### SULLIVAN, MOUNTJOY, STAINBACK & MILLER PSC

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Jeff DeRouen

August 3, 2011

**Executive Director** 

**Public Service Commission** 

211 Sower Boulevard, P.O. Box 615

Frankfort, Kentucky 40602-0615

RECEIVED

AUG 04 2011

PUBLIC OFFINE

COMM.SUIC.N

Re:

In the Matter of: Notice and Application of Big Rivers

Electric Corporation for a General Adjustment in Rates,

PSC Case No. 2011-00036

Dear Mr. DeRouen:

Enclosed for filing on behalf of Big Rivers Electric Corporation ("Big Rivers") are an original and ten copies of Big Rivers' responses to the information requested at the hearing in this matter. I certify that a copy of this letter and a copy of the responses have been served on each party of record.

Sincerely,

34

Tyson Kamuf

TAK/mh Enclosures

cc:

Mark A. Bailey

Albert Yockey

Douglas Beresford, Esq.

Service List

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

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

### SERVICE LIST BIG RIVERS ELECTRIC CORPORATION PSC CASE NO. 2011-00036

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Burns E. Mercer President/CEO Meade County R.E.C.C. 1351 Highway 79 P.O. Box 489 Brandenburg, KY 40108-0489

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

### **VERIFICATION**

I, C. William Blackburn, verify, state, and affirm that I prepared or supervised the
preparation of my data responses filed with this Verification, and that those data responses
are true and accurate to the best of my knowledge, information, and belief formed after a
reasonable inquiry.

	C. William Blackburn
COMMONWEALTH OF KENTUCKY COUNTY OF HENDERSON	)
SUBSCRIBED AND SWORN TO	before me by C. William Blackburn on this the

Paula Mitchell
Notary Public, Ky. State at Large
My Commission Expires 1-12-13

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

### **VERIFICATION**

	I,	Albert	M.	Yockey,	verify,	state,	and	affirm	that I	prepared	or	supervised	the
prepar	atic	n of m	y dat	a respons	es filed	with the	his V	erificati	on, and	that those	e dat	ta response	s are
true ai	nd a	ccurate	to th	e best of	my knov	wledge	, info	rmation	, and b	elief forme	ed af	ter a reasor	nable
inquir	y.												

		Albert M. Yockey
OMMONWEALTH OF KENTUCKY	)	
OUNTY OF HENDERSON	)	

SUBSCRIBED AND SWORN TO before me by Albert M. Yockey on this the <u>3rd</u> day of August, 2011.

Paula Mitchell
Notary Public, Ky. State at Large
My Commission Expires 1–12–13

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

### **VERIFICATION**

	I, Rob	ert W. E	Berry, v	verify,	state,	and affirn	ı that	I prepare	d or su	ipervised	l the	prepara	ation
of my	data r	esponses	filed	with t	his V	erification	, and	that thos	se data	respons	ses an	e true	and
accurat	te to th	e best of	my kr	nowled	ge, in	formation,	and b	elief forn	ned aft	er a reas	onabl	e inqui	iry.

		Mobester Some	
		Robert W. Berry	
COMMONWEALTH OF KENTUCKY	,		
COUNTY OF HENDERSON	)		

SUBSCRIBED AND SWORN TO before me by Robert W. Berry on this the <u>3</u> day of August, 2011.

Notary Public, Ky. State at Large My Commission Expires\_\_\_\_\_

Notary Public, Kentucky State-At-Large My Commission Expires: July 3, 2014 ID 421951

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

### **VERIFICATION**

I, Mark A. Hite, verify, state, and affirm that I prepared or supervised the preparation of
my data responses filed with this Verification, and that those data responses are true and accurate
to the best of my knowledge, information, and belief formed after a reasonable inquiry.

		Mark A. Hite	<u>Z</u>
COMMONWEALTH OF KENTUCKY COUNTY OF HENDERSON	)		

SUBSCRIBED AND SWORN TO before me by Mark A. Hite on this the 3<sup>rd</sup> day of August, 2011.

Notary Public, Ky. State at Large My Commission Expires 1-12-13

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

### **VERIFICATION**

I, William Steven Seelye, verify, state, and affirm that I prepared or supervised the preparation of my data responses filed with this Verification, and that those data responses are
true and accurate to the best of my knowledge, information, and belief formed after a reasonable
William Steven Seetye
COMMONWEALTH OF KENTUCKY )
COUNTY OF OLDHAM )
SUBSCRIBED AND SWORN TO before me by William Steven Seelye on this the $2^{\mu \circ}$ day of August, 2011.
ALISIA A. SPEARS NOTARY PUBLIC STATE AT LARGE KENTUCKY MY COMMISSION EXPIRES MARCH 12, 2014  ALISIA A. SPEARS Notary Public, Ky. State at Large My Commission Expires 3 12 14



Your Touchstone Energy® Cooperative

### COMMONWEALTH OF KENTUCKY

### BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

In the Matter of:

APPLICATION OF BIG RIVERS	)		
ELECTRIC CORPORATION FOR A	)	Case No.	2011-00036
GENERAL ADJUSTMENT IN RATES	)		

Response to Requests for Information from the Hearing of July 26, 2011, through July 28, 2011

**FILED:** August 4, 2011

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

Response to Requests for Information from the Hearing of July 26, 2011, through July 28, 2011

1	Item 1)	Provide Big Rivers' June 2011 and July 2011 Statements of Operations when
2	complete.	
3		
4	Response)	Big Rivers' June 2011 Statement of Operations was filed with the Commission
5	on August 2,	2011 attached to Big Rivers' Fifth Supplemental Response to its original
6	response to I	tem PSC 1-56 of the Commission Staff's Initial Request for Information dated
7	February 18,	2011. Big Rivers' July 2011 Statement of Operations will be provided as soon as
8	it is available	e.
9		
10		
11	Witness)	Mark A. Hite
12		

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

Response to Requests for Information from the Hearing of July 26, 2011, through July 28, 2011

1	Item 2)	Provide the following information for Big Rivers' Demand-Side Management
2	("DSM") pro	ogram, including the pilots for its Energy Efficiency ("EE") programs:
3		
4		a. An updated list of each DSM/EE program,
5		b. A description of each DSM/EE program,
6		c. The results of each DSM/EE pilot program including the number of
7		participants in each pilot, and
8		d. The California Test results for each DSM/EE program on which the
9		California Tests have been performed.
10		
11	Response)	
12		a. through c.
13		In Big Rivers' response to Item KIUC 1-134 filed on April 15, 2010, Big Rivers
14		provided a copy of its 2010 Integrated Resource Plan which was filed with the
15		Commission on November 17, 2010 ("the 2010 BR IRP"). Appendix B of the
16		2010 BR IRP includes a DSM Final Potential Study Report ("the DSM Study").
17		A DSM/EE committee evaluated and tested assumptions in the DSM Study to
18		determine if the modeled DSM potential for each program was achievable in the
19		local markets using available vendors and contractors and the proposed
20		incentives. The following pilot programs were established to test these
21		conditions:
22		
23		1. Energy Star Refrigerator Replacement Pilot,
24		2. Energy Star Clothes Washer Replacement Pilot,
25		3. Energy Efficient Outdoor Lighting Pilot,
26		4. Energy Star New Home Construction Pilot,

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

### Response to Requests for Information from the Hearing of July 26, 2011, through July 28, 2011

1	5. Weatherization Pilot,
2	6. Residential HVAC Tune-up Pilot,
3	7. Commercial Efficiency Lighting Pilot,
4	8. Commercial General Efficiency Pilot, and
5	9. Poultry Facility Pilot.
6	
7	The pilot programs were used to test administrative requirements and member
8	response to incentive levels, trade allies, and media promotions. Where
9	appropriate, a short survey was part of each pilot to gather information about
10	program or media impact. Listed below are short summaries of each planned
11	pilot program, including a parenthetical indication of pilot status.
12	
13	Refrigerator Replacement Rebate Pilot (Complete)
14	The purpose of the pilot was to test communication of the incentive to the retail
15	members and the effectiveness of the incentive amount. The member was
16	required to provide proof of purchase and the haul-away and recycling of the
17	old unit. The retail member was required to fill out a survey to determine the
18	condition of the old refrigerator and where the member heard of the program.
19	
	Run Time November 2010 through February 2011 Number of Participants Pilot Cost Winter kW Reduction Summer kW Reduction Annual kWh Savings November 2010 through February 2011 10 11 11 11 11 12 12 13 14 15 16 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18
20	
21	
22	

