

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF KENTUCKY POWER COMPANY )  
d/b/a AMERICAN ELECTRIC POWER TO ASSESS )  
A SURCHARGE UNDER KRS 278.183 TO )  
RECOVER COSTS OF COMPLIANCE WITH THE ) CASE NO. 96-489  
CLEAN AIR ACT AND THOSE ENVIRONMENTAL )  
REQUIREMENTS WHICH APPLY TO COAL )  
COMBUSTION WASTE AND BY-PRODUCTS )

O R D E R

On November 27, 1996, Kentucky Power Company, d/b/a American Electric Power ("Kentucky Power") filed an application, pursuant to KRS 278.183, for approval of its environmental compliance plan and rate surcharge to recover its costs of environmental compliance. Kentucky Power proposed to make the surcharge effective on December 31, 1996, and estimated that it would recover approximately \$3,000,000 to \$5,000,000 over the two year period beginning December 31, 1996. Pursuant to KRS 278.183(2), the Commission must: (1) consider and approve a compliance plan and rate surcharge if the Commission finds the plan and rate surcharge reasonable and cost-effective for compliance with the applicable environmental requirements; (2) establish a reasonable return on compliance-related capital expenditures; and (3) approve the application of the surcharge. The Commission has six months from the date the application is filed to conduct the necessary proceedings. Consequently, by Order dated December 19, 1996, the Commission suspended Kentucky Power's proposed tariff through May 26, 1997.

The Commission granted motions for full intervention to the Attorney General's Office ("AG") and the Kentucky Industrial Utility Customers ("KIUC"). A public hearing on this matter was held April 2-3, 1997, at the Commission's offices in Frankfort, Kentucky. All material requested at the public hearing has been filed.

### ENVIRONMENTAL COMPLIANCE PLAN

As required by KRS 278.183, Kentucky Power filed, as part of its application, an environmental compliance plan consisting of eight projects related to the Clean Air Act Amendments of 1990 ("CAA") applicable to the coal-fired generating stations of Kentucky Power and American Electric Power, Inc. ("AEP").<sup>1</sup> Four of the projects related to capital expenditures and expenses for actions taken by Kentucky Power at its Big Sandy generating station ("Big Sandy"), while the remaining projects reflected costs allocated to Kentucky Power under the terms of various Federal Energy Regulatory Commission ("FERC") jurisdiction agreements. The projects include:

1. Installation of Low Nitrogen Oxide ("NOx") Burners at Big Sandy Unit 2 ("Unit 2").
2. Installation of Low NOx Burners at Big Sandy Unit 1 ("Unit 1") in 1998.
3. Installation of Continuous Emission Monitors ("CEMs") at Big Sandy.
4. Kentucky Air Emissions Fee for Big Sandy.

---

<sup>1</sup> Kentucky Power is a wholly owned subsidiary of AEP, and is part of the AEP System, a multistate public utility holding company. The other operating companies in the AEP System are Ohio Power Company ("Ohio Power"), Indiana Michigan Power Company ("Indiana Michigan"), Appalachian Power Company ("Appalachian Power"), and Columbus Southern Power Company ("Columbus Southern").

5. Kentucky Power's portion of the cost for the installation of CEMs at Indiana Michigan's Rockport generating station ("Rockport").
6. Kentucky Power's portion of the Indiana Air Emissions Fee for Rockport.
7. Kentucky Power's portion of the cost for the installation of scrubbers at Ohio Power's Gavin generating station ("Gavin").
8. A return earned on Emission Allowances purchased by Kentucky Power.

In support of its environmental compliance plan, Kentucky Power presented testimony and, in response to various data requests, provided: a) bidding information related to the labor and materials for the low NOx burner project; b) bidding information for the CEM projects; c) the AEP System Acid Rain Compliance Plan, filed with the Ohio Public Utilities Commission ("Ohio Commission") on October 14, 1994; and d) the AEP Interim Allowance Agreement ("IAA"). Kentucky Power states that the AEP System is planned, built, and operated on an integrated basis, and that compliance with the CAAA was developed on a system-wide basis. Kentucky Power's environmental compliance plan is part of that system-wide compliance plan.<sup>2</sup> Kentucky Power contends that it is entitled to the current recovery of its environmental costs through its proposed environmental surcharge.<sup>3</sup>

The AG argues that no compliance projects costs are recoverable under the surcharge statute unless the compliance project was reviewed and approved by the

---

<sup>2</sup> McManus Direct Testimony at 9.

<sup>3</sup> Response to the Commission's January 13, 1997 Order, Item 55.

Commission before the project is undertaken by the utility.<sup>4</sup> In addition, the AG contends that Kentucky Power failed to provide essential and necessary evidence to support its compliance plan and, thus, there is no basis for the Commission to find that the compliance plan or proposed surcharge are reasonable or cost effective under KRS 278.183.<sup>5</sup> For these reasons, the AG urges that the application be denied in full. KIUC also argues that the compliance plan should be rejected due to Kentucky Power's failure to meet its burden of proving that the plan and rate surcharge are reasonable and cost effective.<sup>6</sup>

The Commission finds that Kentucky Power's compliance plan consists of eight discreet compliance projects, each of which must be reviewed to determine whether each component is reasonable and cost effective. Only the costs associated with a component found reasonable and cost effective is eligible for surcharge recovery. The specific issues and objections raised by the AG and KIUC to these projects, as well as the Commission's findings on each, are set forth below.

#### Low NOx Burners at Unit 2

To comply with the NOx reductions required by the CAAA, Kentucky Power installed 36 low NOx burners at Unit 2 in 1994 at a cost of \$9,899,554. Kentucky Power indicated that the installation of low NOx burners at Unit 2 was performed in recognition of an "early election" provision in the Environmental Protection Agency's ("EPA") NOx

---

<sup>4</sup> AG Brief at 2.

<sup>5</sup> Id. at 4.

<sup>6</sup> KIUC Brief at 4.

rules.<sup>7</sup> The "early election" provision was intended to be an incentive for utilities to control NOx on Phase II NOx units earlier than the 2000 deadline. By voluntarily bringing a particular unit into Phase I, the unit would have to meet the Phase I limit rather than the more stringent Phase II limit.<sup>8</sup> For Unit 2, the Phase I limit is 0.5 lb. per million BTU, while the Phase II limit is 0.46 lb. per million BTU.<sup>9</sup> Kentucky Power claimed that it was able to achieve design and manufacturing efficiencies by contracting with the original boiler vendor to do the work at Unit 2 in conjunction with similar work at four other AEP units of the same size and design. Kentucky Power estimated this savings to be approximately \$400,000.<sup>10</sup> Finally, Kentucky Power contended that it was desirable to install the low NOx burners at Unit 2 in 1994 because of the timing of a scheduled outage at Unit 2 and the number of units in the AEP System which would need modifications to meet the NOx limits.<sup>11</sup>

In addition to its overall criticisms of Kentucky Power's compliance plan, the AG specifically objected to the inclusion of the low NOx burners at Unit 2, stating that the installed burners do not work and fail to achieve compliance. Kentucky Power has acknowledged that to date, the Unit 2 low NOx burners have only achieved emission

---

<sup>7</sup> McManus Direct Testimony at 5.

<sup>8</sup> Transcript of Evidence ("T.E."), Vol. I, April 2, 1997, at 35.

<sup>9</sup> Id. at 40.

<sup>10</sup> Kentucky Power Brief at 15 and 19.

<sup>11</sup> Id. at 16-18.

levels of 0.55 to 0.56 lb. per million BTU.<sup>12</sup> The AG argues that because of this failure, these costs do not meet the statutory definition of a cost subject to recovery through the surcharge.<sup>13</sup>

KIUC criticized Kentucky Power for installing the low NOx burners six years before their installation was required by the CAAA. KIUC notes that Kentucky Power failed to perform any cost/benefit analysis of the early installation and also failed to provide any evidence prior to the hearing to demonstrate that the NOx control technology utilized at Big Sandy was the most appropriate.<sup>14</sup> KIUC argues that the early installation cannot be considered cost effective, in that the claimed, but undocumented, savings of \$400,000 are one-tenth as large as what the inclusion of the low NOx burners in the surcharge will cost ratepayers over the next three years.<sup>15</sup> KIUC agrees with the AG concerning the failure of the new burners to meet the NOx emission limits, and thus the inability of Kentucky Power to avail itself of the "early election" provision under the EPA rules. Finally, KIUC charges that the information Kentucky Power filed with in its post-hearing data responses went beyond what was requested and cannot be relevant information.<sup>16</sup>

---

<sup>12</sup> T.E., Vol. I, April 2, 1997, at 40-41.

