

**COMMONWEALTH OF KENTUCKY**  
**BEFORE THE**  
**PUBLIC SERVICE COMMISSION OF KENTUCKY**

RECEIVED

MAY 2 2005

PUBLIC SERVICE  
COMMISSION

**IN THE MATTER OF**

**KENTUCKY POWER COMPANY'S SECOND )**  
**AMENDED ENVIRONMENTAL COMPLIANCE )**  
**PLAN AND SECOND REVISED TARIFF )**

**Case No. 2005-00068**

**RESPONSES OF KENTUCKY POWER**  
**D/B/A**  
**AMERICAN ELECTRIC POWER**

**COMMISSION'S SECOND SET OF DATA REQUESTS**

**VOLUME II**

**May 2, 2005**



**Kentucky Power**  
**d/b/a**  
**American Electric Power**

**REQUEST**

Refer to the Wagner Testimony, Exhibit EKW-2. Describe how the member load ratio is calculated and how frequently it is calculated.

**RESPONSE**

The member load ratio is calculated by comparing each company's highest non-coincident monthly peak in the preceding twelve months to the total or sum of all of the member companies' highest non-coincident peaks in the preceding twelve months. See Wagner's testimony, page 4, lines 12 and 13. This calculation is performed monthly.

**WITNESS:** Errol K Wagner



**Kentucky Power  
d/b/a  
American Electric Power**

**REQUEST**

Refer to the Wagner Testimony, Exhibit EKW-3.

- a. Explain why the November 2004 capacity rate calculations reflect the steam production plant and steam capability for the AEP Surplus Companies as of December 31, 2003.
- b. Explain how the carrying charge of 16.44 percent was determined. Show all components of the charge and describe all assumptions used in the determination of the carrying charge. Indicate when the carrying charge was last calculated.

**RESPONSE**

- a. The Interconnection Agreement, Article 6, paragraph 6.211 requires the use of costs as of the "end of the next preceding Year Costs" for this calculation. Thus for the November 2004 capacity rate calculation, the steam production plant investment for the AEP surplus companies uses the costs as of the end of the preceding year of 2003. (see attached pages)
- b. The Monthly Carrying Charge Rate approved by FERC is designed to compensate the company not only for the cost of money, but also for depreciation expense, federal and state income tax and other expenses, including insurance, property and local taxes, and general administration expenses.

The 16.44% annual rate is determined by multiplying the monthly rate of 0.0137 by 12 months. The monthly rate was established by FERC when it approved the Interconnection Agreement containing Article 6, paragraph 6.212 which provided that "the MONTHLY CARRYING CHARGE FACTOR shall be 0.0137, or such larger amount as shall be established by order of the Federal Energy Regulatory Commission issued upon rehearing or reconsideration of its Opinion No. 50, issued July 27, 1979 in Docket No. E-9480."

**WITNESS:** Errol K Wagner

INTERCONNECTION AGREEMENT  
BETWEEN  
APPALACHIAN POWER COMPANY  
KENTUCKY POWER COMPANY  
OHIO POWER COMPANY  
COLUMBUS AND SOUTHERN OHIO ELECTRIC COMPANY \*  
INDIANA & MICHIGAN ELECTRIC COMPANY  
AND WITH  
AMERICAN ELECTRIC POWER SERVICE CORPORATION,  
AS AGENT

Dated: July 6, 1951, as modified and supplemented by:

Modification No. 1, August 1, 1951  
Modification No. 2, September 20, 1962  
Modification No. 3, April 1, 1975  
Supplement No. 1 to  
Modification No. 3, August 1, 1979  
Supplement No. 2 to  
Modification No. 3, August 27, 1979  
Modification No. 4, November 1, 1980 \*  
Compliance Filing (FERC ordered), Opinion 266,  
Docket Nos. ER82-579-006 and EL86-10-001

\* Pursuant to Modification No. 4 the terms "Member" and "Members", whenever said terms appear in the 1951 Agreement, shall, on and after the time when Modification No. 4 shall become effective, include Columbus Company.

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0.1 THIS AGREEMENT, made and entered into as of the 6th day of July, 1951 by and between APPALACHIAN POWER COMPANY (Appalachian Company), a Virginia corporation, KENTUCKY POWER COMPANY (Kentucky Company), a Kentucky corporation, OHIO POWER COMPANY (Ohio Company), an Ohio corporation, COLUMBUS AND SOUTHERN OHIO ELECTRIC COMPANY (Columbus Company), an Ohio corporation, INDIANA & MICHIGAN ELECTRIC COMPANY (Indiana Company), an Indiana corporation, said companies (herein sometimes called 'Members' when referred to collectively and 'Member' when referred to individually), being affiliated companies of an integrated public utility electric system, and AMERICAN ELECTRIC POWER SERVICE CORPORATION (Agent), a New York corporation, being a service company engaged solely in the business of furnishing essential services to the aforesaid companies and to other affiliated electric utility companies.

The term "affiliate" shall include American Electric Power Company, Inc., Appalachian Power Company, Columbus and Southern Ohio Electric Company, Indiana & Michigan Electric Company, Kentucky Power Company, Ohio Power Company, Kingsport Power Company, Michigan Power Company, Wheeling Electric Company, and any subsidiaries, direct or indirect, of the foregoing.

W I T N E S S E T H.

T H A T:

0.2 WHEREAS, the Members own and operate electric facilities in the states herein indicated: (i) Appalachian Company in Tennessee, Virginia, and West Virginia, (ii) Kentucky Company in Kentucky, (iii) Ohio Company in Ohio and West Virginia, and (iv) Indiana Company in Indiana and Michigan, and (v) Columbus Company in Ohio, and

0.3 WHEREAS, the Members' electric facilities are now and have been for many years interconnected through their respective transmission facilities at a number of points (hereby designated and hereinafter called "Interconnection Points"), such facilities and the transmission facilities of other affiliated electric utility companies forming an integrated transmission network; and



0.4 WHEREAS, the transmission facilities of each Member are interconnected at a number of points with the transmission facilities of various non-affiliated electric utility companies, and those of Appalachian Company are interconnected with those of Tennessee Valley Authority, (said companies and Tennessee Valley Authority hereinafter sometimes called "Foreign Companies" when referred to collectively and "Foreign Company" when referred to individually; and

0.5 WHEREAS, the Members through cooperation with each other have been successful for some years in achieving substantial economies in the conduct of their business by coordinating the expansion and operation of their power supply facilities; and

0.6 WHEREAS, the Members believe that a fuller realization of the benefits and advantages through coordinated operation of their electric supply facilities will be better assured and more efficiently and economically achieved by having such operation directed and supervised by a centrally located organization skilled in the technique of system operation on a large scale and thoroughly familiar with the power supply facilities of the Members, and that their participation in the coordinated expansion and operation of their facilities will be simplified and facilitated by having such procedures conducted by a single clearing agent; and

0.7 WHEREAS, the Members believe that the Agent designated herein for such purpose is qualified to perform

such services for them.

0.8 NOW, THEREFORE, in consideration of the premises and of the mutual covenants and agreements hereinafter contained, the parties hereto agree as follows:

ARTICLE I

PROVISIONS FOR, AND CONTINUITY  
OF INTERCONNECTED OPERATION

1.1 Throughout the duration of this agreement the systems of the Members shall be operated in continuous synchronism through each of the various lines interconnecting their respective systems; provided, however, if synchronous operation of the systems through a particular line or lines becomes interrupted because of reasons beyond the control of any Member or because of scheduled maintenance that has been agreed to by the Members, the Members shall cooperate so as to remove the cause of such interruption as soon as practicable and restore the affected line or lines to normal operating condition.

1.2 Each Member shall keep the portions of the lines interconnecting their respective systems, together with all associated facilities and appurtenances, that are located on their respective sides of the Interconnection Points in a suitable condition of repair at all times in order that said lines will operate in a reliable and satisfactory manner and that reduction in their capacity will be avoided.

ARTICLE 2

OPERATING COMMITTEE

2.1 The parties herein shall appoint representatives to act as the "Operating Committee" in cooperation with each other and the Agent in the coordination and operation and/or use

of the electric power sources of or available to the Members and of their transmission and distribution and substation facilities to the end that the advantages to be derived thereunder may be realized to the fullest practicable extent.

2.2 Each Member shall designate in writing delivered to the other Members and Agent, the person who is to act as its representative on said committee and the person or persons who may serve as alternate whenever such representative is unable to act. Agent shall designate in writing delivered to the Members the person who is to act as its representative on said committee. Such person shall act as chairman of the Operating Committee and shall be known as the "Pool Manager". All such representatives or alternates so designated shall be fully authorized to cooperate with the other representatives or alternates in all matters described in this agreement as responsibilities of the Operating Committee.

### ARTICLE 3

#### AGENT'S RESPONSIBILITIES

3.1 For the purpose of carrying out the coordinated operation of the generating and transmission facilities of Members and the most efficient use of the energy produced by them and of other energy available to them, the Members hereby delegate to Agent and Agent hereby accepts the responsibility of supervising and directing such operation and use, and in furtherance thereof Agent agrees as follows; viz:

3.11 To coordinate the operation of the electric power sources of or available to the Members, which include their own generating stations and electric power available to them through interconnection with affiliated companies other than Members and Foreign Companies.

3.12 To arrange for and conduct such meetings the Operating Committee as may be required to insure the effective and efficient carrying out of all matters of procedure essential to the complete performance of the provisions of this agreement.

3.13 To prepare and collect such log sheets and other records as may be needed to afford a clear history of the electric power and energy supplied under this agreement. Preparation and collection of such log sheets and other record shall be coordinated with similar responsibilities of the Members as provided for under Article 9.

3.14 To render to each Member as promptly as possible after the end of each calendar month a statement setting forth the electric power and energy transactions carried out during such month pursuant to the provisions of this agreement in such detail and with such segregations as may be needed for operating records or for settlements hereunder.

3.15 To make arrangements with Foreign Companies on behalf of the Members for the purchase, sale, or interchange of power and energy between such companies and the Members, such arrangements to be made in addition to similar arrangements to be made under agreements between an individual Member and a Foreign Company and to be made whenever in the judgment of the Members the effecting of matters of operation and contract related thereto can be simplified and their performance facilitated.

3.16 To carry out cash settlements for electric power and energy supplied under this agreement. Settlements by the Members shall be made for each calendar month through an account (hereby designated and hereinafter called "SYSTEM ACCOUNT") to be administered by Agent. Payments to or from such account shall be made to or by Agent as clearing agent of the account. The total of the payments made by Members to the SYSTEM ACCOUNT for a particular month shall be equal to the payments made to the Members from the SYSTEM ACCOUNT for such month.

ARTICLE 4

MEMBERS' OBLIGATIONS AND RIGHTS

4.1 For the purpose of obtaining the most efficient coordinated expansion and operation of their electric power supply facilities the Members hereby agree to operate and utilize their electric power sources under the direction of the Pool Manager in such manner that each Member shall receive at all times sufficient electric power and energy from such sources to meet its specific load obligations.

Each member shall, to the extent practicable, install or have available to it under contract such capacity as is necessary to supply all of the requirements of its own customers.

4.2 The Members agree that their electric power sources, which shall include all the generating stations owned by the Members and all electric power available to them through interconnection with affiliated companies other than Members and Foreign Companies, shall be used as needed to carry the combined load obligations of the Member under the direction of the Pool Manager. Each Member in return shall receive at all times sufficient electric power and energy from such sources to meet the specific load obligations of such Member.

4.3 The Members recognize that in carrying out the interconnected operation of their respective transmission systems as herein provided, electric energy being received by a portion of a particular Member's transmission system from another portion of such system or from the system of another interconnected company, or electric energy being delivered by a portion of a particular Member's transmission system to another portion of such system or to the system of another interconnected company, may flow over the transmission system of another Member. In respect of such flow of electric energy (hereinafter called "Energy Transfer") the Members agree that such Energy Transfer over their respective transmission facilities shall be permitted whenever it occurs, and, except as may be specifically agreed to otherwise by the Members, no Member shall make a charge at any time to another Member to permit such Energy Transfer. Electric power and energy associated with such Energy Transfer, including electrical losses associated therewith, shall be accounted for each clockhour. Proper consideration shall be given to such electrical losses in accordance with the manner determined and agreed upon by the Operating Committee, and such consideration shall be fully in accord with the provisions of LINE LOSS FACTOR as defined under subdivision 5.15 of Article 5.

#### ARTICLE 5

##### DEFINITIONS OF LOAD, CAPACITY, AND ENERGY CLASSES AND RELATED FACTORS ASSOCIATED WITH SETTLEMENTS FOR POWER SUPPLIED FROM MEMBER'S ELECTRIC POWER SOURCES

5.1 Load, capacity, and energy shall be designated and allocated to various classes for the purposes of effecting settlements under this agreement. Load, capacity, and energy

classes and related factors associated with the settlement for electric power and energy supplied from electric power sources of the Members are defined as follows; viz:

Load

5.2 MEMBER LOAD OBLIGATION - A Member's internal load plus any firm power sales to Foreign Companies and to affiliated companies other than Members. Principally characterized by the Member assuming the load obligation as its own firm power commitment and by the Member retaining advantages accruing from meeting the load.

5.3 SYSTEM LOAD OBLIGATION - Load obligation shared proportionately by the Members where one Member or Agent will act as Agent of the Members in meeting the commitment; principally characterized by the load not being considered as a part of any MEMBER LOAD OBLIGATION.

