2005 NO_x Compliance Strategy Update for Kentucky Utilities and Louisville Gas and Electric

January 2005

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Executive Summary

Kentucky Utilities Company and Louisville Gas and Electric Company (the "Companies"), as part of a continuing review of the environmental regulatory requirements for NO_x emission reduction under the Clean Air Act, have updated the analysis presented to the Kentucky Public Service Commission ("KPSC") as LEB Exhibit 2 of Bellar Testimony in Case No. 2000-386 and as LEB Exhibit 3 of Bellar Testimony in Case No. 2000-439. The Companies have performed an evaluation of the next steps in continued NO_x compliance. The study was conducted in January of 2005 and utilized the most recent information available at that time.

There have been several significant changes since the last study including a final ruling on the Companies' NO_x allowance allocation of 12,447 (assumed to be 11,875 in the previous study) and the initial compliance deadline of May 31, 2004 (assumed to be May 1, 2003 in the previous study). Other changes include the addition of early reduction credits ("ERCs"), retirement of Green River 1-2 and the update of NO_x emission rates for existing units.

Current projections indicate that, in absence of installing additional NO_x control technologies, the Companies will have sufficient NO_x allowances through the end of 2009 and would be dependent on purchasing 152,000 NO_x allowances over the 2010-2025 timeframe to comply. To mitigate the exposure created by purchasing such a large volume of allowances the construction of SCRs were evaluated at both Brown 3 and Ghent 2. The Ghent 2 SCR was more favorable, in that it reduced the PVRR by $2 million compared to the Brown 3 SCR installed in the same year.

Assuming a three-year SCR construction schedule, the Companies anticipate being able to refine cost estimates and monitor the development of relevant issues (i.e. NO_x market etc) through the end of 2006 and still allow construction of the next technology in time to address the 2010 need.

The Companies will continue to maintain flexibility in their implementation of the NO_x compliance while keeping a close watch on legislative activities, technology enhancements, regulatory rulings and judicial actions in order to meet the on-going emissions reduction requirements in a prudent and least-cost manner.

I. Introduction

In August 2002 Kentucky Utilities Company and Louisville Gas and Electric Company ("Companies"), as part of a continuing review of the environmental regulatory requirements for NO_x emission reduction under the Clean Air Act, updated the analysis presented to the Kentucky Public Service Commission ("KPSC") in Case No. 2000-386 and in Case No. 2000-439. That update was subsequently filed within the Companies' 2002 Integrated Resource Plan ("IRP") in Case No. 2002-00367. The current analysis, conducted in January of 2005, utilizes the most recent information available and serves to

(1) Summarize the technologies currently installed and their performance during the 2004 ozone season (May 31 –Sept 30).

(2) Quantify the Companies current position in regard to NO_x emissions.

(3) Forecast future NO_x emissions and identify when the next NO_x removal technology is needed.

(4) Provide preliminary estimates on the environmental impact and relative cost of subsequent SCR installations at various locations and times.

(5) Develop a low cost, NO_x compliance strategy that maintains flexibility for future legislative, regulatory, or judicial changes.

II. Background

The NO_x SIP Call was promulgated under Title I of the Clean Air Act Amendments of 1990. Title I requires all areas of the country to achieve compliance with the National Ambient Air Quality Standards for ozone, or ground-level smog. In September 1998, the Environmental Protection Agency ("EPA") finalized regulations (the NO_x SIP Call) to address the regional transport of NO_x and its contribution to ozone non-attainment in downwind areas. EPA's final SIP Call requires 22 Eastern states (including Kentucky) and the District of Columbia to revise their State Implementation Plans ("SIPs") to achieve additional NO_x emissions reductions that EPA mandated as necessary to mitigate the transport of ozone across the Eastern half of the United States. The final rule is intended to assist downwind states so that they can achieve compliance with the ozone standard. EPA maintains that NO_x emissions from the identified states “contribute significantly” to non-attainment in downwind states and that the SIPs in these states are therefore inadequate and must be revised. The final rule required electric utilities in the 22-state area to meet a seasonal (May – September) NO_x tonnage limit beginning May 1, 2003. Subsequent amendments to the final rule changed the coverage of the program to just 19 states and extended the first season of compliance to begin May 31, 2004.

Directly related, Northeastern states filed “Section 126” petitions to the EPA to require reductions from certain electric utility plants (including all plants in and East of Louisville). EPA concurred and promulgated regulations requiring NO_x emission reductions very similar to those required under the NO_x SIP Call.

Eight states, the United Mine Workers of America (“UMWA”), and various industry groups appealed EPA's final NO_x SIP Call rule and the Section 126 rule to the U.S. Court of Appeals for the District of Columbia Circuit. The cases have been consolidated (State of Michigan v. EPA, No. 98-147) and the D.C. Circuit Court issued an order in December 1998 granting the parties' motion for expedited briefing to be completed by August 1999. On May 25, 1999, the D.C. Circuit issued an indefinite stay of the September 30, 1999 deadline for SIP submittal. Consequently, Kentucky suspended their NO_x SIP submittal efforts. The D.C. Circuit ruled against the appeal. However, due to delays in establishing a final regulatory program, on April 30, 2002 the compliance deadlines for both programs were harmonized to be May 30, 2004.

The EPA SIP Call NO_x emission tonnage cap went into effect during the ozone season (May through September) of 2004. The EPA set a utility NO_x budget in Kentucky of approximately 37,000 NO_x allowances for the ozone season. The number of NOx allowances that the Companies would receive remained uncertain until April 11, 2002, when the USEPA approved the Kentucky Division for Air Quality’s SIP submittal, which finalized that the Companies will receive 12,447 tons per ozone season for the years 2004-2006 after a 5% holdback for new sources.

III. Significant Changes Since the 2002 IRP

There have been several significant changes since the last study in 2002. The most significant changes are discussed in the following paragraphs.

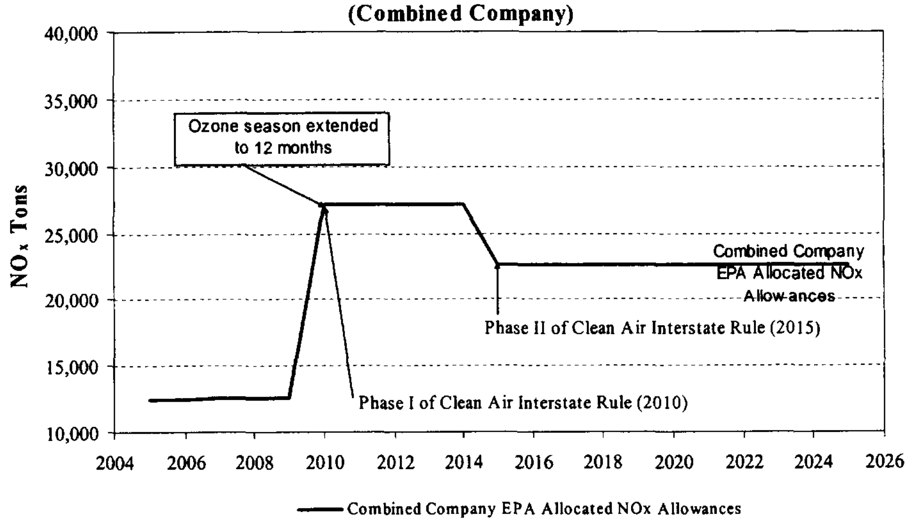
<u>Allowance Allocation</u>**:** The Kentucky allowances are distributed among units based on their heat input during previous ozone seasons. The initial allocation (2004-2006) is based on 1998-2000 heat input and the allowances associated with the 2004-2006 period remains unchanged in this analysis. The next NO_x allocation (for 2007-2009) will be based on 2001-2003 heat input, and so on. Currently the Companies' allocation for 2007-2009 is unknown, but is estimated to be 12,571. Allocations for subsequent time periods are shown below. The allocation by unit for the 2004- 2006 time period can be found in **Appendix B**.

EPA Allocated NO_x Allowances

Year	KU	LGE*	Total *
2004	6,764	5,683	12,447
2007	6,569	6,002	12,571
2010	14,814	12,295	27,109
2015	12,345	10,246	22,591

**Only LGE's portion of Trimble 1 (75%) allowances are included.*

Annual NO_x Emissions and Allowance Allocations
(Combined Company)



Clean Air Interstate Rule ("CAIR") : On December 17, 2003, EPA proposed rules to require significant additional reductions/limits for SO_2 and NO_x, to further reduce Ozone and $PM_{2.5}$ ("fine particulates"). These were published in the Federal Register on January 30, 2004. They would generally apply to the eastern 25-28 states (minus New England) and the District of Columbia (list of states provided below).

Implementation would be based on a "cap-and-trade" or "allowance program" similar to the Acid Rain and NO_x SIP Call Programs.

- EPA would allocate predetermined numbers of SO_2 and NO_x allowances to each state and the individual states determine how to allocate these to individual units.
- States will be allocated a set number of allowances annually during Phase I (2010-2014), and a reduced number of allowances annually during Phase II (2015 and beyond).
- NO_x emissions will count year-round (not just during the ozone season).
- States are to submit their State Implementation Plans ("SIPs") for implementing the requirements within 18 months of EPA's Final Rule.

In May 2004, EPA issued a Supplemental Rule, providing more details and model cap-and-trade programs for power plants that states may adopt to achieve required emissions reductions. EPA's Fact Sheet issued with the Supplemental Rule states that it expects to complete this rulemaking by the end of 2004, which would make SIP submittals due in mid-2006. The EPA has subsequently delayed the completion of the rulemaking until March 2005. Expectations are that SIP submittals will be delayed until later in 2006 as a result. Because EPA has formally made a finding that certain states are significantly contributing to other states' non-attainment of health-based air quality standards and has begun the rulemaking process, it is almost certain that reduction requirements of this nature will be finalized.

The EPA states that:

- SO_2 emissions would be reduced by 3.6 million tons in 2010 (approximately 40 percent below current levels) and by another 2 million tons per year when the rules are fully implemented (approximately 70 percent below current levels), and

- NO_x emissions would be cut by 1.5 million tons in 2010 and 1.8 million tons annually in 2015 (about 65 percent below today's levels).

