

Founded in 1852
by Sidney Davy Miller

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September 28, 2015

Ms. Mary Jo Kunkle
Executive Secretary
Michigan Public Service Commission
7109 W. Saginaw Hwy.
Lansing, MI 48917

Re: Wisconsin Public Service Corporation
2016 PSCR Plan and Factors
MPSC Case No. U-17914

Dear Ms. Kunkle:

Enclosed for electronic filing are the Application and Public Version of Direct Testimony and Exhibits of John G. Guntlisbergen together with the Appearance of Sherri A. Wellman. Also enclosed is a Motion For Entry of Protective Order with draft Protective Order and Notice of Hearing on Motion.

Please be advised that a marked-up Notice of Hearing has been e-mailed to jonesg1@michigan.gov.

Should you have any questions, please kindly advise.

Very truly yours,

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

By: _____
Sherri A. Wellman

Enclosure(s)

cc: John G. Guntlisbergen
Dennis Derricks
Jim Schubilske
Koby Bailey

SAW/tmb
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MICHIGAN DEPARTMENT OF LABOR AND ECONOMIC GROWTH
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) 241-6170.

Please Note: The commission will provide service of documents in this proceeding to only one person for each party.

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

Case / Company Name: Wisconsin Public Service Corporation Docket No. U-17914

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

1. (Name)	<u>Wisconsin Public Service Corporation</u>
2. (Name)	<u></u>
3. (Name)	<u></u>
4. (Name)	<u></u>
5. (Name)	<u></u>
6. (Name)	<u></u>
7. (Name)	<u></u>

Name SHERRI A. WELLMAN

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ONE MICHIGAN AVE, SUITE 900

City LANSING State MI

Zip 48933 Phone (517) 487-2070

Email wellmans@millercanfield.com

Date 09/28/2015

Signature: _____

I am not an attorney

I am an attorney whose:

Michigan Bar # is P- 38989

Bar # is:
(state)

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * * *

In the matter of the application of)	
WISCONSIN PUBLIC SERVICE CORPORATION)	Case No. U-17914
for approval of a power supply cost recovery plan,)	
authorization of monthly power supply cost recovery factors)	
for the calendar year 2016, Sec. 6j (13)(b) approval of)	
<u>capacity charges, and other related approvals.</u>)	

APPLICATION

WISCONSIN PUBLIC SERVICE CORPORATION (“WPS Corp”) applies for authority from the Michigan Public Service Commission (“Commission”) pursuant to Section 6j of 1982 PA 304 (“Act 304”) to implement a Power Supply Cost Recovery (“PSCR”) plan and establish a PSCR factor for the calendar year 2016. WPS Corp also seeks to recover through the PSCR mechanism, costs and credits associated with Auction Revenue Rights (“ARR”), Financial Transmission Rights (“FTR”) and the impacts from the use of natural gas, heating oil and electricity futures and options contracts for the purpose of hedging fuel and purchased power costs. Additionally, WPS Corp seeks approval pursuant to Section 6j (13)(b) of Act 304 of capacity charges associated with a purchase agreement. In support of this Application, WPS Corp respectfully represents the following:

1. WPS Corp, a wholly-owned subsidiary of WEC Energy Group, Inc., is a public utility organized under the law of the State of Wisconsin with principal offices located at 700 N. Adams Street, P.O. Box 19001, Green Bay, Wisconsin, 54307-9001, and is authorized to do business in the State of Michigan. WPS Corp is engaged in the generation, distribution, and sale of electric energy in service areas located in Northeastern Wisconsin and in Menominee County in the Upper Peninsula of Michigan.

2. WPS Corp'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.; and 1939 PA 3, as amended, MCL 460.1 et seq.

3. WPS Corp's current Michigan retail electric rates were authorized by the Commission pursuant to its order issued in Case No. U-17669, dated April 23, 2015. Reflected in the base rates are power supply costs of 39.43 mills per kilowatt-hour ("MWh") and a PSCR loss factor of 1.0276.

4. In accordance with Act 304 and this Commission's August 1, 1984 Opinion and Order in Case No. U-7804 authorizing WPS Corp's PSCR clause, WPS Corp files the testimony and exhibits of John G. Guntlisbergen, which constitute its 2016 PSCR plan and factor of negative \$(0.00055) per kWh or \$(0.55) per MWh to be implemented in its retail Michigan electric customers' monthly bills for the January 2016 through December 2016 billing months. WPS Corp proposes to roll in a forecasted over/under recovery of \$0 for 2015 for purposes of determining the proposed 2016 PSCR factor.

5. In its August 1, 1984 Opinion and Order in Case No. U-7805, this Commission exempted WPS Corp from filing any further five-year forecasts and underlying information concerning fuel contracts and power supply arrangements. WPS Corp's plan, as described in its testimony and exhibits, is filed pursuant to such exemptions.

6. WPS Corp represents that its 2016 PSCR plan and factors, as filed in this case, are just, reasonable, and in the public interest.

7. WPS Corp is also requesting authority to recover through the PSCR prudently incurred actual costs and credits associated with ARR and FTR and the impacts associated with

the use of natural gas, heating oil and electricity futures and options contracts for hedging fuel and purchased power costs. Similar authority has been previously granted in Case Nos. U-14708, U-15008, U-15402, U-15662, U-16032, U-16422, U-16882, U-17092, U-17299, and U-17672.

8. Additionally, WPS Corp's 2015 PSCR plan includes, among other things, a purchase agreement with capacity related charges in excess of six months. WPS Corp is requesting, as part of this Application, Section 6j (13)(b) of Act 304 approval of the capacity related charges associated with a purchase agreement between WPS Corp and The Manitoba Hydro-Electric Board ("Manitoba Hydro"). WPS Corp represents that (i) it was reasonable and prudent to enter into the agreement with Manitoba Hydro, (ii) the agreement was the Company's most reasonable cost option and (iii) the agreement will serve to meet WPS Corp's capacity needs.

9. Finally, because the purchase agreement with Manitoba Hydro is subject to confidentiality terms and conditions and contains confidential, business sensitive information, which if made public, will likely impair future negotiations and the securing of reasonable purchase agreements for WPS Corp and its customers, WPS Corp is contemporaneously filing a Motion for Entry of a Protective Order.

WHEREFORE, WPS Corp respectfully requests that this Commission:

- A. Make and issue its order and notice of hearing, and after notice and hearing;
- B. Determine that the decisions underlying WPS Corp's power supply cost recovery plan are reasonable and prudent;
- C. Approve the power supply cost recovery plan as proposed by WPS Corp;

D. Approve the 2016 power supply cost recovery factor of negative \$(0.00055) per kWh or \$(0.55) per MWh as requested by WPS Corp in its power supply cost recovery plan;

E. Continue the approval for PSCR recovery of costs and credits associated with ARR and FTR and the impacts from use of natural gas, heating oil and electricity futures and options contracts for the purpose of hedging fuel and purchased power costs;

F. Approve, pursuant to Section 6j (13)(b) of Act 304, capacity charges associated with WPS Corp's purchase agreement with Manitoba Hydro; and

G. Grant WPS Corp such other and further authority as may be lawful and proper.

Respectfully submitted,

WISCONSIN PUBLIC SERVICE CORPORATION

Dated: September 28, 2015

By: _____

Its Attorney

Sherri A. Wellman (P38989)

MILLER, CANFIELD, PADDOCK AND STONE, PLC

One Michigan Avenue, Suite 900

Lansing, MI 48933-1609

(517) 487-2070

Attorney for Wisconsin Public Service Corporation

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STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * *

In the matter of the application of)	
WISCONSIN PUBLIC SERVICE CORPORATION)	Case No. U-17914
for approval of a power supply cost recovery plan,)	
authorization of monthly power supply cost recovery factors)	
for the calendar year 2016, Sec. 6j(13)(b) approval of)	
<u>capacity charges, and other related approvals.</u>)	

MOTION OF WISCONSIN PUBLIC SERVICE CORPORATION
FOR ENTRY OF A PROTECTIVE ORDER

Wisconsin Public Service Corporation (“WPS Corp”), by its attorneys, pursuant to Rule 432 of the Michigan Administrative Hearing System’s Administrative Hearing Rules, R 792.10432, and MCR 2.302(C)(8), respectfully requests entry of a Protective Order to govern the release, use, and disclosure of confidential information, in any matter or form, in this proceeding. In support of its Motion, WPS Corp states as follows:

1. WPS Corp, a wholly-owned subsidiary of WEC Energy Group, Inc., is a public service corporation organized under the laws of the state of Wisconsin, with its principal office located in Green Bay, Wisconsin, and is authorized to do business in the state of Michigan. WPS Corp is engaged in the generation, distribution, and sale of electric energy in service areas located in Northeastern Wisconsin and in an adjacent part of Menominee County in the Upper Peninsula of Michigan.

2. WPS Corp requests the Protective Order to protect confidential information identified as Exhibit A-3 (JGG-3), 108 MW System Power Sale Agreement between The Manitoba Hydro-Electric Board and Wisconsin Public Service Corporation, dated February 26,

2014 (“Manitoba Hydro Agreement”), and confidential portions of the testimony of John G. Guntlisbergen which address the terms and conditions of the Manitoba Hydro Agreement.

3. Although the Michigan Public Service Commission’s (“MPSC” or “Commission”) rules do not expressly address the issuance of protective orders, Rule 403(1) of the Michigan Administrative Hearing System’s Administrative Hearing Rules, R 792.10403, states that “[t]hese rules govern practice and procedure in all proceedings before the commission, excepts as otherwise provided by statute or these rules. In areas not addressed by these rules, the presiding officer may rely on appropriate provisions of the currently effective Michigan court rules.” MCR 2.302(C)(8) states:

“On motion by a party or by the person from whom discovery is sought, and on reasonable notice and for good cause shown, the court in which the action is pending may issue any order that justice requires to protect a party or person from annoyance, embarrassment, oppression, or undue burden or expense, including one or more of the following orders:

(8) that a trade secret or other confidential research, development, or commercial information not be disclosed or be disclosed only in a designated way;”

Also, Section 80 of the Michigan Administrative Procedures Act specifically provides that a presiding officer may “[r]egulate the course of the hearings...” MCL 24.280.

4. The appropriateness of the issuance of protective orders in Commission proceedings for documents which are confidential, proprietary, or involve trade secrets is well established. For example, protective orders have been issued in Case Nos. U-9322 and U-9611 (July 18, 1990), U-10335 (Nov. 29, 1993), U-10491 and U-10492 (July 19, 1992), U-13221 (March 20, 2002), U-14040 (May 11, 2004), U-15988 (August 3, 2009), U-16166 (July 23, 2010), U-16417 (August 5, 2011), and U-17672 (November 19, 2014). In its Opinion and Order dated June 30, 1994, Case No. U-10282, the Commission discussed the standards that it applies when considering whether to issue a protective order. The Commission stated that before it will

enter a protective order, the moving party must show “(1) that the information at issue is a trade secret or otherwise confidential, and (2) that disclosure would work a clearly defined and serious injury.”