(Examples of SYSTEM LOAD OBLIGATIONS are electric power and energy deliveries made to Foreign Companies under emergency and storage power arrangements with such companies.)

5.4 MEMBER DEMAND - MEMBER LOAD OBLIGATION determined on a clock-hour integrated kilowatt basis.

5.5 MEMBER MAXIMUM DEMAND - The MEMBER MAXIMUM DEMAND in effect for a calendar month for a particular Member shall be equal to the maximum MEMBER DEMAND experienced by said Member during the twelve consecutive calendar months next preceding such calendar month.

5.6 MEMBER LOAD RATIO - The ratio of a particular Member's MEMBER MAXIMUM DEMAND in effect for a calendar month to the sum of the five MEMBER MAXIMUM DEMANDS in effect for such month.

Capacity

5.7 MEMBER PRIMARY CAPACITY - The aggregate capacity of the electric power sources of a particular Member, in Kilowatts, that is normally expected to be available to carry load. Such capacity shall include (i) the capacity installed at the generating stations owned by the Member and (ii) the capacity available to that Member through inter-connection arrangements with affiliated companies or Foreign Companies, if so designated by the Operating Committee with the approval of the Members.

5.7.1 All determinations by the Operating Committee pursuant to (ii) of Section 5.7 with respect to purchases of capacity from non-affiliated companies shall take into account, but shall not be limited to, the following circumstances and considerations: (1) the term during which such capacity will be available, a commitment from a reliable source of power and energy for at least five years being normally regarded as appropriate for inclusion as a capacity source of a particular Member, with purchases of a short or intermediate duration being normally regarded as System purchases under Article 7; (2) whether the availability of the purchased capacity will be comparable to the availability of the installed primary capacity of the Members, although the Operating Committee may make adjustments in the quantity of purchased capacity to be included as Member Primary Capacity to give effect to any disparity in the availability of such purchased capacity; (3) the need on the part of a Member with a Member Primary Capacity deficit of an extended nature to



rectify or alleviate such deficit and the interest of all Members in maintaining an equalization among the Members of capacity resources over a period of time.

5.7.2 In the event that arrangements are made hereunder for any Member to make capacity available to an affiliated company or to a Foreign Company through the sale by such Member, for its own account, of unit capacity or other non-firm capacity, the amount of the capacity so sold shall be excluded from the Primary Capacity of such Member.

5.8 SYSTEM PRIMARY CAPACITY - The sum of the MEMBER PRIMARY CAPACITY of all the Members.

5.9 MEMBER PRIMARY CAPACITY RESERVATION - SYSTEM PRIMARY CAPACITY multiplied by the MEMBER LOAD RATIO of a particular Member.

5.10 MEMBER PRIMARY CAPACITY SURPLUS - Difference between the MEMBER PRIMARY CAPACITY and MEMBER PRIMARY CAPACITY RESERVATION of a particular Member, when such MEMBER PRIMARY CAPACITY exceeds such MEMBER PRIMARY CAPACITY RESERVATION.

5.11 MEMBER PRIMARY CAPACITY DEFICIT - Difference between the MEMBER PRIMARY CAPACITY and MEMBER PRIMARY CAPACITY RESERVATION of a particular Member, when such MEMBER PRIMARY CAPACITY is less than such MEMBER PRIMARY CAPACITY RESERVATION.

#### Energy

5.12 POOL - Electric energy delivered by one Member, from its MEMBER PRIMARY CAPACITY, to another Member shall be considered to be energy delivered to the POOL by the former Member and received from the POOL by the latter Member.

Electric energy delivered by a Foreign Company to a Member, other than energy associated with a Member's MEMBER PRIMARY CAPACITY, shall be considered to be energy delivered to the POOL. Electric energy delivered by a Member to a Foreign Company to meet a SYSTEM LOAD OBLIGATION shall be considered to be energy delivered by the POOL to the Foreign Company.

5.13 PRIMARY ENERGY - Electric energy delivered to the POOL from the MEMBER PRIMARY CAPACITY of a particular Member to meet another Member's deficiency in capacity. The deficiency may be caused by one or both of two reasons, the total MEMBER PRIMARY CAPACITY of a particular Member may not be great enough to meet its MEMBER LOAD OBLIGATION or a Member may have a portion of its MEMBER PRIMARY CAPACITY out of service for maintenance and the remainder may not be great enough to meet its MEMBER LOAD OBLIGATION.

5.14 ECONOMY ENERGY - Electric energy delivered to the POOL from the MEMBER PRIMARY CAPACITY of a particular Member to displace energy that otherwise would be supplied by less efficient MEMBER PRIMARY CAPACITY of another Member to meet its MEMBER LOAD OBLIGATION.

5.15 LINE LOSS FACTOR - The transmission electrical loss factor to be applied for settlement purposes to a particular metered quantity of energy delivered to the POOL by a Member. The Operating Committee shall determine and agree upon the LINE LOSS FACTOR required, such determinations to be governed by the understanding that the Member receiving such energy shall bear the entire loss caused in transmitting such energy over the facilities of the delivering Member and over the facilities of any other party whose system may be used for such delivery.

ARTICLE 6

SETTLEMENTS FOR POWER AND ENERGY  
SUPPLIED FROM MEMBER'S ELECTRIC POWER SOURCES

6.1 As promptly as practicable following the end of each month (all references to month mean calendar month), for electric power and energy supplied under this agreement during such month from SYSTEM PRIMARY CAPACITY, the Members shall carry out cash settlements through the SYSTEM ACCOUNT in accordance with the following; viz:

Primary Capacity Equalization Charge

6.2 For each kilowatt of MEMBER PRIMARY CAPACITY SURPLUS each Member having such surplus during any month shall receive payment from the SYSTEM ACCOUNT at a rate per kilowatt per month equal to the MEMBER PRIMARY CAPACITY INVESTMENT RATE plus the MEMBER PRIMARY CAPACITY FIXED OPERATING RATE, as hereinbelow defined, applicable to the particular surplus.

6.21 The MEMBER PRIMARY CAPACITY INVESTMENT RATE chargeable against the SYSTEM ACCOUNT for any calendar month by a particular Member shall be equal to the product of (A) the MEMBER WEIGHTED AVERAGE INVESTMENT COST, determined pursuant to subdivision 6.211 below, and (B) the MONTHLY CARRYING CHARGE FACTOR, determined pursuant to subdivision 6.212 below.

6.211 The MEMBER WEIGHTED AVERAGE INVESTMENT COST shall be equal to the ratio of (i) the total installed cost of production plant of the generation stations, other than hydro, classified as part of a particular Member's MEMBER PRIMARY CAPACITY to (ii) the total kilowatt capability of such generating stations. The total installed cost of production plant used in the

determination of the MEMBER WEIGHTED AVERAGE COST, as described above, shall be the total cost of such plant for the aforesaid generating stations included, as of the end of the next preceding year, in Accounts 310 to 316, inclusive, Accounts 320 to 325, inclusive and Accounts 340 to 346, inclusive, of the Uniform System of Accounts prescribed by the Federal Energy Regulatory Commission for Public Utilities and Licensees, as in effect on January 1, 1975.

6.212 The MONTHLY CARRYING CHARGE FACTOR shall be 0.0137, or such larger amount as shall be established by order of the Federal Energy Regulatory Commission issued upon rehearing or reconsideration of its Opinion No. 50, issued July 27, 1979 in Docket No. E-9408.

6.22 The MEMBER PRIMARY CAPACITY FIXED OPERATING RATE chargeable against the SYSTEM ACCOUNT for any calendar month by a particular Member shall be equal to the weighted average fixed operating cost as hereinbelow defined, incurred by said Member during such month. Such weighted average fixed operating cost for purposes hereof shall be equal to the ratio of the fixed operating expense, i.e., the total production expenses minus the fuel and one-half of the maintenance expenses, incurred by a particular Member during a month at the generating stations other than hydro, classified as a part of its MEMBER PRIMARY CAPACITY to the total kilowatt capability of such generating stations.

6.3 For each kilowatt of MEMBER PRIMARY CAPACITY DEFICIT, any Member having such deficit during any month shall make payment into the SYSTEM ACCOUNT at a rate per kilowatt per month equal to the total payments from the SYSTEM ACCOUNT during any such month, determined pursuant to subdivision 6.2 above, divided

by the total kilowatts of MEMBER PRIMARY CAPACITY DEFICITS for such month.

Primary Energy Charge

6.4 For PRIMARY ENERGY delivered to the POOL during any month by any Member, the Member so delivering such energy shall receive payment from the SYSTEM ACCOUNT at a rate per kilowatt-hour equal to said Member's MEMBER PRIMARY ENERGY RATE, as hereinbelow defined, for such month. The MEMBER PRIMARY ENERGY RATE chargeable against the SYSTEM ACCOUNT for any month by said Member shall be equal to the Member's weighted average variable production cost, as hereinbelow defined, for such month. Such weighted average variable production cost for purposes hereof shall be equal to the ratio of the sum of the fuel and one-half of the maintenance expenses incurred by said Member during a month at the generating stations other than hydro, classified as part of such Member's MEMBER PRIMARY CAPACITY to the total kilowatt-hours of net generation at said generating stations during such month.

6.5 For PRIMARY ENERGY received from the POOL during any month by any Member, said Member shall make payment into the SYSTEM ACCOUNT for energy so received at a rate per kilowatt-hour equal to the MEMBER PRIMARY ENERGY RATE payable from the SYSTEM ACCOUNT to the other Members for such month for such PRIMARY ENERGY. The rate applicable to such PRIMARY ENERGY shall be determined from clock-hour records to be kept by Agent as provided under Article 3. Such records shall indicate the receiving Member and supplying Member for each kilowatt-hour classified as PRIMARY ENERGY.

Economy Energy Charge

6.6 For ECONOMY ENERGY delivered to the POOL during any

month the Member delivering such energy shall receive payment from and the Member receiving such energy shall make payment to the SYSTEM ACCOUNT at the ECONOMY ENERGY RATE, as hereinbelow defined, applicable to the energy so delivered and received. The ECONOMY ENERGY RATE applicable to a particular kilowatt-hour of ECONOMY ENERGY shall be equal to the out-of-pocket cost of delivering said kilowatt-hour to the POOL plus one-half the difference between such cost and the out-of-pocket cost of generation avoided by the Member receiving such energy. Said kilowatt-hour shall be considered to be supplied from the highest cost source carrying load to meet MEMBER LOAD OBLIGATIONS of the supplying Member, excluding sources operated for minimum operating requirements, and its out-of-pocket cost shall include fuel expense and an appropriate portion of maintenance expense of generating facilities. The cost of generation avoided by the Member receiving said kilowatt-hour of ECONOMY ENERGY shall be considered to be the out-of-pocket cost that would be experienced if said kilowatt-hour were not delivered and its equivalent generated upon the most efficient operable unloaded generation of the receiving Member. Such out-of-pocket cost shall include cost of fuel and an appropriate portion of maintenance expense of generating facilities. The appropriate portion of maintenance expense allocable to the out-of-pocket cost of the supplying Member and to the avoided cost of the receiving Member shall be determined and agreed upon by the Operating Committee.

System Primary Energy Rate

6.7 Settlements for various classes of electric power and energy delivered under transactions with Foreign Companies shall

include the use of a rate referred to as SYSTEM PRIMARY ENERGY RATE. For purposes of this agreement, the SYSTEM PRIMARY ENERGY RATE chargeable for any month shall be equal to the weighted average variable operating cost, as hereinbelow defined, incurred during such month at the generating stations, other than hydro, classified as part of the SYSTEM PRIMARY CAPACITY. Such weighted average variable operating cost for purposes hereof shall be equal to the ratio of the variable production expenses, i.e., the fuel and one-half of the maintenance expenses, incurred during a month at the generating stations, other than hydro, classified as part of the SYSTEM PRIMARY CAPACITY to the total kilowatt-hours of net generation generated at said generating stations during such month.

#### ARTICLE 7

##### TRANSACTIONS WITH FOREIGN COMPANIES

7.1 As promptly as practicable following the end of each month, cash settlements by the Members through the SYSTEM ACCOUNT for power transactions carried out in their behalf with Foreign Companies during such month shall be effected in accordance with the principles and procedures provided therefor under this Article 7. Any sale of power included in a Member's MEMBER LOAD OBLIGATION and any purchase of power included in a Member's MEMBER PRIMARY CAPACITY shall be excluded from such transactions. All other types of transactions carried out by any Member or on behalf of the Members with any Foreign Company shall be considered a transaction made on behalf of the collective interest of the Members. Costs and benefits associated with such transactions shall be shared proportionately as hereinbelow provided.

Settlement For Power And Energy  
Purchases From Foreign Companies

Power and Energy Purchases  
other than Economy Energy

7.2 Definitions of billing factors required for settlements by the Members through the SYSTEM ACCOUNT for electric power and energy, other than ECONOMY ENERGY PURCHASE from any Foreign Company shall be as follows; viz:

7.21 SYSTEM PURCHASE FROM FOREIGN COMPANY - All energy purchased from a Foreign Company either by a particular Member or by the Members collectively through arrangements made on their behalf by Agent, except ECONOMY ENERGY or such energy as may be purchased to meet a SYSTEM LOAD OBLIGATION (settlement for energy so purchased that is supplied to another Foreign Company is provided for under subdivisions 7.5 and 7.7 below.)

