# **COMMONWEALTH OF KENTUCKY**

# **BEFORE THE PUBLIC SERVICE COMMISSION**

In The Matter Of:

APPLICATION OF KENTUCKY POWER COMPANY FOR APPROVAL OF ITS 2011 ENVIRONMENTAL COMPLIANCE PLAN, FOR APPROVAL OF ITS AMENDED ENVIRONMENTAL COST RECOVERY SURCHARGE TARIFF, AND FOR THE GRANTING OF A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR THE CONSTRUCTION AND ACQUISITION OF RELATED FACILITIES

CASE NO. 2011-00401

RECEIVED

MAR 09 2012

PUBLIC SERVICE COMMISSION

# <u>Notice of Filing Of Supplemental Response</u> To Identified Data <u>Requests</u>

Kentucky Power Company files its March 9, 2012 Supplemental Response to the

following data requests:

(a) KIUC 1-41;

(b) AG 1-26.

Respectfully submitted Mark R. Overstreet R. Benjamin Crittenden

R. Benjamin Crittenden STITES & HARBISON, PLLC 421 West Main Street P.O. Box 634 Frankfort, KY 40602-0634 Telephone: (502) 223-3477 COUNSEL FOR KENTUCKY POWER COMPANY

# **CERTIFICATE OF SERVICE**

I hereby certify that a copy of the foregoing was served by first class mail upon the following parties of record, this the 9<sup>th</sup> day of March, 2012.

Michael L. Kurtz Kurt J. Boehm Boehm, Kurtz & Lowry Suite 1510 36 East Seventh Street Cincinnati, OH 45202

Jennifer Black Hans Dennis G. Howard II Lawrence W. Cook Assistant Attorney General Office for Rate Intervention P.O. Box 2000 Frankfort, KY 40602-2000

Shannon Fisk 235 Rector St. Philadelphia, PA 19128 Joe F. Childers Joe F. Childers & Associates 300 The Lexington Building 201 West Short Street Lexington, KY 40507

Kristin Henry Sierra Club 85 Second Street San Francisco, CA 94105

Mark R. Overstreet

KPSC Case No. 2011-00401 Attorney General's Initial Data Requests Supplemental Response to Item No. 26 March 9, 2012 Page 1 of 7

# MOODY'S INVESTORS SERVICE

# Credit Opinion: Kentucky Power Company

Global Credit Research - 07 Feb 2012

Ashland, Kentucky, United States

# Ratings

Cotogory	Moody's
Category	Rating
Outlook	Stable
Issuer Rating	Baa2
Senior Unsecured	Baa2
Parent: American Electric Power	
Company, Inc.	
Outlook	Stable
Senior Unsecured	Baa2
Jr Subordinate	Baa3
Commercial Paper	P-2

# Contacts

Analyst	Phone
William Hunter/New York City	212.553.1761
William L. Hess/New York City	212.553.3837

# **Key Indicators**

[1]Kentucky Power Company					
	LTM 9/30/2011	2010	2009	2008	
(CFO Pre-W/C + Interest) / Interest Expense	3.9x	3.4x	3.9x	2.5x	
(CFO Pre-W/C) / Debt	18%	15%	18%	9%	
(CFO Pre-W/C - Dividends) / Debt	14%	11%	15%	7%	
Debt / Book Capitalization	44%	46%	46%	50%	

[1] All ratios calculated in accordance with the Global Regulated Electric Utilities Rating Methodology using Moody's standard adjustments.

Note: For definitions of Moody's most common ratio terms please see the accompanying User's Guide.

# Opinion

# **Rating Drivers**

Constructive regulatory environment viewed positively

KPSC Case No. 2011-00401 Attorney General's Initial Data Requests Supplemental Response to Item No. 26 March 9, 2012 Page 2 of 7

Planned environmental expenditures enormous relative to the company's size

Key financial metrics have improved but likely to be stressed by the capital spending program

Maintenance of current ratings will depend on capital injections from the parent

Industrial sales have benefitted from high component of mining and energy-related industries

# **Corporate Profile**

Kentucky Power Company (KPCo, Baa2 senior unsecured, stable outlook) is a vertically integrated electric utility company headquartered in Frankfort, Kentucky and is a wholly owned subsidiary of American Electric Power Company (AEP, Baa2 senior unsecured, stable outlook). KPCo is one of AEP's smaller subsidiaries, with about \$1 billion in rate base (about 6% of AEP's state jurisdictional total) and \$1.6 billion assets (3% of AEP consolidated). KPCo's primary regulator is the Kentucky Public Service Commission (KPSC). KPCo's total owned generation capacity is 1,078 MW, entirely at the Big Sandy plant, and it purchases approximately 390 MW from affiliate AEP Generating's share of the Rockport plant under two long-term unit power agreements. KPCos total capacity of approximately 1,468 MW is 100% coal. KPCo's 2010 peak demand was reported as 1,543 MW, leaving a negative reserve margin of approximately 5%, which KPCO has primarily met with purchases from its affiliates in the AEP Power Pool.

# SUMMARY RATING RATIONALE

KPCo's Baa2 senior unsecured rating primarily reflects the reasonably constructive relationship with the KPSC, financial metrics that have improved to a level that is consistent with the rating, and the company's position as a member of the AEP family, balanced against an enormous planned capital expenditure program that could stress financial metrics, a need for capital injections during the construction period and the impact of an expected near doubling of rate base on retail rates.

# DETAILED RATING CONSIDERATIONS

## CONSTRUCTIVE REGULATORY ENVIRONMENT A CREDIT POSITIVE

Moody's views the regulatory environment in Kentucky as reasonably supportive to long-term credit stability, a material credit positive. In June, 2010, the KPSC approved a not overly-generous rate settlement agreement for KPCo authorizing a \$64 million rate increase, based on a 10.5% authorized ROE with 43% equity, and recovery of \$23 million of storm costs over five years. However, electric utilities have generally been allowed to earn a return on essentially all construction work in progress. Utilities can start to collect interim rates approximately six months after filing a rate case if the KPSC has not acted on it. There are also various riders and cost recovery mechanisms that help to avoid regulatory lag, including a fuel adjustment clause, an energy efficiency rider and, most significantly, an environmental cost recovery rider. Proceedings for the latter are conducted every two years. The KPSC has authorized significant amounts of environmental spending for some of the state's other investor-owned utilities, and Moody's expects that KPCo would be granted similar treatment for reasonable costs to upgrade its coal plants.

# CAPITAL EXPENDITURE PROGRAM COULD PRESSURE RATINGS OVER THE MEDIUM TO LONG TERM

KPCo's cumulative long-term capital investment program is extremely large relative to its size. KPCo terminated its installation of jet bubbling reactor technology at Big Sandy 2 due to technical problems and expects to install dry flue gas desulfurization at unit two (800 MW), while retiring unit one (278 MW). On 12/5/11, KPCo filed with the KPSC to approve the project at an estimated cost of \$940 million including AFUDC. KPCo proposes to defer a return on the project until it is complete ( estimated in 2016) implying

KPSC Case No. 2011-00401 Attorney General's Initial Data Requests Supplemental Response to Item No. 26 March 9, 2012 Page 3 of 7

environmental capex of about \$270 million/year, compared to average annual total capex of \$80 million for 2006-2010. KPCo will also be responsible for a portion of the cost of the Rockport upgrades, but KPCo will pay these costs over a longer period of time through higher capacity costs. To maintain its current rating, KPCo will require additional equity injections from AEP (the last received was in 2009), especially if cash returns are deferred as proposed. Based in part on our expectation that coal-friendly investments will receive timely rate base treatment in Kentucky, we expect that the parent will take appropriate steps to maintain adequate financial metrics at KPCo.

Another potential concern regarding environmental expenditures is the impact on rates. KPCo's average residential rate of 8.85 cents/KWh in 2010 was the highest among investor-owned utilities in the state, and 16% higher than the state average of 7.63 cents/KWh. KPCo estimates that the Big Sandy expenditures will raise rates by about 30% in 2016; however, rates for all utilities in the state will increase due to similarly large expenditures. Higher rates could engender demand response changes among all customer classes. Rate design will be an important consideration, as materially higher rates could discourage industrial activity and/or encourage self generation by large industrial customers, especially if shale gas keeps natural gas prices depressed.

# RECENTLY STABLIZED CREDIT METRICS MAY BE STRESSED BY THE ENVIRONMENTAL SPENDING

KPCo's key financial credit metrics have historically been somewhat weak for its Baa2 senior unsecured rating category but have improved since 2008. For the periods of 2006-2010, 2008-2010 and the twelve months ended 9/30/11, KPCo's ratio of cash from operations before working capital adjustments (CFO pre-W/C) to debt averaged about 14.5%, 13.7% and 18.3%, respectively. The ratio of CFO pre-w/c interest coverage averaged 3.6x, 3.3x and 3.7x, respectively for the same periods. Balance sheet leverage has also improved, with debt to capitalization of 44.2% at 9/30/11, down from 50.5% at 12/31/08. In the near to intermediate term, we expect financial metrics to stabilize. However, metrics will likely be stressed after mid-2013, due to large increases in capital expenditures, potentially with no current return on investment if the KPSC agrees to the proposed deferral. Thus, our expectation that AEP will provide sufficient equity capital to maintain metrics is crucial to the continuance of the current ratings.

# INDUSTRIAL SALES HAVE HELD STEADY, BOOSTED BY COAL MINING AND ENERGY

Although KPCo's service territory is in the easternmost part of the state, with few urban areas other than Ashland, industrial sales represent a high percentage of total production, - about 44% of retail KWh sales and 34% of retail revenues. Of the 10 largest industrial customers, which represent 66% of industrial sales, there are four coal mining companies, two energy companies, two steel manufacturers, and two chemical companies. Industrial sales have been quite stable over the past five years, in part because high coal prices have kept the mines active. Recent Central Appalachian coal price declines could negatively affect overall KWh demand; however, KPCo's territory is on the western edge of the Utica shale formation, which may spur further energy development.

# DISSOLUTION OF THE AEP POWER POOL ADDS A MODICUM OF UNCERTAINTY

In December 2010, all the members of the AEP Power Pool gave notice to terminate the Interconnection Agreement under which they purchase and sell power and share the costs of capacity, effective January 2014 or as determined by FERC. While this notice is revocable, we believe the Interconnection Agreement will be cancelled or materially modified. KPCo is weakly positioned to serve its own load; however, the expected de-regulation of AEP Ohio's generation in stages through mid-2015 provides a potential source of long-term power and capacity for KPCo.

# Liquidity

KPCO's liquidity is adequate. KPCO participates in the AEP Utility Money Pool with a borrowing limit of \$250 million, which provides access to the parent company's liquidity. As of 9/30/11, KPCO had a balance

of \$96 million invested in the Money Pool, compared to the \$67 million invested as of 12/31/10. KPCo also utilizes AEP's receivable securitization facility.

For the twelve months ending September 2011, KPCO generated approximately \$140 million of cash from operations, invested approximately \$64 million in capital expenditures and made \$24 million in upstream dividend payments to AEP, resulting in approximately \$52 million of positive free cash flow. In 2012, we expect KPCO to generate approximately \$120 million of cash from operations, invest approximately \$120 million in capital expenditures and continue to contribute approximately \$20 million in upstream dividends to its parent. KPCO has no long-term debt maturities until 2017.

AEP has two syndicated credit facilities totaling \$3.25 billion that were renewed and extended in mid-2011. One is a \$1.5 billion facility expiring June 2015. The other is a \$1.75 billion facility (upsized from \$1.5 billion) expiring in July 2016. The combined letter of credit sub-limits under these facilities is \$1.35 billion. The facilities contain a covenant requiring that AEP's consolidated debt to capitalization (as defined) will not exceed 67.5% (AEP states the actual ratio was 50.3% at 9/30/11, indicating substantial headroom). AEP is not required to make a representation with respect to either material adverse change or material litigation in order to borrow under the facility. Default provisions exclude payment defaults and insolvency/bankruptcy of subsidiaries that (like KPCo) are not significant subsidiaries per the SEC definition (AEP Texas Central and Southwestern Electric Power Company are also effectively excluded as significant subsidiaries due to definitional adjustments). Also in 2011, AEP allowed a \$478 million letter of credit facility to expire but renewed its \$750 million accounts receivable securitization (only the multi-year portion of the latter is included as an available source in Moody's liquidity testing).

As of 9/30/11, AEP had \$546 million of cash on hand and approximately \$2.6 billion of availability under the syndicated revolving credit facilities after giving effect to \$529 million of commercial paper outstanding and \$103 million of issued letters of credit.

For the 12 months ended 9/30/11, AEP generated approximately \$4.6 billion in cash from operations, made approximately \$3.1 billion in capital investments and net asset purchases and paid about \$890 million in dividends, resulting in roughly \$610 million of positive free cash flow.

Including securitization bonds, AEP has approximately \$690 million of long-term debt due in 2012, \$1.7 billion due in 2013, and \$1.0 billion in 2014. Over the next two years, we estimate that AEP will generate roughly \$3.5 billion in cash from operations, spend about \$3.3 billion annually in capital expenditures and pay approximately \$900-950 million in dividends annually, yielding negative free cash flow of about \$700 million per year.

# **Rating Outlook**

The stable rating outlook for KPCo is primarily based on our expectation that the company will continue to maintain a constructive relationship with the KPSC, including reasonably good recovery of planned environmental upgrade expenditures, and that parent AEP will provide the capital injections needed for KPCo to maintain the recently stabilized key financial credit metrics that support the current rating.

# What Could Change the Rating - Up

Rating upgrades appear unlikely over the near to intermediate term horizon, primarily due to our expectation that KPCo will be challenged to maintain its financial profile in light of the capital investment plan. However, KPCo could be considered for a ratings upgrade if it were to achieve key financial credit metrics, including CFO pre W/C plus interest over interest of approximately 5x and CFO pre W/C to debt of approximately 20% on a sustainable basis.