5. The documentation which is identified in paragraph 2 herein, contains confidential information, which if publically disclosed would result in a serious injury to future power supply negotiations and the ability to secure reasonable power agreements and, thereby, affect WPS Corp’s power supply costs.

6. WPS Corp represents that the documentation identified in paragraph 2 herein is not in the public domain and is treated as confidential by other regulatory agencies over who have control of WPS Corp.

7. The proposed Protective Order (Exhibit A hereto) is modeled after other MPSC orders which protected information. The proposed Protective Order identifies the documentation in paragraph 2 as “Protected Material” and provides that any document filed with the Commission that contains Protected Material shall be placed in a sealed envelope with a copy of the Protective Order attached and maintained in the Commission’s files. The proposed Order also provides that materials which WPS Corp contends are confidential will be marked as “Protected Material.” The proposed Order prohibits distribution or dissemination of the protected documentation by MPSC Staff (“Staff”) or any properly admitted party except according to the terms of the Protective Order. Further, the proposed Order dictates the use of the documentation in the discovery and litigation phases of this case, and requires that WPS Corp be given notice of any Freedom of Information Act request filed with the Commission (or Attorney General’s (“AG”) office) seeking access to the documents. Such notice must be given at least five (5) business days prior to the MPSC, Staff or AG, responding to the request so as to

provide WPS Corp with an opportunity to take whatever legal actions it deems appropriate to protect the documents from disclosure.

8. The proposed Protective Order will not hinder the Commission's, the Administrative Law Judge's, Staff's or any properly admitted party's review of the Application, testimony and exhibits in MPSC Case No. U-17914, because all will continue to have full access to the confidential information.

WHEREFORE, for the reasons states herein, WPS Corp respectfully requests the Commission to grant this Motion and enter the proposed Protective Order, attached as Exhibit A.

Respectfully submitted,

WISCONSIN PUBLIC SERVICE CORPORATION

Dated: September 28, 2015

By: _____

Its Attorney
Sherri A. Wellman (P38989)
MILLER, CANFIELD, PADDOCK and STONE, P.L.C.
One Michigan Avenue, Suite 900
Lansing, Michigan 48933
(517) 483-4954

Attorney for Wisconsin Public Service Corporation

25247092.1\130072-00085

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * *

In the matter of the application of)	
WISCONSIN PUBLIC SERVICE CORPORATION)	Case No. U-17914
for approval of a power supply cost recovery plan,)	
authorization of monthly power supply cost recovery factors)	
for the calendar year 2016, Sec. 6j(13)(b) approval of)	
<u>capacity charges, and other related approvals.</u>)	

PROTECTIVE ORDER

1. This Protective Order governs the use and disclose of confidential (“Protected Material”) to be disclosed by Wisconsin Public Service Corporation (“WPS Corp” or “Company”) as set forth herein. The intent of this Protective Order is to protect the release, use and disclosure of confidential information that meets the following criteria:

- a. WPS Corp hereby certified that such Protected Material is not in the public domain; and
- b. The documentation listed in paragraph 2 herein, either (i) has not been filed with state, provincial or federal agencies, or (ii) if filed with state, provincial or federal agencies, has been protected against public disclosure.

2. The Protected Material that this Protective Order protects is Exhibit A-3 (JGG-3), 108 NW System Power Sale Agreement between The Manitoba Hydro-Electric Board and Wisconsin Public Service Corporation, dated February 26, 2014 (“Manitoba Hydro Agreement”), and confidential portions of the testimony of John J. Guntlisbergen which address the terms and conditions of the Manitoba Hydro Agreement.

3. This Protective Order protects not only the documents described in Paragraph 2 herein, but also protects from disclosure the information contained therein in any form including, but not limited to, affidavits, testimony, exhibits, workpapers, studies, discovery inquiries and responses, and all other data and documentation to the extent provided to the parties or filed with the Michigan Public Service Commission (“MPSC”) in connection with these proceedings.

4. WPS Corp shall furnish the Protected Material to the Administrative Law Judge (“ALJ”), MPSC Staff (“Staff”) and any properly admitted intervenors (“Intervenors”) (collectively the “Parties”) subject to the terms of this Protective Order for the objective of allowing the Parties access to information requested by them for the purposes of advocating or adjudicating positions in this proceeding. WPS Corp shall provide such Protected Material directly to the ALJ, Staff and Intervenors and shall file them under seal with the Docket Section of the MPSC.

5. The Parties to this case retain the right to seek further restrictions on the dissemination of Protected Materials to persons or entities who may subsequently seek to intervene in this or any other MPSC proceeding.

6. WPS Corp shall stamp each page of the Protected Material: “THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION SUBJECT TO A [DATE] PROTECTIVE ORDER WHICH IS ON FILE IN CASE NO. U-17914 WITH THE DOCKET SECTION. ANY PERSON RECEIVING OR REVIEWING THIS DOCUMENT IS BOUND BY THE TERMS OF THE PROTECTIVE ORDER.”

7. Parties and their reviewing representatives receiving Protected Material shall be bound by the terms of this Protective Order and shall, to the extent permitted by law, take

reasonable steps to protect the Protected Material from being available for review by third persons or from being stored or otherwise included with materials available for public disclosure.

8. Protected Material shall remain the property of WPS Corp and shall only remain available to the Party until no later than the conclusion of any appeal of any final order issued in this Case No. U-17914. An attorney for a party in Case No. U-17914 may retain copies of Protected Material until the date the final order in this Case No. U-17914 is no longer subject to judicial review. On or before the date specified by the preceding sentences, the Party shall return to WPS Corp all Protected Material in its possession or in the possession of its reviewing representatives, including all copies thereof and notes of Protected Material or certify in writing that the Protected Material has been destroyed. The Party shall submit to WPS Corp written certification stating that all Protected Material and all copies thereof and all notes of Protected Material in its possession, care, custody or control have been returned or destroyed.

9. Parties receiving a copy of the Protected Material may make additional copies and may use the Protected Material in the course of this proceeding; however, such material shall not be released or disclosed to any other person, except to the extent authorized in this Protective Order. The Protected Material may not be used for any purpose except as necessary for the conduct of this proceeding and any other WPS Corp proceeding before the MPSC for which Protected Material is a source document.

10. Offers of evidence in this or any other MPSC proceeding, as well as briefs and other written submissions, may include, incorporate, utilize, refer to, or otherwise use Protected Material in any reasonable manner. Written submissions using Protected Material shall be filed under seal with the ALJ, to be maintained by the Docket Section of the MPSC in envelopes clearly marked on the outside with the notation reflected in Paragraph 6, supra, or in another

appropriate manner. Simultaneously, identical documents and materials, but with the protected information redacted, shall be filed, offered, introduced, or otherwise disclosed in the usually manner for the submissions of evidence or briefs.

Furthermore, with regard to proceedings before the MPSC or presiding officers designated by it, examination of witnesses on the Protected Material shall be conducted on a separate record to be maintained by the Docket Section of the MPSC in the manner, and subject to the limitations provided in Paragraphs 6, 7 and 8 above. These separate record proceedings shall be closed to all persons except those furnishing the Protected Material and Parties otherwise submit to this Protective Order. The party presenting the information during the course of a proceeding shall advise the ALJ receiving testimony of the terms of this Protective Order and suggest that a separate, protected record be made of all testimony concerning the protected information. Copies of documents filed with the MPSC that contained Protected Material, including the portions of the exhibits, transcripts, and briefs that refer to Protected Material, should be sealed and maintained in the MPSC's files with a copy of this Protective Order attached.

11. It is intended that the Protected Material subject to this Protective Order shall be shielded from disclosure to anyone who is not a party to this case only to the extent permitted by law. If any person files a Freedom of Information Act Request with the MPSC or Michigan Attorney General ("AG") seeking access to documents subject to this Protective Order, the MPSC's Executive Secretary or the AG shall immediately notify WPS Corp, and WPS Corp may take whatever legal actions it deems appropriate to protect the Protected Material from disclosure. In accordance with Section 5 of the Freedom of Information Act, MCL 15.235, the

notice must be given at last five (5) business days prior to the MPSC, its Staff, and/or AG responding to the request.

12. The provision of this Protective Order shall not apply to a particular document or portion of a document described in Paragraphs 2 and 3 if a party can demonstrate that it has been previously disclosed by WPS Corp and does not meet the criteria set forth in Paragraph 1 a or b. Before disclosing a particular document or portion of a document described in Paragraph 2 or 3, however, the party must first provide reasonable notice to WPS Corp of its conclusion that the document or portion of a document is not subject to this Protective Order because of prior disclosure. The provision of this Protective Order shall terminate as to the particular documents described in Paragraphs 2 and 3 to the extent that the terms of such documents are filed with a state, provincial or federal agency and are not subject to a protection from public disclosure, or are otherwise lawfully disclosed.

13. If Parties that receive Protected Material under this Protective Order violate this Order by an improper disclosure or use of Protected Material, then the violating party shall take all necessary steps to remedy the improper disclosure or use. This includes immediately notifying the MPSC, the ALJ, and WPS Corp, in writing, of the identity of each person known or reasonably suspected to have obtained the Protected Material. Parties that violate this Protective Order remain subject to Paragraph 13 regardless of whether WPS Corp could have discovered the violation earlier than it was discovered. Paragraph 13 of this Protective Order applies to both inadvertent and intentional violations. Nothing in this Protective Order limits WPS Corp's rights and remedies, at law or in equity, against Parties or persons using Protected Material in a manner not authorized by this Protective Order, including the right to obtain injunctive relief to prevent or redress violations of this Protective Order.

14. The MPSC or any ALJ designated by it may subsequently declare that the protected status of a document or portion of a document designated a Protected Material should not be continued and immediately communicate that declaration to WPS Corp. Thereafter, this Protective Order shall cease to apply to that document or portion of the document unless, within ten (10) days, WPS Corp files a pleading asserting that the information should continue to be protected and setting forth the basis for that assertion. WPS Corp shall bear the burden of proving that the information is entitled to continuing protection from disclosure. If the MPSC or ALJ finds that a document or portion of a document no longer qualifies for treatment as “Protected Material”, it shall remain subject to the protection afforded by this order for ten (10) days following the issuance of the MPSC’s order or the ALJ’s ruling.

Dated: _____

Administrative Law Judge

25247156.1\130072-00085

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * *

In the matter of the application of)
WISCONSIN PUBLIC SERVICE CORPORATION) Case No. U-17914
for approval of a power supply cost recovery plan,)
authorization of monthly power supply cost recovery factors)
for the calendar year 2016, Sec. 6j(13)(b) approval of)
capacity charges, and other related approvals.)

NOTICE OF HEARING ON MOTION

PLEASE TAKE NOTICE that the scheduling of an initial hearing on the Motion of Wisconsin Public Service Corporation for Entry of a Protective Order will be taken up with the Administrative Law Judge in this proceeding upon his/her appointment.

