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COMMISSION

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Tyson A. Kamuf

Mark W. Starnes

C. Ellsworth Mountjoy

John S. Wathen

September 12, 2014

Jeff Derouen
Executive Director
Public Service Commission
211 Sower Boulevard, P.O. Box 615
Frankfort, Kentucky 40602-0615

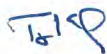
Re: *In the Matter of: An Examination of the Application of the
Fuel Adjustment Clause of Big Rivers Electric Corporation
from November 1, 2013 through April 30, 2014*
Case No. 2014-00230

*Also Licensed in Indiana

Dear Mr. Derouen:

Enclosed for filing are an original and ten (10) copies of Big Rivers Electric Corporation's revised responses to Items 15 and 29 of the information requests contained in the appendix to the Public Service Commission's August 13, 2014, order in the above-referenced matter. I certify that on this date, a copy of this letter and a copy of the revised responses were served on each of the persons listed on the attached service list by either first-class mail or overnight delivery.

Sincerely,



Tyson Kamuf
Counsel for Big Rivers Electric Corporation

TAK/lm
Enclosures

cc: Billie Richert
DeAnna Speed
Service List

Telephone (270) 926-4000
Telecopier (270) 683-6694

100 St. Ann Building
PO Box 727
Owensboro, Kentucky
42302-0727

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Service List
PSC Case No. 2014-00230

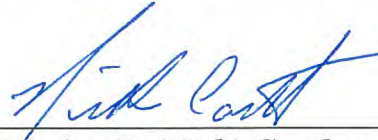
Michael L. Kurtz, Esq.
Kurt J. Boehm, Esq.
Jody Kyler Cohn, Esq.
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Attorneys at Law
36 East Seventh Street, Suite 1510
Cincinnati, OH 45202

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT
CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2013 THROUGH APRIL 30, 2014
CASE NO. 2014-00230**

VERIFICATION

I, Nicholas R. (Nick) Castlen, verify, state, and affirm that the data request responses filed with this verification for which I am listed as a witness are true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.



Nicholas R. (Nick) Castlen

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

SUBSCRIBED AND SWORN TO before me by Nicholas R. (Nick) Castlen on this the 11th day of September, 2014.



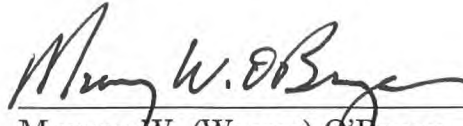
Notary Public, Ky. State at Large
My Commission Expires 5/16/14

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT
CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2013 THROUGH APRIL 30, 2014
CASE NO. 2014-00230**


VERIFICATION

I, Murray W. (Wayne) O'Bryan, verify, state, and affirm that the data request responses filed with this verification for which I am listed as a witness are true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.


Murray W. (Wayne) O'Bryan

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

SUBSCRIBED AND SWORN TO before me by Murray W. (Wayne) O'Bryan
on this the 11th day of September, 2014.

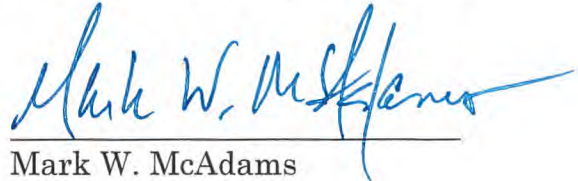

Notary Public, Ky. State at Large
My Commission Expires 5/16/14

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT
CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2013 THROUGH APRIL 30, 2014
CASE NO. 2014-00230**


VERIFICATION

I, Mark W. McAdams, verify, state, and affirm that the data request responses filed with this verification for which I am listed as a witness are true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.


Mark W. McAdams


COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

11th SUBSCRIBED AND SWORN TO before me by Mark W. McAdams on this the
day of September, 2014.


Notary Public, Ky. State at Large
My Commission Expires 9/16/14

ORIGINAL



Your Touchstone Energy® Cooperative 

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

In the Matter of:

**AN EXAMINATION OF THE APPLICATION)
OF THE FUEL ADJUSTMENT CLAUSE)
OF BIG RIVERS ELECTRIC CORPORATION) Case No. 2014-00230
FROM)
NOVEMBER 1, 2013 THROUGH APRIL 30, 2014)**

***Revised* Response to Item 15 of
Commission Staff's Request for Information
dated
August 13, 2014**

FILED: September 12, 2014

ORIGINAL

BIG RIVERS ELECTRIC CORPORATION

AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2013 THROUGH APRIL 30, 2014
CASE NO. 2014-00230

Revised Response to Commission Staff's Request for Information
dated August 13, 2014

September 12, 2014

1 Item 15)

2 a. *During the period from November 1, 2013, through April*
3 *30, 2014, have there been any changes to Big Rivers'*
4 *written policies and procedures regarding its fuel*
5 *procurement?*

6 b. *If yes,*

7 (1) *Describe the changes;*

8 (2) *Provide the written policies and procedures as*
9 *changed;*

10 (3) *State the date(s) the changes were made; and*

11 (4) *Explain why the changes were made.*

12 c. *If no, provide the date Big Rivers' current fuel*
13 *procurement policies and procedures were last changed,*
14 *when they were last provided to the Commission, and*
15 *identify the proceeding in which they were provided.*

16

17 Response)

18 a. Yes.

19 b.

20 (1) Big Rivers revised the following policies:

21 i. Policy No. 105 – Energy-Related Transaction Authority
22 Policy adding “date last reviewed line” to page header and
23 revising Section 4 to conform with Policy No. 105 -
24 Appendix A to ERTA Policy.

Case No. 2014-00230

Revised Response to Staff Item 15
Witnesses: Mark W. McAdams and
Wayne O'Bryan
Page 1 of 3

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2013 THROUGH APRIL 30, 2014
CASE NO. 2014-00230**

**Revised Response to Commission Staff's Request for Information
dated August 13, 2014**

September 12, 2014

- 1 ii. Policy No. 105 - Appendix A to ERTA Policy updating
2 aggregate limits for VP Energy Services, increasing offer
3 price caps for capacity, updating VP Energy Services gas
4 authorization, changing "Power Portfolio Optimization
5 Analyst" to "Senior Power Portfolio Optimization
6 Analyst," and replacing "Manager Power Supply &
7 Market Operations" with "Director Power Supply &
8 Market Operations."
9 iii. Policy No. 120 – Fuel Procurement Policies and
10 Procedures adding a "date last reviewed line" to the page
11 header, adding section headers, and changing "mmBTU"
12 to "gallon."
13 (2) Clean and redline versions of Big Rivers' Policy No. 105 –
14 Energy-Related Transaction Authority Policy, Policy No.
15 105 - Appendix A to ERTA Policy, and Policy No. 120 – Fuel
16 Procurement Policies and Procedures are attached hereto.
17 (3) The aforementioned changes were effective on:
18 i. March 21, 2014, for Policy No. 105 – Energy-Related
19 Transaction Authority Policy.
20 ii. December 18, 2013, for Policy No. 105 – Appendix A to
21 ERTA Policy.
22 iii. March 21, 2014, for Policy No. 120 – Fuel Procurement
23 Policies and Procedures.

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2013 THROUGH APRIL 30, 2014
CASE NO. 2014-00230**

**Revised Response to Commission Staff's Request for Information
dated August 13, 2014**

September 12, 2014

1 (4) The aforementioned changes were made generally to reflect
2 expanded authority for Lindsay N. Barron, Big Rivers' Vice
3 President Energy Services; promotion of Natalie Hankins to
4 Senior Power Portfolio Analyst; and assignment of Wayne
5 O'Bryan to the Director Power Supply & Market
6 Operations.

7 c. Not Applicable.

8

9

10 **Witnesses)** Mark W. McAdams and


11 Wayne O'Bryan

12

13

**Policy No. 105 –
Appendix A – Energy-Related Transaction Authority Policy**



Your Touchstone Energy Cooperative 

Appendix A to Energy Related Transaction Authority Policy 105

APPROVED BY: CEO CEO Signature <i>Mark C. Bailey</i> Revision 8	APPROVAL DATE: <i>12/18/13</i>
STAFF AND ACES TRANSACTING AUTHORITY DELEGATIONS	

1. Purpose

The purpose of this appendix is to define the authority granted by the Big Rivers CEO (“CEO”) to Big Rivers’ staff and ACES to execute energy-related transactions.

2. Objective

The objective of this appendix is to extend authority within Policy 105 to Big Rivers’ internal staff and ACES.

3. Procedural Requirements

As an appendix to Policy 105, all requirements and criteria stated within Policy 105 apply to this appendix.

Delegation of authority regarding Contract Requirements

The CEO delegates his authority to use a long form confirmation as a valid agreement in lieu of a master agreement when necessary to the Chief Operating Officer, the VP Energy Services, the Director of Resources and Forecasting and the Director Power Supply & Market Operations.

4. Bilateral Electric Power and Transmission Transaction Authority

The following outlines Big Rivers' staff and ACES transaction limits for power and power transmission transactions.

Title	Product	Per Transaction Limits (up to)				Per Delivery Day Limits (up to)		Aggregate Limits (up to)	
		Term	Lead Time	MW Size	\$/MWH	Total Volume MWH	Total \$	Total Volume MWH	Total \$
Chief Operating Officer	Electric Power and Transmission	> 1 Month ≤ 1 Year	≤ 1 Year	105	\$85	16,200	\$8.1 million	657,000	\$55.8 million
		≤ 1 Month		210	No Max				
VP Energy Services	Electric Power and Transmission	> 1 Month ≤ 6 Months	≤ 1 Year	105	\$75	14,000	\$7.0 million	657,000	\$37.5 million
		> 1 Week ≤ 1 Month		105	\$100				
Director of Resources & Forecasting or Director Power Supply & Market Operations	Electric Power and Transmission	> 1 Month ≤ 3 Months	≤ 1 Year	105	\$75	14,000	\$7.0 million	500,000	\$37.5 million
		> 1 Week ≤ 1 Month		105	\$100				
		≤ 1 Week	≤ 1 Month	No Max.	No Max.				
Senior Power Portfolio Optimization Analyst	Electric Power and Transmission	≤ 1 Week	≤ 1 Month	450	No Max.	10,800	\$6.0 million	200,000	\$25 million
ACES	Electric Power and Transmission	≤ 1 Daily	≤ 1 Week	450	No Max.	10,800	\$5.4 million	100,000	\$12 million

Delegation of authority regarding Firmness of Power

The CEO delegates his authority to sell power that is more firm than the supply source to the Chief Operating Officer.

Delegation of authority regarding Transmission Firmness and Volume

The CEO delegates his authority to execute transmission purchases not of equal firmness and volume to the energy component that such transmission purchase is associated with to the Chief Operating Officer.

Delegation of authority regarding Restricted Delivery Locations

The CEO delegates his authority to execute transactions at other Eastern interconnection locations to the Chief Operating Officer.

5. MISO Transaction Authority

The following outlines Big Rivers' staff and ACES transaction limits for MISO products.

		MISO Per Transaction Limits (up to)			
Title	Product	Delivery Lead Time	Term	MW Size	
Chief Operating Officer	Generation Awards	As Required by MISO	1 Operating Day	425	MISO Price Cap
	Demand Awards			1750	
	Ancillary Service Awards			425	
	Capacity	≤ 2 Years	≤ 2Years	425	\$150/MW-day
	Financial Transmission Rights	≤ 1 Year	≤ 1 Year	425	\$20/MWh
	Virtual Transaction Awards	As Required by MISO	1 Operating Day	No Max	MISO Price Cap
	Imports/Exports			No Max	
VP Energy Services or Director of Resources & Forecasting or Director Power Supply & Market Operations	Generation Awards	As Required by MISO	1 Operating Day	425	MISO Price Cap
	Demand Awards			1700	
	Ancillary Service Awards			425	
	Capacity	≤ 1 Year	≤ 1Year	425	\$150/MW-day
	Financial Transmission Rights	≤ 6 months	≤ 6 months	425	\$12/MWh
	Virtual Transaction Awards	As Required by MISO	1 Operating Day	400	MISO Price Cap
	Imports/Exports			500	
Senior Power Portfolio Optimization Analyst	Generation Awards	As Required by MISO	1 Operating Day	425	MISO Price Cap
	Demand Awards			1675	
	Ancillary Service Awards			425	
	Financial Transmission Rights	< 6 Months	< 6 Months	425	\$10/MWh
	Virtual Transaction Awards	As Required by MISO	1 Operating Day	400	MISO Price Cap
	Imports/Exports			450	
Energy Services Analyst	Demand Award	As Required by MISO	1 Operating Day	1675	MISO Price Cap
ACES	Generation Awards	As Required by MISO	1 Operating Day	425	MISO Price Cap
	Demand Awards			1650	
	Ancillary Service Awards			425	
	Financial Transmission Rights	≤ 6 Months	≤ 6 Months	425	\$10/MWh
	Virtual Transaction Awards	As Required by MISO	1 Operating Day	400	MISO Price Cap
	Imports/Exports			400	

6. PJM Transaction Authority (Non-Bilateral)

The following outlines Big Rivers' staff and ACES transaction limits for PJM products.

		PJM Per Transaction Limits (up to)			
Title	Product	Delivery Lead Time	Term	MW Size	\$/MWh
Chief Operating Officer	Generation Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Demand Awards				
	Ancillary Service Awards				
	Capacity	≤ 1 Year	≤ 1 Year	210	\$20
	Financial Transmission Rights				
	Virtual Transaction Awards				
Imports/Exports	As Required by PJM	1 Operating Day	No Max No Max	PJM Price Cap	
VP Energy Services or Director of Resources & Forecasting or Director Power Supply & Market Operations	Generation Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Demand Awards				
	Ancillary Service Awards				
	Capacity	≤ 1 Year	≤ 3 months	105	\$12
	Financial Transmission Rights				
	Virtual Transaction Awards			As Required by PJM	
Imports/Exports	500				
Senior Power Portfolio Optimization Analyst	Generation Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Demand Awards				
	Ancillary Service Awards				
	Capacity	Not Authorized	Not Authorized	Not Authorized	Not Authorized
	Financial Transmission Rights				
	Virtual Transaction Awards				
Imports/Exports	450				
ACES	Generation Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Demand Awards				
	Ancillary Service Awards				
	Capacity	Not Authorized	Not Authorized	Not Authorized	Not Authorized
	Financial Transmission Rights				
	Virtual Transaction Awards				
Imports/Exports	400				

7. Natural/Synthetic Gas and Transportation Transaction Authority

The following outlines Big Rivers' staff and ACES transaction limits for natural/synthetic gas (Gas) and transportation transactions.