<sup>13</sup> AG Brief at 7.

<sup>14</sup> KIUC Brief at 22.

<sup>15</sup> Kollen Direct Testimony at 30.

<sup>16</sup> KIUC Brief at 24.

KIUC opines that if the information filed after the hearing is relevant, Kentucky Power had a legal duty to produce it prior to the hearing in response to KIUC data requests.<sup>17</sup>

The Commission finds that Kentucky Power has not adequately demonstrated the reasonableness of its actions concerning the low NOx burners at Unit 2, and this project should not be included as part of Kentucky Power's environmental surcharge compliance plan. The record shows that at no time in its decision-making process did Kentucky Power or AEP perform a formal cost/benefit analysis or an evaluation of its compliance options.<sup>18</sup> In addition, no analysis was performed to verify AEP assumptions that performing the work in conjunction with low NOx burner installation at four other units of similar size and design would result in cost savings.<sup>19</sup> There is some evidence to indicate that Kentucky Power and AEP may have had legitimate concerns about the costs associated with alternative compliance technologies.<sup>20</sup> However, alternative technologies did exist and an evaluation of compliance options would have taken into consideration those concerns and would have demonstrated which technology was reasonable and cost effective.

---

<sup>17</sup> Id. The data requests referenced were KIUC 1st Set, dated January 13, 1997, Item 3 and KIUC 2nd Set, dated February 7, 1997, Item 2. Kentucky Power was requested to provide copies of all reports, engineering studies, internal memoranda, analyses, or other documents in the possession of it or AEP that relate in any way to the reasonableness or cost effectiveness of that part of the compliance plan including, but not limited to, the low NOx burners and Units 1 and 2, the CEMs at Big Sandy and Rockport, the Gavin Scrubber, and the emission allowance purchases.

<sup>18</sup> T.E., Vol. I, April 2, 1997, at 68-73, 88-89, 165-166, 194-195, and 203-208.

<sup>19</sup> Id. at 73.

<sup>20</sup> Id. at 57-59.

The Commission further finds that there was no excuse for Kentucky Power's numerous failures to timely disclose relevant information concerning the low NOx burner project at Unit 2. Kentucky Power failed to disclose until the hearing that the new burners failed to meet either the Phase I or Phase II NOx limits, thus compromising its ability to take advantage of the "early election" option. Kentucky Power failed to disclose until the hearing that it had accepted a cost reduction rather than have the manufacturer pursue other options to meet the designed NOx limits.<sup>21</sup> Finally, Kentucky Power failed to disclose until it filed its brief that the bidding procedures used to secure the materials used in the project were a variation from AEP's normal and customary bidding procedures.<sup>22</sup>

The Commission finds no merit in KIUC's argument that it was unreasonable per se for Kentucky Power to proceed with this compliance project long before the EPA deadline of 2000. KIUC's efforts to compare the anticipated early election savings from this compliance project to the first three year rate impacts are equally unpersuasive. The Commission finds neither of these arguments to be relevant in the determination of the project's reasonableness or cost effectiveness. Finally, the Commission has not based its finding on the AG's argument that compliance projects are eligible for surcharge recovery only if they have been reviewed and approved by the Commission prior to being undertaken by the utility.

---

<sup>21</sup> Id. at 56-58.

<sup>22</sup> Kentucky Power Brief at 19-20.



### Low NOx Burners at Unit 1

Kentucky Power included in its compliance plan the installation of low NOx burners at Unit 1 at an estimated cost of \$3,000,000. Since this project has a 1998 in service date, there will be no costs subject to surcharge recovery until that time. Kentucky Power indicated that the procedures to be used to select the labor contractor for this project will be similar to those used for the Unit 2 project, while the low NOx burner material will be supplied by a specific vendor on a lowest cost basis.<sup>23</sup>

KIUC argued that Kentucky Power filed no evidence or analysis to support the inclusion of this project. This lack of evidence, KIUC suggests, justified rejecting the project without prejudice, subject to Kentucky Power's right to request inclusion at a future date.<sup>24</sup>

The Commission finds that Kentucky Power has failed to provide any analysis or sufficient credible evidence to demonstrate the reasonableness or cost effectiveness of the low NOx burners at Unit 1. Thus, this project will not be included as part of Kentucky Power's environmental surcharge compliance plan at this time. Kentucky Power and AEP have indicated a preference for a specific low NOx burner materials vendor, while it appears the project has not yet been bid.<sup>25</sup> Like the Unit 2 project, Kentucky Power

---

<sup>23</sup> Response to the Commission's January 13, 1997 Order, Item 10(a).

<sup>24</sup> KIUC Brief at 25.

<sup>25</sup> T.E., Vol. I, April 2, 1997, at 79-80.

and AEP have indicated that no formal analysis or evaluation of the compliance options for Unit 1 will be performed.<sup>26</sup>

If Kentucky Power chooses to resubmit this project for future inclusion in its compliance plan and rate surcharge, the reasonableness and cost effectiveness of the project must be demonstrated and documented as part of the application. Such documentation should include, but not be limited to, a formal evaluation of the compliance options available to Kentucky Power and evidence of compliance with AEP's normal and customary bidding procedures.

#### CEMs at Big Sandy

The CAAA required all electric utilities to install CEMs on their power plants by January 1, 1995. The CEMs monitor and measure sulfur dioxide ("SO<sub>2</sub>"), NO<sub>x</sub>, and carbon dioxide as well as the volume of gas exhausted at the power plants. Kentucky Power installed CEMs at Big Sandy in 1994 at a cost of \$1,301,138. Neither the AG nor KIUC raised specific objections to the inclusion of this project in the compliance plan.

The Commission finds that Kentucky Power has demonstrated the reasonableness and cost effectiveness of CEM installation at Big Sandy, and will include this project as part of Kentucky Power's environmental surcharge compliance plan. Unlike the low NO<sub>x</sub> burners, there are no alternative technologies available to perform the monitoring required by the CAAA. CEMs consist of several equipment components, and there are a variety of vendors available to provide the components.<sup>27</sup> Kentucky Power identified

---

<sup>26</sup> Id. at 80-81.

<sup>27</sup> Id. at 82-83.

13 separate components included in its CEMs and documented that each component was procured through AEP's normal competitive bidding process.<sup>28</sup>

#### Kentucky Air Emissions Fee for Big Sandy

Title V of the CAAA required the establishment of a new, more uniform permitting system for air pollution sources and directed the states to establish permit fees to cover the cost of the program. While most states already had a permitting system accompanied by fees, Title V required that the new national system be financed entirely through emission fees collected from air pollution sources, resulting in higher fees than previously required. Kentucky Power included the Kentucky Air Emissions Fee for Big Sandy, which in 1996 was \$292,967, as a project in its proposed compliance plan. Neither the AG nor KIUC raised specific objections to the inclusion of this project in the compliance plan.

The Commission finds that the Kentucky Air Emissions Fee for Big Sandy is reasonable and cost effective, and should be included as part of Kentucky Power's environmental surcharge compliance plan. This fee is required by Title V of the CAAA, and Kentucky Power must pay the fee to be in compliance with this legislation. KRS 278.183(1) provides that this type of expense is recoverable through the surcharge.

---

<sup>28</sup> Response to Staff Hearing Request, April 2-3, 1997, Item 4. For 12 of the 13 components, multiple vendors responded, proposals were evaluated, and the lowest bidder was selected. The remaining component involved a technology where only one vendor submitted a bid.

### Costs Associated with FERC Jurisdictional Agreements

The remaining projects in Kentucky Power's compliance plan are related to costs associated with FERC jurisdictional agreements. As Kentucky Power incurred these costs as a direct result of the provisions of FERC-approved or accepted agreements, Kentucky Power contended that the "federal preemption" principle requires that these costs be recognized as reasonably incurred operating expenses and, thus, eligible for recovery through the environmental surcharge.<sup>29</sup> The projects are as follows:

CEMs and Indiana Air Emissions Fee for Rockport. As Kentucky Power did at Big Sandy, Indiana Michigan installed CEMs at Rockport in 1994 at a cost of \$1,370,584. Indiana Michigan also was required to pay the higher Indiana Air Emissions Fee, which in 1996 totaled \$150,000. Under the terms of the Rockport Unit Power Agreement, a FERC jurisdictional tariff, Kentucky Power is responsible for 15 percent of these costs.