Respectfully submitted,

WISCONSIN PUBLIC SERVICE CORPORATION

Dated: September 28, 2015

By: _____
Its Attorney
Sherri A. Wellman (P38989)
MILLER, CANFIELD, PADDOCK and STONE, P.L.C.
One Michigan Avenue, Suite 900
Lansing, Michigan 48933
(517) 483-4954

Attorney for Wisconsin Public Service Corporation

STATE OF MICHIGAN
BEFORE THE
MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of)
WISCONSIN PUBLIC SERVICE CORPORATION)
for approval of a power supply cost recovery plan, and)
authorization of monthly power supply cost recovery)
factors for the calendar year 2016, Sec. 6j (13)(b) approval)
of capacity charges, and other related approvals.)
_____)

Case No. U-17914

DIRECT TESTIMONY AND EXHIBITS OF

JOHN G. GUNT LISBERGEN

9-28-15

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

2 A. My name is John G. Guntlisbergen. My business address is WEC Energy Group, Inc.
3 (“WEC”), 700 North Adams Street, P.O. Box 19001, Green Bay, WI 54307-9001. I am
4 the Manager of Electric Fuel Cost Recovery in the Regulatory Affairs Department of
5 WEC. Wisconsin Public Service Corporation (“WPS Corp” or the “Company”) is a
6 wholly-owned subsidiary of WEC.

7

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

9 A. In 1981, I graduated from St. Norbert College - De Pere, Wisconsin, with a Bachelor of
10 Business Administration Degree in Accounting. After completing college I was employed
11 by WPS Corp as a Depreciation Analyst and later as the Depreciation Supervisor in the
12 Corporate Tax Department. While in the Corporate Tax Department, I performed
13 depreciation studies on utility plant property, and determined book depreciation, tax
14 depreciation and deferred taxes on an actual and forecasted basis. In 1993, I moved to
15 the Rates and Economic Evaluation Department as a Rates Planner. I performed cost

1 studies and rate impact studies for generation planning and long-range corporate
2 planning. I participated in the analysis of transmission costs and the development of the
3 transmission tariffs for filing with the Federal Energy Regulatory Commission ("FERC").
4 I performed electric and gas cost of service studies for the Michigan and Wisconsin
5 jurisdictions. I have also worked with the power supply areas for WPS Corp and Upper
6 Peninsula Power Company to develop Power Supply Cost Recovery ("PSCR") plans and
7 in the reconciliation of the PSCR costs to revenues.

8
9 **Q. Have you ever testified before a regulatory agency?**

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

12
13 **Q. What is the nature of the testimony you are offering in this proceeding?**

14 A. The purpose of my testimony is (1) to support the Company's 2016 PSCR plan, (2) to
15 develop the 2016 PSCR factors, (3) to support Section 6j(13)(b) approval of capacity
16 charges associated with a new purchase power agreement, and (4) to support the cost
17 recovery of financial instruments used to hedge fuel and purchased power costs.

18
19 **Q. Are you sponsoring any exhibits in the proceeding?**

20 A. Yes, I am sponsoring Exhibit A-1 (JGG-1), Exhibit A-2 (JGG-2), and Exhibit A-3 (JGG-3).

21
22 **Q. Were these exhibits prepared by you or under your supervision?**

23 A. Yes.

24
25 **Q. Please describe Exhibit A-1 (JGG-1).**

26 A. Exhibit A-1 (JGG-1) consists of six pages.

1 Page 1 shows the calculation of the uniform PSCR factor for January through December
2 2016.

3 Page 2 details the anticipated power supply costs by function for each month for January
4 through December 2016.

5 Page 3 shows the actual power supply dispatch and the related costs for the first seven
6 months of 2015.

7 Page 4 shows the forecasted power supply dispatch and the related costs for all 12
8 months of 2016.

9 Page 5 compares the first 7 months of actual power supply costs for 2015 to the first 7
10 months of the forecasted power supply costs for the 2016 plan year.

11 Page 6 shows the January through July 2015 actual over/under-recovery of power
12 supply costs as requested in item 5 of the Commission Staff Additional Filing
13 Requirements - PSCR Plans. Page 6 also shows a forecast of the August through
14 December 2015 over/under-recovery of power supply costs.

15
16 The proposed PSCR factors were calculated using WPS Corp's most recent estimates of
17 generation requirements, fuel, purchased power and transmission costs for 2016.

18
19 Pages 3 and 5 of Exhibit A-1 (JGG-1) are in response to item 1 of the ongoing
20 Commission Staff discovery request in Case No. U-8587 entitled "Additional Filing
21 Requirements - PSCR plans". (WPS Corp's submittal of pages 3 and 5 with this case
22 should not imply that the Company agrees that these pages are relevant to the proposed
23 2016 plan.)

24

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

26 A. Page 1 of Exhibit A-2 (JGG-2) is the PSCR schedule Sheet No. D-1.00 of WPS Corp's

1 Michigan rate book revised to reflect the proposed 2016 PSCR factor of negative
2 (\$0.00055) per kilowatt-hour and an estimate of the 2015 PSCR reconciliation factor of
3 \$0.00000 per kilowatt-hour. Exhibit A-2 (JGG-2) also shows the sum of the 2016 PSCR
4 factor and the 2015 PSCR over/under-recovery collection, for a proposed maximum
5 PSCR factor of negative (\$0.00055) per kilowatt-hour (or negative (\$0.55) per MWh) to
6 be applied for all billing months during 2016.

7
8 **Q. Please describe Exhibit A-3 (JGG-3).**

9 A. Exhibit A-3 (JGG-3) is a capacity purchase agreement with The Manitoba Hydro-Electric
10 Board.

11
12 **Q. What are the PSCR clause base and the loss factor used in the determination of
13 the PSCR factor in this case?**

14 A. The current PSCR clause base is \$39.43/MWh on a generation basis and the loss factor
15 is 1.0276 as established in the Company's last electric rate case order before the MPSC
16 in Case No. U-17669. Applying the loss factor to the PSCR clause base on a generation
17 basis results in a PSCR clause base of \$40.52/MWh on a requirement sales basis,
18 which is used in the determination of the PSCR factor as shown on line 7 of page 1 of
19 Exhibit A-1 (JGG-1).

20
21 **Q. How was the proposed negative (\$0.55)/MWh power supply cost recovery factor
22 for 2016 determined?**

23 A. Referring to the annual total column on page 1 of Exhibit A-1 (JGG-1), the proposed
24 negative (\$0.55)/MWh power supply cost recovery factor was determined by: (a) dividing
25 the total system costs for recovery on line 1 of \$531,727,000, by the net system
26 requirements excluding losses on line 2 of 13,301,603 MWhs, resulting in the corporate

1 average power supply cost of \$39.97/MWh on line 3; (b) This average power supply
2 cost/MWh was applied to the estimated 2016 Michigan retail sales of 273,257 MWhs on
3 line 4, resulting in the net power supply costs assigned to the Michigan retail jurisdiction
4 of \$10,922,000 on line 5; (c) Dividing the adjusted net power supply costs assigned to
5 the Michigan jurisdiction of \$10,922,000 by the estimated 2016 Michigan retail sales on
6 line 4, resulted in the Michigan power supply cost rate of \$39.97/MWh on line 6; (d)
7 Comparing the \$39.97/MWh of power supply cost to the base power supply costs
8 included in base rates of \$40.52/MWh on line 7, results in the proposed negative
9 (\$0.55)/MWh power supply cost recovery factor on line 8; (e) The forecasted 2015
10 over/under-collection amount of \$0 shown on line 9, which results in the roll-in of
11 \$0.00/MWh (line 10); and (f) The resulting 2016 PSCR factor is negative (\$0.55)/MWh
12 (line 11).

13
14 **Q. How does WPS Corp propose to apply the proposed power supply cost recovery**
15 **factor?**

16 A. The Company proposes to apply a monthly PSCR factor of up to negative (0.55) mills
17 per kilowatt-hour to Michigan retail sales for each month of the plan year of 2016.

18
19 **Q. Could you please describe the sources of the net system requirements shown on**
20 **line 2 of page 1 of Exhibit A-1 (JGG-1)?**

21 A. Net system requirements were premised on historical requirement sales data that are
22 corrected for weather and for known deviations. Some of the known deviations are
23 determined after a field survey of WPS Corp's largest retail industrial customers and all
24 firm wholesale customers. The electric residential category, which represents 21.7% of
25 the total firm and interruptible sales, includes urban and rural residential and farm
26 customers. The residential group forecast is based upon projected customer additions,

1 the effective annual average number of customers, days covered by the meter reading
2 year, and kilowatt-hour consumption per customer per meter reading day. Commercial
3 and industrial classes have been combined, and these classes represent 58.8% of WPS
4 Corp's firm and interruptible sales. The 2016 sales forecast incorporates estimates by
5 account executives based on personal interviews with WPS Corp's largest industrial
6 customers representing 28.8% of the Company's firm and interruptible sales. The
7 wholesale requirement customer sales forecasts were provided by the wholesale
8 customers, and represent 19.5% of the Company's firm and interruptible sales. WPS
9 Corp's Michigan retail sales represent about 2.1% of its total requirement sales and as a
10 result the current Michigan Energy Optimization initiative for energy efficiency is not
11 expected to have significant impacts on its overall requirement sales.

12
13 **Q. How are these net system requirements translated into the costs shown on page 2
14 of Exhibit A-1 (JGG-1)?**

15 A. Net system sales requirements are increased for losses and company use to determine
16 the total system requirements. From the total system requirements, average hydro, wind
17 and contracted purchased power are subtracted and the remaining requirements are
18 loaded on generating units via computer economic dispatch. This economic dispatch
19 recognizes planned maintenance, unit heat rate, fuel cost, unit restrictions including
20 environmental restrictions, and considers potential opportunity sales and purchases from
21 the Midcontinent Independent System Operator ("MISO") Energy Market based on
22 availability and projected market prices. Based on the level of operation of each
23 generating unit, the amount of fuel burned and the cost of the fuel burned, the fuel
24 expenses are determined. Combining the contracted purchased power costs, the
25 opportunity purchases resulting from projected market prices, and forecasted MISO
26 Energy Market charges, the purchased power expenses are determined. Opportunity

1 sales revenues are based on the economic dispatch model and the projected market
2 prices. The 2016 dispatch of the power supply resources and the related costs are
3 shown on page 4 of Exhibit A-1 (JGG-1).

4
5 **Q. Could you provide a brief description of the WPS Corp generation portfolio?**

6 A. Yes. Presently, WPS Corp owns generating facilities with a current MISO Unforced
7 Capacity (“UCAP”) of approximately 2,312.9 MW. WPS Corp owns and operates 5 coal
8 fired units with a total capacity of 900.9 MW and jointly owns 3 coal fired units with a
9 WPS Corp assigned capacity of 438.5 MW that are operated by Wisconsin Power and
10 Light Company (“WP&L”). WPS Corp also has a 543.2 MW combined cycle plant
11 (inclusive of 50MW of duct fired peaking), 385.3 MW of simple cycle gas-fired
12 combustion turbines, 45.0 MW of hydro generation and approximately 108 MW
13 nameplate capacity of wind generation, of which none of the capacity is currently
14 counted as MISO qualified UCAP.

