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July 30, 2012

RECEIVED

Via Federal Express

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

JUL 3 0 2012

PUBLIC SERVICE COMMISSION

In the Matter of: Application of Big Rivers Electric Corporation Re: for Approval of its 2012 Environmental Compliance Plan, for Approval of its Amended Environmental Cost Recovery Surcharge Tariff, for Certificates of Public Convenience and Necessity, and for Authority to Establish a Regulatory Account, P.S.C. Case No. 2012-00063

Dear Mr. DeRouen:

Enclosed for filing on behalf of Big Rivers Electric Corporation ("Big Rivers") are an original and ten copies of: (i) Big Rivers' First Request for Information to Kentucky Industrial Utility Customers, Inc.; and (ii) Big Rivers' First Request for Information to Sierra Club. A copy of this letter and a copy of the requests for information have been served on each of the persons on the attached service list.

Sincerely,

Tyson Kamuf

TAK/ei **Enclosures**

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

Albert Yockey cc: Service List

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1	COMMONWEALTH OF KENTUCKY					
2	BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY					
3						
4						
5	In the Matter of:					
6						
7	Application of Big Rivers Electric Corporation)					
8 9	for Approval of its 2012 Environmental) Compliance Plan, for Approval of its Amended)					
10	Environmental Cost Recovery Surcharge Tariff, Case No. 2012-00063					
11	for Certificates of Public Convenience and					
12	Necessity, and for Authority to Establish a)					
13	Regulatory Account)					
14	, , , , , , , , , , , , , , , , , , ,					
15						
16	BIG RIVERS ELECTRIC CORPORATION'S FIRST REQUEST FOR INFORMATION					
17	TO KENTUCKY INDUSTRIAL UTILITY CUSTOMERS, INC.					
18						
19	Big Rivers Electric Corporation submits this first request for information to Kentucky					
20	Utility Industrial Utility Customers, Inc., to be answered in accordance with the following					
20	Offinty Industrial Offinty Customers, Inc., to be answered in accordance with the following					
21	Definitions and Instructions.					
22	<u>DEFINITIONS</u>					
0.0						
23	1. Whenever it is necessary to bring within the scope of these information requests					
24	documents that otherwise might be construed to be outside their scope (1) the use of "and" as					
	accuments that office might be constitued to be valided then beope (1) the use of what us					
25	well as "or" shall be construed both disjunctively and conjunctively; (2) the use of a word in its					
26	singular form shall be construed to include within its meaning its plural form as well, and vice					
07						
27	versa; (3) the use of "include" and "including" shall be construed to mean "without limitation";					
28	and (4) the use of a verb in any tense or voice shall be construed as the use of that verb in all					
20	and (7) the use of a vero in any tense of voice shall be constitued as the use of that vero in all					
29	other tenses and voices.					
20	2 "Dia Birray" mana Dia Birraya Electria Companytica					
30	2. "Big Rivers" means Big Rivers Electric Corporation.					
31	3. "KIUC," "you," or "your" means Kentucky Industrial Utility Customers, Inc., its					
32	agents, officers, directors, employees, attorneys, consultants, and members.					

- 1 4. "Smelter" or "Smelters" means one or both of Century Aluminum of Kentucky
- 2 General Partnership and Alcan Primary Products Corporation, and includes their agents, officers,
- directors, employees, attorneys, consultants, parent companies, divisions, subsidiaries, and other
- 4 related companies.
- 5. "Commission" means the Kentucky Public Service Commission.
- 6. "Kentucky Attorney General" includes his agents, employees, and consultants.
- 7. "Ventyx" includes its agents, officers, directors, employees, attorneys,
- 8 consultants, parent companies, divisions, subsidiaries, and other related companies.
- 9 8. "Sierra Club" includes its agents, officers, directors, employees, attorneys,
- 10 consultants, divisions, subsidiaries, chapters, and other related organizations.
- 9. "APM" means Alliance for Cooperative Energy Services Power Marketing, its
- agents, officers, directors, employees, attorneys, and consultants.
- 13 10. "Pace" means Pace Global, LLC.
- 14 "NPVRR" means net present value revenue requirement.
- 15 "MISO" means Midwest Independent Transmission System Operator, Inc.
- 16 13. "Document" means any written, recorded, transcribed, printed or impressed
- matter of whatever kind, however produced, stored or reproduced, including, but not limited to,
- sound or pictorial recordings, computerized information, books, pamphlets, letters, memoranda,
- 19 telegrams, electronic or mechanical transmissions, communications of all kinds, reports, notes,
- working papers, handwritings, charts, papers, writings, printings, transcriptions, tapes and
- 21 records of all kinds.
- 22 14. "Person" includes a natural person, a business organization of any type, an
- 23 unincorporated association, a governmental subdivision, agency, or entity, and a business trust.