Capacity Settlement Payments Related to Gavin Scrubber. When AEP evaluated its entire generating system for compliance with the CAAA SO<sub>2</sub> provisions, it was determined that scrubbers should be added to Gavin. Under Ohio law, Ohio Power filed with the Ohio Commission an Acid Rain Compliance Plan which had scrubbers at Gavin as the primary compliance activity. The Ohio Commission approved the compliance plan in 1992.<sup>30</sup>

---

<sup>29</sup> Kentucky Power Brief at 2, 29, 30, 32, 40, and 42.

<sup>30</sup> Response to KIUC's 1st Data Request, dated January 13, 1997, Item 4(c), sheets 23 through 45 of 45. Copy of the Ohio Commission's November 25, 1992 Order in Case No. 92-790-EL-ECP.

Kentucky Power is a signatory to the AEP Interconnection Agreement, a FERC jurisdictional agreement governing the use of generating assets and the allocation of their costs among the AEP operating companies. The provisions of the AEP Interconnection Agreement require each operating company to provide adequate generating facilities or resources to meet its firm load requirements; allocate capacity costs on the basis of each company's non-coincident peak in the preceding twelve months, which is referred to as the Member Load Ratio; and provide for the payment of a carrying charge, referred to as a capacity settlement payment, which equalizes responsibility for installed capacity. Capacity "deficit" companies are required by the FERC tariff to pay a capacity settlement charge to capacity "surplus" companies based on the embedded cost of capacity of the capacity surplus companies.<sup>31</sup> Under the terms of the Interconnection Agreement, Kentucky Power is currently a capacity deficit company, along with Appalachian Power and Columbus Southern. The capacity surplus companies are Indiana Michigan and Ohio Power. Since Gavin is owned by Ohio Power, a portion of the FERC capacity settlement payment Kentucky Power pays each month includes a portion of the Gavin scrubber costs. Kentucky Power proposed to include in its compliance plan the portion of its FERC capacity settlement payment related to the Gavin scrubbers, which for calendar year 1996 was \$685,458.<sup>32</sup>

---

<sup>31</sup> Ohio Power Co. v. F.E.R.C., 668 F.2d 880 (6th Cir. 1982).

<sup>32</sup> Kyle Direct Testimony, Exhibit MDK-4 and Response to the Commission's February 7, 1997 Order, Item 5.

Emission Allowance Purchases under the IAA. As an integrated system, AEP manages the operating companies' emission allowance inventories from a system-wide perspective. In addition to the allowances EPA assigned to the AEP operating companies, Ohio Power received bonus allowances from EPA because it added scrubbers at Gavin. In order to achieve an equitable allocation of the costs and benefits associated with allowances, AEP developed the IAA, which was accepted for filing by the FERC on December 30, 1994. AEP subsequently supplanted the IAA by a modified version, known as Modification No. 1, which was accepted for filing by the FERC on August 30, 1996.<sup>33</sup> (Unless otherwise noted, subsequent references in this Order to the IAA relate to Modification No. 1.)

Under the terms of the IAA, a portion of the Gavin allowances is reallocated to the capacity deficit companies at zero cost. The IAA requires each member company to maintain an allowance bank, or inventory, where the annual ending allowance balance is equal to the member load ratio share of the total AEP system allowance inventory. If the member company's ending allowance balance is below the required member load ratio share, it must purchase allowances from member companies whose ending allowance balance exceeds the member load ratio share. The purchase price of these

---

<sup>33</sup> Kentucky Power and AEP have contended throughout this case that the original and modified IAAs were the result of a consensus among the state commission representatives to an ad hoc group known as the "AEP Regional Coordinating Committee." However, it was documented at the hearing that the original IAA was not the consensus product of the Regional Coordinating Committee. See T.E., Vol. I, April 2, 1997, at 162-164. Nor has Kentucky Power produced any evidence in this case which establishes that the modified IAA was a consensus product of the Regional Coordinating Committee.

allowances reflects a calculated "cost of compliance" which is the net present value of the costs incurred by various AEP member companies to comply with the SO<sub>2</sub> requirements of the CAAA. The purchase price is escalated each year at a rate of 10.56 percent, which represents the AEP member companies' cost of capital. In 1995 the purchase price was \$115.43 per allowance; in 1996 it was \$127.62.

Kentucky Power requested a return on its allowance inventory, which reflected allowance purchases it had been required to make under the IAA. Kentucky Power estimated the annual return on the allowance inventory to be approximately \$851,000.

In addition to his general opposition to the compliance plan, the AG argued that neither the decision to scrub Gavin nor the requirement to purchase allowances have been demonstrated to be cost effective for Kentucky Power. The AG presented numerous arguments in opposition to these costs, but did not specifically challenge the Rockport associated costs.

KIUC agreed with several of the AG's arguments and also contended that AEP has not shown the Gavin scrubber to be part of a reasonable and cost effective compliance plan for Kentucky Power.<sup>34</sup> Concerning the IAA, KIUC argued that federal preemption is not applicable to this proceeding and that the FERC acceptance of the IAA by letter was not the same as a FERC Order.<sup>35</sup> KIUC also did not specifically oppose the inclusion of the Rockport costs.

---

<sup>34</sup> KIUC Brief at 20.

<sup>35</sup> Id. at 13-15.

The Commission finds that federal preemption mandates our acceptance of the FERC jurisdictional agreements as reasonable. To the extent that environmental costs are part of the total costs Kentucky Power is allocated under the terms of these agreements, the costs must be accepted as reasonable. Contrary to KIUC's position, federal preemption is applicable and controls in this instance, not only for the allowance purchases required under the IAA, but also for the costs Kentucky Power is required to pay under the terms of the Rockport Unit Power Agreement and the Interconnection Agreement. Due to the application of federal preemption, the Commission is required to accept as reasonable the costs incurred under these FERC agreements. Consequently, all of the arguments presented by the AG and KIUC in opposition to the reasonableness of such costs are not appropriate for consideration by this Commission.

KIUC has cited two cases in support of its contention that the circumstances in this environmental surcharge proceeding constitute an exception to federal preemption. The first, Pike County Power and Light v. Pennsylvania Public Utility Commission, 465 A.2d 735 (Pa. Commw. Ct. 1983), has no application to a utility subsidiary of a multi-state registered holding company. Due to the multi-state nature of AEP's utility operations, Kentucky Power must pay for any costs allocated to it by AEP if the allocations are pursuant to FERC agreements. The second, New Orleans Public Service Inc. v. Council of City of New Orleans, 911 F.2d 993 (5th Circuit, 1990), holds that although a cost incurred pursuant to a FERC agreement is presumed to be reasonable for retail rate purposes, retail rate recovery may be denied if the utility acted imprudently by failing to mitigate the impact of the FERC incurred cost.



The record in this case contains no credible evidence that Kentucky Power acted imprudently or otherwise failed to pursue an opportunity to mitigate the costs incurred pursuant to FERC agreements. Neither the AG nor KIUC submitted any evidence that Kentucky Power acted imprudently; rather they allege that there is insufficient evidence to determine the reasonableness of Kentucky Power's actions. Numerous court rulings lead inextricably to the conclusion that actions taken by Kentucky Power pursuant to FERC filed agreements must be presumed to be reasonable by this Commission.

The Commission finds no merit in KIUC's argument that no presumption of reasonableness attaches to a FERC letter accepting for filing a FERC jurisdictional agreement. KIUC has offered no support for its contention that a FERC acceptance letter is of lesser weight than a FERC Order. An examination of the FERC letter accepting the IAA reveals that it represents final administrative action; it terminates a FERC docket and results in new tariffs being incorporated into existing FERC rate schedules for the five AEP operating companies. In addition, the FERC letter states that the acceptance of the IAA was, "By direction of the Commission."<sup>36</sup>

KIUC has attempted to draw a distinction between this case and the federal preemption issue presented in Case No. 9061,<sup>37</sup> which involved costs incurred by Kentucky Power under the terms of the Rockport Unit Power Agreement. No such

---

<sup>36</sup> See KIUC Cross-Examination Exhibit No. 3 (FERC Docket No. ER94-1670-000, Letter dated December 30, 1994) and the Response to KIUC's Hearing Request, April 2-3, 1997, Item 12 (FERC Docket No. ER96-2213-000, Letter dated August 30, 1996).