15
16 **Q. What changes has WPS Corp included in its generation portfolio assumptions for
17 2016?**

18 A. WPS Corp retired Pulliam units 5 (45 MW) and 6 (61 MW), and Weston unit 1 (47 MW)
19 as of June 1, 2015. Therefore Pulliam units 5 and 6 and Weston unit 1 have no
20 generation in 2016. WPS Corp continues to operate Weston unit 2 (69 MW), but has
21 switched fuel from coal to natural gas as of June 1, 2015. These changes were made to
22 comply with the Consent Decree with the United States Environmental Protection
23 Agency (“EPA”).

24
25 **Q. How did the Consent Decree with the EPA result in the Company’s decision to
26 retire Pulliam units 5 and 6 and Weston unit 1?**

1 A. As part of the Consent Decree with the EPA WPS Corp agreed to discontinue burning
2 coal at Pulliam units 5 and 6 and Weston units 1 and 2. The retirement of Pulliam units
3 5 and 6 and Weston unit 1 were based on the higher cost of repowering or refueling the
4 units relative to other power supply options for meeting WPS Corp power supply
5 requirements on both a short-term and long-term basis due to the capital cost required to
6 refuel those units. The decision to refuel and operate Weston unit 2 on natural gas
7 makes economic sense, since the unit was initially constructed and is already able to
8 use natural gas as a fuel source without any additional capital expenditures.

9

10 **Q. Have costs for chemicals used to reduce emissions been included in the 2016**
11 **PSCR Plan?**

12 A. Yes. As approved in the December 4, 2007 Opinion and Order adopting settlement
13 agreement issued in MPSC Case No. U-15352, the Company has included costs for
14 chemicals used to reduce emissions in the 2016 PSCR Plan. The fuel costs shown on
15 page 4 of Exhibit A-1 (JGG-1) include costs of \$15.6 million for lime, ammonia, urea,
16 calcium bromide, activated carbon sorbent, trona, activated coke and flue gas
17 conditioning. These chemicals act as reagents to remove/reduce emissions from the
18 combustion by-products of burning coal. The use of lime in the Flue Gas Desulfurization
19 system and trona in the Dry Sorbent Injection system reduces sulfur dioxide (“SO₂”)
20 emissions. The use of ammonia and urea reduces nitrogen oxide (“NO_x”) emissions.
21 The use of activated carbon sorbent and calcium bromide reduces mercury emissions.
22 The use of activated coke in the new Regenerative Activated Coke Technology
23 (“ReACT”) emission control system, which is currently being constructed, will reduce
24 SO₂ and NO_x emissions.

25

1 **Q. Please describe the ReACT emission control system being installed at the Weston**
2 **3 generating unit.**

3 A. WPS Corp is installing a new multi-pollutant control system, commercially known as the
4 ReACT system, which will reduce SO₂, NO_x, mercury, and other air pollutant emissions
5 from the process of burning coal to generate electricity at Weston unit 3. The reduction
6 of emissions at Weston unit 3 was also agreed to as part of the Consent Decree with the
7 EPA. The capital costs for constructing the ReACT system are estimated to be \$345
8 million, but are not considered PSCR costs and have not been included in the 2016
9 PSCR Plan.

10

11 The ReACT system is expected to be completed and operational by the beginning of
12 April 2016, with seasoning of the activated coke and testing of the emission removal
13 capabilities throughout 2016. The Company expects to incur costs of \$9.9 million for
14 activated coke and \$906,000 for ammonia used in the ReACT process in 2016. These
15 costs have been included in the PSCR Plan as part of the cost of chemicals used to
16 control emissions identified above.

17

18 **Q. Have costs for emission allowances been included in the 2016 PSCR Plan?**

19 A. Yes. As also approved in MPSC Case No. U-15352, the Company has included costs
20 for emission allowances in the 2016 PSCR Plan. The emission allowance costs for 2015
21 are forecasted to be \$673,000 as shown on page 4, line 25 of Exhibit A-1 (JGG-1).

22

23 **Q. Has WPS Corp included in its 2016 PSCR Plan any coal and rail transportation**
24 **contract obligation costs related to not meeting minimum amounts required to be**
25 **purchased and transported under its coal and rail contracts?**

26 A. No. WPS Corp does not expect to be subject to rail transportation contract minimum

1 volume obligation costs and does not expect to incur coal contract obligation costs in
2 2016, and therefore has not included any of these costs in the 2016 Plan. However,
3 WPS Corp requests cost recovery through the PSCR mechanism for any coal and rail
4 contract obligation costs that may actually be incurred during the Plan year.

5
6 **Q. Could you please provide a general overview of the Company’s purchased power**
7 **agreements (“PPAs”), included in the 2016 plan, that are in excess of 6 months?**

8 A. Yes.

9
10 Wisconsin River Power Company (“WRPCO”) Hydro Generation – 18.7 MW of
11 UCAP; at an approximate cost of \$3,750,084. Capacity charges were approved
12 by the MPSC in Case No. U-14422.

13
14 Manitoba Hydro – 100 MW of energy, 186,624 MWh of energy through May 31,
15 2016, at an approximate total cost of \$6,699,801. WPS Corp is settling the
16 energy provided by this agreement outside of the MISO Energy Market. There
17 are no capacity charges with this agreement. There are Renewable Energy
18 Credits associated with wind energy that are purchased as part of this agreement
19 at a cost of \$144,540.

20
21 WRPCO (J31 Combustion Turbine) – 4.0 MW of UCAP, at an approximate cost
22 of \$506,561; Capacity charges were approved by the MPSC in Case No.
23 U-16882.

24

1 Exelon Generation Company, LLC (Exelon) – 100 MW capacity purchase for 12
2 months starting June 2015 through May 2016 at a cost of \$684,000; Capacity
3 charges were approved by the MPSC in Case No. U-17672.

4
5 Forward Energy (Wind) – Project is expected to produce 152,452 MWh of energy
6 at an approximate cost of \$11,344,549. There are no capacity charges with this
7 agreement.

8
9 Shirley Wind (Wind) – Project is expected to produce 62,155 MWh of energy at
10 an approximate cost of \$4,877,568. There are no specific capacity charges for
11 this PPA. In addition, the price paid for the energy from this wind project that is
12 above the MISO Locational Marginal Price (“LMP”), plus administrative costs, is
13 reimbursed by the Department of Administration for the state of Wisconsin to
14 meet its renewable energy requirements, which keeps WPS Corp economically
15 whole.

16
17 Shell Energy North America - 50 MW energy purchase for a 24x7 energy product
18 with the delivery point at WPS Corp’s commercial pricing node (including NERC
19 holidays); 439,200 MWhs of energy at a price of \$35.50/MWh for a total cost of
20 about \$15.6 million. There are no capacity charges with this agreement.

21
22 Manitoba Hydro - 108 MW of capacity and on peak energy purchases starting
23 June 1, 2016 through May 31, 2021. The total cost of the capacity and energy of
24 257,472 MWhs in 2016 is estimated to be \$ [REDACTED]; WPS Corp is seeking
25 Section 6j(13)(b) approval as part of this filing.

26

1 NextEra Energy Power Marketing PPA - 50 MW energy purchase for a 24x7
2 energy product with the delivery point at WPS Corp's commercial pricing node
3 (including NERC holidays); 439,200 MWhs of energy at a price of \$35.35/MWh
4 for a total cost of about \$15.5 million. There are no capacity charges with this
5 agreement.

6
7 Parallel Generation – Purchases of renewable energy and market priced energy
8 from customer owned generation; 221,124 MWhs of energy for a cost of about
9 \$17.7 million. There are no capacity charges with these agreements.

10
11 **Q. Has WPS Corp included any renewable energy costs in its PSCR plan for 2016?**

12 A. Yes. As indicated in the previous discussion on purchased power contracts, WPS Corp
13 has included purchased power costs for renewable energy purchases. Under Wisconsin
14 state statute 196.378, WPS Corp is required to provide a portion of its electric power
15 supply to retail customers from renewable energy sources. The PSCW has reviewed
16 renewable energy sources as part of its audit in Docket No. 6690-UR-124 and has
17 allowed these costs to be recovered in WPS Corp's Wisconsin rates for 2016. At this
18 point in time, WPS Corp is not aware of any PSCW staff issues associated with
19 renewable energy costs.

20
21 On October 6, 2008, Governor Jennifer M. Granholm signed into law the Clean,
22 Renewable, and Efficient Energy Act, 2008 Public Act 295 (PA 295). Generally, PA 295
23 requires all electric providers serving retail load in Michigan to achieve a renewable
24 energy credit standard. WPS Corp expects to meet the Michigan renewable energy
25 requirements based on its current renewable energy portfolio and its future renewable
26 energy plans

1 **Q. Has all of the opportunity sales revenue been included as a reduction to the power**
2 **supply costs in this case?**

3 A. Yes. All forecasted opportunity sales revenues have been included as a reduction to the
4 power supply costs in this case; actual revenues will be considered in the reconciliation
5 of this plan.

6

7 **Q. What MISO Energy Market costs has the Company included in the 2016 PSCR**
8 **Plan?**

9 A. In addition to the normal opportunity sales and opportunity purchases that are expected
10 to occur in the MISO Energy Market, the Company has included net marginal congestion
11 credits of \$2,400,000, net marginal loss costs of \$2,578,839, Revenue Sufficiency
12 Guarantee ("RSG") Make Whole Payment credits of \$121,070, RSG charges of
13 \$977,266, Real Time Revenue Neutrality Uplift ("RNU") charges of \$2,263,816, Ancillary
14 Services Market ("ASM") charges of \$770,304, ASM credits of \$1,366,574, Balancing
15 Authority charges (MISO Schedule 24) of \$225,154, MISO administrative charges for the
16 Financial Transmission Rights ("FTR") market (MISO Schedule 16) of \$79,814, and
17 MISO administrative charges for the Energy Market (MISO Schedule 17) of \$1,663,654
18 in the 2016 PSCR Plan.

19

20 The Company also has the option of offering virtual generation and bidding virtual load
21 into the MISO Energy Market. These risk management tools can be used to manage
22 overall market price impacts to the Company and its customers. There are no costs or
23 benefits included in the 2016 PSCR Plan for virtual offers and virtual bids, since these
24 activities would be transacted dependent upon the circumstances of generation unit and
25 transmission system availability and system load requirements as they occur on an

1 actual basis in the Company's load zone, but if incurred, these costs and/or benefits will
2 be reflected in the 2016 PSCR reconciliation.