1	15.	Wherever in these information requests you are asked to "identify," you are		
2	requested:			
3	a.	when identifying an oral communication, to:		
4		i. identify the author thereof and the parties thereto,		
5		ii. state the date of the communication,		
6		iii. state the place of the communication,		
7		iv. state the substance of the communication, and		
8		v. state whether such communication has been reduced to writing and, if	so,	
9		identify each document and the present custodian thereof;		
10	b.	when identifying other information, to state:		
11		i. the source thereof,		
12		ii. any oral communications pertaining thereto,		
13		iii. any documents pertaining thereto, and		
14		iv. the substance of the information;		
15	c.	when identifying a document, to:		
16		i. identify the author thereof and the parties thereto,		
17		ii. state its title or other identifying data,		
18		iii. state the date of the document or if no date appears thereon, the		
19		approximate date,		
20		iv. state the exact nature and substance thereof;		
21		v. identify each person having possession, care, custody or control of the	>	
22		original and any copies thereof,		

1		vi. if such document was, but no longer is, in your possession or subject to			
2		your control, state what disposition was made of it, and			
3		vii. produce the document.			
4		INSTRUCTIONS			
5	1.	If any document called for by any of these data requests is withheld based upon a			
6	claim of privil	ege or work product, please produce so much of the document as to which you do			
7	not claim priv	ilege or protection, and for each document or part of a document for which you			
8	claim privilege or protection, describe or identify:				
9	a.	The nature, subject matter and substance of the document or part of the document			
10		withheld;			
11	b.	The nature of the privilege or protection claimed;			
12	c.	The date, author or authors, addressee or addressees, and distribution of the			
13		document;			
14	d.	Each person in whose possession, custody or control any copy of the document is			
15		or has been; and			
16	e.	Paragraph number of the schedule of documents to which the document or part of			
17		the document is responsive.			
18	2.	If, for reasons other than a claim of privilege or work product, you refuse to			
19	answer any da	ta request or to produce any document requested, state the grounds upon which the			
20	refusal is base	d with sufficient specificity to permit a determination of the propriety of such			
21	refusal.				
22	3.	If any copy of any document requested herein or any record which refers or			
23	relates to any	document requested herein has been destroyed or lost, set forth to the extent			

- 1 possible the content of each such document, the date such document and its copies were
- 2 destroyed or lost and, if destroyed, the identity of the person authorizing such destruction, and
- 3 the identity of the last known custodian of such document prior to its destruction.
- 4. These data requests shall be deemed continuing and you should serve upon Big
- 5 Rivers' counsel (1) supplemental responses to these data requests if additional information or
- 6 information that changes your response to any data request is obtained during the course of this
- 7 proceeding, and (2) any documents requested herein that become available or that are discovered
- 8 after the date your responses to these data requests are due.