Consistent with other recently completed environmental compliance evaluations, the restrictions imposed by CAIR are implemented beginning January 1, 2010 in this analysis.

Early Reduction Credits ("ERC"): As in the 2002 evaluation, the current study has incorporated an allocation of Kentucky's ERCs. The 2002 evaluation used a conservative number of 1,500. Since the completion of the 2002 evaluation the final number of ERC has been determined. As such, this study reflects an actual allocation of early reduction credits totaling 2,841.

Base NO_x Emission Rates: The base NO_x emission rate for each unit was updated to reflect the unit's most recent emission rate. This included reflecting the installation of new NO_x control technology additions where appropriate. The Base NO_x emission rates for each unit can be found in **Appendix A**.

Retirement of Green River Units 1-2: Green River Units 1 and 2 were completed in 1950 and provided 25 MW of gross generation each. In 2003, these units were 53 years old. Having operated past their design lives, these units ran a greater risk of catastrophic failure than other units. The challenges facing the units, the necessary actions to remedy those situations as well as their associated cost were explained in detail in the evaluation titled *Phase II Evaluation of the Economic Viability of Green River Units 1 and 2.* The aforementioned evaluation was provided to the KPSC in Case No. 2003-00434, Response 15.b(1) in the Second Data request of the Commission Staff. Green River Units 1 and 2 were operationally retired December 31, 2003 for economic reasons and subsequently have been removed from the current analysis.

IV. 2004 Ozone Season Compliance

The period of May 31, 2004 through September 30, 2004 was the "first ozone season" in which the Company had to comply with the EPA's SIP Call NO_x emission tonnage cap. The 2004 ozone season NO_x emissions for the combined companies met the regulatory requirements by a margin of 39% (5,987/15,288). Results for the first ozone season are shown in the table below. The margin calculation of 39% includes ERCs and the full five-month NO_x allowances granted to the Companies by the EPA for the 2004 ozone season. The 5,987 NO_x allowances that were not surrendered remain in the bank of credits available to the corporation for future emissions. The Companies NO_x allowance bank is now approximately 50% of the allowances awarded for a full ozone season.

2004 OZONE SEASON PERFORMANCE SUMMARY
Actual NO_x Emissions vs. NO_x Allowances Allocated

	EPA Annual Allocation (2004-2006)	Total Early Reduction Credits (ERCs)	Total NO_x Allowances Available	Actual NO_x Emissions (May 31-Sep 30)	Variance in NO_x Emissions
KU Total	6,764	954	7,718	5,162	-2,556
LGE Total	5,683	1,887	7,570	4,139	-3,431
Combined Companies	12,447	2,841	15,288	9,301	-5,987

Notes: Excess Allowance Margin: 39%

Negative indicates actual emissions were below the EPA allowance levels.
Allowance allocations and emissions based on LGE's 75% ownership of Trimble County 1

As explained previously, 2004 NO_x emission allowances were granted for May 1 – September 30, but emissions reporting requirements in 2004 were May 31- September 30. By estimating the NO_x allowances for May 31 – September 30, and comparing the actual emissions for the same time period, it can be determined that the Companies complied with regulations by a margin of 9% during the May 31 – September 30 reporting period. This approach more accurately reflects the performance of the Companies NO_x reduction systems during the 2004 regulatory period.

2004 Reporting Season Performance Estimate
Actual NO_x Emissions vs. NO_x Allowances Allocated

	Estimated EPA Annual Allocation (May 31-Sep 30)	Actual NOx Emissions (May 31-Sep 30)	Variance in NO_x Emissions
Combined Companies	10,267	9,301	-966

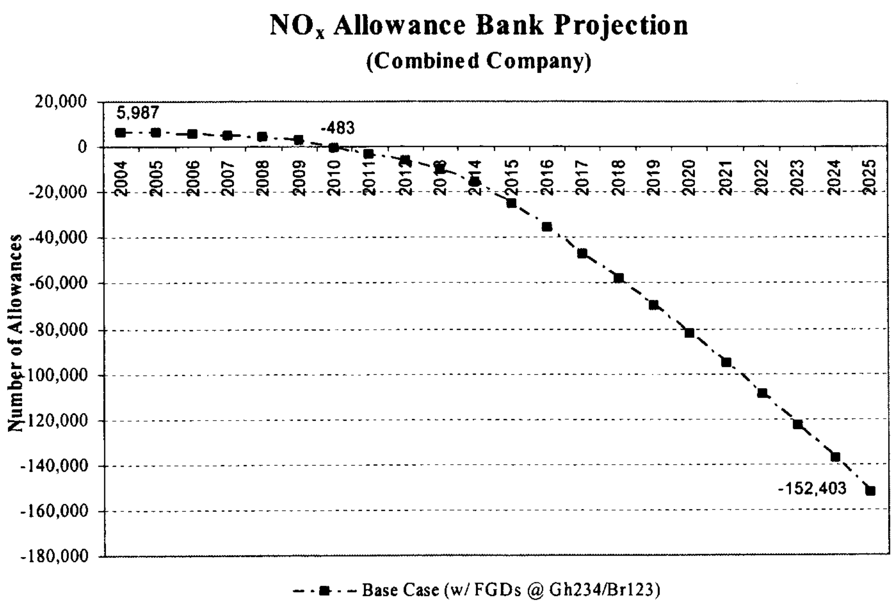
Excess Allowance Margin: 9%

Notes:

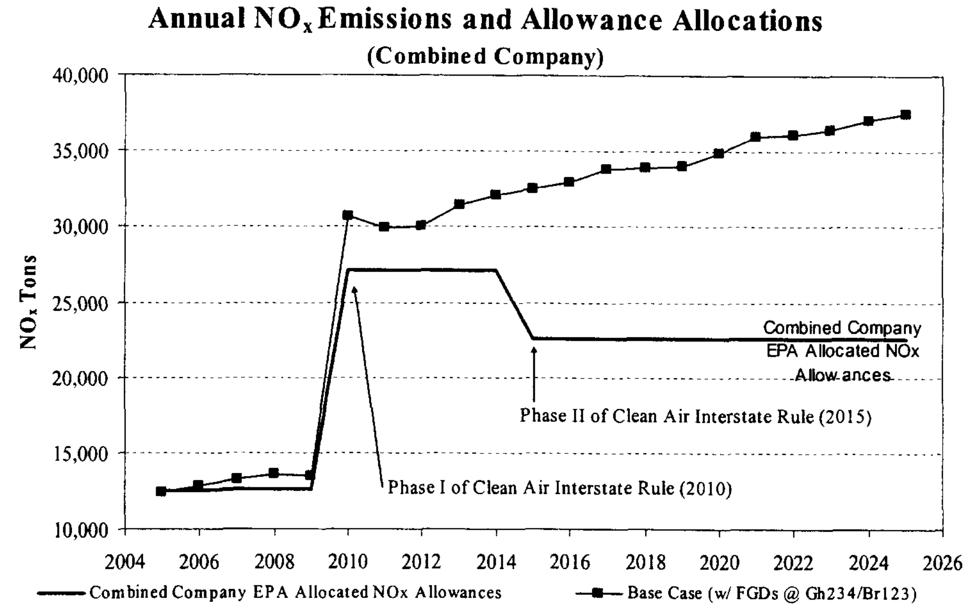
Negative indicates actual emissions were below the EPA allowance levels.
Allowance allocations and emissions based on LGE's 75% ownership of Trimble County 1

IV. Current NO_x Allowance Position

Projections indicate that the banking of NO_x allowances will not continue over the long-term. In-fact, in absence of the installation of additional NO_x control technologies the Companies are expected to begin to draw down the number of banked NO_x allowances starting in 2005. Projections are that the Companies will experience a shortfall of 483 tons by the end of year 2010. Once depleted the Companies must either reduce NO_x emissions, purchase NO_x allowances from the allowance market or a combination of both. The total number of allowances projected to be purchased in absence of implementing additional NO_x control would exceed 152,000 tons. The following graph shows the depletion of the Companies' NO_x allowance bank over time. A detailed study entitled *2004 SO_2 Compliance Strategy* was completed in November of 2004. This analysis assumes the SO_2 control technologies recommend by the November 2004 analysis are implemented and are a part of the Base Case plan.

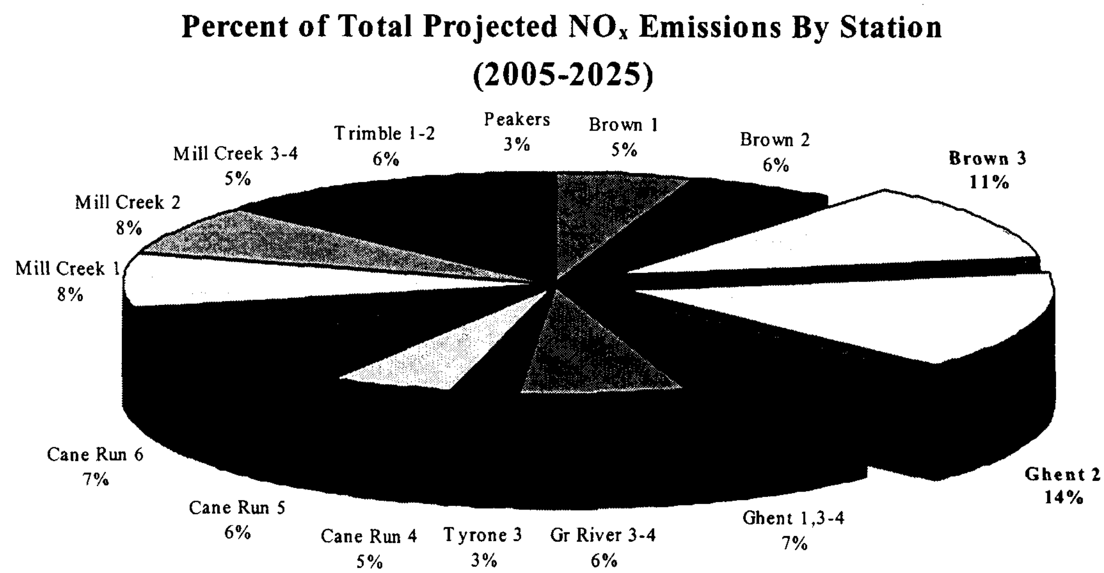


The following figure depicts the Companies' projected ozone season NO_x emissions and anticipated annual allowance allocations. CAIR Phase I will increase the Companies' annual



NO_x allowance allocation to 27,109 tons, based on a 12 month ozone season. Projected emissions during the same time are expected to increase to over 30,000 tons annually.