Title	Product	Per Transaction Limits (up to)				Per Delivery Day Limits (up to)		Aggregate Limits (up to)	
		Term	Lead Time	Physical MMBtu Volume per Day	\$/MMBtu	Total Physical Volume MMBtu	Total \$	Total Physical Volume MMBtu	Total \$
Chief Operating Officer	Physical	> 1 Month ≤ 1 Year	≤ 1 Year	20,000	\$15	20,000	\$300,000	400,000	\$6 million
		≤ 1 Month		No Max	No Max	No Max	No Max		
VP Energy Services	Physical	> 1 Week ≤ 6 Months	≤ 1 Year	20,000	\$15	20,000	\$300,000	200,000	\$3 million
		≤ 1 Week	≤ 1 Month	No Max.	No Max.	No Max	No Max		
Director of Resources & Forecasting or Director Power Supply & Market Operations	Physical	> 1 Week ≤ 1 Month	≤ 1 Year	10,000	\$15	10,000	\$150,000	200,000	\$3 million
		≤ 1 Week	≤ 1 Month	No Max.	No Max.	No Max	No Max		
ACES	Physical*	≤ 1 Week	≤ 1 Week	20,000	\$15	20,000	\$300,000	100,000	\$1.5 million
	Pipeline Payback			60,000	\$15	60,000	\$900,000	60,000	\$900,000

***Excludes purchases for pipeline payback. Purchases for pipeline payback are addressed separately in the row below.**

Delegation of authority regarding Gas Firmness

The CEO delegates his authority to sell gas that is more firm than the supply source to the Chief Operating Officer.

Delegation of authority regarding Transportation Firmness and Volume

The CEO delegates his authority to execute transportation purchases not of equal firmness and volume to the gas component that such transportation purchase is associated with to the Chief Operating Officer.

8. Fuel Oil Transaction Authority

The following outlines Big Rivers' staff and ACES transaction limits for fuel oil transactions.

<u>Title</u>	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Physical-Volume Gallons	\$/Gallon	Total Volume Gallons	Total \$
Chief Operating Officer	Physical Fuel Oil	> 1 Month ≤ 1 Year	≤ 1 Year	750,000	\$6	4,000,000	\$24 Million
		≤ 1 Month		No Max	No Max		
Director of Fuels Procurement	Physical Fuel Oil	> 1 Week ≤ 1 Month	≤ 1 Year	500,000	\$6	1,000,000	\$6 million
		≤ 1 Week	≤ 1 Month	No Max	No Max		
ACES	Physical Fuel Oil	As directed	As directed	As directed	As directed	As directed	As directed

9. Solid Fuel Transaction Authority

The following outlines Big Rivers' staff transaction limits for solid fuel.

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/MMBtu	Total Volume Tons	Total \$
Chief Operating Officer	Physical Solid Fuel	> 3 Months ≤ 1 Year	≤ 1 Year	500,000	\$2.50	1.0 million	\$60 million
		≤ 3 Months		100,000	\$2.85		
Director of Fuels Procurement	Physical Solid Fuel	> 3 Months ≤ 6 Months	≤ 1 Year	250,000	\$2.50	500,000	\$30 million
		≤ 3 Months		50,000	\$2.85		

10. Solid Fuel Transportation Authority

The following outlines Big Rivers' staff transaction limits for solid fuel transportation transactions.

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Chief Operating Officer	Barge, Rail or Truck Transportation	> 3 Months ≤ 3 Years	≤ 1 Year	2.5 million	\$5	5 million	\$20 million
		≤ 3 Months		No Max	No Max		
Director of Fuels Procurement	Barge, Rail or Truck Transportation	> 1 Month ≤ 1 Year	≤ 1 Year	750,000	\$5	2 million	\$10 million
		≤ 1 Month	≤ 1 Month	No Max	No Max		

11. Emission Allowance Transaction Authority

The following outlines Big Rivers' staff and ACES transaction limits for emission allowance transactions.

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Chief Operating Officer	Federal SO2 Emission Allowances	≤ 1 Year	≤ 1 Year	2,500	\$300	10,000	\$3 million
	Federal NOx Emission Allowances	≤ 1 Year		1,250	\$2,000	5,000	\$10 million
VP Energy Services or Director of Resources & Forecasting or Director Power Supply & Market Operations	Federal SO2 Emission Allowances	≤ 1 Year	≤ 6 months	2,000	\$275	5,000	\$1 million
	Federal NOx Emission Allowances	≤ 1 Year		500	\$1,500	2,000	\$3 million
ACES	Federal SO2 Emission Allowances	As directed	As directed	As directed	As directed	As directed	As directed
	Federal NOx Emission Allowances	As directed		As directed	As directed		

12. Limestone Reagent Transaction Authority

The following outlines Big Rivers' staff transaction limits for limestone reagent transactions.

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Chief Operating Officer	Physical Limestone Reagent	≤ 1 Year	≤ 1 Year	187,500	\$18	375,000	\$6.75 million
Director of Fuels Procurement	Physical Limestone Reagent	≤ 3 Months	≤ 1 Year	93,750	\$18	187,500	\$3.375 million

13. Lime Reagent Transaction Authority

The following outlines Big Rivers' staff transaction limits for lime reagent transactions.

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Chief Operating Officer	Physical Lime Reagent	≤ 1 Year	≤ 1 Year	162,500	\$120	162,500	\$19.5 million
Director of Fuels Procurement	Physical Lime Reagent	≤ 3 Months	≤ 1 Year	81,250	\$120	81,250	\$9.75 million

14. Acknowledgements

Violations and Sanctions

Violations of this Authority Policy must not occur. Any person covered by this policy who becomes aware of a violation of the Authority Policy has an affirmative duty to report the violation to the department head in which the violation occurred and to the Director of Enterprise Risk Management and Strategic Planning who in turn shall inform the Big Rivers CEO. However, if it is believed that the Big Rivers CEO is involved then the Big Rivers Chairman of the Board shall be notified. The responsible party(ies) will be sanctioned according to Big Rivers Risk Management Sanctions Policy (for Big Rivers Employees only, ACES employees are governed by the ACES Power Marketing Trading Sanctions Policy).

Appendix Effective

This Transaction Authority Appendix is in effect upon the CEO's approval and shall remain in effect until a replacement appendix has been approved by the CEO.

Responsibility


It shall be the responsibility of the CEO, Chief Operating Officer and the Big Rivers-IRMC and the ACES-IRMC to ensure compliance with this policy.

Revisions

Big Rivers Policy 105/Appendix A Revision Record			
Number	Date	Notes	Approved by
Rev. 0	11-04-09	Energy Related Trans	Mark Bailey
Rev. 1	11-22-10	MISO and other misc. updates	Mark Bailey
Rev. 2	1-4-11	Updated Solid Fuel Transaction Authority	Mark Bailey
Rev, 3	3-18-11	Added Limestone and Lime, general cleanup	Mark Bailey
Rev. 4	12-5-11	Update Bi-Lateral and Emission limits, add authority for PJM FTRs, add VP of Production	Mark Bailey
Rev. 5	5-7-11	Remove Senior VP Energy Services from document due to retirement/elimination of role	Mark Bailey
Rev. 6	7-12-2012	Change Director of Power Portfolio Optimization to Managing Director Energy Services	Mark Bailey
Rev. 7	3-12-2013	Updated MISO capacity and Natural Gas limits, changed VP Production to Chief Operating Officer, changed Managing Director Energy Services to VP Energy Services, added Manager Power Supply & Market Operations, changed Power Scheduling Analyst to Power Portfolio Optimization Analyst and added Energy Services Analyst	Mark Bailey

Rev. 8	12-18-2013	Updated aggregate limits for VP Energy Services, increased offer price caps for capacity, updated VP Energy Services gas authorization to ensure ability to execute standard Texas Gas contracts, changed Power Portfolio Optimization Analyst title to reflect Senior status, replaced Manager Power Supply & Market Operations with Director Power Supply & Market Operations	Mark Bailey
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Your Touchstone Energy® Cooperative 

Appendix A to Energy Related Transaction Authority Policy 105

APPROVED BY: CEO	APPROVAL DATE:
CEO Signature _____	
Revision <u>8</u>	
STAFF AND ACES TRANSACTING AUTHORITY DELEGATIONS	

Deleted: 7

1. Purpose

The purpose of this appendix is to define the authority granted by the Big Rivers CEO (“CEO”) to Big Rivers’ staff and ACES to execute energy-related transactions.

2. Objective

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Deleted: Manager

4. Bilateral Electric Power and Transmission Transaction Authority

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Title	Product	Per Transaction Limits (up to)				Per Delivery Day Limits (up to)		Aggregate Limits (up to)			
		Term	Lead Time	MW Size	\$/MWH	Total Volume MWH	Total \$	Total Volume MWH	Total \$		
Chief Operating Officer	Electric Power and Transmission	> 1 Month	≤ 1 Year	105	\$85	16,200	\$8.1 million	657,000	\$55.8 million		
		≤ 1 Month		210	No Max						
VP Energy Services	Electric Power and Transmission	> 1 Month	≤ 1 Year	105	\$75	14,000	\$7.0 million	657,000	Deleted: 3-		
		≤ 6 Months							\$37.5 million	Deleted: 500,000	
		> 1 Week			105				\$100		
Director of Resources & Forecasting or Director Power Supply & Market Operations	Electric Power and Transmission	> 1 Month	≤ 1 Year	105	\$75	14,000	\$7.0 million	500,000	Deleted: ≤ 1 Week		
		≤ 3 Months								Deleted: ≤ 1 Month	
		> 1 Week			105				\$100		Deleted: No Max.
		≤ 1 Month									Deleted: No Max.
Senior Power Portfolio Optimization Analyst	Electric Power and Transmission	≤ 1 Week	≤ 1 Month	450	No Max.	10,800	\$6.0 million	200,000	\$25 million		
									Deleted: Power Scheduling Analyst		
ACES	Electric Power and Transmission	≤ 1 Daily	≤ 1 Week	450	No Max.	10,800	\$5.4 million	100,000	\$12 million		

Delegation of authority regarding Firmness of Power

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Delegation of authority regarding Transmission Firmness and Volume

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Delegation of authority regarding Restricted Delivery Locations

The CEO delegates his authority to execute transactions at other Eastern interconnection locations to the Chief Operating Officer.

5. MISO Transaction Authority

The following outlines Big Rivers' staff and ACES transaction limits for MISO products.

		MISO Per Transaction Limits (up to)			
Title	Product	Delivery Lead Time	Term	MW Size	
Chief Operating Officer	Generation Awards	As Required by MISO	1 Operating Day	425	MISO Price Cap
	Demand Awards			1750	
	Ancillary Service Awards			425	
	Capacity	≤ 2 Years	≤ 2 Years	425	\$150/MW-day
	Financial Transmission Rights	≤ 1 Year	≤ 1 Year	425	\$20/MWh
	Virtual Transaction Awards	As Required by MISO	1 Operating Day	No Max	No Max
VP Energy Services or Director of Resources & Forecasting or Director, Power Supply & Market Operations	Generation Awards	As Required by MISO	1 Operating Day	425	MISO Price Cap
	Demand Awards			1700	
	Ancillary Service Awards			425	
	Capacity	≤ 1 Year	≤ 1 Year	425	\$150/MWh
	Financial Transmission Rights	≤ 6 months	≤ 6 months	425	\$12/MWh
	Virtual Transaction Awards			400	Deleted: Manager
	Imports/Exports	As Required by MISO	1 Operating Day	500	MISO Price Cap
Senior Power Portfolio Optimization Analyst	Generation Awards	As Required by MISO	1 Operating Day	425	MISO Price Cap
	Demand Awards			1675	
	Ancillary Service Awards			425	
	Financial Transmission Rights	< 6 Months	< 6 Months	425	\$10/MWh
	Virtual Transaction Awards	As Required by MISO	1 Operating Day	400	MISO Price Cap
	Imports/Exports			450	
Energy Services Analyst	Demand Award	As Required by MISO	1 Operating Day	1675	MISO Price Cap
ACES	Generation Awards	As Required by MISO	1 Operating Day	425	MISO Price Cap
	Demand Awards			1650	
	Ancillary Service Awards			425	
	Financial Transmission Rights	≤ 6 Months	≤ 6 Months	425	\$10/MWh
	Virtual Transaction Awards	As Required by MISO	1 Operating Day	400	MISO Price Cap
	Imports/Exports			400	

6. PJM Transaction Authority (Non-Bilateral)

The following outlines Big Rivers' staff and ACES transaction limits for PJM products.

		PJM Per Transaction Limits (up to)			
Title	Product	Delivery Lead Time	Term	MW Size	\$/MWh
Chief Operating Officer	Generation Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Demand Awards				
	Ancillary Service Awards				
	Capacity	≤ 1 Year	≤ 1 Year	210	\$20
	Financial Transmission Rights				
Virtual Transaction Awards	As Required by PJM	1 Operating Day	No Max	PJM Price Cap	
Imports/Exports			No Max		
VP Energy Services or Director of Resources & Forecasting or Director Power Supply & Market Operations	Generation Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Demand Awards				
	Ancillary Service Awards				
	Capacity	≤ 1 Year	≤ 3 months	105	\$12
	Virtual Transaction Awards	As Required by PJM	1 Operating Day	400	PJM Price Cap
Imports/Exports	500				
Senior Power Portfolio Optimization Analyst	Generation Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Demand Awards				
	Ancillary Service Awards				
	Capacity	Not Authorized	Not Authorized	Not Authorized	Not Authorized
	Financial Transmission Rights				
Virtual Transaction Awards	As Required by PJM	1 Operating Day	400	PJM Price Cap	
Imports/Exports			450		
ACES	Generation Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Demand Awards				
	Ancillary Service Awards				
	Capacity	Not Authorized	Not Authorized	Not Authorized	Not Authorized
	Financial Transmission Rights				
Virtual Transaction Awards	As Required by PJM	1 Operating Day	400	PJM Price Cap	
Imports/Exports			400		

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7. Natural/Synthetic Gas and Transportation Transaction Authority

The following outlines Big Rivers' staff and ACES transaction limits for natural/synthetic gas (Gas) and transportation transactions.