INFORMATION REQUESTS

- 9 10
- 1. Please provide supplements to Exhibits SJB-2 and SJB-3, in the existing format,
- but using data for 2017 instead of 2016. Separately, please do the same using data for 2018.
- 13 Please provide these exhibits in electronic spreadsheet form with all cell formulas intact, and
- provide any other workpapers, calculations and assumptions used in developing the revised
- 15 exhibits.
- 16 2. Please refer to pages 4 and 9 of Mr. Baron's testimony. Please explain why Mr.
- Baron thinks "the inclusions of fuel...in the 'allocator' is not appropriate" when allocating
- 18 environmental costs among classes but is appropriate when allocating costs between off-system
- sales and sales to Big Rivers' members.
- 20 3. Please provide all workpapers, spreadsheets (in electronic form with formulas
- 21 intact), and other documents supporting the calculations contained on page 10 of Mr. Baron's
- 22 testimony.
- 23 4. Please refer to Baron Exhibits SJB-2 and SJB-3. Please provide these exhibits in
- 24 electronic spreadsheet form with all cell formulas intact.

- 1 5. Have Domtar Paper Co., LLC and Kimberly-Clark Corporation each agreed to
- 2 Mr. Baron's proposed cost allocation methodology?
- 3 6. Please refer to page 3 of Mr. Hayet's testimony. Please list each project in which
- 4 Mr. Hayet has performed production cost modeling using the Planning and Risk model, the name
- 5 of the utility involved, and the year Mr. Hayet performed each such modeling.
- 7. Please refer to page 13 of Mr. Hayet's testimony, lines 14-17. Please identify
- 7 each Pace market price forecast iteration that included CO₂ and each Pace market price forecast
- 8 iteration that did not include CO₂.
- 9 8. Please refer to page 17 of Mr. Hayet's testimony, line 19. Please identify each
- 10 case that Mr. Hayet could not get to run and what precisely was done to resolve the issue.
- 11 9. Please provide the dates and times of all correspondence and communications
- between Mr. Hayet and anyone at APM, including direct telephone calls, conference calls, e-
- mails, faxes, or any other communications. Please provide a copy of all correspondence and a
- brief description of the subject and nature of each communication.
- 15 10. Please refer to page 18 of Mr. Hayet's testimony, lines 12-13. For each case Mr.
- Hayet performed, please list each input and assumption he changed, explain why the input or
- 17 assumption was changed, and provide all analyses, documents, or other bases supporting the
- 18 change.
- 19 11. Please refer to page 18 of Mr. Hayet's testimony, lines 12-13. For each case Mr.
- 20 Hayet performed, please provide all input files, input assumptions, output files, databases, run
- 21 definitions, and any other files or information needed to replicate the results.
- 22 12. Please provide all spreadsheets, models, and supporting documentation, with
- formulas intact, for the table depicting the NPVRR on page 21 of Mr. Hayet's testimony.

- 1 13. Please refer to the table on page 21 of Mr. Hayet's testimony.
- a. Please provide the annual figures for each of the cases in nominal dollars before
 they are discounted to present value.
 - b. Please provide this information both as a hard copy and in electronic format with formulas intact.
 - c. Please provide the discount rate used by Mr. Hayet.

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- 7 14. Please refer to page 22 of Mr. Hayet's testimony, lines 17-18. Please list each 8 item of incremental VO&M costs he claims is not included in the results.
- 9 15. Please refer to page 8 of Mr. Kollen's testimony, lines 10-11.
 - a. Please provide all analyses, documents, or other bases for his assertion that Big
 Rivers' management team is relatively inexperienced in large scale construction
 projects.
 - b. Please quantify, on a net present value basis, the dollar impact Mr. Kollen claims the alleged inexperience will have on the Build Case and the Buy Case.
 - 16. Please refer to page 15 of Mr. Kollen's testimony, lines 2-12. What dollar impact does correcting the alleged error have on the NPVRR of the Build Case, the Buy Case, and the difference between the two cases?
- 17. Please refer to Mr. Kollen's testimony, page 15 line 13 through page 16 line 7.

 What dollar impact does correcting the alleged error have on the NPVRR of the Build Case, the

 Buy Case, and the difference between the two cases?
- 21 18. Please refer to page 23 of Mr. Kollen's testimony, lines 10 and 13. Are the percent increases he refers to wholesale or retail increases?