Logically, NO_x control technologies should be constructed at those locations which are projected to be the major contributors to the Companies' NO_x allowance shortfall.



The most significant contributors to the Companies' NO_x emissions over the next twenty years are projected to be Ghent 2 and Brown 3. Together, these two units comprise over 25% of the Companies' future NO_x emissions. Any long-term compliance strategy must, at a minimum, reduce the NO_x emissions from these two locations.

V. NO_x Compliance Plan Analysis

The Companies conducted the new analysis using the detailed production cost model, PROSYM™, and a detailed financial model, Strategist's Capital Expenditure and Recovery ("CER") module.

PROSYM™ can perform a detailed analysis that takes into consideration the following items:

- Economic dispatch
- NO_x-affected dispatch
- Ability to purchase NO_x allowances
- New units
- Multi-year compliance
- Consideration of all units in NO_x tonnage cap
- More detailed calculation of revenue requirements

PROSYM™ is capable not only of simulating the economic dispatch of the generating units but also of simulating the NO_x-affected dispatch of the generating units. **Appendix B** contains some general study assumptions including a summary of financial assumptions used in the CER and the market price forecast for SO_2 and NO_x allowances. Note that the assumptions used in this update are identical to the assumptions used in the Companies' *2004 SO_2 Compliance Strategy.* The CER module of Strategist allows the user to examine the book, tax, and regulatory accounting effects for construction alternative(s) and calculates the present worth of revenue requirements for each project

Discussion of Alternatives

The Companies' approach to NO_x compliance is currently and has been in the past to "over-comply" on some units rather than devising a plan that would lower each individual unit's NO_x emissions to levels below its allocated allowances. The excess allowances from the units that over-comply would be used toward the units that did not have the allowances needed to comply.

This is the same approach taken by the Companies for SO_2 compliance purposes. To address the Companies' projected shortfall, and for purposes of this update, the SCR technology was the only NO_x emission reduction technology evaluated. SCRs are a proven technology and one in which the Companies have operational experience. The SCR retrofits were considered at Brown 3 and Ghent 2 and were installed in 2010; the year in which current projections indicate the Companies will NO_x allowance bank will become depleted.

The table below enumerates the four options considered in this evaluation. Option 0, which is the Base Case, has no additional NO_x control technologies installed other than what exists on the Companies' generation system today and would represent a 100% reliance on the NO_x allowance market. It should be noted that dependence on the allowance market does not come without risk. **Appendix F** shows that the NO_x allowance market varied greatly in 2004, varying from a minimum of $1,735/ton to a maximum of $2,750. As previously mentioned, the Base Case does assume the Companies will meet its SO_2 Compliance shortfall as recommended in the *2004 SO_2 Compliance Strategy.*

Individual NO_x Control Alternatives

Option	Description	NO_x Technology In-Service Date	Total Capital Cash Flow ($000)
0	Base Case	n/a	n/a
1	Brown 3 SCR	January 1, 2010	$76,416
2	Ghent 2 SCR	January 1, 2010	$92,544
3	Ghent 2 SCR	January 1, 2008	$87,232
4	Brown 3 SCR	January 1, 2016	$91,243

Notes:
Total Capital Cash Flow ($000)" represents the sum of annual construction costs.

Detailed inputs including fixed and variable O&M expenses, derates and NO_x reduction percentages associated with each technology can be found in **Appendix C.**

In order to develop a least cost strategy, the individual alternatives were also combined in an effort to further reduce the revenue requirements associated with NO_x compliance. As a result, six different cases were modeled (including the Base Case) and evaluated to determine which plan produced the least cost revenue requirements. The following defines the six cases evaluated.

Definitions of Cases Evaluated

Base Case: (Option 0) Starting point for this update and assumes existing NO_x control equipment only (i.e. No additional NO_x control equipment is placed in-service during the study period). Assumes scrubbers are installed at Ghent 2-4 and Brown 1-3 as recommended in *2004 SO_2 Compliance Strategy*. Allowances are purchased on an as-needed basis in the year of need and environmental dispatch on the Companies' generation system continues.

Case01: (Base Case + Option 1) Constructs an SCR in the Base Case on Brown 3 in 2010. Allowances are purchased on an as-needed basis in the year of need and environmental dispatch on the Companies' generation system continues.

Case02: (Base Case + Option 2) Constructs an SCR in the Base Case on Ghent 2 in 2010. Allowances are purchased on an as-needed basis in the year of need and environmental dispatch on the Companies' generation system continues.

Case03: (Base Case + Option 3) Constructs an SCR in the Base Case on Ghent 2 in 2008. Allowances are purchased on an as-needed basis in the year of need and environmental dispatch on the Companies' generation system continues.

Case04: (Base Case + Option 1 + Option 2) Constructs an SCR in the Base Case on Brown 3 in 2010 and Ghent 2 in 2010. Allowances are purchased on an as-needed basis in the year of need and environmental dispatch on the Companies' generation system continues.

Case05: (Base Case + Option 2 + Option 4) Constructs an SCR in the Base Case on Ghent 2 in 2010 and Brown 3 in 2016. Allowances are purchased on an as-needed basis in the year of need and environmental dispatch on the Companies' generation system continues.

A production cost projection (using PROSYM™ model) and a capital cost projection (using the CER model) was made for each case. Any NO_x (or SO_2) allowance shortfall could be purchased from the respective allowance market at the forecasted market prices for that year as shown in **Appendix B.** Consistent with other studies of this type, allowances transfers between Companies were permitted for compliance.

Results of Analysis

The table below summarizes the results of the six Case runs. For ease of comparison the total present value revenue requirement ("PVRR") of each Case has been categorized into four areas:

1. *Production Costs:* represent the revenue requirements associated with fuel, fixed and variable operation and maintenance expenses and purchased power expenses
2. *NO_x Allowance Costs:* represent the revenue requirements associated with the purchasing of any NO_x allowances.
3. *SO_2 Allowance Costs:* represent the revenue requirements associated with the purchasing of any SO_2 allowances.
4. *Capital Costs:* represent the revenue requirements associated with any capital expenditures for the case.

In addition to cost information, other relevant information pertaining to each Case is shown. Information such as the total number of SO_2/NO_x allowances purchased over the study period and the year in which the SO_2/NO_x allowance bank is depleted.

Case Summary
(Assuming: Base Capital Costs, Base SO_2/NO_x Forward Price Forecast)
(All Costs in 2005 PVRR $1000)

ALL CASES COMPARED TO Base Case (Trimble 2 In-service 2010, Wet FGD HS GH234, Wet FGD HS BR123)

Case	Production Cost	NOx Allowance Cost	SO2 Allowance Cost	Capital	Total	Incremental over Base	First Year of SO_2 Allowance Purchase	First Year of NO_x Allowance Purchase	Total SO_2 Allowances Purchased	Total NO_x Allowances Purchased
Base Case	13,671,906	147,085	164,055	813,000	14,796,046	Base	2008	2010	677,793	152,403
Case02- Base + Gh2 SCR 2010	**13,689,616**	**74,637**	**163,269**	**905,256**	**14,832,778**	**36,732**	**2008**	**2016**	**674,933**	**81,109**
Case01- Base + Br3 SCR 2010	13,693,847	88,738	162,986	889,174	14,834,745	38,699	2008	2015	674,034	94,476
Case03- Base + Gh2 SCR 2008	13,691,231	70,149	163,204	913,044	14,837,629	41,583	2008	2016	674,747	77,371
Case05- Base + Gh2 SCR 2010, Br3 SCR 2016	13,700,985	39,843	162,783	964,988	14,868,599	72,553	2008	2016	672,861	44,070
Case04- Base + Br3 & Gh2 SCR 2010	13,712,103	19,618	162,187	981,431	14,875,339	79,293	2008	2021	671,063	24,530

The PVRR of each Case is compared to that of the Base Case. The Base Case is the first case listed in the table. All other cases follow in increasing order of PVRR. For example, Case02 is $36.732 million (PVRR) more expensive than the Base Case but significantly reduces the dependence on the NO_x allowance market by delaying the first year of NO_x allowance market purchases until 2016. The table above is summary of the annual data associated with comparing each Case to the Base Case, which can be found in **Appendices D and E.** **Appendix E** further breaks down the annual data and contains a by unit summary of the NO_x emission rates and annual tons emitted by each unit in the Companies' generation system.

The following is a detailed description of the results of each case.

Base Case - is a case where no NO_x compliance options were implemented except for an emission dispatch adder for NO_x. PROSYM^{TM} penalized the dispatch cost of each unit based on the unit's expected NO_x emissions at a rate equal to the forecast price of NO_x allowances as shown in **Appendix B**. This emission affected dispatch is identical in implementation to the SO_2 adder that has been in use since 1995 for the KU system and since 2000 for the LG&E system. The NO_x adder is in addition to the SO_2 adder. The case emits 605,043 tons of NO_x from 2005 through the end of the study period.

The PVRR is $14,796 million and consists of $13,671 million in production costs and $813.0 million in capital costs (these costs are for the wet scrubbers at Ghent and Brown and associated Brown Ash pond work), $164.1 million in SO_2 allowance market purchases and $147.1 million in NO_x allowance market purchases. The Companies deplete their combined NO_x allowance bank and are forced to procure NO_x allowances from the market beginning in 2010. As with other plans that follow, the production costs are for total system and the capital costs are due only to environmental compliance options.

This case is shown only for comparison purposes. It is highly unlikely that the Companies would be able to purchase enough allowances to comply with the regulation. In addition, having to obtain such a large volume of allowances would most likely drive up the overall allowance purchase price.

Case01-Br3 SCR in 2010- is a case developed to evaluate the economics of installing an SCR on Brown 3 at the time the Companies' depletes its NO_x allowance bank. In this case, the Brown 3 SCR would be the Companies' next and only NO_x control technology installed. Case01 reduces the annual NO_x emissions by approximately 3,500 tons. With total NO_x emissions over the study period reduced to just over 547,100 tons, the depletion of the NO_x bank is delayed until 2015. The total amount of NO_x allowances purchased in this case was second only to the Base Case with over 94,400 NO_x allowances purchased over the study period.