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

### Response to Requests for Information from the Hearing of July 26, 2011, through July 28, 2011

### August 4, 2011

1	
2	Clothes Washer Replacement Rebate Pilot (Complete)
3	The purpose of the pilot was to test promotional mediums for the incentive to
4	retail members and the effectiveness of the incentive amount. The member was
5	required to provide proof of purchase and installation at the service address.
6	The member was also required to fill out a survey to determine the energy
7	source for the dryer and where the member heard about the program.
8	
	Run Time April 2011 through June 2011  Number of Participants 49  Pilot Cost \$5,497  Winter kW Reduction 1.27 kW  Summer kW Reduction 0.343 kW
	Annual kWh Savings 10,976 kWh Annual Water Savings 318,500 gallons
9	
10	LED/Induction Outdoor Lighting Evaluation Pilot (Continuing through 2011)
11	The purpose of this pilot is to test the light quality and quantity (customer
12	acceptance), energy consumption and product durability of both Light Emitting
13	Diode ("LED") and Induction lamps as potential replacements for the Mercury
14	Vapor ("MV") lamp, which is no longer available for use. Both LED and
15	Induction lamps have an estimated life of 90,000 to 100,000 hours. This may
16	allow significantly fewer service calls over the life of the lamps compared to the
17	Metal Halide ("MH") lamps currently being used as the MV replacement. The
18	cost of both LED and Induction lamps is expected to be significantly higher
19	than the MH lamp. Each of Big Rivers' Member Cooperatives has deployed the
20	lamps to the field and will continue to evaluate them.

21

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

### Response to Requests for Information from the Hearing of July 26, 2011, through July 28, 2011

1	
2	Energy STAR New Home Program (Continuing through Sept. 2011)
3	The purpose of the pilot is to test communication of the incentive to the retail
4	members and the effectiveness of the incentive amount. The Energy STAR
5	new-home construction standard is an objective, reliable and verifiable energy-
6	efficiency program that ensures the member will see substantial savings from
7	the new home.
8	
9	The Energy STAR-certified contractor will complete a whole-house analysis
10	ensuring quality work and energy efficiency criteria are met. This rater works
11	closely with the builder to determine the needed energy-saving equipment,
12	construction techniques and administration of required on-site diagnostic testing
13	and inspections are documented in order to assure the home is eligible to earn
14	the Energy STAR certification. The home must meet the guidelines, making it
15	15-35% more efficient than standard homes.
16	
	Run Time October 2010 through September 2011
	Number of Participants 12
	Pilot Cost \$13,065 Winter kW Reduction 15.3 kW
	Summer kW Reduction 8.8 kW
	Annual kWh Savings 41,600 kWh
	Annual Gas Savings 99.2 MMBTU
17	
18	Manufactured Home Weatherization Pilot (Continuing through Sept. 2011)
19	The purpose of this pilot is to determine the benefit, cost and procedures for
20	weatherizing homes. Hoosier Energy in Indiana has deemed their manufactured
21	home weatherization program a success and its staff has demonstrated its

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

### Response to Requests for Information from the Hearing of July 26, 2011, through July 28, 2011

1	program for Big Rivers and its Member Cooperatives. Initial test-in home
2	visits will be completed in August and the weatherization and test-out
3	procedures will take place in September.
4	
5	Big Rivers and its Member Cooperatives are currently working with Sherlock
6	Homes in Bloomington, Indiana to evaluate if we can replicate Hoosier
7	Energy's success. Big Rivers and its Member Cooperatives are also working
8	with the staff at Kentucky Home Performance Program to integrate the
9	programs to minimize cost to the residential consumer, while maximizing
10	benefit.
11	
12	Residential Weatherization Pilot (Continuing through Sept. 2011)
13	In conjunction with the manufactured weatherization pilot, this pilot will
14	determine the benefit, cost and procedures for weatherizing site-built homes.
15	Hoosier Energy in Indiana has deemed its residential weatherization program a
16	success and its staff has demonstrated its program to Big Rivers and its Member
17	Cooperatives. Initial test-in home visits will be completed in August and the
18	weatherization and test-out procedures will take place in September.
19	
20	Big Rivers and its Member Cooperatives are currently working with Sherlock
21	Homes in Bloomington, Indiana to evaluate if we can replicate Hoosier
22	Energy's success. Big Rivers and its Member Cooperatives are also working
23	with the staff at Kentucky Home Performance Program to integrate the
24	programs to minimize cost to the residential consumer, while maximizing
25	benefit.
26	

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

### Response to Requests for Information from the Hearing of July 26, 2011, through July 28, 2011

1		
2	HVAC & Refrigeration Tune-Up	(Complete)
3	The purpose of this pilot was to to	est the effectiveness of cash incentive
4	payments to motivate retail memb	pers to initiate annual maintenance for their air
5	conditioning equipment. The pilo	ot also measured the average length of time
6	since the previous maintenance ca	all for each unit.
7		
	Run Time Number of Participants Pilot Cost Winter kW Reduction Summer kW Reduction Annual kWh Savings	May 2011 through June 2011 343 Residential; 75 Commercial \$13,810 0.0 kW 125.4 kW 265,430 kWh
8	č	,
9	Commercial Efficient Lighting R	eplacement Rebate Pilot (Continuing through
10	Sept. 2011)	
11	The purpose of the pilot is to dete	rmine incentive levels necessary to motivate
12	retail members to upgrade, test m	ethods of promoting high efficiency
13	commercial lighting to retail com	mercial members, and establish methods of
14	design and installation that allow	the use of local contractors. A process of
15	verification will be established du	ring this pilot.
16		
17	In June Big Rivers' Member Coo	peratives sent staff to commercial lighting
18	training that involved education of	n current lighting technologies and two
19	commercial lighting customers.	Commercial customers are currently being
20	approached with incentives to up	grade technology.
21		
22		

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

### Response to Requests for Information from the Hearing of July 26, 2011, through July 28, 2011

1	
2	Commercial General Efficiency Pilot (Continuing through Sept. 2011)
3	The purpose of the pilot is to determine incentive levels necessary to motivate
4	commercial and industrial members to upgrade to more energy efficient
5	equipment and test methods of promoting efficiency at commercial facilities
6	other than lighting. The incentive will be used to improve the return on
7	investment of high efficiency equipment.
8	
9	Commercial customers are currently being approached by Member
10	Cooperative's and Big Rivers' staffs to evaluate the necessary incentives which
11	allow retail commercial members to cost justify the investment.
12	
13	Poultry Facility Efficiency Pilot (Continuing through Sept. 2011)
14	The purpose of the pilot is to determine incentive levels and assist in the
15	investigation of new technologies, in order to motivate poultry growers to test
16	new technologies, and ultimately upgrade their facilities. Due to the large
17	number of poultry grow-out facilities and the number of technology
18	improvements available to the growers, the poultry growers have been
19	partitioned for a distinct program.
20	
21	Member Cooperatives are currently working with innovators among poultry
22	raising commercial members to evaluate LED lights by measuring energy
23	savings and comparing lamps.
24	
25	
26	

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

### Response to Requests for Information from the Hearing of July 26, 2011, through July 28, 2011

1		d.
2		All measures associated with each potential DSM/EE program evaluated in the
3		DSM Study were subjected to the California Tests. Those test results were
4		provided in the DSM Study, and are also attached hereto for quick reference.
5		
6		
7	Witness)	C. William Blackburn
8		

