COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF KENTUCKY UTILITIES COMPANY FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT FLUE GAS DESULFURIZATION SYSTEMS AND APPROVAL OF ITS 2004 COMPLIANCE PLAN FOR RECOVERY BY ENVIRONMENTAL SURCHARGE	)	CASE NO. 2004-00426

O R D E R

On December 20, 2004, the Kentucky Utilities Company ("KU"), pursuant to KRS 278.020(1) and 278.183, filed an application requesting a Certificate of Public Convenience and Necessity ("CPCN") for the construction of certain flue gas desulfurization sulfur dioxide ("SO_2") control technologies ("scrubbers") and seeking approval of an amended compliance plan for purposes of recovering the costs of new and additional pollution control facilities and amend its Environmental Cost Recovery Surcharge tariff ("ES tariff"). KU maintains that it will need these facilities and will incur the related compliance costs to comply with the requirements of the Clean Air Act Amendments of 1990 ("CAA"),[1] the Resource Conservation and Recovery Act,[2] and other federal, state, or local environmental requirements applicable to combustion waste and by-products from facilities used for the generation of energy from coal. KU

[1] As amended, 42 U.S.C.A. § 7401 *et seq.*

[2] As amended, 42 U.S.C.A. § 6901 *et seq.*

proposed that its amended ES tariff become effective for service rendered on and after July 1, 2005.

The following parties requested and were granted full intervention: the Attorney General of the Commonwealth of Kentucky, by and through his Office of Rate Intervention ("AG"), and Kentucky Industrial Utility Customers, Inc. ("KIUC"). A consolidated hearing was held on May 10, 2005 for this case and Case No. 2004-00421,[3] the companion case for Louisville Gas and Electric Company ("LG&E"). All information requested at the public hearing has been filed and the parties have submitted briefs.

BACKGROUND

KU is a privately owned electric utility that generates, transmits, distributes, and sells electricity to approximately 486,000 consumers in all or parts of 77 counties in Kentucky.[4] KU is a wholly owned subsidiary of LG&E Energy LLC, a non-utility holding company.[5]

KRS 278.183 provides that a utility is entitled to the current recovery of its costs of complying with the CAA as amended and those federal, state, or local environmental requirements that apply to combustion wastes and by-products from facilities utilized for

[3] Case No. 2004-00421, The Application of Louisville Gas and Electric Company for Approval of Its 2004 Compliance Plan for Recovery by Environmental Surcharge.

[4] Operating under the name of Old Dominion Power Company, KU generates, transmits, distributes, and sells electricity to approximately 29,600 consumers in 5 counties in southwestern Virginia. KU also sells wholesale electric energy to 12 municipalities.

[5] LG&E Energy LLC is a Kentucky limited liability company and is an indirect subsidiary of E.ON AG, a German multi-national energy corporation.

the production of energy from coal. Pursuant to KRS 278.183(2), a utility seeking to recover its environmental compliance costs through an environmental surcharge must first submit to the Commission a plan that addresses compliance with the applicable environmental requirements. The plan must also include the utility's testimony concerning a reasonable return on compliance-related capital expenditures and a tariff addition containing the terms and conditions of the proposed surcharge applied to individual rate classes. Within 6 months of submission, the Commission must conduct a hearing to:

> (a) Consider and approve the compliance plan and rate surcharge if the plan and rate surcharge are found reasonable and cost-effective for compliance with the applicable environmental requirements;
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> (b) Establish a reasonable return on compliance-related capital expenditures; and
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> (c) Approve the application of the surcharge.

KU's original compliance plan and environmental surcharge were approved by the Commission in 1994 ("1994 Plan") in Case No. 1993-00465.[6] The 1994 Plan was comprised of capital projects including a scrubber at Ghent Unit 1, ash pond enhancements, precipitator enhancements, and other pollution control equipment required by federal, state, or local environmental regulations applicable to coal combustion and by-products. The ES tariff for the 1994 Plan provided for a formula to calculate the retail monthly environmental surcharge gross revenue requirement ("ES revenue requirement") and applicable monthly surcharge factor. The rate of return

[6] Case No. 1993-00465, The Application of Kentucky Utilities Company to Assess a Surcharge Under KRS 278.183 to Recover Costs of Compliance with Environmental Requirements for Coal Combustion Wastes and By-Products, final Order dated July 19, 1994.

authorized for the 1994 Plan environmental capital expenditures was based on the actual cost of KU's December 1993 pollution control bond debt.[7]

KU added new pollution control facilities to its compliance plan and environmental surcharge through amendments that were approved by the Commission in 2001 ("2001 Plan") in Case No. 2000-00439.[8] The 2001 Plan contained capital projects involving advanced low nitrogen oxide ("NOx") burner systems, selective catalytic reduction NOx reduction technology facilities, and other pollution control equipment required by the emission limits mandated by the Environmental Protection Agency ("EPA") and the CAA. The ES tariff for the 2001 Plan amended the ES tariff for the 1994 Plan and provided for a formula to calculate the ES revenue requirement and applicable monthly surcharge factor.

In Case No. 2000-00439 the rates of return on the 1994 and 2001 Plan environmental capital expenditures were separated. The rate of return on the 1994 Plan was based on the weighted average cost of KU's pollution control bond debt as of December 31, 2000;[9] but the rate of return on the 2001 Plan environmental capital expenditures was based on KU's overall rate of return on capital, reflecting KU's jurisdictional capital structure and corresponding debt and preferred stock cost rates as

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[7] Id. at 19.

[8] Case No. 2000-00439, The Application of Kentucky Utilities Company for Approval of an Amended Compliance Plan for Purposes of Recovering the Costs of New and Additional Pollution Control Facilities and to Amend Its Environmental Surcharge Tariff, final Order dated April 18, 2001.

