456)	($60,214,000)	$15,365,544	-25.52%
63		Revenue/Mwh	$42.70	$44.12	($1.42)	-3.21%
64						
65	Losses & Comp. Use	Mwhs	(502,347)	(737,851)		
66						
67	TOTAL	PSCR Mwh Sales	13,121,596	13,301,603	(180,007)	-1.35%
68		PSCR Cost ($'s)	$479,147,267	$531,726,987	($52,579,721)	-9.89%
69		PSCR Cost/Mwh	$36.52	$39.97	($3.46)	-8.65%

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-17914-R

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 Sherri A. Wellman

Address MILLER, CANFIELD, PADDOCK AND STONE

One Michigan Avenue, Suite 900

City Lansing State Michigan

Zip 48933 Phone (517) 487-2070

Email wellmans@millercanfield.com

Date March 29, 2017

Signature: Sherri A. Wellman

Digitally signed by: Sherri A. Wellman
DN: CN = Sherri A. Wellman C = AD
O = MillerCanfield
Date: 2017.03.29 16:17:22 -05'00'

☐ I am not an attorney

☑ I am an attorney whose:

Michigan Bar # is P-38989

__________ Bar # is: __________
(state)

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EAHR1 - 09/29/2016

MICHIGAN DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
PUBLIC SERVICE COMMISSION

ENTRY OF APPEARANCE IN AN ADMINISTRATIVE HEARING

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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

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Date March 29, 2017

Signature: Michael C. Rampe

Digitally signed by: Michael C. Rampe
DN: CN = Michael C. Rampe C = US
O = Miller Canfield
Date: 2017.03.29 16:18:10 -05'00'

☐ I am not an attorney

☑ I am an attorney whose:

Michigan Bar # is P-58189

__________ Bar # is: __________
(state)

Save Form

EAHR1 - 09/29/2016