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	se RE tion Settiretion	0000	0% 50.00%	Н	Н	4	0% 10.00%	9%00%	ŀ	750000	╀	-		$\vdash$	+	0% 26,00%	1	Н	4	0% 26.00%	1	H	096 25.00%	$\dashv$	+	10 00%	+	00% 10.00	10.00%	+	10.00%	Н	4	14.00% 25.00%	╀-	Н	7.50% 8.00	4-	9000 0,00%	+	0,000 avoi	000% 0.00%	ш	100.00% 30.00%			85.00% 50.00%	10%   28.00	40.00% 28.00%	+	+	1000 00
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	A Messure/End Use Description	M/E	Retrofit Homes W/ Electric Furnace & AC	Homes w/ Electric Furnace & A	it Homes w/ Electric Furnace & A	Retrofit Homes w/ Electric Furnace & AC	it Homes w/ Electric Furnace & A	it Homes w/ Electric Furnace & A	Shell Measures - Mobile Homes W/ Electric AC Only (& Gas Heat)	it nomes w/ Electric Ac Only (&	ROB Homes w/ Electric AC Only (& Gas Heat)	it Homes w/ Electric AC Only (&	/ Electric Heat Pump	Retrofit Homes w/ Electric Heat Pump	Homes W/ Biecure Rear Pump	it Homes w/ Electric Heat Pump	Homes w/ Electric Heat	Retrofit Homes w/ Electric Heat & Cool	it Homes w/ Electric Heat & Cool	ROB Homes w/ Electric Heat & Cool	Mobile Homes	it Homes with Central AC or Hear	Homes w/ Electric Room AC		Homes w/ Electric Central AC	Homes w/ Electric Central AC	1.	Hames with	it Homes with Electric Heat Pum		Homes with Electric Furnaces and CAC	_	it Homes with Central AC or Heat Pump	$\neg$	_	it Homes w/ Electric Central AC	Homes with Electric Heat Pum	Homes with Electric Furnaces	fit Homes with Electric Furnaces and CAC	Homes with Electric Heat Pum	Homes with Electric Furnaces and CAL	fit All Homes	fit All Homes	Homes with Pools	Retrofit All Homes		Retrofit All Multi-Family Homes	/ [All Single Family New Homes w / AC Only	1			T
	Increm. Measure ROBVs. Cost Retrofit	Single Fam	51 366 70	\$3,610.88	\$882.30	\$529.00 Retro	\$500.00	\$641.00 Retro	Mobile Homes w/ Ele	\$320.00 Retroit	\$4,218.48 ROB	\$500,00 Retro	ures - Mobile Homes w	\$326.00 Retro	S821.6U Ketront	\$200.00	1 ==	П	_	54,218.48	ment - Single	\$160.00   Retrofit	\$50.00	\$50,00	\$555.71	\$3,413,00 Retront	1"	\$8,300.00 ROB	\$14,000.00 R	\$3,843.00	\$5,700.00 Regular		\$160.00 Retrofit	\$50.00 ROB	+	\$3,252.00 R	\$1,005.00 ROB	\$3.588.00 ROF	\$6,384.00 Retrofit	\$2,000.00	34,688,00 KUB	\$240.00	\$99.00	\$664.00	\$240,00	1 1	1	omes - Single Family	-	\$4,300.00	300.00	
	ner Winter 7 RW Useini Rs Savings Life	틞	1.460	╁	3 0.365 20.00	₩	1.460	-1	발	3 0.000 11.00	5 0.000 20.00	9 0,000 18,00	ce Cooling Shell Meas	⊢+	1 1 20.00	1 005	space Cooling Shell Measures - Mob		Н	35 1.825 20.00	Space	0.00	9 0.000 9.00	0.000	0,000	0.000 14.00	55 0.000 12.00	73 4.453 22.00	Н	16 0.000 12.00	┿	16 7.066 12.00	Н	55 0.000 9.00	16 0.000 14.00	92 0,000 14,00	46 0.000 12.00	25 0.000 12.00	╫	7.066	46   7.056   12.00	0.075	93 0.193 3.00	0.000	21 0,221 3.00	1 1	0.030 0.057 9.00 \$60.00	0 584 0 073 20.00	2409	76 0.438 20.00	Н	
	Elec. Summer stylings EW (RWh) Savings	leating and Space Co	Т	1,752.33 0.219	-	90.79 0.110	1	Н	ating and Space Cool	103.26 0.073	30.62 0.30	494.91 0.2	Heating and Spa	739.05 0.0	0000 647.87	1 546 65 07	ace Heating and Space	1,080.04 0.073	000'0 65'086	3,675,62 0.365	Space Heating a	535.80 0.304	111.58 0.069	Н	+	1,889,31 0,365	591.78 0.1	3,658.00 0.073	Н	7,189,19 0,146	448 00 0 146	944.90 0.1	534.82 0.2	89.27 0.055	321.77 0.146	1,590.47 0.292	650.00 0.146	3,344,71 0,292 7 195 25 0 146	╁	Н	9,907.25 0.146	1	Н	1,260,00 0.315	2,652,16 0,221	11	357.30 0.0	139150 05	╁	H	Н	ł
	s %	151	3297% B	+-	┡	Н	7	Н	ᅪ	251%	20.19%	12.03%	Space	6,30%	16.10%	17 5094 1	Ī'n	1	Н	3,30% 3	44,3070	13.01%	Ļ	Ц	11.29%	1	30 2106. 3	L	Н	4	28 5394.	64.39%	13.00%	9.26%	11.31%	Ш	7.74%	4	┺	Ш	66.30%	5.00%	Н	. 200	12.80%		4.14%	10.00%	20.00%	25.00%	30.00%	
	Base filee. Use (RWh)		17 580 00	17,589,00	17,589,00	17,589.00	17,589.00	17,589.00		4.114.00	-	4,114,00	1	11,093.00	11,093.00	11,093,00	20000011	16,849.00	16,849.00	16,849.00	10,022,001	4,887.00	1,205.00	964.00	3,379.00	4,887.00	11 849 00	12,643.00	15,542.00	15,445.90	8 949 00	15,445,90	4,114.00	964.00	2.845.00	4,114.00	8,398.00	11.093.00	16,849.00	8,398.00	14,943.25	18,090.00	18,090.00	, 00	20,720,00	100 CONTRACTOR	8.626.73	13915.00	19,686.00	13,915.00	19,686.00	
d Costs)	oll lo		35 23	15	SF	SF	SF	SF		WH.	WH.	MM	90,000,000,000	МН	HWH	u a		HOH	МН	₩.	uwi	ISF	SF	SF	SF	SF	7 6	15	SF	S.	35 13	SF	МН	HW H	WH.	MH	HW.	T	E E	Mii	HW	SF	SF	SF	W W	100	¥.	35	SE	SF	SF	
Electric Measure Assumptions (Initial Assumptions & Levelized Costs)	Weisire Mener		69 Insulation - Ceiling (R-0 to R-19)	71 Energy Star® Windows	72 Insulation -Ceiling (R-19 to R-38)	П		75 Radiant Barriers	ı	76 Air Infiltration	77 Insulation - Floor (R-11 to R-30)	Г	1	П	81 Insulation - Floor (R-11 to R-30)	Τ	os (Duccesening	Γ		86 Energy Star® Windows	1	88 HVACTune-Un	Г	ľ	91 High Efficiency Central AC	7	T	94 fign chickensy fical rump/ carry years (111 opgrand) 95 Ground Source Heat Pump (HP Upgrade)	Т		98 Heat Pump/Early Retire (Replacing Electric Furnace)	T	П	102 Energy Star & Room A/C	Т	105 High Efficiency Central AC/Early Retire	П	107 High Efficiency Beat Pump/Early Retire (HP Upgrade)	109 Heat Pump/Early Retire (Replacing Electric Furnace)	110 Dual Fuel Heat Pump Upgrade (Replacing New ASIP)	111   Dual Fuel Heat Pump (Replacing Electric Furnace)	112 In Home Energy Display Monitor	Г	114 Pool Pump and Motor	115 In Home Energy Display Monitor	1	117 Multi-Family Homes Efficiency Kit	110 Mary Courses, edge _ 1504 mary afficiant	119 New Construction - 15% more efficient	120 New Construction - 35% more efficient	.21 New Construction - 35% more efficient	ALL INCH COMMENCE CONTRACTOR

Note: In general, savings estimaxes for the thermal envelope were based on engineering calculations derived from the REMFate modeling software, but were adjusted down based on experience that suggests actual savings are much lower than pure engineering assumptions and supplying the savings % found in the modeling runs to this new base usage. Additional assumptions utilized for the calculation of individual measure savings, costs, and measure saturation can be found noted in the Residential Electric Measure Sources and Notes\* table.