[9] Id. at 17.

of December 31, 2000.[10] For both the 1994 and 2001 Plans, the cost of debt and preferred stock were scheduled to be reviewed and re-established during the 6-month surcharge review cases. In addition, at the 6-month surcharge reviews a "true-up" calculation would reflect changes during the review period in the cost of debt.

KU's second amendment to its environmental compliance plan and surcharge mechanism was in Case No. 2002-00146.[11] The amendment to the compliance plan, approved by the Commission in 2003 ("2003 Plan"), consisted of a capital project that involved modifications of the ash pond dike at the Ghent generating station. The separation of the 1994 Plan and 2001 Plan ES revenue requirements was maintained, and no changes were made to the surcharge mechanism or calculation of the ES revenue requirements and monthly surcharge factor for the 1994 Plan and the 2001 Plan. For the 2003 Plan, the surcharge mechanism, the calculation of the ES revenue requirement, and the calculation of the monthly surcharge factor were similar to that used for the 1994 and 2001 Plans. In Case No. 2002-00146, the rate of return applied to the 1994 Plan and 2001 Plan environmental capital expenditures remained the same as approved in Case No. 2000-00439. For the 2003 Plan environmental capital expenditures, the overall rate of return on capital was approved, consistent with the approach outlined for the 2001 Plan in Case No. 2000-00439.

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[10] Id. at 23-26. During rehearing the Commission included short-term debt and accounts receivable financing in KU's jurisdictional capital structure along with the corresponding cost rates as of December 31, 2000. See Orders on Rehearing dated May 14, 2001 and August 30, 2001.

[11] Case No. 2002-00146, The Application of Kentucky Utilities Company for Approval of Its 2002 Compliance Plan for Recovery by Environmental Surcharge, final Order dated February 11, 2003.

As part of Case No. 2003-00068,[12] the Commission modified KU's surcharge mechanism to utilize the base-current methodology. Prior to the modification, KU's surcharge mechanism was based on the incremental approach. Under the base-current methodology, all retirements and replacements recognized as offsets in KU's monthly surcharge filings through May 31, 2002 were incorporated in the base period surcharge factor. Only retirements or replacements of PC plant occurring since May 31, 2002 are reflected in the monthly surcharge filings as part of the current period surcharge factor. The determination of the ES revenue requirements for the 1994, 2001, and 2003 Plans were otherwise not changed by the adoption of the base-current methodology.

In Case No. 2003-00434,[13] the capital expenditures and operating expenses associated with the 1994 Plan were included for recovery through KU's base rates. These costs were removed from KU's environmental surcharge, with the environmental surcharge providing recovery of the costs associated with the 2001 and 2003 Plans.

REQUEST FOR CPCN

KU has been considering and evaluating the addition of a scrubber at Ghent Unit 2 since 1996. In each of the three Integrated Resource Plans ("IRPs") submitted since 1996,[14] KU has reviewed its SO_2 compliance strategy reflecting the then current

[12] Case No. 2003-00068, An Examination by the Public Service Commission of the Environmental Surcharge Mechanism of Kentucky Utilities Company for the Six-Month Billing Periods Ending January 31, 2001, July 31, 2001, January 31, 2002, and January 31, 2003 and for the Two-Year Billing Periods Ending July 31, 2000 and July 31, 2002, final Order dated October 17, 2003 and rehearing Order dated May 4, 2004.

[13] Case No. 2003-00434, An Adjustment of the Electric Rates, Terms, and Conditions of Kentucky Utilities Company, final Order dated June 30, 2004.

[14] KU filed IRPs with the Commission in 1996, 1999, and 2002.

estimates of scrubbing versus not scrubbing Ghent Unit 2. In the 1999 IRP, the installation of a scrubber at Ghent Unit 2 was a viable alternative, but was not the lowest cost option evaluated. The 2002 IRP concluded that a scrubber at Ghent Unit 2 was only slightly more expensive than the SO_2 compliance strategy of overscrubbing and purchasing SO_2 emission allowances and recommended pursuing the construction of the Ghent Unit 2 scrubber.[15]

A series of events has now tipped the scales definitively in favor of KU's request to construct not only that scrubber, but others as well. First, under the provisions of the CAA, KU is required to reduce its SO_2 emissions. KU's current annual allotment of SO_2 emission allowances from the EPA is 83,343 allowances.[16] However, KU's current SO_2 emissions exceed the CAA emission limits by approximately 55,000 tons per year. KU has been using banked[17] SO_2 emission allowances to remain in compliance with emission limits, but it estimates that its bank of SO_2 emission allowances will be depleted before the end of 2007.

In addition, the EPA proposed the Clean Air Interstate Rule ("CAIR") on December 17, 2003. Under the CAIR, maximum allowed SO_2 emissions would be reduced by 3.6 million tons annually in 2010 and an additional 2.0 million tons annually

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[15] Response to the Commission Staff's First Data Request dated January 26, 2005, Item 11.

[16] Malloy Direct Testimony, Exhibit JPM-4. The Commission notes that under current regulations, each SO_2 emission allowance authorizes the emission of one ton of SO_2. As shown in Exhibit JPM-4, KU projected its total SO_2 emissions for 2004 to be 137,519 tons, growing to 148,822 tons by 2006.

[17] The unused balance of a given year's annual EPA allotment of SO_2 emission allowances can be used in a subsequent year. This unused balance is referred to as "banked" allowances.

in 2015. The proposed SO_2 emission levels represent a 70 percent reduction below current SO_2 emission levels.[18] In conjunction with the reduction in SO_2 emissions, beginning in 2010, two SO_2 emission allowances will authorize the emission of one ton of SO_2, while in 2015 the ratio becomes three SO_2 emission allowances for one ton of SO_2. To comply with the CAIR regulations, KU would either have to reduce SO_2 emissions by an additional 24,000 tons per year, obtain additional SO_2 emission allowances, or a combination of both. The EPA issued its final adoption of the CAIR on March 10, 2005.