<sup>37</sup> Case No. 9061, General Adjustment in Electric Rates of Kentucky Power Company.

distinction exists. On October 21, 1988, Kentucky Power, the Commission, the AG, KIUC, and others entered into a settlement agreement resolving the issues presented in a remand of that case from the Kentucky Court of Appeals. The settlement agreement included the following provisions:

18. The parties recognize and agree that the Supremacy Clause, the doctrine of federal preemption and the filed-rate doctrine require the Commission, in setting retail rates, to allow as a cost-of-service item the expenses incurred by Kentucky Power under the Unit Power Agreement for the purchase of that portion of the output of the Rockport generating plant as determined by the FERC.

28. Except as provided for in paragraphs 7, 8, 18, 19, 20, 21 and 22, the making of this Agreement shall not be deemed in any respect to constitute an admission by any party hereto that any computations, formula, allegations or contentions made by any other party in these proceedings is true or valid. Except as provided for in paragraphs 7, 8, 18, 19, 20, 21 and 22, the making of this Agreement establishes no principles and shall not be deemed to foreclose any party from making any contention in any future proceeding or investigation.<sup>38</sup> (emphasis added)

The Franklin Circuit Court approved the settlement agreement by its October 28, 1988 Order.

Therefore, the actions taken by Kentucky Power under the terms of these FERC jurisdictional agreements must be presumed to be reasonable for retail ratemaking. Consequently, this Commission has no discretion to exclude these projects from Kentucky Power's environmental surcharge compliance plan on the grounds that the evidence fails to demonstrate that the projects are reasonable.

---

<sup>38</sup> Case No. 9061, Order on Remand, dated October 28, 1988, Appendix A.

### Approved Compliance Plan

In summary, the Commission finds the following projects should be included in and constitute Kentucky Power's environmental compliance plan:

1. Installation of CEMs at Big Sandy.
2. Kentucky Air Emissions Fee for Big Sandy.
3. Kentucky Power's portion of the cost for the installation of CEMs at Rockport.
4. Kentucky Power's portion of the Indiana Air Emissions Fee for Rockport.
5. Kentucky Power's portion of the cost for the installation of scrubbers at Gavin.
6. A return earned on Emission Allowances purchased by Kentucky Power.

### SURCHARGE MECHANISM AND CALCULATION

Kentucky Power proposed to recover the costs of its environmental compliance plan through a surcharge mechanism defined in its proposed Tariff E.S. Kentucky Power modeled its proposal on its Fuel Adjustment Clause ("FAC") methodology. The proposed methodology follows a base/current concept, with the base during the first two years of the surcharge equaling zero.

Kentucky Power proposed to allocate the surcharge to its Kentucky retail customers and two FERC municipal customers. The allocation to retail customers is

based on a Kentucky Jurisdictional Allocation Factor ("Allocation Factor").<sup>39</sup> For its retail customers, Kentucky Power proposed to allocate the surcharge to three customer classes on the basis of revenues. The surcharge amount allocated to a class would then be divided by that class's Kwh sales, resulting in a per Kwh sales charge to be applied to customer bills. Kentucky Power argued that this two-step approach allocates its environmental costs in a manner consistent with the approach the Commission has always followed in Kentucky Power rate cases and is the same methodology used in allocating demand side management ("DSM") costs in its experimental DSM adjustment clause.<sup>40</sup>

The AG and KIUC criticized Kentucky Power for not modeling its proposed surcharge mechanism on the methodology approved by the Commission in three prior environmental surcharge proceedings. However, the AG and KIUC did not offer specific alternative surcharge mechanism proposals.

The AG argued that since KRS 278.183 only permits surcharge recovery of costs not already included in existing rates, the statute "may be read to mandate an examination of costs relating to environmental compliance costs which were considered in past base rate actions to determine the status of those costs and whether depreciation

---

<sup>39</sup> The Kentucky Jurisdictional Allocation Factor is determined by dividing the 12-month average amount of Retail Kentucky Jurisdictional Load by the 12-month average of the Kentucky Internal-Maximum Load. The Kentucky Internal-Maximum Load is the result of subtracting the 12-month average System Sales including Losses from the 12-month average Kentucky Peak-Maximum Load. See Wagner Direct Testimony, Exhibit EKW-7.

<sup>40</sup> Wagner Rebuttal Testimony at 4-5.

has created an offset against which the costs now being considered may be determined to be already included in the base rates."<sup>41</sup> The AG proposed that depreciation for certain environmental compliance items previously considered in base rates be recognized as a reduction to the costs included for recovery in Kentucky Power's surcharge.<sup>42</sup>

KIUC also raised the issue of costs not already included in existing rates. KIUC argued that "if the utility already has included in its existing rates the capital costs, taxes, or depreciation expense of a certain energy production process, and that process is changed because of environmental requirements and if surcharge recovery is granted for the new process, then the costs of the old process must be used as an offset."<sup>43</sup> KIUC contended that such an offset was necessary for the low NOx burners at Unit 1 and the CEMs. KIUC claimed that such an offset was consistent with previous Commission decisions involving environmental surcharges.<sup>44</sup>

Kentucky Power strongly objected to the proposal that it should reduce the costs of its environmental compliance investments to recognize the depreciated cost of plant retired as a result of the installation of new facilities. Kentucky Power argued that its rates were designed to provide it with the opportunity to earn a reasonable return in the

---

<sup>41</sup> AG Brief at 5.

<sup>42</sup> Id. at 6.

<sup>43</sup> KIUC Brief at 32.

<sup>44</sup> Id. at 33-34.

future, based on historic costs.<sup>45</sup> The costs incurred for the retired utility plant were prudently incurred and were incurred for the benefit of Kentucky Power's full-requirements customers. Kentucky Power contends that it is neither logical nor proper to have its shareholders absorb the cost of retired plant because of the CAAA.<sup>46</sup> Kentucky Power claims that the General Assembly did not intend for the Commission to relitigate a base rate case when a utility applied for a surcharge, and urges the Commission not to delve into Kentucky Power's last rate case on a piecemeal basis.<sup>47</sup>

KIUC stated that Kentucky Power's computation of rate base did not include a reduction for accumulated deferred income taxes. KIUC argued that accumulated deferred income taxes are a source of cost free capital which should be reflected as a reduction in the capital expenditures on which Kentucky Power is allowed to earn a return.<sup>48</sup> Kentucky Power agreed that the net book value of the environmental facilities should be reduced by the associated accumulated deferred income taxes.<sup>49</sup>

#### Surcharge Approach

The Commission is presented with a surcharge mechanism modeled on Kentucky Power's FAC and arguments from the intervenors that the mechanism should be modeled on the approach previously approved by the Commission. In determining the

---

<sup>45</sup> Kentucky Power Brief at 22.

<sup>46</sup> Id. at 23.

<sup>47</sup> Id. at 25.

<sup>48</sup> KIUC Brief at 35.

<sup>49</sup> Wagner Rebuttal Testimony at 7.

most reasonable approach for Kentucky Power, the Commission must consider its prior surcharge decisions as well as Kentucky Power's status as a member of a multistate holding company.

The Commission agrees with KIUC that the costs associated with utility plant which was retired as a result of installing new facilities to comply with the CAAA must be removed from the surcharge calculations as these are costs already included in existing rates. The determination of what costs are not included in existing rates has been extensively addressed in each of the environmental surcharge cases decided by the Commission.<sup>50</sup> As the Commission has clearly stated in two previous Orders, "To require ratepayers to pay a surcharge for the costs of . . . compliance projects while the existing rates include the cost of related plant no longer in service would be unreasonable and a violation of KRS 278.183(2)."<sup>51</sup> The only project in the Commission's approved compliance plan for Kentucky Power impacted by this determination is the installation of the Rockport CEMs.

---

<sup>50</sup> Kentucky Power testified at the hearing that prior to filing its application, it had not reviewed the Commission's Orders in the three prior environmental surcharge cases. See T.E., Vol. II, April 3, 1997, at 98.