# What Could Change the Rating - Down

Ratings could be downgraded if the regulatory environment were to take a more adversarial tone,

KPSC Case No. 2011-00401 Attorney General's Initial Data Requests Supplemental Response to Item No. 26 March 9, 2012 Page 5 of 7

especially with respect to the recent environmental capex filing, if KPCo's capital expenditure program experienced material cost over-runs, if equity contributions from AEP were not forthcoming in a manner to maintain financial metrics commensurate with the current rating, if there were a material, sustained decrease in retail sales and revenues (especially from industrial customers), or the key financial credit metrics exhibited a deterioration that we expected would be prolonged, for instance, a ratio of CFO pre W/C plus interest over interest below 3.0x or CFO pre W/C to debt in the low-teens.

# **Rating Factors**

# Kentucky Power Company

Regulated Electric and Gas Utilities Industry [1][2]	Current 12/31/2010	1		Moody's 12-18 month Forward View* As of February 2012	
Factor 1: Regulatory Framework (25%)	Measure	Score		Measure	Score
a) Regulatory Framework		Baa			Baa
Factor 2: Ability To Recover Costs And Earn Returns (25%)					
a) Ability To Recover Costs And Earn Returns		Baa			Baa
Factor 3: Diversification (10%)					
a) Market Position (5%)		Baa			Baa
b) Generation and Fuel Diversity (5%)		B			В
Factor 4: Financial Strength, Liquidity And Key					
Financial Metrics (40%)					
a) Liquidity (10%)		Baa			Baa
b) CFO pre-WC + Interest/ Interest (3 Year Avg) (7.5%)	3.2x	Baa		3.0 - 3.5x	
c) CFO pre-WC / Debt (3 Year Avg) (7.5%)	13.7%	Baa		13 - 17%	
d) CFO pre-WC - Dividends / Debt (3 Year Avg) (7.5%)	10.8%	Baa		13 - 17%	Baa
e) Debt/Capitalization (3 Year Avg) (7.5%)	47.3%	Baa	-	45 - 55%	Ba
Rating:					
a) Indicated Rating from Grid		Baa2			Baa2
b) Actual Rating Assigned		Baa2			Baa2

\* THIS REPRESENTS MOODY'S FORWARD VIEW; NOT THE VIEW OF THE ISSUER; AND UNLESS NOTED IN THE TEXT DOES NOT INCORPORATE SIGNIFICANT ACQUISITIONS OR DIVESTITURES

[1] All ratios are calculated using Moody's Standard Adjustments. [2] As of 12/31/2010; Source: Moody's Financial Metrics

MOODY'S INVESTORS SERVICE

KPSC Case No. 2011-00401 Attorney General's Initial Data Requests Supplemental Response to Item No. 26 March 9, 2012 Page 6 of 7

© 2012 Moody's Investors Service, Inc. and/or its licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. ("MIS") AND ITS AFFILIATES ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND CREDIT RATINGS AND RESEARCH PUBLICATIONS PUBLISHED BY MOODY'S ("MOODY'S PUBLICATIONS") MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL, FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY'S OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. CREDIT RATINGS AND MOODY'S PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS NOR MOODY'S PUBLICATIONS COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS AND PUBLISHES MOODY'S PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT. All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources Moody's considers to be reliable, including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process. Under no circumstances shall MOODY'S have any liability to any person or entity for (a) any loss or damage in whole or in part caused by, resulting from, or relating to, any error (negligent or otherwise) or other circumstance or contingency within or outside the control of MOODY'S or any of its directors, officers, employees or agents in connection with the procurement, collection, compilation, analysis, interpretation, communication, publication or delivery of any such information, or (b) any direct, indirect, special, consequential, compensatory or incidental damages whatsoever (including without limitation, lost profits), even if MOODY'S is advised in advance of the possibility of such damages, resulting from the use of or inability to use, any such information. The ratings, financial reporting analysis, projections, and other observations, if any, constituting part of the information contained herein are, and must be construed solely as. statements of opinion and not statements of fact or recommendations to purchase, sell or hold any securities. Each user of the information contained herein must make its own study and evaluation of each security it may consider purchasing, holding or selling. NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY SUCH RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

KPSC Case No. 2011-00401 Attorney General's Initial Data Requests Supplemental Response to Item No. 26 March 9, 2012 Page 7 of 7

MIS, a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MIS have, prior to assignment of any rating, agreed to pay to MIS for appraisal and rating services rendered by it fees ranging from \$1,500 to approximately \$2,500,000. MCO and MIS also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at <u>www.moodys.com</u> under the heading "Shareholder Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Any publication into Australia of this document is by MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657, which holds Australian Financial Services License no. 336969. This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001.

Notwithstanding the foregoing, credit ratings assigned on and after October 1, 2010 by Moody's Japan K.K. ("MJKK") are MJKK's current opinions of the relative future credit risk of entities, credit commitments, or debt or debt-like securities. In such a case, "MIS" in the foregoing statements shall be deemed to be replaced with "MJKK". MJKK is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO.

This credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors. It would be dangerous for retail investors to make any investment decision based on this credit rating. If in doubt you should contact your financial or other professional adviser.

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 1 of 25

KENTUCKY POWER° A unit of American Electric Power

Kentucky Power 101A Enterprise Drive P 0 Box 5190 Frankfort, KY 40602-5190 KentuckyPower.com

# RECEIVED

JAN 20 2012

PUBLIC SERVICE COMMISSION

January 20, 2012

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

Attention: Jeff Shaw

RE: Monthly Environmental Surcharge Report

Dear Mr. Shaw,

Pursuant to KRS 278.183(3), Kentucky Power Company (Kentucky Power or KPCo) files the original and two copies of its Environmental Surcharge Reports for the month of December 2011. In accordance with the Commission's Orders in the Environmental Surcharge cases, Kentucky Power has included the calculation and supporting documentation of the Environmental Surcharge Factor that will be billed for service on and after January 31, 2012.

If there are any questions please contact me at 502-696-7010.

Lila P. Mensey

Manager, Regulatory Services Enclosures

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 2 of 25

ES FORM 1.00

## KENTUCKY POWER COMPANY -- ENVIRONMENTAL SURCHARGE REPORT CALCULATION OF E(m) and SURCHARGE FACTOR For the Expense Month of December 2011

.

The state of the second se	CALCULATION OF E(m)					
	E(m) ≈ CRR - BRR					
LINE 1	CRR from ES FORM 3.00	\$4,788,967				
LINE 2	Brr from ES FORM 1.10	4,074,321	Window of the local data			
LINE 3	E(m) (LINE 1 - LINE 2)	\$714,646				
LINE 4	Kentucky Retail Jurisdictional Allocation Factor, LINE 4 from ES FORM 3.30, Schedule of Revenues, LINE 1					
LINE 5	INE 5 KY Retail E(m) (LINE 3 * LINE 4)					
LINE 6	(Over) / Under Recovery Adjustment from ES FORM 3.30	(\$122,928)				
LINE 7	Net KY Retail E(m) (LINE 5 + LINE 6)	\$470,228				
	SURCHARGE FACTOR					
LINE 8	Net KY Retail E(m) (Line 7)	\$470,228				
LINE 9	INE 9 KY Retail R(m) from ES FORM 3.30					
LINE 10	Environmental Surcharge Factor for Expense Month (Line 8 / LINE 9)	0.9289%				

Effective Date for Billing:

January 31, 2012

Submitted By :

Title :

ķ cla Vinse Manager Regulatory Services

January 20, 2012

Date Submitted :

1/ Case No. 2009-00459, dated June 28, 2010

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 3 of 25

ES FORM 1.10

## KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT BASE PERIOD REVENUE REQUIREMENT For the Expense Month of December 2011

# MONTHLY BASE PERIOD REVENUE REQUIREMENT

	Base Net
	Environmental
Billing Month	Costs
JANUARY	\$3,991,163
FEBRUARY	3,590,810
MARCH	3,651,374
APRIL	3,647,040
MAY	3,922,590
JUNE	3,627,274
JULY	3,805,325
AUGUST	4,088,830
SEPTEMBER	3,740,010
OCTOBER	3,260,302
NOVEMBER	2,786,040
DECEMBER	4,074,321
TOTAL	\$44,185,079
	=========

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 4 of 25

ES FORM 3.00

# KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT For the Expense Month of December 2011

# CALCULATION OF CURRENT PERIOD REVENUE REQUIREMENT

LINE NO.	COMPONENTS		
1	First Component: Associated with Big Sandy Plant ((RB KP(C)) (ROR KP(C)/12)) + OE KP(C) ES FORM 3.10, Line 20		\$4,740,073
2	Second Component: Associated with Rockport Plant [((RB IM(C)) (ROR IM(C)/12)) + OE IM(C) ES FORM 3.20, Line 16		\$48,894
	Third Component: Net Proceeds from Emission Allowances Sales AS		
	<ol> <li>SO2 - EPA Auction Proceeds received during Expense Month</li> </ol>	\$0	
	<ol> <li>SO2 - Net Gain or (Loss) from Allowance Sales, in compliance with the AEP Interim Allowance</li> </ol>		
	Agreement, received during Expense Month	\$0	
	Total Net Proceeds from SO2 Allowances	\$0	
	1) NOx - ERC Sales Proceeds, received during Expense Month	\$0	
	2) NOx - EPA Auction Proceeds, received during Expense Month	\$0	
	<ol> <li>NOx - Net Gain or Loss from NOx Allowances Sales, received during Expense Month</li> </ol>	\$0	
	Total Net Proceeds from NOx Allowances	\$0	
3	Total Net Gain or (Loss) from Emission Allowance Sales		\$0
4	Total Current Period Revenue Requirement, CRR Record on ES FORM 1.00.		\$4,788,967

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 5 of 25

ES FORM 3.10

1

#### KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT COSTS ASSOCIATED WITH BIG SANDY

LINE NO.	COST COMPONENT		
	Return on Rate Base :		SECTOR FOR THE PROPERTY
1	Utility Plant at Original Cost	\$191,327,552	
2	Less Accumulated Depreciation	(\$68,484,814)	
3	Less Accum. Def. Income Taxes	(\$38,920,099)	
4	Net Utility Plant		\$83,922,639
5	SO2 Emission Allowance Inventory from ES FORM 3.11		\$17,044,601
6	ECR & NOx Emission Allowance Inventory from ES FORM 3.12		\$158,405
7	Cash Working Capital Allowance from ES FORM 3.13, Line 13		\$237,942
8	Total Rate Base		\$101,363,587
9	Weighted Average Cost of Capital - ES FORM 3.15	10.69%	
	Monthly Weighted Avg. Cost of Capital (9) / 12		0.89%
11	Monthly Return of Rate Base (8) * (10)		\$902,136
	Operating Expenses :		
12	Monthly Depreciation Expense		\$577,252
13	Monthly Catalyst Amortization Expense		\$46,030
14	Monthly Property Taxes		\$13,169
	Monthly Kentucky Air Emissions Fee		\$31,701
	Monthly Environmental AEP Pool Capacity Costs		
	from ES FORM 3.14, Page 1 of 11, Column 5, Line 10		\$1,573,350
17	Monthly 2003 Plan Non-Fuel O&M Expenses from ES FORM 3.13		\$758,145
	Monthly SO2 Emission Allowance Consumption		\$838,290
	Total Operating Expenses [Line 12 thru Line 18]		<u>\$3,837,937</u>
20	Total Revenue Requirement - Big Sandy		
	Record on ES FORM 3.00, Line 1		\$4,740,073

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 6 of 25

ES FORM 3.11

#### KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT SO2 EMISSIONS ALLOWANCE INVENTORY

For the Expense Month of December 2011

		(1) Allowance	(2)	(3)	(4) Cumulative	(5)
		Activity in Month	Cumulative Balance	Dollar Value of Activity	Dollar Balance	Weighted Average Cost
BEGINNING INVENTORY Additions -			754,608		\$4,685,726	\$6.209
EPA Allowances		0	474,169	\$0	\$0	\$0.000
Gavin Reallocation		0	94,744	\$0	\$0	\$0,000
P & E Transfers In		0	327,201	\$0	\$4,855,695	\$14.840
Intercompany Purchases		41,774	109,405	\$12,341,570	\$33,456,375	\$305.803
Other (List) SO2 Emissions Allowance		0	433,206	\$0	\$67,152,857	\$155.014
Adjustment		0	4,106	\$0	(\$1,700,982)	(\$414.267)
Withdrawals -						
P & E Transfers Out		0	11,382	\$0	\$836,106	\$73.459
Intercompany Sales		0	59,987	\$0	\$4,855,950	\$80.950
Off - System Sales		0	303,050	\$0	\$29,780,273	\$98.269
SO2 Emissions Allowance		0	0	\$0	\$0	\$0.000
Adjustment		U	U	ψŪ	ψΟ	ຈູນ.ບບບ
SO2 Emissions Allowances Consumed By Kentucky Power - 1:1 (Year 2009 & Prior)		0		\$0		
SO2 Emissions Allowances Consumed By Kentucky Power - 2:1 (Years 2010 to 2014)		8,326	690,441	\$838,290	\$55,932,741	\$81.010
ENDING INVENTORY - Record Balance in Column (4) on ES FORM 3.10, Line 5			1,132,579		\$17,044,601	\$15.049
	A STREET GALLER	- 1999 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 199 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997	1,102,010	an a		ψισ.στο
Expense Month Member Load Ratio fo	or AEP/Ker	ntucky Power				0.06598

#### Columns 1 and 2 -

Record the number of allowances in any transaction (purchase, sale, transfer) which occurred during the Expense Month. Multiple transactions for a given category are to be shown as the total activity for that category during the Expense Month. For each transaction shown in Column 1, update the cumulative balance in Column 2.

#### Columns 3 and 4 -

For each transaction reflected in Column 1, record the total dollars of the transaction. Multiple transaction for a given category are to be shown as the total dollar amount for that category during the Expense Month. For each transaction shown in Column 3, update the cumulative dollar balance in Column 4. Include transactions that total zero dollars. Record amounts in whole dollars.

#### Column 5 -

Compute the Weighted Average Cost by dividing the Cumulative Dollar Balance (Co. 4) by the corresponding Cumulative Balance (Col. 2). Perform this calculation for the Beginning Inventory, Ending Inventory and all additions and withdrawals made during the Expense Month. The Weighted Average Cost should be carried out to 3 decimal places.