KU performed a study of its SO_2 compliance options in 2004 and determined that 55 percent of its future SO_2 emissions would come from Ghent Units 2, 3, and 4 and Brown Units 1, 2, and 3. KU considered and evaluated compliance strategies using various scrubber processes, fuel switching, and additional purchases of SO_2 emission allowances. The study concluded that the most cost-effective approach would include the installation of wet process scrubbers with a simultaneous switch at the same generating units to high sulfur coal and the purchase of SO_2 emission allowances on an as needed basis. Over a 20-year analysis period, this approach should result in decreased cost of SO_2 compliance, limited exposure to the SO_2 allowance market, increased fuel procurement flexibility, and improved position for KU in meeting the SO_2 requirements associated with CAIR and future regulations concerning fine particulates and mercury.[19]

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[18] Application at 3.

[19] Malloy Direct Testimony at 2-5 and Exhibit JPM-2.

KU proposes to construct three scrubbers at Ghent Units 2, 3, and 4 and one scrubber at Brown Units 1, 2, and 3. The four scrubbers are expected to reduce SO_2 emissions at the two generating stations by approximately 110,000 tons per year.[20] KU estimates that the timeframe for constructing each scrubber is approximately 18 to 24 months, with construction on the first scrubber beginning in 2005. KU expects the four scrubbers will be completed between 2007 and 2009 at an estimated capital cost for all four of $659.0 million. KU anticipates that it will bid and award the scrubber construction contracts as a single package resulting in gaining significant efficiencies associated with project staging, procurement, and labor scheduling.[21] Neither the AG nor KIUC objected to KU's proposal to construct the four scrubbers.

After consideration of the evidence and being otherwise sufficiently advised, the Commission finds that the proposed construction of four scrubbers is needed for KU to comply with the SO_2 emission limits of the CAA and the CAIR and a CPCN should be granted. The proposed construction is reasonable and cost effective and will not result in the wasteful duplication of facilities.

2005 COMPLIANCE PLAN

KU is adding new pollution control facilities to its previously approved compliance plans to reflect its continuing efforts to reduce SO_2 emissions and control fly and bottom

[20] Response to the Commission Staff's First Data Request dated January 26, 2005, Item 13. The scrubbers on Ghent Units 2, 3, and 4 are expected to reduce SO_2 emissions by 20,000 tons each and the scrubber on Brown Units 1, 2, and 3 is expected to reduce SO_2 emissions by 50,000 tons.

[21] Application at 4.

ash. The third amendment to the compliance plan ("2005 Plan") proposed by KU calls for four projects that include the following facilities:

(1) Replacement of the existing ash conveyance system and the ash booster pump, and expansion of the existing pump house currently utilized at the Ghent Station.

(2) Vertical expansion of the existing ash treatment basin at the E.W. Brown Station.

(3) Construction of scrubbers on E.W. Brown Units 1, 2, and 3 and Ghent Units 2, 3, and 4.

(4) Purchase of emission allowances required to maintain compliance with CAA requirements.

The 2005 Plan has a total estimated capital expenditure of $760.56 million, with the scrubbers representing $658.93 million of the investment.

In support of the 2005 Plan, KU presented testimony and an analysis performed by Fuller, Mossbarger, Scott & May Engineers ("FMSM Study") that evaluated the options available at the Brown site for handling ash. As discussed previously in this Order, KU prepared in 2004 a detailed SO_2 compliance strategy which recommended the installation of the scrubbers and purchase of SO_2 emission allowances. The AG and KIUC have not challenged the reasonableness or the cost-effectiveness of KU's proposed 2005 Plan.

This evidence shows that the projects in the 2005 Plan are related to compliance with the CAA as amended and other governmental regulations pertaining to combustion wastes and by-products resulting from the production of electricity from coal. Furthermore, the FMSM Study shows that KU sufficiently analyzed the available options and selected the option that is most cost-effective. The SO_2 compliance strategy supported KU's decision to construct scrubbers and purchase allowances. Based on a

review of the record, the Commission finds that KU's 2005 Plan is reasonable, cost-effective, and should be approved.

SURCHARGE MECHANISM AND CALCULATION

KU proposed no changes in the surcharge mechanism or calculation of the ES revenue requirements and monthly surcharge factor for the 2001 and 2003 Plans. For the 2005 Plan, KU proposes that the environmental surcharge mechanism be similar to that used for the 2003 Plan. The ES revenue requirement, determined for the current expense month, is comprised of a return on the 2005 Plan Environmental Compliance Rate Base ("Rate Base") plus specified environmental compliance operating expenses.[22] The addition of the 2005 Plan will require a revision to the monthly surcharge reporting formats. KU provided sample monthly reporting formats that reflected the revisions required by the 2005 Plan.[23]

Rate Base

KU's proposed 2005 Plan Rate Base used in the environmental surcharge mechanism includes the following components: eligible pollution control plant in service ("PC plant"), accumulated depreciation associated with the PC plant, eligible pollution control construction work in progress ("PC CWIP"), deferred income taxes, deferred investment tax credits, cash working capital allowance, and emission allowance inventory. The Rate Base would be adjusted for eligible PC plant, accumulated depreciation, and deferred taxes relating to replacements and retirements of PC plant

[22] Conroy Direct Testimony, Exhibit RMC-4 at 3 of 10.

[23] Id. at 1-10 of 10.

that are already included in existing rates. The AG and KIUC did not object to KU's proposed 2005 Plan Rate Base.