<sup>51</sup> Case No. 94-332, The Application of Louisville Gas and Electric Company for Approval of Compliance Plan and to Assess a Surcharge Pursuant to KRS 278.183 to Recover Costs of Compliance with Environmental Requirements for Coal Combustion Wastes and By-Products, final Order dated April 6, 1995, at 9; and Case No. 95-060, An Examination by the Public Service Commission of the Environmental Surcharge Mechanism of Kentucky Utilities Company as Billed from August 1, 1994 to January 31, 1995, final Order dated August 22, 1995, at 7.

The Commission does not accept the AG's interpretation of the surcharge statute concerning the "not already included in existing rates" issue. The Commission believes the AG's interpretation is contrary to the intent of the statute, is inconsistent with the Commission's previous decisions on this issue, and is unsupported by any evidence in the record. The interpretation urged by the AG would require an exhaustive rate proceeding to determine what is already included in Kentucky Power's existing rates. Such an exercise is unnecessary. The statute authorizes surcharge recovery of eligible costs upon a showing that those costs are not already in existing rates.

The Commission agrees with KIUC and Kentucky Power that accumulated deferred income taxes should be recognized in the computation of any environmental surcharge rate bases. This recognition should be reflected in the adjustment for retired utility plant as well as the facilities developed as part of the approved compliance plan.

The Commission believes that some form of a base/current concept is desirable for Kentucky Power's surcharge mechanism. The base/current concept allows for clear recognition in the base period of any retired utility plant included in existing rates and a straight-forward calculation of the present environmental costs in the current period. However, the Commission does not believe the use of Kentucky Power's FAC is an appropriate model in this case. Stating the retired Rockport monitor costs in the base period as an amount per Kwh sales or per revenues would render the recognition of the cost already included in existing rates as meaningless.

The Commission is not persuaded that Kentucky Power's two-step surcharge allocation approach is appropriate. Kentucky Power's DSM adjustment clause must



recognize customer classes because KRS 278.285(3) requires DSM program costs to be assigned to the specific customer class or classes which benefit from the particular program. All of Kentucky Power's classes are affected by its compliance with the CAAA. As discussed later in this Order, the Commission will allocate Kentucky Power's environmental surcharge on the basis of revenues.

The Commission finds that the reasonable surcharge mechanism for Kentucky Power is one which compares a base period revenue requirement with a current period revenue requirement. The retired Rockport monitor costs will compose the base period revenue requirement, while the current cost of Kentucky Power's approved compliance plan will compose the current period revenue requirement. This approach is similar to the mechanism the Commission approved for the Big Rivers Electric Corporation.

#### Qualifying Costs

Base Period. The base period revenue requirement for Kentucky Power will be based on utility plant retired at Rockport when Indiana Michigan installed CEMs in 1994. The base period revenue requirement will reflect the costs for the month of December 1990, the last month of Kentucky Power's test year in its last general base rate case. The original cost of this retired utility plant was \$107,550.<sup>52</sup> The base period revenue requirement will reflect a return on rate base and certain operating expenses. The rate base will begin with the original cost of the retired utility plant less the December 31, 1990 balances for accumulated depreciation and accumulated deferred income taxes. The rate of return applied to the rate base will reflect the calculations required under the

---

<sup>52</sup> Response to the Commission's February 7, 1997 Order, Item 3.

Unit Power Agreement, as of December 31, 1990. As the base period revenue requirement is a monthly amount, the rate of return will be divided by 12. The monthly depreciation expense and Indiana Air Emissions Fee for December 1990 will be added to the return on rate base to determine the total base period revenue requirement. This amount will be multiplied by 15 percent to arrive at Kentucky Power's share of the costs, and will constitute the base period revenue requirement used in the surcharge mechanism. The base period will not be recalculated until the two year review.

Current Period. The monthly current period revenue requirement will be composed of the following components:

1. A monthly return on Kentucky Power's environmental rate base, which will include the original cost of the CEMs at Big Sandy, less related accumulated depreciation and accumulated deferred income taxes, and Kentucky Power's ending inventory balance for emission allowances. The ending inventory of emission allowances should be valued using the weighted average cost method required by the FERC.

2. Operating expenses which will include the monthly depreciation expense and property tax expense associated with the Big Sandy CEMs, one-twelfth of the annual Kentucky Air Emissions Fee, and the monthly capacity settlement charge associated with the Gavin scrubber.

3. The 15 percent share of the Rockport costs associated with the CEMs and Indiana Air Emissions Fee. This will include a return on the original cost of the CEMs at Rockport, less related accumulated depreciation and accumulated deferred income

taxes, plus the monthly depreciation expense on the CEMs and one-twelfth of the annual Indiana Air Emissions Fee.

4. The net gain or net loss resulting from emission allowance sales, either from the annual EPA auctions or those amounts allocated to Kentucky Power under the terms of the IAA.

Kentucky Power proposed to include certain operating expenses associated with its compliance plan projects. To the extent that those projects have been approved by the Commission, those specific operating expenses will be recoverable by surcharge. The current period revenue requirement will reflect only those projects approved by the Commission in this proceeding. Should Kentucky Power desire to include other projects in the future, it will have to apply for an amendment to its approved compliance plan.

Under the terms of the IAA and the annual EPA emission allowance auctions, Kentucky Power has received \$2,319,057 in allowance sale proceeds.<sup>53</sup> As the Commission has included a return on the allowance inventory, it is appropriate to return these net sales proceeds to ratepayers as an offset in the surcharge mechanism. The Commission finds it is appropriate to return these proceeds over a 12-month period. Therefore, each of the first 12 surcharge filings will include a reduction to the current period revenue requirement of \$193,255.<sup>54</sup> In addition, any EPA auction proceeds and

---

<sup>53</sup> Response to the Commission's January 13, 1997 Order, Item 21, Attachment, Vol. 2 of 2, Modification No. 1 to IAA, Appendix B, page 2 of 2 (1994 Allowance Sales/Purchases to/from Other Entities, per the IAA plus carrying charges, and carrying charges per IAA for first 3 EPA auction proceeds), and Item 24 (EPA auction proceeds 1993 through 1996).

<sup>54</sup> \$2,319,057 divided by 12 equals \$193,254.75, rounded to \$193,255.

any net gains or net losses allocated to Kentucky Power under the IAA will be included as offsets to the current period revenue requirement in the month received by Kentucky Power.<sup>55</sup>

#### Review and Audit Process

Kentucky Power provided a series of detailed schedules showing the operation of its proposed surcharge mechanism. These schedules calculated the monthly surcharge for each project included in the proposed compliance plan. The proposed mechanism provides for a true-up for over- and under-recovery due to differences in revenues and Kwh sales levels between the expense and billing months. Kentucky Power had proposed that the Commission adopt procedures that were similar to the 6-month and 2-year procedures used by the FAC regulation. Kentucky Power recommended that the Commission Staff conduct on-site audits and investigations of its books and records in connection with the environmental surcharge.<sup>56</sup>

Because of the modifications made to Kentucky Power's surcharge mechanism, the Commission has revised and modified the proposed schedules. The revised formats are attached to this Order as Appendix B. The monthly formats should be filed when Kentucky Power submits the amount of the monthly surcharge. As experience is gained in the monthly reporting and review processes, the Commission may modify these formats or prescribe additional formats. Concerning the procedures to be used at the 6-month and 2-year reviews, the Commission will follow the requirements of KRS

---

<sup>55</sup> Net losses will increase, rather than decrease, the revenue requirement.

<sup>56</sup> Wagner Direct Testimony at 9.

278.183 and rely on the experience gained from the surcharge review proceedings held for the three utilities previously authorized an environmental surcharge, but recognizing the unique features of the surcharge mechanism prescribed for Kentucky Power. The Commission will accept Kentucky Power's proposal concerning the monthly true-up for over- and under-recoveries related to differences between expense and billing months. The Commission also agrees with the recommendation that its Staff perform on-site audits of the surcharge records as necessary.