7.22 MEMBER RESERVATION OF SYSTEM PURCHASE FROM FOREIGN COMPANY - For a month, the SYSTEM PURCHASE FROM FOREIGN COMPANY multiplied by the MEMBER LOAD RATIO of a particular Member.

7.23 MEMBER ENTITLEMENT OF SYSTEM PURCHASE FROM FOREIGN COMPANY - For a month, when the quantity of the MEMBER RESERVATION OF SYSTEM PURCHASE FROM FOREIGN COMPANY for a particular Member exceeds such quantity of energy delivered to said Member by the Foreign Company, the difference between such quantities is the MEMBER ENTITLEMENT OF SYSTEM PURCHASE FROM FOREIGN COMPANY of



said Member for such month.

7.24 MEMBER OBLIGATION OF SYSTEM PURCHASE FROM FOREIGN COMPANY - For a month, when the quantity of the MEMBER RESERVATION OF SYSTEM PURCHASE FROM FOREIGN COMPANY for a particular Member is less than such quantity of energy delivered to said Member by the Foreign Company, the difference between such quantities is the MEMBER OBLIGATION OF SYSTEM PURCHASE FROM FOREIGN COMPANY of said Member for such month.

7.25 MEMBER DEFICIT OF SYSTEM PURCHASE FROM FOREIGN COMPANY - For a month, when the quantity of the MEMBER OBLIGATION OF SYSTEM PURCHASE FROM FOREIGN COMPANY for a particular Member exceeds the quantity of kilowatt-hours of SYSTEM PURCHASE from FOREIGN COMPANY delivered to the POOL by the Member, the difference between such quantities is the MEMBER DEFICIT OF SYSTEM PURCHASE FROM FOREIGN COMPANY of said Member for such month.

7.26 MEMBER SURPLUS OF SYSTEM PURCHASE FROM FOREIGN COMPANY - For a month, when the quantity of the MEMBER ENTITLEMENT OF SYSTEM PURCHASE FROM FOREIGN COMPANY for a particular Member exceeds the quantity of kilowatt-hours of SYSTEM PURCHASE FROM FOREIGN COMPANY received from the POOL by said Member, the difference between such quantities is the MEMBER SURPLUS OF SYSTEM PURCHASE FROM FOREIGN COMPANY of said Member for such month.

7.3 To effect a proportionate sharing of the cost of any SYSTEM PURCHASE FROM FOREIGN COMPANY, purchases so made from each Foreign Company shall be treated separately as follows:

7.31 At the end of each month, from data supplied by the Members, Agent shall determine the cost of SYSTEM PURCHASE FROM FOREIGN COMPANY.

7.32 The total cost so determined multiplied by the [MEMBER] LOAD RATIO of a particular Member shall be the gross amount chargeable to said Member.

7.33 If a particular Member has established a MEMBER DEFICIT OF SYSTEM PURCHASE FROM FOREIGN COMPANY, the adjusted gross amount chargeable to the Member shall equal the sum of the gross amount determined under subdivision 7.32 above plus the amount chargeable to the Member for the MEMBER DEFICIT OF SYSTEM PURCHASE FROM FOREIGN COMPANY. The rate applicable to such deficit shall be the SYSTEM PRIMARY ENERGY RATE determined for the particular month.

7.34 If a particular Member has established a MEMBER SURPLUS OF SYSTEM PURCHASE FROM FOREIGN COMPANY, the adjusted gross amount chargeable to the Member shall equal the difference between the gross amount determined under subdivision 7.32 above and the amount to be credited to the Member for the MEMBER SURPLUS OF SYSTEM PURCHASE FROM FOREIGN COMPANY. The rate applicable to such surplus shall be the SYSTEM PRIMARY ENERGY RATE determined for the particular month.

7.35 If the adjusted gross amount chargeable to a particular Member for any month as determined under either subdivisions 7.33 or 7.34 is greater than the payment made by said Member to the Foreign Company for the SYSTEM

PURCHASE FROM FOREIGN COMPANY, said Member shall make payment into the SYSTEM ACCOUNT of the difference between such amount and payment. Conversely, if the amount so determined for a particular Member is less than the Member's aforesaid payment to the Foreign Company, such Member shall receive payment from the SYSTEM ACCOUNT of the difference between such amount and such payment to the Foreign Company.

Economy Energy Purchases

7.4 Settlement by the Members through the SYSTEM ACCOUNT for ECONOMY ENERGY PURCHASE from a Foreign Company shall be governed by the principle that the saving in production expense realized by the System (the term "System" as used in this agreement refers to the electric facilities of the Members viewed as a unit) shall be shared by the Members in proportion to their respective MEMBER LOAD RATIOS.

(The following illustrates the application of the principle and procedure for effecting such settlements:

It is assumed that Appalachian Company has purchased a block of ECONOMY ENERGY PURCHASE at a rate of 1.00 mill per kilowatt-hour which has displaced generation at Twin Branch Station of Indiana Company; the production expense saving to Indiana Company being 2.00 mills per kilowatt-hour.

Charges payable to and credits payable from the SYSTEM ACCOUNT for such energy shall be at the following rates: (1) pay Appalachian Company at a rate per kilowatt-hour equal to the sum of 1.00 mill plus the product of 2.00 mills times Appalachian Company's MEMBER LOAD RATIO, (2) pay Ohio Company at a rate per kilowatt-hour equal to the product of 2.00 mills times Ohio Company's MEMBER LOAD RATIO, and (3) charge Indiana Company at a rate per kilowatt-hour equal to the sum of 1.00 mill plus the product of 2.00 mills times the sum of Appalachian Company's and Ohio Company's MEMBER LOAD RATIOS.)

For the purpose of this agreement, the cost of generation avoided by the System in receiving a kilowatt-hour of ECONOMY ENERGY PURCHASE shall be considered to be the out-of-pocket

cost, i.e., fuel expense and an appropriate portion of maintenance expense of generating facilities that would be experienced if said kilowatt-hour were not delivered and its equivalent generated upon the most efficient operable unloaded generation of the System. The appropriate portion of maintenance expense allocable to the out-of-pocket cost of such generating facilities shall be determined and agreed upon by the Operating Committee.

Settlement for Power Sales to Foreign Companies

7.5 Settlement by the Members through the SYSTEM ACCOUNT for electric power and energy sales to Foreign Companies shall be governed by the principle that the difference between the amount charged a Foreign Company for the power and energy supplied under such a sale and the production expenses, i.e., out-of-pocket costs incurred by the System in making such supply, shall be shared by the Members in proportion to the respective MEMBER LOAD RATIOS. Electric Power and energy for such sales shall be considered to be supplied from the higher cost of the following two sources: (1) from the highest cost source carrying load on the System, excluding sources operated for minimum operating requirements, or (2) the highest cost source supplying power to the System under arrangements with Foreign Companies.

(The following illustrates the application of the principles and procedures for effecting such settlements:

It is assumed that Indiana Company has sold a block of energy at a rate of 4.00 mills per kilowatt-hour which has been supplied by carrying a block of load that would not otherwise be carried at Philo Station of Ohio Company, the out-of-pocket cost incurred by Ohio Company being 3.00 mills per kilowatt-hour.

Charges payable to and credits payable from the SYSTEM ACCOUNT for such energy would be at the following rates: (1) charge

Indiana Company at a rate per kilowatt-hour equal to the sum of 3.00 mills plus the product of 1.00 mill times the sum of Appalachian Company's and Ohio Company's MEMBER LOAD RATIOS, (2) pay Ohio company at a rate per kilowatt-hour equal to the sum of 3.00 mills and the product of 1.00 mill times Ohio Company's MEMBER LOAD RATIO, and (3) pay Appalachian Company at a rate per kilowatt-hour equal to the product of 1.00 mill times Appalachian Company's MEMBER LOAD RATIO.)

Settlement For Power and Energy Received Under  
Interchange Arrangements With Foreign Companies

Power and Energy Received other  
than Interchange Economy Energy

7.6 Definitions of billing factors required for settlements by the Members through the SYSTEM ACCOUNT for electric power and energy received, other than INTERCHANGE ECONOMY ENERGY, from any Foreign Company under interchange arrangements which require no cash settlements shall be as follows; viz:

7.61 SYSTEM INTERCHANGE FROM FOREIGN COMPANY - All energy received from Foreign Company by either a particular Member or by the Members collectively through arrangements made on their behalf by Agent, which requires no cash settlement, except INTERCHANGE ECONOMY ENERGY.

7.62 MEMBER RESERVATION OF SYSTEM INTERCHANGE FROM FOREIGN COMPANY - For a month, the SYSTEM INTERCHANGE FROM FOREIGN COMPANY multiplied by the MEMBER LOAD RATIO of a particular Member.

7.63 MEMBER ENTITLEMENT OF SYSTEM INTERCHANGE FROM FOREIGN COMPANY - For a month, when the quantity of the MEMBER RESERVATION OF SYSTEM INTERCHANGE FROM FOREIGN COMPANY for a particular Member exceeds the quantity of such energy delivered to the Member by the Foreign Company, the difference between such quantities is the MEMBER ENTITLEMENT OF SYSTEM

INTERCHANGE FROM FOREIGN COMPANY of such Member for such month.

7.64 MEMBER OBLIGATION OF SYSTEM INTERCHANGE FROM FOREIGN COMPANY - For a month, when the quantity of the MEMBER RESERVATION OF SYSTEM INTERCHANGE FROM FOREIGN COMPANY for a particular Member is less than the quantity of such energy delivered to the Member by the Foreign Company, the difference between such quantities is the MEMBER OBLIGATION OF SYSTEM INTERCHANGE FROM FOREIGN COMPANY of said Member for such month.

7.65 MEMBER DEFICIT OF SYSTEM INTERCHANGE FROM FOREIGN COMPANY - For a month, when the quantity of the MEMBER OBLIGATION OF SYSTEM INTERCHANGE FROM FOREIGN COMPANY for a particular Member exceeds the quantity of kilowatt-hours of SYSTEM INTERCHANGE FROM FOREIGN COMPANY delivered to the POOL by said Member, the difference between such quantities is the MEMBER DEFICIT OF SYSTEM INTERCHANGE FROM FOREIGN COMPANY of said Member for such month.

7.66 MEMBER SURPLUS OF SYSTEM INTERCHANGE FROM FOREIGN COMPANY - For a month, when the quantity of the MEMBER ENTITLEMENT OF SYSTEM INTERCHANGE FROM FOREIGN COMPANY for a particular Member exceeds the quantity of kilowatt-hours of SYSTEM INTERCHANGE FROM FOREIGN COMPANY received from the POOL by said Member, the difference between such quantities is the MEMBER SURPLUS OF SYSTEM INTERCHANGE FROM FOREIGN COMPANY of said Member for such month.

7.7 To effect a proportionate sharing of the benefits of SYSTEM INTERCHANGE FROM FOREIGN COMPANY, electric energy so received from each Foreign Company shall be treated separately as follows:

7.71 If a particular Member has established a MEMBER DEFICIT OF SYSTEM INTERCHANGE FROM FOREIGN COMPANY, said Member shall make payment into the SYSTEM ACCOUNT for the kilowatt-hours of such deficit at the SYSTEM PRIMARY ENERGY RATE determined for the particular month.

7.72 If a particular Member has established a MEMBER SURPLUS OF SYSTEM INTERCHANGE FROM FOREIGN COMPANY, said Member shall receive payment from the SYSTEM ACCOUNT for the kilowatt-hours of such surplus at the SYSTEM PRIMARY ENERGY RATE determined for the particular month.

Interchange Economy Energy

7.8 The principles described under subdivision 7.4 above for the settlement of ECONOMY ENERGY PURCHASE shall also govern the settlements by the Members through the SYSTEM ACCOUNT for INTERCHANGE ECONOMY ENERGY received from a Foreign Company. It shall be assumed for the purpose of such settlement that payment to the Foreign Company for INTERCHANGE ECONOMY ENERGY was made at a rate of zero mills per kilowatt-hour.

Settlements For Power Delivered Under Interchange Arrangements With Interconnected Foreign Companies

7.9 Settlement hereunder for electric power and energy (hereinafter called "SYSTEM INTERCHANGE TO FOREIGN COMPANY") delivered to any Foreign Company under interchange arrangements with either a particular Member or with the Members collectively through arrangements made on their behalf by Agent, which require no cash settlements, will be governed by the principle that the production expenses, i.e., out-of-pocket costs incurred by the System in making such deliveries, shall be shared by the

Members in proportion to their respective MEMBER LOAD RATIOS.

(The following illustrates the application of the principle and procedure for effecting such settlements:

It is assumed that Appalachian Company has delivered a block of SYSTEM INTERCHANGE TO FOREIGN COMPANY which has been supplied by carrying a block of load that would not otherwise be carried at Windsor Station of Ohio Company; the out-of-pocket cost incurred by Ohio Company being 3.50 mills per kilowatt-hour.

Charges payable to and credits payable from the SYSTEM ACCOUNT for such energy shall be at the following rates: (1) charge Appalachian Company and Indiana Company at rates per kilowatt-hour equal to the product of 3.50 mills per kilowatt-hour and their respective MEMBER LOAD RATIOS, and (2) pay Ohio Company at a rate equal to the sum of the rates charged Appalachian Company and Indiana.)