The Commission finds that the 2005 Plan Rate Base should be comprised of PC plant, accumulated depreciation associated with the PC plant, eligible PC CWIP, deferred income taxes, deferred investment tax credits, cash working capital allowance, and emission allowance inventory. Consistent with the base-current methodology,[24] the 2005 Plan Rate Base should be adjusted for eligible PC plant, accumulated depreciation, and deferred taxes to reflect any retirement or replacement of PC plant that is already included in existing rates.

KU's SO_2 emission allowance inventory is currently part of its environmental compliance rate base. KU has proposed to continue including the SO_2 emission allowance inventory in its environmental compliance rate base. KU has also proposed to include the purchase of additional SO_2 emission allowances as part of its amendment to its environmental compliance plan. The AG and KIUC did not oppose the continued inclusion of the SO_2 emission allowance inventory in rate base or the purchase of allowances as part of the approved compliance plan. However, KIUC did oppose including SO_2 emission allowances that have been assigned to gas-fired combustion turbines ("gas-fired CTs") in the allowance inventory and rate base. KIUC argued that KRS 278.183 prohibits the inclusion of the gas-fired CT emission allowances in the surcharge mechanism. KIUC acknowledged that KU was not including with its emission

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[24] As noted previously in this Order, any retirements or replacements of PC plant occurring since May 31, 2002 are reflected in the monthly surcharge filings as part of the current period surcharge factor.

allowance expense the cost of any SO_2 emission allowances used for the gas-fired CTs.[25]

KU argued that all of its SO_2 emission allowances, including those it assigned to gas-fired CTs, should be included in the environmental compliance rate base. KU stated that while EPA did not assign emission allowances to the gas-fired CTs, it was required by EPA regulations to have allowances in its accounts for the gas-fired CTs and surrender allowances in a number equal to the CT emissions. KU also noted that the Federal Energy Regulatory Commission ("FERC") Uniform System of Accounts ("USoA") requires SO_2 emission allowances to be valued using a monthly weighted-average method of cost determination rather than a specific assignment method. This average cost is applied to all allowances, regardless of whether the allowance was assigned to coal-fired or gas-fired generation. KU contended that it should not be denied the opportunity to earn a return on emission allowance inventory simply because of its internal decision on the timing of the transfer of allowances to the gas-fired CT accounts.[26]

The Commission addressed the question of including projects in an environmental compliance plan and surcharge mechanism related to gas-fired generation in Case No. 2004-00321.[27] In that case, the Commission stated,

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[25] Kollen Direct Testimony at 5 and 20-21.

[26] Blake Rebuttal Testimony at 10-11.

[27] Case No. 2004-00321, Application of East Kentucky Power Cooperative, Inc. for Approval of an Environmental Compliance Plan and Authority to Implement an Environmental Surcharge, final Order dated March 17, 2005.

> The agreed to compliance plan for East Kentucky will contain only those environmental projects related to the generation of electricity by burning coal. This is consistent with the stated provisions of KRS 278.183, the Commission's previous decisions in environmental surcharge applications, and the decision of the Kentucky Supreme Court in *Kentucky Industrial Utility Customers v. Kentucky Utilities Co.*, Ky., 983 S.W.2d 493 (1998).[28]

In this case, the Commission notes the inconsistency of KU's position regarding SO_2 emission allowances. KU readily agreed that the cost of SO_2 emission allowances associated with the gas-fired CTs should not be recovered through the surcharge mechanism, yet it argued it is entitled to earn a return on its SO_2 emission allowance inventory that has been assigned to the gas-fired CTs. Both the recovery of environmental costs and the earning of a return on environmental compliance capital expenditures must be in compliance with the provisions of KRS 278.183. Consequently, the SO_2 emission allowances associated with KU's gas-fired CTs cannot be included in the allowance inventory that is reflected in the environmental compliance rate base.

The Commission agrees with KIUC on this issue and will require that KU exclude from its SO_2 emission allowance inventory included in the environmental compliance Rate Base those allowances assigned to the gas-fired CTs. KU will determine this adjustment by applying the weighted average cost of its SO_2 emission allowances to the number of allowances assigned to the gas-fired CTs and deducting the resulting amount from the allowance inventory balance included in the monthly Rate Base calculations.

[28] Case No. 2004-00321, March 17, 2005 Order at 11.

The Commission notes in the compliance plan amendment that KU envisions the possibly of SO_2 emission allowance purchases from or sales to LG&E. KU and LG&E have proposed that any purchases or sales of emission allowances between the two regulated utilities should be priced at the market price. KU argued that to transfer allowances at prices less than market denies customers the full benefits of the excess allowances. KU did state, however, that if the Commission found that the transfers should be priced at the weighted average cost, it was not opposed to that pricing method for purposes of this proceeding.[29] When asked if the Corporate Policies and Guidelines for Intercompany Transactions ("Guidelines")[30] required the purchase or sale of allowances at cost, KU stated,

> The reference in these Guidelines to asset transfers clearly applies to capital assets included in rate base. For such assets, the utility is allowed the opportunity to earn a fair, just and reasonable return on the cost of such assets. The policy of transferring assets at cost between LG&E and KU in the Guidelines reflects that as between two full rate-of-return regulated utilities, the cost of the asset essentially represents the fair market price of the asset because each Company earns a regulated return (i.e. regulation's substitute for the fair market rate of return) on its rate base assets. Thus, transferring the assets at cost is the functional equivalent of transferring the assets at their fair market value as between the two utility companies.[31]

[29] Response to the Commission Staff's First Data Request dated January 26, 2005, Item 14(b).

[30] See Case No. 1997-00300, Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for Approval of Merger, final Order dated September 12, 1997. KU and L&GE requested the Commission's approval of the Guidelines to govern their merged activities. The Commission ordered KU and LG&E to comply with the Guidelines after the merger.