The PVRR is $14,834 million and consists of $13,693 million in production costs, $889.2 million in capital costs, $163.0 million in purchased SO_2 allowances and $88.7 million for the purchase of NO_x allowances. The total PVRR of this case exceeds those of the Base Case by $38.7 million. This case meets the requirements of the annual NO_x tonnage limits through 2015 and complies through the end of the study period by purchasing NO_x allowances.

Case02-Gh2 SCR in 2010- is a case developed to evaluate the economics of installing the Ghent 2 SCR instead of the Brown 3 SCR at the time the Companies' NO_x allowance bank is projected to expire. In this case, the Ghent 2 SCR would be the next and only NO_x control technology installed. All other technologies are the same as in the Base Case for all units. The Ghent 2 SCR results in a reduction in the annual NO_x emissions by over 4,000 tons from the Base Case.

The PVRR of this case is $14,832 million and consists of $13,689 million in production costs, $905.3 million in capital costs, $163.3 million for the purchase of SO_2 allowances and $74.6 million for the purchase of NO_x allowances. The total cost of Case02 exceeds the Base Case by $36.7 million. Construction of the Ghent 2 in 2010 delays until 2016 the need to purchase NO_x allowances. Compliance through the end of the study period is obtained by purchasing of NO_x allowances.

The detailed PROSYM™ runs confirm that the Ghent 2 SCR in 2010 is approximately $2.0 million more favorable than construction of an SCR on Brown 3 in the same year. This case also has a cumulative PVRR of $36.7 million more than the Base Case.

Case03-Gh2 SCR in 2008- is Case02 but with the Ghent SCR installation schedule accelerated to allow for an in-service date of 2008. All other technologies are the same for all units. The purpose of this case was to evaluate whether or not accelerating the most attractive SCR option (Ghent 2 in 2010) improves the economics over a 2010 install. The results indicate that installing the Ghent 2 SCR in 2010, based on the assumptions used in this analysis, is more favorable than, installation in 2008.

The PVRR is $14,837 million, approximately $5 million higher than a 2010 installation of the Ghent 2 SCR. While NO_x purchase cost decreased by about $5 million, the increase in capital costs of $10 million associated with accelerating the project offset any potential benefits compared to Case02. This case also has a cumulative PVRR of $41.5 million more than the Base Case.

<u>Case04-Gh2 SCR 2010, Br3 SCR 2010</u>- is a case that combines the most attractive Ghent 2 SCR option (Ghent 2 SCR in 2010) with the Brown 3 SCR in 2010. The purpose of this case was to evaluate the economics associated with a simultaneous installation of SCRs at Ghent and Brown. This case reduces the number of NO_x allowances purchased and NO_x tons emitted to the lowest of any of the cases evaluated in this update. By reducing NO_x emission to 477,170 tons over the study period, a shortfall of only 24,530 tons remained with the first NO_x allowance market purchase not occurring until 2021.

The PVRR associated with this case is $14,875 million and consists of $13,712 million in production costs, $981.4 million in capital costs, $162.2 million for the purchase of SO_2 allowances and $19.6 million for the purchase of NO_x allowances. While the total cumulative cost for this case is higher than the Base Case there is substantially less NO_x market exposure associated with the simultaneous installations of SCRs at Ghent and Brown. This case also has a cumulative PVRR of $79.3 million more than the Base Case.

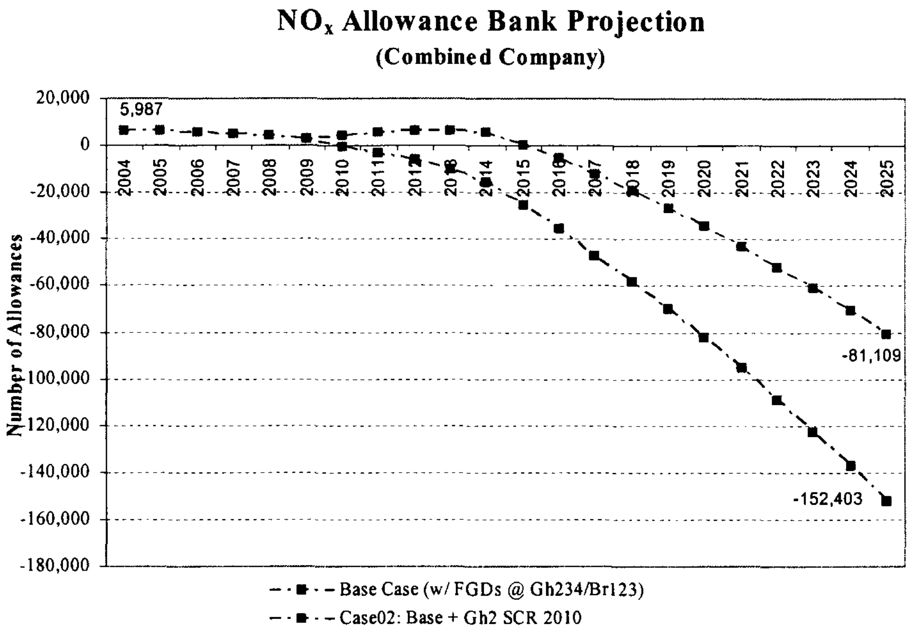
<u>Case05-Gh2 SCR 2010, Br3 SCR 2016</u>- is Case02 with an SCR added at Brown 3 in 2016. The year 2016 is the first year that Case02 was required to make NO_x allowance market purchase in order to comply. The purpose of this case is to determine whether it is less costly to delay the Brown SCR until the year in which the NO_x allowance bank would, in absence of an SCR at Brown 3, become depleted. This case reduces the number of NO_x emissions over the study period to 496,710 tons from 605,043 tons in the Base Case and begins NO_x allowance market purchases in 2016, just as in Case02. So the installation of the Brown 3 SCR in January of 2016 does not reduce NO_x emission enough to delay the need to participate in the NO_x allowance market. This case required the purchase of 44,070 NO_x allowances through the end of the study period, second only to Case04 for the fewest in any of the cases evaluated.

The PVRR is $14,868 million and consists of $13,700 million in production costs, $965.0 million in capital costs, $39.8 million for the purchase of NO_x allowances and $162.8 million for the purchase of SO_2 allowances. The total cumulative cost for this case is less than Case04, so the delay of the Brown 3 SCR until 2016 was favorable to the economics by approximately $7 million (compared to Case04). However, the Case still has a cumulative PVRR of over $72.5 million more than the Base Case.

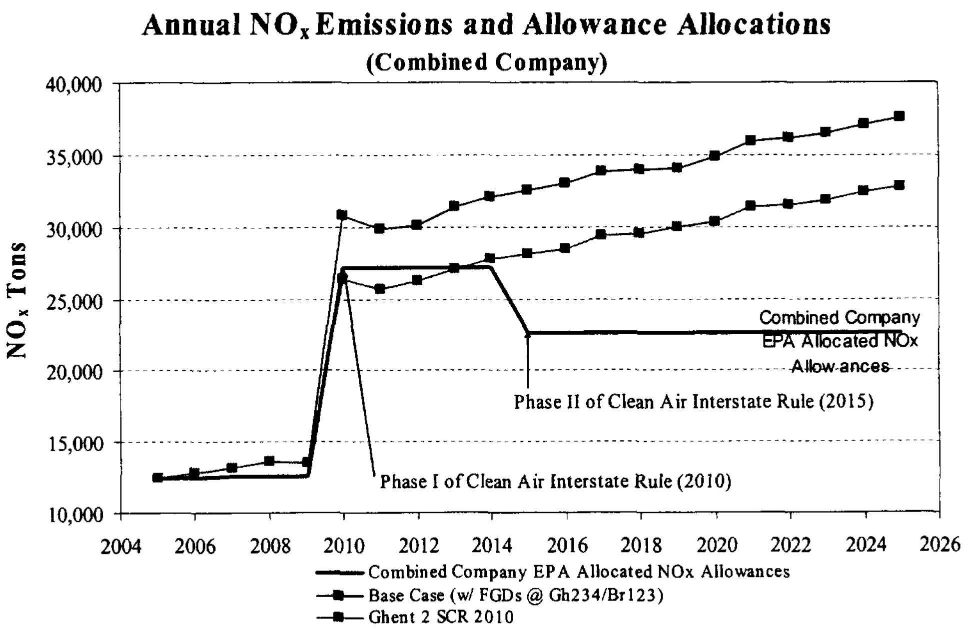
As previously mentioned an annual summary of all the case costs and emissions can be found in **Appendices D and E** of this document.

V. Summary and Recommendation

NO_x control equipment currently installed on the Companies' generation system is projected to be sufficient until the 2010 timeframe when the NO_x allowance bank is expected to become depleted. This coincides with Phase I of the CAIR. At that time the Companies will have to further reduce NO_x emissions, purchase NO_x allowances from the allowance market or a do both. This evaluation considered SCR installations at the two largest sources of NO_x emissions on the Companies system; Ghent 2 and Brown 3, the purchasing of allowances and a combination of new SCR installations and purchasing of NO_x allowances. Of the cases considered in this evaluation, the construction of an SCR on Ghent 2 in 2010 is the least cost manner in which the Companies can lessen reliance on the NO_x allowance market and is slightly more favorable than an SCR on Brown 3. While the 2010 SCR at Ghent 2 does reduce NO_x allowance market purchases from 152,000 to just over 81,000 it does not eliminate the Companies' dependence on the NO_x allowance market for compliance beginning in 2016.



Compared to the Base Case the Ghent 2 SCR is projected to reduce annual NO_x emissions by 4,000-5000 tons enabling the Companies' NO_x allowance bank to increase during the 2010-2013 time period. In 2013, the bank reaches a level of just over 6,400 tons and is once again depleted by 2016, the 2nd year of CAIR Phase II.