As described under subdivision 7.5 above, electric power and energy for sales to Foreign Companies shall be considered to be supplied from the higher cost of the following two sources: (1) from the highest cost source carrying load on the System, excluding sources operated for minimum operating requirements, or (2) the highest cost source supplying electric power and energy to the System under arrangements with Foreign Companies. Similarly, following the determination and designation of such source for the aforesaid sales, electric power and energy for SYSTEM INTERCHANGE TO FOREIGN COMPANY deliveries shall be considered to be supplied from the higher cost of the balance of said two sources.

#### ARTICLE 8

#### DELIVERY POINTS, METERING POINTS AND METERING

##### Delivery Points

8.1 All electric energy delivered under this agreement shall be of the character commonly known as three-phase sixty-cycle energy, and shall be delivered at the various Interconnection



Points where the transmission systems of the Members are interconnected at the nominal unregulated voltage designated for such points, and at such other points and voltages as may be determined and agreed upon by the Members.

Metering Points

8.2 Electric power and energy supplied and delivered by one Member to another Member shall be measured by suitable metering equipment to be provided, owned, and maintained by the Members at such metering points as are determined and agreed upon by them.

Metering

8.3 Suitable metering equipment at metering points as provided under subdivision 8.2 above shall include electric meters which shall give for each direction of flow the following quantities (1) an automatic record for each clock-hour of kilowatt-hours and (2) a continuous integrating record of the kilowatt-hours.

8.4 Measurements of electric energy for the purpose of effecting settlements under this agreement shall be made by standard types of electric meters, installed and maintained by the owner at the metering points as provided under subdivision 8.2 above. The timing devices of all meters having such devices shall be maintained in time synchronism as closely as practicable. The meters shall be sealed and the seals shall be broken only upon occasions when the meters are to be tested or adjusted. For the purpose of checking the records of the metering equipment installed by any Member as hereinabove provided, the other Members shall have the right to install check metering equipment at the aforesaid metering points. Metering equipment so installed by

one Member on the premises of another Member shall be owned and maintained by the Member installing such equipment. Upon termination of this agreement the Member owning such metering equipment shall remove it from the premises of the other Member. Authorized representatives of any Member shall have access at all reasonable hours to the premises where the meters are located and to the records made by the meters.

8.5 The aforesaid metering equipment shall be tested by the owner at suitable intervals and its accuracy of registration maintained in accordance with good practice. On request of any Member, special tests shall be made at the expense of the Member requesting such special test.

8.6 If on any test of metering equipment, an inaccuracy shall be disclosed exceeding two percent, the account between the Members for service theretofore delivered shall be adjusted to correct for the inaccuracy disclosed over the shorter of the following two periods: (1) for the thirty-day period immediately preceding the day of the test or (2) for the period that such inaccuracy may be determined to have existed. Should the metering equipment as hereinabove provided fail to register at any time, the electric power and energy delivered shall be determined from the check meters, if installed, or otherwise shall be determined from the best available data.

#### ARTICLE 9

##### RECORDS AND STATEMENTS

9.1 In addition to meter records to be kept by the Members as provided under Article 8, the Members shall keep in duplicate such log sheets and other records as may be needed to afford a clear history of the various deliveries of electric power and energy made pursuant to the provisions of this agreement. The

originals of log sheets and other records shall be retained by the Member keeping the records and the duplicates shall be delivered as determined and agreed upon by the Operating Committee.

#### ARTICLE 10

##### TAXES

10.1 If at any time during the duration of this agreement, there should be levied and/or assessed against any Member any tax by any taxing authority in respect of the electric power and energy generated, purchased, sold, imported, transmitted, interchanged, or exchanged by said Member in addition to or different from the forms of such taxes now being levied or assessed against said Member, or there should be any increase or decrease in the rate of such existing or future taxes, and such taxes or changes in such taxes should result in increasing or decreasing the cost to said Member in carrying out the provisions of this agreement, then in such event adjustments shall be made in the rates and charges for electric power and energy furnished hereunder to make allowance for such taxes and changes in such taxes in an equitable manner.

#### ARTICLE 11

##### BILLINGS AND PAYMENTS

11.1 All bills for amounts owed hereunder shall be due and payable on the twentieth day of the month next following the monthly or other period to which such bills are applicable, or on the fifteenth day following receipt of bill, whichever date be later. Interest on unpaid amounts shall accrue at the rate of six percent per annum from the date due until the date upon which payment is made. Unless otherwise agreed upon a

calendar month shall be the standard monthly period for the purpose of settlements under this agreement.

ARTICLE 12

MODIFICATION

12.1 Any Member, by written notice given to the other Members and Agent not less than ninety days prior to the beginning of any calendar year of the duration of this agreement, may call for a reconsideration of the terms and conditions herein provided. If such reconsideration is called for, there shall be taken into account any changed conditions, any results from the application of said terms and conditions, and any other factors that might cause said terms and conditions to result in an inequitable division of the benefits of interconnected operation or in an inadequate realization of such benefits. Any modification in terms and conditions agreed to by the Members following such reconsideration shall become effective the first day of January of the calendar year next following the aforesaid ninety-day notice period.

ARTICLE 13

DURATION OF AGREEMENT

13.1 This agreement shall become effective August 1, 1951, and shall continue in effect for an initial period expiring December 31, 1971, and thereafter for successive periods of one year each until terminated as provided under subdivision 13.2 below.

13.2 Any Member upon at least three years' prior written notice to the other Members and Agent may terminate this agreement at the expiration of said initial period or at the expiration of any successive period of one year.

ARTICLE 14

TERMINATION OF EXISTING AGREEMENTS

14.1 Upon their joint execution of this agreement Appalachian Company and Ohio Company agree that the inter-connection agreements between them dated November 28, 1930, and September 1, 1936, respectively, and all supplements and amendments thereto, shall terminate as of July 31, 1951, and that all further obligations between them in respect thereof shall cease and terminate as of such date, except in respect of any payments or liabilities incurred in respect thereof prior to such termination date.

14.2 Upon their joint execution of this agreement Indiana Company and Ohio Company agree that the interconnection agreements between them, dated October 15, 1930, and September 1, 1936, respectively, and all supplements and amendments thereto, shall terminate as of July 31, 1951, and that all further obligations between them in respect thereof shall cease and terminate as of such date, except in respect of any payments or liabilities incurred in respect thereof prior to such termination date.

ARTICLE 15

REGULATORY AUTHORITIES

15.1 This agreement is made subject to the jurisdiction of any governmental authority or authorities having lawful jurisdiction in the premises.

ARTICLE 16

ASSIGNMENT

16.1 This agreement shall inure to the benefit of and be binding upon the successors and assigns of the respective parties.

16.2 IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed in their respective corporate names and on their behalf by their proper officers thereunto duly authorized as of the day and year first above written.

(The numerous pages of the various signatories to the original Agreement and subsequent modifications thereto, are omitted herein.)







**Kentucky Power  
d/b/a  
American Electric Power**

**REQUEST**

Refer to the Wagner Testimony, Exhibit EKW-4.

- a. Explain why the return on investment is applied to the net cost of the environmental facilities rather than a rate base, where the net cost of the environmental facilities would be reduced by accumulated depreciation and accumulated deferred income taxes.
- b. Provide Kentucky Power's Pool Capacity Deficit and Member Load Ratio as of February 2005.
- c. Using the November 2004 levels of investment and costs, prepare a revised Exhibit EKW-4 showing the impact from using Kentucky Power's February 2005 Pool Capacity Deficit.

**RESPONSE**

- a. Upon review, the Company believes the term "return on investment" as used on Exhibit EKW-4 is not correct. Rather the correct terminology is "monthly carrying charge rate". See revised Exhibit EKW-4 submitted herewith (page 2 of 4).

EKW-4 demonstrates the calculation of the environmental monthly capacity costs incurred pursuant to the Interconnection Agreement. Article 6, paragraphs 6.21 and 6.211 state the FERC Account Numbers to be included in the determination of a member's weighted average investment. Accumulated depreciation and accumulated deferred taxes are not included in the account numbers in paragraph 6.211.

- b. KPCo's AEP Pool capacity deficit for February 2005 was 366,300 MW. KPCo's member load ratio for February 2005 was .07838. See the Company's March 2005 Environmental filing ES Form 3.14 line no 13 which is attached to this response (page 3 of 4).

c. See the attached page 4 of 4 which demonstrates that there are three changes caused by using the February 2005 member load ratio. See lines 15, 16 and 18. Line 15 would change from 220,100 MW to 366,300 MW. Line 16 would change from \$180,484 to \$300,366 (366,300 MW x \$0.82). Line 18 would change from \$2,165,784 to \$3,604,392 (\$300,366 x 12).

**WITNESS:** Errol K Wagner

Kentucky Power Company  
 AEP Pool Monthly  
 Environmental Capacity Costs  
 for November 2004

Exhibit EKW-4  
 Revised 5/2/05

<u>Ln. No.</u>	<u>Description</u>	<u>I&amp;M</u>	<u>OPCo</u>	<u>KPCo</u>
1	Net Cost of Envir. Facilities Investment Installed (\$ Thousands) (See Exhibit EKW-1)	\$35,604	\$593,508	
2	Installed Capacity (kw) (See Exhibit EKW-3)	<u>5,089,000</u>	<u>8,472,000</u>	
3	Wgt. Ave. Installed Cost (Ln1/Ln2) (\$/kw)	<u>\$7.00</u>	<u>\$70.06</u>	
4	Monthly <b>Carrying Charge Rate</b> (See Exhibit EKW-3)	0.0137	0.0137	
5	Envir. Member Cap. Invest. Rate (\$/kw/month)	\$0.10	\$0.96	
<b>Plus: Operations &amp; 1/2 Maintenance</b>				
6	Amos Unit No. 3 SCR (Exhibit EKW-5 L 11)		\$0.00	
7	Cardinal Unit No. 1 SCR (Exhibit EKW-6 L.9)		\$0.00	
8	Gavin Unit No. 1 SCR (Exhibit EKW-7 L 10)		\$0.00	
9	Gavin Unit No. 2 SCR (Exhibit EKW-8 L10)		\$0.00	
10	Muskingum River Unit No. 5 SCR (Exhibit EKW-9 L 9)		\$0.00	
11	Title V Air Emission Fees (Exhibit EKW-10 L 12)	<u>\$0.00</u>	<u>\$0.01</u>	
12	Sub-Total	\$0.10	\$0.97	
13	Surplus Company Weighting (See Exhibit EKW-10)	<u>17.81%</u>	<u>82.19%</u>	
14	Effect on Wgt. Ave. Rate (Ln11 * 12)	0.02	0.8	0.82
15	KPCo's Pool Capacity Deficit (See Exhibit EKW-2)			<u>220,100</u>
16	KPCo's Monthly Envir. Pool Cap. Charge			\$180,482
17	Number of months			<u>12</u>
18	Annual Effect of Envir. Pool Cap. Charge			<u>\$2,165,784</u>

AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT  
 CURRENT PERIOD REVENUE REQUIREMENT  
 GAVIN SCRUBBER COSTS

For the Expense Month of February 2005

LINE NO.	COST	AMOUNTS
	Operations :	
1	Disposal (5010000)	\$28,364
2	Lime (5020000)	\$2,582,833
3	Lease (5070000)	<u>\$4,176,430</u>
4	Total Operations (1) + (2) + (3)	\$6,787,627
	Maintenance :	
5	Scrubbers (5120000)	\$354,920
6	1/2 of Maintenance (5) * 50%	<u>\$177,460</u>
7	Fixed O&M (4) + (6)	\$6,965,087
	Impact on Weighted Average Capacity Rate :	
8	Ohio Power Steam Capacity (kw)	8,472,000
9	Gavin Scrubber Rate (\$/kw) (7) / (8)	\$0.82
10	Ohio Power Surplus Weighing	78.00%
11	Portion of Weighted Average Capacity Rate Attributed to Gavin Scrubber (\$/kw) (9) * (10)	\$0.64
	Gavin Costs to Kentucky Power :	
12	Gavin Scrubber Portion (\$/kw) (11)	\$0.64
13	Kentucky Power Capacity Deficit (kw)	<u>366,300</u>
14	Scrubber Cost to Kentucky Power (12) * (13)	\$234,432

Total Cost at Line 14 is to be recorded on ES FORM 3.10, Line 16.