Charactering	Objection	Ammentikan Saved	Percent Savings (Vinter RW) (FAVIn) Savines		Savines 1800 Savines	Ingremented Gost	Usefullife	Amoritized cost	revelizedi onse (= Admin)		TIRE Trest Utility Trest Parts Trest RIM Trest	orte Reste B
					5							
	qinq	202.00	74.00%	0.049	0.046	\$3.00	2	\$1.64	\$0.01	6.97	19.93	9,53
	exit sign	201.00	82.00%	0.023	0.023	\$25.00	15	\$2.63	\$0.01	5.74	16.39	98'9
Standard T8 (vs T12) 4ft	fixture	96.00	43.00%	0.024	0.011	\$45.00	12	\$5.46	\$0.06	1,46	4.16	1.80
High Performance T8 (vs T12) 4ft	fixture	115.00	51.57%	0,113	0.113	\$51.75	12	\$6.28	\$0.05	2,66	7.59	1.86
High Performance T8HO (vs T12) 8ft	fixture	138.00	43.00%	0.034	0.034	\$69.00	12	\$8.38	\$0.06	1.36	3.89	1.71
Occupancy Sensor (under 500W)	sensor	397.00	41.00%	0.099	660'0	\$100.00	10	\$13.80	\$0.03	2.28	6.52	2.69
Occupancy Sensor (over 500W)	sensor	994.00	41.00%	0.243	0.243	\$200.00	10	\$27.60	\$0.03	2.84	8.12	3.27
Pulse Start Metal Halide 100W - 300W	fixture	220.50	%00'6	0.059	0.049	\$23.00	15	\$2.42	\$0.01	8.07	23.06	8.11
Pulse Start Metal Halide > 300W	fixture	315.00	20.00%	0.084	0.070	\$38.00	15	\$4.00	\$0.01	6.98	19.94	7.06
High performance T5 (replacing T8)	fixture	84,00	28.00%	0.000	0.000	\$40.00	15	\$4.21	\$0.05	1,46	4.18	2,05
CFL Hard Wired Fixture	fixture	236.00	74.00%	0.043	0.036	\$12.00	15	\$1.26	\$0.01	12.10	34.58	13,64
CFL High Wattage 31-115	qlnq	572.50	%00.89	0.104	0.087	\$35.00	15	\$3.68	\$0.01	10.75	30.71	11.40
CFL High Wattage 150-199	pulb	614.50	49.00%	0.112	0.094	\$175.00	15	\$18.41	\$0.03	2,60	7.42	3.10
LLU-MANAMAN TO THE TOTAL TOTAL TO THE TOTAL TOTAL TO THE												
Selly AC (10 SPER 77 HSPF to 14 5 SEER 8 5 HSPF)	5 ton	4.533.57	15.00%	0.000	0,089	\$575.00	15	\$60.49	\$0.01	4.32	12.33	6.73
Shift AC (10 CPEP 77 HSPF to 15 SEER 85 HSPF)	5 ton	4.700.59	15.00%	0.000	0.091	\$860.00	15	\$90.47	\$0.02	2.99	8,55	4.77
TIGHT OF PERIOD HOLL	1000	E 002 21	15 0002	0000	0.096	\$1,000,00	15	\$105.19	\$0.02	2.74	7.83	4.40
SpiicAc (10 SEER, 7.) marr to 10 SEER, 9.3 marr)	3 ton	7 555 95	15 00%	0.000	0.125	\$954.50	15	\$100.41	\$0.01	4.33	12.38	6.76
Splich (10 SEER, 77 HSEE WATER SEER STOLE)	9.3 ton	7 834.32	15 00%	0000	0.128	\$1.427.60	15	\$150.18	\$0.02	3.00	8.58	4.79
Spirche (10 SEEK, 7.7 Harr to 13 SEEK, 6.3 Harr)	8.3 for	8 338 85	15 00%	0 000	0.132	\$1.660.00	15	\$174,62	\$0.02	2.75	7.86	4.42
Spile At (10 Seek, 7.7, fish to 10 Seek, 6.5 fish f) NY Dealered Section (FED-10.0)	10 ton	4 439 00	17.43%	0000	4.035	\$607.00	15	\$63,85	\$0.01	4.00	11.44	6.27
DA Packageu System (CET Tion 2)	20 ton	9 550 00	7 00%	0.000	8.682	\$910,00	15	\$95.73	\$0.01	5.75	16.41	8.84
DA Fathaged System (CEE Tier 2)	> 20 ton	12.733.00	18.00%	0.000	11.575	\$1.813.00	15	\$190.72	\$0.01	3.84	10.99	6.03
(2.00.00)	5 ton	4.720.06	15.00%	0,000	0.260	\$575.00	23	\$48.13	\$0.01	6.30	18.00	9.20
	8 ton	7,313,31	15.00%	0.000	0.260	\$920.00	23	\$77.00	\$0.01	6.10	17.43	8.92
	1/2 ton	201.20	31.91%	0.000	0.119	\$50.00	15	\$5.26	\$0.03	2.20	6.29	3.61
	3/4 ton	178.23	21.13%	0.000	0.105	\$75.00	15	87.89	\$0.04	1.30	3.72	2.27
	1 ton	352.85	31.76%	0.000	0.208	\$100.00	15	\$10.52	\$0.03	1.93	5.52	3.21
	1 1/4 ton	469.25	28.90%	0.000	0.277	\$150.00	15	\$15.78	\$0.03	1.71	4.89	2.88
	1/2 ton	785.41	19.15%	0.071	0.000	\$50.00	15	\$5.26	\$0.01	10.20	29.14	13.06
	3/4 ton	1.004.29	25.87%	0.131	0.000	\$75.00	15	\$7.89	\$0.01	8.80	25.13	11.19
	1 ton	1,445.84	35.16%	0.241	0.000	\$100,00	15	\$10.52	\$0.01	09'6	27.42	12.05
	1 1/4 ton	1.712.61	30.45%	0.285	0.000	\$150.00	15	\$15.78	\$0.01	7.58	21.66	14.21
	1 to 5 HP	204.00	2.89%	0.056	0.062	\$88.00	15	\$9.26	\$0.05	1.93	5.50	2.89
	7.5 to 20 HP	737.92	9.68%	0.201	0.223	\$227.00	15	\$23.88	\$0.03	2.70	7.72	4.05
	25 to 100 HP	2,092.19	11.58%	0.569	0.631	\$558.00	15	\$58.70	\$0.03	3.11	8.90	4.67
	125 to 250 HP	6,276,56	12.32%	1.706	1.894	\$1,079.00	15	\$113.50	\$0.02	4.83	13.80	7.24
Variable Frequency Drives	<2 HP	598.72	25.00%	0.154	0.170	\$200,00	15	\$21.04	\$0.04	6.57	18.76	9.96
Variable Frequency Drives	3 to 10 HP	3,592.31	25.00%	0.921	1.022	\$1,000.00	15	\$105,19	\$0.03	4.27	12.20	6.47
Variable Frequency Drives	11 to 50 HP	16.764.11	25.00%	4.298	4.771	\$3,000.00	15	\$315.58	\$0.02	7.23	20.64	10,96
Motors (Non-Ventilation)												
	1 to 5 HP	113.00	2.89%	0.031	0.031	\$88.00	15	\$9.26	\$0.08	1.07	3.05	1.60
	7,5 to 20 HP	408.00	%89.6	0,111	0.111	\$227.00	15	\$23.88	\$0.06	1.49	4.27	2.24
	25 to 100 HP	1,056.00	11.58%	0,287	0.287	\$558.00	15	\$58.70	\$0.06	1.57	4.49	2.36
	125 to 250 HP	2,435.00	12.32%	0.662	0,662	\$1,079.00	15	\$113.50	\$0.05	1.87	5.36	2.81
Variable Frequency Drives	<2 HP	598,72	25.00%	0.154	0.154	\$200.00	15	\$21.04	\$0.04	2.46	7.03	3.73