Based on the current analysis the Companies should plan for additional NO_x control technologies being required around 2010 in order to comply with environmental legislation. Given the large volume of NO_x allowances projected to be purchased from the NO_x allowance market in absence of additional controls, the Companies should continue to refine cost expectations pertaining to an SCR being constructed at Ghent 2 and at Brown 3. This analysis favors the installation of an SCR at Ghent 2 over that of Brown 3, but monitoring the construction costs at both locations should be continued to confirm the relative benefits of Ghent 2 over Brown 3 exist as the 2010 time period approaches. Assuming a three-year SCR construction schedule, the Companies anticipate being able to refine cost estimates and monitor the development of relevant issues (i.e. NO_x market etc) through the end of 2006 and still allow construction of the next technology in time to address the 2010 need.

The Companies will continue to maintain flexibility in their attainment of NO_x compliance while keeping a close watch on legislative activities, technology enhancements, regulatory rulings, and judicial actions in order to meet the on-going emissions reduction requirements in a prudent and least-cost manner.

APPENDIX A

Base NO_x Emission Rates

Unit	NO_x Emission (lb/Mbtu)	Unit	NO_x Emission (lb/Mbtu)
Brown 1	0.500	Cane Run 4**	0.320
Brown 2	0.320	Cane Run 5**	0.341
Brown 3	0.270	Cane Run 6**	0.274
Ghent 1	0.380	Mill Creek 1**	0.250
Ghent 2	0.300	Mill Creek 2*	0.250
Ghent 3*	0.035	Mill Creek 3*	0.037
Ghent 4*	0.035	Mill Creek 4*	0.035
Green River 3	0.390	Trimble 1*	0.035
Green River 4	0.380	Cane Run 11	0.440
Tyrone 1	0.200	Paddy's Run 11	0.440
Tyrone 2	0.200	Paddy's Run 12	0.440
Tyrone 3**	0.3400	Paddy's Run 13	0.090
Brown 5	0.090	Trimble 5	0.056
Brown 6	0.090	Trimble 6	0.056
Brown 7	0.090	Trimble 7	0.056
Brown 8	0.120	Trimble 8	0.056
Brown 9	0.120	Trimble 9	0.056
Brown 10	0.120	Trimble 10	0.056
Brown 11	0.120	Waterside 7	0.440
Haefling	0.440	Waterside 8	0.440
		Zorn	0.440

** Unit has increased rate at low load levels.*

***Varies, value shown is unit's minimum emission rate.*

APPENDIX B

General Assumptions

- Study Period: 20-year period for Production Cost impacts (2005-2025)
  30-year period for Capital Costs impacts (2005-through book life of project)

  The production costs include items such as fuel, O&M, purchase power etc and are estimated using the PROSYM™ production model. This model was run for the 2005-2025 time period.

  The revenue requirements associated with capital costs are determined via the Capital Expenditure and Recovery module of the Strategist production and capital costing software. Capital projects with a 20 year book/tax life and an in service date after 2005 would have the last years of their life excluded from the revenue requirement calculation if capital costs impacts were halted at 2025. Doing so would have the affect of underestimating the capital cost of alternatives and would favor construction of new projects. Therefore, to completely account for capital projects costs over their lifetime, the revenue requirements associated with new capital projects were extended through the end of their book life.

- KU/LGE continues as a regulated entity subject to the oversight of the Kentucky Public Service Commission and that the Commission continues the requirement of the Companies implementing the least cost strategy to the benefit of the native load ratepayers.

- The capital costs, O&M costs and the costs of increased emissions (both NO_x and SO_2) associated with the addition of new environmental projects will be subject to recovery through the Environmental Cost Recovery mechanism.

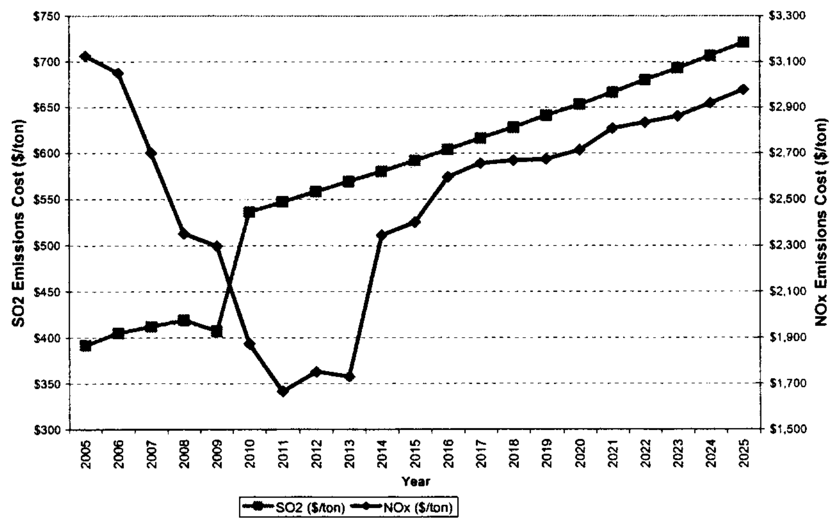
- Financial Data

➢ Discount Rate (%):	7.26 %
➢ Federal Income Tax Rate (%)	40.36 %
➢ AFUDC Rate (%):	7.26 %
➢ Insurance Rate (%):	0.07 %
➢ Property Tax Rate (%):	0.18 %
➢ Percentage of Debt in Capital Structure (%):	46.06 %
➢ Debt Interest Rate/Weighted Cost of Debt (%):	3.16 %
➢ Desired Return on Rate base (%):	7.26 %
➢ Capitalized Interest Debt Rate (%):	3.16 %
➢ Environmental Projects Book Life (years):	20 years
➢ Environmental Projects Tax Life (years):	20 years
➢ Annual capital cost escalation rate (%):	3.0%
➢ Annual Fixed O&M escalation rate (%):	2.0%
➢ Annual Variable O&M escalation rate (%):	2.0%

- No unit retirements occur on the Companies' generating system within the study period.

- SO_2 and NO_x Emission Costs (Base Assumptions)

	Market Cost per ton of	
	SO2 ($/ton)	NOx ($/ton)
2005	392	3125
2006	405	3050
2007	412	2700
2008	419	2350
2009	407	2298
2010	536	1874
2011	547	1666
2012	558	1752
2013	569	1731
2014	580	2344
2015	592	2400
2016	604	2596
2017	616	2656
2018	628	2668
2019	641	2674
2020	653	2713
2021	666	2807
2022	680	2833
2023	693	2861
2024	707	2918
2025	721	2977



- NO_x Allocation By Unit (2004-2006 Ozone Seasons)

Unit	NOx Allowances
Brown 1	235
Brown 2	346
Brown 3	831
Brown 6	7
Brown 7	9
Brown 8	46
Brown 9	44
Brown 10	41
Brown 11	32
Ghent 1	1093
Ghent 2	1090
Ghent 3	1104
Ghent 4	1113
Green River 1&2	107
Green River 3	197
Green River 4	242
Pineville 3	79
Tyrone 1&2	5
Tyrone 3	143
Cane Run 4	389
Cane Run 5	360
Cane Run 6	420
Mill Creek 1	784
Mill Creek 2	719
Mill Creek 3	978
Mill Creek 4	1058
Paddys Run 12	4
Trimble Count 1	971
Total	12,447

Note:
Only LG&E portion of Trimble County 1's allowances are included.

Confidential Information Redacted

- Fuel Forecast (Base Assumptions)
  - Any and all fuel cost savings associated with serving native load will be returned to the ratepayer though the Fuel Adjustment Clause mechanism.

Annual Average Fuel Forecast

(cents/mmBtu)

	Brown				Ghent 1	Ghent 2-4			Gr River	Tyrone 3	Cane Run	Mill Creek	Trimble			HAEF
SO_2 content >	0.9 #	1.20#	2.75 #	6.36#	6.10#	0.9#	1.20#	6.10#	4.56#	1.80#	6.05#	6.09#	6.50#	Oil	Gas	Gas
2005	[redacted]															
2006	[redacted]															
2007	[redacted]															
2008	[redacted]															
2009	[redacted]															
2010	[redacted]															
2011	[redacted]															
2012	[redacted]															
2013	[redacted]															
2014	[redacted]															
2015	[redacted]															
2016	[redacted]															
2017	[redacted]															
2018	[redacted]															
2019	[redacted]															
2020	[redacted]															
2021	[redacted]															
2022	[redacted]															
2023	[redacted]															
2024	[redacted]															
2025	[redacted]															

APPENDIX C

Detailed Cost and Operations Assumptions

	Option Number			
	1	2	3	4
	Brown 3 SCR	**Ghent 2 SCR**	**Ghent 2 SCR**	**Brown 3 SCR**
NO_x Control Technology In-Serice Year	Jan-10	Jan-10	Jan-08	Jan-16
NO_x Removal (%)	89%	90%	90%	89%
Post Tech. NO_x Emisson Rate (#NO_x/mmBtu)*	0.03	0.03	0.03	0.03
Incremental Variable O&M (Nominal Yr $/MWH)	0.3500	0.3334	0.3205	0.3942
Derate (MW)	2	2	2	2
Incremental Fixed O&M (Nominal Yr $000/yr)	$490	$433	$416	$551
Lump Sum Cash Flow (Nominal Yr $000)**	$76,416	$92,544	$87,232	$91,243

Notes:

All costs are incremental costs. Fixed and Variable costs escalate at 2% annually. Capital costs are escalate at 3% annually.

*Higher than shown NO_x emission rates at low generation levels. Represents 90% reduction in NO_x or a floor of 0.03 #NO_x/mmbtu.

**Capital expenditures are completed one year prior to "NO_x Control Technology In-Service Year" to allow technology to be in-service January 1.