**Kentucky Power Company  
 AEP Pool Monthly  
 Environmental Capacity Costs  
 for February 2005**

<u>Ln. No.</u>	<u>Description</u>	<u>I&amp;M</u>	<u>OPCo</u>	<u>KPCo</u>
1	Net Cost of Envir. Facilities Investment Installed (\$ Thousands) (See Exhibit EKW-1)	\$35,604	\$593,508	
2	Installed Capacity (kw) (See Exhibit EKW-3)	<u>5,089,000</u>	<u>8,472,000</u>	
3	Wgt. Ave. Installed Cost (Ln1/Ln2) (\$/kw)	<u>\$7.00</u>	<u>\$70.06</u>	
4	Monthly <b>Carrying Charge Rate</b> (See Exhibit EKW-3)	0.0137	0.0137	
5	Envir. Member Cap. Invest. Rate (\$/kw/month)	\$0.10	\$0.96	
<b>Plus: Operations &amp; 1/2 Maintenance</b>				
6	Amos Unit No. 3 SCR (Exhibit EKW-5 L 11)		\$0.00	
7	Cardinal Unit No. 1 SCR (Exhibit EKW-6 L.9)		\$0.00	
8	Gavin Unit No. 1 SCR (Exhibit EKW-7 L 10)		\$0.00	
9	Gavin Unit No. 2 SCR (Exhibit EKW-8 L10)		\$0.00	
10	Muskingum River Unit No. 5 SCR (Exhibit EKW-9 L 9)		\$0.00	
11	Title V Air Emission Fees (Exhibit EKW-10 L 12)	<u>\$0.00</u>	<u>\$0.01</u>	
12	Sub-Total	\$0.10	\$0.97	
13	Surplus Company Weighting (See Exhibit EKW-10)	<u>17.81%</u>	<u>82.19%</u>	
14	Effect on Wgt. Ave. Rate (Ln11 * 12)	0.02	0.8	0.82
15	KPCo's Pool Capacity Deficit (See Exhibit EKW-2)			<u>366,300</u>
16	KPCo's Monthly Envir. Pool Cap. Charge			\$300,366
17	Number of months			<u>12</u>
18	Annual Effect of Envir. Pool Cap. Charge			<u>\$3,604,392</u>



**Kentucky Power  
d/b/a  
American Electric Power**

**REQUEST**

Refer to the Wagner Testimony, Exhibit EKW-10, lines 13 through 16. Explain how the generating capacities shown in this part of the exhibit are determined.

**RESPONSE**

The generating capacities shown on Exhibit EKW-10 lines 13 through 16 are determined in accordance with Article 5, paragraph 5.7 of the Interconnection Agreement. Capacity installed at the generating stations owned by the Members and the capacity available to the Members through interconnection arrangements, as designated by the Operating Committee with the approval of the Members, are included in a particular Member's Primary Capacity.

**WITNESS:** Errol K. Wagner





**Kentucky Power  
d/b/a  
American Electric Power**

**REQUEST**

Refer to the Wagner Testimony, Exhibit EKW-12.

- a. Reconcile the low NOx burner's installed cost shown on this exhibit with the "New Environmental Facilities Cost" shown on Exhibit EKW-1, page 4 of 4, lines 42 and 43.
- b. Explain how the weighted average cost of capital of 12.19 percent was determined. Show all components of the charge and describe all assumptions used in the determination of the carrying charge.
- c. Explain how Kentucky Power's portion of the Rockport low NOx burners of 30 percent was determined.

**RESPONSE**

a. Exhibit EKW-12 only reflects AEGCo's portion of the investment in the Rockport Low NOx burners because the Rockport Unit Power Agreement is based on AEGCo's investment (\$8,234,000 for Rockport Unit No 1 and \$8,304,000 for Rockport Unit No 2). Exhibit EKW-2 reflects the total (I&M and AEGCo's) Rockport Low NOx Burner costs, i.e. \$16,753,000 for Rockport Unit No 1 and \$16,712,000 for Rockport Unit No 2. When I&M's share of the costs are added to the AEGCo's costs as shown on Exhibit EKW-12, the total costs are equal to the costs shown on Exhibit EKW-1, as shown on the following table:

	I&M	AEG	Total
Rockport Unit No 1	\$8,519,000	\$8,234,000	\$16,753,000
Rockport Unit No 2	\$8,408,000	\$8,304,000	\$16,712,000

b. The derivation of the weighted cost of capital is set forth in ES Form 3.21.

Attached is a copy of ES Form 3.21 from the Company's December Environmental monthly filing which demonstrates the calculation of the 12.19%.

c. Under the Rockport Unit Power Agreement, KPCo is responsible for 195 MW or 30% (195 MW / 650 MW) of AEG's 50% of the Rockport Generating Unit.

WITNESS: Errol K Wagner

AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT  
 CURRENT PERIOD REVENUE REQUIREMENT  
 ROCKPORT UNIT POWER AGREEMENT COST OF CAPITAL

For the Expense Month of November 2004

LINE NO.	Component	Balances	Cap. Structures	Cost Rates		WACC (NET OF TAX)	GRCF		WACC (PRE - TAX)
		As of 11/30/2004							
1	L/T DEBT	44,818,168	45.0843%	4.6610%		2.1014%			2.1014%
2	S/T DEBT	6,097,311	6.1335%	1.8715%		0.1148%			0.1148%
3	S/T INV	0	0.0000%	4.3270%		0.0000%			0.0000%
4	DEBT								
5	C EQUITY	48,494,120	48.7822%	12.1600%	1/	5.9319%	1.681379	2/	9.9738%
6	TOTAL	99,409,599	100.0000%			8.1481%			12.1900%

  

WACC = Weighted Average Cost of Capital		
1/	Cost Rates per the Provisions of the Rockport Unit Power Agreement	
2/	Gross Revenue Conversion Factor (GRCF) Calculation:	
1	OPERATING REVENUE	
2	LESS: INDIANA ADJUSTED GROSS INCOME	100.00
3	(LINE 1 X .085)	
4	INCOME BEFORE FED INC TAX	8.500
5	LESS: FEDERAL INCOME TAX	91.500
6	(LINE 4 X .35)	
7	OPERATING INCOME PERCENTAGE	32.025
8	GROSS REVENUE CONVERSION	59.475
9	FACTOR (100% / LINE 7)	1.681379

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



**Kentucky Power**  
**d/b/a**  
**American Electric Power**

**REQUEST**

Refer to the Wagner Testimony, Exhibit EKW-13.

- a. Reconcile the low NOx burners' installed cost shown on this exhibit with the "Less Original Facility Cost in Base Rates" shown on Exhibit EKW-1, page 4 of 4, line 42.
- b. Explain how the weighted average cost of capital of 12.6216 percent was determined. Show all components of the charge and describe all assumptions used in the determination of the carrying charge.

**RESPONSE**

- a. The caption for line 1 on Exhibit EKW-13 should read: "AEGCo's Original Burners' Installed Costs." See attached Revised Exhibit EKW-13.

The Rockport Unit No 1 original burners included in the calculation of the Company's 1990 base rate was \$6,210,000 as shown on Exhibit EKW-1, line 42, column 6. This included both I&M's and AEGCo's portion of the burners as of December 31, 1990. AEGCo's share of the original burners at December 31, 1990 was \$3,104,670.

- b. Attached is a copy of ES Form 2.21 from the Company's December 2004 Environmental monthly filing which demonstrates the calculation of the 12.6216%.

**WITNESS:** Errol K Wagner

**Kentucky Power Company  
 Rockport Burner Retirements  
 Environmental Surcharge Calculations  
 Base Period  
 Revenue Requirement**

**Exhibit EKW-13  
 Revised 5/02/05**

For the Month of December 1990

Ln. No	Cost Component	Unit <u>No. 1</u>	<u>Total</u>
Return on Rate Base:			
1	AEGCo <b>Original</b> Burners Installed Cost	\$3,104,670	
2	Less Accumulated Depreciation	\$699,793	
3	Less Accum. Def. Income Taxes	<u>\$301,045</u>	
4	Total Rate Base	\$2,103,832	\$2,103,832
5	Weighted Average Cost of Capital		12.6216%
6	Monthly Weighted Avg, Cost of Capital		<u>1.0518%</u>
7	Monthly Return on Rate Base (Lns. 4 * 6)		<u>\$22,128</u>
Operating Expenses:			
8	Monthly Depreciation Expense	\$6,171	<u>\$6,171</u>
9	Total Operating Expense		<u>\$6,171</u>
10	Total Revenue Requirement Associated with Rockport Low Nox Burners (Lns 7 + 9)		<u>\$28,299</u>
11	KPCo's Portion of Rockport's Low Nox Burners ( Ln 10 * 30%)		\$8,490
12	Annualize		<u>12</u>
13	Annualized Revenue Requirement		<u>\$101,877</u> *

\* Any difference is due to rounding

AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT  
 CURRENT PERIOD REVENUE REQUIREMENT  
 ROCKPORT UNIT POWER AGREEMENT COST OF CAPITAL  
 For the Expense Month of December 1990

LINE NO.	DESC	CAP. BAL.	WEIGHTED CAP. BAL.	CAP. COST RATES		WAC (NET OF TAX)	GRCF		WAC (PRE - TAX)	
1	L/T DEBT	162,770,349	70.3618%	7.7961%		5.4855%				
2	S/T DEBT	0	0.0000%	0.0000%		0.0000%				
3	S/T INV	(26,356,261)	-11.3932%	7.7961%		-0.8882%				
4	DEBT									
5	C EQUITY	94,919,467	41.0314%	12.1600%	1/	4.9894%	1.608260	2/	4.5973%	
6	TOTAL	231,333,555	100.0000%						8.0243%	
									12.6216%	
WACC = Weighted Average Cost of Capital										
1/	Cost Rates per the Provisions of the Rockport Unit Power Agreement							12.16%		
2/	Gross Revenue Conversion Factor (GRCF) Calculation:									
1	OPERATING REVENUE							100.00		
2	LESS: INDIANA ADJUSTED GROSS INCOME									
3	(LINE 1 X .0434)									
4	INCOME BEFORE FED INC TAX							4.340		
5	LESS: FEDERAL INCOME TAX							95.660		
6	(LINE 4 X .35)									
7	OPERATING INCOME PERCENTAGE							33.481		
8	GROSS REVENUE CONVERSION							62.179		
9	FACTOR (100% / LINE 7)							1.608260		





**Kentucky Power  
d/b/a  
American Electric Power**

**REQUEST**

Assume for purposes of this question that the Commission approves Kentucky Power's amendment to its environmental compliance plan and modification to the surcharge mechanism as proposed. Indicate what schedules Kentucky Power would propose to include with the monthly environmental surcharge filing to document the additional environmental costs it was permitted to recover from ratepayers.

**RESPONSE**

Attached is a copy of the Company's proposed revised monthly environmental surcharge schedules. The Company started with the November, 2004 monthly environmental surcharge filing and modified the schedules to include the 2005 Plan's environmental costs.

Schedule ES Form 3.20 was revised to reflect KPCo's environmental costs associated with the Rockport Unit Power low NOx burners investment. Schedule ES Form 3.14 was revised to reflect KPCo's environmental costs associated with the AEP Pool capacity costs. Schedule ES Form 3.14 pages 3 through 11, calculates the environmental costs at each generating plant. Each generating plant's total monthly amount is also placed on ES Form 3.14 page 1 to calculate the total monthly AEP Pool environmental costs. Schedule ES Form 3.14 page 2, is used to calculate the monthly working capital associated with the AEP Pool environmental costs. Schedule ES Form 3.13 was revised to include the 2005 Plan's costs. Schedule ES Form 3.10 lines 7 and 16 were revised to include the 2005 Plan's costs. Schedule ES Form 2.11 was revised to include the Rockport Unit No 1's original burners net investment at December, 1990. Schedule ES Form 2.00 line 2 includes the new amount from Schedule ES Form 2.11. Schedule ES Form 1.00 includes both the environmental costs from the original November, 2004 monthly filing and the environmental costs associated with the 2005 Plan. The net change from the original November, 2004 monthly filing and the revised November, 2004 monthly filing, which includes the environmental costs associated with the 2005 Plan, was an increase on line 8 of Schedule ES Form 1.00 of \$152,003 (1,868,774 - \$1,716,771).

The above results reflect the adjustment to the Gavin SCR Catalyst Replacement discussed by the Company in its response to the Commission Staff Second Set Item No. 5 of \$1,147,000.