#### Tariff Modifications

The Commission has reviewed Kentucky Power's proposed Tariff E.S. and finds that several modifications should be made. Concerning the language describing the costs which can be recovered through the surcharge, Kentucky Power should delete the reference "included but not limited to." The only costs Kentucky Power can recover through this environmental surcharge are those costs identified as being associated with the projects included in the approved compliance plan. The costs of additional projects cannot be included in the surcharge until after the approved compliance plan has been amended by the Commission. Paragraphs six through eight should be deleted as these repeat provisions of statutes governing the surcharge filings. As the Commission has modified the surcharge mechanism's approach to the base/current concept, Paragraph nine of the proposed tariff should also be deleted.

#### Formula to Calculate the Surcharge Factor

The Monthly Environmental Surcharge Gross Revenue Requirement,  $E(m)$ , will be equal to the difference between the monthly base period and current period revenue

requirements. The formulas used to determine these amounts are shown in Appendix A. After E(m) is calculated, a portion of this amount will be allocated to Kentucky retail customers. The Environmental Surcharge Factor charged to Kentucky retail customers will be calculated by dividing the Monthly Kentucky Retail E(m) by the Monthly Kentucky Retail Revenue for the Current Expense Month, R(m).

#### SURCHARGE ALLOCATION

As noted previously, Kentucky Power proposed to allocate its surcharge only to its Kentucky retail and FERC municipal customers. Kentucky Power contended that any attempt to allocate a portion of its compliance investments to non-Kentucky Power retail sales reflected a fundamental misunderstanding of the nature of its investment, and a clear misreading of KRS 278.183.<sup>57</sup> Kentucky Power claimed that the compliance costs incurred by it at Big Sandy and Rockport were incurred solely for the benefit of Kentucky Power's full-requirement customers. Kentucky Power argued that its capacity was constructed, maintained, and reserved for these customers.<sup>58</sup> Kentucky Power stated that its customers were receiving the full benefit of its plant facilities, and accordingly should bear the capital costs associated with environmental equipment required to be placed on those facilities.

Concerning off-system sales, Kentucky Power contended that these were merely opportunity sales which can fluctuate quite dramatically. Kentucky Power noted that because of its system sales tracker, one half of any profit or loss from off-system sales

---

<sup>57</sup> Kentucky Power Brief at 50.

<sup>58</sup> Id.

above or below the level in base rates goes back to ratepayers. Therefore, Kentucky Power argued it was not in the ratepayers' best interest to increase the cost of these off-system sales, thereby reducing their profitability, and perhaps preventing some sales from being made.<sup>59</sup>

The AG and KIUC argued that Kentucky Power should allocate the surcharge over all sales revenues. The AG stated that such an allocation was consistent with the Commission's rulings in the three previous surcharge cases.<sup>60</sup> KIUC argued that costs should be allocated to the cost causer and the Commission has repeatedly held there is some relationship between energy consumed and the pollution caused by generating the energy.<sup>61</sup>

The Commission finds that the monthly surcharge should be allocated over all sales revenues. While disagreeing with the concept of allocating costs to all sales, Kentucky Power did agree that if the Commission rejected its proposed methodology, a percentage of revenues methodology would be more appropriate than a per Kwh basis.<sup>62</sup> The arguments put forth by Kentucky Power have all been made in the previous surcharge cases and the Commission has rejected each one. Kentucky Power's generating facilities are currently used to make off-system sales and the cost of environmental improvements should be allocated to both retail and off-system sales.

---

<sup>59</sup> Id. at 51.

<sup>60</sup> AG Brief at 14.

<sup>61</sup> KIUC Brief at 30.

<sup>62</sup> T.E., Vol. II, April 3, 1997, at 102.

Kentucky Power has failed to demonstrate that the allocation of the surcharge to off-system sales would lower the margins on those sales to the point they would be uneconomical. To the extent that Kentucky Power is able to sell power off-system, proper cost allocation requires that the costs attributable to those sales, including environmental costs, be assigned to such sales, rather than being charged to retail sales. Kentucky Power has submitted no analysis to demonstrate the impact on the system sales tracker of allocating surcharge costs to all sales. Kentucky Power presented no basis to justify a revenue allocation that differs from the allocations utilized by the other utilities authorized an environmental surcharge. Thus, the Commission will not utilize the Jurisdictional Allocation Factor proposed by Kentucky Power. The allocation to Kentucky retail customers will be a calculation dividing the monthly Kentucky retail revenues by the monthly Total Company revenues. Total Company revenues will include revenues from sales to other AEP System members and sales to parties other than AEP System members.

#### RATE OF RETURN

Kentucky Power proposed that it be allowed a rate of return that included debt and equity, and submitted testimony in support of its proposal. It further proposed that the debt portion be recalculated monthly to more closely reflect the cost actually incurred, while the equity portion would be reviewed for reasonableness at the 2-year reviews.<sup>63</sup> Kentucky Power proposed a rate of return on common equity of 12 percent.<sup>64</sup>

---

<sup>63</sup> Response to the Commission's February 7, 1997 Order, Item 13.

<sup>64</sup> Barber Direct Testimony at 26.



Kentucky Power's calculation of costs allocated to it under the Rockport Unit Power Agreement used a different rate of return, in compliance with the terms of that agreement.<sup>65</sup>

The AG argued that the authorized rate of return should be the cost of debt, to be consistent with the Commission's decisions in the other surcharge cases. The AG contends that Kentucky Power presented no evidence to set it apart from the other utilities which have requested a surcharge. The AG recommended a rate of return of 6.375 percent, which was the rate on Kentucky Power's latest pollution control bond issue.<sup>66</sup>

KIUC argued that the requested returns for Kentucky Power and the Rockport investments were excessive and should be denied. KIUC stated that the inclusion of a return on common equity is not appropriate in an environmental surcharge proceeding, as it is a single issue rate case sanctioned by statute that only examines environmental costs.<sup>67</sup> KIUC proposed that average debt interest rates be used as the authorized rate of return. For Rockport, the rate of return would be 3.91 percent, and for Kentucky Power, the rate of return would be 7.48 percent.<sup>68</sup>

The Commission rejects the suggestion by the AG and KIUC that the rate of return should be based on a debt rate only. Kentucky Power is authorized by KRS

---

<sup>65</sup> Response to the Commission's January 13, 1997 Order, Item 53(h).

<sup>66</sup> AG Brief at 15.

<sup>67</sup> KIUC Brief at 26.

<sup>68</sup> Id. at 28.

278.183 to request a reasonable return and is not limited to recovering only its cost of debt. A reasonable return includes both debt and equity. In the prior surcharge cases the utilities chose to limit their respective requested returns to a debt only component.

Kentucky Power proposed a return on equity for the overall company in the range of 11.75 percent to 12.25 percent, and recommended 12 percent as the appropriate return for determining the environmental surcharge. Kentucky Power used several methods to estimate its required return on equity. The basic results ranged from 10.8 percent to 13.64 percent.<sup>69</sup> The Commission has reviewed Kentucky Power's position in the electric utility industry and determined that Kentucky Power is in good financial condition, has relatively low rates, and is well positioned in the industry. Based on all these factors, the Commission finds that a return of 11.5 percent on equity for Kentucky Power's compliance-related capital expenditures is reasonable.

Based on Kentucky Power's capital structure and cost of debt as of December 31, 1996,<sup>70</sup> Kentucky Power's weighted cost of capital, before income tax gross-up, is:

	<u>Capital Structure</u>	<u>Cost</u>	<u>Weighted Cost</u>
Debt	54.65%	7.68%	4.197%
Equity	45.35%	11.50%	<u>5.215%</u>
Weighted Average Cost of Capital			9.412%

After adjusting the common equity weighted average cost of capital component for income tax gross-up,<sup>71</sup> the overall weighted average cost of capital is 12.96 percent.

---

<sup>69</sup> Barber Direct Testimony at 9.

<sup>70</sup> Response to Staff Hearing Request, April 2-3, 1997, Item 13.

<sup>71</sup> Wagner Direct Testimony, Exhibit EKW-2, page 8 of 11.

The Commission finds that it is not reasonable to restate the debt component of the cost of capital monthly, and therefore the debt component will be fixed for six-month periods. The Commission agrees with Kentucky Power and finds that the common equity component should be subject to review at the 2-year review. Concerning the Rockport rates of return, as those calculations are governed by the Rockport Unit Power Agreement, the rate of return authorized under the terms of that agreement will be used.