3
4 MISO Energy Market costs are pursuant to FERC approved charges and the Company
5 requests the inclusion of these costs and benefits in its PSCR mechanism.

6
7 **Q. In what FERC Accounts are MISO Energy Market costs and credits being**
8 **recorded?**

9 A. Consistent with the FERC Order 668, MISO Schedules 16 and 17 for the MISO Energy
10 Market costs are being recorded in FERC Account 575.7 (Market Administration,
11 Monitoring and Compliance Services). Opportunity sales and ASM revenues from the
12 MISO Energy Market are being recorded in FERC Account 447 (Sales for Resale). All
13 other MISO Energy Market costs and credits are being recorded in FERC Account 555
14 (Purchased Power).

15
16 **Q. Will WPS Corp use any financial instruments to hedge fuel and purchased power**
17 **costs in 2016?**

18 A. Yes. WPS Corp received an order approving its Electric Market Risk Management
19 Policy and Plan from the PSCW on July 19, 2013, which allows for the use of financial
20 instruments for hedging. Based on the order, financial instruments exclude contracts for
21 the physical delivery of gas and electricity to the WPS Corp system, which are
22 considered outside of the WPS Corp Electric Market Risk Management Policy and Plan.
23 Based on the approved plan, the Company can use the following financial instruments to
24 hedge fuel and purchased power costs in 2016:

1 (1) Auction Revenue Rights (“ARR”) and FTR

2 In order to mitigate some of the effects of congestion pricing, utilities are allocated ARR
3 which provide revenues that can either be retained or used in the purchase of FTR to
4 hedge future potential congestion costs. Revenues from ARR and credits or charges
5 from the MISO Market for FTR can be used to offset some of the effects of the higher or
6 lower prices that will be reflected in the Locational Marginal Prices (“LMP”) due to
7 congestion. The FTR are considered financial instruments, since they represent future
8 rights to offset congestion costs. The Company receives ARR and purchases FTR to
9 manage its congestion cost risks.

10
11 (2) NYMEX-traded natural gas futures and options contracts

12 With the volatility of natural gas prices, the Company utilizes NYMEX-traded natural gas
13 futures and options contracts to manage or hedge some portion of the price risk of
14 natural gas used in its supply resource mix. A credit of \$60,280 has been included in the
15 2016 PSCR Plan as part of purchased power costs for gas hedge impacts in 2016 based
16 on the market price of natural gas at the time this fuel and purchased power forecast
17 was prepared.

18
19 (3) NYMEX-traded Heating Oil futures and options contracts

20 WPS Corp has a hedging program to manage the fuel cost risk associated with the
21 delivery of coal resulting from diesel fuel surcharges which are based on a published
22 diesel fuel price index. The diesel fuel index (EIA On-Highway Diesel, All Types) used to
23 set the surcharges by the rail companies is not forward traded; however, NYMEX
24 Heating Oil prices are closely correlated with the EIA Diesel price and are traded in very
25 liquid markets. Therefore, the Company hedges these coal transportation surcharges
26 with the purchase of NYMEX-traded Heating Oil futures and options contracts to

1 manage or hedge a portion of the price risk of coal transportation costs. A charge of
2 \$505,000 has been included in the 2016 PSCR Plan as part of fuel costs for diesel fuel
3 surcharge hedge impacts in 2016 based on the market price of Heating Oil at the time
4 this fuel and purchased power forecast was prepared.

5
6 (4) NYMEX-traded electricity futures and options contracts for delivery at a specified
7 Midwest hub or a similar financial contract listed on the Intercontinental Exchange, Inc.
8 (“ICE”) trading platform.

9 In order to manage or hedge a portion of the price risk of the purchases from the MISO
10 market, the Company may use NYMEX-traded electricity futures and options contracts
11 for delivery at a specified Midwest hub or a similar financial contract listed on the ICE
12 trading platform. No financial instruments for electricity futures or options contracts have
13 been executed to date.

14
15 The Company requests the inclusion of all costs and credits in the PSCR for ARR and
16 FTR and the impacts from the use of natural gas, heating oil and electricity futures and
17 options contracts for the purpose of hedging fuel and purchased power costs.

18
19 **Q. Do the power supply costs you are proposing include charges for network**
20 **transmission service from the American Transmission Company LLC (“ATCLLC”)**
21 **and the MISO and their related administrative charges for transmission service?**

22 A. Yes. WPS Corp receives transmission and related services from the ATCLLC and MISO
23 at FERC approved rates. As approved in Case No. U-13688, WPS Corp’s ATCLLC and
24 MISO transmission network and related administrative costs have been included in
25 PSCR costs since the 2005 PSCR Plan. For the total WPS Corp system in 2016, the
26 forecasted cost for these services is approximately \$143,844,081.

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These costs are included in the line titled “Transmission – PSCR Recovery” on page 2, line 15 of Exhibit A-1 (JGG-1) in which the system costs are developed.

Q. In what FERC Accounts are ATCLLC and MISO network transmission and their related administrative charges recorded?

A. ATCLLC and MISO network transmission charges are recorded in FERC Account 565 (Transmission of Electricity by Others). Consistent with the FERC Order 668, MISO Schedule 10 costs are recorded in FERC Accounts 561.4 (Scheduling, System Control and Dispatching Services), 561.8 (Reliability Planning and Standards Development Services) and 575.7 (Market Administration, Monitoring and Compliance Services).

Q. Please explain the MISO Schedule 43 costs being charged to WPS Corp?

A. MISO Schedule 43 costs are allocated to WPS Corp by MISO, and are expenses incurred by other Market Participants to continue operating generating units for transmission system reliability that would otherwise be retired or idled based on economic considerations. These generating assets are known as System Support Resources (“SSR”). A MISO system study is performed to determine if the resource submitted for retirement is needed for system reliability and should be designated as a SSR. If a unit is designated as a SSR for reliability by MISO, a SSR agreement is negotiated between the SSR asset owner and the MISO for the cost recovery to continue operating the facility. The need for the SSR agreement, the amount of the SSR cost recovery, and the allocation of SSR costs by MISO to other Market Participants must be approved by FERC. Each SSR is for a period of one year or less, and if extended must be re-evaluated by MISO, MISO stakeholders, and re-approved by FERC.

1 **Q. What are the estimated MISO Schedule 43 costs to be charged to WPS Corp for**
2 **2016?**

3 A. At this time, the current MISO Schedule 43 charges to WPS Corp are forecasted to be
4 minimal for 2016. The Company will seek recovery of all actual MISO Schedule 43 costs
5 assigned to WPS Corp as part of the PSCR reconciliation process.
6

7 **Q. Are there any other MISO market changes that could significantly change WPS**
8 **Corp power supply costs in 2016 that have not been included in this PSCR Plan?**

9 A. At this time, there are no “known” MISO market changes that could significantly change
10 the Company’s 2016 PSCR plan. However, MISO has initiated stakeholder discussion
11 on enhancements to the resource adequacy construct including seasonal requirements,
12 locational considerations and the interconnection of new capacity resources. While, as
13 of the filing of this case, no changes are expected that would impact WPS Corp’s power
14 supply costs in 2016, WPS Corp actively participates in the MISO stakeholder process to
15 advocate for short and long-term policies that are beneficial to its customers, and any
16 actual changes will be reflected in the 2016 PSCR reconciliation.
17

18 **Q. Pages 2 and 3 of the Staff Additional Filing Requirements request an explanation**
19 **of the differences between the then actual year to date and the Forecasted Power**
20 **Supply Costs year to date. Can you please explain the differences between actual**
21 **2015 and forecasted 2016?**

22 A. Yes. The following describes and quantifies the major reasons for the differences
23 between the year-to-date actual through July 2015 and forecasted year-to-date through
24 July 2016 power supply costs (WPS Corp’s submittal of this information should not imply
25 that the Company agrees that this comparison is relevant to the proposed 2016 plan.):

1 **Fossil**

2 Total fossil generation is projected to be 1,015,724 MWhs or 27% higher in the 2016
3 Plan as compared to 2015. This increased fossil generation is due to factors impacting
4 market conditions including lower rail costs for Pulliam and Weston and higher
5 forecasted MISO market LMPs, along with variations in plant maintenance outages.
6 Listed below are specific details regarding plants with significant variances:

7 **Pulliam**

8 -Generation (MWh): The MWhs for Pulliam are projected to increase in 2016 compared
9 to 2015 mainly due to a 9 week planned maintenance outage at Pulliam 7 and a
10 3 week outage on Pulliam 8 in 2015 with no outages planned in 2016 and the
11 market conditions described above.

12 -Cost (\$/MWh): The \$/MWhs for Pulliam are projected to decrease in 2016 compared to
13 2015 mainly due to a new rail contract in 2016 resulting in a \$4.10/MWh lower
14 cost and no rail contract obligation costs which were \$2.95/MWh in 2015.

15 **Weston**

16 -Generation (MWh): The MWhs for Weston are projected to increase in 2016 compared
17 to 2015 mainly due to ReACT Guaranteed Performance Standard (“GPS”) testing
18 on Weston 3 in 2016 requiring increased operations and the market conditions
19 described above.

20 -Cost (\$/MWh): Overall, the \$/MWh costs for Weston are projected to slightly increase in
21 2016 compared to 2015. The change is mainly due to increased costs of
22 \$1.66/MWh for activated coke and ammonia used to control emissions, as a
23 result of the new ReACT emission control process at Weston 3, which is
24 forecasted to begin operation in 2016. The conversion of Weston 2 to only

1 burning natural gas resulted in a \$0.80/MWh increase. The higher cost/MWh is
2 largely offset by lower coal transportation costs due to a new rail contract in
3 2016, resulting in a \$0.97/MWh lower cost, and no rail contract obligation costs in
4 2016, as compared to \$0.95/MWh in 2015.

5 Edgewater

6 -Generation (MWh): The MWhs for Edgewater are projected to increase in 2016
7 compared to 2015 mainly due to 4 weeks planned maintenance outage in 2015
8 versus no planned outages in 2016 and the market conditions described above.

9 -Cost (\$/MWh): The \$/MWhs for Edgewater are projected to increase by 2.7% in 2016
10 as compared to 2015. This is primarily due to higher forecasted chemical costs
11 to control emissions.

12 Columbia

13 -Generation (MWh): The MWhs for Columbia are projected to increase in 2016
14 compared to 2015 mainly due to planned maintenance outages at Columbia 1 for
15 6 weeks and Columbia 2 for 6 weeks in 2015 versus 4 weeks each in the 2016
16 Plan, and the market conditions described above.

17 -Costs (\$/MWh): The \$/MWh cost for Columbia are projected to increase in 2016
18 compared to 2015 due to a new rail contract effective January 1, 2015, which
19 includes a contract price that escalates from 2015 to 2016. In addition, during
20 the first part of 2015 lower cost coal in inventory from 2014 was expensed
21 resulting in 2015 costs being approximately \$3.45/MWh lower.