Title	Product	Per Transaction Limits (up to)				Per Delivery Day Limits (up to)		Aggregate Limits (up to)	
		Term	Lead Time	Physical MMBtu Volume per Day	\$/MMBtu	Total Physical Volume MMBtu	Total \$	Total Physical Volume MMBtu	Total \$
Chief Operating Officer	Physical	> 1 Month ≤ 1 Year	≤ 1 Year	20,000	\$15	20,000	\$300,000	400,000	\$6 million
		≤ 1 Month		No Max	No Max	No Max	No Max		
VP Energy Services	Physical	> 1 Week ≤ 6 Months	≤ 1 Year	20,000	\$15	20,000	\$300,000	200,000	Deleted: 3-
		≤ 1 Week		≤ 1 Month	No Max.	No Max.	No Max		No Max
Director of Resources & Forecasting or Director Power Supply & Market Operations	Physical	> 1 Week ≤ 1 Month	≤ 1 Year	10,000	\$15	10,000	\$150,000	200,000	Deleted: 15
		≤ 1 Week		≤ 1 Month	No Max.	No Max.	No Max		No Max
ACES	Physical*	≤ 1 Week	≤ 1 Week	20,000	\$15	20,000	\$300,000	100,000	\$1.5 million
	Pipeline Payback			60,000	\$15	60,000	\$900,000	60,000	\$900,000

***Excludes purchases for pipeline payback. Purchases for pipeline payback are addressed separately in the row below.**

Delegation of authority regarding Gas Firmness

The CEO delegates his authority to sell gas that is more firm than the supply source to the Chief Operating Officer.

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Delegation of authority regarding Transportation Firmness and Volume

The CEO delegates his authority to execute transportation purchases not of equal firmness and volume to the gas component that such transportation purchase is associated with to the Chief Operating Officer.

8. Fuel Oil Transaction Authority

The following outlines Big Rivers' staff and ACES transaction limits for fuel oil transactions.

<u>Title</u>	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Physical-Volume Gallons	\$/Gallon	Total Volume Gallons	Total \$
Chief Operating Officer	Physical Fuel Oil	> 1 Month ≤ 1 Year	≤ 1 Year	750,000	\$6	4,000,000	\$24 Million
		≤ 1 Month		No Max	No Max		
Director of Fuels Procurement	Physical Fuel Oil	> 1 Week ≤ 1 Month	≤ 1 Year	500,000	\$6	1,000,000	\$6 million
		≤ 1 Week	≤ 1 Month	No Max	No Max		
ACES	Physical Fuel Oil	As directed	As directed	As directed	As directed	As directed	As directed

9. Solid Fuel Transaction Authority

The following outlines Big Rivers' staff transaction limits for solid fuel.

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/MMBtu	Total Volume Tons	Total \$
Chief Operating Officer	Physical Solid Fuel	> 3 Months ≤ 1 Year	≤ 1 Year	500,000	\$2.50	1.0 million	\$60 million
		≤ 3 Months		100,000	\$2.85		
Director of Fuels Procurement	Physical Solid Fuel	> 3 Months ≤ 6 Months	≤ 1 Year	250,000	\$2.50	500,000	\$30 million
		≤ 3 Months		50,000	\$2.85		

10. Solid Fuel Transportation Authority

The following outlines Big Rivers' staff transaction limits for solid fuel transportation transactions.

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Chief Operating Officer	Barge, Rail or Truck Transportation	> 3 Months ≤ 3 Years	≤ 1 Year	2.5 million	\$5	5 million	\$20 million
		≤ 3 Months		No Max	No Max		
Director of Fuels Procurement	Barge, Rail or Truck Transportation	> 1 Month ≤ 1 Year	≤ 1 Year	750,000	\$5	2 million	\$10 million
		≤ 1 Month	≤ 1 Month	No Max	No Max		

11. Emission Allowance Transaction Authority

The following outlines Big Rivers' staff and ACES transaction limits for emission allowance transactions.

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Chief Operating Officer	Federal SO2 Emission Allowances	≤ 1 Year	≤ 1 Year	2,500	\$300	10,000	\$3 million
	Federal NOx Emission Allowances	≤ 1 Year		1,250	\$2,000	5,000	\$10 million
VP Energy Services or Director of Resources & Forecasting or Director Power Supply & Market Operations	Federal SO2 Emission Allowances	≤ 1 Year	≤ 6 months	2,000	\$275	5,000	\$1 million
	Federal NOx Emission Allowances	≤ 1 Year		500	\$1,500	2,000	\$3 million
ACES	Federal SO2 Emission Allowances	As directed	As directed	As directed	As directed	As directed	As directed
	Federal NOx Emission Allowances	As directed		As directed	As directed		

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12. Limestone Reagent Transaction Authority

The following outlines Big Rivers' staff transaction limits for limestone reagent transactions.

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Chief Operating Officer	Physical Limestone Reagent	≤ 1 Year	≤ 1 Year	187,500	\$18	375,000	\$6.75 million
Director of Fuels Procurement	Physical Limestone Reagent	≤ 3 Months	≤ 1 Year	93,750	\$18	187,500	\$3.375 million

13. Lime Reagent Transaction Authority

The following outlines Big Rivers' staff transaction limits for lime reagent transactions.

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Chief Operating Officer	Physical Lime Reagent	≤ 1 Year	≤ 1 Year	162,500	\$120	162,500	\$19.5 million
Director of Fuels Procurement	Physical Lime Reagent	≤ 3 Months	≤ 1 Year	81,250	\$120	81,250	\$9.75 million

14. Acknowledgements

Violations and Sanctions

Violations of this Authority Policy must not occur. Any person covered by this policy who becomes aware of a violation of the Authority Policy has an affirmative duty to report the violation to the department head in which the violation occurred and to the Director of Enterprise Risk Management and Strategic Planning who in turn shall inform the Big Rivers CEO. However, if it is believed that the Big Rivers CEO is involved then the Big Rivers Chairman of the Board shall be notified. The responsible party(ies) will be sanctioned according to Big Rivers Risk Management Sanctions Policy (for Big Rivers Employees only, ACES employees are governed by the ACES Power Marketing Trading Sanctions Policy).

Appendix Effective

This Transaction Authority Appendix is in effect upon the CEO’s approval and shall remain in effect until a replacement appendix has been approved by the CEO.

Responsibility

It shall be the responsibility of the CEO, Chief Operating Officer and the Big Rivers-IRMC and the ACES-IRMC to ensure compliance with this policy.

Revisions

Big Rivers Policy 105/Appendix A Revision Record			
Number	Date	Notes	Approved by
Rev. 0	11-04-09	Energy Related Trans	Mark Bailey
Rev. 1	11-22-10	MISO and other misc. updates	Mark Bailey
Rev. 2	1-4-11	Updated Solid Fuel Transaction Authority	Mark Bailey
Rev. 3	3-18-11	Added Limestone and Lime, general cleanup	Mark Bailey
Rev. 4	12-5-11	Update Bi-Lateral and Emission limits, add authority for PJM FTRs, add VP of Production	Mark Bailey
Rev. 5	5-7-11	Remove Senior VP Energy Services from document due to retirement/elimination of role	Mark Bailey
Rev. 6	7-12-2012	Change Director of Power Portfolio Optimization to Managing Director Energy Services	Mark Bailey
Rev. 7	3-12-2013	Updated MISO capacity and Natural Gas limits, changed VP Production to Chief Operating Officer, changed Managing Director Energy Services to VP Energy Services, added Manager Power Supply & Market Operations, changed Power Scheduling Analyst to Power Portfolio Optimization Analyst and added Energy Services Analyst	Mark Bailey

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Rev. 8	12-18-2013	Updated aggregate limits for VP Energy Services, increased offer price caps for capacity, updated VP Energy Services gas authorization to ensure ability to execute standard Texas Gas contracts, changed Power Portfolio Optimization Analyst title to reflect Senior status, replaced Manager Power Supply & Market Operations with Director Power Supply & Market Operations	Mark Bailey	<div style="border: 1px solid black; padding: 2px;">Deleted: 11-4-2013</div> <div style="border: 1px solid black; padding: 2px;">Deleted: 4</div>
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**Policy No. 105 –
Energy-Related Transaction Authority Policy**

Policy Number 105

Original Effective Date	<u>06/15/2007</u>	Approved By: BOARD
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1. Policy Purpose

The purpose of this policy is to define the authority granted by the Big Rivers Electric Corporation (“Big Rivers”) Board of Directors (“Board”) to the President & Chief Executive Officer (“CEO”) to execute, or to delegate authority to execute energy-related transactions. Furthermore, it sets forth clarity and empowerment among those with transaction authority and is designed to encourage communication among individuals with transaction authority and the Board.

2. Objective

The objective of Big Rivers’ Energy Related Transaction Authority Policy is to define:

- Who has authority to execute transactions,
- The commodities and products that can be transacted,
- The authorized lead-time and term for each transaction,
- The authorized maximum price and volume,
- Counterparty contract and credit requirements,
- The process for approving new commodities, products or locations,
- Big Rivers’ intention regarding hedging and speculating,
- Other relevant factors associated with due diligence in authorizing transactions to be executed.

3. Procedural Requirements

The following defines the procedural requirements that apply to all commodities and products transacted pursuant to this policy.

Execution Authority

Execution Authority is outlined by commodity in the authority matrix sections found below. All column limits in these matrices are applied independently of one another for each authority level, in that no individual column limit may be exceeded without authorization, regardless of whether a transaction does not exceed another column limit for that same authority level. Limits for each level of authority are cumulative, and include all column limits up to and including that level. The authority granted in this policy should not violate any other policy limits.

The transaction limits apply to both purchases and sales. Daily limits are applied to gross amounts transacted in total for the day, and not to purchases and sales netted together.

This policy identifies Board-authorized levels for the CEO and explicitly gives the CEO the authority to delegate authority levels to Big Rivers’ staff and ACES Power Marketing (“APM”). The CEO has the authority to modify delegated authority levels (noted in Appendix A) at his sole discretion as long as the delegated authority does not exceed his own authority per this policy. All delegated authority levels below the Chief Operating Officer level will be recommended by the Chief Operating Officer and approved by the CEO.



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Contract Requirements

Transactions with counterparties shall only be permitted if Big Rivers has either:

- An active, valid, and executed agreement enabling such transaction activity with that counterparty,
- Long-form confirmations may be used as a valid agreement in lieu of a permanent agreement, when necessary if approved in writing by the Big Rivers CEO.

Credit Requirements

Credit limits for each counterparty shall not be intentionally exceeded. *(Note: Since credit exposures are a function of not only positions transacted, but also a function of market pricing and volatility, credit exposure to counterparty may unintentionally exceed a credit limit purely due to changes in the forward market).*

Entering into unsecured transactions with a counterparty that has total credit exposure greater than or equal to its open line of credit and the total of any security currently provided will not be allowed unless approved in writing by the Big Rivers CEO.

Credit Slewing

All slewing transactions for credit purposes shall be approved by the CEO. *(Note: Slewing is an arrangement where a more financially reputable entity acts as middleman for a smaller, undercapitalized entity in the purchase or sale of power.)*

Contract Slewing

This policy does not prohibit Big Rivers from being positioned between another member or customer of APM and an external counterparty in order to bridge a contract gap that exists. The sleeve must:

- Be only for physical power, transmission or natural gas, not transportation,
- Be only for terms of one month or less.

Contract slewing on behalf of Big Rivers is approved when it is either the only or the most economical path to pursue at the discretion of APM, with prompt after-the-fact notice to the Big Rivers Chief Operating Officer.



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Transaction Communications

All communications for bilateral electric power transactions must be transacted via a recorded communication method. Examples include, but are not limited to, voice recorded communication land or cellular phone, instant messaging or via an online broker account. Recorded communications must be maintained and controlled by personnel who are independent of the transaction function.

Deal Capture

Any transactions executed by a Big Rivers employee must be promptly forwarded to APM after the deal execution.

Speculation

Speculation refers to a purchase or sales transaction in which the intent was to realize a profit without taking physical delivery. No speculative transaction activities shall be permitted, and no speculative transaction positions shall be initiated. Transactions will be permitted only for purposes of hedging and portfolio optimization.

Non-Standard Products

The Board must pre-approve any transaction that involves commodities or products not listed in this policy.

Transactions Requiring Board Approval

Transactions which meet any of the following criteria must be pre-approved by the Board prior to execution:

- The transaction is a new commodity or within the list of commodities not previously transacted by Big Rivers,
- The transaction is at a location in which no transactions are permitted,
- The transaction is for something other than: physical spot or forward electricity, natural gas, fuel oil, solid fuel, ancillary services, capacity, power transmission, financial transmission rights, gas transportation, gas imbalance and storage, solid fuel transportation, exchange transacted energy products, over-the-counter (OTC) financial energy transactions, OTC energy options, federal SO2 or NOx emission allowances, renewable energy credits or a unit outage insurance product.

Examples of new instruments would include the use of derivatives with different risk characteristics or the use of derivatives to implement different business strategies or goals. New instruments or locations would also include those instruments or locations that may be transacted on a “one-off” basis, which



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would be implementation of a derivative instrument or entry into a commodity market that, despite the anticipation of being transacted just once, would still fit the definition of a new instrument or location.

The purpose of defining a process for such transactions as noted above is to ensure that the exposures associated with them are thoroughly reviewed and understood by the Board and appropriate transaction controls are in place. The Board must approve the use of such transactions prior to execution using the process defined below:

- a) Transaction Proposal - The proposal is the responsibility of the person or business group proposing the transaction. The proposal should address the business need, risks, transaction controls, valuation methodology, accounting methodology, operations workflow/ methodology, and assessment of legal and regulatory issues.
- b) Board Review - The Board will perform a review of the benefits and risks of the proposed transaction. The Board will assess the proposed transaction and make a determination whether to add the proposed transaction to the approved list.
- c) Approval (Pilot Program) – The Board may approve limited use of the proposed transaction to ensure that proper controls are in place to monitor the activity. The Board may approve the proposed transaction without instituting a Pilot Program if the proposed transaction is going to be used once (one off), where it would not be prudent to test it in a shorter time frame or smaller quantity due to constraints such as liquidity or length of term of product. The Board will use more scrutiny in approval of one-off transactions.

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4. Bilateral Electric Power and Transmission Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for power and power transmission transactions.