[31] Response to the Commission Staff's Second Data Request dated February 23, 2005, Item 3(a).

The Commission believes that the SO_2 emission allowances clearly are tangible assets of KU. Allowances can be publicly traded or bought and sold in transactions between two parties. The FERC USoA classifies the allowances as assets. The inventory of SO_2 emission allowances are capital assets that KU has proposed to include in its environmental compliance Rate Base. The Guidelines clearly require that the transfer or sale of assets between KU and LG&E will be priced at cost. KU has stated that neither FERC nor the Securities and Exchange Commission requires that emission allowance transfers between KU and LG&E be at market. KU further has stated that the provisions of KRS 278.2207(2) do not apply because emission allowances are neither a service nor a product offered by KU to LG&E.[32]

Therefore, the Commission finds that, from the date of this Order, any future SO_2 emission allowance purchases from or sales to LG&E should be priced at weighted average cost. In future proceedings, KU may submit evidence supporting a change in this pricing method.

Operating Expenses

KU anticipates additional incremental operating and maintenance expenses in conjunction with the 2005 Plan. KU plans to identify and track these incremental expenses associated with the 2005 Plan by utilizing Account No. 502006, Scrubber Operations and Account No. 512005, Scrubber Maintenance.[33]

[32] Response to the Commission Staff's First Data Request dated January 26, 2005, Item 14(a) and 14(b).

[33] Conroy Direct Testimony, Exhibit RMC-4 at 8 of 10.

In addition to the Account No. 502006 and 512005 expenses, KU proposed that the monthly environmental compliance operating expenses for the 2005 Plan should include: depreciation expense, property taxes, insurance, and emission allowance expense. The depreciation expense, property taxes, and insurance expense are functions of the value of the PC plant and the monthly expense amounts would reflect that calculation.

The AG and KIUC did not oppose the inclusion of the operating expenses proposed by KU for the 2005 Plan. KIUC did raise the concern that KU had not sufficiently acknowledged the obligation to reflect all cost reductions associated with the retirement of environmental plant included in existing rates. KIUC recommended that the Commission reiterate the general principle stated in the Orders in Case No. 2002-00147[34] and require KU to credit environmental surcharge expenses for reductions in all environmental expenses related to the retirement of plant included in existing rates.[35] KU has stated that if there are retirements resulting from the installation of new pollution control equipment, "KU will adjust the monthly ECR filings to reflect asset retirements in conformity with prior Commission Orders and consistent with KU's current practice."[36]

The Commission finds that KU's proposal to track the additional incremental expenses associated with the 2005 Plan by utilizing Account No. 502006, Scrubber Operations and Account No. 512005, Scrubber Maintenance and report those expenses

[34] Case No. 2002-00147, The Application of Louisville Gas and Electric Company for Approval of Its 2002 Compliance Plan for Recovery by Environmental Surcharge, final Order dated February 11, 2003 and rehearing Order dated September 4, 2003.

[35] Kollen Direct Testimony at 25-27.

[36] Scott Direct Testimony at 7.

in the same manner as currently used is reasonable and should be approved. The Commission further finds KU's proposal concerning the recovery of depreciation expense, property taxes, insurance expense, and emission allowance expense associated with the 2005 Plan to be reasonable, and it should be approved.

Concerning the impact of retirements, while KU's assurance recognizes prior Commission Orders concerning retirements, its focus fails to directly acknowledge the impact retirements could have on environmental surcharge operating expenses. Thus, the Commission agrees with KIUC and reminds KU that, to the extent retirements or replacements of PC plant already included in base rates impact the determination of the surcharge operating expenses, KU should include the necessary adjustment to the expense reported for the current expense month.

The Commission anticipates that KU will not incur the discussed operating expenses until the 2005 Plan facilities have gone into service. If a monthly surcharge factor includes these expenses prior to the 2005 Plan facilities going into service, KU should submit as part of the monthly surcharge filing a written explanation documenting why the expense has been incurred. The inclusion of that expense would be subject to review during the appropriate 6-month surcharge review.

Capital Structure

The AG recommended and KU agreed that the capital structure utilized to determine the overall rate of return on capital should reflect the capital structure ratios as of December 31, 2004.[37] While KIUC did not object to the December 31, 2004 valuation date, it did object to the use of the common equity ratio of 55.09 percent.

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[37] Weaver Testimony at 47 and Blake Rebuttal Testimony at 5.

KIUC contended that LG&E Energy LLC and KU had significantly increased KU's common equity ratio during 2004 by retaining earnings and reducing short-term and long-term debt. KIUC argued that the common equity ratio is excessive and unnecessary for KU to retain its single A bond rating. KIUC compared KU's common equity ratio with other utilities with similar risk characteristics as KU and with LG&E, and concluded that KU's common equity ratio is excessive. KIUC stated that the excess ratio was unreasonable and would result in KU receiving an excessive recovery of its environmental compliance costs through the environmental surcharge. KIUC recommended that the common equity ratio be capped at 51.58 percent, the common equity ratio used in Case No. 2003-00434.[38] KIUC also stated that the Commission has utilized such a hypothetical capital structure in the environmental surcharge cases for KU, LG&E, Big Rivers Electric Corporation ("Big Rivers"), and East Kentucky Power Cooperative, Inc. ("East Kentucky").[39]

KU opposed the KIUC recommendation to cap the common equity ratio used to determine the overall rate of return on capital. KU stated that a hypothetical capital structure had not been used for its or LG&E's environmental surcharge cases.[40] KU also responded that its common equity ratio was closer to the common equity ratios of other companies identified by KIUC and not excessive as implied by KIUC's analysis. KU further noted that its common equity ratio, on a rating agency basis, was within the

[38] Kollen Direct Testimony at 12-18.

[39] Response to the Commission Staff's First Data Request to KIUC dated April 6, 2005, Item 6.