1 **Emission Allowances Costs**

2 -The 2016 PSCR plan for emission allowance costs are higher in 2015 by \$500,000
3 mainly due to higher emissions due to increased generation.

4

5 **Fox Energy Center**

6 -Generation (MWh): The Company's combined cycle generation is highly variable and is
7 affected by market conditions, peak demands and baseload unit outage
8 schedules. The Fox Energy Center generation is expected to decrease by
9 165,058 MWhs or 8.38% in 2016 due to market conditions.

10 -Costs (\$/MWh): The cost per MWh is expected to increase by approximately 27% in
11 2016 due to the forecasted higher cost for natural gas and increased use of fuel
12 oil. The average price for natural gas for Fox Energy Center in the 2016 Plan is
13 projected to be \$3.339/dekatherm or 13% higher than actual 2015 average prices
14 of \$2.938/dekatherm and was 81% of the variance. The alternate fuel was
15 \$.91/MWh higher or 16% of the variance.

16 **Hydro**

17 -Generation (MWh): The 2016 PSCR plan reflects expected hydro generation under
18 normal conditions utilizing a 30-year average. Hydro generation in 2015 was lower
19 due to lower than normal rainfall.

20 **Peakers**

21 -Generation (MWh): The Company's gas fired combustion turbine generation is highly
22 variable and is affected by baseload unit outage schedules, market conditions and
23 peak demands. For 2016, more normal weather and the resulting peak demands

1 are expected to result in increased gas fired combustion turbine generation of
2 117,274 MWhs.

3 -Costs (\$/MWh): The cost per MWh is expected to be lower by 13%, due to the lower
4 cost of gas from storage and increased operation of the gas fired combustion
5 turbine generation during times of lower market prices for natural gas.

6 7 **Purchased Power**

8 As illustrated on Page 5 of Exhibit A-1 (JGG-1), the forecasted 2016 purchased power
9 volumes are expected to decrease in excess of 27% as compared to 2015 actuals. The
10 decrease is primarily the result of higher LMPs forecasted in 2016 relative to the variable
11 cost of generation. The higher LMPs result in higher levels of generation, which in turn
12 reduce the quantity of market energy purchases.

13
14 Year to date July 2016 purchased power costs are expected to decrease by \$31.2
15 million compared to costs for year to date July 2015. The primary causes of the
16 decrease in purchased power costs from 2015 to 2016 are due to the lower volumes of
17 energy forecasted to be purchased. Two separate short term energy purchases totaling
18 100 MW as described earlier were made to limit risk associated with MISO energy and
19 congestion price volatility.

20 21 **Transmission Expenses**

22 Transmission expenses are expected to increase from 2015 to 2016 by 7.4% due to
23 increased FERC approved rates for the ATCLLC and MISO network transmission
24 services. This increase reflects the on-going construction costs for upgrades to the
25 ATCLLC transmission network as well as increases from Regional Expansion Criteria

1 and Benefits (“RECB”) cost sharing and Multi-Value Project (“MVP”) projects. RECB cost
2 sharing is included in MISO’s FERC-approved transmission tariff and imposes
3 socialized cost sharing for MISO Market Participants within a region for a portion of new
4 transmission construction of 345 KV or higher voltages. MVPs are transmission projects
5 deemed by MISO to benefit, collectively, all participants in the MISO market. For this
6 reason, MVP costs are socialized across the MISO footprint.

7
8 **Opportunity Sales**

9 Opportunity sales are comprised of both short-term (spot) energy/capacity/ASM sales
10 and mid-term (Firm) energy/capacity sales. As illustrated on Page 5 of Exhibit A-1
11 (JGG-1), the forecasted opportunity sales volumes for the 2016 plan year are expected
12 to increase compared to year 2015. Opportunity sales volumes are closely related to the
13 availability of excess hourly generation at market clearing prices, forecasted demand
14 and forecasted market prices, all of which are taken into consideration through the
15 production cost modeling process employed by WPS Corp. The availability of excess
16 hourly generation at market clearing prices is up in 2016 primarily due to forecasted
17 increases of coal generation.

18
19 **Interruptible Buyout**

20 WPS Corp forecasted no interruptible buyouts in the 2016 PSCR Plan, since any
21 revenue collected for buyouts is used to offset the higher cost of energy and will be
22 reflected in the reconciliation.

23
24 **Q. Has the Company assumed any limitations in the delivery of coal to its coal-fired**
25 **plants in 2016, as part of this PSCR Plan?**

1 A. No. The 2016 PSCR Plan assumes all coal needed to operate the Company's
2 generating facilities on an economic basis is available for 2016. However, if the
3 Company were to experience limited deliveries of coal by the rail companies the
4 Company, will seek to recover any resulting increase in power supply costs in the
5 reconciliation.

6
7 **Q. Are there any significant reasons, such as new power sources or major outages,**
8 **that would require a recalculation of 2016 plan costs for a "same basis"**
9 **comparison with 2015 actual costs as requested in item 4 of the Additional Filing**
10 **Requirements?**

11 A. No.

12
13 **Q. Please describe the purchase agreement with Manitoba Hydro for which Section**
14 **6j(13)(b) approval is sought.**

15 A. WPS Corp entered into a system power purchase agreement, both capacity and energy,
16 dated February 26, 2014, with Manitoba Hydro for the purchase of electric energy and
17 capacity. This agreement is effective, beginning June 1, 2016, through May 31, 2021
18 and has capacity purchases exceeding six months. The agreement has a stated price
19 for the capacity of \$ [REDACTED]/MW per year and a stated energy price of \$ [REDACTED]/MWh for
20 the planning year 2016-2017. The capacity and energy prices contain price adjustment
21 factors to address inflation, which have been reflected in the calculation of the costs for
22 the 2016 plan year.

23

24 A copy of the confidential agreement is sponsored as Exhibit A-3(JGG-3).

25

1 **Q. Did the Manitoba Hydro capacity purchase agreement overall represent WPS**
2 **Corp's least cost option?**

3 A. Yes. WPS Corp issued a Request for Proposal ("RFP") for capacity for the period
4 starting June 1, 2014, through May 31, 2019. There were no conforming responses to
5 the RFP, and only one viable non-conforming bid. The non-confirming bid lead to a
6 capacity purchase for Planning Year 2015-2016 with Exelon for which WPS Corp
7 received Section 6j(13)(b) approval in case U-17672. Following the results of the RFP,
8 WPS Corp analyzed the cost associated with converting the Weston 1, and Pulliam 5
9 and 6 units to natural gas relative to the Manitoba Hydro contract. Based on the
10 analysis performed, Manitoba Hydro was the lowest cost option to secure capacity and
11 energy for the months of June 2016 through May 2021.

12

13 **Q. What was the capacity forecast indicating at the time WPS Corp executed the**
14 **power purchase agreement with Manitoba Hydro?**

15 A. The forecast was indicating a capacity shortage for WPS Corp driven by the retirements
16 of Weston unit 1 and Pulliam units 5 and 6 stemming from the Consent Decree with the
17 EPA as discussed earlier in this testimony.

18

19 The Manitoba Hydro contract was put into place as an intermediate supply source to
20 delay the need for additional capacity resources.

21

22 **Q. What was the basis for the decision to purchase capacity from Manitoba Hydro?**

23 A. WPS Corp had identified a future capacity need due to the retirements of Weston 1, and
24 Pulliam units 5 and 6. An RFP was issued and no conforming bids were received. The
25 contract with Manitoba Hydro was identified as the lowest cost source of capacity and
26 energy over the timeframe for which WPS Corp was seeking as compared to the option

1 of converting Weston 1, and Pulliam units 5 and 6 to natural gas and continuing to
2 operate those units.

3
4 **Q. Was the decision to enter into a capacity purchase agreement with Manitoba
5 Hydro reasonable and prudent?**

6 A. Yes. For the reasons stated above, WPS Corp took a proactive approach and secured
7 the lowest cost source of capacity and energy for the period June 1, 2016 through May
8 31, 2021.

9
10 **Q. The PSCR plan filing requirements of 1982 PA 304 contain additional requirements
11 that you have not addressed. Please explain.**

12 A. The Commission's August 1, 1984 Opinion and Order implementing the PSCR plan for
13 1984, issued in Case No. U-7805, exempted WPS Corp from any further filings of five-
14 year forecasts and underlying information concerning fuel contracts and power supply
15 arrangement as required by Section 6j(3) and 6j(4) of Act 304. Therefore, I have not
16 addressed those matters.

17
18 **Q. Please discuss the actions of the PSCW that are relevant to the 2016 PSCR plan.**

19 A. WPS Corp's electric system is integrated and its power supply costs are incurred on a
20 system wide basis. There are no separate power supply costs incurred specifically for
21 the Michigan jurisdictional sales. Because power supply costs are incurred on a system
22 wide basis, all of the contracts underlying these costs are monitored in depth on a
23 continuous basis by the PSCW.

24

1 **Q. Mr. Guntlisbergen, regarding the proposed 2016 PSCR factors, are you saying that**
2 **the PSCW reviews and approves the major contracts and power supply**
3 **arrangements underlying those factors?**

4 A. Yes. On April 17, 2015, WPS Corp filed a 2016 test year rate case with the PSCW,
5 under Docket No. 6690-UR-124. An initial staff audit of fuel and purchased power
6 expenses was completed, however the PSCW will not make a formal ruling until later
7 this year.

8

9 **Q. So that the MPSC is assured that this review is already being performed by the**
10 **PSCW, would you please describe the monitoring activities being conducted by**
11 **the PSCW?**

12 A. The PSCW review process evaluates the reasonableness and prudence of power supply
13 to ensure adequate future service is supplied at minimal cost and minimal environmental
14 impact. Because of the ongoing nature of the process, there is sufficient assurance that
15 appropriate decisions have been previously made to cover power supply arrangements
16 for the immediate upcoming 12-month period.

17

18 **Q. What plans or procedures are in place for the State of Wisconsin and the PSCW**
19 **for the authorization of new generation facilities?**

20 A. The 1997 Wisconsin Act 204 ("ACT") became law in the spring of 1998. The ACT
21 encompasses the Governor's electric reliability plan and in particular contains provisions
22 which relate to the planning and approval by the PSCW of electric power generation and
23 transmission facilities, the regional management of the transmission system, and new
24 electric power generation, including the ownership and operation of wholesale merchant
25 plants, among other things. The ACT replaced the previous planning process called the
26 Advance Plan with a process called Strategic Energy Assessment.

1 As a replacement for the Advance Plan, the ACT requires the PSCW to prepare
2 a biennial strategic energy assessment that evaluates the adequacy and reliability of the
3 state's current and future electrical supply. The assessment is to include, among other
4 things, identification of and description of projected demand for electric energy, the basis
5 for determining such demand, and whether sufficient electric capacity and energy will be
6 available to the public at a reasonable price.

7 The ACT also modified the facility certification process by which licenses are
8 granted for the construction of power plants and transmission lines. This ACT became
9 effective September 1, 1998.