Title	Product	Per Transaction Limits (up to)				Per Delivery Day Limits (up to)		Aggregate Limits	
		Term	Lead Time	MW Size	\$/MWH	Total Volume MWH	Total \$	Total Volume MWH	Total \$
Board	Electric Power and Transmission	No Limit	No Limit	No Max.	No Max.	No Max.	No Max.	No Max.	No Max.
CEO	Electric Power and Transmission	> 1 Year	≤ 2 Years	50	\$150	21,600	\$10.8 million	1,800,000	\$110 million
		≤ 3 Years		No Max.	No Max.				
		≤ 1 Year							

Power Authority Matrix Explanations

- Transaction limits represent the MW volume per hour and dollars/MWH for each transaction executed.
- Per Delivery Day Limits represent the total MWH volume and dollars for all transactions delivered in a given transaction day.
- Aggregate Limits represent the sum total MWH volume and dollars for all forward transactions.
- Lead time represents the time period from the date the transaction is executed to the start of the transaction.
- Authorized products include electric power, both forwards and options, transmission, including both physical and financial derivatives. Options may only be entered into by the Big Rivers CEO or his designee.
- Authority for PJM and MISO products is defined in the authority matrices below.



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Delivery Locations

Transactions at delivery locations outside the eastern interconnect are not permitted, unless approved by the CEO. Transaction at delivery locations that are normal to the daily course of business for Big Rivers, to the extent transmission is available, are authorized as follows:

Unrestricted Delivery Locations

- SERC Reliability Region
- MISO
- PJM
- RFC Reliability Region
- SPP

Transaction at any other delivery locations within the eastern interconnection shall be restricted as follows:

Restricted Delivery Locations

Other eastern interconnection locations only with approval by the Big Rivers CEO.

Firmness of Power

The product firmness of all transactions must be provided for in an executed agreement between Big Rivers and the appropriate counterparty. Sales commitments must never be more firm than the supply source, including the purchase side of back-to-back sales, swaps, sleeves or spreads unless the Big Rivers CEO gives explicit written authority to sell power that is more firm than the supply source. Energy purchased as firm liquidated damages may be resold as such.

Transmission Firmness and Volume

Transmission purchases need to be of equal firmness and volume to the energy component that such transmission purchase is associated with, unless pre-approved otherwise by the Big Rivers CEO. (Note: Purchasing small percentages of additional transmission to cover transmission losses is permitted.) In addition, transmission may be reserved but not utilized if an energy schedule is not confirmed prior to scheduling deadlines outside of Big Rivers' or APM's control. When this occurs it is not considered a violation of this policy.

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5. MISO Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for MISO products.

		MISO Per Transaction Limits (up to)			
Title	Product	Delivery Lead Time	Term	MW Size	\$/MWh
Board	All MISO Products	No Limit	No Limit	No Max	No Max
CEO	Generation Awards	As Required by MISO	1 Operating Day	No Max	MISO Price Cap
	Demand Awards				
	Ancillary Service Awards				
	Capacity	≤ 3 Years	≤ 3 Years	500	
	Financial Transmission Rights	≤ 4 Years	≤ 4 Years	425	\$20
	Virtual Transaction Awards	As Required by MISO	1 Operating Day	No Max	MISO Price Cap
Imports/Exports					

MISO Authority Matrix Explanations

- Virtual transaction award limits are per each bid/offer nodal point. Virtual purchase awards and virtual sales awards are monitored separately.
- Imports and exports are per location and are monitored separately.
- Generation Award Limits are per generating unit.
- Demand Award Limits are per each load nodal point.
- Limits for Ancillary Service Awards apply to the Regulation and Operating (Spinning and Supplemental) Reserve Market only.
- Capacity limits apply to bilateral transactions executed to meet MISO resource adequacy requirements such as MISO Zonal Resource Credits as well as capacity transacted via the MISO Capacity Auction.
- Only Financial Transmission Rights that are bought and sold via the annual and monthly auctions or in the secondary market are monitored per the limits above. Participation in the Annual Allocation of financial transmission rights is not considered a transaction subject to this Policy.
- Delivery lead time represents the time period between trade execution and start of flow.

Note that all MISO ISO day-ahead transactions, such as price-sensitive offers and bids for importing and exporting from MISO, are financially firm. Hence an exception from the firmness of power for adjustments to these day ahead transactions intraday is acceptable due to the fact that these adjustments are hourly and non-firm.

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6. PJM Transaction Authority (Non-Bilateral)

The following outlines transaction limits, definitions, and procedural requirements for PJM products.

Title	Product	PJM Per Transaction Limits (up to)			
		Delivery Lead Time	Term	MW Size	\$/MWh
Board	All PJM Products	No Limit	No Limit	No Max	No Max
CEO	Generation Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Demand Awards				
	Ancillary Service Awards				
	Capacity				
	Financial Transmission Rights	≤ 4 Years	≤ 4 Years	425	\$20
	Virtual Transaction Awards Imports/Exports	As Required by PJM	1 Operating Day	No Max	PJM Price Cap

PJM Authority Matrix Explanations

- Virtual transaction award limits are per each bid/offer nodal point. Incremental purchase awards and decremental sales awards are monitored separately.
- Imports and exports are per location and are each monitored separately.
- Only financial transmission rights that are bought and sold via the annual and monthly auctions or in the secondary market are monitored per the limits above. Participation in the Annual Allocation of financial transmission rights is not considered a transaction subject to this Policy.

Note that PJM RTO day-ahead transactions, such as price-sensitive offers and bids for importing and exporting from PJM are financially firm. Hence an exception from the firmness of power for adjustments to these day ahead transactions intraday is acceptable due to the fact that these adjustments are hourly and non-firm.

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7. Natural/Synthetic Gas and Transportation Transaction Authority


The following outlines transaction limits, definitions, and procedural requirements for natural/synthetic gas (Gas) and transportation transactions.

Title	Product	Per Transaction Limits (up to)				Per Delivery Day Limits (up to)		Aggregate Limits (up to)	
		Term	Lead Time	Physical Volume per Day MMBtu	\$/ MMBtu	Physical Volume MMBtu	Total \$	Total Physical Volume MMBtu	Total \$
Board	Gas Products	No Limit	No Limit	No Max.	No Max.	No Max.	No Max.	No Max.	No Max.
CEO	Physical	> 1 Year	≤ 2 Years	25,000	\$15	25,000	\$375,000	1.2 million	\$18 million
		≤ 2 Years		No Max.	No Max.	No Max.	No Max.		

Gas Authority Matrix Explanations

- Transaction limits represent the physical MMBtu volume per day and dollars/MMBtu for each transaction executed.
- Per delivery day limits represent the total physical MMBtu volume and dollars for all transactions delivered in a given day.
- Aggregate limits represent the total physical MMBtu volume and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.
- The dollar limits are based upon commodity gas only and do not include transportation, however, the term, lead time, and volume limits do apply to transportation.
- Gas products include physical gas, as well as transportation, imbalance and storage. The above authority matrix applies to both exchange transacted and OTC derivative products.



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Gas Firmness

The product firmness of all transactions must be provided for in an executed agreement between Big Rivers and the appropriate counterparty. Sales commitments of Gas must never be more firm than the Gas supply source unless pre-approved by the Big Rivers CEO.

Transportation Firmness and Volume

Transportation purchases need to be of equal firmness and volume to the Gas component that such transportation purchase is associated with, unless pre-approved otherwise by the Big Rivers CEO.

Delivery Locations

Gas transactions may only be executed at the following locations:

- Pipelines and hubs that serve Big Rivers' gas powered generation unit(s).

Physical Gas transactions may only be executed at other locations upon approval of the Big Rivers CEO and such transactions must support the hedging needs of Big Rivers.

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8. Fuel Oil Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for physical fuel oil transactions.

Fuel oil hedging will be conducted to hedge price risk associated with fuel oil used for plant start-up or to hedge potential fuel oil or diesel fuel price risk contained within solid fuel contracts.

<u>Title</u>	<u>Product</u>	<u>Per Transaction Limits</u> (up to)				<u>Aggregate Limits</u> (up to)	
		<u>Term</u>	<u>Lead Time</u>	<u>Physical - Volume Gallons</u>	<u>\$/Gallon</u>	<u>Total Physical - Volume Gallons</u>	<u>Total \$</u>
Board	Physical Fuel Oil	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	Physical Fuel Oil	> 1 Year	≤ 2 Years	1,000,000	\$6	6,000,000	\$36 million
		≤ 3 Years		No Max	No Max		
		≤ 1 Year					

Fuel Oil Authority Matrix Explanations

- Transaction limits represent the total gallons and dollars/gallon for each transaction executed.
- Aggregate limits represent the sum total gallon volume and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.



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9. Solid Fuel Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for solid fuel transactions.

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/MMBtu	Total Volume Tons	Total \$
Board	Physical Solid Fuel	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	Physical Solid Fuel	> 3 Months ≤ 3 Years	≤ 2 Years	1,500,000	\$2.50	2 million	\$120 million
		≤ 3 Months		200,000	\$2.85		

Solid Fuel Authority Matrix Explanations

- Authorized products include physical spot and forward transactions and options on physical forwards.
- Per transaction limits represent the total quantity in tons and dollars/MMBtu for each transaction executed.
- Aggregate limits represent the sum total quantity in tons and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.

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10. Solid Fuel Transportation Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for solid fuel transportation transactions.

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Board	Barge, Rail or Truck Transportation	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	Barge, Rail or Truck Transportation	> 1 Year ≤ 3 Years	≤ 2 Years	3 million	\$9	6 million	\$54 million
		≤ 1 Year		No Max	No Max		

Solid Fuel Transportation Authority Matrix Explanations

- Authorized products include barge, rail and truck transportation transactions.
- Per transaction limits represent the total quantity in tons and dollars/ton for each transaction executed.
- Aggregate limits represent the sum total quantity in tons and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.

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11. Emission Allowances Transaction Authority*

The following outlines transaction limits, definitions, and procedural requirements for emissions transactions.

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Board	Federal SO ₂ and NO _x Emission Allowances	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	Federal SO ₂ Emission Allowances	> 1 Year ≤ 2 Years	≤ 2 Years	5,000	\$500	20,000	\$10 million
		≤ 1 Year		No Max	No Max		
	Federal NO _x Emission Allowances	> 1 Year ≤ 2 Years		2,500	\$2,500	12,500	\$30 million
		≤ 1 Year		No Max	No Max		

Emission Allowance Authority Matrix Explanations

- The authority matrix above represents authority for SO₂ and NO_x emission allowances.
- Per transaction limits represent the total quantity in tons and dollars/ton for each transaction executed.
- Aggregate limits represent the sum total quantity in tons and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.

*Per Appendix A of the Kentucky Public Service Commission order dated March 6, 2009 in case 2007-00455 Big Rivers commits to not sell SO₂ allowances in its inventory (excluding the 14,000 SO₂ allowances acquired in conjunction with the Unwind Transaction) unless the sale is cost-effective based on a written policy which reflects short- and long-term allowance needs and prices.



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12. Limestone Reagent Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for limestone reagent transactions.

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Board of Directors	Physical Limestone Reagent	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	Physical Limestone Reagent	> 3 Months ≤ 3 Years	≤ 2 Years	750,000	\$20	1.50 million	\$30 million
		≤ 3 Months		No Max	No Max		

Limestone Reagent Authority Matrix Explanations

- Authorized products include physical spot and forward transactions and options on physical forwards.
- Per transaction limits represent the total quantity in tons and dollars for each transaction executed.
- Aggregate limits represent the sum total quantity in tons and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.

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13. Lime Reagent Transaction Authority


The following outlines transaction limits, definitions, and procedural requirements for lime reagent transactions.

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Board of Directors	Physical Lime Reagent	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	Physical Lime Reagent	> 3 Months ≤ 3 Years	≤ 2 Years	650,000	\$125	650,000	\$81 million
		≤ 3 Months		No Max	No Max		

Lime Reagent Authority Matrix Explanations

- Authorized products include physical spot and forward transactions and options on physical forwards.
- Per transaction limits represent the total quantity in tons and dollars for each transaction executed.
- Aggregate limits represent the sum total quantity in tons and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.



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14. Acknowledgements

Clear Authority and Staff and APM Authority Delegations

Where authority is further downward delegated, it must be approved by written signature of the next authority level up prior to any execution. In no case will the delegation of authority to Big Rivers staff or APM exceed that of the Big Rivers CEO.

Violations and Sanctions

Violations of this Authority Policy must not occur. Any person covered by this policy who becomes aware of a violation of the Authority Policy has an affirmative duty to report the violation to the department head in which the violation occurred and to the Director Risk Management/Strategic Planning who in turn shall inform the Big Rivers CEO. However, if it is believed that the Big Rivers CEO is involved then the Big Rivers Chairman of the Board shall be notified. The responsible party (ies) will be sanctioned according to Big Rivers Risk Management Sanctions Policy (for Big Rivers Employees only, APM employees are governed by the ACES Power Marketing Trading Sanctions Policy).

Policy Effective

This Transaction Authority Policy is in effect upon the Board's approval and shall remain in effect until a revised policy has been approved by the Board.

Responsibility

It shall be the responsibility of the Board, the CEO, the Big Rivers-IRMC and the APM-IRMC to ensure compliance with this policy.



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Number	Date	Notes	Approved by
		Replaced Risk Management Policy for Power Supply	Board
Original	06/15/2007	Trading Authority Policy w/o matrices	Board
Rev 1	10/16/2009	Name change to Energy Related Transaction Authority Policy with matrices	Board
Rev 2	11/19/2010	MISO Transaction Authority updated	Board
Rev 3	12/17/2010	Updated Solid Fuel Transaction Authority	Board
Rev 4	03/18/2011	Added limestone and lime, general cleanup	Board
Rev 5	02/21/2012	Made revisions to account for retirement of Senior VP Energy Services	Board
Rev 6	02/14/2013	Changed VP Production to Chief Operating Officer. Changed Vice President of Governmental Relations and Enterprise Risk Management to Director Enterprise Risk Management/Strategic Planning. Under MISO, changed Aggregate Planning Resource Credits to Zonal Resource Credits.	Board
Rev. 7	3/21/2014	Add date last reviewed line and correct section 4 to comply with Appendix	Board



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1. Policy Purpose

The purpose of this policy is to define the authority granted by the Big Rivers Electric Corporation (“Big Rivers”) Board of Directors (“Board”) to the President & Chief Executive Officer (“CEO”) to execute, or to delegate authority to execute energy-related transactions. Furthermore, it sets forth clarity and empowerment among those with transaction authority and is designed to encourage communication among individuals with transaction authority and the Board.

2. Objective

The objective of Big Rivers’ Energy Related Transaction Authority Policy is to define:

- Who has authority to execute transactions,
- The commodities and products that can be transacted,
- The authorized lead-time and term for each transaction,
- The authorized maximum price and volume,
- Counterparty contract and credit requirements,
- The process for approving new commodities, products or locations,
- Big Rivers’ intention regarding hedging and speculating,
- Other relevant factors associated with due diligence in authorizing transactions to be executed.