[40] Blake Rebuttal Testimony at 9.

range of ratios used by the rating agencies.[41] KU acknowledged that the common equity ratio of 55.09 percent that it had provided in data responses was for total company rather than Kentucky jurisdictional operations. KU stated that the Kentucky jurisdictional common equity ratio as of December 31, 2004 was 54.78 percent.[42]

The Commission is not persuaded by KIUC's arguments. In determining the reasonable capital structure in either an environmental surcharge or base rate case, the Commission normally does not establish the common equity ratio using the approach followed by rating agencies but instead utilizes the actual common equity ratio of the utility. Unlike the approach used in a rate of return on common equity analyses, the Commission does not determine the capital structure or common equity ratio of a utility based on the capital structures or ratios of other comparable utilities. KIUC has provided no compelling evidence documenting that KU or its corporate parent LG&E Energy LLC intentionally increased KU's common equity ratio. Contrary to KIUC's mischaracterization, the Commission has never utilized or established a hypothetical capital structure for the environmental surcharges authorized for KU, LG&E, Big Rivers, or East Kentucky. In the initial environmental surcharge authorized for each of these utilities, the Commission found that the reasonable rate of return on compliance-related capital expenditures was the cost of debt or based on the cost of debt. In none of these

[41] Rosenberg Rebuttal Testimony at 31-36.

[42] Blake Rebuttal Testimony at 5 and Exhibit KWB-1 at 3 and 4 of 4.

cases was a reasonable capital structure for the utility discussed, approved, implied, or mentioned in the final Orders.[43]

The Commission finds KU's Kentucky jurisdictional capital structure is:

	Percent
Long-Term Debt	41.01
Short-Term Debt	1.97
Preferred Stock	2.24
Common Equity	54.78
Total Kentucky Jurisdictional Capital Structure	100.00

Surcharge Formula

KU has proposed that the surcharge formula utilized to calculate the monthly ES revenue requirement and surcharge factor be the same as was established for the 2001 and 2003 Plans.[44] The AG and KIUC did not oppose KU's proposal. The Commission finds KU's proposal concerning the surcharge formula used to calculate the monthly ES revenue requirement and surcharge factor is reasonable and should be approved.

[43] See Case No. 1993-00465, July 19, 1994 Order at 19; Case No. 1994-00332, 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 24; Case No. 1994-00032, Application of Big Rivers Electric Corporation to Assess a Surcharge Under KRS 278.183 to Recover Costs of Compliance with Environmental Requirements of the Clean Air Act, final Order dated August 31, 1994 at 24; and Case No. 2004-00321, Application of East Kentucky Power Cooperative, Inc. for Approval of an Environmental Compliance Plan and Authority to Implement an Environmental Surcharge, final Order dated March 17, 2005 at 7-8 and 10. The Commission notes that in the East Kentucky case an intervenor, Gallatin Steel Company, recommended using East Kentucky's overall cost of capital as the reasonable return on compliance-related capital expenditures. The settlement agreement approved by the Commission in that case, however, did not address the reasonable capital structure for East Kentucky.

[44] Conroy Direct Testimony, Exhibit RMC-1.

RATE OF RETURN

KU proposed that it be allowed to earn the overall rate of return on capital for the 2001, 2003, and 2005 Plan Rate Bases. None of the intervenors opposed the use of the overall rate of return on capital.

Cost of Preferred Stock and Debt

As discussed previously in this Order, KU and the AG agreed that the capital structure as of December 31, 2004 should be used to determine the overall rate of return on capital.[45] The Commission has found the Kentucky jurisdictional capital structure as of December 31, 2004 reasonable for the surcharge mechanism purposes.

KU provided the cost of its preferred stock, long-term debt, and short-term debt as of December 31, 2004. Those costs were 5.68 percent for preferred stock, 3.43 percent for long-term debt, and 2.22 percent for short-term debt.[46] The AG and KIUC did not object to the cost of preferred stock and short-term debt provided by KU, and KIUC did not object to the cost of long-term debt. The Commission has reviewed the determination of the preferred stock and short-term debt cost rates of 5.68 percent and 2.22 percent, respectively, and finds both are reasonable for surcharge mechanism purposes.

The AG objected to the use of the cost of long-term debt determined by KU. The AG advocated that the pollution control bonds cost of 2.301 percent should be used as the cost of long-term debt in the determination of the overall rate of return on capital.

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[45] KIUC did not object to the valuation date of December 31, 2004 but did challenge using the common equity ratio as of that date.

[46] Response to the AG's First Data Request dated January 26, 2005, Item 11.

The AG argues that the total cost of long-term debt is higher than the cost of pollution control bond debt, which results in the surcharge being higher than the actual capital costs that are required on environmental assets.[47]

KU opposed the AG's recommendation, noting that there are significant limits on the amount of pollution control bond financing available to it to fund its environmental compliance capital expenditures. KU argued that the Commission has found in previous environmental surcharge cases that capital expenditures are financed by numerous sources of capital, that it generally is not possible to match the capital expenditure with the source of capital, and that previous environmental compliance plans were not exclusively funded with pollution control bond debt. Finally, KU disagreed with the AG's argument that it would recover in excess of its actual costs if the overall rate of return on capital reflected the actual cost of all long-term debt.[48]

The Commission is not persuaded by the AG's arguments. In early environmental surcharge proceedings, KU and LG&E only requested the pollution control bond cost rate for the rate of return on environmental compliance capital expenditures, and the Commission approved that request. Those orders, however, did not find that all environmental compliance capital expenditures were solely funded by pollution control bond debt. In subsequent orders, the Commission has recognized that all components of a utility's capital structure are used to fund compliance capital expenditures, including all types of long-term debt. Consequently, it is reasonable to use the cost of KU's long-term debt, and not just the pollution control bond debt cost, to

[47] Weaver Testimony at 47-48.