			829-300		1100	j.		Chargan	Annual	Compliand Goods				
	MeasureName	Unit Notes	Saved	(RWh) Savings	Savings Savings	Savings		Osetal Dife	Per Unit (= Admin)	(=Admin)	3	iš.	Part. Test RIM Test	Mitterst
5-7	Variable Frequency Drives	11 to 50 HP	16,764.11	25.00%	4.298	4.298	\$3,000.00	15	\$315.58	\$0.02	4.59	13.11	96'9	0.94
9	Water Heating													
6-1	High Efficiency Storage (tank)		256.00	15.00%	0.054	0.045	\$70.00	10	\$9.66	\$0.04	1.83	5.22	3.31	0.73
6-2	Pre-Rinse Sprayer, Low flow, Commercial Application		1,396.00	45.00%	0.233	0.196	\$35.00	2	\$8.38	\$0.01	9.46	27.04	19.75	0.72
6-3	On Demand (tankless)		345.00	7.00%	0.072	0,061	\$350.00	20	\$31.34	\$0.09	0.89	2.56	1.50	89'0
6-4	Tank insulation		512.00	30,00%	0.108	0.091	\$60.00	12	\$7.29	\$0.01	5.06	14.47	8.95	0.82
7	Caoking													
7-1	Electric Energy Star Fryers		983.00	6.50%	0.200	0.252	\$4,252.00	15	\$447.29	\$0.46	0.18	0.51	0.29	0.33
7-2	Electric Energy Star Steamers, 3-6 pan		13,162.00	51.00%	2,500	3.150	\$4,150.00	15	\$436.56	\$0.03	2.41	6.88	3.95	0.83
7-3	Energy Star Hot Food Holding Cabinet		4,654.00	60.00%	0.638	0.803	\$1,783.00	15	\$187.56	\$0.04	1.88	5,36	3.25	0.76
7-4	Energy Star Convection Ovens		1.879.00	15.40%	0.500	0,630	\$2,928.50	10	\$404.13	\$0.22	0.36	1.04	0,58	0.50
7-5	Energy Star Griddles		651.00	11.00%	0.149	0,188	\$4,089.50	15	\$430.19	\$0.66	0.13	0.36	0.20	0.26
8	Refrigeration													
8-1	Glass Door Freezer, <15-49 cu ft, Energy Star		2,759.00	24.17%	0.315	0.397	\$100.00	6	\$14.91	\$0.01	11.42	32,63	22.87	0.75
8-2	Glass Door Freezer, 50+ cu ft, Energy Star		7,643.00	24.17%	0.873	1.099	\$100.00	6	\$14.91	\$0.00	31.64	90.39	63.36	0.76
8-3	Solid Door Freezer, <15-49 cu ft, Energy Star		1,160.00	20.94%	0.132	0.167	\$100.00	6	\$14.91	\$0.01	4.80	13.72	9.62	0.73
8-4	Solid Door Freezer, 50+ cu ft, Energy Star		4,181.00	20.94%	0.477	0.601	\$100.00	6	\$14.91	\$0.00	17.31	49.45	34.66	0.76
8-5	Glass Door Refrigerator, <15 - 49 cu ft		724.33	25.07%	0.083	0.104	\$100.00	6	\$14.91	\$0.02	3.00	8.57	6.00	0.70
9-8	Glass Door Refrigerator, 50+ cu ft, Energy Star		919.00	25.07%	0.105	0.132	\$100.00	6	\$14.91	\$0.02	3.80	10.87	7.62	0.72
8-7	Solid Door Refrigerator, <15 cu ft, Energy Star		545.33	33.70%	0.062	0.078	\$100.00	6	\$14.91	\$0.03	2.26	6,45	4.52	69.0
8-8	Solid Door Refrigerator, 50+ cu ft, Energy Star		1,218.00	33.72%	0.139	0.175	\$100.00	6	\$14.91	\$0.01	5.04	14.40	10.10	0.73
8-9	Commercial Refrigeration Tune-Up, Medium Temp, not self contained	tained	537.00	7.00%	0.099	0.125	\$75.00	1	\$79.75	\$0.15	0.33	0.93	0.77	0.39
8-10	Commercial Refrigeration Tune-Up, Low Temp, not self contained	pa	1,388.00	7.00%	0.191	0.241	\$75.00	1	\$79.75	\$0.06	0.82	2.33	1.98	0.50
8-11	Anti-sweat heater controls on freezers		1,745,50	16.46%	0.027	0.033	\$170.00	12	\$20.65	\$0.01	4.95	14.15	10.77	0.67
8-12	Anti-sweat heater controls, on refrigerators		1,039.50	33.14%	0.028	0.035	\$170.00	12	\$20.65	\$0.02	2.99	8.55	6.41	99.0
8-13	Vending Miser, Cold Beverage		1,694.00	48.50%	0.193	0.244	\$160.00	15	\$16.83	\$0.01	6.97	19.93	13.18	0.78
8-14	Brushless DC Motors for freezers and coolers		1,050.00	8.79%	0.012	0.015	\$25.00	S	\$5.99	\$0.01	8.46	24.18	20.80	0.61
8-15	Humidity Door Heater Controls for freezers and coolers		3,500.00	55.00%	0.094	0.118	\$300.00	10	\$41.40	\$0.01	4.82	13.77	10.56	29.0
8-16	Refrigerated Case Covers		2,900.00	6.00%	0.331	0.417	\$120.00	4	\$34.89	\$0.01	4.30	12.30	9.75	0.64
8-17	Zero Energy Doors for freezers and coolers		800.00	20.00%	0.165	0.208	\$538.00	10	\$74.24	\$0.09	0.75	2.15	1.35	0.62
8-18	Evaporator Coil Defrost Control		600.00	43.60%	0.405	0.510	\$500.00	10	\$69.00	\$0.12	0.90	2.58	1.09	0.85
8-19	Evaporator Fan Motor Control for freezers and coolers		2,600.00	35.77%	0.059	0.074	\$2,254.00	13	\$259.54	\$0.10	09.0	1.72	1.29	0.51
8-20	Permanent Split Capacitor Motor		385.00	33.33%	0.044	0.055	\$125.00	15	\$13.15	\$0.03	2.03	5.80	3.83	0.71
8-21	Ice Machine, Energy Star, Self-Contained		270.00	10.15%	0.029	0.037	\$56.00	6	\$8.35	\$0.03	1.98	5.66	4.00	29.0
8-22	LED Case Lighting (5 door case)		398.00	61.00%	0.006	0.007	\$190.00	8	\$31.00	\$0.08	0.45	1.28	0.87	0.49
6	Office Equipment/Appliances													
9-1	Watt Sensors on Office Electronics	50 Watt	129.00	29.00%	0.100	0.100	\$75,00	10	\$10.35	\$0.08	0.91	2.59	1.56	29'0
9-5	Watt Sensors on Office Electronics	150 Watt	321.00	58.00%	0,200	0.200	\$82.00	10	\$11.32	\$0.04	1.96	5.60	3.54	0.74
10	Compressed Air													
10-1	Fix Air Leaks	<5HP	262.50	15.00%	0.063	0.063	\$75.00	1	\$79.75	\$0,30	0.18	0.50	0.37	0.30
10-2	Fix Air Leaks	10-50HP	2,009.67	15.00%	0.483	0.483	\$75.00	1	\$79.75	\$0.04	1.35	3,86	2.86	0.61
10-3	Fix Air Leaks	50-100HP	6,134,50	15.00%	1.475	1.475	\$75.00	1	\$79.75	\$0.01	4.12	11.78	8.74	89.0
10-4	Engineered Nozzles for blow-off		7,343.00	39.00%	3.680	3,680	\$80.00	15	\$8.42	\$0.00	89.21	254.88	114.28	1.20

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

### Response to Requests for Information from the Hearing of July 26, 2011, through July 28, 2011

### August 4, 2011

1	Item 3)	Provide the amount of generation maintenance that was deferred out of the
2	test year.	
3		
4	Response)	During the test year period of November 1, 2009 through October 31, 2010 Big
5	Rivers deferre	ed \$1,511,091 of planned non-outage maintenance, \$3,866,966 of planned outage
6	maintenance,	and \$12,481,744 of planned capital projects all totaling \$17,859,801. Please see
7	Attachment 3	A for details of these deferred generation expenditures.
8		Because of continuing concerns about achieving the minimum MFIR of 1.10 in
9	2011, and the	cascading financial effect of the test-year deferrals, Big Rivers also deferred
10	additional plan	nned maintenance activities and capital projects following the test period
11	between Nove	ember 1, 2010 and June 30, 2011. These deferrals were \$149,000 in planned
12	non-outage ma	aintenance, \$13,186,571 in planned outage maintenance, and \$23,898,777 in
13	planned capita	al projects all totaling \$37,234,348. Please see Attachment 3B for details of these
14	deferred gener	ration expenditures.
15		The table below summarizes these deferrals.
16		

### **Big Rivers Electric Corporation Generation Deferral Amounts**

	Time Period		
Deferral Category	November 1, 2009 through October 31, 2010	November 1, 2010 through June 30, 2011	
Planned Non-Outage Maintenance	\$ 1,511,091	\$ 149,000	
Planned Outage Maintenance	3,866,966	13,186,571	
Planned Capital Projects	12,481,744	23,898,777	
Total Deferral Amount	<u>\$17,859,801</u>	<u>\$37,234,348</u>	

17

18 Witness) Robert W. Berry

19

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

### Test Year 1-Nov-2009 to 31-Oct-2010

	Non-Labor Non-Outage O&M Deferrals	
Project	Colomon	
CLMPAS	t Coleman: Replace Intake & BU Air Line	20,000
CLMSGUFPE	Mill Overhaul	278,830
CLMPST	Structures and Life Assessment (Unwind Agreement)	60,000
CLORM	Black and Veatch performance monitoring (Heat Rate Improvement)	526,440
	Coleman Total	885,270
	Wilson:	
WLOADM	Black and Veatch performance monitoring (Heat Rate Improvement)	56,000
WLMFGD	FGD Wiring Repairs	40,000
WLMWWS	Sewage Treatment plant vessel refurbishment	200,000
	Wilson Total	296,000
	Green:	
GNOSGU	Black and Veatch performance monitoring (Heat Rate Improvement)	92,000
	Green Total	92,000
	R/SII:	
ST10CSTK	Protective Coating on FGD stack interior structure	237,821
	R/SII Total	237,821
	Non-Outage Deferral Total	1,511,091