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 7 of 25

ESFORM 3.12 A

#### KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT SEASONAL NOX EMISSIONS ALLOWANCE INVENTORY

For the Expense Month of December 2011

	(1) Allowance Activity in Month	(2) Cumulative Balance	(3) Dollar Value of Activity	(4) Cumulative Dollar Balance	(5) Weighted Average Cost
BEGINNING INVENTORY Additions -		0		\$D	\$0.000
EPA Allowances	0	37,003	\$0	\$0	
P&E Transfers In	0	0		\$0	
Intercompany Purchases	0	0	\$0	\$0	\$0.000
Other (List)	0	0	\$0	\$0	\$0.000
Withdrawals -					
P & E Transfers Out	0	0	\$0	\$0	\$0.000
Intercompany Sales	0	0	\$0	\$0	\$0.000
Off - System Sales	0	2,425	\$0	\$0	\$0.000
ERC Consumed By Kentucky Power	0	930	\$0	\$D	\$0.000
NOx Consumed By Kentucky Power	0	23,693	\$0	\$0	\$0.000
ENDING INVENTORY - Record Balance in					
Column (4) on ES FORM 3.10, Line 5		9,955		\$0	\$0.000

#### Columns 1 and 2 -

Record the number of allowances in any transaction (purchase, sale, transfer) which occurred during the Expense Month. Multiple transactions for a given category are to be shown as the total activity for that category during the Expense Month. For each transaction shown in Column 1, update the cumulative balance in Column 2.

#### Columns 3 and 4 -

For each transaction reflected in Column 1, record the total dollars of the transaction. Multiple transaction for a given category are to be shown as the total dollar amount for that category during the Expense Month. For each transaction shown in Column 3, update the cumulative dollar balance in Column 4. Include transactions that total zero dollars. Record amounts in whole dollars.

#### Column 5 -

Compute the Weighted Average Cost by dividing the Cumulative Dollar Balance (Co. 4) by the corresponding Cumulative Balance (Col. 2). Perform this calculation for the Beginning Inventory, Ending Inventory and all additions and withdrawals made during the Expense Month. The Weighted Average Cost should be carried out to 3 decimal places.

Note: For any sale or transfer of ERCs or NOx emission allowances, attach to this report documentation showing the currently available market prices for similar ERC or NOx allowances.

Total Early Reduction Credits (ERC)	930	
Consumed: June 2004 July 2004	420 510	
Total Consumed	930 -	
Remaining Early Reduction Credits (ERC)	0	

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 8 of 25

#### ES FORM 3.12 B

------

#### KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT ANNUAL NOX EMISSIONS ALLOWANCE INVENTORY

#### For the Expense Month of December 2011

	(1) Allowance Activity in Month	(2) Cumulative Balance	(3) Dollar Value of Activity	(4) Cumulative Dollar Balance	(5) Weighted Average Cost
BEGINNING INVENTORY Additions -		0		\$0	\$0.000
EPA Allowances	0	44,729	\$0	\$0	\$0.000
P&E Transfers In	0	. 0	\$0	\$0	\$0.000
Intercompany Purchases	0	0	\$0	\$0	\$0.000
External Purchases	0	3,480	\$0	\$2,023,690	\$581.520
Other (List)	0	0	\$0	\$0	\$0.000
Withdrawals -					
P & E Transfers Out	0	0	\$0	\$0	#DIV/0!
Intercompany Sales	0	0	\$0	\$0	\$0.000
Off - System Sales	0	0	\$0	\$0	\$0.000
NOx Consumed By Kentucky Power	1,258	25,885	\$262,209	\$1,865,285	\$72.060
ENDING INVENTORY - Record Balance in					
Column (4) on ES FORM 3.10, Line 5		22,324		\$158,405	\$7.096

#### Columns 1 and 2 -

Record the number of allowances in any transaction (purchase, sale, transfer) which occurred during the Expense Month. Multiple transactions for a given category are to be shown as the total activity for that category during the Expense Month. For each transaction shown in Column 1, update the cumulative balance in Column 2.

#### Columns 3 and 4 -

For each transaction reflected in Column 1, record the total dollars of the transaction. Multiple transaction for a given category are to be shown as the total dollar amount for that category during the Expense Month. For each transaction shown in Column 3, update the cumulative dollar balance in Column 4. Include transactions that total zero dollars. Record amounts in whole dollars.

#### Column 5 -

Compute the Weighted Average Cost by dividing the Cumulative Dollar Balance (Co. 4) by the corresponding Cumulative Balance (Col. 2). Perform this calculation for the Beginning Inventory, Ending Inventory and all additions and withdrawals made during the Expense Month. The Weighted Average Cost should be carried out to 3 decimal places.

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 9 of 25

ES FORM 3.13

# KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT

# For the Expense Month of December 2011

1 2 3 4	1997 Plan : Monthly Kentucky Air Emissions Fee Total Monthly AEP Pool Environmental Capacity Costs Monthly SO2 Allowance Consumption Total 1997 Plan O&M Expenses	\$31,701 \$275,400 <u>\$838,290</u>	\$1,145,391
5 6 7 8 9	<b>2003 Plan :</b> Monthly Varible Cladding at Big Sandy Unit 1 Monthly Urea Consumption at Big Sandy Unit 2 Monthly Catalyst Replacement at Big Sandy Unit 2 Monthly ERC & NOx Allowance Consumption Equipment - Associated Operating Expenses	\$0 \$485,032 \$0 \$262,209 \$2,167	
10 11	Equipment - Associated Maintenance Expenses Total 2003 Plan O&M Expenses	<u>\$8,737</u> '	<u>\$758,145</u>
12	Total Monthly O&M Expenses		<u>\$1,903,536</u>
13	Cash Working Capital Allowance ( Line 12 X 1/8 )		\$237,942

Total Cost at Line 11 is to be recorded on ES FORM 3.10, Line 7.

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 10 of 25

# Kentucky Power Company Environmental Equipment Operation and Maintenance Costs December 2011

Work Description	Material Costs	Outside Contract Labor	Misc Other Costs	Total Costs
Ammonia on Demand (AOD)	\$2,389.00	\$0.00	\$0.00	\$2,389.00
Hydrolizer (AOD)	\$2,280.00	\$0.00	\$0.00	\$2,280.00
SCR Boiler Outlet Ductwork	\$0.00	\$461.00	\$0.00	\$461.00
SCR Acoustic Horns	\$554.00	\$0.00	(\$195.00)	\$359.00
SCR NOX Monitoring	\$209.00	\$0.00	\$0.00	\$209.00
Total SCR December 2011 O & M Expense	\$5,432.00	\$461.00	(\$195.00)	\$5,698.00
Additional Operator Overtime During The Ozone Season	\$0.00	\$0.00	\$0.00	\$2,167.00
Emission Testing Required Under Permit -				
Operation Maintenance	\$0.00 \$3,039.00	\$0.00 \$0.00	\$0.00 \$0.00	\$0.00 \$3,039.00
December 2011				

O & M Expenses Filed

\$10,904.00

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 11 of 25

> ES FORM 3.14 Page 1 of 11

> > ÷

ł

#### KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT AEP POOL MONTHLY ENVIRONMENTAL CAPACITY COSTS

# For the Expense Month of December 2011

Line No. (1)	Cost Component (2)	Ohio Power Company's Environmental Cost to KPCo (3)	Indiana Michigan Power Company's Environmental Cost to KPCo (4)	Total (5)
1	Amos Unit No. 3 Environmental Cost to Kentucky Power (ES FORM 3.14, Page 3 of 11, Line 26)	\$247,350		
2	Cardinal Unit No. 1 Environmental Cost to Kentucky Power (ES FORM 3.14, Page 4 of 11, Line 24)	\$168,300		
3	Gavin Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 5 of 11, Line 26)	\$581,400		
4	Kammer Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 6 of 11, Line 20)	\$5,100		
5	Mitchell Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 7 of 11, Line 23)	\$504,900		
6	Muskingum River Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 8 of 11, Line 20)	\$48,450		
7	Sporn Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 9 of 11, Line 20)	\$10,200		
8	Rockport Plant Environmental to Kentucky Power (ES FORM 3.14, Page 10 of 11, Column 5, Line 21)		\$2,550	
9	Tanners Creek Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 11 of 11, Line 20)		\$5,100	
10	Total AEP Pool Monthly Environmental Capacity Costs to Kentucky Power	\$1,565,700	\$7,650	\$1,573,350

Note: Cost in Column 5, Line 10 is to be recorded on ES FORM 3.10, Line 16.

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 12 of 25

> ES FORM 3.14 Page 2 of 11

Indiana

.

ţ

#### KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT AEP POOL MONTHLY ENVIRONMENTAL CAPACITY COSTS WORKING CAPITAL ONLY

For the Expense Month of December 2011

Line No. (1)	Cost Component (2)	Ohio Power Company's (OPCo) Environmental Cost to KPCo (3)	Michigan Power Company's (I&M) Environmental Cost to KPCo (4)	Total (5)
(1)	Amos Unit No. 3 Environmental Cost to Kentucky Power	(-)		(-)
1	(ES FORM 3.14, Page 3 of 11, Line 19)	\$360,717		
2	Cardinal Unit No. 1 Environmental Cost to Kentucky Power (ES FORM 3.14, Page 4 of 11, Line 17)	\$289,495		
3	Gavin Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 5 of 11, Line 17)	\$6,890,170		
4	Kammer Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 6 of 11, Line 10)	\$15,690		
5	Mitchell Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 7 of 11, Line 16)	\$1,760,284		
6	Muskingum River Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 8 of 11, Line 10)	\$197,607		
7	Sporn Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 9 of 11, Line 10)	\$13,207		
8	Rockport Plant Environmental to Kentucky Power (ES FORM 3.14, Page 10 of 11, Columns 3 & 6, Line 10)		\$15,625	
9	Rockport Plant Environmental to Kentucky Power (ES FORM 3.14, Page 10 of 11, Columns 4 & 5, Line 10)		\$0	
10	Tanners Creek Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 11 of 11, Line 10)		\$15,625	
11	Subtotal	\$9,527,170	\$31,250	
12	Steam Capacity By Company - , OPCo (Column 3) / I&M (Column 4) (kw)	8,003,000	5,414,000	
13	Environmental Base (\$/kw)	\$1.19	\$0.01	
14	Company Surplus Weighting	91.00%	9.00%	
15	Portion of Weighted Average Capacity Rate Attributed to Environmental Fixed O&M Costs	, \$1.08	\$0.00	
16	Kentucky Power Capacily Deficit (kw)	255,000	255,000	
17	Fixed O&M Environmental Cost to Kentucky Power	\$275,400	\$0	\$275,400

Note: Cost in Column 5, Line 17 is to be recorded on ES FORM 3.13, Line 2.

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 13 of 25

> ES FORM 3.14 Page 3 of 11

# KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT OHIO POWER COMPANY (OPCo) - AMOS PLANT UNIT NO. 3

LINE NO.	COST	AMOUNTS
		0000 404 444
1	Utility Plant at Original Cost	\$600,434,141
2	Member Primary Capacity Investment Rate (16.44% / 12)	<u>1.37%</u>
3	Total Rate Base	\$8,225,948 100.00%
4	Ohio Power Company's Percentage Ownership - Environmental Investment	\$8,225,948
5	OPCo's Share of Cost Associated with Amos Unit No. 3 (3) X (4)	
	Operations :	\$1,233
6	Disposal (5010000)	\$153,609
7	Urea (5020002)	\$103,009
	Trona (5020003)	\$141,287
	Lime Stone (5020004)	\$141,287 \$10,292
10	Air Emission Fee	\$376,997
11	Total Operations (Lines 6 thru 10)	4310,391
	Maintenance:	\$271,098
12	SCR Maintenance (5120000)	\$57,005
13	Scrubber (FGD) Maintenance (5120000)	\$328,103
14	Total Maintnenance (12) + (13)	\$164,052
15	1/2 of Maintenance (14) * 50%	\$541,049
16	Fixed O&M (11) + (15)	66.67%
17	Ohio Power Company's Percentage Ownership - O&M Cost	\$360,717
18	OPCo's Share of O&M Cost Associated with Amos Unit No. 3 (16) X (17)	4000,111
	Total Revenue Requirement,	\$8,586,665
19	Cost Associated with Amos Unit No. 3 (5) + (18)	8,003,000
20	Ohio Power Company Steam Capacity (kw)	\$1.07
21	Amos Unit No. 3 Environmental Rate (\$/kw)	91.00%
22	Ohio Power Surplus Weighing	31,0070
23	Portion of Weighted Average Capacity Rate	\$0.97
1	Attributed to Amos Unit No. 3 SCR (\$/kw) (21) * (22)	φυ.στ
	Amos Unit No. 3 Costs to Kentucky Power :	\$0.97
24	Amos Unit No. 3 Portion (\$/kw) (23)	255,000
25	Kentucky Power Capacity Deficit (kw)	200,000
	Amos Unit No. 3 Environmental Cost to Kentucky Power (24) * (25)	\$247,350
26	(ES FORM 3.14, Page 1 of 10, Line 1)	φ2-11,000

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 14 of 25

> ES FORM 3.14 Page 4 of 11

> > :

# KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT OHIO POWER COMPANY (OPCo) - CARDINAL UNIT 1

LINE]		
NO.	COST	AMOUNTS
1	Utility Plant at Original Cost	\$400,962,145
2	Member Primary Capacity Investment Rate (16.44% / 12)	<u>1.37%</u>
3	Total Rate Base	\$5,493,181
	Operations :	<b>600 700</b>
4	Disposal (5010000)	\$20,706
5	Lime (5020001)	\$0
6	Urea (5020002)	\$200
7	Trona (5020003)	\$10,790
8	Lime Stone (5020004)	\$189,341
9	Air Emission Fee	\$8,622
10	Total Operations (Line 4 thru 8)	\$229,659
	Maintenance :	
11	SCR Maintenance (5120000)	\$444
12	Scrubber (FGD) Maintenance (5120000)	<u>\$119,228</u>
13	Total Maintenance (13) + (14)	\$119,672
14	1/2 Maintenance (15) * 50%	\$59,836
15	Fixed O&M (12) + (16)	<u>\$289,495</u>
	Total Revenue Requirement,	AF 700 070
16	Cost Associated with Cardinal Unit No. 3 (3) + (17)	<u>\$5,782,676</u>
17	Ohio Power Company's Percentage Ownership	100.00%
18	OPCo's Share of Cost Associated with Cardinal Unit No. 1 (18) X (19)	\$5,782,676
19	Ohio Power Company Steam Capacity (kw)	8,003,000
20	Cardinal Unit No. 1 (\$/kw)	\$0.72
21	Ohio Power Surplus Weighing	91.00%
22	Portion of Weighted Average Capacity Rate	
	Attributed to Cardinal Unit No. 1 (\$/kw) (22) X (23)	\$0.66
	Cardinal Unit No. 1 Costs to Kentucky Power :	00.00
23	Cardinal Unit No. 1 Portion (\$/kw) (24)	\$0.66
24	Kentucky Power Capacity Deficit (kw)	<u>255,000</u>
	Cardinal Unit No. 1 Environmental Cost to Kentucky Power (25) * (26)	#400.000
25	(ES FORM 3.14, Page 1 of 10, Line 2)	\$168,300
		<u> </u>