**WITNESS:** Errol K. Wagner

ES FORM 1.00

KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT  
 CALCULATION OF E(m) and SURCHARGE FACTOR  
 For the Expense Month of November 2004

<u>CALCULATION OF E(m)</u>		
E(m) = CRR - BRR		
LINE 1	CRR from ES FORM 3.00	\$2,683,411
LINE 2	Brr from ES FORM 2.00	\$24,275
LINE 3	E(m) (LINE 1 - LINE 2)	\$2,659,136
LINE 4	Kentucky Retail Jurisdictional Allocation Factor, from ES FORM 3.30, Schedule of Revenues, LINE 1	66.7%
LINE 5	KY Retail E(m) (LINE 3 * LINE 4)	\$1,773,644
LINE 6	Over/(Under) Recovery Adjustment from ES FORM 3.30	\$95,130
LINE 7	Net KY Retail E(m) (LINE 5 + LINE 6)	\$1,868,774
<u>SURCHARGE FACTOR</u>		
LINE 8	Net KY Retail E(m) (Line 7)	\$1,868,774
LINE 9	KY Retail R(m) from ES FORM 3.30	\$25,019,832
LINE 10	Environmental Surcharge Factor for Expense Month (Line 8 / LINE 9)	7.4692%

Effective Date for Billing: January 2005

Submitted By : \_\_\_\_\_

Title : Director Regulatory Services

Date Submitted : December 19, 2004

KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT  
 BASE PERIOD REVENUE REQUIREMENT  
 For the Expense Month of December 1990

CALCULATION OF BASE PERIOD REVENUE REQUIREMENT

LINE NO.	COMPONENTS	
1	First Component - Associated with Big Sandy $((RB\ KP(B)) (ROR\ KP(B))/12)$ ES FORM 2.10, Line 11	\$15,625
2	Second Component - Associated with Rockport $[((RB\ IM(B)) (ROR\ IM(B))/12) + OE\ IM\ (B)] (.15)$ ES FORM 2.11, Line 12	<u>\$8,650</u>
3	Total Base Period Revenue Requirement, BRR Record on ES FORM 1.00, Line 2	\$24,275

ES FORM 2.10

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

For the Month of December 1990

LINE NO.	COST COMPONENT		
	Return on Rate Base (Balances as of December 31, 1990) :		
1	Utility Plant at Original Cost	\$3,920,119	
2	Less Accumulated Depreciation	(\$2,995,865)	
3	Less Acum. Def. Income Taxes	(\$475,467)	
4	Total Rate Base		\$448,787
5	Weighted Average Cost of Capital - ES FORM 2.20	12.8200%	
6	Monthly Weighted Avg. Cost of Capital (5)/12		1.0683%
7	December 1990 Return on Rate Base (4) * (6)		\$4,794
	Operating Expenses:		
8	December 1990 Depreciation Expense		\$10,597
9	December 1990 Property Tax		<u>\$234</u>
10	Total Operating Expenses (8) + (9)		<u>\$10,831</u>
11	Total Revenue Requirement, Costs Associated with Big Sandy (7) + (10) Record on ES FORM 2.00, Line 1		\$15,625

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

For the Month of December 1990

LINE NO.	COST COMPONENT	December 1990 Weighted Average Cost of Capital	Rockport Plant Common	Unit No. 1	Total
(1)	(2)	(3)	(4)	(5)	(6)
	Return on Rate Base :				
1	Rockport Plant Continuous Environmental Monitoring System (CEMS) Installed Cost		\$107,550		
2	AEGCo Original Burners (OB) Installed Cost			\$3,104,670	
3	Less Accumulated Depreciation		(\$22,554)	(\$699,793)	
4	Less Accum. Def. Income Taxes		(\$13,834)	(\$301,045)	
5	Total Rate Base		\$71,162	\$2,103,832	
6	Weighted Average Cost of Capital - ES FORM 2.21	12.6216%			
7	Monthly Weighted Avg. Cost of Capital (LINE 6 / 12)		1.0518%	1.0518%	
8	Monthly Return of Rate Base (Line 5 * Line 7)		\$748	\$22,128	
	Operating Expenses :				
9	Monthly Depreciation Expense		\$313	\$6,171	
10	Monthly Indiana Air Emissions Fee		\$7	\$0	
11	Total Operating Expenses (8 + 9)		\$320	\$6,171	
12	Total Revenue Requirement, Cost Associated with Rockport Plant CEMS and Original Burners (Line 8 + Line 11)		\$1,068	\$28,299	
13	Kentucky Power Portion of Rockport CEMS (Line 12 * 15%)		\$160		
14	Kentucky Power Portion of Rockport OB (Line 12 * 30%)			\$8,490	
	Total Kentucky power Portion of Rockport Plant's Total Revenue Requirement (Column 4, Line 13 + Column 5, Line 14)				
15	(Note: Record on ES FORM 2.00, Line 1)				\$8,650

The Base Period Revenue Requirement information will only need to be filed once during the first 2-year period, as part of the first monthly surcharge filing. Attach a schedule similar to Exhibit EKW-2, page 11 of 11 (Wagner Direct Testimony in Case No. 96-489), showing the calculation of the Weighted Average Cost of Capital. These calculations should reflect the provisions of the Rockport Unit Power Agreement, and be as of December 1990.

KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT  
 CURRENT PERIOD REVENUE REQUIREMENT  
 BIG SANDY PLANT COST OF CAPITAL  
 For the Expense Month of December 1990

LINE NO.	Component	Balances	Cap. Structures	Cost Rates		WACC (NET OF TAX)	GRCF		WACC (PRE - TAX)	
1	L/T DEBT	240,670,885	53.59%	8.20%		4.39%			4.39%	
2	S/T DEBT	17,796,815	3.96%	9.16%		0.36%			0.36%	
3	C EQUITY	190,611,826	42.45%	11.50%	1/	4.88%	1.6545	2/	8.07%	
4	TOTAL	449,079,526	100.00%			9.63%			12.82%	
1/	WACC = Weighted Average Cost of Capital Rate of Return on Common Equity per Case No. 2002 - 00169							11.50%		
2/	Gross Revenue Conversion Factor (GRCF) Calculation:									
1	OPERATING REVENUE						100.00			
2	UNCOLLECTIBLE						<u>0.20</u>			
3	INCOME BEFORE STATE TAXES						99.80			
4	LESS : STATE INCOME TAX									
5	(LINE 3 X .0825)						<u>8.23</u>			
6	INCOME BEFORE FED INC TAX						91.57			
7	LESS : FEDERAL INCOME TAX									
8	(LINE 6 X .34)						<u>31.13</u>			
9	OPERATING INC PERCENTAGE						<u>60.44</u>			
10	GROSS REVENUE CONVERSION									
11	FACTOR (100%/LINE 9)						1.6545			

KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT  
 CURRENT PERIOD REVENUE REQUIREMENT  
 ROCKPORT UNIT POWER AGREEMENT COST OF CAPITAL  
 For the Expense Month of December 1990

LINE NO.	DESC	CAP. BAL.	WEIGHTED CAP. BAL.	CAP. COST RATES		WAC (NET OF TAX)	GRCF		WAC (PRE - TAX)	
1	L/T DEBT	162,770,349	70.3618%	7.7961%		5.4855%				
2	S/T DEBT	0	0.0000%	0.0000%		0.0000%				
3	S/T INV	(26,356,261)	-11.3932%	7.7961%		-0.8882%				
4	DEBT								4.5973%	
5	C EQUITY	94,919,467	41.0314%	12.1600%	1/	4.9894%	1.608260	2/	8.0243%	
6	TOTAL	231,333,555	100.0000%						12.6216%	
WACC = Weighted Average Cost of Capital										
1/	Cost Rates per the Provisions of the Rockport Unit Power Agreement							12.16%		
2/	Gross Revenue Conversion Factor (GRCF) Calculation:									
1	OPERATING REVENUE							100.00		
2	LESS: INDIANA AJUSTED GROSS INCOME									
3	(LINE 1 X .0434)							<u>4.340</u>		
4	INCOME BEFORE FED INC TAX							95.660		
5	LESS: FEDERAL INCOME TAX									
6	(LINE 4 X .35)							<u>33.481</u>		
7	OPERATING INCOME PERCENTAGE							<u>62.179</u>		
8	GROSS REVENUE CONVERSION									
9	FACTOR (100% / LINE 7)							1.608260		

KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT  
 CURRENT PERIOD REVENUE REQUIREMENT  
 For the Expense Month of November 2004

CALCULATION OF CURRENT PERIOD REVENUE REQUIREMENT

LINE NO.	COMPONENTS		
1	<b>First Component:</b> Associated with Big Sandy Plant ((RB KP(C)) (ROR KP(C)/12)) + OE KP(C) <b>ES FORM 3.10</b> , Line 20		\$2,621,591
2	<b>Second Component:</b> Associated with Rockport Plant [((RB IM(C)) (ROR IM(C)/12)) + OE IM(C)] <b>ES FORM 3.20</b> , Line 12		\$61,820
	<b>Third Component:</b> Net Proceeds from Emission Allowances Sales AS 1) <b>SO<sub>2</sub></b> - EPA Auction Proceeds received during Expense Month 2) <b>SO<sub>2</sub></b> - Net Gain or (Loss) from Allowance Sales, in compliance with the AEP Interim Allowance Agreement, received during Expense Month Total Net Proceeds from SO <sub>2</sub> Allowances 1) <b>NO<sub>x</sub></b> - EPA Auction Proceeds received during Expense Month 2) <b>NO<sub>x</sub></b> - EPA Auction Proceeds, received during Expense Month 3) <b>NO<sub>x</sub></b> - Net Gain or Loss from NO <sub>x</sub> Allowances Sales, received during Expense Month Total Net Proceeds from NO <sub>x</sub> Allowances	\$0           \$0           \$0           \$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.		----- \$2,683,411



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

For the Expense Month of November 2004

LINE NO.	COST COMPONENT		
	Return on Rate Base :		
1	Utility Plant at Original Cost	\$187,496,762	
2	Less Accumulated Depreciation	(\$15,719,055)	
3	Less Accum. Def. Income Taxes	(\$24,326,036)	
4	Net Utility Plant		\$147,451,671
5	SO2 Emission Allowance Inventory from ES FORM 3.11		\$13,018,708
6	ECR & NOx Emission Allowance Inventory from ES FORM 3.12		\$0
7	Cash Working Capital Allowance from ES FORM 3.13, Line11		\$57,777
8	Total Rate Base		\$160,528,156
9	Weighted Average Cost of Capital - ES FORM 3.15	10.20%	
10	Monthly Weighted Avg. Cost of Capital (7)/12		0.85%
11	Monthly Return of Rate Base (6) * (8)		\$1,364,489
	Operating Expenses :		
12	Monthly Depreciation Expense		\$564,951
13	Monthly Catalyst Amortization Expense		\$46,029
14	Monthly Property Taxes		\$7,829
15	Monthly Kentucky Air Emissions Fee		\$23,668
16	Monthly Environmental AEP Pool Capacity Costs from ES FORM 3.14		\$360,964
17	Monthly 2003 Plan Non-Fuel O&M Expenses from ES FORM 3.13		\$13,821
18	Monthly SO2 Emission Allowance Consumption		\$239,840
19	Monthly ERC & NOx Emission Allowance Consumption		\$0
20	Total Operating Expenses [Line 12 thru Line 18]		\$1,257,102
21	Total Revenue Requirement - Big Sandy Record on ES FORM 3.00, Line 1		\$2,621,591

ES FORM 3.11

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

For the Expense Month of November 2004

	(1) Allowance Activity in Month	(2) Cumulative Balance	(3) Dollar Value of Activity	(4) Cumulative Dollar Balance	(5) Weighted Average Cost
BEGINNING INVENTORY		754,608		\$4,685,726	\$6.209
Additions -					
EPA Allowances	0	228,405	\$0	\$0	\$0.000
Gavin Reallocation	0	3,853	\$0	\$0	\$0.000
P & E Transfers In	0	312,630	\$0	\$3,639,150	\$11.640
Intercompany Purchases	0	12,132	\$0	\$1,615,719	\$133.178
Other (List)	0	452,661	\$0	\$62,290,516	\$137.610
Withdrawals -					
P & E Transfers Out	0	2,415	\$0	\$272,099	\$112.670
Intercompany Sales	0	51,893	\$0	\$4,941,374	\$95.222
Off - System Sales	0	276,219	\$0	\$28,737,649	\$104.039
SO2 Emissions Allowances					
Adjustments	0	34,941	\$0	\$0	\$0.000
SO2 Emissions Allowances					
Consumed By Kentucky Power	3,402	280,344	\$239,840	\$25,261,281	\$90.108
ENDING INVENTORY - Record Balance in Column (4) on ES FORM 3.10, Line 5		1,118,477		\$13,018,708	\$11.640
Expense Month Member Load Ratio for AEP/Kentucky Power					<b>0.07207</b>

**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.

KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT  
 CURRENT PERIOD REVENUE REQUIREMENT  
 ECR and NOx EMISSIONS ALLOWANCE INVENTORY

For the Expense Month of November 2004

	(1) Allowance Activity in Month	(2) Cumulative Balance	(3) Dollar Value of Activity	(4) Cumulative Dollar Balance	(5) Weighted Average Cost
BEGINNING INVENTORY		0		\$0	0.000
Additions -					
EPA Allowances	0	13,943	\$0	\$0	
P&E Transfers In	0	0	\$0	\$0	0.000
Intercompany Purchases					
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	450	\$0	\$0	0.000
ERC Consumed By Kentucky Power	0	930	\$0	\$0	0.000
NOx Consumed By Kentucky Power	0	1,083	\$0	\$0	0.000
ENDING INVENTORY - Record Balance in Column (4) on ES FORM 3.10, Line 5		11,480		\$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

KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT  
 CURRENT PERIOD REVENUE REQUIREMENT  
 CASH WORKING CAPITAL ALLOWANCE

For the Expense Month of November 2004

LINE NO.	O&M Expenses		
	<b>1997 &amp; 2005 Plan :</b>		
1	Monthly Kentucky Air Emissions Fee	\$23,668	
	Total Monthly AEP Pool	\$184,884	
2	Environmental Capacity Costs	<u>\$239,840</u>	
3	Monthly SO2 Allowance Consumption		\$448,392
4	Total 1997 & 2005 Plan O&M Expenses		
	<b>2003 Plan :</b>		
5	Monthly Variable Cladding at Big Sandy Unit 1	\$0	
6	Monthly Urea Consumption at Big Sandy Unit 2	\$0	
7	Monthly Catalyst Replacement at Big Sandy Unit 2	\$0	
8	Monthly ERC & NOx Allowance Consumption	\$0	
9	Equipment - Associated Operating Expenses	\$301	
10	Equipment - Associated Maintenance Expenses	<u>\$13,520</u>	
11	Total 2003 Plan O&M Expenses		<u>\$13,821</u>
12	Total Monthly O&M Expenses		<u>\$462,213</u>
13	Cash Working Capital Allowance ( Line 10 X 1/8 )		\$57,777

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

**KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT**  
**Environmental Equipment Operation and Maintenance Costs**  
**November 2004**