19. Please refer to page 24 of Mr. Kollen's testimony, lines 12-14. Please list all of the "necessary steps" Mr. Kollen recommends that the Commission take to ensure that the smelters do not terminate their contracts, and provide a detailed explanation of how each step will achieve that objective.

- 20. Please provide all spreadsheets, models and supporting documentation, with formulas intact, for the table depicting "all-in" non-smelter member revenue requirements, found on page 25 of Mr. Kollen's testimony.
- 21. Please refer to page 29 of Mr. Kollen's testimony, lines 7-11, where Mr. Kollen states that "if the Commission authorizes Big Rivers to proceed with ECP projects 4 and 5, then it will commit the Company, its creditors, and all of its customers to the completion of the projects, the financing of the projects, and the obligation to pay through rates for the projects."
 - a. Does Mr. Kollen believe that by approving projects 4 and 5 in the instant case, the Commission is waiving its authority to address future construction, operation, and ratemaking issues related to these projects? Please explain in detail.
 - b. Does Mr. Kollen believe that if the Commission approves projects 4 and 5, then Big Rivers, its creditors, and/or its members waive any rights related to future consideration of the projects, their construction, operation, and future ratemaking treatment? Please explain in detail.
- 22. To the extent not provided in connection with a response to another Big Rivers information request, please provide all spreadsheets, models, and supporting documentation, with formulas intact, for each table in Mr. Kollen's testimony.

- Does KIUC agree with Ms. Wilson's testimony that Big Rivers should retire all of
- 2 its coal units and construct natural gas combined cycle units? Please explain your response in
- 3 detail.
- 4 24. Please provide all emails, memos, and other documents, sent by KIUC to the
- 5 Kentucky Attorney General, Ventyx, or Sierra Club since January 1, 2012.
- 6 25. Please provide all emails, memoranda, and other documents sent to KIUC from
- 7 the Kentucky Attorney General, Ventyx, or Sierra Club since January 1, 2012.
- 8 26. Please provide all emails, memos, and other documents, sent by KIUC to persons
- 9 other than Big Rivers, the Kentucky Attorney General, Ventyx, or Sierra Club since January 1,
- 10 2012, regarding this case or analyses performed relating to Big Rivers' environmental
- 11 compliance options.
- 12 27. Please provide all emails, memos, and other documents, sent to KIUC from
- 13 persons other than Big Rivers, the Kentucky Attorney General, Ventyx, or Sierra Club since
- January 1, 2012, regarding this case or analyses performed relating to Big Rivers' environmental
- 15 compliance options.
- 16 28. Please provide the dates and times of all correspondence and communications
- between Mr. Hayet and anyone at Ventyx, including direct telephone calls, conference calls, e-
- mails, faxes, or any other communications. Please provide a copy of all documents concerning,
- 19 regarding, or related to that correspondence and a brief description of the subject and nature of
- 20 each communication.
- 29. Please provide a copy of all documents, whether hardcopy or electronic, Mr.
- Hayet received from Ventyx or that were prepared by or for him, in whole or in part, while at
- 23 Ventyx.

1	30.	Mr. H	layet claims that there are other ways in Planning and Risk to derive a more		
2	optimal dispatch than the method used by APM in the Buy Case.				
3	a. What strategies, if any, did Mr. Hayet test?				
4	b.	What	were the results of those strategies?		
5		i.	Please provide model setup, output, spreadsheets, and other documents, in		
6			electronic form with formulas intact.		
7		ii.	Please provide the NPVRR of the Big Rivers Buy Case using all of the		
8			inputs and assumptions in the Buy Case Big Rivers filed and correcting for		
9			none of Mr. Hayet's alleged errors, except using each of the strategies		
10			proposed in your response to part a, above.		
11	31.	Please	e provide the dollar impact on the NPVRR of the Big Rivers Build Case, No		
12	Smelter Build	l Case,	Buy Case, and No Smelter Buy Case, of each error Mr. Hayet alleges.		
13	32.	In his	changes to the models, inputs, and assumptions provided by Big Rivers or		
14	APM, did Mr	. Hayet	take into account (especially in the Buy scenarios) that generation had be to		
15	curtailed at le	ast dov	vn to the CSAPR variability limits? If so, how?		
16			On this the 30 th day of July, 2012.		
17 18			100		
19			James M. Miller		
20 21			Tyson Kamuf		
22			SULLIVAN, MOUNTJOY, STAINBACK		
23			& MILLER, P.S.C.		
24 25			100 St. Ann Street P. O. Box 727		
23 26			Owensboro, Kentucky 42302-0727		
27			(270) 926-4000		
28			Council for Dia Divina Electric Comparation		
29			Counsel for Big Rivers Electric Corporation		