[48] Blake Rebuttal Testimony at 5-8.

determine the overall rate of return on capital for the environmental compliance capital expenditures in this case.

Therefore, the Commission finds that the cost of long-term debt to be used for surcharge mechanism purposes is 3.43 percent.

Cost of Equity

The AG estimated KU's required return on equity ("ROE") using four methods: a constant-growth discounted cash flow model ("DCF"), a multi-stage DCF model, a Capital Asset Pricing Model ("CAPM"), and a Bond-Yield-Risk Premium method. The AG placed greater emphasis on the constant growth DCF model in his analysis because it has greater use by participants in the capital markets than other methods and has been taught in finance classes for over 50 years.[49]

The AG performed his analyses on a proxy group of eight electric companies. The AG used the following criteria to select his companies: (1) *Value Line* financial strength rating; (2) *Value Line's* recommendation to purchase; (3) no recent sale or purchase of major assets; (4) no merger activities; (5) a contiguous operating system; (6) fuel mix for electric generation; (7) percentage of electric revenues to overall revenues; and (8) equity percentage. The AG also provided a general economic analysis and an analysis of risk measures for his proxy group to develop his recommendation. Within his analysis, the AG made several adjustments. First, he adjusted the results by 25 basis points to compensate for any risk increase associated with the elimination of the Earning Sharing Mechanism, discontinued in KU's last rate

[49] Weaver Testimony at 31.

case.[50] Second, he adjusted the two DCF analyses by 100 basis points to allow for an expected increase in interest rates. The effect of this adjustment on the average result was an increase of 50 basis points.

The AG's methodology generated an ROE range of 9.75 percent to 10.25 percent, but he recommended using the lower portion of the range, 9.75 to 10.00 percent, for three reasons. First, the environmental compliance operation is a somewhat self-contained operation within KU. Second, there is little risk associated with environmental compliance revenues and expenses. Third, financial theory regarding risk and return indicates that there is a risk/return trade-off, and lower risk securities have a lower required rate of return.[51]

KIUC estimated KU's required ROE using a DCF model and two CAPM analyses. KIUC did not rely on the results of the CAPM analyses in developing its recommendation, citing problems with CAPM components in determining the required return as its reason as well as the need for a considerable amount of judgment in determining those components.[52] KIUC performed its analysis on a comparison group of eleven companies selected from the February 2005 issue of the C.A. Turner Utility Report. The companies were selected if they: (1) were rated either A/A or A/Baa/BBB by Moody's and Standard and Poor's; (2) had at least 50 percent of revenues from electric operations; (3) had not recently cut or eliminated dividends; (4) were not recently involved in mergers or restructuring; and (5) had not recently experienced

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[50] Id. at 41.

[51] Id. at 42.

[52] Baudino Direct Testimony at 28.

significant earnings fluctuations. KIUC also supplied a general economic and risk discussion. Based on the results of the DCF analysis, KIUC recommends an ROE of 8.7 percent.[53]

In its rebuttal testimony, KU criticized the AG's and KIUC's ROE recommendations as substantially understated. In support of its argument, KU performed a comparison of the allowed returns for the AG's and KIUC's proxy groups that showed the recommended returns were below that of the average allowed returns nationally. While KU did not suggest that the Commission base its decision on other commissions' awards, it presented the information to show the unreasonableness of the AG's recommendation. KU concentrated its rebuttal on the AG's analysis and further criticized the AG's methodology and inputs for the models used in his analysis, claiming mathematic errors and data problems create a downward bias in the results. When KU modified the AG's calculations, its results showed an average ROE of 10.55 percent to 11.55 percent, supporting KU's recommended ROE of 11.0 percent.[54]

The AG and KIUC, along with the other parties involved in KU's last rate case, signed a settlement agreement that specifically addressed the ROE that would apply to environmental projects. That settlement language states:

> The signatories hereto, including the AG, agree that, after the date hereof, orders approving cost recovery of LG&E's and KU's environmental projects pursuant to KRS 278.183 shall be based upon an 11.0% return on common equity until

[53] Id. at 33.

[54] Rosenberg Rebuttal Testimony at 21.

> directed by order of the Commission that a different rate of return shall be utilized.[55]

During the May 10, 2005 hearing, each ROE witness was questioned as to what had changed since June 2004 that would affect the required ROE. KIUC's response was that interest rates had decreased, the AG responded that the measured cost of equity had declined since then, and KU responded that nothing had changed. Given the large difference between KIUC's recommendation of 8.7 percent and the 11.0 percent agreed upon one year ago, the Commission is not convinced that the economy or business conditions have changed enough to warrant such a dramatic decrease in the ROE.

While the Commission agrees with KU that other commissions' ROE awards should not necessarily determine the ROE awarded in this case, such awards do indicate a reasonableness measure for a company's allowed ROE. Furthermore, the Commission takes note that 10.5 percent was determined to be a reasonable ROE one year ago in KU's most recent general rate case. Although we realize that conditions today are not totally identical to conditions that existed in June 2004, the Commission, based on the ROE evidence presented in this proceeding, concludes that a range of 10.0 to 11.0 percent, with a midpoint of 10.5 percent, continues to be a reasonable ROE for KU.

Summary

Applying the rates of 3.43 percent for long-term debt, 2.22 percent for short-term debt, 5.68 percent for preferred stock, and 10.50 percent for common equity to the capital structure produces an overall rate of return on capital of 7.33 percent.

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[55] Case No. 2003-00434, June 30, 2004 Order, Appendix C, Article III, Section 3.1.