<b>Work Description</b>	<b>Material Costs</b>	<b>Outside Contract Labor</b>	<b>Misc Other Costs</b>	<b>Total Costs</b>
Repair Expansion Joint SCR Inlet & Reactor	\$750.00	\$0.00	\$0.00	\$750.00
Installation of SCR Mixing Vanes	\$0.00	\$0.00	\$0.00	\$0.00
Installation of Turning Vanes in Booster Fans	\$0.00	\$0.00	\$0.00	\$0.00
SCR Outlet NOX Probe	\$0.00	\$0.00	\$0.00	\$0.00
Repair Booster Fans	\$250.00	\$0.00	\$0.00	\$250.00
Inspection and Maintenance of Ammonia On Demand (AOD) System	\$24.71	\$540.50	\$0.00	\$565.21
NOX Monitor Vacuum Pumps - SCR NOX Monitoring	\$0.00	\$0.00	\$0.00	\$0.00
Repair Expansion Joint 85' - 7"	\$0.00	\$0.00	\$0.00	\$0.00
Replace Experimental #21 Mill Burners	\$0.00	\$0.00	\$0.00	\$0.00
SCR Acoustic Sootblower Horns	\$120.00	\$0.00	\$0.00	\$120.00
<b>Total SCR November 2004 O &amp; M Expense</b>	<b>\$1,144.71</b>	<b>\$540.50</b>	<b>\$0.00</b>	<b>\$1,685.21</b>
Additional Operator Overtime During The Ozone Season	\$0.00	\$0.00	\$0.00	\$0.00
Emission Testing Required Under Permit -				
Operation	\$301.27	\$0.00	\$0.00	\$301.27
Maintenance	\$11,834.35	\$0.00	\$0.00	\$11,834.35
<b>November 2004 O &amp; M Expenses Filed+H37</b>				<b>\$13,821</b>

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

**For the Expense Month of November 2004**

<b>Line No. (1)</b>	<b>Cost Component (2)</b>	<b>Ohio Power Company's Environmental Cost to KPCo (3)</b>	<b>Indiana Michigan Power Company's Environmental Cost to KPCo (4)</b>	<b>Total (5)</b>
1	Amos Unit No. 3 Environmental Cost to Kentucky Power (ES FORM 3.14, Page 2 of 10, Line 22)	\$26,412		
2	Cardinal Unit No. 1 Environmental Cost to Kentucky Power (ES FORM 3.14, Page 3 of 10, Line 20)	\$28,613		
3	Gavin Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 4 of 10, Line 25)	\$255,316		
4	Kammer Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 5 of 10, Line 20)	\$2,201		
5	Mitchell Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 6 of 10, Line 20)	\$4,402		
6	Muskingum Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 7 of 10, Line 20)	\$35,216		
7	Sporn Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 8 of 10, Line 20)	\$4,402		
8	Rockport Plant Environmental to Kentucky Power (ES FORM 3.14, Page 9 of 10, Line 21)		\$2,201	
9	Tanners Creek Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 10 of 10, Line 20)		\$2,201	
10	Total AEP Pool Monthly Environmental Capacity Costs to Kentucky Power	\$356,562	\$4,402	\$360,964

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

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

For the Expense Month of November 2004

Line No. (1)	Cost Component (2)	Ohio Power Company's (OPCo) Environmental Cost to KPCo (3)	Indiana 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 2 of 10, Line 14)	\$4,418		
2	Cardinal Unit No. 1 Environmental Cost to Kentucky Power (ES FORM 3.14, Page 3 of 10, Line 10)	\$9,169		
3	Gavin Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 4 of 10, Line 15)	\$8,541,984		
4	Kammer Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 5 of 10, Line 10)	\$16,906		
5	Mitchell Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 6 of 10, Line 10)	\$21,271		
6	Muskingum Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 7 of 10, Line 10)	\$27,267		
7	Sporn Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 8 of 10, Line 10)	\$13,690		
8	Rockport Plant Environmental to Kentucky Power (ES FORM 3.14, Page 9 of 10, Column 3, Line 10)		\$5,313	
9	Rockport Plant Environmental to Kentucky Power (ES FORM 3.14, Page 9 of 10, Column 4, Line 10)		\$4,063	
10	Tanners Creek Plant Environmental Cost to Kentucky Power (ES FORM 3.14, Page 10 of 10, Line 20)		\$12,500	
11	Subtotal	\$8,634,705	\$21,876	
12	Steam Capacity By Company - OPCo (Column 3) / I&M (Column 4) (kw)	8,472,000	5,089,000	
13	Environmental Base (\$/kw)	\$1.02	\$0.00	
14	Company Surplus Weighting	82.19%	17.81%	
15	Portion of Weighted Average Capacity Rate Attributed to Environmental Fixed O&M Costs	\$0.84	\$0.00	
16	Kentucky Power Capacity Deficit (kw)	220,100	220,100	
17	Fixed O&M Environmental Cost to Kentucky Power	\$184,884	\$0	\$184,884

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

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

For the Expense Month of November 2004

LINE NO.	COST	AMOUNTS
1	Utility Plant at Original Cost	\$90,609,000
2	Member Primary Capacity Investment Rate (16.44% / 12)	<u>1.37%</u>
3	Total Rate Base	\$1,241,343
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 (11) X (12)	\$1,241,343
	Operations :	
6	Urea (5020002)	\$0
7	Trona (5020003)	\$0
8	Air Emission Fee	<u>\$6,626</u>
9	Total Operations (4) + (5) + (6)	\$6,626
	Maintenance :	
10	SCR Maintenance (5120000)	\$0
11	1/2 of Maintenance (7) * 50%	<u>\$0</u>
12	Fixed O&M (9) + (11)	\$6,626
13	Ohio Power Company's Percentage Ownership - O&M Cost	<u>66.67%</u>
14	OPCo's Share of O&M Cost Associated with Amos Unit No. 3 (12) X (13)	<u>\$4,418</u>
	Total Revenue Requirement,	
15	Cost Associated with Amos Unit No. 3 (5) + (14)	\$1,245,761
16	Ohio Power Company Steam Capacity (kw)	8,472,000
17	Amos Unit No. 3 Environmental Rate (\$/kw)	\$0.15
18	Ohio Power Surplus Weighing	82.19%
19	Portion of Weighted Average Capacity Rate Attributed to Amos Unit No. 3 SCR (\$/kw) (17) * (18)	\$0.12
	Amos Unit No. 3 Costs to Kentucky Power :	
20	Amos Unit No. 3 Portion (\$/kw) (19)	\$0.12
21	Kentucky Power Capacity Deficit (kw)	<u>220,100</u>
	Amos Unit No. 3 Environmental Cost to Kentucky Power (20) * (21)	
22	(ES FORM 3.14, Page 1 of 10, Line 1)	\$26,412



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

For the Expense Month of November 2004

LINE NO.	COST	AMOUNTS
1	Utility Plant at Original Cost	\$98,273,000
2	Member Primary Capacity Investment Rate (16.44% / 12)	<u>1.37%</u>
3	Total Rate Base	\$1,346,340
	Operations :	
4	Urea (5020002)	\$0
5	Trona (5020003)	\$0
6	Air Emission Fee	<u>\$9,169</u>
7	Total Operations (4) + (5) + (6)	\$9,169
	Maintenance :	
8	SCR Maintenance (5120000)	\$0
9	1/2 of Maintenance (8) * 50%	<u>\$0</u>
10	Fixed O&M (7) + (9)	<u>\$9,169</u>
	Total Revenue Requirement,	
11	Cost Associated with Cardinal Unit No. 3 (3) + (10)	<u>\$1,355,509</u>
12	Ohio Power Company's Percentage Ownership	100.00%
13	OPCo's Share of Cost Associated with Cardinal Unit No. 1 (11) X (12)	\$1,355,509
14	Ohio Power Company Steam Capacity (kw)	8,472,000
15	Cardinal Unit No. 1 (\$/kw)	\$0.16
16	Ohio Power Surplus Weighing	82.19%
17	Portion of Weighted Average Capacity Rate Attributed to Cardinal Unit No. 1 (\$/kw) (15) X (16)	\$0.13
	Cardinal Unit No. 1 Costs to Kentucky Power :	
18	Cardinal Unit No. 1 Portion (\$/kw) (17)	\$0.13
19	Kentucky Power Capacity Deficit (kw)	<u>220,100</u>
20	Cardinal Unit No. 1 Environmental Cost to Kentucky Power (18) * (19) (ES FORM 3.14, Page 1 of 10, Line 2)	\$28,613

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

For the Expense Month of November 2004

LINE NO.	COST	AMOUNTS
1	Utility Plant at Original Cost	\$246,996,000
2	Member Primary Capacity Investment Rate (16.44% / 12)	<u>1.37%</u>
3	Total Rate Base	\$3,383,845
	Operations :	
4	Sludge Disposal (5010000)	\$383,133
5	Lime (5020000)	\$2,707,369
6	Urea (5020002)	\$1,652
7	Trona (5020003)	(\$11,775)
8	Air Emission Fee	\$27,758
9	Lease (5070000)	<u>\$5,289,396</u>
10	Total Operations (4) + (5) + (6) + (7) + (8) + (9)	\$8,397,533
	Maintenance :	
11	SCR Maintenance (5120000)	\$272,901
12	Scrubber Maintenance (5120000)	<u>\$16,000</u>
13	Total Maintenance (11) + (12)	\$288,901
14	1/2 of Maintenance (13) * 50%	<u>\$144,451</u>
15	Fixed O&M (10) + (14)	<u>\$8,541,984</u>
	Total Revenue Requirement,	
16	Cost Associated with Gavin Plant (3) + (15)	\$11,925,829
17	Ohio Power Company's Percentage Ownership	100.00%
18	OPCo's Share of Cost Associated with Gavin Plant (16) X (17)	\$11,925,829
19	Ohio Power Company Steam Capacity (kw)	8,472,000
20	Gavin Plant (\$/kw)	\$1.41
21	Ohio Power Surplus Weighing	82.19%
22	Portion of Weighted Average Capacity Rate Attributed to Gavin Plant (\$/kw) (20) X (21)	\$1.16
	Gavin Plant Costs to Kentucky Power :	
23	Gavin Plant Portion (\$/kw) (22)	\$1.16
24	Kentucky Power Capacity Deficit (kw)	<u>220,100</u>
	Gavin Plant Environmental Cost to Kentucky Power (23) * (24)	
25	(ES FORM 3.14, Page 1 of 10, Line 3)	\$255,316

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

For the Expense Month of November 2004

LINE NO.	COST	AMOUNTS
1	Utility Plant at Original Cost	\$7,188,000
2	Member Primary Capacity Investment Rate (16.44% / 12)	<u>1.37%</u>
3	Total Rate Base	\$98,476
	Operations :	
4	Urea (5020002)	\$0
5	Trona (5020003)	\$0
6	Air Emission Fee	<u>\$16,906</u>
7	Total Operations (4) + (5) + (6)	\$16,906
	Maintenance :	
8	SCR Maintenance (5120000)	\$0
9	1/2 of Maintenance (8) * 50%	<u>\$0</u>
10	Fixed O&M (7) + (9)	<u>\$16,906</u>
	Total Revenue Requirement,	
11	Cost Associated with Kammer Plant (3) + (10)	<u>\$115,382</u>
12	Ohio Power Company's Percentage Ownership	100.00%
13	OPCo's Share of Cost Associated with Kammer Plant (11) X (12)	\$115,382
14	Ohio Power Company Steam Capacity (kw)	8,472,000
15	Kammer Plant (\$/kw)	\$0.01
16	Ohio Power Surplus Weighing	82.19%
17	Portion of Weighted Average Capacity Rate Attributed to Kammer Plant (\$/kw) (15) X (16)	\$0.01
	Kammer Plant Costs to Kentucky Power :	
18	Kammer Plant Portion (\$/kw) (17)	\$0.01
19	Kentucky Power Capacity Deficit (kw)	<u>220,100</u>
20	Kammer Plant Environmental Cost to Kentucky Power (18) * (19) (ES FORM 3.14, Page 1 of 10, Line 4)	\$2,201

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

For the Expense Month of November 2004

LINE NO.	COST	AMOUNTS
1	Utility Plant at Original Cost	\$19,445,000
2	Member Primary Capacity Investment Rate (16.44% / 12)	1.37%
3	Total Rate Base	\$266,397
	Operations :	
4	Urea (5020002)	\$0
5	Trona (5020003)	\$0
6	Air Emission Fee	<u>\$21,271</u>
7	Total Operations (4) + (5) + (6)	\$21,271
	Maintenance :	
8	SCR Maintenance (5120000)	\$0
9	1/2 of Maintenance (8) * 50%	<u>\$0</u>
10	Fixed O&M (7) + (9)	<u>\$21,271</u>
	Total Revenue Requirement,	
11	Cost Associated with Mitchell Plant (3) + (10)	<u>\$287,668</u>
12	Ohio Power Company's Percentage Ownership	100.00%
13	OPCo's Share of Cost Associated with Mitchell Plant (11) X (12)	\$287,668
14	Ohio Power Company Steam Capacity (kw)	8,472,000
15	Mitchell Plant (\$/kw)	\$0.03
16	Ohio Power Surplus Weighing	82.19%
17	Portion of Weighted Average Capacity Rate Attributed to Mitchell Plant (\$/kw) (15) X (16)	\$0.02
	Mitchell Plant Costs to Kentucky Power :	
18	Mitchell Plant Portion (\$/kw) (17)	\$0.02
19	Kentucky Power Capacity Deficit (kw)	<u>220,100</u>
20	Mitchell Plant Environmental Cost to Kentucky Power (18) * (19) (ES FORM 3.14, Page 1 of 10, Line 5)	\$4,402