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 15 of 25

> ES FORM 3.14 Page 5 of 11

# KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT OHIO POWER COMPANY (OPCo) - GAVIN PLANT (UNITS 1 & 2)

LINE NO.	COST	AMOUNTS
NO. 1 2 3 4 5 6 7 8 9		AMOUNTS \$964,148,720 <u>1.37%</u> \$13,208,837 \$13,208,837 \$822,128 \$3,625,177 \$1,091,797 \$619,699 \$520 \$34,947 <u>\$0</u> \$6,194,268 \$97,464 <u>\$1,294,339</u> \$1,391,803 <u>\$695,902</u> \$6,890,170 \$20,099,007 100.00% \$20,099,007 8,003,000 \$2.51
21 22 23	Gavin Plant (\$7kw) Ohio Power Surplus Weighing Portion of Weighted Average Capacity Rate Attributed to Gavin Plant (\$/kw) (21) X (22)	91.00% \$2.28
24 25	Gavin Plant Costs to Kentucky Power : Gavin Plant Portion (\$/kw) (23) Kentucky Power Capacity Deficit (kw) Gavin Plant Environmental Cost to Kentucky Power (24) * (25)	\$2.28 <u>255,000</u>
26	(ES FORM 3.14, Page 1 of 10, Line 3)	\$581,400

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 16 of 25

> ES FORM 3.14 Page 6 of 11

# KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT OHIO POWER COMPANY (OPCo) - KAMMER PLANT (UNITS 1, 2 & 3)

LINE NO.	COST	AMOUNTS
1 2 3	Utility Plant at Original Cost Member Primary Capacity Investment Rate (16.44% / 12) Total Rate Base Operations :	\$8,451,624 <u>1.37%</u> \$115,787 \$0
45	Urea (5020002) Trona (5020003)	\$0
6 7	Air Emission Fee Total Operations (4) + (5) + (6) Maintenance :	<u>\$15,690</u> \$15,690
8	SCR Maintenance (5120000)	\$0
9	1/2 of Maintenance (8) * 50%	<u>\$0</u> \$15,690
10	Fixed O&M (7) + (9) Total Revenue Requirement,	
11	Cost Associated with Kammer Plant (3) + (10)	<u>\$131,477</u> 100,00%
12	Ohio Power Company's Percentage Ownership OPCo's Share of Cost Associated with Kammer Plant (11) X (12)	\$131,477
13 14	Ohio Power Company Steam Capacity (kw)	8,003,000
a :	Kammer Plant (\$/kw)	\$0.02
16	Ohio Power Surplus Weighing	91.00%
17	Portion of Weighted Average Capacity Rate Attributed to Kammer Plant (\$/kw) (15) X (16)	\$0.02
18	Kammer Plant Costs to Kentucky Power : Kammer Plant Portion (\$/kw) (17)	\$0.02
10	Kentucky Power Capacity Deficit (kw)	<u>255.000</u>
20	Kammer Plant Environmental Cost to Kentucky Power (18) * (19) (ES FORM 3.14, Page 1 of 10, Line 4)	\$5,100

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 17 of 25

> ES FORM 3.14 Page 7 of 11

> > ,

# KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT OHIO POWER COMPANY (OPCo) - MITCHELL PLANT (UNITS 1 & 2)

LINE NO.	COST	AMOUNTS
<u>110.</u>		ANICONTO
1	Utility Plant at Original Cost	\$1,143,093,101
2	Member Primary Capacity Investment Rate (16.44% / 12)	1.37%
3	Total Rate Base	\$15,660,375
J	Operations :	\$10,000,070
4	Disposal (5010000)	\$4,804
5	Urea (5020002)	\$651,904
6	Trona (5020003)	\$108,808
7	Lime Stone (5020004)	\$798,261
8	Air Emission Fee	\$12,128
9	Total Operations (Lines 4 thru 8)	\$1,575,905
	Maintenance :	
10	SCR Maintenance (5120000)	\$2,721
11	FDG (5120000)	\$366,036
	1/2 of Maintenance (10 + 11) * 50%	\$184,379
13	Fixed O&M (9) + (12)	\$1,760,284
	Total Revenue Requirement,	
14	Cost Associated with Mitchell Plant (3) + (13)	\$17,420,659
15	Ohio Power Company's Percentage Ownership	100.00%
16	OPCo's Share of Cost Associated with Mitchell Plant (14) X (15)	\$17,420,659
17	Ohio Power Company Steam Capacity (kw)	8,003,000
18	Mitchell Plant (\$/kw)	\$2.18
19	Ohio Power Surplus Weighing	91.00%
20	Portion of Weighted Average Capacity Rate	
	Attributed to Mitchell Plant (\$/kw) (18) X (19)	\$1.98
	Mitchell Plant Costs to Kentucky Power :	
21	Mitchell Plant Portion (\$/kw) (20)	\$1.98
22	Kentucky Power Capacity Deficit (kw)	<u>255,000</u>
	Mitchell Plant Environmental Cost to Kentucky Power (21) * (22)	
23	(ES FORM 3.14, Page 1 of 10, Line 5)	\$504,900

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 18 of 25

> ES FORM 3.14 Page 8 of 11

## KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT OHIO POWER COMPANY (OPCo) - MUSKINGUM RIVER PLANT (UNITS 1, 2, 3, 4 & 5)

LINE NO.	COST	AMOUNTS
1	Utility Plant at Original Cost	\$108,672,817
2	Member Primary Capacity Investment Rate (16.44% / 12)	1.37%
3	Total Rate Base	\$1,488,818
	Operations :	
4	Urea (5020002)	\$158,040
5	Trona (5020003)	\$0
6	Air Emission Fee	<u>\$34,561</u>
7	Total Operations (4) + (5) + (6)	\$192,601
	Maintenance :	
8	SCR Maintenance (5120000)	\$10,011
9	1/2 of Maintenance (8) * 50%	<u>\$5,006</u>
10	Fixed O&M (7) + (9)	<u>\$197,607</u>
	Total Revenue Requirement,	
11	Cost Associated with Muskingum Plant (3) + (10)	<u>\$1,686,425</u>
12	Ohio Power Company's Percentage Ownership	100.00%
13	OPCo's Share of Cost Associated with Muskingum Plant (11) X (12)	\$1,686,425
14	Ohio Power Company Steam Capacity (kw)	8,003,000
15	Muskingum Plant (\$/kw)	\$0.21
16	Ohio Power Surplus Weighing	91.00%
17	Portion of Weighted Average Capacity Rate	
	Attributed to Muskingum Plant (\$/kw) (15) X (16)	\$D.19
	Muskingum Plant Costs to Kentucky Power :	
18	Muskingum Plant Portion (\$/kw) (17)	\$0.19
19	Kentucky Power Capacity Deficit (kw)	<u>255,000</u>
	Muskingum Plant Environmental Cost to Kentucky Power (18) * (19)	
20	(ES FORM 3.14, Page 1 of 10, Line 6)	\$48,450

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 19 of 25

> ES FORM 3.14 Page 9 of 11

# KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT OHIO POWER COMPANY (OPCo) - SPORN PLANT (UNITS 2, 3, 4 & 5)

LINE NO.	COST	AMOUNTS
1 2 3	Utility Plant at Original Cost Member Primary Capacity Investment Rate (16.44% / 12) Total Rate Base Operations :	\$20,310,295 <u>1.37%</u> \$278,251
4 5 6 7	Urea (5020002) Trona (5020003) Air Emission Fee Total Operations (4) + (5) + (6) Maintenance :	\$0 \$0 <u>\$13,207</u> \$13,207
8 9 10	SCR Maintenance (5120000) 1/2 of Maintenance (8) * 50% Fixed O&M (7) + (9) Total Revenue Requirement,	\$0 <u>\$0</u> <u>\$13,207</u>
11 12 13 14	Cost Associated with Sporn Plant (3) + (10) Ohio Power Company's Percentage Ownership OPCo's Share of Cost Associated with Sporn Plant (11) X (12) Ohio Power Company Steam Capacity (kw)	<u>\$291,458</u> 100.00% \$291,458 8,003,000
15 16 17	Sporn Plant (\$/kw) Ohio Power Surplus Weighing Portion of Weighted Average Capacity Rate	\$0.04 91.00%
18 19	Attributed to Sporn Plant (\$/kw) (15) X (16) Sporn Plant Costs to Kentucky Power : SpornGavin Plant Portion (\$/kw) (17) Kentucky Power Capacity Deficit (kw)	\$0.04 \$0.04 <u>255,000</u>
20	Sporn Plant Environmental Cost to Kentucky Power (18) * (19) (ES FORM 3.14, Page 1 of 10, Line 7)	\$10,200

5,414,000 \$0.06 9.00% 255,000 \$2,550 \$306,918 \$0.01 \$0.01 Total E \$30,168 50.00% \$15,084 6 8 8 8 8 1 37% 8 8 8 \$2,202,020 \$30,168 Common **Xockpol** Plant 6 \$228,919 <u>65.08%</u> \$148,980 66666 808 UNIT 2 AMOUNTS \$16,709,416 37% \$228,919 0 \$10,544,676 1.37% \$144,462 <u>85.00%</u> \$122,793 88888 \$ \$ \$ \$ \$144,462 AMOUNTS UNIT 1 Ð \$40,121 50% \$20,061 \$1,787,996 \$0 \$0 \$15,625 \$24,496 \$15,625 \$15,625 88 Common Rockport Plant ල Attributed to Rockport Plant (\$/kw) (17) X (18) Rockport Plant Costs to Kentucky Power : Rockport Plant Portion (\$/kw) (18) Kentucky Power Capacity Deficit (kw) Rockport Units 1 & 2 Environmental to Kentucky Power (19) \* (20) (ES FORM 3.14, Page 1 of 10, Line 8) &M's Share of Cost Associated with Rockport Plant (11) X (12) Indiana Michigan Power Company's Percentage Ownership Member Primary Capacity Investment Rate (16.44% / 12) Indiana Michigan Power Company Steam Capacity (Icw) Total Rockport Plant Common and Units 1 & 2 Cost Associated with Rockport Plant (3) + (10) Kentucky Power Portion of Rockport Plant / Indiana Michigan Power Surplus Weighing Portion of Weighted Average Capacity Rate COST Rockport Plant (\$/kw) (14) / (15) Total Operations (4) + (5) + (6) SCR Maintenance (5120000) 1/2 of Maintenance (8) \* 50% Fixed O&M (7) + (9) Total Revenue Reguirement, Utility Plant at Original Cost Air Emission Fee **Fotal Rate Base** Trona (502003) Urea (5020002) Maintenance Operations LINE ΰç 17 C2 C2 C2 18 Ŋ. 19 00° 3 Ē ~ N 00 4902

KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT INDIANA MICHGAN POWER COMPANY (1&M) - ROCKPORT PLANT (UNITS 1 & 2)

For the Expense Month of December 2011

ES FORM 3.14 Page 10 of 11

#### KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 20 of 25

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 21 of 25

> ES FORM 3.14 Page 11 of 11

# KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT INDIANA MICHGAN POWER COMPANY (I&M) - TANNERS CREEK (UNITS 1, 2, 3 & 4)

LINE NO.	COST	AMOUNTS
1	Utility Plant at Original Cost	\$98,457,579
2	Member Primary Capacity Investment Rate (16.44% / 12)	<u>1.37%</u>
3	Total Rate Base	\$1,348,869
	Operations :	
4	Urea (5020002)	\$0
5	Trona (5020003)	\$0
6	Air Emission Fee	<u>\$15,625</u>
7	Total Operations $(4) + (5) + (6)$	\$15,625
	Maintenance :	#0
8	SCR Maintenance (5120000)	\$0
9	1/2 of Maintenance (8) * 50%	<u>\$0</u>
10	Fixed O&M (7) + (9)	<u>\$15,625</u>
	Total Revenue Requirement, Cost Associated with Tanners Creek Plant (3) + (10)	\$1,364,494
11 12	Indiana Michigan Power Company's Percentage Ownership	100.00%
12	I&M's Share of Cost Associated with Tanners Creek Plant (11) X (12)	\$1,364,494
8	Indiana Michigan Power Company Steam Capacity (kw)	5,414,000
	Tanners Creek Plant (\$/kw)	\$0.25
	Indiana Michigan Power Surplus Weighing	9,00%
17	Portion of Weighted Average Capacity Rate	0.0070
	Attributed to Rockport Plant (\$/kw) (15) X (16)	\$0.02
	Tanners Creek Plant Costs to Kentucky Power:	
18	Tanners Creek Plant Portion (\$/kw) (17)	\$0.02
19	Kentucky Power Capacity Deficit (kw)	255,000
	Tanners Creek Plant Environmental Cost to Kentucky Power (18) * (19)	
20	(ES FORM 3.14, Page 1 of 10, Line 9)	\$5,100

#### ES FORM 3.15

# KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT BIG SANDY PLANT COST OF CAPITAL

For the Expense Month of December 2011

LINE NO.	Component	Balances	Cap. Structure	Cost Rafes		WACC (Net of Tax)	GRCF		WACC (PRE-TAX)
		As of 4/30/2010							
1 2	L/T DEBT S/T DEBT ACCTS REC	\$550,000,000 \$0	51.941% 0.000%	6.48% 0.83%		3.37% 0.00%			3.37% 0.00%
3 4	FINANCING C EQUITY	\$43,588,933 \$465,314,088	4、116% 43、943%	1.22% 10.50%	1/	0.05% 4.61%	1.5762	2/	0.05% 7.27%
5	TOTAL	\$1,058,903,021	100.000%			8.03%			10.69%
1/	WACC = Weigh Raie of Relum								
2/		Conversion Factor - 00020 dated - Apri		tion:					
1 2 3		EVENUE LE ACCOUNTS EX Service Commissio		0.15%)			100.0000 0.2400 0.1500		
4 5	STATE TAXABI STATE INCOMI	ow)	99.610D 5.6384						
6 7	FEDERAL TAX 199 DEDUCTIO	л	93.9716 5.6372						
8 9	FEDERAL TAX/ FEDERAL INCO	88.3344 30.9171							
10	AFTER-TAX PR	57.4173							
11 12 13 14 15	GROSS-UP FACTOR FOR PRODUCTION INCOME: AFTER-TAX PRODUCTION INCOME 199 DEDUCTION PHASE-IN UNCOLLECTIBLE ACCOUNTS EXPENSE Kenlucky Public Service Commission Assessment (0.15%)								
16	TOTAL GROSS	)	63.4445						
17 18 19 20	BLENDED FEDERAL AND STATE TAX RATE: FEDERAL (LINE 8) STATE (LINE 4) BLENDED TAX RATE								
21	GROSS REVEN		1.5762						
1 2 3	STATE INCOME TAX CALCULATION: PRE-TAX PRODUCTION INCOME COLLECTIBLE ACCOUNTS EXPENSE (0.24%) Kentucky Public Service Commission Assessment (0.15%)								
4 5		ABLE PRODUCTIC ATE 199 DEDUCTIC		FORE 199 DED	UCT	ION	99.6100 5.6372		
6 7	STATE TAX STATE INC	ON	93.9728 6.0000						
8	STATE INC		5.6384						

The WACC (PRE - TAX) value on Line 5 is to be recorded on ES FORM 3.10, Line 9. Weighted Average Cost of Captial Balances As of 4/30/2010 based on Case No. 2010-00318, dated September 7, 2010.

#### KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 23 of 25

ES FORM 3.20

# KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT COSTS ASSOCIATED WITH ROCKPORT

-	1	energia de la constante de la c	erena ena	ene Haddaa	- and -			transfer (	14 N 2 1 1	-	estretest	abiliaik	11111111111111111111111111111111111111
Total	(6)												\$48,394
Rockport Plant Common	(8)		\$2.185.292	(\$199,810) \$23,538	\$2,009,020	0.9784%	\$19,656	\$6,410 \$0	\$6,410	\$26,066	\$7,820		
Total Units 1 & 2 (C5 + C5)	(/)	wegten zijn die een zijk een z			\$8,490,086	0.9784%	\$83,067	\$39,968 \$0	\$39,968	\$123,035	\$36,911		
Unit No. 2	(9)		\$8,353,084	(\$2,252,476) (\$846.360)	\$5,254,248		i sacaro po	\$24,502 \$0					
Unit No. 1	(2)		\$5,272,657	(\$1,497,495) (\$539,324)	\$3,235,838		1.000(d.00)(0.00)	\$15,466 \$0			-		
Rockport Plant Common	(4)	\$1.777.206	-	(\$157,696)	\$706,673	0.9784%	\$6,914	\$5,212 \$15,625	\$20,837	\$27,751	\$4,163		
	(3)					11.7403%							
NT		System (CEMS)								Plant	3%) e 13 * 30%)	L 15)	
COST COMPONENT		Rockport Plant Continuous Environmental Monitoring System (CEMS) Utility Plant at Onginal Cost	AEGCo Low NOx Burners (LNB) Installed Cost Flyash Landfill Installed Cost	Less Accumulated Depreciation Less Accum. Def. Income Taxes	Total Rate Base	Weighted Average Cost of Capital - ES FORM 3.21 Monthly Weighted Avg. Cost of Capital (LINE 7 / 12)	Monthly Return of Rate Base (Line 6 * Line 8) Operating Expanses 1	Monthly Depreciation Expense Monthly Indiana Air Emissions Fee	Total Operating Expenses (Line 10 + Line 11))	Total Revenue Requirement, Cost Associated with Rockport Plant CEMS and LNB (Line 9 + Line 12)	Kentucky Power's Portion of Rockport's CEMS (Line 13 * 15%) Kentucky Power's Portion of AEGCo's LNB and Landfill (Line 13 * 30%)	Kentucky Power's Portion of Kockport Plants' Total Revenue Requirement. (C 4, Ln 14 + C 7, Ln 15 + C 8, L 15)	Note: Cost in Column 8, Line 16 is to be Recorded on ES FORM 3.00 Line 2
LINE NO.	(1) = (2)	Return on Rate Base : Rockport Plant Continuous Environmental Monitoring 1 Utility Plant at Onginal Cost	2 AEGCo Low NOX Burners (LNB) installed Cost 3 Fiyash Landfill installed Cost		6 Total Rate Base	7 Weighted Average Cost of Capital - ES FORM 3.21 8 Monthly Weighted Avg. Cost of Capital (LINE 7 / 12)	9 Monthly Return of Rate Base (Line 6 * Line 8) Oberating Expenses	10 Monthly Depreciation Expense 11 Monthly Indiana Air Emissions Fee		Total Revenue Requirement, Cost Associat CEMS and LNB (Line 9 + Line 12)	<ul> <li>14 Kentucky Power's Portion of Rockport's CEMS (Line 13 * 16</li> <li>15 Kentucky Power's Portion of AEGCo's LNB and Landfill (Lin</li> </ul>	Kentucky Power's Portion of Kockport Plants' Total Revenue Requirement. (C 4, Ln 14 + C 7, Ln 15 + C 8,	Note: Cost in Column 8, Line 16 is to be Recorded on 16 ES FORM 3.00 Line 2

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 24 of 25

#### ES FORM 3.21

#### KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT ROCKPORT UNIT POWER AGREEMENT COST OF CAPITAL

For the Expense Month of December 2011

LINE		and different light contains the second s	Cap.	Cost		WACC	and a second		WACC
NO.	Component	Balances	Structures	Rates		(NET OF TAX)	GRCF		(PRE - TAX)
	anning 10 10 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	As of 12/31/2011			mnes				
1 2	L/T DEBT S/T DEBT CAPITALIZATION	66,487,612 20,027,220	41.2382% 12.4216%	5.3515% 0.4736%		2.2069% 0.0588%			2.2069% 0.0588%
3 4	OFFSETS DEBT	0	0.0000%	4.2223%		0.0000%			0.0000%
5	C EQUITY	74,713,431	46.3402%	12.1600%	1/	5.6350%	1.681379	2/	9.4746%
6	TOTAL	161,228,263 ======	100.0000% ======			7.9007% =======			11.7403% =======
1/	WACC = Weighted Average Cost of Capital Cost Rates per the Provisions of the Rockport Unit Power Agreement								
2/	Gross Revenue Cor	version Factor (	GRCF) Calculati	ion:					
1	OPERATING REVE		SS INCOME				100.00		
3 4	LESS: INDIANA ADJUSTED GROSS INCOME (LINE 1 X .085) INCOME BEFORE FED INC TAX LESS: FEDERAL INCOME TAX								
6 7	(LINE 4 X .35) OPERATING INCOME PERCENTAGE GROSS REVENUE CONVERSION								
9	FACTOR (100		<u>1.681379</u>						

The WACC (PRE - TAX) value on Line 6 is to be recorded on ES FORM 3.20, Line 5.

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 1 Page 25 of 25

ES FORM 3.30

#### KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT MONTHLY REVENUES, JURISDICTIONAL ALLOCATION FACTOR, and OVER/(UNDER) RECOVERY ADJUSTMENT

For the Expense Month of December 2011

#### SCHEDULE OF MONTHLY REVENUES

Line No.	Description	Monthly Revenues	Percentage of Total Revenues
1	Kentucky Retail Revenues	\$50,620,415	83.0%
2	FERC Wholesale Revenues	\$524,598	0.9%
3	Associated Utilities Revenues	\$5,272,444	8.6%
4	Non-Assoc. Utilities Revenues	\$4,557,585	7.5%
5	Total Revenues for Surcharges Purposes	\$60,975,042	100.0%
6	Non-Physical Revenues for Month	(\$121,093)	
7	Total Revenues for Month	\$60,853,949	

The Kentucky Retail Monthly Revenues and Percentage of Total Revenues (Line 1) are to be recorded on ES FORM 1.00, Lines 9 and 4. The Percentage of Kentucky Retail Revenues to the Total Revenues for the Expense Month will be the Kentucky Retail Jurisdictional Allocation Factor.

#### OVER/(UNDER) RECOVERY ADJUSTMENT

Line No.	Description	Amounts
1	Kentucky Retail Surcharge Factor for October 2011	1.0410%
2	Kentucky Retail Revenues for Current Expense Month	\$50,094,428
3	Surcharge Collected (1) * (2)	\$521,483
4	Surcharge Amount To Be Collected	\$398,555
5	Over / (Under) Recovery (3) - (4) = (5)	\$122,928

The Over/(Under) Recovery amount is to be recorded on ES FORM 1.00, LINE 6.

NOTE : The sign on LINE 5 of ES FORM 3.30 will be changed on LINE 6 of ES FORM 1.00 in order to properly adjust the collection of the current month's expense.

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 1 of 25

> Kontucky Power 101A Enterprise Drive P 0 Box 5190 Frankfort, KY 40602-5190 KentuckyPower.com

February 20, 2012

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

Attention: Jeff Shaw

RE: Monthly Environmental Surcharge Report

Dear Mr. Shaw,

Pursuant to KRS 278.183(3), Kentucky Power Company (Kentucky Power or KPCo) files the original and two copies of its Environmental Surcharge Reports for the month of January 2012. In accordance with the Commission's Orders in the Environmental Surcharge cases, Kentucky Power has included the calculation and supporting documentation of the Environmental Surcharge Factor that will be billed for service on and after February 29, 2012.

If there are any questions please contact me at 502-696-7010.

Lila P. Munsey

Lila P. Munsey Manager, Regulatory Services Enclosures

RECEIVED FEB 2 0 2012 PUBLIC SERVICE COMMISSION



POWER

A unit of American Electric Power

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 2 of 25

ES FORM 1.00

#### KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CALCULATION OF E(m) and SURCHARGE FACTOR For the Expense Month of January 2012

.

	CALCULATION OF E(m)	977711112112122222222222222222222222222	
	E(m) = CRR - BRR		
LINE 1	CRR from ES FORM 3.00	\$3,263,816	
LINE 2	Brr from ES FORM 1.10	3,991,163	
LINE 3	E(m) (LINE 1 - LINE 2)	(\$727,347)	
LINE 4	Kentucky Retail Jurisdictional Allocation Factor, from ES FORM 3.30, Schedule of Revenues, LINE 1	88.6%	
LINE 5	KY Retail E(m) (LINE 3 * LINE 4)	(\$644,429)	
LINE 6	(Over) / Under Recovery Adjustment from ES FORM 3.30	(\$105,459)	
LINE 7	Net KY Retail E(m) (LINE 5 + LINE 6)	(\$749,888)	
	SURCHARGE FACTOR		
LINE 8	Net KY Retail E(m) (Line 7)	(\$749,888)	
LINE 9	KY Retail R(m) from ES FORM 3.30	\$55,884,283	
LINE 10	Environmental Surcharge Factor for Expense Month (Line 8 / LINE 9)	-1.3419%	

Effective Date for Billing:

February 29, 2012

Submitted By :

)O <u>Nela</u> Unser

Title :

Manager Regulatory Services

Date Submitted :

February 20, 2012

11 Case No. 2009-00459, dated June 28, 2010

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 3 of 25

ES FORM 1.10

#### KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT BASE PERIOD REVENUE REQUIREMENT For the Expense Month of January 2012

# MONTHLY BASE PERIOD REVENUE REQUIREMENT

.

	Base Net Environmental
Billing Month	Costs
JANUARY	\$3,991,163
FEBRUARY	3,590,810
MARCH	3,651,374
APRIL	3,647,040
MAY	3,922,590
JUNE	3,627,274
JULY	3,805,325
AUGUST	4,088,830
SEPTEMBER	3,740,010
OCTOBER	3,260,302
NOVEMBER	2,786,040
DECEMBER	4,074,321
	· · · · · · · · · · · · · · · · · · ·
TOTAL.	\$44,185,079
х.	tend from the tend for the state and the state

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 4 of 25

ESFORM 3.00

## KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT For the Expense Month of January 2012

# CALCULATION OF CURRENT PERIOD REVENUE REQUIREMENT

LINE NO.	COMPONENTS		
1	First Component: Associated with Big Sandy Plant ((RB KP(C)) (ROR KP(C)/12)) + OE KP(C) ES FORM 3.10, Line 20		\$3,219,091
2	Second Component: Associated with Rockport Plant [((RB IM(C)) (ROR IM(C)/12)) + OE IM(C) ES FORM 3.20, Line 16		\$44,725
	Third Component: Net Proceeds from Emission Allowances Sales AS		
	<ol> <li>SO2 - EPA Auction Proceeds received during Expense Month</li> </ol>	\$0	
	<ol> <li>SO2 - Net Gain or (Loss) from Allowance Sales, in compliance with the AEP Interim Allowance Agreement, received during Expense Month</li> </ol>	\$0	
	Total Net Proceeds from SO2 Allowances	\$0	
	1) NOx - ERC Sales Proceeds, received during Expense Month	\$0	
	2) NOx - EPA Auction Proceeds, received during Expense Month	\$0	
	<ol> <li>NOx - Net Gain or Loss from NOx Allowances Sales, received during Expense Month</li> </ol>	\$0	
	Total Net Proceeds from NOx Allowances	\$0	
3	Total Net Gain or (Loss) from Emission Allowance Sales		\$0
4	Total Current Period Revenue Requirement, CRR Record on ES FORM 1.00.		\$3,263,816