APPENDIX D

Confidential Information Redacted

Cost Comparison of Alternative NO_x Compliance Plans

All Costs in 2005 PVRR $ x1000

Case01: Base + Br3 SCR 2010

Fuel Forecast: Base
Load Forecast: Base
SO2 Price Forecast: Base
NOx Price Forecast: Base
Other Description: SO2 Dispatch, TC2 '10
WFGD HS BR123 & GH234
BR3 SCR '10

Capital Cost Sensitivity: ______

SO_2 Environmental Controls:

Unit	SO2 Tech	SO2 Rem %	Cost (M$)	In-Service
Brown 1	FS HS+Wet FGD	98%	234M$ Br123	2009
Brown 2	FS HS+Wet FGD	98%	234M$ Br123	2009
Brown 3	FS HS+Wet FGD	98%	234M$ Br123	2009
Ghent 1	Existing FGD	93%	0	1992
Ghent 2	FS HS+Wet FGD	98%	425M$ Gh234	2008
Ghent 3	FS HS+Wet FGD	98%	425M$ Gh234	2007
Ghent 4	FS HS+Wet FGD	98%	425M$ Gh234	2009

SO_2 Allowances Purchased: 674,034
SO_2 Tons Emitted: 2,511,879
Largest Annual SO_2 Purchase (as a % of EPA Allocation): 115%
NO_x Allowances Purchased: 94,476
NO_x Tons Emitted: 547,116

Base Case

Fuel Forecast: Base
Load Forecast: Base
SO2 Price Forecast: Base
NOx Price Forecast: Base
Other Description: SO2 Dispatch, TC2 2010, No Br3 SCR
WFGD HS BR123
WFGD HS GH234

Capital Cost Sensitivity: ______

SO_2 Environmental Controls:

Unit	SO2 Tech	SO2 Rem %	Cost (M$)	In-Service
Brown 1	FS HS+Wet FGD	98%	234M$ Br123	2009
Brown 2	FS HS+Wet FGD	98%	234M$ Br123	2009
Brown 3	FS HS+Wet FGD	98%	234M$ Br123	2009
Ghent 1	Existing FGD	93%	0	1992
Ghent 2	FS HS+Wet FGD	98%	425M$ Gh234	2008
Ghent 3	FS HS+Wet FGD	98%	425M$ Gh234	2007
Ghent 4	FS HS+Wet FGD	98%	425M$ Gh234	2009

SO_2 Allowances Purchased: 677,793
SO_2 Tons Emitted: 2,515,638
Largest Annual SO_2 Purchase (as a % of EPA Allocation): 115%
NO_x Allowances Purchased: 152,403
NO_x Tons Emitted: 605,043

SO_2 Price Curve Multiplier: 1.00

	Case01: Allowance Price ($Nominal/ton)			Case01: Combined Company Allow. Purchases				Base Case: Allowance Price ($Nominal/ton)			Base Case: Combined Company Allow. Purchases				DIFFERENCE CALCULATIONS	
Year	NOx	SO2	Production $	NOx $	SO2 $	Capital $	NPV Total $	NOx	SO2	Production $	NOx $	SO2 $	Capital $	NPV Total $	Total $	Cumulative Total $
2005	3146	392	[redacted]	-	-	11,233	[redacted]	3146	392	[redacted]	-	-	11,233	[redacted]	-	-
2006	3063	405	[redacted]	-	-	23,749	[redacted]	3063	405	[redacted]	-	-	23,749	[redacted]	-	-
2007	2599	412	[redacted]	-	-	49,380	[redacted]	2599	412	[redacted]	-	-	49,380	[redacted]	-	-
2008	2352	419	[redacted]	-	4,604	66,004	[redacted]	2352	419	[redacted]	-	4,604	66,004	[redacted]	-	-
2009	2308	407	[redacted]	-	-	85,033	[redacted]	2308	407	[redacted]	-	-	78,372	[redacted]	6,661	6,661
2010	1874	536	[redacted]	-	-	83,030	[redacted]	1874	536	[redacted]	637	-	74,429	[redacted]	9,913	16,574
2011	1666	547	[redacted]	-	3,395	74,085	[redacted]	1666	547	[redacted]	3,042	3,657	66,404	[redacted]	6,352	22,926
2012	1752	558	[redacted]	-	6,896	66,075	[redacted]	1752	558	[redacted]	3,196	6,989	59,217	[redacted]	5,267	28,193
2013	1731	569	[redacted]	-	6,761	58,896	[redacted]	1731	569	[redacted]	4,256	6,844	52,776	[redacted]	3,549	31,742
2014	2344	580	[redacted]	-	7,060	52,461	[redacted]	2344	580	[redacted]	6,247	7,151	47,002	[redacted]	754	32,496
2015	2400	592	[redacted]	6,485	13,881	46,680	[redacted]	2400	592	[redacted]	11,867	13,980	41,814	[redacted]	979	33,475
2016	2596	604	[redacted]	8,203	13,298	41,476	[redacted]	2596	604	[redacted]	12,482	13,369	37,142	[redacted]	1,816	35,291
2017	2656	616	[redacted]	8,587	12,951	36,768	[redacted]	2656	616	[redacted]	12,838	13,023	32,916	[redacted]	1,048	36,340
2018	2668	628	[redacted]	8,156	13,011	32,508	[redacted]	2668	628	[redacted]	12,152	13,079	29,091	[redacted]	569	36,908
2019	2674	641	[redacted]	8,130	12,963	28,656	[redacted]	2674	641	[redacted]	11,513	13,012	25,634	[redacted]	660	37,568
2020	2713	653	[redacted]	8,043	12,418	25,176	[redacted]	2713	653	[redacted]	11,641	12,468	22,511	[redacted]	113	37,681
2021	2807	666	[redacted]	8,686	11,981	22,036	[redacted]	2807	666	[redacted]	12,224	12,017	19,693	[redacted]	(218)	37,464
2022	2833	680	[redacted]	8,252	11,731	19,206	[redacted]	2833	680	[redacted]	11,634	11,758	17,154	[redacted]	(370)	37,094
2023	2861	693	[redacted]	8,079	10,925	16,658	[redacted]	2861	693	[redacted]	11,251	10,954	14,868	[redacted]	(461)	36,633
2024	2918	707	[redacted]	8,119	10,663	14,367	[redacted]	2918	707	[redacted]	11,181	10,687	12,814	[redacted]	(691)	35,942
2025	2977	721	[redacted]	7,997	10,447	12,263	[redacted]	2977	721	[redacted]	10,922	10,461	10,921	[redacted]	(801)	35,141
2026			[redacted]	-	-	10,160	[redacted]			[redacted]	-	-	9,009	[redacted]	1,151	36,292
2027			[redacted]	-	-	7,179	[redacted]			[redacted]	-	-	6,200	[redacted]	979	37,271
2028			[redacted]	-	-	4,787	[redacted]			[redacted]	-	-	3,961	[redacted]	826	38,097
2029			[redacted]	-	-	1,308	[redacted]			[redacted]	-	-	706	[redacted]	602	38,699
2030			[redacted]	-	-	-	[redacted]			[redacted]	-	-	-	[redacted]	-	38,699
2031			[redacted]	-	-	-	[redacted]			[redacted]	-	-	-	[redacted]	-	38,699
2032			[redacted]	-	-	-	[redacted]			[redacted]	-	-	-	[redacted]	-	38,699
2033			[redacted]	-	-	-	[redacted]			[redacted]	-	-	-	[redacted]	-	38,699
2034			[redacted]	-	-	-	[redacted]			[redacted]	-	-	-	[redacted]	-	38,699
2035			[redacted]	-	-	-	[redacted]			[redacted]	-	-	-	[redacted]	-	38,699
Totals			13,693,847	88,738	162,986	889,174	14,834,745			13,671,906	147,085	164,055	813,000	14,796,046	38,699	

Confidential Information Redacted

Cost Comparison of Alternative NO_x Compliance Plans

All Costs in 2005 PVRR $ x1000

Case02: Base + Gh2 SCR 2010

Fuel Forecast: Base
Load Forecast: Base
SO2 Price Forecast: Base
NOx Price Forecast: Base
Other Description: SO2 Dispatch, TC2 '10
WFGD HS BR123 & GH234
GH2 SCR '10
Capital Cost Sensitivity: ______

SO_2 Environmental Controls:

Unit	SO2 Tech	SO2 Rem %	Cost (M$)	In-Service
Brown 1	FS HS+Wet FGD	98%	234M$ Br123	2009
Brown 2	FS HS+Wet FGD	98%	234M$ Br123	2009
Brown 3	FS HS+Wet FGD	98%	234M$ Br123	2009
Ghent 1	Existing FGD	93%	0	1992
Ghent 2	FS HS+Wet FGD	98%	425M$ Gh234	2008
Ghent 3	FS HS+Wet FGD	98%	425M$ Gh234	2007
Ghent 4	FS HS+Wet FGD	98%	425M$ Gh234	2009

SO_2 Allowances Purchased: 674,933 — SO_2 Tons Emitted: 2,512,779
Largest Annual SO_2 Purchase (as a % of EPA Allocation): 115%
NO_x Allowances Purchased: 81,109 — NO_x Tons Emitted: 533,749

Base Case

Fuel Forecast: Base
Load Forecast: Base
SO2 Price Forecast: Base
NOx Price Forecast: Base
Other Description: SO2 Dispatch, TC2 2010, No Br3 SCR
WFGD HS BR123
WFGD HS GH234
Capital Cost Sensitivity: ______

SO_2 Environmental Controls:

Unit	SO2 Tech	SO2 Rem %	Cost (M$)	In-Service
Brown 1	FS HS+Wet FGD	98%	234M$ Br123	2009
Brown 2	FS HS+Wet FGD	98%	234M$ Br123	2009
Brown 3	FS HS+Wet FGD	98%	234M$ Br123	2009
Ghent 1	Existing FGD	93%	0	1992
Ghent 2	FS HS+Wet FGD	98%	425M$ Gh234	2008
Ghent 3	FS HS+Wet FGD	98%	425M$ Gh234	2007
Ghent 4	FS HS+Wet FGD	98%	425M$ Gh234	2009

SO_2 Allowances Purchased: 677,793 — SO_2 Tons Emitted: 2,515,638
Largest Annual SO_2 Purchase (as a % of EPA Allocation): 115%
NO_x Allowances Purchased: 152,403 — NO_x Tons Emitted: 605,043