1 2	COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY						
3							
4 5 6	In the Matter of:						
7 8 9 10 11 12 13 14	Application of Big Rivers Electric Corporation for Approval of its 2012 Environmental Compliance Plan, for Approval of its Amended Environmental Cost Recovery Surcharge Tariff, for Certificates of Public Convenience and Necessity, and for Authority to Establish a Regulatory Account Case No. 2012-00063						
15 16	BIG RIVERS ELECTRIC CORPORATION'S FIRST REQUEST FOR INFORMATION						
17	TO SIERRA CLUB						
18							
19	Big Rivers Electric Corporation submits this first request for information to Sierra Club						
20	to be answered in accordance with the following Definitions and Instructions.						
21	<u>DEFINITIONS</u>						
22	1. Whenever it is necessary to bring within the scope of these information requests						
23	documents that otherwise might be construed to be outside their scope (1) the use of "and" as						
24	well as "or" shall be construed both disjunctively and conjunctively; (2) the use of a word in its						
25	singular form shall be construed to include within its meaning its plural form as well, and vice						
26	versa; (3) the use of "include" and "including" shall be construed to mean "without limitation";						
27	and (4) the use of a verb in any tense or voice shall be construed as the use of that verb in all						
28	other tenses and voices.						
29	2. "Big Rivers" means Big Rivers Electric Corporation.						
30	3. "Sierra Club," "you," or "your" means Sierra Club, its agents, officers, directors,						
31	employees, attorneys, consultants, divisions, subsidiaries, chapters, and other related						
32	organizations.						

- 4. "Synapse" means Synapse Energy Economics, Inc., its agents, officers, directors,
- 2 employees, attorneys, consultants, parent companies, divisions, subsidiaries, and other related
- 3 companies.
- 5. "KIUC," means Kentucky Industrial Utility Customers, Inc., its agents, officers,
- 5 directors, employees, attorneys, consultants, and members.
- 6. "Smelter" or "Smelters" means one or both of Century Aluminum of Kentucky
- 7 General Partnership and Alcan Primary Products Corporation.
- 8 7. "Commission" means the Kentucky Public Service Commission.
- 9 8. "Kentucky Attorney General" includes his agents, employees, and consultants.
- 10 9. "Ventyx" includes its agents, officers, directors, employees, attorneys,
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- 14 "Pace" means Pace Global, LLC.
- 15 12. "NPVRR" means net present value revenue requirement.
- 16 13. "NGCC" means natural gas combined cycle.
- 17 14. "DSM" means demand-side management.
- 18 15. "MISO" means Midwest Independent Transmission System Operator, Inc.
- 19 16. "Document" means any written, recorded, transcribed, printed or impressed
- 20 matter of whatever kind, however produced, stored or reproduced, including, but not limited to,
- sound or pictorial recordings, computerized information, books, pamphlets, letters, memoranda,
- telegrams, electronic or mechanical transmissions, communications of all kinds, reports, notes,