10 Rulemaking proceedings to establish procedures and requirements for reporting
11 information to the PSCW to enable it to prepare strategic energy assessments were
12 completed in 1999.

13 The ACT also modified the Certificate of Public Convenience and Necessity
14 requirements by limiting its applicability to generation and transmission facilities.

15
16 **Q. Does the ACT have any effect on the 2016 PSCR Plan?**

17 A. No.

18
19 **Q. Does WPS Corp have adequate capacity at this time for year 2016?**

20 A. Yes.

21
22 **Q. Please explain the procedures that WPS Corp follows to minimize the cost of fuel.**

23 A. The following describes the processes that help to minimize the costs of fuel and
24 purchased power:

25 Within WPS Corp's Fuel Services Department, which is directly responsible for
26 fuel procurement, policies and procedures have been developed to outline a series of

1 rules and directives by which to conduct the fuel procurement operations. The
2 procedures and policies include:

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

6

7 **Q. Do the amounts of projected power supply costs include any items of cost that**
8 **the Commission could reasonably anticipate disallowing under section 6j(13)?**

9 A. No.

10

11 **Q. What is your evaluation of the reasonableness and prudence of the proposed 2016**
12 **PSCR plan?**

13 A. I believe that WPS Corp's PSCR plan is reasonable and prudent. I base this conclusion
14 not only on my knowledge of WPS Corp's actions, but also on the actions of the PSCW.
15 The proposed increase in the authorized PSCR factor from negative (\$2.00)/MWh in
16 2015 to negative (\$0.55)/MWh in 2016, is primarily the result of higher coal
17 transportation costs for the jointly owned Columbia generating units, higher natural gas
18 prices, increased emission control costs for the ReACT emission control system, and
19 higher transmission costs, which were somewhat offset by higher opportunity sales
20 revenue.

21

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

23 A. Yes, it does.

WISCONSIN PUBLIC SERVICE CORPORATION
 DEVELOPMENT OF 2016 POWER SUPPLY COST RECOVERY FACTORS
 N.S.R. METHOD WITH ANNUAL LOSS FACTORS

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
1. Total System Costs for Recovery (000's of \$)	\$44,408	\$41,267	\$44,051	\$43,580	\$44,204	\$44,750	\$47,896	\$47,230	\$43,710	\$43,705	\$41,992	\$44,934	\$531,727
* 2. System Requirement Sales MWh	1,156,038	1,071,918	1,099,823	1,027,556	1,056,254	1,137,783	1,219,260	1,196,613	1,098,053	1,058,967	1,055,214	1,124,124	13,301,603
3. Average Power Supply Costs \$/MWh	\$38.41	\$38.50	\$40.05	\$42.41	\$41.85	\$39.33	\$39.28	\$39.47	\$39.81	\$41.27	\$39.79	\$39.97	\$39.97
4. Estimated 2016 Michigan Retail Sales MWh	24,301	22,643	23,131	22,143	22,153	22,270	23,377	23,669	20,740	22,469	22,491	23,870	273,257
** 5. Michigan Retail Power Supply Costs (000's of \$)	\$933	\$872	\$926	\$939	\$927	\$876	\$918	\$934	\$826	\$927	\$895	\$954	\$10,922
6. Michigan Power Supply Cost Rate (\$/MWh)	\$38.41	\$38.50	\$40.05	\$42.41	\$41.85	\$39.33	\$39.28	\$39.47	\$39.81	\$41.27	\$39.79	\$39.97	\$39.97
7. Base Power Supply Costs \$/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
8. 2016 PSCR Factor \$/MWh	(\$2.11)	(\$2.02)	(\$0.47)	\$1.89	\$1.33	(\$1.19)	(\$1.24)	(\$1.05)	(\$0.71)	\$0.75	(\$0.73)	(\$0.55)	(\$0.55)
9. 2015 Under/(Over)-recovery (000's of \$)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)
10. PSCR Rate for 2015 Under/(Over)-recovery (\$/MWh)	(\$0.00)	(\$0.00)	(\$0.00)	(\$0.00)	(\$0.00)	(\$0.00)	(\$0.00)	(\$0.00)	(\$0.00)	(\$0.00)	(\$0.00)	(\$0.00)	(\$0.00)
11. 2016 PSCR Factor + PSCR Rate for 2015 Under/(Over)-recovery (\$/MWh)	(\$2.11)	(\$2.02)	(\$0.47)	\$1.89	\$1.33	(\$1.19)	(\$1.24)	(\$1.05)	(\$0.71)	\$0.75	(\$0.73)	(\$0.55)	(\$0.55)

* - Total Generation and Purchases Less Losses, Opportunity Sales, GDS and Company Use

** - Average Power Supply Costs (\$/MWh) times Estimated Michigan Retail Sales (MWh)

WISCONSIN PUBLIC SERVICE CORPORATION
 ANTICIPATED SOURCES AND COSTS OF POWER SUPPLY
 FOR DEVELOPMENT OF 2016 POWER SUPPLY COST RECOVERY FACTORS

Units: 000's of \$

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1 <u>System Costs for Recovery</u>													
2													
3 Fossil Fuel*	20,928	17,522	15,879	16,718	18,573	18,690	19,928	20,213	17,905	18,424	17,542	20,179	222,501
4													
5 Emission Allowances Costs	527	29	26	15	9	10	10	11	11	9	9	7	673
6													
7 Fox Energy Center	12,547	10,252	8,603	284	1,441	7,131	7,825	8,014	7,439	4,169	7,764	8,965	84,434
8													
9 Combustion Turbines	2,002	1,452	1,997	566	951	697	1,891	1,367	502	269	119	199	12,012
10													
11 Purchased Power	5,488	6,246	10,268	18,558	15,320	10,534	10,201	9,724	10,326	13,635	9,760	8,417	128,477
12													
13 Contract Buyout Amortization	0	0	0	0	0	0	0	0	0	0	0	0	0
14													
15 Transmission - PSCR Recovery	12,038	11,714	11,879	11,602	11,883	12,211	12,621	12,430	12,010	11,808	11,695	11,953	143,844
16													
17 Less: Opportunity Sales -													
18 Resale and Retail	-9,122	-5,948	-4,601	-4,163	-3,973	-4,523	-4,580	-4,529	-4,483	-4,609	-4,897	-4,786	-60,214
19													
20 TOTAL System Costs for Recovery	44,408	41,267	44,051	43,580	44,204	44,750	47,896	47,230	43,710	43,705	41,992	44,934	531,727

* Fossil Fuel Expense excluding unit train costs, handling and demurrage.

QUESTION (1)

		2015 Year-to-Date Actual P.S.C.R. Costs (\$/MWh)							Year To Date	
		JAN	FEB	MAR	APR	MAY	JUN	JUL	Through July	
1	Fossil Generation (MWh)	Pulliam	38,144	65,750	47,502	13,805	11,685	34,949	69,341	281,176
2		Weston	164,567	176,774	171,716	53	0	10,380	181,345	704,835
3		Weston 4	236,307	230,333	246,794	219,238	189,241	241,831	252,205	1,615,949
4		Edgewater	27,474	40,307	54,315	3,157	13,947	57,976	65,846	263,022
5		Columbia	150,252	102,721	112,904	69,906	93,617	157,555	172,478	859,433
6		Total Generation	616,744	615,885	633,231	306,159	308,490	502,691	741,215	3,724,415
7										
8	Fossil Costs (\$000's)	Pulliam	1,534	2,137	1,540	604	1,116	1,290	2,299	10,520
9		Weston	4,812	5,035	5,007	305	-756	659	5,483	20,545
10		Weston 4	5,869	5,749	6,230	5,625	3,275	6,136	6,332	39,216
11		Edgewater	751	997	1,348	116	347	1,428	1,592	6,579
12		Columbia	3,279	2,491	2,886	1,733	2,491	4,249	4,504	21,633
13		Total Costs	16,245	16,409	17,011	8,383	6,473	13,762	20,210	98,493
14										
15	Costs \$/MWh	Pulliam	40.22	32.50	32.42	43.75	95.51	36.91	33.15	37.41
16		Weston	29.24	28.48	29.16	5,754.72	0.00	63.49	30.24	29.15
17		Weston 4	24.84	24.96	25.24	25.66	17.31	25.37	25.11	24.27
18		Edgewater	27.33	24.74	24.82	36.74	24.88	24.63	24.63	25.01
19		Columbia	21.82	24.25	25.56	24.79	26.61	26.97	26.11	25.17
20		Average Costs/MWh	26.34	26.64	26.86	27.38	20.98	27.38	27.27	26.45
21										
22	Emission Allowances	Costs	24	26	27	2	4	12	31	126
23										
24	Fox Energy Center	Generation (MWh)	245,574	212,872	361,832	358,809	243,120	213,257	335,328	1,970,792
25		Costs (\$000's)	5,550	4,848	7,530	6,883	5,044	4,612	6,928	41,395
26		Costs \$/MWh	22.60	22.77	20.81	19.18	20.75	21.63	20.66	21.00
27										
28	Hydro	Generation (MWh)	27,856	19,103	22,771	31,739	27,121	31,831	21,469	181,890
29		Costs	---	---	---	---	---	---	---	---
30		Costs \$/MWh	---	---	---	---	---	---	---	---
31										
32	Peakers	Generation (MWh)	2,318	11,722	8,767	3,076	16,221	13,572	27,876	83,552
33		Costs (\$000's)	254	790	579	227	752	682	1,296	4,580
34		Costs \$/MWh	109.60	67.39	66.04	73.79	46.36	50.25	46.49	54.82
35										
36	Wind	Generation (MWh)	29,886	29,431	26,562	31,480	29,977	15,250	15,200	177,786
37										
38	Purchased Power & Regulation	MWh	360,153	289,112	269,520	355,809	505,619	448,028	311,277	2,539,519
39		Costs (\$000's)	14,935	14,391	13,320	15,109	17,987	17,359	14,703	107,804
40		Costs \$/MWh	41.47	49.78	49.42	42.46	35.57	38.75	47.23	42.45
41										
42	Transmission Expenses (Network Costs (\$000's))		11,256	11,049	11,069	10,809	11,068	11,153	11,755	78,159
43										
44	Less: Opportunity Sales (Mwh)		(87,777)	(72,317)	(196,787)	(49,778)	(58,223)	(70,950)	(175,425)	(711,256)
45	Less: Opportunity Sales (\$000's)		(3,566)	(3,400)	(6,653)	(2,204)	(2,420)	(2,978)	(6,874)	(28,095)
46		Costs \$/MWh	40.63	47.02	33.81	44.28	41.56	41.97	39.18	39.50
47										
48	Less: Interruptible Buyout Sales (Mwh)		0	(4,084)	(384)	0	0	0	(1,911)	(6,379)
49	Less: Interruptible Buyout Revenue		0	(439)	(20)	0	0	44	(101)	(516)
50										
51	Less: Transmission Losses (Mwh)		0	0	0	0	0	0	0	0
52	Less: Company Use and Aux Power (Mwh)		(7,304)	(6,187)	(7,188)	(6,162)	(3,737)	(9,807)	(4,088)	(44,473)
53										
54	System Requirements (Mwh)		1,187,449	1,095,537	1,118,325	1,031,133	1,068,589	1,143,872	1,270,940	7,915,845
55										
56	Less: Distribution Losses (Mwh)		(31,808)	(26,754)	(27,201)	(26,083)	(35,350)	(35,860)	(41,093)	(224,148)
57										
58	System Requirement Sales (Mwh)		1,155,641	1,068,783	1,091,124	1,005,049	1,033,239	1,108,013	1,229,847	7,691,697
59		Costs (\$000's)	44,698	43,674	42,863	39,209	38,908	44,646	47,948	301,946
60		Costs \$/MWh	38.68	40.86	39.28	39.01	37.66	40.29	38.99	39.26