SO_2 Price Curve Multiplier: 1.00

	Case02: Allowance Price ($Nominal/ton)			Case02: Combined Company Allow. Purchases				Base Case: Allowance Price ($Nominal/ton)			Base Case: Combined Company Allow. Purchases				DIFFERENCE CALCULATIONS	
Year	NOx	SO2	Production $	NOx $	SO2 $	Capital $	NPV Total $	NOx	SO2	Production $	NOx $	SO2 $	Capital $	NPV Total $	Total $	Cumulative Total $
2005	3146	392	[redacted]	-	-	11,233	[redacted]	3146	392	[redacted]	-	-	11,233	[redacted]	-	-
2006	3063	405	[redacted]	-	-	23,749	[redacted]	3063	405	[redacted]	-	-	23,749	[redacted]	-	-
2007	2599	412	[redacted]	-	-	49,380	[redacted]	2599	412	[redacted]	-	-	49,380	[redacted]	-	-
2008	2352	419	[redacted]	-	4,604	66,004	[redacted]	2352	419	[redacted]	-	4,604	66,004	[redacted]	-	-
2009	2308	407	[redacted]	-	-	86,439	[redacted]	2308	407	[redacted]	-	-	78,372	[redacted]	8,067	8,067
2010	1874	536	[redacted]	-	-	84,845	[redacted]	1874	536	[redacted]	637	-	74,429	[redacted]	11,122	19,189
2011	1666	547	[redacted]	-	3,539	75,707	[redacted]	1666	547	[redacted]	3,042	3,657	66,404	[redacted]	7,560	26,749
2012	1752	558	[redacted]	-	6,925	67,522	[redacted]	1752	558	[redacted]	3,196	6,989	59,217	[redacted]	6,287	33,036
2013	1731	569	[redacted]	-	6,777	60,188	[redacted]	1731	569	[redacted]	4,256	6,844	52,776	[redacted]	4,513	37,549
2014	2344	580	[redacted]	-	7,074	53,613	[redacted]	2344	580	[redacted]	6,247	7,151	47,002	[redacted]	1,555	39,104
2015	2400	592	[redacted]	-	13,904	47,707	[redacted]	2400	592	[redacted]	11,867	13,980	41,814	[redacted]	(4,911)	34,194
2016	2596	604	[redacted]	6,781	13,294	42,391	[redacted]	2596	604	[redacted]	12,482	13,369	37,142	[redacted]	757	34,951
2017	2656	616	[redacted]	7,709	12,970	37,582	[redacted]	2656	616	[redacted]	12,838	13,023	32,916	[redacted]	729	35,680
2018	2668	628	[redacted]	7,350	13,019	33,229	[redacted]	2668	628	[redacted]	12,152	13,079	29,091	[redacted]	296	35,975
2019	2674	641	[redacted]	7,418	12,973	29,294	[redacted]	2674	641	[redacted]	11,513	13,012	25,634	[redacted]	484	36,459
2020	2713	653	[redacted]	7,297	12,426	25,739	[redacted]	2713	653	[redacted]	11,641	12,468	22,511	[redacted]	(164)	36,295
2021	2807	666	[redacted]	7,984	11,986	22,531	[redacted]	2807	666	[redacted]	12,224	12,017	19,693	[redacted]	(494)	35,801
2022	2833	680	[redacted]	7,604	11,736	19,640	[redacted]	2833	680	[redacted]	11,634	11,758	17,154	[redacted]	(679)	35,122
2023	2861	693	[redacted]	7,446	10,934	17,036	[redacted]	2861	693	[redacted]	11,251	10,954	14,868	[redacted]	(802)	34,319
2024	2918	707	[redacted]	7,582	10,665	14,695	[redacted]	2918	707	[redacted]	11,181	10,687	12,814	[redacted]	(888)	33,432
2025	2977	721	[redacted]	7,467	10,442	12,546	[redacted]	2977	721	[redacted]	10,922	10,461	10,921	[redacted]	(1,010)	32,422
2026			[redacted]	-	-	10,403	[redacted]			[redacted]	-	-	9,009	[redacted]	1,394	33,816
2027			[redacted]	-	-	7,386	[redacted]			[redacted]	-	-	6,200	[redacted]	1,186	35,002
2028			[redacted]	-	-	4,962	[redacted]			[redacted]	-	-	3,961	[redacted]	1,001	36,003
2029			[redacted]	-	-	1,435	[redacted]			[redacted]	-	-	706	[redacted]	729	36,732
2030			[redacted]	-	-	-	[redacted]			[redacted]	-	-	-	[redacted]	-	36,732
2031			[redacted]	-	-	-	[redacted]			[redacted]	-	-	-	[redacted]	-	36,732
2032			[redacted]	-	-	-	[redacted]			[redacted]	-	-	-	[redacted]	-	36,732
2033			[redacted]	-	-	-	[redacted]			[redacted]	-	-	-	[redacted]	-	36,732
2034			[redacted]	-	-	-	[redacted]			[redacted]	-	-	-	[redacted]	-	36,732
2035			[redacted]	-	-	-	[redacted]			[redacted]	-	-	-	[redacted]	-	36,732
Totals			13,689,616	74,637	163,269	905,256	14,832,778			13,671,906	147,085	164,055	813,000	14,796,046	36,732	

Confidential Information Redacted

Cost Comparison of Alternative NO_x Compliance Plans

All Costs in 2005 PVRR $ x1000

Case03: Base + Gh2 SCR 2008

Fuel Forecast: Base
Load Forecast: Base
SO2 Price Forecast: Base
NOx Price Forecast: Base
Other Description: SO2 Dispatch, TC2 '10
WFGD HS BR123 & GH234
GH2 SCR '08

Capital Cost Sensitivity: ______

SO_2 Environmental Controls:

Unit	SO2 Tech	SO2 Rem %	Cost (M$)	In-Service
Brown 1	FS HS+Wet FGD	98%	234M$ Br123	2009
Brown 2	FS HS+Wet FGD	98%	234M$ Br123	2009
Brown 3	FS HS+Wet FGD	98%	234M$ Br123	2009
Ghent 1	Existing FGD	93%	0	1992
Ghent 2	FS HS+Wet FGD	98%	425M$ Gh234	2008
Ghent 3	FS HS+Wet FGD	98%	425M$ Gh234	2007
Ghent 4	FS HS+Wet FGD	98%	425M$ Gh234	2009

SO_2 Allowances Purchased: 674,747
SO_2 Tons Emitted: 2,512,595
Largest Annual SO_2 Purchase (as a % of EPA Allocation): 115%
NO_x Allowances Purchased: 77,371
NO_x Tons Emitted: 530,011

Base Case

Fuel Forecast: Base
Load Forecast: Base
SO2 Price Forecast: Base
NOx Price Forecast: Base
Other Description: SO2 Dispatch, TC2 2010, No Br3 SCR
WFGD HS BR123
WFGD HS GH234

Capital Cost Sensitivity: ______

SO_2 Environmental Controls:

Unit	SO2 Tech	SO2 Rem %	Cost (M$)	In-Service
Brown 1	FS HS+Wet FGD	98%	234M$ Br123	2009
Brown 2	FS HS+Wet FGD	98%	234M$ Br123	2009
Brown 3	FS HS+Wet FGD	98%	234M$ Br123	2009
Ghent 1	Existing FGD	93%	0	1992
Ghent 2	FS HS+Wet FGD	98%	425M$ Gh234	2008
Ghent 3	FS HS+Wet FGD	98%	425M$ Gh234	2007
Ghent 4	FS HS+Wet FGD	98%	425M$ Gh234	2009

SO_2 Allowances Purchased: 677,793
SO_2 Tons Emitted: 2,515,638
Largest Annual SO_2 Purchase (as a % of EPA Allocation): 115%
NO_x Allowances Purchased: 152,403
NO_x Tons Emitted: 605,043

SO_2 Price Curve Multiplier: 1.00

	Case03: Base + Gh2 SCR 2008							Base Case							DIFFERENCE CALCULATIONS	
	Allowance Price ($Nominal/ton)			Combined Company Allow. Purchases				Allowance Price ($Nominal/ton)			Combined Company Allow. Purchases					
Year	NOx	SO2	Production $	NOx $	SO2 $	Capital $	NPV Total $	NOx	SO2	Production $	NOx $	SO2 $	Capital $	NPV Total $	Total $	Cumulative Total $
2005	3146	392	[redacted]	-	-	11,233	[redacted]	3146	392	[redacted]	-	-	11,233	[redacted]	-	-
2006	3063	405	[redacted]	-	-	23,749	[redacted]	3063	405	[redacted]	-	-	23,749	[redacted]	-	-
2007	2599	412	[redacted]	-	-	58,128	[redacted]	2599	412	[redacted]	-	-	49,380	[redacted]	8,748	8,748
2008	2343	419	[redacted]	-	4,570	77,299	[redacted]	2352	419	[redacted]	-	4,604	66,004	[redacted]	12,136	20,884
2009	2299	407	[redacted]	-	-	88,460	[redacted]	2308	407	[redacted]	-	-	78,372	[redacted]	10,828	31,712
2010	1874	536	[redacted]	-	-	83,436	[redacted]	1874	536	[redacted]	637	-	74,429	[redacted]	9,713	41,425
2011	1666	547	[redacted]	-	3,508	74,442	[redacted]	1666	547	[redacted]	3,042	3,657	66,404	[redacted]	6,264	47,689
2012	1752	558	[redacted]	-	6,925	66,386	[redacted]	1752	558	[redacted]	3,196	6,989	59,217	[redacted]	5,151	52,840
2013	1731	569	[redacted]	-	6,777	59,166	[redacted]	1731	569	[redacted]	4,256	6,844	52,776	[redacted]	3,491	56,332
2014	2344	580	[redacted]	-	7,074	52,694	[redacted]	2344	580	[redacted]	6,247	7,151	47,002	[redacted]	636	56,968
2015	2400	592	[redacted]	-	13,904	46,874	[redacted]	2400	592	[redacted]	11,867	13,980	41,814	[redacted]	(5,744)	51,224
2016	2596	604	[redacted]	2,293	13,294	41,630	[redacted]	2596	604	[redacted]	12,482	13,369	37,142	[redacted]	(4,492)	46,732
2017	2656	616	[redacted]	7,709	12,970	36,885	[redacted]	2656	616	[redacted]	12,838	13,023	32,916	[redacted]	32	46,764
2018	2668	628	[redacted]	7,350	13,019	32,592	[redacted]	2668	628	[redacted]	12,152	13,079	29,091	[redacted]	(341)	46,423
2019	2674	641	[redacted]	7,418	12,973	28,711	[redacted]	2674	641	[redacted]	11,513	13,012	25,634	[redacted]	(99)	46,324
2020	2713	653	[redacted]	7,297	12,426	25,206	[redacted]	2713	653	[redacted]	11,641	12,468	22,511	[redacted]	(697)	45,626
2021	2807	666	[redacted]	7,984	11,986	22,044	[redacted]	2807	666	[redacted]	12,224	12,017	19,693	[redacted]	(981)	44,645
2022	2833	680	[redacted]	7,604	11,736	19,195	[redacted]	2833	680	[redacted]	11,634	11,758	17,154	[redacted]	(1,124)	43,521
2023	2861	693	[redacted]	7,446	10,934	16,630	[redacted]	2861	693	[redacted]	11,251	10,954	14,868	[redacted]	(1,208)	42,313
2024	2918	707	[redacted]	7,582	10,665	14,325	[redacted]	2918	707	[redacted]	11,181	10,687	12,814	[redacted]	(1,258)	41,056
2025	2977	721	[redacted]	7,467	10,442	12,208	[redacted]	2977	721	[redacted]	10,922	10,461	10,921	[redacted]	(1,348)	39,708
2026			[redacted]	-	-	10,094	[redacted]			[redacted]	-	-	9,009	[redacted]	1,085	40,793
2027			[redacted]	-	-	6,990	[redacted]			[redacted]	-	-	6,200	[redacted]	790	41,583
2028			[redacted]	-	-	3,961	[redacted]			[redacted]	-	-	3,961	[redacted]	-	41,583
2029			[redacted]	-	-	706	[redacted]			[redacted]	-	-	706	[redacted]	-	41,583
2030			[redacted]	-	-	-	[redacted]			[redacted]	-	-	-	[redacted]	-	41,583
2031			[redacted]	-	-	-	[redacted]			[redacted]	-	-	-	[redacted]	-	41,583
2032			[redacted]	-	-	-	[redacted]			[redacted]	-	-	-	[redacted]	-	41,583
2033			[redacted]	-	-	-	[redacted]			[redacted]	-	-	-	[redacted]	-	41,583
2034			[redacted]	-	-	-	[redacted]			[redacted]	-	-	-	[redacted]	-	41,583
2035			[redacted]	-	-	-	[redacted]			[redacted]	-	-	-	[redacted]	-	41,583
Totals			13,691,231	70,149	163,204	913,044	14,837,629			13,671,906	147,085	164,055	813,000	14,796,046	41,583	