Case No. 2011-00036

Witness: Robert W. Berry

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

### Test Year 1-Nov-2009 to 31-Oct-2010

	Non-Labor Outage O&M Deferrals	
Projec	t Coleman:	
	No Deferrals	
	Coleman Total	
	Wilson:	
W10OUTPL	2010 Scheduled Outage (reduction in outage scope)	787,817
	Wilson Total	787,817
	Green:	
GN110SPG, N, O, T, S	G G1 - Outage (Deferred until 2011)	3,079,149
	Green Total	3,079,149
	R/SII:	
	No Deferrals	
	R/SII Total	•
	Outage Deferral Total	3,866,966
	Total Non Labor O&M Deferrals	5,378,057

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

### Test Year 1-Nov-2009 to 31-Oct-2010

Capital Project Deferrals		
	Coleman:	
	No Deferrals	
	Coleman Total	
	Coleman Total	
	Wilson:	
	Gravity Sand Filter Replacement	100,000
	Plant Manager Vehicle	10,000
	Finishing Superheater milestone pmt	600,000
	Wilson Total	710,000
	Green:	
G-1 Outage Deferred to 2011	G1 - Air Heater Baskets	895,000
J	G1 - C/T Cell Structure & Fill Replacement (4 cells)	836,000
	G1 - Rpl C/T Deck (4 Cells only)	140,000
	G1 - C/T Water Deck Replacement (4 cells)	140,000
	G1 - Economizer Outlet Exp Joints	111,000
	G1 - Generator Voltage Regulator	250,000
	G1 - Rpl Scrubber Structural component	750,000
	G1 - Rpl Precipitator Field (1st & 2nd Field)	1,842,727
	G1 - Generator Rectifier Replacement	300,000
	G1 - Water Wall Tube Weld Overlay	2,000,000
	Green 1&2 FGD Rehab (non-outage)	3,020,908
	Green 1&2 Paint Boiler, Precip & FGD (non-outage)	1,486,109
	Green Total	11,771,744
	R/SII:	
	No Deferrals	
	R/SII Total	
	Total Capital Project Deferrals	12,481,744

Case No. 2011-00036

Witness: Robert W. Berry

Attachment 3A for Hearing Data Request for Information - Item 3

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

### End of Test Year to Present 1-Nov-2010 to 30-Jun-2011

	Coleman:	
	No Deferrals	
	Coleman Total	
	Wilson:	
WLOADM	Black and Veatch performance monitoring (Heat Rate Improvement)	56,000
	Wilson Total	56,000
	Green:	
GNOSGU	Black and Veatch performance monitoring (Heat Rate Improvement)	93,000
	Green Total	93,000
	R/SII:	
	No Deferrals	
	R/SII Total	
	Non-Outage Deferral Total	149,000

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

### End of Test Year to Present 1-Nov-2010 to 30-Jun-2011

	Non-Labor Outage O&M Deferrals	
	Coleman:	
	C-1 Outage Deferred to 2012	2,957,904
	Coleman Total	2,957,904
	Wilson:	
W11OUTPL	Wilson Outage Deferred to 2012	4,918,874
W11OUTPL	Wilson 2011 Pit stop Outage (reduction in work scope)	200,000
W11OUTPL	Boiler Chemical Cleaning Deferred to 2012	650,000
	Wilson Total	5,768,874
	Green:	
GN211SPG, N, O, T, S	G2 - Outage Deferred to 2012	2,685,030
	Green Total	2,685,030
	R/SII:	
ST1PLO	H1 - Outage Deferred to 2012	1,444,763
	GT - Combustion Can Inspection Deferred to 2012	330,000
	R/SII Total	1,774,763
	Outage Deferral Total	13,186,571
	Total Non Labor O&M Deferrals	13,335,571

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

### End of Test Year to Present 1-Nov-2010 to 30-Jun-2011

	Capital Project Deferrals	
	Coleman:	
C-1 Outage Deferred to 2012	C-1 4160 V Motor replacements	160,000
-	C-1 Boiler Expansion Joint Replacement	250,000
	C-1 Boiler Insulation	250,000
	C-1 Boiler penthouse casing	150,000
	C-1 Boiler Water Wall Tube Weld Overlay	1,250,000
	C-1 CEM Duct Gas Analyzers Replacement	85,000
	C-1 Cold End Air Heater Basket	400,000
	C-1 Critical Pipe System Hanger Replacements	40,000
	C-1 DCS controller repl BRC 400	100,000
	C-1 Drum Enclosure replacement	175,000
	C-1 FD fan housings, silencers & hoods	620,000
	C-1 Hot/Cold/Rating Drive Replacement	180,000
	C-1 Lab Sample Panel	100,000
	C-1 monitor replacement including 37" alarm monitors	12,000
	C-1 Precipitator Inlet duct replacement	300,000
	C-1 ROFA Fan Discharge Dampers	250,000
	C-1 Slag Grinder Replacement	100,000
	C-1 Start Up Regulator	115,000
	C-1 Superheat Spray Header Replacement 1 upper 2 lower	750,000
	C-1 Tube Replacement Hot Reheat Section	2,050,000
	C-1 Vacuum Pump Replacement	130,000
	C1, C2, C3 and CH EWS replacement	20,000
	C-3 DAS upgrade	200,000
	C-1 Replace ILS controls	200,000
	CL Control Room	800,000
	All terrain fork truck	125,000
	Coleman Total	8,812,000
	Wilson:	
W-1 Outage Deferred to 2012	DCS System Control Upgrades	600,000
	Water Wall Tube Weld Overlay (UOP TBD by 2010 inspection)	700,000
	Supervisory instruments, ID, FD and PA Fans	205,000
	Secondary Air Heater Baskets	950,000
	Replace Scanner Air Fan	35,000
	Remaining BTG Board Control Switches into DCS	125,000
	Finishing Superheater replacement - Year 2	1,782,000
	Burner Replacement 13 of 25	750,000
	Burner Flame Scanners	100,000
	Replace Boiler main steam stop valve (1 of 1)	200,000
	Install stack lightning elimination system	200,000
	FGD Life Extension Phase 3 of 3	3,170,000
	Wilson Total	8,817,000

Case No. 2011-00036

Witness: Robert W. Berry

Attachment 3B for Hearing Request for Information - Item 3

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

### End of Test Year to Present 1-Nov-2010 to 30-Jun-2011

	Green:	
G-2 Outage Deferred to 2012	G2 - BRC 100 DCS Controller Upgrade	94,00
5 2 Gatage Deferred to 2012	G2 - Cold Reheat hangers (3 Sets)	50,00
	G2 - DCS Power Supply Upgrade	150,00
	G2 - Economizer Outlet Exp Joints	150,00
	G2 - Generator Retaining Rings	721,41
	G2 - Hot Reheat hangers (3 Sets)	50,00
	G2 - The Reneat hangers (5 sees) G2 - ID Fan Outlet Dampers	200,00
	G2 - Main Steam Hangers (3 sets)	50,00
	G2 - Replace B ID Fan Shaft	550,00
	G2 - Replace Steam Coil Drain Tank	75,00
	G2 - Replace Secan Con Drain Tank G2 - Rpl & Relocate Boiler Drain Lines	600,00
	G2 - Rpl FD Fan Inlet Vanes	250,00
	G2 - Steam Coils Banks (8)	80,00
	G2 - Upgrade SOE Migrate to DCS	180,00
	G2 - Voltage Regulator	200,00
	G2 - Precip Repair	1,125,50
	Green Total	4,525,92
	R/SII:	
H-1 Outage Deferred to 2012	H1 - A/H Cold End Baskets	336,34
C	H1 - Burner Replacement Study	6,13
	H1 - Cooling Tower Controls	13,59
	H1 - Cooling Tower Fill South Tower A,B &C	336,34
	H1 - Generator Re-wedge	129,10
	H1 - Insulation & Lagging - Reduced scope	37,37
	H1 - Miscellaneous Projects	270,02
	H1 - Precipitator False Floor Replacement	174,76
	H1 - Rpl AH Steam Coils (2)	31,80
	H1 - Transformer Deluge System	61,83
	H1 - Wet Bottom Ash Removal Hopper -Seal Skirt Replacement	346,53
	R/SII Total	1,743,85