1	working papers, handwritings, charts, papers, writings, printings, transcriptions, tapes and				
2	records of all kinds.				
3	17.	"Perso	on" includes a natural person, a business organization of any type, an		
4	unincorporate	ed assoc	iation, a governmental subdivision, agency, or entity, and a business trust.		
5	18.	Where	ever in these information requests you are asked to "identify," you are		
6	requested:				
7	a.	when	identifying an oral communication, to:		
8		i.	identify the author thereof and the parties thereto,		
9		ii.	state the date of the communication,		
LO		iii.	state the place of the communication,		
11		iv.	state the substance of the communication, and		
12		v.	state whether such communication has been reduced to writing and, if so,		
13			identify each document and the present custodian thereof;		
14	b.	when	identifying other information, to state:		
15		i.	the source thereof,		
16		ii.	any oral communications pertaining thereto,		
17		iii.	any documents pertaining thereto, and		
18		iv.	the substance of the information;		
19	c.	when	identifying a document, to:		
20		i.	identify the author thereof and the parties thereto,		
21		ii.	state its title or other identifying data,		
22		iii.	state the date of the document or if no date appears thereon, the		
23			approximate date,		

1		iv. state the exact nature and substance thereof;
2		v. identify each person having possession, care, custody or control of the
3		original and any copies thereof,
4		vi. if such document was, but no longer is, in your possession or subject to
5		your control, state what disposition was made of it, and
6		vii. produce the document.
7		INSTRUCTIONS
8	1.	If any document called for by any of these data requests is withheld based upon a
9	claim of privi	lege or work product, please produce so much of the document as to which you do
10	not claim priv	ilege or protection, and for each document or part of a document for which you
11	claim privileg	e or protection, describe or identify:
12	a.	The nature, subject matter and substance of the document or part of the document
13		withheld;
14	b.	The nature of the privilege or protection claimed;
15	c.	The date, author or authors, addressee or addressees, and distribution of the
16		document;
17	d.	Each person in whose possession, custody or control any copy of the document is
18		or has been; and
19	e.	Paragraph number of the schedule of documents to which the document or part of
20		the document is responsive.
21	2.	If, for reasons other than a claim of privilege or work product, you refuse to
22	answer any da	ata request or to produce any document requested, state the grounds upon which the

- refusal is based with sufficient specificity to permit a determination of the propriety of such refusal.
- 3. If any copy of any document requested herein or any record which refers or relates to any document requested herein has been destroyed or lost, set forth to the extent possible the content of each such document, the date such document and its copies were destroyed or lost and, if destroyed, the identity of the person authorizing such destruction, and

the identity of the last known custodian of such document prior to its destruction.

4. These data requests shall be deemed continuing and you should serve upon Big Rivers' counsel (1) supplemental responses to these data requests if additional information or information that changes your response to any data request is obtained during the course of this proceeding, and (2) any documents requested herein that become available or that are discovered after the date your responses to these data requests are due.

INFORMATION REQUESTS

- 1. Please refer to page 10 of Dr. Steinhurst's testimony, lines 13-16, where he states that Synapse compared the Build Case to a natural gas combined cycle unit "using several combinations of more appropriate assumptions." Please list each input and assumption Synapse changed, explain why the input or assumption was changed, and provide all analyses, documents, or other bases supporting the change.
- 2. Please refer to page 11 of Dr. Steinhurst's testimony, beginning at line 20, where he states, "It is also contrary to the experience of national leaders in energy efficiency who have found it possible to achieve savings in excess of 1% of retail sales per year consistently for a decade or more."
 - a. Please provide all documents upon which Mr. Steinhurst bases that statement.