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 5 of 25

ES FORM 3.10

#### KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT COSTS ASSOCIATED WITH BIG SANDY

LINE NO.	COST COMPONENT		
NO. 1 2 3 4 5 6 7 8 9 10 11 11	Return on Rate Base : Utility Plant at Original Cost Less Accumulated Depreciation Less Accum. Def. Income Taxes Net Utility Plant SO2 Emission Allowance Inventory from ES FORM 3.11 ECR & NOx Emission Allowance Inventory from ES FORM 3.12 Cash Working Capital Allowance from ES FORM 3.13, Line 13 Total Rate Base Weighted Average Cost of Capital - ES FORM 3.15 Monthly Weighted Avg. Cost of Capital (9) / 12 Monthly Return of Rate Base (8) * (10) Operating Expenses : Monthly Depreciation Expense Monthly Catalyst Amortization Expense Monthly Property Taxes Monthly Kentucky Air Emissions Fee	\$191,452,443 (\$69,108,096) (\$38,700,903) 10.69%	\$83,643,444 \$12,948,207 \$176,685 \$130,663 \$96,898,999 0.89% \$862,401 \$577,252 \$46,030 \$13,322 \$10,527
16 17	Monthly Environmental AEP Pool Capacity Costs from ES FORM 3.14, Page 1 of 11, Column 5, Line 10 Monthly 2003 Plan Non-Fuel O&M Expenses from ES FORM 3.13		\$806,043 \$210,120
17			\$210,120 \$693,396 <u>\$2,356,690</u>
	Record on ES FORM 3.00, Line 1		\$3,219,091

KPSC Case No 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 6 of 25

ES FORM 3.11

#### KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT SO2 EMISSIONS ALLOWANCE INVENTORY

#### For the Expense Month of January 2012

		(1) Allowance	(2)	(3)	(4) Cumulative	(5)
		Activity in Month	Cumulative Balance	Dollar Value of Activity	Dollar Balance	Weighted Average Cost
BEGINNING INVENTORY			754,608		\$4,685,726	\$6.209
Additions - EPA Allowances		o	474,169	\$0	so	\$0.000
Gavin Reallocation		0	94,744	\$0	\$0 \$D	\$0.000
P & E Transfers In		Ő	327,201	\$0	\$4,855,695	\$14,840
Intercompany Purchases		0	109,405	\$D	\$33,456,375	\$305.803
Other (List)		0	433,206	\$0	\$67,152,857	\$155.014
SO2 Emissions Allowance						
Adjustment		9,564	13,670	(\$3,402,998)	(\$5,103,980)	(\$373.371)
Withdrawals -						
P & E Transfers Out		0	11,382	\$0	\$836,106	\$73.459
Intercompany Sales		0	59,987	\$D \$O	\$4,855,950 \$29,780,273	\$80.950
Off - System Sales SO2 Emissions Allowance		0	303,050	ψŲ	ψ29,100,213	\$98.269
Adjustment		0	0	\$0	\$0	\$0,000
	1	U U	Ŭ	40	φœ	\$0.000
SO2 Emissions Allowances						
Consumed By Kentucky Power - 1:1 (Year 2009 & Prior)		622		\$345,324		
		0112				
SO2 Emissions Allowances Consumed By Kentucky Power - 2:1						
(Years 2010 to 2014)		4,468	695,531	\$348,072	\$56,626,137	\$81.414
ENDING INVENTORY - Record		arren e a serval				ę.,,,,,,
Balance in Column (4) on						
ES FORM 3.10, Line 5	國際編		1,137,053		\$12,948,207	\$11.388
						φ / 1.000
Expense Month Member Load Ratio	or AEP/Kei	ntucky Power				0.06407

#### Columns 1 and 2 -

Record the number of allowances in any transaction (purchase, sale, transfer) which occurred during the Expense Month. Multiple transactions for a given category are to be shown as the total activity for that category during the Expense Month. For each transaction shown in Column 1, update the cumulative balance in Column 2.

#### Columns 3 and 4 -

For each transaction reflected in Column 1, record the total dollars of the transaction. Multiple transaction for a given category are to be shown as the total dollar amount for that category during the Expense Month. For each transaction shown in Column 3, update the cumulative dollar balance in Column 4. Include transactions that total zero dollars. Record amounts in whole dollars.

#### Column 5 -

Compute the Weighted Average Cost by dividing the Cumulative Dollar Balance (Co. 4) by the corresponding Cumulative Balance (Col. 2). Perform this calculation for the Beginning Inventory, Ending Inventory and all additions and withdrawals made during the Expense Month. The Weighted Average Cost should be carried out to 3 decimal places.

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 7 of 25

ES FORM 3.12 A

#### KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT SEASONAL NOX EMISSIONS ALLOWANCE INVENTORY

For the Expense Month of January 2012

	(1) Allowance	(2)	(3)	(4)	(5)
	Activity in	Cumulative	Dollar Value of	Cumulative	Weighted
	Month	Balance	Activity	Dollar Balance	Average Cost
BEGINNING INVENTORY Additions -		0		\$0	\$0.000
EPA Allowances	45	37,048	\$0	\$0	
P&E Transfers In	0	0		\$D	
Intercompany Purchases	0	0	\$0	\$0	\$0.000
Other (List)	0	0	\$0	\$0	\$0.000
Withdrawals -					1977 - 1977 - 1977 - 1977 - 1977 - 1977 - 1977 - 1977 - 1977 - 1977 - 1977 - 1977 - 1977 - 1977 - 1977 - 1977 -
P & E Transfers Out	0	0	\$0	\$0	\$0.000
Intercompany Sales	0	0	\$0	\$O	\$0.000
Off - System Sales	0	2,425	\$0	\$0	\$0.000
ERC Consumed By Kentucky Power	0	930	\$0	\$0	\$0.000
NOx Consumed By Kentucky Power	0	23,693	\$0	\$0	\$0.000
ENDING INVENTORY - Record Balance in					
Column (4) on ES FORM 3.10, Line 5		10,000		\$0	\$0.000

#### Columns 1 and 2 -

....

Record the number of allowances in any transaction (purchase, sale, transfer) which occurred during the Expense Month. Multiple transactions for a given category are to be shown as the total activity for that category during the Expense Month. For each transaction shown in Column 1, update the cumulative balance in Column 2.

#### Columns 3 and 4 -

For each transaction reflected in Column 1, record the total dollars of the transaction. Multiple transaction for a given category are to be shown as the total dollar amount for that category during the Expense Month. For each transaction shown in Column 3, update the cumulative dollar balance in Column 4. Include transactions that total zero dollars. Record amounts in whole dollars.

#### Column 5 -

Compute the Weighted Average Cost by dividing the Cumulative Dollar Balance (Co. 4) by the corresponding Cumulative Balance (Col. 2). Perform this calculation for the Beginning Inventory, Ending Inventory and all additions and withdrawals made during the Expense Month. The Weighted Average Cost should be carried out to 3 decimal places.

Note: For any sale or transfer of ERCs or NOx emission allowances, attach to this report documentation showing the currently available market prices for similar ERC or NOx allowances.

Total Early Reduction Credits (ERC)	930
Consumed: June 2004	420
July 2004	510
Total Consumed	930
Remaining Early Reduction Credits (ERC)	0

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 8 of 25

ES FORM 3.12 B

#### KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT ANNUAL NOX EMISSIONS ALLOWANCE INVENTORY

For the Expense Month of January 2012

	(1) Allowance	(2)	(3)	(4)	(5)
	Activity in	Cumulative	Dollar Value of	Cumulative	Weighted
	Month	Balance	Activity	Dollar Balance	Average Cost
BEGINNING INVENTORY Additions -		D		\$0	\$0.000
EPA Allowances	0	44,729	\$0	\$0	\$0.000
P&E Transfers In	0	0	\$0	\$0	\$0.000
Intercompany Purchases	0	0	\$0	\$0	\$0.000
External Purchases	500	3,980	\$33,750	\$2,057,440	\$516.945
Other (List)	0	0	\$O	\$0	\$0.000
NOx Emissions Allowance					
Adjustment	(6)	(6)	(\$1,905)	(\$1,905)	\$317.500
Withdrawals -					
P & E Transfers Out	0	0	\$0	\$0	\$0.000
Intercompany Sales		0	\$0	\$0	\$0.000
Off - System Sales		0	\$0	\$0	\$0.000
NOx Consumed By Kentucky Power	569	26,454	\$13,565	\$1,878,850	\$71.023
ENDING INVENTORY - Record Balance in					
Column (4) on ES FORM 3.10, Line 5		22,249		\$176,685	\$7.941

#### Columns 1 and 2 -

Record the number of allowances in any transaction (purchase, sale, transfer) which occurred during the Expense Month. Multiple transactions for a given category are to be shown as the total activity for that category during the Expense Month. For each transaction shown in Column 1, update the cumulative balance in Column 2.

#### Columns 3 and 4 -

For each transaction reflected in Column 1, record the total dollars of the transaction. Multiple transaction for a given category are to be shown as the total dollar amount for that category during the Expense Month. For each transaction shown in Column 3, update the cumulative dollar balance in Column 4. Include transactions that total zero dollars. Record amounts in whole dollars.

#### Column 5 -

Compute the Weighted Average Cost by dividing the Cumulative Dollar Balance (Co. 4) by the corresponding Cumulative Balance (Col. 2). Perform this calculation for the Beginning Inventory, Ending Inventory and all additions and withdrawals made during the Expense Month. The Weighted Average Cost should be carried out to 3 decimal places.

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 9 of 25

ES FORM 3.13

#### KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT

## For the Expense Month of January 2012

. ...

-----

	1997 Plan :		
1	Monthly Kentucky Air Emissions Fee	\$10,527	
2	Total Monthly AEP Pool Environmental Capacity Costs	\$131,264 \$6 <u>93,396</u>	
3 4	Monthly SO2 Allowance Consumption Total 1997 Plan O&M Expenses	4033,330	\$835,187
6 7 8 9	2003 Plan : Monthly Varible Cladding at Big Sandy Unit 1 Monthly Urea Consumption at Big Sandy Unit 2 Monthly Catalyst Replacement at Big Sandy Unit 2 Monthly ERC & NOx Allowance Consumption Equipment - Associated Operating Expenses	\$D \$151,952 \$0 \$13,565 \$2,745 \$41,858	
10 11	Equipment - Associated Maintenance Expenses Total 2003 Plan O&M Expenses	<u>041,000</u>	<u>\$210,120</u>
12	Total Monthly O&M Expenses		<u>\$1,045,307</u>
13	Cash Working Capital Allowance ( Line 12 X 1/8 )		\$130,663

Total Cost at Line 11 is to be recorded on ES FORM 3.10, Line 7.

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 10 of 25

# Kentucky Power Company Environmental Equipment Operation and Maintenance Costs January 2012

Work Description	Material Costs	Outside Contract Labor	Misc Other Costs	Total Costs
Ammonia on Demand (AOD)	\$901.00	\$0.00	\$0.00	\$901.00
Hydrolyzer	(\$2,000.00)	\$922.64	\$0.00	(\$1,077.36)
SCR Acoustic Homs	\$1,000.00	\$0.00	\$0.00	\$1,000.00
SCR Ammonia on Demand (AOD)	\$215.66	\$0.00	\$0.00	\$215.66
SCR Booster Fan	\$34,370.88	\$0.00	\$0.00	\$34,370.88
Total SCR January 2012 O & M Expense	\$34,487.54	\$922.64	\$0.00	\$35,410.18
Additional Operator Overtime During The Ozone Season	\$0.00	\$0.00	\$0.00	\$2,745.28
Emission Testing Required Under Permit -				
Operation Maintenance	\$0.00 \$6,447.75	\$0.00 \$0.00	\$0.00 \$0.00	\$0.00 \$6,447.75

January 2012 O & M Expenses Filed

\$44,603.21

.

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 11 of 25

> ES FORM 3.14 Page 1 of 11

#### KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT AEP POOL MONTHLY ENVIRONMENTAL CAPACITY COSTS

# For the Expense Month of January 2012

Line No. (1)	Cost Component (2)	Ohio Power Company's Environmental Cost to KPCo (3)	Indiana Michigan Power Company's Environmental Cost to KPCo (4)	Total (5)
1	Amos Unit No. 3 Environmental Cost to Kentucky Power (ES FORM 3.14, Page 3 of 11, Line 26)	\$137,417		
2	Cardinal Unit No. 1 Environmental Cost to Kentucky Power (ES FORM 3.14, Page 4 of 11, Line 24)	\$82,040		
3	Gavin Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 5 of 11, Line 26)	\$295,344		
4	Kammer Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 6 of 11, Line 20)	\$2,051		
5	Mitchell Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 7 of 11, Line 23)	\$256,375		
6	Muskingum River Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 8 of 11, Line 20)	\$24,612		
7	Sporn Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 9 of 11, Line 20)	\$4,102		
8	Rockport Plant Environmental to Kentucky Power (ES FORM 3.14, Page 10 of 11, Column 5, Line 21)		\$0	
9	Tanners Creek Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 11 of 11, Line 20)		\$4,102	
10	Total AEP Pool Monthly Environmental Capacity Costs to Kentucky Power	\$801,941	\$4,102	\$806,043

Note: Cost in Column 5, Line 10 is to be recorded on ES FORM 3.10, Line 16.

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 12 of 25

> ES FORM 3.14 Page 2 of 11

Indiana

#### KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT AEP POOL MONTHLY ENVIRONMENTAL CAPACITY COSTS WORKING CAPITAL ONLY

For the Expense Month of January 2012

Line No. (1)	Cost Componenî (2)	Ohio Power Company's (OPCo) Environmental Cost to KPCo (3)	Michigan Power Company's (I&M) Environmental Cost to KPCo (4)	Total (5)
1	Amos Unit No. 3 Environmental Cost to Kentucky Power (ES FORM 3.14, Page 3 of 11, Line 19)	\$777,256		
2	Cardinal Unit No. 1 Environmental Cost to Kentucky Power (ES FORM 3.14, Page 4 of 11, Line 17)	(\$20,274)		
3	Gavin Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 5 of 11, Line 17)	\$6,480,816		
4	Kammer Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 6 of 11, Line 10)	\$19,398		
5	Mitchell Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 7 of 11, Line 16)	\$1,299,837		
G	Muskingum River Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 8 of 11, Line 10)	\$123,044		
7	Sporn Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 9 of 11, Line 10)	\$16,272		
8	Rockport Plant Environmental to Kentucky Power (ES FORM 3.14, Page 10 of 11, Columns 3 & 6, Line 10)		\$15,625	
9	Rockport Plant Environmenial to Kenlucky Power (ES FORM 3.14, Page 10 of 11, Columns 4 & 5, Line 10)		\$O	
10	Tanners Creek Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 11 of 11, Line 10)		\$15,625	
11	Subtotal	\$8,696,349	\$31,250	
12	Steam Capacity By Company - OPCo (Column 3) / I&M (Column 4) (kw)	12,860,000	5,414,000	
13	Environmental Base (\$/low)	\$0.68	\$0.01	
14	Company Surplus Weighting	94.00%	6.00%	
15	Portion of Weighted Average Capacity Rate Attributed to Environmental Fixed O&M Costs	\$0 64	\$0.00	
16	Kentucky Power Capacity Deficit (kw)	205,100	205,100	
17	Fixed O&M Environmental Cost to Kentucky Power	\$131,264	\$D	\$131,264

Note: Cost in Column 5, Line 17 is to be recorded on ES FORM 3.13, Line 2.