3. Procedural Requirements

The following defines the procedural requirements that apply to all commodities and products transacted pursuant to this policy.

Execution Authority

Execution Authority is outlined by commodity in the authority matrix sections found below. All column limits in these matrices are applied independently of one another for each authority level, in that no individual column limit may be exceeded without authorization, regardless of whether a transaction does not exceed another column limit for that same authority level. Limits for each level of authority are cumulative, and include all column limits up to and including that level. The authority granted in this policy should not violate any other policy limits.

The transaction limits apply to both purchases and sales. Daily limits are applied to gross amounts transacted in total for the day, and not to purchases and sales netted together.

This policy identifies Board-authorized levels for the CEO and explicitly gives the CEO the authority to delegate authority levels to Big Rivers’ staff and ACES Power Marketing (“APM”). The CEO has the authority to modify delegated authority levels (noted in Appendix A) at his sole discretion as long as the delegated authority does not exceed his own authority per this policy. All delegated authority levels below the Chief Operating Officer level will be recommended by the Chief Operating Officer and approved by the CEO.



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Contract Requirements

Transactions with counterparties shall only be permitted if Big Rivers has either:

- An active, valid, and executed agreement enabling such transaction activity with that counterparty,
- Long-form confirmations may be used as a valid agreement in lieu of a permanent agreement, when necessary if approved in writing by the Big Rivers CEO.

Credit Requirements

Credit limits for each counterparty shall not be intentionally exceeded. *(Note: Since credit exposures are a function of not only positions transacted, but also a function of market pricing and volatility, credit exposure to counterparty may unintentionally exceed a credit limit purely due to changes in the forward market).*

Entering into unsecured transactions with a counterparty that has total credit exposure greater than or equal to its open line of credit and the total of any security currently provided will not be allowed unless approved in writing by the Big Rivers CEO.

Credit Sleeving

All sleeving transactions for credit purposes shall be approved by the CEO. *(Note: Sleeving is an arrangement where a more financially reputable entity acts as middleman for a smaller, undercapitalized entity in the purchase or sale of power.)*

Contract Sleeving

This policy does not prohibit Big Rivers from being positioned between another member or customer of APM and an external counterparty in order to bridge a contract gap that exists. The sleeve must:

- Be only for physical power, transmission or natural gas, not transportation,
- Be only for terms of one month or less.

Contract sleeving on behalf of Big Rivers is approved when it is either the only or the most economical path to pursue at the discretion of APM, with prompt after-the-fact notice to the Big Rivers Chief Operating Officer.



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Transaction Communications

All communications for bilateral electric power transactions must be transacted via a recorded communication method. Examples include, but are not limited to, voice recorded communication land or cellular phone, instant messaging or via an online broker account. Recorded communications must be maintained and controlled by personnel who are independent of the transaction function.

Deal Capture

Any transactions executed by a Big Rivers employee must be promptly forwarded to APM after the deal execution.

Speculation

Speculation refers to a purchase or sales transaction in which the intent was to realize a profit without taking physical delivery. No speculative transaction activities shall be permitted, and no speculative transaction positions shall be initiated. Transactions will be permitted only for purposes of hedging and portfolio optimization.

Non-Standard Products

The Board must pre-approve any transaction that involves commodities or products not listed in this policy.

Transactions Requiring Board Approval

Transactions which meet any of the following criteria must be pre-approved by the Board prior to execution:

- The transaction is a new commodity or within the list of commodities not previously transacted by Big Rivers,
- The transaction is at a location in which no transactions are permitted,
- The transaction is for something other than: physical spot or forward electricity, natural gas, fuel oil, solid fuel, ancillary services, capacity, power transmission, financial transmission rights, gas transportation, gas imbalance and storage, solid fuel transportation, exchange transacted energy products, over-the-counter (OTC) financial energy transactions, OTC energy options, federal SO2 or NOx emission allowances, renewable energy credits or a unit outage insurance product.

Examples of new instruments would include the use of derivatives with different risk characteristics or the use of derivatives to implement different business strategies or goals. New instruments or locations would also include those instruments or locations that may be transacted on a “one-off” basis, which



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would be implementation of a derivative instrument or entry into a commodity market that, despite the anticipation of being transacted just once, would still fit the definition of a new instrument or location.

The purpose of defining a process for such transactions as noted above is to ensure that the exposures associated with them are thoroughly reviewed and understood by the Board and appropriate transaction controls are in place. The Board must approve the use of such transactions prior to execution using the process defined below:

- a) Transaction Proposal - The proposal is the responsibility of the person or business group proposing the transaction. The proposal should address the business need, risks, transaction controls, valuation methodology, accounting methodology, operations workflow/ methodology, and assessment of legal and regulatory issues.
- b) Board Review - The Board will perform a review of the benefits and risks of the proposed transaction. The Board will assess the proposed transaction and make a determination whether to add the proposed transaction to the approved list.
- c) Approval (Pilot Program) – The Board may approve limited use of the proposed transaction to ensure that proper controls are in place to monitor the activity. The Board may approve the proposed transaction without instituting a Pilot Program if the proposed transaction is going to be used once (one off), where it would not be prudent to test it in a shorter time frame or smaller quantity due to constraints such as liquidity or length of term of product. The Board will use more scrutiny in approval of one-off transactions.



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4. Bilateral Electric Power and Transmission Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for power and power transmission transactions.

Title	Product	Per Transaction Limits (up to)				Per Delivery Day Limits (up to)		Aggregate Limits	
		Term	Lead Time	MW Size	\$/MWH	Total Volume MWH	Total \$	Total Volume MWH	Total \$
Board	Electric Power and Transmission	No Limit	No Limit	No Max.	No Max.	No Max.	No Max.	No Max.	No Max.
CEO	Electric Power and Transmission	> 1 Year	≤ 2 Years	50	\$150	21,600	\$10.8 million	1,800,000	\$110 million
		≤ 3 Years		No Max.	No Max.				
		≤ 1 Year							

Power Authority Matrix Explanations

- Transaction limits represent the MW volume per hour and dollars/MWH for each transaction executed.
- Per Delivery Day Limits represent the total MWH volume and dollars for all transactions delivered in a given transaction day.
- Aggregate Limits represent the sum total MWH volume and dollars for all forward transactions.
- Lead time represents the time period from the date the transaction is executed to the start of the transaction.
- Authorized products include electric power, both forwards and options, transmission, including both physical and financial derivatives. Options may only be entered into by the Big Rivers CEO or his designee.
- Authority for PJM and MISO products is defined in the authority matrices below.



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Delivery Locations

Transactions at delivery locations outside the eastern interconnect are not permitted, unless approved by the CEO. Transaction at delivery locations that are normal to the daily course of business for Big Rivers, to the extent transmission is available, are authorized as follows:

Unrestricted Delivery Locations

- SERC Reliability Region
- MISO
- PJM
- RFC Reliability Region
- SPP

Transaction at any other delivery locations within the eastern interconnection shall be restricted as follows:

Restricted Delivery Locations

Other eastern interconnection locations only with approval by the Big Rivers CEO.

Firmness of Power

The product firmness of all transactions must be provided for in an executed agreement between Big Rivers and the appropriate counterparty. Sales commitments must never be more firm than the supply source, including the purchase side of back-to-back sales, swaps, sleeves or spreads unless the Big Rivers CEO gives explicit written authority to sell power that is more firm than the supply source. Energy purchased as firm liquidated damages may be resold as such.

Transmission Firmness and Volume

Transmission purchases need to be of equal firmness and volume to the energy component that such transmission purchase is associated with, unless pre-approved otherwise by the Big Rivers CEO. (Note: Purchasing small percentages of additional transmission to cover transmission losses is permitted.) In addition, transmission may be reserved but not utilized if an energy schedule is not confirmed prior to scheduling deadlines outside of Big Rivers' or APM's control. When this occurs it is not considered a violation of this policy.



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5. MISO Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for MISO products.

		MISO Per Transaction Limits (up to)			
Title	Product	Delivery Lead Time	Term	MW Size	\$/MWh
Board	All MISO Products	No Limit	No Limit	No Max	No Max
CEO	Generation Awards	As Required by MISO	1 Operating Day	No Max	MISO Price Cap
	Demand Awards				
	Ancillary Service Awards				
	Capacity	≤ 3 Years	≤ 3 Years	500	
	Financial Transmission Rights	≤ 4 Years	≤ 4 Years	425	\$20
	Virtual Transaction Awards	As Required by MISO	1 Operating Day	No Max	MISO Price Cap
	Imports/Exports				

MISO Authority Matrix Explanations

- Virtual transaction award limits are per each bid/offer nodal point. Virtual purchase awards and virtual sales awards are monitored separately.
- Imports and exports are per location and are monitored separately.
- Generation Award Limits are per generating unit.
- Demand Award Limits are per each load nodal point.
- Limits for Ancillary Service Awards apply to the Regulation and Operating (Spinning and Supplemental) Reserve Market only.
- Capacity limits apply to bilateral transactions executed to meet MISO resource adequacy requirements such as MISO Zonal Resource Credits as well as capacity transacted via the MISO Capacity Auction.
- Only Financial Transmission Rights that are bought and sold via the annual and monthly auctions or in the secondary market are monitored per the limits above. Participation in the Annual Allocation of financial transmission rights is not considered a transaction subject to this Policy.
- Delivery lead time represents the time period between trade execution and start of flow.

Note that all MISO ISO day-ahead transactions, such as price-sensitive offers and bids for importing and exporting from MISO, are financially firm. Hence an exception from the firmness of power for adjustments to these day ahead transactions intraday is acceptable due to the fact that these adjustments are hourly and non-firm.



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6. PJM Transaction Authority (Non-Bilateral)

The following outlines transaction limits, definitions, and procedural requirements for PJM products.

Title	Product	PJM Per Transaction Limits (up to)			
		Delivery Lead Time	Term	MW Size	S/MWh
Board	All PJM Products	No Limit	No Limit	No Max	No Max
CEO	Generation Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Demand Awards				
	Ancillary Service Awards				
	Capacity				
	Financial Transmission Rights	≤ 4 Years	≤ 4 Years	425	\$20
	Virtual Transaction Awards	As Required by PJM	1 Operating Day	No Max	PJM Price Cap
Imports/Exports					

PJM Authority Matrix Explanations

- Virtual transaction award limits are per each bid/offer nodal point. Incremental purchase awards and decremental sales awards are monitored separately.
- Imports and exports are per location and are each monitored separately.
- Only financial transmission rights that are bought and sold via the annual and monthly auctions or in the secondary market are monitored per the limits above. Participation in the Annual Allocation of financial transmission rights is not considered a transaction subject to this Policy.

Note that PJM RTO day-ahead transactions, such as price-sensitive offers and bids for importing and exporting from PJM are financially firm. Hence an exception from the firmness of power for adjustments to these day ahead transactions intraday is acceptable due to the fact that these adjustments are hourly and non-firm.



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7. Natural/Synthetic Gas and Transportation Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for natural/synthetic gas (Gas) and transportation transactions.

Title	Product	Per Transaction Limits (up to)				Per Delivery Day Limits (up to)		Aggregate Limits (up to)	
		Term	Lead Time	Physical Volume per Day MMBtu	\$/ MMBtu	Physical Volume MMBtu	Total \$	Total Physical Volume MMBtu	Total \$
Board	Gas Products	No Limit	No Limit	No Max.	No Max.	No Max.	No Max.	No Max.	No Max.
CEO	Physical	> 1 Year ≤ 2 Years	≤ 2 Years	25,000	\$15	25,000	\$375,000	1.2 million	\$18 million
		≤ 1 Year		No Max.	No Max.	No Max.	No Max.		

Gas Authority Matrix Explanations

- Transaction limits represent the physical MMBtu volume per day and dollars/MMBtu for each transaction executed.
- Per delivery day limits represent the total physical MMBtu volume and dollars for all transactions delivered in a given day.
- Aggregate limits represent the total physical MMBtu volume and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.
- The dollar limits are based upon commodity gas only and do not include transportation, however, the term, lead time, and volume limits do apply to transportation.
- Gas products include physical gas, as well as transportation, imbalance and storage. The above authority matrix applies to both exchange transacted and OTC derivative products.



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Gas Firmness

The product firmness of all transactions must be provided for in an executed agreement between Big Rivers and the appropriate counterparty. Sales commitments of Gas must never be more firm than the Gas supply source unless pre-approved by the Big Rivers CEO.

Transportation Firmness and Volume

Transportation purchases need to be of equal firmness and volume to the Gas component that such transportation purchase is associated with, unless pre-approved otherwise by the Big Rivers CEO.

Delivery Locations

Gas transactions may only be executed at the following locations:

- Pipelines and hubs that serve Big Rivers’ gas powered generation unit(s).

Physical Gas transactions may only be executed at other locations upon approval of the Big Rivers CEO and such transactions must support the hedging needs of Big Rivers.



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8. Fuel Oil Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for physical fuel oil transactions.

Fuel oil hedging will be conducted to hedge price risk associated with fuel oil used for plant start-up or to hedge potential fuel oil or diesel fuel price risk contained within solid fuel contracts.

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Physical - Volume Gallons	\$/Gallon	Total Physical - Volume Gallons	Total \$
Board	Physical Fuel Oil	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	Physical Fuel Oil	> 1 Year	≤ 2 Years	1,000,000	\$6	6,000,000	\$36 million
		≤ 3 Years		No Max			
		≤ 1 Year	No Max	No Max			

Fuel Oil Authority Matrix Explanations

- Transaction limits represent the total gallons and dollars/gallon for each transaction executed.
- Aggregate limits represent the sum total gallon volume and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.



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9. Solid Fuel Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for solid fuel transactions.

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/MMBtu	Total Volume Tons	Total \$
Board	Physical Solid Fuel	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	Physical Solid Fuel	> 3 Months	≤ 2 Years	1,500,000	\$2.50	2 million	\$120 million
		≤ 3 Years		200,000	\$2.85		
		≤ 3 Months					

Solid Fuel Authority Matrix Explanations

- Authorized products include physical spot and forward transactions and options on physical forwards.
- Per transaction limits represent the total quantity in tons and dollars/MMBtu for each transaction executed.
- Aggregate limits represent the sum total quantity in tons and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.



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10. Solid Fuel Transportation Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for solid fuel transportation transactions.