KU has noted the need to recognize a "gross up" of the cost rates for its preferred stock and common equity to reflect the effects of income taxes. KIUC and KU agreed that the gross up factor should reflect the impact of the new Internal Revenue Code Section 199 Domestic Manufacturing Deduction and the reduction in the Kentucky corporate income tax rate.[56] KU recalculated the gross up factor to reflect these tax changes, resulting in a gross up factor of 61.5558 percent.[57]

Applying this gross up factor to the weighted average costs of preferred stock and common equity results in an overall rate of return on capital of 11.00 percent. The Commission finds this is the reasonable rate of return for KU's entire environmental compliance Rate Base as of the date of this Order.

SURCHARGE ALLOCATION

KU proposed to use total revenue to allocate the revenue requirement associated with its proposed projects, which would result in all retail customer classes receiving equal percentage increases in the environmental surcharge components of their electric bills. The Commission has used a total revenue methodology to allocate the approved environmental revenue requirement in all prior KU environmental surcharge cases.

KIUC proposed an alternative allocation method based on total revenue net of fuel revenue. It contended that KU's existing base rates are not in line with KU's cost of service, resulting in substantial subsidy of some customer classes by other customers, notably industrial customers. KIUC argued that KU industrial customers, by bearing

[56] House Bill 272, 2005 Regular Session of the Kentucky General Assembly.

[57] Scott Rebuttal Testimony at 2 and Exhibit VLS-1.

these rate subsidies, were at a disadvantage with both national and international competitors whose electric rates do not include subsidies of other customers.

KIUC argued that continued use of total revenue should not be used to allocate the environmental revenue requirement because to do so would maintain the existing rate/subsidy relationship between the customer classes. Recognizing that it was impractical for KU to perform a cost-of-service analysis with each monthly surcharge filing, KIUC proposed its net revenue approach as a proxy for such analyses. Under the proposal, eight customer groups would be established to reflect the subsidies, disaggregate revenues and fuel costs, and calculate the surcharge factors.

While it agreed with KIUC's contention that its base rates are not in line with its cost of service, KU raises two concerns about KIUC's proposal. First, it stated that implementing the proposal would necessitate modifications to its billing and customer information systems, modifications that would require it to incur additional costs. If it were required to implement KIUC's proposal, KU contended that it should be permitted to recover these additional costs. Second, for simplicity and ease of administration, KU contended that it should use a single, consistent methodology to allocate its jurisdictional environmental revenue requirement between retail customer classes and allocate its total environmental revenue requirement between jurisdictional and non-jurisdictional sales. Accordingly, if the Commission approves KIUC's proposal for allocating the jurisdictional revenue requirement between customer classes, KU argued that it should require the same method for allocations between jurisdictional and non-jurisdictional sales.

The AG contended that KIUC's proposal, which attempts to remedy cost of service inequities, is beyond the scope of the surcharge statute, KRS 278.183. The AG argued that KIUC's proposal is not permissible because it results in multiple surcharges, while the statute permits only one surcharge. Furthermore, according to the AG, KRS 278.183 is a single issue rate-making statute whose purpose is to permit cost recovery between general rate cases as an incentive for utilities to use Kentucky coal to comply with environmental requirements. The AG reiterated that the statute's purpose is not to address issues regarding class contributions to a utility's cost of service.

Having considered the implications of KIUC's allocation proposal, we conclude that it should be denied and that total revenue should continue as the methodology for allocating KU's environmental revenue requirement. While the Commission appreciates KIUC's concerns as to the discrepancies between KU's cost of service and the recovery of costs through its base rates, we are not persuaded that an environmental surcharge proceeding is an appropriate venue to address those discrepancies. Furthermore, while it claims that KU's competitors are unfettered by the types of subsidies that it alleges are reflected in KU's base rates, KIUC acknowledges that it has no specific information regarding the rates charged those competitors by their electric service providers and whether or not they include subsidies. Finally, while we need not specifically address the issue raised in KU's rebuttal, namely whether a single methodology must be used for both intra-jurisdictional and inter-jurisdictional allocations, the Commission notes that KU's response to the AG's hearing request shows that adopting KIUC's proposal for the inter-jurisdictional allocation assigns a larger share of the environmental revenue

requirement to Kentucky jurisdictional customers, including KIUC's members. For all these reasons, the Commission rejects KIUC's proposal.

IT IS THEREFORE ORDERED that:

1. KU is granted a CPCN to construct four scrubbers at Ghent Units 2, 3, and 4 and Brown Units 1, 2, and 3 as needed to comply with EPA requirements.

2. KU's 2005 Plan consisting of four additional capital projects to meet federal, state, and local environmental regulations is approved.

3. KU's proposed ES tariff is approved and shall be effective for service rendered on or after July 1, 2005.

4. KU's rate of return on the 2001, 2003, and 2005 Plan capital expenditures, reflecting the gross up for income taxes, shall be 11.00 percent. The true-up process for the cost of debt shall be the same as authorized in Case No. 2000-00439.

5. KU's SO_2 emission allowance inventory included in the environmental surcharge Rate Base shall include only those allowances assigned to generating units producing electricity from the burning of coal.

6. The sale to LG&E of SO_2 emission allowances shall be at KU's weighted average cost of its SO_2 emission allowances. The purchase from LG&E of SO_2 emission allowances shall be at LG&E's weighted average cost of LG&E's SO_2 emission allowances.

7. KIUC's proposed revenue allocation methodology is denied, and KU shall continue to use total revenues as the basis for allocating the environmental revenue requirement.

8. The monthly surcharge reporting formats proposed by KU are approved. Previous reporting formats shall no longer be submitted.

9. Within 10 days of the date of this Order, KU shall file with the Commission revised tariff sheets setting out the ES tariff approved in this Order.

Done at Frankfort, Kentucky, this 20th day of June, 2005.

By the Commission

ATTEST:

Executive Director