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 13 of 25

> ES FORM 3.14 Page 3 of 11

## KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT OHIO POWER COMPANY (OPCo) - AMOS PLANT UNIT NO. 3

LINE NO.	COST	AMOUNTS
1	Utility Plant at Original Cost	\$611,422,571
2	Member Primary Capacity Investment Rate (16.44% / 12)	1.37%
3	Total Rate Base	\$8,376,489
4	Ohio Power Company's Percentage Ownership - Environmental Investment	<u>100.00%</u>
5	OPCo's Share of Cost Associated with Amos Unit No. 3 (3) X (4)	\$8,376,489
	Operations :	14141 and 1
6	Disposal (5010000)	\$49,270
7	Urea (5020002)	\$462,614
8	Trona (5020003)	\$166,082
9	Lime Stone (5020004)	\$351,437
10	Air Emission Fee	<u>\$11,770</u>
11	Total Operations (Lines 6 thru 10)	\$1,041,173
	Maintenance:	
12	SCR Maintenance (5120000)	\$69,334
13	Scrubber (FGD) Maintenance (5120000)	<u>\$179,969</u>
14	Total Maintnenance (12) + (13)	<u>\$249,303</u>
15	1/2 of Maintenance (14) * 50%	<u>\$124,652</u>
16	Fixed O&M (11) + (15)	\$1,165,825
17	Ohio Power Company's Percentage Ownership - O&M Cost	<u>66.67%</u>
18	OPCo's Share of O&M Cost Associated with Amos Unit No. 3 (16) X (17)	\$777,256
	Total Revenue Requirement,	
19	Cost Associated with Amos Unit No. 3 (5) + (18)	\$9,153,745
20	Ohio Power Company Steam Capacity (kw)	12,860,000
21	Amos Unit No. 3 Environmental Rate (\$/kw)	\$0.71
22	Ohio Power Surplus Weighing	94.00%
23	Portion of Weighted Average Capacity Rate	
	Attributed to Amos Unit No. 3 SCR (\$/kw) (21) * (22)	\$0.67
	Amos Unit No. 3 Costs to Kentucky Power:	
24	Amos Unit No. 3 Portion (\$/kw) (23)	\$0.67
25	Kentucky Power Capacity Deficit (kw)	205,100
	Amos Unit No. 3 Environmental Cost to Kentucky Power (24) * (25)	
26	(ES FORM 3.14, Page 1 of 10, Line 1)	\$137,417

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 14 of 25

> ES FORM 3.14 Page 4 of 11

# KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT OHIO POWER COMPANY (OPCo) - CARDINAL UNIT 1

NO.	COST	AMOUNTS
1	Utility Plant at Original Cost	\$403,006,219
	Member Primary Capacity Investment Rate (16.44% / 12)	1.37%
3	Total Rate Base	\$5,521,185
	Operations :	
4	Disposal (5010000)	(\$41,667)
5	Lime (5020001)	\$0
6	Urea (5020002)	\$0
7	Trona (5020003)	\$D
8	Lime Stone (5020004)	\$0
9	Air Emission Fee	<u>\$8,663</u>
10	Total Operations (Line 4 thru 8)	(\$33,004)
	Maintenance :	
11	SCR Maintenance (5120000)	(\$1,303)
12	Scrubber (FGD) Maintenance (5120000)	<u>\$26,763</u>
13	Total Maintenance (13) + (14)	\$25,460
14	1/2 Maintenance (15) * 50%	<u>\$12,730</u>
15	Fixed O&M (12) + (16)	<u>(\$20,274)</u>
	Total Revenue Requirement,	
16	Cost Associated with Cardinal Unit No. 3 (3) + (17)	<u>\$5,500,911</u>
17	Ohio Power Company's Percentage Ownership	100.00%
18	OPCo's Share of Cost Associated with Cardinal Unit No. 1 (18) X (19)	\$5,500,911
19	Ohio Power Company Steam Capacity (kw)	12,860,000
20	Cardinal Unit No. 1 (\$/kw)	\$0.43
21	Ohio Power Surplus Weighing	94.00%
22	Portion of Weighted Average Capacity Rate	\$0_40
	Attributed to Cardinal Unit No. 1 (\$/kw) (22) X (23)	ο ΦU_40
	Cardinal Unit No. 1 Costs to Kentucky Power :	\$0.40
23	Cardinal Unit No. 1 Portion (\$/kw) (24) Kentucky Power Capacity Deficit (kw)	205,100
24	Cardinal Unit No. 1 Environmental Cost to Kentucky Power (25) * (26)	200,100
25	(ES FORM 3.14, Page 1 of 10, Line 2)	\$82,040
20		,02,040

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 15 of 25

> ES FORM 3.14 Page 5 of 11

# KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT OHIO POWER COMPANY (OPCo) - GAVIN PLANT (UNITS 1 & 2)

NO.	COST	AMOUNTS
4	Utility Plant at Original Cost	\$964,567,531
1	Member Primary Capacity Investment Rate (16.44% / 12)	<u>1.37%</u>
3	Tofal Rafe Base	\$13,214,575
5	Operations :	, , , , , , , , , , , , , , , , , , ,
4	Sludge Dísposal (5010000)	\$874,456
13	Lime (5020001)	\$3,407,914
6	Urea (5020002)	\$1,314,839
7	Trona (5020003)	\$622,279
8	Lime Stone (5020004)	\$193
9	Air Emission Fee	\$35,828
1 - 1	Lease (5070005)	\$0
11	Total Operations (Lines 4 thru 10)	\$6,255,509
	Maintenance :	, -,,
12	SCR Maintenance (5120000)	\$108,653
13	Scrubber Maintenance (5120000)	\$341,960
14	Total Maintenance (12) + (13)	\$450,613
15	1/2 of Maintenance (13) * 50%	\$225,307
16	Fixed O&M (11) + (15)	\$6,480,816
	Total Revenue Requirement,	
17	Cost Associated with Gavin Plant (3) + (17)	\$19,695,391
18	Ohio Power Company's Percentage Ownership	100.00%
19	OPCo's Share of Cost Associated with Gavin Plant (17) X (18)	\$19,695,391
20	Ohio Power Company Steam Capacity (kw)	12,860,000
21	Gavin Plant (\$/kw)	\$1.53
22	Ohio Power Surplus Weighing	94.00%
23	Portion of Weighted Average Capacity Rate	
	Attributed to Gavin Plant (\$/kw) (21) X (22)	\$1.44
	Gavin Plant Costs to Kentucky Power:	
24	Gavin Plant Portion (\$/kw) (23)	\$1.44
25	Kentucky Power Capacity Deficit (kw)	<u>205,100</u>
	Gavin Plant Environmental Cost to Kentucky Power (24) * (25)	
26	(ES FORM 3.14, Page 1 of 10, Line 3)	\$295,344
		1

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 16 of 25

> ES FORM 3.14 Page 6 of 11

# KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT OHIO POWER COMPANY (OPCo) - KAMMER PLANT (UNITS 1, 2 & 3)

LINE NO.	COST	AMOUNTS
		60 407 000
1	Utility Plant at Original Cost	\$8,487,868
2	Member Primary Capacity Investment Rate (16.44% / 12)	1.37%
3	Total Rate Base	\$116,284
	Operations :	¢0.
4	Urea (5020002)	\$0 ©0
4 1	Trona (5020003)	\$0
1 <sup>-</sup> R	Air Emission Fee	<u>\$19,398</u> \$19,398
7	Total Operations $(4) + (5) + (6)$	\$19,390
	Maintenance :	\$0
8	SCR Maintenance (5120000)	\$0
9 10	1/2 of Maintenance (8) * 50%	<u>\$0</u> <u>\$19,398</u>
	Fixed O&M (7) + (9) Total Revenue Requirement,	<u>\$10,000</u>
11	Cost Associated with Kammer Plant (3) + (10)	\$135,682
12	Ohio Power Company's Percentage Ownership	100.00%
13	OPCo's Share of Cost Associated with Kammer Plant (11) X (12)	\$135,682
14	Ohio Power Company Steam Capacity (kw)	12,860,000
15	Kammer Plant (\$/kw)	\$0.01
16	Ohio Power Surplus Weighing	94.00%
	Portion of Weighted Average Capacity Rate	01.0070
	Attributed to Kammer Plant (\$/kw) (15) X (16)	\$0.01
	Kammer Plant Costs to Kentucky Power :	
18	Kammer Plant Portion (\$/kw) (17)	\$0.01
1 14	Kentucky Power Capacity Deficit (kw)	205,100
	Kammer Plant Environmental Cost to Kentucky Power (18) * (19)	
20	(ES FORM 3.14, Page 1 of 10, Line 4)	\$2,051

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 17 of 25

> ES FORM 3.14 Page 7 of 11

# KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT OHIO POWER COMPANY (OPCo) - MITCHELL PLANT (UNITS 1 & 2)

NO.	COST	AMOUNTS
1	Utility Plant at Original Cost	\$1,149,819,326
2	Member Primary Capacity Investment Rate (16.44% / 12)	<u>1.37%</u>
3	Total Rate Base	\$15,752,525
	Operations :	
4	Disposal (5010000)	\$45,175
5	Urea (5020002)	\$568,415
6	Trona (5020003)	\$53,251
7	Lime Stone (5020004)	\$607,609
8	Air Emission Fee	<u>\$18,559</u>
9	Total Operations (Lines 4 thru 8)	\$1,293,009
	Maintenance :	
10	SCR Maintenance (5120000)	\$134
	FDG (5120000)	<u>\$13,521</u>
12	1/2 of Maintenance (10 + 11) * 50%	<u>\$6,828</u>
13	Fixed O&M (9) + (12)	<u>\$1,299,837</u>
	Total Revenue Requirement,	
14	Cost Associated with Mitchell Plant (3) + (13)	<u>\$17,052,362</u>
15	Ohio Power Company's Percentage Ownership	100.00%
16	OPCo's Share of Cost Associated with Mitchell Plant (14) X (15)	\$17,052,362
17	Ohio Power Company Steam Capacity (kw)	12,860,000
18	Mitchell Plant (\$/kw)	\$1.33
19	Ohio Power Surplus Weighing	94.00%
20	Portion of Weighted Average Capacity Rate	
	Attributed to Mitchell Plant (\$/kw) (18) X (19)	\$1.25
	Mitchell Plant Costs to Kentucky Power:	
21	Mitchell Plant Portion (\$/kw) (20)	\$1.25
22	Kentucky Power Capacity Deficit (kw)	<u>205,100</u>
	Mitchell Plant Environmental Cost to Kentucky Power (21) * (22)	
23	(ES FORM 3.14, Page 1 of 10, Line 5)	\$256,375
		<u> </u>

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 18 of 25

> ES FORM 3.14 Page 8 of 11

# KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT OHIO POWER COMPANY (OPCo) - MUSKINGUM RIVER PLANT (UNITS 1, 2, 3, 4 & 5)

TIME		
NO.	COST	AMOUNTS
1 2 3	Utility Plant at Original Cost Member Primary Capacity Investment Rate (16.44% / 12) Total Rate Base	\$114,236,110 <u>1.37%</u> \$1,565,035
4 5 6 7	Operations : Urea (5020002) Trona (5020003) Air Emission Fee Total Operations (4) + (5) + (6)	\$87,343 \$0 <u>\$34,853</u> \$122,196
8 9 10	Maintenance : SCR Maintenance (5120000) 1/2 of Maintenance (8) * 50% Fixed O&M (7) + (9) Total Revenue Requirement,	\$1,696 <u>\$848</u> <u>\$123,044</u>
11 12 13	Cost Associated with Muskingum Plant (3) + (10) Ohio Power Company's Percentage Ownership OPCo's Share of Cost Associated with Muskingum Plant (11) X (12)	\$ <u>1,688,079</u> 100.00% \$1,688,079
14 15	Ohio Power Company Steam Capacity (kw) Muskingum Plant (\$/kw)	12,860,000 \$0.13 94.00%
16 17	Ohio Power Surplus Weighing Portion of Weighted Average Capacity Rate Attributed to Muskingum Plant (\$/kw) (15) X (16) Muskingum Plant Costs to Kentucky Power :	\$0.12
18 19	Muskingum Plant Costs to Kentucky Fower : Muskingum Plant Portion (\$/kw) (17) Kentucky Power Capacity Deficit (kw) Muskingum Plant Environmental Cost to Kentucky Power (18) * (19)	\$0.12 <u>205,100</u>
20	(ES FORM 3.14, Page 1 of 10, Line 6)	\$24,612