IT IS THEREFORE ORDERED that:

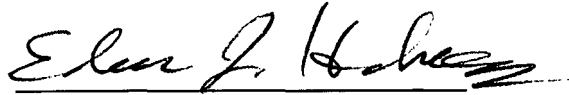
1. Kentucky Power's environmental compliance plan consisting of projects to meet federal, state, and local environmental laws and regulations is approved, with the exception of the installation of low NOx burners at Units 1 and 2.
2. Kentucky Power's environmental surcharge Tariff E.S., as modified herein, is approved to be effective on May 27, 1997.
3. Kentucky Power's proposed Tariff E.S. is denied.
4. Kentucky Power's rate of return on common equity for the environmental surcharge shall be 11.5 percent, and shall be reviewed for reasonableness at each 2-year review.
5. Kentucky Power's weighted average cost of capital shall be 9.412 percent, shall remain fixed during each 6-month period, and shall be reviewed and re-established during each 6-month review case.
6. The reporting formats included in Appendix B shall be used, as specified therein, for each monthly filing.

7. Within 10 days of the date of this Order, Kentucky Power shall file with the Commission revised tariff sheets setting out the Environmental Surcharge Tariff as modified and approved herein.

Done at Frankfort, Kentucky, this 27th day of May, 1997.

PUBLIC SERVICE COMMISSION

  
Chairman

  
Vice Chairman

  
Commissioner

ATTEST:

  
Executive Director

## APPENDIX A

### APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 96-489 DATED MAY 27, 1997

#### FORMULAS USED WHEN CALCULATING THE MONTHLY ENVIRONMENTAL SURCHARGE FACTOR AND THE MONTHLY ENVIRONMENTAL SURCHARGE GROSS REVENUE REQUIREMENT E(m)

##### Monthly Environmental Surcharge Factor

$$\text{Surcharge Factor} = \text{Net KY Retail } E(m) / \text{KY Retail } R(m)$$

Where:

Net KY Retail E(m) = Monthly E(m) allocated to Kentucky Retail Customers, net of Over/(Under) Recovery Adjustment; Allocation based on Percentage of Kentucky Retail Revenues to Total Company Revenues in the Expense Month.

KY Retail R(m) = Kentucky Retail Revenues for the Expense Month.

##### Monthly Environmental Surcharge Gross Revenue Requirement, E(m)

$$E(m) = \text{CRR} - \text{BRR}$$

Where:

CRR = Current Period Revenue Requirement for the Expense Month.

BRR = Base Period Revenue Requirement.

##### Base Period Revenue Requirement, BRR

$$\text{BRR} = [((\text{RB}_{\text{IM(B)}})(\text{ROR}_{\text{IM(B)}}/12)) + \text{OE}_{\text{IM(B)}}](.15)$$

Where:

$\text{RB}_{\text{IM(B)}}$  = Environmental Compliance Rate Base for Rockport.

$\text{ROR}_{\text{IM(B)}}$  = Annual Rate of Return on Rockport Rate Base; Annual Rate divided by 12 to restate to a Monthly Rate of Return.

$\text{OE}_{\text{IM(B)}}$  = Monthly Pollution Control Operating Expenses for Rockport.

The Base Period Revenue Requirement will remain fixed during the first two years of the surcharge. The Rate Base and Rate of Return calculations should reflect the account balances as of December 31, 1990. The Operating Expense amounts should reflect the December 1990 expense. The Rate of Return calculation should reflect the requirements of the Rockport Unit Power Agreement. "IM(B)" identifies these components as Indiana Michigan - Rockport, Base Period.

**Current Period Revenue Requirement, CRR**

$$CRR = ((RB_{KP})(ROR_{KP}/12)) + OE_{KP} + [((RB_{IM(C)})(ROR_{IM(C)}/12)) + OE_{IM(C)}](.15) - AS$$

Where:

- RB<sub>KP</sub> = Environmental Compliance Rate Base for Big Sandy.
- ROR<sub>KP</sub> = Annual Rate of Return on Big Sandy Rate Base, as authorized by the Commission; Annual Rate divided by 12 to restate to a Monthly Rate of Return.
- OE<sub>KP</sub> = Monthly Pollution Control Operating Expenses for Big Sandy.
- RB<sub>IM(C)</sub> = Environmental Compliance Rate Base for Rockport.
- ROR<sub>IM(C)</sub> = Annual Rate of Return on Rockport Rate Base; Annual Rate divided by 12 to restate to a Monthly Rate of Return.
- OE<sub>IM(C)</sub> = Monthly Pollution Control Operating Expenses for Rockport.
- AS = Net Gain or Net Loss resulting from Emission Allowance Sales, from either EPA Auctions or IAA Allocations, reflected in the month of receipt. This component also includes the return over the first 12 months of allowance sale proceeds as ordered by the Commission.

The Current Period Revenue Requirement will reflect the balances and expenses as of the Expense Month of the filing. The Rate of Return for Rockport should reflect the requirements of the Rockport Unit Power Agreement. Net Gains from Emission Allowance Sales will be a reduction to the Current Period Revenue Requirement, while Net Losses will be an increase. "KP" identifies those components associated with Kentucky Power - Big Sandy, while "IM(C)" identifies those components associated with Indiana Michigan - Rockport, Current Period.

## APPENDIX B

### APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 96-489 DATED MAY 27, 1997

#### INDEX OF REPORTING FORMATS FOR AMERICAN ELECTRIC POWER ENVIRONMENTAL SURCHARGE

ES Form 1.0	Calculation of E(m) and Surcharge Factor
ES Form 2.0	Base Period Revenue Requirement, Costs Associated with Rockport
ES Form 3.0	Current Period Revenue Requirement
ES Form 3.10	Current Period Revenue Requirement, Costs Associated with Big Sandy
ES Form 3.11	Current Period Revenue Requirement, Gavin Scrubber Costs
ES Form 3.12	Current Period Revenue Requirement, Emissions Allowance Inventory
ES Form 3.2	Current Period Revenue Requirement, Costs Associated with Rockport
ES Form 3.3	Current Period Revenue Requirement, Monthly Revenues, Jurisdictional Allocation Factor, and Over/(Under) Recovery Adjustment

Note: All reporting formats are to be filed 10 days before each monthly environmental surcharge is scheduled to go into effect, with the exception of **ES Form 2.0**, which is only required to be filed at the beginning of the 2-year cycle.

**AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT  
 CALCULATION OF E(m) and SURCHARGE FACTOR  
 For the Expense Month of \_\_\_\_\_**

CALCULATION OF E(m)

E(m) = CRR - BRR

Line 1	CRR from <b>ES Form 3.0</b>	\$	
Line 2	BRR from <b>ES Form 2.0</b>	\$	
Line 3	E(m) (Line 1 - Line 2)	\$	
Line 4	Kentucky Retail Jurisdictional Allocation Factor, from <b>ES Form 3.3</b> , Schedule of Revenues, Line 1		%
Line 5	KY Retail E(m) (Line 3 * Line 4)	\$	
Line 6	Over/(Under) Recovery Adjustment from <b>ES Form 3.3</b>	\$	
Line 7	Net KY Retail E(m) (Line 5 + Line 6)	\$	

SURCHARGE FACTOR

Line 8	Net KY Retail E(m) (Line 7)	\$	
Line 9	KY Retail R(m) from <b>ES Form 3.3</b>	\$	
Line 10	Environmental Surcharge Factor for Expense Month (Line 8 / Line 9)		%

Effective Date for Billing: \_\_\_\_\_

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

Title: \_\_\_\_\_

Date Submitted: \_\_\_\_\_



**AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT**  
**BASE PERIOD REVENUE REQUIREMENT**  
**COSTS ASSOCIATED WITH ROCKPORT**  
**For the Month of December 1990**

Line	Cost Component		
	Return on Rate Base (Balances as of December 31, 1990):		
1	Utility Plant at Original Cost	\$	
2	Less Accumulated Depreciation	\$	
3	Less Accum. Def. Income Taxes	\$	
4	Total Rate Base		\$
5	Weighted Average Cost of Capital		%
6	Monthly Weighted Aver. Cost of Capital (5)/12		%
7	December 1990 Return on Rate Base (4)*(6)		\$
	Operating Expenses:		
8	December 1990 Depreciation Expense		\$
9	December 1990 Portion of Indiana Air Emissions Fee		\$
10	Total Operating Expenses (8)+(9)		\$
11	Total Revenue Requirement, Costs Associated with Rockport (7)+(10)		\$
12	Kentucky Power Portion of Rockport Total Revenue Requirement, as of December 1990. Record on <b>ES Form 1.0</b> . (11)*15%		\$

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.

**AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT  
CURRENT PERIOD REVENUE REQUIREMENT  
For the Expense Month of \_\_\_\_\_**

**CALCULATION OF CURRENT PERIOD REVENUE REQUIREMENT**

First Component:	$(RB_{KP})(ROR_{KP}/12) + OE_{KP}$	
Costs Associated with Big Sandy, ES Form 3.10, Line 15		\$
Second Component:	$(((RB_{IM(C)})(ROR_{IM(C)}/12)) + OE_{IM(C)})(.15)$	
Kentucky Power Portion of Costs Associated with Rockport, ES Form 3.2, Line 12		\$
Third Component:	AS	
Net Gain or Net Loss from Emission Allowance Sales:		
1) EPA Auction Proceeds received during Expense Month		\$
2) Net Gain or Net Loss from Allowance Sales, in compliance with the AEP Interim Allowance Agreement, received during Expense Month		\$
3) Return of Allowance Sale Proceeds as Ordered by the Commission in Case No. 96-489 (Effective for 12 months)	\$ 193,255	
Total Net Gain or Net Loss from Emission Allowance Sales		\$
Total Current Period Revenue Requirement, CRR Record on ES Form 1.0.		\$

**AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT  
CURRENT PERIOD REVENUE REQUIREMENT  
COSTS ASSOCIATED WITH BIG SANDY  
For the Expense Month of \_\_\_\_\_**

Line	Cost Component		
	Return on Rate Base:		
1	Utility Plant at Original Cost	\$	
2	Less Accumulated Depreciation	\$	
3	Less Accum. Def. Income Taxes	\$	
4	Net Utility Plant		\$
5	Emission Allowance Inventory		\$
6	Total Rate Base		\$
7	Weighted Average Cost of Capital		%
8	Monthly Weighted Aver. Cost of Capital (7)/12		%
9	Monthly Return on Rate Base (6)*(8)		\$
	Operating Expenses:		
10	Monthly Depreciation Expense		\$
11	Monthly Property Taxes		\$
12	Monthly Kentucky Air Emissions Fee		\$
13	Monthly Gavin Scrubber Cost		\$
14	Total Operating Expenses (10)+(11)+(12)+(13)		\$
15	Total Revenue Requirement, Costs Associated with Big Sandy. Record on ES Form 3.0. (9)+(14)		\$

For the first six months of the surcharge, the Weighted Average Cost of Capital will be 12.96 percent, per the Commission's Order in Case No. 96-489.

**AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT  
CURRENT PERIOD REVENUE REQUIREMENT  
GAVIN SCRUBBER COSTS  
For the Expense Month of \_\_\_\_\_**

Line	Cost	Amount
	Operations -	
1	Disposal (501.91)	\$
2	Lime (502.9)	\$
3	Lease (507)	\$
4	Total Operations (1)+(2)+(3)	\$
	Maintenance -	
5	Scrubbers (512.8)	\$
6	1/2 of Maintenance (5)*50%	\$
7	Fixed O&M (4)+(6)	\$
	Impact on Weighted Average Capacity Rate -	
8	Ohio Power Steam Capacity (kw)	
9	Gavin Scrubber Rate (\$/kw) (7)/((8)	\$
10	Ohio Power Surplus Weighting	%
11	Portion of Weighted Average Capacity Rate Attributed to Gavin Scrubber (\$/kw) (9)*(10)	\$
	Gavin Costs to Kentucky Power -	
12	Gavin Scrubber Portion (\$/kw) (11)	\$
13	Kentucky Power Capacity Deficit (kw)	
14	Scrubber Cost to Kentucky Power (12)*(13)	\$

Total Cost at Line 14 is to be recorded on **ES Form 3.10**, Line 13.

**AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT  
CURRENT PERIOD REVENUE REQUIREMENT  
EMISSIONS ALLOWANCE INVENTORY  
For the Expense Month of \_\_\_\_\_**

	(1) Allowance Activity in Month	(2) Cumulative Balance	(3) Dollar Value of Activity	(4) Cumulative Dollar Balance	(5) Weighted Average Cost
BEGINNING INVENTORY				\$	\$
Additions -					
EPA Allowances				\$	\$
Gavin Reallocation				\$	\$
P&E Transfers In				\$	\$
Intercompany Purchases				\$	\$
Other (List)				\$	\$
Withdrawals -					
P&E Transfers Out				\$	\$
Intercompany Sales				\$	\$
Off-System Sales				\$	\$
SO2 Emissions				\$	\$
ENDING INVENTORY				\$	\$
Record the ENDING INVENTORY in Column 4 on <b>ES Form 3.10</b> , Line 5.					
Expense Month Member Load Ratio for American Electric Power (Kentucky)					

**Column 1** - Record the number of allowances involved in any transaction (purchase, sale, transfer) which occurred during the Expense Month. If more than one transaction occurs in the Expense Month, such as multiple P&E Transfers Out, show the total of all P&E Transfers Out made in the Expense Month.

**Column 2** - For any transaction reflected in Column 1, update the cumulative balance. For example, when the Gavin Reallocation is shown in Column 1, the cumulative balance in this column should reflect the increase to the allowance inventory.

**Column 3** - For any transaction reflected in Column 1, record the total dollar amount of the transaction. If more than one transaction occurs in the Expense Month, such as multiple P&E Transfers Out, show the total dollar value of all P&E Transfers Out made in the Expense Month. This includes transactions which total zero dollars. Record amounts in whole dollars.

**Column 4** - For any dollar transaction shown in Column 3, update the cumulative balance, even if the amount of the transaction totaled zero. Record amounts in whole dollars.

**Column 5** - Compute the Weighted Average Cost of the Inventory by dividing the Cumulative Dollar Balance in Column 4 by the corresponding Cumulative Balance in Column 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.

**AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT  
CURRENT PERIOD REVENUE REQUIREMENT  
COSTS ASSOCIATED WITH ROCKPORT  
For the Expense Month of \_\_\_\_\_**

Line	Cost Component		
	Return on Rate Base:		
1	Utility Plant at Original Cost	\$	
2	Less Accumulated Depreciation	\$	
3	Less Accum. Def. Income Taxes	\$	
4	Total Rate Base		\$
5	Weighted Average Cost of Capital		%
6	Monthly Weighted Aver. Cost of Capital (5)/12		%
7	Monthly Return on Rate Base (4)*(6)		\$
	Operating Expenses:		
8	Monthly Depreciation Expense		\$
9	Monthly Indiana Air Emissions Fee		\$
10	Total Operating Expenses (8)+(9)		\$
11	Total Revenue Requirement, Costs Associated with Rockport (7)+(10)		\$
12	Kentucky Power Portion of Rockport Total Revenue Requirement. Record on <b>ES Form 3.0</b> . (11)*15%		\$

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.

**AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT  
CURRENT PERIOD REVENUE REQUIREMENT  
MONTHLY REVENUES, JURISDICTIONAL ALLOCATION FACTOR,  
and OVER/(UNDER) RECOVERY ADJUSTMENT  
For the Expense Month of \_\_\_\_\_**

SCHEDULE OF MONTHLY REVENUES

Line	Description	Monthly Revenues	Percentage of Total Revenues
1	Kentucky Retail Revenues	\$	%
2	FERC Wholesale Revenues	\$	%
3	Associated Utilities Revenues	\$	%
4	Non-Assoc. Utilities Revenues	\$	%
5	TOTAL REVENUES FOR MONTH (1)+(2)+(3)+(4)	\$	%

The Kentucky Retail Monthly Revenues and Percentage of Total Revenues (Line 1) are to be recorded on **ES Form 1.0**, 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	Description	Amounts
1	Kentucky Retail Surcharge Factor for the Expense Month of _____	
2	Kentucky Retail Revenues for Current Expense Month	\$
3	Surcharge Collected (1)*(2)	\$
4	Surcharge Amount To Be Collected	\$
5	Over/(Under) Recovery (4)-(3)	\$

The Over/(Under) Recovery amount is to be recorded on **ES Form 1.0**, Line 6.