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Board	Barge, Rail or Truck Transportation	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	Barge, Rail or Truck Transportation	> 1 Year ≤ 3 Years	≤ 2 Years	3 million	\$9	6 million	\$54 million
		≤ 1 Year		No Max	No Max		

Solid Fuel Transportation Authority Matrix Explanations

- Authorized products include barge, rail and truck transportation transactions.
- Per transaction limits represent the total quantity in tons and dollars/ton for each transaction executed.
- Aggregate limits represent the sum total quantity in tons and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.



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11. Emission Allowances Transaction Authority*

The following outlines transaction limits, definitions, and procedural requirements for emissions transactions.

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Board	Federal SO ₂ and NO _x Emission Allowances	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	Federal SO ₂ Emission Allowances	> 1 Year ≤ 2 Years	≤ 2 Years	5,000	\$500	20,000	\$10 million
		≤ 1 Year		No Max	No Max		
	Federal NO _x Emission Allowances	> 1 Year ≤ 2 Years		2,500	\$2,500	12,500	\$30 million
		≤ 1 Year		No Max	No Max		

Emission Allowance Authority Matrix Explanations

- The authority matrix above represents authority for SO₂ and NO_x emission allowances.
- Per transaction limits represent the total quantity in tons and dollars/ton for each transaction executed.
- Aggregate limits represent the sum total quantity in tons and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.

*Per Appendix A of the Kentucky Public Service Commission order dated March 6, 2009 in case 2007-00455 Big Rivers commits to not sell SO₂ allowances in its inventory (excluding the 14,000 SO₂ allowances acquired in conjunction with the Unwind Transaction) unless the sale is cost-effective based on a written policy which reflects short- and long-term allowance needs and prices.



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12. Limestone Reagent Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for limestone reagent transactions.

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Board of Directors	Physical Limestone Reagent	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	Physical Limestone Reagent	> 3 Months ≤ 3 Years	≤ 2 Years	750,000	\$20	1.50 million	\$30 million
		≤ 3 Months		No Max	No Max		

Limestone Reagent Authority Matrix Explanations

- Authorized products include physical spot and forward transactions and options on physical forwards.
- Per transaction limits represent the total quantity in tons and dollars for each transaction executed.
- Aggregate limits represent the sum total quantity in tons and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.



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13. Lime Reagent Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for lime reagent transactions.

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Board of Directors	Physical Lime Reagent	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	Physical Lime Reagent	> 3 Months ≤ 3 Years	≤ 2 Years	650,000	\$125	650,000	\$81 million
		≤ 3 Months		No Max	No Max		

Lime Reagent Authority Matrix Explanations

- Authorized products include physical spot and forward transactions and options on physical forwards.
- Per transaction limits represent the total quantity in tons and dollars for each transaction executed.
- Aggregate limits represent the sum total quantity in tons and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.



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		Deleted: 2

14. Acknowledgements

Clear Authority and Staff and APM Authority Delegations

Where authority is further downward delegated, it must be approved by written signature of the next authority level up prior to any execution. In no case will the delegation of authority to Big Rivers staff or APM exceed that of the Big Rivers CEO.

Violations and Sanctions

Violations of this Authority Policy must not occur. Any person covered by this policy who becomes aware of a violation of the Authority Policy has an affirmative duty to report the violation to the department head in which the violation occurred and to the Director Risk Management/Strategic Planning who in turn shall inform the Big Rivers CEO. However, if it is believed that the Big Rivers CEO is involved then the Big Rivers Chairman of the Board shall be notified. The responsible party (ies) will be sanctioned according to Big Rivers Risk Management Sanctions Policy (for Big Rivers Employees only, APM employees are governed by the ACES Power Marketing Trading Sanctions Policy).

Policy Effective

This Transaction Authority Policy is in effect upon the Board’s approval and shall remain in effect until a revised policy has been approved by the Board.

Responsibility

It shall be the responsibility of the Board, the CEO, the Big Rivers-IRMC and the APM-IRMC to ensure compliance with this policy.



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Number	Date	Notes	Approved by
		Replaced Risk Management Policy for Power Supply	Board
Original	06/15/2007	Trading Authority Policy w/o matrices	Board
Rev 1	10/16/2009	Name change to Energy Related Transaction Authority Policy with matrices	Board
Rev 2	11/19/2010	MISO Transaction Authority updated	Board
Rev 3	12/17/2010	Updated Solid Fuel Transaction Authority	Board
Rev 4	03/18/2011	Added limestone and lime, general cleanup	Board
Rev 5	02/21/2012	Made revisions to account for retirement of Senior VP Energy Services	Board
Rev 6	02/14/2013	Changed VP Production to Chief Operating Officer. Changed Vice President of Governmental Relations and Enterprise Risk Management to Director Enterprise Risk Management/Strategic Planning. Under MISO, changed Aggregate Planning Resource Credits to Zonal Resource Credits.	Board
Rev. 7	<u>3/21/2014</u>	Add date last reviewed line and correct section 4 to comply with Appendix	Board

Deleted: 02/21

**Policy No. 120 –
Fuel Procurement Policy and Procedure**



Policy Number 120

Original Effective Date	<u>07/16/2009</u>	Approved by: Board
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Fuel Procurement Policies and Procedures

Policy Purpose

The purpose of the Fuel Procurement Policies and Procedures guidelines is to present the principles that govern the procurement of fuel, reagent, and associated transportation. This document is not intended to provide a step-by-step procedural flow, but place an emphasis on procurement policies and a concise overview of appropriate procurement practices. The awarding of Contracts and Purchase Orders will comply with business controls including corporate governance, authority limit matrices, auditing recommendations, and other established practices and limitations.

FUEL PROCUREMENT POLICIES AND PROCEDURES

A. Definitions:

1. "Agreement" means a legally binding document, in which one party agrees to sell and the other agrees to buy fuel, reagent, or transportation services for such, which is executed by both Buyer and Seller.
2. "Award Recommendation" means the Company's approval process for the review and approval by Senior Management of a recommended fuel, reagent, or transportation purchase that fall outside the limits established in the Company's granted authority limits.
3. "Company" means Big Rivers Electric Corporation.
4. "Contract" is an Agreement, Letter Agreement, Purchase Order, or Spot Contract for fuel supply, reagent, or such transportation with certain terms and conditions that describe the business transaction under which the Company procures fuel, reagent, and related transportation.
5. "Contract purchase" means any purchase of fuel, reagent, or transportation on behalf of the Company under a contract, typically more than one year's duration.
6. "Department" means the Company's Fuels Department.
7. "Director" means the Company's Director of Fuels.
8. "Emergency" means extraordinary conditions affecting fuel production, transportation, or usage, including but not limited to strikes, lockouts or other labor problems, embargoes, mining impediments and other problems affecting the production or transportation of fuel, existing and/or forecasted extreme weather conditions, or any other conditions or circumstances that could be reasonably foreseen as impairing the continued supply of fuel to Company facilities.
9. "Environmental standards" mean the legal requirements for compliance with emission levels or other environmental requirements applicable to one or more of the Company's generating units.
10. "Fuel" means combustibles purchased by the Company for one or more of its generating stations.

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11. Chief Operating Officer means the Company's principal individual responsible for power generation and fuel procurement, among other duties.
12. "Solicitation" means the process of soliciting bids (written or oral) for the supply of fuel, reagent, and/or related transportation services.
13. "Spot Contract" is a type of agreement that may be issued by the Company for the supply of fuel, reagent, or related transportation of such with a term of typically one year or less.
14. "Spot Purchase" means any purchase of fuel, reagent, or related transportation on behalf of the Company where the terms and conditions are incorporated in the Letter Agreement, Purchase Order or Spot Contract and the term is typically of one year or less.
15. "Station" means one of the Company's generating facilities.
16. "Supplier" means the seller or counterparty to an agreement who is obligated to comply with and fulfill the agreement's terms and conditions.
17. "Unit" means a generating unit at a station.
18. "Unit bus bar cost" is the total variable production cost including the maintenance cost associated with burning the fuel.

Fuel Procurement Policies:

The Company's fuel procurement policy is to obtain an adequate supply of fuel and reagent of sufficient quality at the most competitive overall evaluated cost on a unit bus bar basis consistent with the Company's obligations to provide adequate and reliable service to its customers, to meet operational and environmental standards, and to meet any other applicable legal requirements. The Company will use its best efforts to secure its fuel and reagent supply at competitive prices through solicitation for such.

Implementation of this policy is of highest priority to the Company. The Fuels Department shall be organized and staffed, and fuel procurement procedures and administration shall be conducted, in an efficient and practical manner consistent with this policy. Fuel, reagent, and related transportation shall be purchased at competitive prices considering all material factors. The factors include but are not limited to: quantity needed to maintain an adequate supply, quality necessary to ensure generating unit operating and maintenance characteristics and environmental standards, reliability of the supplier, creditworthiness, and forward planning to meet projected system requirements, and meeting emergency or other unusual circumstances that might affect operating conditions. From time to time, the Director of Fuels will review the Company's Fuel Procurement Policies and Procedures and recommend updates as appropriate.

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Fuel Procurement Policies and Procedures

C. Organization:

1. Department Structure. The Department shall be organized and staffed to effectively administer the Company's fuel procurement function.
2. Organizational Responsibility. The Chief Operating Officer to whom the Director reports, has the responsibility for fuel procurement. The Director is responsible for the Department. Other departments may be called upon by the Department to the extent the Director or Chief Operating Officer considers advisable in the execution of the functions of the Department.
3. Approval Authority (Award Recommendation). An Award Recommendation will be prepared for all fuel purchases that exceed the term, tenor, or notional amount of authority of the Director of Fuels which is specified in the single transaction authority limits by the Company. The Award Recommendation will be drafted by the Director, reviewed by Fuels legal counsel, and executed by the Chief Operating Officer within the authority granted by the Energy Related Transaction Authority Policy. Greater expenditures shall require the signature of the Company's President and Chief Executive Officer and within his trading authority as established by the Board of Directors. These levels of authority may be amended, supplemented, or superseded as dictated by the Company.
4. Reports. The Director will instruct the Department to prepare, maintain and distribute reports to management and others as deemed necessary for business operations and regulatory requirements.
5. Records. The Department shall maintain the following records:
 - a. Open Contract Files. The Department shall maintain the following on open status for at least one-year or longer as the contract term or other conditions warrant:
 1. For each current contract supplier, the files will contain:
 - a) Contract documents, amendments, purchase orders and escalation documentation;
 - b) General correspondence;
 - c) Invoices and invoice verification data;
 - d) Delivery records and quality analyses data;
 - e) Inspection reports and other data.
 2. A record of transportation equipment owned or leased by the Company (as applicable).
 3. A list containing current suppliers and known potential Suppliers of fuel.
 - b. Closed Contract Files. The Department shall maintain its files according to the Company's record retention plan.

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Fuel Procurement Policies and Procedures

6. General Administrative Duties.

The Department shall subscribe to and have membership in appropriate trade and industry publications and/or associations, to include reports of governmental or consulting agencies concerning fuel, reagent, and related transportation market information, to include fuel prices and/or projections. Department personnel shall use their best efforts to keep current with fuel market conditions, prices and availability, and other developments relating to fuel procurement.

D. Fuel Supply Procedures:

1. Projections. In conjunction with other departments of the Company, the Department shall prepare annually a projection of fuel usage and cost at each Station for the number of years required for use in the Company's planning process.
2. Contract/Spot Mix. Subject to the approval of the Chief Operating Officer the Director shall determine whether a contract purchase is advisable, considering the following factors: (a) the availability of adequate supplies from qualified suppliers, (b) the advisability or need to have an adequate supply committed for an existing or planned unit (subject to inventory limits specified by the Company), (c) the desire to maintain practical flexibility as to market conditions and other factors affecting price and availability, (d) existing and anticipated environmental standards, (e) such other factors as may reasonably affect the implementation of the Company's Fuel Procurement Policy and (f) fuel impact on generation facilities' operation and maintenance.
3. Current Requirements. The Department shall review and analyze the data available to the Department for purposes of conducting fuel and reagent purchases in a timely manner to meet the requirements of the Company.
4. Supplier Qualifications. The Company shall select potential suppliers on the basis of evaluation, market intelligence, performance information (as available), industry research, and creditworthiness, as determined by the Director and his staff. No potential qualified supplier shall be preferred or discriminated against because of race, religion, color, sex, age or marital status of the supplier or any of its representatives.

A supplier evaluation (to include site visit and mine engineering and/or performance report) may be performed to determine if a supplier has the ability to deliver in the time frame requested the quantity and quality of coal or reagent bid at the offered price.

5. Solicitations. The Department shall maintain a current list of Suppliers and shall review that list from time to time to ensure that it remains current. Normally, the Company shall purchase its fuel and reagent through sealed bid solicitations; however, the Company reserves the right to utilize its market intelligence to seize opportunity purchases of fuels and reagent, request oral, written, or electronic offers, potentially followed by negotiations, when in its judgment market conditions provide an opportunity to obtain fuel or reagent more advantageously than through mailed bid solicitations and usual procedures. When the Company foregoes the solicitation

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process, documentation shall be appended to the resulting purchase order file describing the conditions.

A notice of a request for quotation (“RFQ”) shall be provided to normal industry newsletters and information postings. The normal solicitation process shall require that potential suppliers be notified in writing as to the general quantities, terms and quality specifications required. An RFQ number will be assigned to for the quotation package. An RFQ will include: instructions to bidders (date and time due); scope of supply (quantity and quality); potential term; standard terms and conditions of typical agreements.

Offers from potential suppliers shall be returned by the requested date and time or they will be rejected. A bid log shall be kept for logging in receipt of bid offers. Attendees viewing the opening of the bid shall initial the bid document as opened and the log as at the completion of the opening. Offers shall be opened and logged in the presence of the Chief Operating Officer and Director of Fuel or their representative in their absence, and another selected representative outside of the Fuels Department.

All appropriate bid data shall be documented and electronically categorized for the process of evaluation of the various offerings of fuel and reagent. The documents shall be maintained in a secured area and shall be kept pursuant to normal record keeping practices.

6. Contract Awards. The Department shall review and analyze each Contract offer. The Director, or his/her representative, may engage in preliminary negotiations to determine which offers warrant further consideration. The Director and/or representative shall investigate the potential supplier and proposed source of supply; and, as to any offer for fuel, the Department shall verify the adequacy of the proposed source of supply as to quantity, quality, and timely deliverability.

The evaluation shall include, but not necessarily be limited to, the response to the RFQ (items required by the RFQ for satisfactory operational, environmental, and economic criteria); diversity of supply; supplier credit assessment; transportation mode and cost; and diversity of suppliers to provide the lowest evaluated cost of electrical energy to the Unit bus bar over the long term.