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 19 of 25

> ES FORM 3.14 Page 9 of 11

# KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT OHIO POWER COMPANY (OPCo) - SPORN PLANT (UNITS 2, 3, 4 & 5)

NO.	COST	AMOUNTS
1	Utility Plant at Original Cost	\$20,796,088
2	Member Primary Capacity Investment Rate (16.44% / 12)	<u>1.37%</u>
3	Total Rate Base	\$284,906
	Operations :	
4	Urea (5020002)	\$0
11 P	Trona (5020003)	\$0
6	Air Emission Fee	<u>\$16,272</u>
7	Total Operations $(4) + (5) + (6)$	\$16,272
	Maintenance :	фо.
8	SCR Maintenance (5120000)	\$0
9	1/2 of Maintenance (8) * 50%	<u>\$0</u> <u>\$16,272</u>
10	Fixed O&M (7) + (9)	<u>\$10,212</u>
	Total Revenue Requirement, Cost Associated with Sporn Plant (3) ÷ (10)	\$301,178
11 12	Ohio Power Company's Percentage Ownership	100.00%
12	OPCo's Share of Cost Associated with Sporn Plant (11) X (12)	\$301,178
14	Ohio Power Company Steam Capacity (kw)	12,860,000
15	Sporn Plant (\$/kw)	\$0.02
16	Ohio Power Surplus Weighing	94.00%
	Portion of Weighted Average Capacity Rate	
	Attributed to Sporn Plant (\$/kw) (15) X (16)	\$0.02
	Sporn Plant Costs to Kentucky Power:	
18	SpornGavin Plant Portion (\$/kw) (17)	\$0.02
19	Kentucky Power Capacity Deficit (kw)	<u>205,100</u>
	Sporn Plant Environmental Cost to Kentucky Power (18) * (19)	
20	(ES FORM 3.14, Page 1 of 10, Line 7)	\$4,102
1		)

6.00% 205,100 ß \$0.00 \$0.00 \$0.06 5,414,000 \$309,130 Total R \$34,625 50.00% \$17,313 양 성 영 1.37% 양 양 영 양 \$34,625 \$2,527,341 Common Rockpon Plant (0) \$228,919 <u>65.08%</u> \$148,980 666 8888 UNIT 2 AMOUNTS 1.37% \$16,709,416 \$228,919 ŝ \$144,462 <u>85.00%</u> \$122,793 양 영 영 \$10,544,676 37% \$144,462 66666 AMOUNTS UNIT 1 Ð \$1,785,548 8 <u>1.37%</u> \$24,462 \$40,087 50% \$20,044 \$0 \$15,625 \$15,625 \$15,625 88 Common Rockpor Plant (3) Kentucky Power Capacity Deflicit (kw) Rockport Units 1 & 2 Environmental to Kentucky Power (19) \* (20) (ES FORM 3.14, Page 1 of 10, Line 8) Indiana Michigan Power Company's Percentage Ownership I&M's Share of Cost Associated with Rockport Plant (11) X (12) Member Primary Capacity Investment Rate (16.44% / 12) Indiana Michigan Power Company Steam Capacity (kw) Total Rockport Plant Common and Units 1 & 2 Cost Associated with Rockport Plant (3) + (10) Attributed to Rockport Plant (\$/kw) (17) X (18) Portion of Weighted Average Capacity Rate Kentucky Power Portion of Rockport Plant / Indiana Michigan Power Surplus Weighing Rockport Plant Costs to Kentucky Power : COST (2) Rockport Plant Portion (\$/kw) (18) Rockport Plant (\$/kw) (14) / (15) Total Operations (4) + (5) + (6) SCR Maintenance (5120000) 1/2 of Maintenance (8) \* 50% **fotal Revenue Requirement**, Utility Plant at Original Cost Fixed O&M (7) + (9) Air Emission Fee Trona (502003) Urea (5020002) **Total Rate Base** Maintenance : Operations UO. ₩ 2 2 14 က် ထိ 20 3 000 9000 4500 ļ, -00

ES FORM 3.14 Page 10 of 11

# KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT INDIANA MICHGAN POWER COMPANY (I&M) - ROCKPORT PLANT (UNITS 1 & 2)

For the Expense Month of January 2012

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 20 of 25

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 21 of 25

> ES FORM 3.14 Page 11 of 11

#### KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT INDIANA MICHGAN POWER COMPANY (I&M) - TANNERS CREEK (UNITS 1, 2, 3 & 4)

LINE NO.	COST	AMOUNTS
1	Utility Plant at Original Cost Member Primary Capacity Investment Rate (16.44% / 12)	\$98,564,441 1.37%
3	Total Rate Base	\$1,350,333
	Operations :	
4	Urea (5020002)	\$0
11 1	Trona (5020003)	\$0
6	Air Emission Fee	<u>\$15,625</u>
	Total Operations $(4) \div (5) \div (6)$	\$15,625
I F		\$0
8	SCR Maintenance (5120000)	ະ \$0
2 1	1/2 of Maintenance (8) * 50% Fixed O&M (7) + (9)	<u>\$0</u> \$15,625
	Total Revenue Requirement,	<u>\$10,020</u>
11	Cost Associated with Tanners Creek Plant (3) + (10)	\$1,365,958
	Indiana Michigan Power Company's Percentage Ownership	100.00%
	I&M's Share of Cost Associated with Tanners Creek Plant (11) X (12)	\$1,365,958
	Indiana Michigan Power Company Steam Capacity (kw)	5,414,000
15	Tanners Creek Plant (\$/kw)	\$0.25
	Indiana Michigan Power Surplus Weighing	6.00%
17	Portion of Weighted Average Capacity Rate	
	Attributed to Rockport Plant (\$/kw) (15) X (16)	\$0.02
	Tanners Creek Plant Costs to Kentucky Power:	¢0.00
	Tanners Creek Plant Portion (\$/kw) (17)	\$0.02 205,100
19	Kentucky Power Capacity Deficit (kw) Tanners Creek Plant Environmental Cost to Kentucky Power (18) * (19)	200,100
20	(ES FORM 3.14, Page 1 of 10, Line 9)	\$4,102
20		

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 22 of 25

ES FORM 3.15

# KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT BIG SANDY PLANT COST OF CAPITAL

For the Expense Month of January 2012

LINE	]		Cap.	Cost		WACC			WACC
NO.		Balances	Structure	Rates		(Net of Tax)	GRCF		(PRE-TAX)
		As of 4/30/2010		an a	errow				
1 2	L/T DEBT S/T DEBT ACCTS REC	\$550,000,000 \$0	51.941% 0.000%	6.48% D.83%		3.37% 0.00%			3.37% 0.00%
3 4	FINANCING C EQUITY	\$43,588,933 \$465,314,088	4.116% 43.943%	1.22% 10.50%	1/	0.05% 4.61%	1.5762	2/	0.05% 7.27%
5	TOTAL	\$1,058,903,021	100.000%			8.03%			10.69%
1/ 2/	WACC = Weigh Rate of Return Gross Revenue								
21		- 00020 dated - Apr							
1 2 3	OPERATING R UNCOLLECTIB Kentucky Public	EVENUE LE ACCOUNTS EX Service Commissio	PENSE (0.24%) on Assessment	(0.15%)			100.0000 0.2400 0.1500		
4 5	STATE TAXABI STATE INCOM	LE PRODUCTION II E TAX EXPENSE, N	NCOME BEFOR	E 199 DEDUCT DUCTION (SEE	ION BEL	ow)	99.6100 5.6384		
6 7	FEDERAL TAX 199 DEDUCTIC	ABLE PRODUCTION N PHASE-IN	N INCOME BEF	ORE 199 DEDL	ICTI	NC	93.9716 5,6372		
8 9		ABLE PRODUCTION		EDUCTION (35%	%}		88.3344 30,9171		
10	AFTER-TAX PR	RODUCTION INCOM	1E				57.4173		
11 12 13 14 15	GROSS-UP FA AFTER-TA 199 DEDU( UNCOLLE( Kenlucky P		57.4173 5 6372 0.2400 0.1500						
16	TOTAL GROSS	-UP FACTOR FOR	PRODUCTION	INCOME (ROU	NDE	)	63.4445		
17 18 19 20	BLENDED FED FEDERAL STATE (LII BLENDED TAX		30.9171 5.6384 36.5555						
21	GROSS REVEN	VUE CONVERSION	FACTOR (100 (	0000/Line 14)			1.5762		
1 2 3	STATE INCOMI PRE-TAX F COLLECTI Kentucky P		100.0000 0.2400 0,1500						
4 5	STATE TAX LESS: ST	ION	99.6100 5.6372						
6 7	STATE TAX STATE INC	ION	93.9728 6.0000						
8	STATE INC	OME TAX EXPENS	E (LINE 5 X LIN	IE 6)			5.6384		

The WACC (PRE - TAX) value on Line 5 is to be recorded on ES FORM 3.10, Line 9. Weighted Average Cost of Capital Balances As of 4/30/2010 based on Case No. 2010-00318, dated September 7, 2010.

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 23 of 25

KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT COSTS ASSOCIATED WITH ROCKPORT

For the Expense Month of January 2012

																			\$44,725	
	(9)																		63 	
Rockport Plant		/_\	1		\$2,510,613	(\$206,220)	\$25,781	\$2,330,174	0.8281%	\$19,296	\$6,410	\$0	\$6,410		\$25,706	\$7,712				
Total Units 1 & 2	(C5 + C6)	1.1	2			20 <b>4</b>		\$8,464,106	0.8281%	\$70,091	\$39,968	03	\$39,968		\$110,059	\$33.018				
Unit	No. 2	(n)	<u>, y</u>		\$8,353,084	(\$2,276,978)	(\$837,785)	\$5,238,321		-	\$24,502	05								
Unit	No. 1	(c)	********		\$5,272,657	(\$1.512.961)	(\$533,911)	\$3,225,785			815 AGR									
Rockport Plant	Comman	(†)		S1.774.758		(S918 049)	(\$155.871)	\$700,838	0 ROB1 0	\$5.804	е до	817 FOR	\$20.830	-	\$26.634	\$3,995				
		(3)							9.9369%								1			
	COST COMPONENT	(2)	Return on Rate Base	Rockport Plant Continuous Environmental Monitoring System (CEMS)	Utility Plant at Original Cost AEGCo Low NOx Burners (LNB) Installed Cost	Flyash Landfill Installed Cost	Less Accumulated Depreciation	Less Accum. Def. Income Taxes	local Kate base Weighted Average Cost of Capital - ES FORM 3.21	Monthly Weighted Avg. Cost of Capital (LINE 7 / 12)	Monthly Return of Rate base (Line o " Line o) Operating Expenses :	Monthly Depreciation Expense	Monthly Indiana Air Emissions Fee	Total Operating Expenses (Line 10 + Line 11)	Total Revenue Requirement, Cost Associated with Rockport Plant	CEMS and LNB (Line 9 + Line 12) Mentucity Power's Portion of Rockport's CEMS (Line 13 * 15%)	Kentucky Power's Portion of AEGCo's LNB and Landfill (Line 13 * 30%)	Kentucky Power's Portion of Kockport Flatits Trotal Revenue Requirement. (C 4, Ln 14 + C 7, Ln 15 + C 8, L 15)	Note: Cost in Column 8, Line 16 is to be Recorded on	ES FORM 3.00 Line 2
L	NO.	Ĩ.		orati		10	4	ю (	o ⊳-	:0	o	0		ŭ		<u>5</u> 4	15			16

ES FORM 3.20

-

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 24 of 25

#### ES FORM 3.21

#### KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT ROCKPORT UNIT POWER AGREEMENT COST OF CAPITAL

For the Expense Month of January 2012

LINE	]		Cap.	Cost		WACC		1	WACC
NO.	Component	Balances	Structures	Rates	CONTRACTOR:	(NET OF TAX)	GRCF		(PRE-TAX)
		As of 1/31/2012							
1	L/T DEBT S/T DEBT CAPITALIZATION	66,487,612 51,508,881	34.5014% 26.7287%	5.4188% 0.5262%		1.8696% 0.1406%			1.8696% 0.1406%
3	OFFSETS DEBT	0	0.0000%	3.2830%		0.0000%			0.0000%
5	C EQUITY	74,713,431	38.7699%	12.1600%	1/	4.7144%	1 681379	2/	7.9267%
6	TOTAL	192,709,924 =======	100.0000%			6.7246% ========			9.9369% ======
1/ 2/ 1 2 3 4 5 6 7 8 9	WACC = Weighted Cost Rates per the Gross Revenue Con OPERATING REVE LESS: INDIANA A (LINE 1 X .085) INCOME BEFORE LESS: FEDERAL I (LINE 4 X .35) OPERATING INCO GROSS REVENUE FACTOR (100		100.00 <u>8.500</u> 91.500 <u>32.025</u> 59.475 <u>1.681379</u>						

.

The WACC (PRE - TAX) value on Line 6 is to be recorded on ES FORM 3.20, Line 5.

KPSC Case No. 2011-00401 KIUC's First Set of Data Requests Supplemental Response to Item No. 41 March 9, 2012 Attachment 2 Page 25 of 25

#### ES FORM 3.30

#### KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT MONTHLY REVENUES, JURISDICTIONAL ALLOCATION FACTOR, and OVER/(UNDER) RECOVERY ADJUSTMENT

#### For the Expense Month of January 2012

#### SCHEDULE OF MONTHLY REVENUES

Line No.	Description	Monthly Revenues	Percentage of Total Revenues
2 3	Kentucky Retail Revenues FERC Wholesale Revenues Associated Utilities Revenues Non-Assoc. Utilities Revenues	\$55,884,283 \$580,219 \$1,908,090 \$4,714,834	88.6% 0.9% 3.0% 7.5%
5	Total Revenues for Surcharges Purposes	\$63,087,426	100.0%
6	Non-Physical Revenues for Month	\$247,893	
7	Total Revenues for Month	\$63,335,319	

The Kentucky Retail Monthly Revenues and Percentage of Total Revenues (Line 1) are to be recorded on ES FORM 1.00, Lines 9 and 4. The Percentage of Kentucky Retail Revenues to the Total Revenues for the Expense Month will be the Kentucky Retail Jurisdictional Allocation Factor.

#### OVER/(UNDER) RECOVERY ADJUSTMENT

Line No.	Description	Amounts
1	Kentucky Retail Surcharge Factor for November 2011	1.6812%
2	Kentucky Retail Revenues for Current Expense Month	\$49,126,279
3	Surcharge Collected (1) * (2)	\$825,911
4	Surcharge Amount To Be Collected	\$720,452
5	Over / (Under) Recovery (3) - (4) = (5)	\$105,459

The Over/(Under) Recovery amount is to be recorded on ES FORM 1.00, LINE 6.

NOTE: The sign on LINE 5 of ES FORM 3.30 will be changed on LINE 6 of ES FORM 1.00 in order to properly adjust the collection of the current month's expense.