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

For the Expense Month of November 2004

LINE NO.	COST	AMOUNTS
1	Utility Plant at Original Cost	\$114,608,000
2	Member Primary Capacity Investment Rate (16.44% / 12)	1.37%
3	Total Rate Base	\$1,570,130
	Operations :	
4	Urea (5020002)	\$0
5	Trona (5020003)	\$0
6	Air Emission Fee	\$27,267
7	Total Operations (4) + (5) + (6)	\$27,267
	Maintenance :	
8	SCR Maintenance (5120000)	\$0
9	1/2 of Maintenance (8) * 50%	\$0
10	Fixed O&M (7) + (9)	\$27,267
	Total Revenue Requirement,	
11	Cost Associated with Muskingum Plant (3) + (10)	\$1,597,397
12	Ohio Power Company's Percentage Ownership	100.00%
13	OPCo's Share of Cost Associated with Muskingum Plant (11) X (12)	\$1,597,397
14	Ohio Power Company Steam Capacity (kw)	8,472,000
15	Muskingum Plant (\$/kw)	\$0.19
16	Ohio Power Surplus Weighing	82.19%
17	Portion of Weighted Average Capacity Rate Attributed to Muskingum Plant (\$/kw) (15) X (16)	\$0.16
	Muskingum Plant Costs to Kentucky Power :	
18	Muskingum Plant Portion (\$/kw) (17)	\$0.16
19	Kentucky Power Capacity Deficit (kw)	220,100
20	Muskingum Plant Environmental Cost to Kentucky Power (18) * (19) (ES FORM 3.14, Page 1 of 10, Line 6)	\$35,216

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

For the Expense Month of November 2004

LINE NO.	COST	AMOUNTS
1	Utility Plant at Original Cost	\$15,242,000
2	Member Primary Capacity Investment Rate (16.44% / 12)	<u>1.37%</u>
3	Total Rate Base	\$208,815
	Operations :	
4	Urea (5020002)	\$0
5	Trona (5020003)	\$0
6	Air Emission Fee	<u>\$13,690</u>
7	Total Operations (4) + (5) + (6)	\$13,690
	Maintenance :	
8	SCR Maintenance (5120000)	\$0
9	1/2 of Maintenance (8) * 50%	<u>\$0</u>
10	Fixed O&M (7) + (9)	<u>\$13,690</u>
	Total Revenue Requirement,	
11	Cost Associated with Sporn Plant (3) + (10)	<u>\$222,505</u>
12	Ohio Power Company's Percentage Ownership	100.00%
13	OPCo's Share of Cost Associated with Sporn Plant (11) X (12)	\$222,505
14	Ohio Power Company Steam Capacity (kw)	8,472,000
15	Sporn Plant (\$/kw)	\$0.03
16	Ohio Power Surplus Weighing	82.19%
17	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>220,100</u>
20	Sporn Plant Environmental Cost to Kentucky Power (18) * (19) (ES FORM 3.14, Page 1 of 10, Line 7)	\$4,402

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 November 2004

LINE NO.	COST	UNIT 1 AMOUNTS	UNIT 2 AMOUNTS	TOTAL
(1)	(2)	(3)	(4)	(5)
1	Utility Plant at Original Cost	\$10,543,000	\$16,712,000	
2	Member Primary Capacity Investment Rate (16.44% / 12)	<u>1.37%</u>	<u>1.37%</u>	
3	Total Rate Base	\$144,439	\$228,954	
	Operations :			
4	Urea (5020002)	\$0	\$0	
5	Trona (5020003)	\$0	\$0	
6	Air Emission Fee	<u>\$6,250</u>	<u>\$6,250</u>	
7	Total Operations (4) + (5) + (6)	\$6,250	\$6,250	
	Maintenance :			
8	SCR Maintenance (5120000)	\$0	\$0	
9	1/2 of Maintenance (8) * 50%	<u>\$0</u>	<u>\$0</u>	
10	Fixed O&M (7) + (7)	<u>\$6,250</u>	<u>\$6,250</u>	
	Total Revenue Requirement,			
11	Cost Associated with Rockport Plant (7) + (9)	\$150,689	\$235,204	
12	Indiana Michigan Power Company's Percentage Ownership	<u>85.00%</u>	<u>65.00%</u>	
13	I&M's Share of Cost Associated with Rockport Plant (11) X (12)	\$128,086	\$152,883	
14	Total Rockport Units 1 & 2			\$280,969
15	Indiana Michigan Power Company Steam Capacity (kw)			5,089,000
16	Rockport Plant (\$/kw) (14) / (15)			\$0.06
17	Kentucky Power Portion of Rockport Plant /			
18	Indiana Michigan Power Surplus Weighing			17.81%
18	Portion of Weighted Average Capacity Rate			
	Attributed to Rockport Plant (\$/kw) (17) X (18)			\$0.01
	Rockport Plant Costs to Kentucky Power :			
19	Rockport Plant Portion (\$/kw) (18)			\$0.01
20	Kentucky Power Capacity Deficit (kw)			<u>220,100</u>
	Rockport Units 1 & 2 Environmental to Kentucky Power (19) * (20)			
21	(ES FORM 3.14, Page 1 of 10, Line 8)			\$2,201

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

For the Expense Month of November 2004

LINE NO.	COST	AMOUNTS
1	Utility Plant at Original Cost	\$15,766,000
2	Member Primary Capacity Investment Rate (16.44% / 12)	<u>1.37%</u>
3	Total Rate Base	\$215,994
	Operations :	
4	Urea (5020002)	\$0
5	Trona (5020003)	\$0
6	Air Emission Fee	<u>\$12,500</u>
7	Total Operations (4) + (5) + (6)	\$12,500
	Maintenance :	
8	SCR Maintenance (5120000)	\$0
9	1/2 of Maintenance (8) * 50%	<u>\$0</u>
10	Fixed O&M (7) + (9)	<u>\$12,500</u>
	Total Revenue Requirement,	
11	Cost Associated with Tanners Creek Plant (3) + (10)	<u>\$228,494</u>
12	Indiana Michigan Power Company's Percentage Ownership	100.00%
13	I&M's Share of Cost Associated with Tanners Creek Plant (11) X (12)	\$228,494
14	Indiana Michigan Power Company Steam Capacity (kw)	5,089,000
15	Tanners Creek Plant (\$/kw)	\$0.04
16	Indiana Michigan Power Surplus Weighing	17.81%
17	Portion of Weighted Average Capacity Rate Attributed to Rockport Plant (\$/kw) (15) X (16)	\$0.01
	Tanners Creek Plant Costs to Kentucky Power :	
18	Tanners Creek Plant Portion (\$/kw) (17)	\$0.01
19	Kentucky Power Capacity Deficit (kw)	<u>220,100</u>
20	Tanners Creek Plant Environmental Cost to Kentucky Power (18) * (19) (ES FORM 3.14, Page 1 of 10, Line 9)	\$2,201



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 November 2004

LINE NO.	Component	Balances	Cap. Structure	Cost Rates		WACC (Net of Tax)	GRCF		WACC (PRE-TAX)
		<b>As of 12/31/2002</b>							
1	L/T DEBT	\$466,631,680	57.24%	5.752%		3.29%			3.29%
2	S/T DEBT	\$23,386,094	2.87%	2.062%		0.06%			0.06%
3	ACCTS REC								
3	FINANCING	\$27,214,021	3.34%	2.804%		0.09%			0.09%
4	C EQUITY	\$298,018,017	36.56%	11.000%	1/	4.02%	1.6801	2/	6.76%
5	TOTAL	<b>\$815,249,812</b>	<b>100.00%</b>			<b>7.46%</b>			<b>10.20%</b>
WACC = Weighted Average Cost of Capital 1/ Rate of Return on Common Equity per Case No. 2002 - 00169 2/ Gross Revenue Conversion Factor (GRCF) Calculation:									
1	OPERATING REVENUE						100.00		
2	UNCOLLECTIBLE						<u>0.20</u>		
3	INCOME BEFORE STATE TAXES						99.80		
4	LESS : STATE INCOME TAX								
5	(LINE 3 X .0825)						<u>8.23</u>		
6	INCOME BEFORE FED INC TAX						91.57		
7	LESS : FEDERAL INC TAX								
8	(LINE 6 X .35)						<u>32.05</u>		
9	OPERATING INC PERCENTAGE						<u>59.52</u>		
10	GROSS REVENUE CONVERSION								
11	FACTOR (100%/LINE 9)						1.6801		

The WACC (PRE - TAX) value on Line 5 is to be recorded on ES FORM 3.10, Line 9.

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

For the Expense Month of November 2004

LINE NO.	(1)	(2)	(3)	Rockport Plant Common	Unit No. 1	Unit No. 2	Total Units 1 & 2	Total
		COST COMPONENT		(4)	(5)	(6)	(7)	(8)
		Return on Rate Base :						
1		Rockport Plant Continuous Environmental Monitoring System (CEMS)						
2		Installed Cost		\$1,380,823	\$8,234,000	\$8,304,000		
3		AEGCo Low NOx Burners (LNB) Installed Cost		(\$459,658)	(\$289,836)	(\$240,261)		
4		Less Accumulated Depreciation		(\$107,122)	(\$1,262,907)	(\$1,437,158)		
5		Less Accum. Def. Income Taxes		\$814,043	\$6,681,257	\$6,626,581		
6		Total Rate Base					\$13,307,838	
7		Weighted Average Cost of Capital - ES FORM 3.21	12.1900%					
8		Monthly Weighted Avg. Cost of Capital (LINE 6 / 12)		1.0158%			1.0158%	
9		Monthly Return of Rate Base (Line 5 * Line 7)		\$8,269			\$135,181	
10		Operating Expenses :						
11		Monthly Depreciation Expense		\$4,051	\$24,153	\$34,323	\$58,476	
12		Monthly Indiana Air Emissions Fee		\$12,500	\$0	\$0	\$0	
13		Total Operating Expenses (Line 9 + Line 10)		\$16,551			\$58,476	
14		Total Revenue Requirement, Cost Associated with Rockport Plant						
15		CEMS and LNB (Line 8 Line 11)		\$24,820			\$193,657	
		Kentucky Power Portion of Rockport's CEMS (Line 12 * 15%)		\$3,723			\$58,097	
		Kentucky Power Portion of Rockport's LNB (Line 12 * 30%)						
		Total Kentucky Power Portion of Rockports Plants's						
		Total Revenue Requirement (Column 4, Line 13 + Column 7, Line 14)						
		Note: Cost in Column 8, Line 15 is to be Recorded on						
		ES FORM 3.00, Line 2.						\$61,820

With each monthly filing, attach a schedule similar to Exhibit EKW-2, page 11 of 11 (Wagner Direct Testimony in Case No. 96-489), showing the calculation of the Weighted Average Cost of Capital. These calculations should reflect the provisions of the Rockport Unit Power Agreement, and be as of the Current Expense Month.

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

For the Expense Month of November 2004

LINE NO.	Component	Balances	Cap. Structures	Cost Rates		WACC (NET OF TAX)	GRCF		WACC (PRE - TAX)	
		<b>As of 11/30/2004</b>								
1	L/T DEBT	44,818,168	45.0843%	4.6610%		2.1014%			2.1014%	
2	S/T DEBT	6,097,311	6.1335%	1.8715%		0.1148%			0.1148%	
3	S/T INV	0	0.0000%	4.3270%		0.0000%			0.0000%	
4	DEBT									
5	C EQUITY	48,494,120	48.7822%	12.1600%	1/	5.9319%	1.681379	2/	9.9738%	
6	TOTAL	99,409,599 =====	100.0000% =====			8.1481% =====			12.1900% =====	
WACC = Weighted Average Cost of Capital 1/ Cost Rates per the Provisions of the Rockport Unit Power Agreement  2/ Gross Revenue Conversion Factor (GRCF) Calculation:  1 OPERATING REVENUE 2 LESS: INDIANA ADJUSTED GROSS INCOME 3 (LINE 1 X .085) 4 INCOME BEFORE FED INC TAX 5 LESS: FEDERAL INCOME TAX 6 (LINE 4 X .35) 7 OPERATING INCOME PERCENTAGE 8 GROSS REVENUE CONVERSION 9 FACTOR (100% / LINE 7)							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.

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 November 2004

SCHEDULE OF MONTHLY REVENUES

Line No.	Description	Monthly Revenues	Percentage of Total Revenues
1	Kentucky Retail Revenues	\$25,019,832	66.7%
2	FERC Wholesale Revenues	\$242,168	0.6%
3	Associated Utilities Revenues	\$2,703,304	7.2%
4	Non-Assoc. Utilities Revenues	\$9,581,561	25.5%
5	Total Revenues for Surcharges Purposes	\$37,546,865	100.0%
6	Non-Physical Revenues for Month	(\$690,880)	
7	Total Revenues for Month	\$36,855,985	

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 September 2004	8.4321%
2	Kentucky Retail Revenues for Current Expense	\$23,065,488
3	Surcharge Collected (1) * (2)	\$1,944,905
4	Surcharge Amount To Be Collected	\$2,040,035
6	Over/(Under) Recovery (3) - (4) - (5)	(\$95,130)

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.