Case No. 2011-00036

Witness: Robert W. Berry

Attachment 3B for Hearing Request for Information - Item 3

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

Response to Requests for Information from the Hearing of July 26, 2011, through July 28, 2011

1	Item 4)	Provide the balance of the Non-Smelter Non-FAC PPA regulatory account at				
2	June 30, 2011.					
3						
4	Response)	The June 30, 2011, balance of the Non-Smelter Non-FAC PPA regulatory				
5	liability acco	ount was \$7,041,523. Rural Customers' and Large Industrial Customers'				
6	combined kWh sales (Non-Smelter Applicable Sales) for the 24-month period (September					
7	2011 to Aug	gust 2013) are 6,762,718,794 kWhs. Therefore, the per kWh rate is \$.001041/kWh				
8	(\$0.001041/	$kWh = \$7,041,523 \div 6,762,718,794 \text{ kWhs}$ ).				
9						
10						
11	Witness)	Mark A. Hite				
12						

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

Response to Requests for Information from the Hearing of July 26, 2011, through July 28, 2011

1	Item 5)	Regarding Big Rivers' proposed Renewable Resource Energy Service rider			
2	(Present Renewable Resource Energy Service Tariff Rider beginning on Original Sheet No.				
3	65 of Big Rivers' Existing Tariff, and Proposed RRES rider beginning on Original Sheet				
4	No. 40 of Bi	g Rivers' <u>Proposed</u> Tariff) –			
5					
6		a. Is the "adder" mentioned therein increasing for the Rural Delivery			
7		Service class (Existing Rate Schedule C.4.d and Proposed Rate Schedule			
8		RDS) under Big Rivers' proposal?			
9		b. Is the "adder" mentioned therein decreasing for the Large Industrial			
10		Customer class (Existing Rate Schedule C.7.c and Proposed Rate			
11		Schedule LIC) under Big Rivers' proposal?			
12		c. Explain why the amount of the "adder" is currently different for those two			
13		rate classes?			
14		d. What is the basis for the \$ 0.055 per kWh current rate mentioned on			
15		Original Sheet No. 66 of Big Rivers' Existing Tariff, and on Original			
16		Sheet No. 40 of Big Rivers' Proposed Tariff) of Big Rivers?			
17		e. Instead of a rate that "is in lieu of" the current energy rate, why did Big			
18		Rivers not propose a flat rate adder that would be on top of (i.e., in			
19		addition to) the energy rate?			
20					
21	Response)	The rate for energy associated with service pursuant to the proposed Renewable			
22	Resource En	ergy Service rider is fixed at \$0.055 per kWh in both the existing and proposed			
23	tariffs. Big l	Rivers is not proposing to change that rate in this filing.			
24					
25		a. Yes, but please see the explanation in subparagraph c. of this response.			
26		b. Yes, but please see the explanation in subparagraph c. of this response.			

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

### Response to Requests for Information from the Hearing of July 26, 2011, through July 28, 2011

### August 4, 2011

c.	The Renewable Resource Energy Service rate of \$0.055 per kWh is actually
	a substitute energy rate, not an "adder" to the standard rate schedule.
	However, if one wants to use the concept of an "adder" to analyze the rate,
	the amount of the "adder" would be defined as the difference between the
	energy rate for the rate class in question (either RDS or LIC for the Rural
	Customers and Large Industrials, respectively) and the fixed energy rate in
	the Renewable Resource Energy Service. If the adder is calculated for the
	RDS and LIC classes, the amount of the adder will be different, because the
	tariff energy rates for the RDS and LIC classes are different. Because the
	rate for energy under this schedule is fixed and is cost-based (as described
	below), the "adder" or difference between this fixed Renewable Resource
	Energy Service rate and the energy rates under the standard tariffs is not a
	factor in the determination of the Renewable Resource Energy Service rate.
	The reason the adder increases under Big Rivers' proposed rates stems from
	the proposed Non-FAC PPA roll-in. If you ignore the Non-FAC PPA roll-
	in, neither "adder" increases the RDS adder stays the same (because the
	RDS and the Renewable Resource Energy Service energy rates do not
	change) and the LIC adder shrinks (because the LIC energy rate increases
	and the Renewable Resource Energy Service energy rate is constant). But
	the Non-FAC PPA roll-in changes that; the roll-in lowers both base energy
	rates. For the RDS class, this increases the adder. However, for the LIC
	class, the adder is still a decrease (because the Non-FAC PPA roll-in does
	not offset the base energy rate increase for the LIC class). These points are
	illustrated on the table attached to this response.

d. The rate of \$0.055 per kWh is based on the contractually-specified cost of

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

### Response to Requests for Information from the Hearing of July 26, 2011, through July 28, 2011

### August 4, 2011

1			renewable energy purchases that Big Rivers has already made for purposes
2			of providing service under this tariff. While the contract for renewable
3			purchases has expired, Big Rivers has "banked" the renewable purchases, all
4			of which were made at the cost of \$0.055 per kWh. At present, Big Rivers'
5			members have three residential customers taking service through them
6			pursuant to this rate schedule. Even if this number increases by a reasonable
7			amount, Big Rivers does not anticipate that the banked purchases will be
8			exhausted at any time in the near future. If or when that expectation
9			changes, and if the future cost to Big Rivers to purchase renewable energy
10			changes, Big Rivers expects to seek approval from the Commission to revise
11			the energy rate for this schedule to account for that change in cost.
12		e.	The rate for Renewable Energy is a cost-based rate, as described in this
13			response, and thus establishing a rate that is "in lieu of" standard tariff
14			energy rates was more appropriate than a flat rate adder would be for this
15			tariff. Because there is no distinction between the banked renewable energy
16			purchases that may be used for Rural Customers and those that may be used
17			for Large Industrials and because the cost for those banked purchases is
18			the same (\$0.055 per kWh) the use of a cost-based, single rate identical to
19			the approved rate in the existing tariff is reasonable and justifiable.
20			
21			
22	Witness)	Al	lbert M. Yockey
22			

23

# APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

Calculation of Renewable Resource Energy Service Rider "Adder"

		Variance	from	Current	(\$/kWh)	(9)			(0.000876)	0.001170	ı			0.000876	(0.001170)
Proposed	<b>Energy Rate</b>	After	NFPPA	Roll-In	(\$/kWh)	(2)			0.019524	0.014885	0.055000			0.035476	0.040115
		Variance	from	Current	(\$/kWh)	(4)			ı	0.0020460	1			ı	(0.0020460)
Proposed	<b>Energy Rate</b>	Before	NFPPA	Roll-In	(\$/kwh)	(3)			0.020400	0.015761	0.055000			0.034600	0.039239
			Current	Energy Rate	(\$/kWh)	(2)			0.020400	0.013715	0.055000			0.034600	0.041285
					Rate	(1)		Standard Tariff	Rural	Large Industriai	Renewable		"Adder"	Rural	Large Industrial
					Line		,	H	7	3	4	5	9	7	<b>∞</b>

### Notes

Page 1 of 1

<sup>2</sup> Source of current and proposed rates is Exhibit Seelye-6

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

Response to Requests for Information from the Hearing of July 26, 2011, through July 28, 2011

1	Item 6)	Does Exhibit Seelye-6 need to be updated to incorporate the Non-FAC PPA
2	roll-in and th	e FAC roll-in? If so, provide an updated Exhibit Seelye-6 in both hardcopy
3	and electroni	c formats.
4		
5	Response)	Yes, the rows labeled "Base Variable Energy Charge" and "Non-FAC PPA" on
6	page 3 of Exh	nibit Seelye-6 should be revised to reflect properly the effect of the roll-in of the
7	Non-FAC PP.	A into base rates proposed in the rate case. A revised version of page 3 of
8	Exhibit Seely	e-6 is attached. An electronic version of Exhibit Seelye-6 is also provided on
9	CD.	
10		In the attached revised version of page 3 of Exhibit Seelye-6, the row labeled
11	"Non-FAC Pl	PA" has been corrected to reflect the change in the Base Variable Rate resulting
12	from the roll-	in of the Non-FAC PPA base. Specifically, the Base Variable Rate has been
13	reduced by \$0	0.000876 per kWh corresponding to the reduction in the Non-FAC PPA base
14	proposed in th	nis proceeding. The changes to the exhibit are highlighted.
15		There was also a miscalculation in the row labeled "Non-FAC PPA". In the
16	original exhib	oit, the \$0.000876 per kWh Non-FAC PPA roll-in charge amount was applied to
17	the 7,297,080	,000 kWh of Base Fixed Energy (gross amount) rather than the 7,113,321,360
18	kWh of Base	Monthly Energy (net amount). Because the Non-FAC PPA applies to the Base
19	Monthly Ener	gy, the impact of the roll-in should apply to the Base Monthly Energy amount
20	and not the B	ase Fixed Energy amount, as in the original exhibit.
21		As a result of making both of these changes, which are highlighted in the
22	Attachment, t	he effect of the Non-FAC PPA roll-in remains revenue neutral. The revision
23	therefore does	s not result in any change to the proposed Revenue Deficiency in this proceeding.
24		Also attached is revised version of Supplemental Exhibit Seelye-6 showing the
25	impact of the	FAC roll-in, with the changes to the exhibit highlighted. Basically, the same
26	revision to ref	flect properly the Non-FAC PPA describes above simply flows through to this

### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES CASE NO. 2011-00036

### Response to Requests for Information from the Hearing of July 26, 2011, through July 28, 2011

### August 4, 2011

1	exhibit, without any correction necessary to reflect the FAC roll-in, which was presented
2	properly in the Supplemental Testimony filed in Big Rivers' response to Item 1 of the
3	Commission Staff's Fourth Request for Information. Commission Staff's request was dated
4	June 22, 2011; Big Rivers' response was filed with the Commission on July 1, 2011. On page
5	4 of Supplemental Exhibit Seelye-6, the FAC roll-in was reflected in both the rows labeled
6	"Base Variable Energy Charge" and "Non-FAC PPA" and the row labeled "FAC (Section
7	4.8.1)" was also correctly calculated by applying the FAC roll-in charge amount to the Base
8	Monthly Energy amount. While the effect of the FAC roll-in is correct on page 4 of
9	Supplemental Exhibit Seelye-6, the exhibit was based on an incorrect presentation of the Non-
10	FAC PPA roll-in which was carried forward from the original exhibit. Again, the effect is
11	revenue neutral. An electronic version of the revised Supplemental Exhibit Seelye-6 is also
12	provided on CD.
13	
14	Witness) William Steven Seelye
15	

Big Rivers Electric Corporation Calculation of Proposed Rate Increase Based on the 12 Months Ended October 31, 2010

	L						
		Current Rate	Rate	Proposed Rate	i Rate	Proposed Kate after Non-FAC PPA Koll-in	n-FAC PPA Koll-in
SMELTERS	Units	Rate	Billings	Rate	Billings	Rate	Billings
Base Energy Charge							
Base Fixed Energy Charge	7,297,080,000 kWh	0.028153 /kWh	\$ 205,434,693.24	0.031244 /kWh	\$ 227,988,088.84	0.030368 /kWh	\$ 221,595,846.76
Base Variable Energy Charge	(183,758,640) kWh	0.012470 /kWh	(2,291,470.24)	0.012470 /kWh	(2,291,470.24)	0.011594 /kWh	(2,130,497.67)
Total Base Energy Charge	7,113,321,360 kWh		\$ 203,143,223.00		\$ 225,696,618.60		\$ 219,465,349.09
Other Charges or Credits Suralemental Power (Sertion 4.3)			, •		·		· v
Backup Energy Charge (Section 4.4)	8,151,430 kWh	0.039977 /kWh	353,379.80		353,379.80		353,379.80
Transmission Charge (Section 4.5)			•		•		•
Excess Reactive Demand Charge (Section 4.6)			•				•
TIER Adjustment Charge (Section 4.7.1)			14,229,306.00		7,114,653.00		7,114,653.00
FAC (Section 4.8.1)			73,123,202.72		73,123,202.72		73,123,202.72
Non-FAC PPA			(6,337,959.88)		(6,337,959.88)		(106,690.37)
Environmental Surcharge (Section 4.8.3)			15,493,537.87		15,493,537.87		15,493,537.87
Amortization of Restructuring Amount (Section 16.5.1)			•		•		•
Less: Rebate (Section 4.9)					•		
Less: Equity Development Credit (Section 4.10)			•		•		,
Surcharge (Section 4.11)			11,466,492.00		11,466,492.00		11,466,492.00
Surplus Sales (Section 4.13.1)	(769,627,000) kWh	0.038166 /kWh	(28,015,862.60)		(28,015,862.60)		(28,015,862.60)
Undeliverable Energy Sales (Section 4.13.1)			•		•		•
Potline Reduction Sales (Section 4.13.1)					•		•
Curtailment of Purchased Power (Section 4.13.2)	incl w/SS kWh	0.038166 /kWh	(1,717,347.75)		(1,717,347.75)		(1,717,347.75)
Economic Sales (Section 4.13.3)			•		•		•
Other Credits (Section 4.14)			•		•		Ī
Taxes (Section 4.15)			•		•		,
Other Amounts (Section 5.1)			(3,818.03)		(3,818.03)		(3,818.03)
Billing Adjustments			657,687.71		657,687.71		657,687.71
Total	6,351,845,790		\$ 282,391,840.83		\$ 297,830,583.43		\$ 297,830,583.43
Increase (Decrease)					\$ 15,438,742.60		\$ 15,438,742.60
Percentage Increase (Decrease)					5.47%		5.47%

Big Rivers Electric Corporation

Calculation of Proposed Rate Increase Based on the 12 Months Ended October 31, 2010

Supplement to original Exhibit Seelye-6

			•		•	
		Proposed Rate Before FAC Roll-In (1)	e FAC Roll-In (1)	Proposed Rate After FAC PPA Roll-in (2)	FAC PPA Roll-in (2)	
SMELTERS	Billing Units	Rate	Billings	Rate	Billings	Variance
Base Energy Charge						
Base Fixed Energy Charge	7,297,080,000 kWh	0.030368 /kWh	\$ 221,595,846.76 \$	0.040580 /kWh	\$ 296,113,627.72	\$ 74,517,780.96
Base Variable Energy Charge	(183,758,640) kWh	0.011594 /kWh	(2,130,497.67) \$	0.021806 /kWh	(4,007,040.90)	(1,876,543.23)
Total Base Energy Charge	7,113,321,360 kWh		\$ 219,465,349.09		\$ 292,106,586.82	\$ 72.641,237.73
Other Charges or Credits			•			
Supplemental Power (Section 4.3) Backup Energy Charge (Section 4.4)	8.151,430 kWh		353.379.80		\$ - \$ 353.379.80	· ·
Transmission Charge (Section 4.5)			i.		ŧ	,
Excess Reactive Demand Charge (Section 4.6)			1		i	•
TIER Adjustment Charge (Section 4.7.1)			7,114,653.00		7,114,653.00	
FAC (Section 4.8.1) Non-FAC PPA			73,123,202.72		481,964.99	(72,641,237.73)
Environmental Surcharge (Section 4.8.3)			15,493,537.87		15.493.537.87	
Amortization of Restructuring Amount (Section 16.5.1)			•		,	ı
Less: Rebate (Section 4.9)			1		•	1
Less: Equity Development Credit (Section 4.10)			1		•	•
Surcharge (Section 4.11)			11,466,492.00		11,466,492.00	,
Surplus Sales (Section 4.13.1)	(769,627,000) kWh		(28,015,862.60)		(28,015,862.60)	ţ
Undeliverable Energy Sales (Section 4.13.1)			1		•	
Potline Reduction Sales (Section 4.13.1)			•		•	1
Curtailment of Purchased Power (Section 4.13.2)	incl w/SS kWh		(1,717,347.75)		(1,717,347.75)	ı
Other Credits (Section 4.13.5)			•		•	f
Taxes (Section 4.15)			1		•	1
Other Amounts (Section 5.1)			(3.818.03)		(3 818 03)	
Billing Adjustments			657,687.71		657,687.71	ŧ
Total	6,351,845,790		\$ 297,830,583.43		\$ 297,830,583.43	
Increase (Decrease)			\$ 15,438,742.60		\$ 15,438,742.60	ŧ
Percentage Increase (Decrease)			5.47%		5.47%	•
Notes						

### Case No. 2011-00036 Witness: William Steven Seelye

Notes
(1) Proposed Rate after Non-FAC PPA Roll-In per original Exhibit Seelye-6
(2) Rate in (1) reflecting addition of \$0.010212 to base energy rate and change of FAC Base from \$0.01072 to \$0.020932