b. Please list each utility Mr. Steinhurst is referring to in that statement, and for each 1 utility listed: 2 i. please provide the percentage of residential load to total load for each of 3 the last 10 years, and 4 5 ii. please state whether all of the energy savings Mr. Steinhurst mentions came from a reduction in residential energy consumption, and if not, 6 provide the annual energy consumption reductions from residential 7 8 consumers. Please refer to page 12 of Dr. Steinhurst's testimony, lines 6-12. Using Big 3. 9 Rivers' proposed Build Case, provide a detailed analysis showing how DSM and energy 10 efficiency programs will eliminate the need for Big Rivers to build one or more of the proposed 11 projects, and still permit Big Rivers to comply with all environmental regulations in a timely and 12 less cost manner than the Build Case. 13 Please refer to the table on page 14 of Dr. Steinhurst's testimony. 14 a. Please provide all workpapers, models, databases, and other documents, in 15 electronic form with formulas intact, used in developing each number in the table. 16 b. Please provide the basis, including all assumptions and supporting documents, 17 used in developing each number in the table. 18 5. For each table in Ms. Wilson's testimony. 19 a. Please provide all workpapers, models, databases, and other documents, in 20 electronic form with formulas intact, used in developing each number in the table. 21 b. Please provide the basis, including all assumptions and supporting documents, 22

used in developing each number in the table.

- 6. For each input and assumption used in Ms. Wilson's analysis that differs from the inputs and assumptions in Big Rivers' Build Case, please list the input or assumption, and provide the basis for the input or assumption and all supporting worksheets or other documents.
 - 7. Please refer to the testimony of Ms. Wilson.

- a. Please explain in detail the extent to which Ms. Wilson incorporated potential future environmental laws or regulations relating to or affecting natural gas production (including potential laws or regulations relating to hydraulic fracturing) or natural gas combined cycle units into her analysis. If her answer is that she did not incorporate consideration of those subjects in her analysis, please explain why not.
- b. Please provide a natural gas forward price curve showing the impact of such environmental laws and regulations over the expected life of the proposed natural gas combined cycle units.
- c. Please provide all workpapers and other documents supporting the impact of potential future environmental laws or regulations on the price of natural gas over the expected life of the proposed natural gas combined cycle units.
- d. Has Sierra Club adopted a public position regarding the appropriateness of the technique of hydraulic fracturing in connection with the production of natural gas, or advocated imposition of any limits, prohibitions, bans, or other laws or regulations restricting use of the technique of hydraulic fracturing in connection with the production of natural gas? If so, please provide all documents relating to the positions taken by Sierra Club on those subjects, including details relating to the positions, and an estimated impact on the natural gas forward prices used in

Ms. Wilson's analysis if the positions taken by Sierra Club on those subjects are implemented by laws, regulations, or otherwise.

- e. Does Sierra Club have an opinion about the likelihood that any limits, prohibitions, bans, restrictions or other laws or regulations will be imposed on use of the technique of hydraulic fracturing in connection with the production of natural gas? If so, please provide all documents relating to such opinion, details explaining the basis for the opinion, and an estimated impact on the natural gas forward prices used in Ms. Wilson's analysis if the limits, prohibitions, bans, restrictions or other laws or regulations Sierra Club believes are likely to be imposed on use of the technique of hydraulic fracturing in connection with the production of natural gas are implemented by laws, regulations, or otherwise.
- f. Has Sierra Club proposed to any administrative agency or branch of a local, state or federal government any limits, prohibitions, bans, restrictions or other laws or regulations on use of the technique of hydraulic fracturing in connection with the production of natural gas? If so, please provide all documents relating to such proposals, details relating to the proposal, and an estimated impact on the natural gas forward prices used in Ms. Wilson's analysis if the proposals offered by Sierra Club are implemented by laws, regulations, or otherwise.
- 8. Please refer to the tables on pages 9 and 10 of Ms. Wilson's testimony.
 - a. Please provide all analyses and other documents showing the impact of the coal retirements listed on power market prices in general and on power market prices in MISO.
 - b. With regard to the 120 GW estimates:

1		i. Of the 120 GW, flow many GW of coar fetheries were from coar		
2		generation in MISO?		
3	i	i. What is the total capacity of coal generation (in GW) in MISO?		
4	ii	i. What is the total capacity of coal generation (in GW) in the United States?		
5	įv	What percent of the total coal capacity in the United States would a		
6		retirement of 120 GW represent?		
7	,	What percent of MISO coal capacity would the MISO retirements		
8		represent?		
9	V	i. Has Sierra Club made any estimates of the impact of retiring 120 GW of		
LO		coal on system reliability and resource adequacy, specifically in MISO?		
l1	vi	i. Did ICF/EEI provide a list of generators they expect to be retired (adding		
l2		up to the total GW of retirements reported)? If so, were any Big Rivers'		
13		facilities on that list?		
L4	9. Pl	ease refer to page 12 of Ms. Wilson's testimony, lines 15-16. Provide any		
L 5	allowance price f	orecast showing allowance prices different than the Pace forecast, and for each		
16	price forecast, provide the impact to the NPVRR of the Big Rivers Build Case (using Big Rivers			
17	assumptions).			
18	10. W	hat modeling software did Ms. Wilson or Synapse use to perform the cost		
19	comparisons of th	e natural gas combined cycle scenarios versus Big Rivers' scenarios referenced		
20	in Ms. Wilson's t	estimony?		
21	a. Pr	ovide copies of all models, databases, input and output files, input assumptions,		
22	in	electronic format with formulas intact.		

1 11. What capital, fuel, allowance, and operation and maintenance costs	what car	pital, fuel, allowa	nce, and operation	and maintenance	costs ara ivi
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- Wilson assume in her analysis for the combined cycle build? Provide all such costs, the basis for
- 3 those assumptions, and all documents supporting those assumptions. Include the manufacturer
- 4 and model number of the combined cycle units used as the basis for any assumption.
- 5 12. What compliance option does Ms. Wilson use in her analysis for NAAQS, 316b,
- 6 CCR, and effluent limitations?
- a. Provide all capital and operation and maintenance cost estimates used by Ms.
- 8 Wilson in her analysis for the equipment needed for compliance with NAAQS
- 9 316b, CCR and effluent limitations. Provide all bases for those estimates and all
- supporting documents. Provide the in service date for the equipment.
- 13. Explain in detail how Ms. Wilson modeled Big Rivers' debt structure when
- assuming retirement of the existing fleet and construction of new natural gas combined cycle
- 13 (NGCC) units?
- a. How would retiring Big Rivers' entire fleet affect Big Rivers' financial statements
- and equity as a percentage of assets?
- b. How was Big Rivers' current debt modeled?
- c. What sort of financing was assumed given Big Rivers' current debt structure and
- the additional amount of debt required when constructing new NGCC units?
- d. What is the additional amount of debt required to build new NGCC units?
- e. What interest rate was assumed on the new debt?
- 21 14. Please refer to Exhibit RW-3. That exhibit is a study entitled, "EEI Preliminary
- Reference Case and Scenario Results." At the bottom of each page of that study is a notice that
- states, "EEI CONFIDENTIAL BUSINESS INFORMATION: Do Not Cite, Quote or Distribute."

- Each page of the study, except the cover page, also includes a notice of ICF International's
- 2 copyright.
- a. What rights or authority does Sierra Club have to copy, cite, quote, and distribute
 the study? Please provide all evidence of such rights or authority.
- b. Please provide the business contact information for each person who provided the
 study to Sierra Club or who Sierra Club contacted to obtain the right or authority
 to copy, cite, quote, and distribute the study.
- Please provide all emails, memos, and other documents, sent by Sierra Club to the Kentucky Attorney General, Ventyx, or KIUC since January 1, 2012.
- 16. Please provide all emails, memoranda, and other documents sent to Sierra Club from the Kentucky Attorney General, Ventyx, or KIUC since January 1, 2012.
- 17. Please provide all emails, memos, and other documents, sent by Sierra Club to
 persons other than Big Rivers, the Kentucky Attorney General, Ventyx or KIUC since January 1,
 2012, regarding this case or analyses performed relating to Big Rivers' environmental
 compliance options.
 - 18. Please provide all emails, memos, and other documents, sent to Sierra Club from persons other than Big Rivers, the Kentucky Attorney General, Ventyx or KIUC since January 1, 2012, regarding this case or analyses performed relating to Big Rivers' environmental compliance options.

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On this the 30th day of July, 2012.

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