From this initial evaluation, a select group of potential suppliers (a “short-list”) of suppliers shall be developed for more in-depth evaluation. The Department may then engage in preliminary discussions to ensure that the offer warrants further evaluation and consideration. The objective of the negotiating discussions is to ensure that the Company achieves balanced terms and conditions and the lowest evaluated electrical energy delivered to the Unit bus bar and reliable supply consistent with other qualifiers related to supplier reliability, environmental restraints, transportation options, etc.

The recommended Supplier(s) shall be selected by the negotiating team based upon the evaluation criteria and the results of the negotiating discussions. The Department shall prepare a detailed Award Recommendation for approval. The Award Recommendation shall document the selection criteria and pertinent factors, and in circumstances where more than one company is selected, the recommendation shall describe the tonnage requirements and other responsibilities of each of the other recommended Suppliers.

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All contracts for which the term, tenor or notional amount exceed the limits specified for the Director of Fuels must be approved and signed by individual(s) authorized per the Energy Related Transaction Authority Policy.

7. Spot Purchases. Spot purchases may be made by the Company whenever considered advisable by the Director in furtherance of the Company's fuel and reagent needs, subject to the limit of authority as outlined by the Company.
8. Documentation. Contracts shall be signed by a duly appointed officer of the Supplier and an Officer of the Company. A purchase order may be issued for a spot purchase. A purchase order shall contain all terms of that purchase. Further, the Department shall maintain documentation of the final list (log) of bidders, a copy of the entire bid package; bidder's responses; and the bid evaluation summary used for decision support.
9. Fuel Oil. Fuel Supply Procedures principally address procurement of solid fuel. Fuel oil is procured on an "as-needed" basis due to the infrequency of use of this fuel and the nature of the oil markets. When the need for oil arises, the Fuels Department shall act to solicit vendors for offers. Orders are assigned on the basis of lowest delivered cost per gallon and ability to fill the order. Solicitation results shall be documented and purchase orders issued in the Fuels Department for those purchases initiated and completed by the Department.

E. Fuel Supply and Reagent Agreement Administration:

1. Compliance. The Department shall review and analyze daily business and operational reports to properly administer all fuel and transportation agreements.
2. Coal weights. Coal weights shall be obtained by either the Company or by Supplier, upon agreement by Company. Coal weight is obtained by scale or draft method, depending upon Company site or methodology employed by Supplier to ascertain weights. In either event, coal weights are obtained by industry-accepted standards, and in cases where scales are utilized, are duly tested and maintained in proper order for such purpose. In cases where draft weights are utilized, the Company employs processes to verify actions to obtain draft weights and that such measures are by industry-accepted standards. Coal quantity is obtained by Station personnel and reported through the fuels information system or is provided by the Supplier pursuant to the contract agreement.
3. Coal sampling. Coal sampling and analysis shall be performed by either the Company or the Supplier, upon agreement by Company. Coal sampling and analysis shall be performed according to procedures adopted by the Company's laboratory in accordance with A.S.T.M. standards for coal sampling, coal sample preparation, coal sample identification, handling of sample, and coal analysis. Coal quality is assessed and reported through the fuels information system by the Company's laboratory personnel or is provided by the Supplier pursuant to the contract agreement.

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Fuel Procurement Policies and Procedures

4. Amendments. A contract shall not be materially amended except after analysis by the Department and recommendation of the Director of Fuels or the Chief Operating Officer. No material contract or purchase order addendum shall be made except upon recommendation of the Director and subject to the approval limits of the Company.
5. Contract Administration. The Director and the Department shall remain informed as to the terms and conditions of each current contract, and maintain the necessary data to administer the contracts. Every supplier request for a change in terms, conditions, or prices must be written and supported by adequate data in conformity with the contract. Each such request shall be analyzed by the Department against the contract provisions, and reported with recommendations to the Director. After review by the Director, the supplier request and Department's recommendations shall be approved as required by the Company. If any request is not approved in whole or in part, the Director shall advise the supplier, specifying the Company's objections with an adequate explanation. If the supplier's request is not approved, negotiation between the supplier and Company as dictated by contract terms shall be the primary method of resolving the issue.
6. Force Majeure. A supplier's claim for relief from compliance with fuel supply agreement terms due to force majeure conditions must be in writing with an adequate description of conditions warranting nonperformance. Each force majeure claim shall be reviewed by the Director and the company's legal counsel.
7. Inspections. The Director shall request inspections of mining and other facilities of a contract fuel and/or reagent supplier or other facilities as required or deemed necessary to manage the performance and contractual relationship (Contract Administration).

F. Fuel and Reagent Supply Agreement Enforcement:

1. General Enforcement Policy. Supplier obligations under Fuel or Reagent Supply Agreements shall be enforced by the Company in a reasonable, fair, and practical manner to achieve supplier compliance with the Company's overall procurement policy and the continuing supply of fuel to meet current and anticipated system requirements.
2. Director Responsibility. Whenever it is determined that a shipment does not meet Fuel Supply or Reagent Agreement terms, the Director, or his/her designee, shall inform the supplier and direct that subsequent shipments be in compliance. When necessary the Chief Operating Officer and the Director may determine, or receive advice, as to further action needed to assure fuel or reagent supply agreement compliance.
3. Legal Assistance. The Department shall have access to, and shall receive advice from, legal counsel as provided by the Company on any matter relating to fuel, reagent, and related transportation procurement, contracts and amendments thereto, administration, and enforcement. Should a dispute as to a supplier's performance fail to be satisfactorily resolved by the Director, the matter shall be referred to legal counsel. Legal counsel may consider further negotiation, arbitration (if provided by the contract), or litigation. No arbitration or litigation shall commence except on the advice of said counsel with approval by senior management.

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G. Inventory Levels:

The Company has an obligation to ensure continuous low cost, reliable service to its members. Decisions affecting fuel inventory shall consider these obligations.

The Company shall maintain an adequate inventory while allowing for enough flexibility to permit inventory levels to be responsive to known and anticipated changes in conditions in an attempt to avoid risks and stoppages due to unforeseen conditions. Inventory shall be recommended based upon, but not limited to, supplier performance, environmental conditions, labor matters, logistical issues and concerns, and generation requirements and dispatch. The general level of inventory shall be monitored for such matters and recommendations to adjust inventory to meet anticipated conditions shall be made from time to time. Such inventory recommendations shall be made by the Director for approval by the Senior Management of the Company.

Coal inventories and reagent shall be monitored and reported regularly via the Company's fuel information system(s).

H. Emergency Procurement:

Any one or more of the procedures described herein may be waived by the Chief Operating Officer, when, in the informed judgment of the Director, and on his recommendation, fuel must be purchased without complying with one or more of such provisions due to extraordinary conditions including strikes, lockouts or other labor problems affecting fuel production, embargoes, mining or other problems affecting production or transportation, existing and/or forecasted extreme weather conditions, or any other conditions or circumstances that can be reasonably foreseen as impairing the continued supply of fuel and reagent to the Company from its existing suppliers. When such a purchase is made, documentation of circumstances will be appended to the purchase order and/or contract file.

I. Transportation Services Contracts:

Transportation services bids shall be requested and Contracts negotiated whenever appropriate. Consideration shall be given to plant requirements, supplier loading capabilities, relative location of supplier to Stations, transportation mix, unloading capabilities and capacities at Stations, logistic constraints, transportation provider economics, Station material handling economics, and any other factor which might affect the delivery of Fuel and reagent to the Company's Stations.

Unless otherwise dictated by Emergency situations, the Solicitation process will be utilized for transportation services. The selection of transportation provider will generally be based upon, but not necessarily limited to cost, reliability, insurance, past / current performance, container availability and suitability for purpose, material handling capacities and constraints, transportation mix, and any other mitigating factors in terms of logistics.



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All transportation service agreements shall be in written contractual form duly executed by an authorized supplier of service and the Company.

J. Ethics and Conduct:

The Company recognizes the importance of following appropriate business ethics to guide the conduct of the Fuels Department in the performance of its duties and responsibilities. Fuels staff shall adhere to the ethical standards and policies of the Company including, but not limited to, the Business Ethics Policy and the Conflicts of Interest Policy for Big Rivers' Employees. Also, each contractual document shall denote that the contract was prepared and executed in ethical dealing.

Fuels staff shall endeavor to serve the best interests of the Company, its Members, and stakeholders in the performance of their duties and responsibilities.

Number	Date	Notes	Approved by
Original	12/21/2007	Approved to be effective at close of unwind	Board
Rev. 1	03/16/2012	Update out of date language and staffing changes	Board
Rev. 2	03/14/2013	Update due to title change	
Rev. 3	03/21/2014	Add date last reviewed line, section header and change "mmBTU" to "gallon"	Board



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Fuel Procurement Policies and Procedures

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2. "Award Recommendation" means the Company's approval process for the review and approval by Senior Management of a recommended fuel, reagent, or transportation purchase that fall outside the limits established in the Company's granted authority limits.
3. "Company" means Big Rivers Electric Corporation.
4. "Contract" is an Agreement, Letter Agreement, Purchase Order, or Spot Contract for fuel supply, reagent, or such transportation with certain terms and conditions that describe the business transaction under which the Company procures fuel, reagent, and related transportation.
5. "Contract purchase" means any purchase of fuel, reagent, or transportation on behalf of the Company under a contract, typically more than one year's duration.
6. "Department" means the Company's Fuels Department.
7. "Director" means the Company's Director of Fuels.
8. "Emergency" means extraordinary conditions affecting fuel production, transportation, or usage, including but not limited to strikes, lockouts or other labor problems, embargoes, mining impediments and other problems affecting the production or transportation of fuel, existing and/or forecasted extreme weather conditions, or any other conditions or circumstances that could be reasonably foreseen as impairing the continued supply of fuel to Company facilities.
9. "Environmental standards" mean the legal requirements for compliance with emission levels or other environmental requirements applicable to one or more of the Company's generating units.
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Fuel Procurement Policies and Procedures

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18. "Unit bus bar cost" is the total variable production cost including the maintenance cost associated with burning the fuel.

B. Fuel Procurement Policies:

The Company's fuel procurement policy is to obtain an adequate supply of fuel and reagent of sufficient quality at the most competitive overall evaluated cost on a unit bus bar basis consistent with the Company's obligations to provide adequate and reliable service to its customers, to meet operational and environmental standards, and to meet any other applicable legal requirements. The Company will use its best efforts to secure its fuel and reagent supply at competitive prices through solicitation for such.

Implementation of this policy is of highest priority to the Company. The Fuels Department shall be organized and staffed, and fuel procurement procedures and administration shall be conducted, in an efficient and practical manner consistent with this policy. Fuel, reagent, and related transportation shall be purchased at competitive prices considering all material factors. The factors include but are not limited to: quantity needed to maintain an adequate supply, quality necessary to ensure generating unit operating and maintenance characteristics and environmental standards, reliability of the supplier, creditworthiness, and forward planning to meet projected system requirements, and meeting emergency or other unusual circumstances that might affect operating conditions. From time to time, the Director of Fuels will review the Company's Fuel Procurement Policies and Procedures and recommend updates as appropriate.



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Date Last Revised	<u>03/21/2014</u>		
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Fuel Procurement Policies and Procedures

C. Organization:

1. Department Structure. The Department shall be organized and staffed to effectively administer the Company's fuel procurement function.
2. Organizational Responsibility. The Chief Operating Officer to whom the Director reports, has the responsibility for fuel procurement. The Director is responsible for the Department. Other departments may be called upon by the Department to the extent the Director or Chief Operating Officer considers advisable in the execution of the functions of the Department.
3. Approval Authority (Award Recommendation). An Award Recommendation will be prepared for all fuel purchases that exceed the term, tenor, or notional amount of authority of the Director of Fuels which is specified in the single transaction authority limits by the Company. The Award Recommendation will be drafted by the Director, reviewed by Fuels legal counsel, and executed by the Chief Operating Officer within the authority granted by the Energy Related Transaction Authority Policy. Greater expenditures shall require the signature of the Company's President and Chief Executive Officer and within his trading authority as established by the Board of Directors. These levels of authority may be amended, supplemented, or superseded as dictated by the Company.
4. Reports. The Director will instruct the Department to prepare, maintain and distribute reports to management and others as deemed necessary for business operations and regulatory requirements.
5. Records. The Department shall maintain the following records:
 - a. Open Contract Files. The Department shall maintain the following on open status for at least one-year or longer as the contract term or other conditions warrant:
 1. For each current contract supplier, the files will contain:
 - a) Contract documents, amendments, purchase orders and escalation documentation;
 - b) General correspondence;
 - c) Invoices and invoice verification data;
 - d) Delivery records and quality analyses data;
 - e) Inspection reports and other data.
 2. A record of transportation equipment owned or leased by the Company (as applicable).
 3. A list containing current suppliers and known potential Suppliers of fuel.
 - b. Closed Contract Files. The Department shall maintain its files according to the Company's record retention plan.



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Fuel Procurement Policies and Procedures

6. General Administrative Duties.

The Department shall subscribe to and have membership in appropriate trade and industry publications and/or associations, to include reports of governmental or consulting agencies concerning fuel, reagent, and related transportation market information, to include fuel prices and/or projections. Department personnel shall use their best efforts to keep current with fuel market conditions, prices and availability, and other developments relating to fuel procurement.

D. Fuel Supply Procedures:

1. Projections. In conjunction with other departments of the Company, the Department shall prepare annually a projection of fuel usage and cost at each Station for the number of years required for use in the Company's planning process.
2. Contract/Spot Mix. Subject to the approval of the Chief Operating Officer the Director shall determine whether a contract purchase is advisable, considering the following factors: (a) the availability of adequate supplies from qualified suppliers, (b) the advisability or need to have an adequate supply committed for an existing or planned unit (subject to inventory limits specified by the Company), (c) the desire to maintain practical flexibility as to market conditions and other factors affecting price and availability, (d) existing and anticipated environmental standards, (e) such other factors as may reasonably affect the implementation of the Company's Fuel Procurement Policy and (f) fuel impact on generation facilities' operation and maintenance.
3. Current Requirements. The Department shall review and analyze the data available to the Department for purposes of conducting fuel and reagent purchases in a timely manner to meet the requirements of the Company.
4. Supplier Qualifications. The Company shall select potential suppliers on the basis of evaluation, market intelligence, performance information (as available), industry research, and creditworthiness, as determined by the Director and his staff. No potential qualified supplier shall be preferred or discriminated against because of race, religion, color, sex, age or marital status of the supplier or any of its representatives.