QUESTION (1)	7 Months 2015 ACTUAL	7 Months 2016 PLAN	CHANGE	% CHANGE
1 Fossil Generation (MWh)				
2 Pulliam	281,176	456,835	175,659	62.47%
3 Weston	2,320,784	2,887,440	566,656	24.42%
4 Edgewater	263,022	315,586	52,564	19.98%
5 Columbia	859,433	1,080,278	220,845	25.70%
6 Total Generation	3,724,415	4,740,139	1,015,724	27.27%
7				
8 Costs (\$000's)				
9 Pulliam	10,520	13,426	2,906	27.62%
10 Weston	59,761	75,466	15,705	26.28%
11 Edgewater	6,579	8,108	1,529	23.24%
12 Columbia	21,633	31,238	9,605	44.40%
13 Total Costs	98,493	128,238	29,745	30.20%
14				
15 Costs \$/MWh				
16 Pulliam	37.41	29.39	-8.03	-21.45%
17 Weston	25.75	26.14	0.39	1.50%
18 Edgewater	25.01	25.69	0.68	2.71%
19 Columbia	25.17	28.92	3.75	14.88%
20 Average Costs/MWh	26.45	27.05	0.61	2.30%
21				
22 Emission Allowances Costs	126	626	500	396.83%
23				
24 Fox Energy Center				
25 Generation (MWh)	1,970,792	1,805,734	-165,058	-8.38%
26 Costs (\$000's)	41,395	48,083	6,688	16.16%
27 Costs \$/MWh	21.00	26.63	5.63	26.78%
28				
29 Hydro Generation (MWh)	181,890	229,323	47,433	26.08%
30 Costs	---	---	---	---
31 Cost \$/MWh	---	---	---	---
32				
33 Peakers Generation (MWh)	83,552	200,826	117,274	140.36%
34 Costs (\$000's)	4,580	9,556	4,976	108.65%
35 Costs \$/MWh	54.82	47.58	-7.23	-13.19%
36				
37 Wind Generation (MWh)	177,786	197,067	19,281	10.85%
38				
39 Purchased Power(incl Third Party)				
40 MWh Purchased	2,539,519	1,832,002	-707,517	-27.86%
41 Costs (\$000's)	107,804	76,615	-31,189	-28.93%
42 Costs \$/MWh	42.45	41.82	-0.63	-1.49%
43				
44 Transmission Expenses(Network) (\$000's)	78,159	83,948	5,789	7.41%
45				
46 Less: Opportunity Sales (Mwh)	-711,256	-804,321	-93,064	13.08%
47 Costs (\$000's)	-28,095	-36,910	-8,815	31.38%
48 Costs \$/MWh	39.50	45.89	6.39	16.18%
49				
50 Less: Interruptible Buyout Sales (MWh)	-6,379	0.0	6,379	
51 Less: Interruptible Buyout Revenue (\$000's)	-516	0.0	516	
52				
53 Less: Transmission Losses (Mwh)	0	-160,465	-160,465	
54 Less: Company Use and Aux Power (Mwh)	-44,473	-51,309	-6,836	
55				
56 System Requirements (MWh)	7,915,845	7,988,996	73,151	0.92%
57				
58 Less: Distribution Losses (Mwh)	-224,148	-220,365	3,783	-1.69%
59				
60 System Requirement Sales (Mwh)	7,691,697	7,768,631	76,934	1.00%
61 Costs (\$000's)	301,946	310,156	8,210	2.72%
62 Costs \$/MWh	39.26	39.92	0.67	1.70%

WISCONSIN PUBLIC SERVICE CORPORATION

SUMMARY OF 2015 OVER/UNDERRECOVERY OF POWER SUPPLY COSTS

Question (5)	Actual 2014 Balance	Actual 2015 JAN	Actual 2015 FEB	Actual 2015 MAR	Actual 2015 APR	Actual 2015 MAY	Actual 2015 JUN	Actual 2015 JUL	Forecasted 2015 AUG	Forecasted 2015 SEP	Forecasted 2015 OCT	Forecasted 2015 NOV	Forecasted 2015 DEC	2015 TOTAL
1 Total Requirement Sales (Mwhs)		1,155,989	1,069,076	1,091,449	1,005,324	1,033,458	1,108,255	1,230,093	1,167,887	1,072,035	1,054,333	1,025,582	1,125,963	13,139,443
2 Total System Power Supply Costs		\$44,696,513	\$43,676,217	\$42,861,800	\$39,208,382	\$38,910,269	\$44,647,418	\$47,945,777	\$46,884,000	\$45,279,000	\$43,922,000	\$42,821,000	\$45,311,000	\$526,163,376
3 Cost/Kwh		\$0.03867	\$0.04085	\$0.03927	\$0.03900	\$0.03765	\$0.04029	\$0.03898	\$0.04014	\$0.04224	\$0.04166	\$0.04175	\$0.04024	\$0.04004
4														
5 PSCR SALES (KWH)		23,206,886	21,591,235	23,023,194	21,602,998	19,733,718	21,675,725	21,730,003	23,660,000	20,726,000	22,448,000	21,991,000	23,898,000	265,286,760
6 PSCR Base Rate		\$0.04070	\$0.04070	\$0.04070	\$0.04070	\$0.04052	\$0.04052	\$0.04052	\$0.04052	\$0.04052	\$0.04052	\$0.04052	\$0.04052	\$0.04052
7 Applied PSCR Factor (\$/kwh)		\$0.00222	\$0.00222	(\$0.00200)	(\$0.00200)	(\$0.00200)	(\$0.00200)	(\$0.00200)	(\$0.00200)	(\$0.00271)	(\$0.00271)	(\$0.00271)	(\$0.00271)	(\$0.00271)
8														
9 TOTAL PSCR REVENUES (\$'s)		\$996,040	\$903,327	\$890,998	\$835,185	\$760,143	\$834,949	\$837,040	\$911,383	\$783,698	\$848,811	\$831,531	\$903,639	\$10,336,745
10 APPLICABLE POWER COSTS (\$'s)		\$897,298	\$882,092	\$904,134	\$842,533	\$742,985	\$873,233	\$846,978	\$949,814	\$875,394	\$935,151	\$918,188	\$961,703	\$10,629,504
11														
12 Over/(Under) Recovery	263,681	\$98,741	\$21,235	(\$13,136)	(\$7,347)	\$17,157	(\$38,284)	(\$9,939)	(38,431)	(91,695)	(86,340)	(86,657)	(58,064)	(29,078)
13 \$/KWH		0.00425	0.00098	-0.00057	-0.00034	0.00087	-0.00177	-0.00046	-0.00162	-0.00442	-0.00385	-0.00394	-0.00243	-0.00011
14														
15 Over/(Under) Recovery Balance	\$263,681	\$362,422	\$383,657	\$370,521	\$363,174	\$380,331	\$342,047	\$332,108	\$293,678	\$201,982	\$115,642	\$28,986	(\$29,078)	
16														
17		10.60%	10.60%	10.60%	10.60%	10.60%	10.60%	10.60%	10.60%	10.60%	10.60%	10.60%	0.30%	
18 Interest		\$ 2,765	\$ 3,295	\$ 3,331	\$ 3,240	\$ 3,284	\$ 3,191	\$ 2,978	\$ 2,764	\$ 2,189	\$ 1,403	\$ 639	(0)	29,078
19 Interest Balance		\$2,765	\$6,060	\$9,391	\$12,632	\$15,916	\$19,106	\$22,084	\$24,848	\$27,037	\$28,440	\$29,078	\$29,078	
20														
21 Over/(Under) Recovery + Interest Balance	\$263,681	\$365,187	\$389,717	\$379,912	\$375,806	\$396,247	\$361,153	\$354,192	\$318,525	\$229,019	\$144,082	\$58,064	\$0	
22														
23														
24 2015 Over Collect Interest Rate		10.60%	10.60%	10.60%	10.60%	10.60%	10.60%	10.60%	10.60%	10.60%	10.60%	10.60%	10.60%	
25 2015 Under Collect Interest Rate		0.330%	0.312%	0.333%	0.322%	0.307%	0.304%	0.304%	0.304%	0.304%	0.304%	0.304%	0.304%	

WISCONSIN PUBLIC SERVICE CORPORATION

MPSC Vol No 5-ELECTRIC
 (2016 PSCR Plan Case No. U-17914)

Replaces _____ Revised Sheet No. D-1.00
 _____ Revised Sheet No. D-1.00

D1. Power Supply Cost Recovery

PSCR

1. PSCR FACTORS

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

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

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

Power Supply Cost Recovery Factors

	Authorized 2016 Plan Year PSCR Factor \$/kWh	Authorized PSCR Reconciliation Factor \$/kWh	Maximum Authorized 2016 PSCR Factor \$/kWh	Actual Factor Billed \$/kWh
R	January 2016	(\$0.00055)	\$0.00000	(\$0.00055)
R	February 2016	(\$0.00055)	\$0.00000	(\$0.00055)
R	March 2016	(\$0.00055)	\$0.00000	(\$0.00055)
R	April 2016	(\$0.00055)	\$0.00000	(\$0.00055)
R	May 2016	(\$0.00055)	\$0.00000	(\$0.00055)
R	June 2016	(\$0.00055)	\$0.00000	(\$0.00055)
R	July 2016	(\$0.00055)	\$0.00000	(\$0.00055)
R	August 2016	(\$0.00055)	\$0.00000	(\$0.00055)
R	September 2016	(\$0.00055)	\$0.00000	(\$0.00055)
R	October 2016	(\$0.00055)	\$0.00000	(\$0.00055)
R	November 2016	(\$0.00055)	\$0.00000	(\$0.00055)
R	December 2016	(\$0.00055)	\$0.00000	(\$0.00055)

Continued to Sheet No. D-2.00

Issued:
 By D M Derricks
 Dir. - Regulatory Affairs
 Green Bay, Wisconsin

Effective for bills rendered
 for the 2016 plan year
 Issued Under Auth. Of
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Wisconsin Public Service Corporation

U-17914

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