A supplier evaluation (to include site visit and mine engineering and/or performance report) may be performed to determine if a supplier has the ability to deliver in the time frame requested the quantity and quality of coal or reagent bid at the offered price.
5. Solicitations. The Department shall maintain a current list of Suppliers and shall review that list from time to time to ensure that it remains current. Normally, the Company shall purchase its fuel and reagent through sealed bid solicitations; however, the Company reserves the right to utilize its market intelligence to seize opportunity purchases of fuels and reagent, request oral, written, or electronic offers, potentially followed by negotiations, when in its judgment market conditions provide an opportunity to obtain fuel or reagent more advantageously than through mailed bid solicitations and usual procedures. When the Company foregoes the solicitation



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Fuel Procurement Policies and Procedures

process, documentation shall be appended to the resulting purchase order file describing the conditions.

A notice of a request for quotation (“RFQ”) shall be provided to normal industry newsletters and information postings. The normal solicitation process shall require that potential suppliers be notified in writing as to the general quantities, terms and quality specifications required. An RFQ number will be assigned to for the quotation package. An RFQ will include: instructions to bidders (date and time due); scope of supply (quantity and quality); potential term; standard terms and conditions of typical agreements.

Offers from potential suppliers shall be returned by the requested date and time or they will be rejected. A bid log shall be kept for logging in receipt of bid offers. Attendees viewing the opening of the bid shall initial the bid document as opened and the log as at the completion of the opening. Offers shall be opened and logged in the presence of the Chief Operating Officer and Director of Fuel or their representative in their absence, and another selected representative outside of the Fuels Department.

All appropriate bid data shall be documented and electronically categorized for the process of evaluation of the various offerings of fuel and reagent. The documents shall be maintained in a secured area and shall be kept pursuant to normal record keeping practices.

- 6. Contract Awards. The Department shall review and analyze each Contract offer. The Director, or his/her representative, may engage in preliminary negotiations to determine which offers warrant further consideration. The Director and/or representative shall investigate the potential supplier and proposed source of supply; and, as to any offer for fuel, the Department shall verify the adequacy of the proposed source of supply as to quantity, quality, and timely deliverability.

The evaluation shall include, but not necessarily be limited to, the response to the RFQ (items required by the RFQ for satisfactory operational, environmental, and economic criteria); diversity of supply; supplier credit assessment; transportation mode and cost; and diversity of suppliers to provide the lowest evaluated cost of electrical energy to the Unit bus bar over the long term.

From this initial evaluation, a select group of potential suppliers (a “short-list”) of suppliers shall be developed for more in-depth evaluation. The Department may then engage in preliminary discussions to ensure that the offer warrants further evaluation and consideration. The objective of the negotiating discussions is to ensure that the Company achieves balanced terms and conditions and the lowest evaluated electrical energy delivered to the Unit bus bar and reliable supply consistent with other qualifiers related to supplier reliability, environmental restraints, transportation options, etc.

The recommended Supplier(s) shall be selected by the negotiating team based upon the evaluation criteria and the results of the negotiating discussions. The Department shall prepare a detailed Award Recommendation for approval. The Award Recommendation shall document the selection criteria and pertinent factors, and in circumstances where more than one company is selected, the recommendation shall describe the tonnage requirements and other responsibilities of each of the other recommended Suppliers.



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All contracts for which the term, tenor or notional amount exceed the limits specified for the Director of Fuels must be approved and signed by individual(s) authorized per the Energy Related Transaction Authority Policy.

- 7. Spot Purchases. Spot purchases may be made by the Company whenever considered advisable by the Director in furtherance of the Company's fuel and reagent needs, subject to the limit of authority as outlined by the Company.
- 8. Documentation. Contracts shall be signed by a duly appointed officer of the Supplier and an Officer of the Company. A purchase order may be issued for a spot purchase. A purchase order shall contain all terms of that purchase. Further, the Department shall maintain documentation of the final list (log) of bidders, a copy of the entire bid package; bidder's responses; and the bid evaluation summary used for decision support.
- 9. Fuel Oil. Fuel Supply Procedures principally address procurement of solid fuel. Fuel oil is procured on an "as-needed" basis due to the infrequency of use of this fuel and the nature of the oil markets. When the need for oil arises, the Fuels Department shall act to solicit vendors for offers. Orders are assigned on the basis of lowest delivered cost per gallon and ability to fill the order. Solicitation results shall be documented and purchase orders issued in the Fuels Department for those purchases initiated and completed by the Department.

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E. Fuel Supply and Reagent Agreement Administration:

- 1. Compliance. The Department shall review and analyze daily business and operational reports to properly administer all fuel and transportation agreements.
- 2. Coal weights. Coal weights shall be obtained by either the Company or by Supplier, upon agreement by Company. Coal weight is obtained by scale or draft method, depending upon Company site or methodology employed by Supplier to ascertain weights. In either event, coal weights are obtained by industry-accepted standards, and in cases where scales are utilized, are duly tested and maintained in proper order for such purpose. In cases where draft weights are utilized, the Company employs processes to verify actions to obtain draft weights and that such measures are by industry-accepted standards. Coal quantity is obtained by Station personnel and reported through the fuels information system or is provided by the Supplier pursuant to the contract agreement.
- 3. Coal sampling. Coal sampling and analysis shall be performed by either the Company or the Supplier, upon agreement by Company. Coal sampling and analysis shall be performed according to procedures adopted by the Company's laboratory in accordance with A.S.T.M. standards for coal sampling, coal sample preparation, coal sample identification, handling of sample, and coal analysis. Coal quality is assessed and reported through the fuels information system by the Company's laboratory personnel or is provided by the Supplier pursuant to the contract agreement.



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Fuel Procurement Policies and Procedures

4. **Amendments.** A contract shall not be materially amended except after analysis by the Department and recommendation of the Director of Fuels or the Chief Operating Officer. No material contract or purchase order addendum shall be made except upon recommendation of the Director and subject to the approval limits of the Company.
5. **Contract Administration.** The Director and the Department shall remain informed as to the terms and conditions of each current contract, and maintain the necessary data to administer the contracts. Every supplier request for a change in terms, conditions, or prices must be written and supported by adequate data in conformity with the contract. Each such request shall be analyzed by the Department against the contract provisions, and reported with recommendations to the Director. After review by the Director, the supplier request and Department's recommendations shall be approved as required by the Company. If any request is not approved in whole or in part, the Director shall advise the supplier, specifying the Company's objections with an adequate explanation. If the supplier's request is not approved, negotiation between the supplier and Company as dictated by contract terms shall be the primary method of resolving the issue.
6. **Force Majeure.** A supplier's claim for relief from compliance with fuel supply agreement terms due to force majeure conditions must be in writing with an adequate description of conditions warranting nonperformance. Each force majeure claim shall be reviewed by the Director and the company's legal counsel.
7. **Inspections.** The Director shall request inspections of mining and other facilities of a contract fuel and/or reagent supplier or other facilities as required or deemed necessary to manage the performance and contractual relationship (Contract Administration).

F. Fuel and Reagent Supply Agreement Enforcement:

1. **General Enforcement Policy.** Supplier obligations under Fuel or Reagent Supply Agreements shall be enforced by the Company in a reasonable, fair, and practical manner to achieve supplier compliance with the Company's overall procurement policy and the continuing supply of fuel to meet current and anticipated system requirements.
2. **Director Responsibility.** Whenever it is determined that a shipment does not meet Fuel Supply or Reagent Agreement terms, the Director, or his/her designee, shall inform the supplier and direct that subsequent shipments be in compliance. When necessary the Chief Operating Officer and the Director may determine, or receive advice, as to further action needed to assure fuel or reagent supply agreement compliance.
3. **Legal Assistance.** The Department shall have access to, and shall receive advice from, legal counsel as provided by the Company on any matter relating to fuel, reagent, and related transportation procurement, contracts and amendments thereto, administration, and enforcement. Should a dispute as to a supplier's performance fail to be satisfactorily resolved by the Director, the matter shall be referred to legal counsel. Legal counsel may consider further negotiation, arbitration (if provided by the contract), or litigation. No arbitration or litigation shall commence except on the advice of said counsel with approval by senior management.



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Fuel Procurement Policies and Procedures

G. Inventory Levels:

The Company has an obligation to ensure continuous low cost, reliable service to its members. Decisions affecting fuel inventory shall consider these obligations.

The Company shall maintain an adequate inventory while allowing for enough flexibility to permit inventory levels to be responsive to known and anticipated changes in conditions in an attempt to avoid risks and stoppages due to unforeseen conditions. Inventory shall be recommended based upon, but not limited to, supplier performance, environmental conditions, labor matters, logistical issues and concerns, and generation requirements and dispatch. The general level of inventory shall be monitored for such matters and recommendations to adjust inventory to meet anticipated conditions shall be made from time to time. Such inventory recommendations shall be made by the Director for approval by the Senior Management of the Company.

Coal inventories and reagent shall be monitored and reported regularly via the Company's fuel information system(s).

H. Emergency Procurement:

Any one or more of the procedures described herein may be waived by the Chief Operating Officer, when, in the informed judgment of the Director, and on his recommendation, fuel must be purchased without complying with one or more of such provisions due to extraordinary conditions including strikes, lockouts or other labor problems affecting fuel production, embargoes, mining or other problems affecting production or transportation, existing and/or forecasted extreme weather conditions, or any other conditions or circumstances that can be reasonably foreseen as impairing the continued supply of fuel and reagent to the Company from its existing suppliers. When such a purchase is made, documentation of circumstances will be appended to the purchase order and/or contract file.

I. Transportation Services Contracts:

Transportation services bids shall be requested and Contracts negotiated whenever appropriate. Consideration shall be given to plant requirements, supplier loading capabilities, relative location of supplier to Stations, transportation mix, unloading capabilities and capacities at Stations, logistic constraints, transportation provider economics, Station material handling economics, and any other factor which might affect the delivery of Fuel and reagent to the Company's Stations.

Unless otherwise dictated by Emergency situations, the Solicitation process will be utilized for transportation services. The selection of transportation provider will generally be based upon, but not necessarily limited to cost, reliability, insurance, past / current performance, container availability and suitability for purpose, material handling capacities and constraints, transportation mix, and any other mitigating factors in terms of logistics.



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All transportation service agreements shall be in written contractual form duly executed by an authorized supplier of service and the Company.

J. Ethics and Conduct:

The Company recognizes the importance of following appropriate business ethics to guide the conduct of the Fuels Department in the performance of its duties and responsibilities. Fuels staff shall adhere to the ethical standards and policies of the Company including, but not limited to, the Business Ethics Policy and the Conflicts of Interest Policy for Big Rivers' Employees. Also, each contractual document shall denote that the contract was prepared and executed in ethical dealing.

Fuels staff shall endeavor to serve the best interests of the Company, its Members, and stakeholders in the performance of their duties and responsibilities.

Number	Date	Notes	Approved by
Original	12/21/2007	Approved to be effective at close of unwind	Board
Rev. 1	03/16/2012	Update out of date language and staffing changes	Board
Rev. 2	03/14/2013	Update due to title change	
Rev. 3	<u>03/21/2014</u>	Add date last reviewed line, section header and change "mmBTU" to "gallon"	Board

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BIG RIVERS ELECTRIC CORPORATION

AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2013 THROUGH APRIL 30, 2014
CASE NO. 2014-00230

Revised Response to Commission Staff's Request for Information
dated August 13, 2014

August 27, 2014

Revised September 12, 2014

1 Item 29) *If Big Rivers is familiar with the term "no load costs," provide*
2 *a definition of the term and responses to the following:*

3
4 a. *If all or a portion of these costs are recovered through the*
5 *FAC, explain how these costs are calculated and allocated*
6 *between native-load sales and off-system sales each hour.*

7 b. *By month and generating unit, provide the amount of "no*
8 *load costs" that have been allocated each to native-load*
9 *customers and off-system sales from November 1, 2012,*
10 *through April 30, 2014.*

11
12 **Response)** The book *Fundamentals of Power System Economics* defines no-load
13 cost as the theoretical cost for a unit "... to remain connected to the system while
14 supplying non electrical power, the no-load cost represents the cost of fuel
15 required to keep the unit running. Such a mode of operation is not possible for
16 most thermal generating units. The no-load cost is simply the constant term in
17 the cost curve and does not have physical meaning."¹

18 In the MISO market, in order to build an incremental cost curve for
19 offering units for economic dispatch, MISO utilizes a calculated reference value
20 known as no-load cost; however, this calculation is merely a reflection of the
21 beginning of the incremental cost curve.

¹ Kirschen, Daniel Sadi and Strbac, Goran. *Fundamentals of Power Economics*.
West Sussex, England: John Wiley and Sons, 2004. page 84

Case No. 2014-00230

Revised Response to Staff Item 29

Witnesses: Wayne O'Bryan (*'No Load Costs' definition*) and
Nicholas R. Castlen (*FAC treatment of 'No Load Costs'*)

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BIG RIVERS ELECTRIC CORPORATION

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**Revised Response to Commission Staff's Request for Information
dated August 13, 2014**

**August 27, 2014
Revised September 12, 2014**

1 Big Rivers concurs with this definition and simplifies it as “no-load
2 costs are the cost of operating generation at zero MWs.” Big Rivers utilizes
3 startup fuel to achieve synchronous speed, then immediately ties units online.
4

- 5 a. The no-load cost is a cost Big Rivers does not quantify because
6 Big Rivers does not operate at a no-load state. Big Rivers' units
7 are set to begin generating positive MWs immediately upon
8 connection to the system. Any theoretical costs required to
9 operate Big Rivers' units at zero MWs are embedded in Big
10 Rivers' total fuel cost for generating, and Big Rivers makes no
11 attempt to segregate no-load costs from the average cost of
12 generating MWs. Thus, there is no distinction made in the
13 allocation of these theoretical costs between native-load and off-
14 system sales.
- 15 b. Any theoretical cost of operating at zero MW output is
16 embedded in total fuel costs and is not quantified, nor treated
17 differently, between native sales and off-system.
18
19

20 **Witnesses)** Wayne O'Bryan (*'No Load Costs' definition*) and
21 Nicholas R. Castlen (*FAC treatment of 'No Load Costs'*)
22

Case No. 2014-00230

Revised Response to Staff Item 29

**Witnesses: Wayne O'Bryan (*'No Load Costs' definition*) and
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