Confidential Information Redacted

Cost Comparison of Alternative NO_x Compliance Plans

All Costs in 2005 PVRR $ x1000

Case04: Base + Br3 & Gh2 SCR 2010

Fuel Forecast: Base
Load Forecast: Base
SO2 Price Forecast: Base
NOx Price Forecast: Base
Other Description: SO2 Dispatch, TC2 '10
WFGD HS BR123 & GH234
GH2 & BR3 SCR '10

Capital Cost Sensitivity: ______

SO_2 Environmental Controls:

Unit	SO2 Tech	SO2 Rem %	Cost (M$)	In-Service
Brown 1	FS HS+Wet FGD	98%	234M$ Br123	2009
Brown 2	FS HS+Wet FGD	98%	234M$ Br123	2009
Brown 3	FS HS+Wet FGD	98%	234M$ Br123	2009
Ghent 1	Existing FGD	93%	0	1992
Ghent 2	FS HS+Wet FGD	98%	425M$ Gh234	2008
Ghent 3	FS HS+Wet FGD	98%	425M$ Gh234	2007
Ghent 4	FS HS+Wet FGD	98%	425M$ Gh234	2009

SO_2 Allowances Purchased: 671,063
SO_2 Tons Emitted: 2,508,908
Largest Annual SO_2 Purchase (as a % of EPA Allocation): 115%
NO_x Allowances Purchased: 24,530
NO_x Tons Emitted: 477,170

Base Case

Fuel Forecast: Base
Load Forecast: Base
SO2 Price Forecast: Base
NOx Price Forecast: Base
Other Description: SO2 Dispatch, TC2 2010, No Br3 SCR
WFGD HS BR123
WFGD HS GH234

Capital Cost Sensitivity: ______

SO_2 Environmental Controls:

Unit	SO2 Tech	SO2 Rem %	Cost (M$)	In-Service
Brown 1	FS HS+Wet FGD	98%	234M$ Br123	2009
Brown 2	FS HS+Wet FGD	98%	234M$ Br123	2009
Brown 3	FS HS+Wet FGD	98%	234M$ Br123	2009
Ghent 1	Existing FGD	93%	0	1992
Ghent 2	FS HS+Wet FGD	98%	425M$ Gh234	2008
Ghent 3	FS HS+Wet FGD	98%	425M$ Gh234	2007
Ghent 4	FS HS+Wet FGD	98%	425M$ Gh234	2009

SO_2 Allowances Purchased: 677,793
SO_2 Tons Emitted: 2,515,638
Largest Annual SO_2 Purchase (as a % of EPA Allocation): 115%
NO_x Allowances Purchased: 152,403
NO_x Tons Emitted: 605,043

SO_2 Price Curve Multiplier: 1.00

DIFFERENCE CALCULATIONS

Year	Case04 Allowance Price ($Nominal/ton) NOx	Case04 Allowance Price SO2	Case04 Production $	Case04 Combined Company Allow. Purchases NOx $	Case04 Combined Company Allow. Purchases SO2 $	Case04 Capital $	Case04 NPV Total $	Base Case Allowance Price ($Nominal/ton) NOx	Base Case Allowance Price SO2	Base Case Production $	Base Case Combined Company Allow. Purchases NOx $	Base Case Combined Company Allow. Purchases SO2 $	Base Case Capital $	Base Case NPV Total $	Difference Total $	Cumulative Total $
2005	3146	392	[redacted]	-	-	11,233	[redacted]	3146	392	[redacted]	-	-	11,233	[redacted]	-	-
2006	3063	405		-	-	23,749		3063	405		-	-	23,749		-	-
2007	2599	412		-	-	49,380		2599	412		-	-	49,380		-	-
2008	2352	419		-	4,604	66,004		2352	419		-	4,604	66,004		-	-
2009	2308	407		-	-	93,100		2308	407		-	-	78,372		14,728	14,728
2010	1874	536		-	-	93,446		1874	536		637	-	74,429		21,757	36,485
2011	1666	547		-	3,293	83,388		1666	547		3,042	3,657	66,404		17,038	53,523
2012	1752	558		-	6,848	74,381		1752	558		3,196	6,989	59,217		14,822	68,345
2013	1731	569		-	6,706	66,308		1731	569		4,256	6,844	52,776		12,311	80,656
2014	2344	580		-	6,969	59,072		2344	580		6,247	7,151	47,002		8,745	89,401
2015	2400	592		-	13,807	52,573		2400	592		11,867	13,980	41,814		1,562	90,963
2016	2596	604		-	13,216	46,725		2596	604		12,482	13,369	37,142		58	91,021
2017	2656	616		-	12,888	41,435		2656	616		12,838	13,023	32,916		(1,347)	89,673
2018	2668	628		-	12,949	36,646		2668	628		12,152	13,079	29,091		(2,503)	87,170
2019	2674	641		-	12,918	32,316		2674	641		11,513	13,012	25,634		(2,954)	84,217
2020	2713	653		-	12,373	28,404		2713	653		11,641	12,468	22,511		(3,784)	80,433
2021	2807	666		1,856	11,951	24,874		2807	666		12,224	12,017	19,693		(3,358)	77,075
2022	2833	680		4,285	11,702	21,692		2833	680		11,634	11,758	17,154		(996)	76,079
2023	2861	693		4,318	10,900	18,826		2861	693		11,251	10,954	14,868		(1,253)	74,825
2024	2918	707		4,571	10,635	16,249		2918	707		11,181	10,687	12,814		(1,564)	73,261
2025	2977	721		4,588	10,427	13,887		2977	721		10,922	10,461	10,921		(1,835)	71,426
2026				-	-	11,553					-	-	9,009		2,544	73,970
2027				-	-	8,366					-	-	6,200		2,166	76,136
2028				-	-	5,788					-	-	3,961		1,827	77,963
2029				-	-	2,036					-	-	706		1,330	79,293
2030				-	-	-					-	-	-		-	79,293
2031				-	-	-					-	-	-		-	79,293
2032				-	-	-					-	-	-		-	79,293
2033				-	-	-					-	-	-		-	79,293
2034				-	-	-					-	-	-		-	79,293
2035				-	-	-					-	-	-		-	79,293
Totals			13,712,103	19,618	162,187	981,431	14,875,339			13,671,906	147,085	164,055	813,000	14,796,046	79,293	

Confidential Information Redacted

Cost Comparison of Alternative NO_x Compliance Plans

All Costs in 2005 PVRR $ x1000

Case05: Base + Gh2 SCR 2010, Br3 SCR 2016

Fuel Forecast: Base
Load Forecast: Base
SO2 Price Forecast: Base
NOx Price Forecast: Base
Other Description: SO2 Dispatch, TC2 '10
WFGD HS BR123 & GH234
GH2 SCR '10, BR3 SCR '16

Capital Cost Sensitivity: ______

SO_2 Environmental Controls:

Unit	SO2 Tech	SO2 Rem %	Cost (M$)	In-Service
Brown 1	FS HS+Wet FGD	98%	234M$ Br123	2009
Brown 2	FS HS+Wet FGD	98%	234M$ Br123	2009
Brown 3	FS HS+Wet FGD	98%	234M$ Br123	2009
Ghent 1	Existing FGD	93%	0	1992
Ghent 2	FS HS+Wet FGD	98%	425M$ Gh234	2008
Ghent 3	FS HS+Wet FGD	98%	425M$ Gh234	2007
Ghent 4	FS HS+Wet FGD	98%	425M$ Gh234	2009

SO_2 Allowances Purchased: 672,861
SO_2 Tons Emitted: 2,510,706
Largest Annual SO_2 Purchase (as a % of EPA Allocation): 115%
NO_x Allowances Purchased: 44,070
NO_x Tons Emitted: 496,710

Base Case

Fuel Forecast: Base
Load Forecast: Base
SO2 Price Forecast: Base
NOx Price Forecast: Base
Other Description: SO2 Dispatch, TC2 2010, No Br3 SCR
WFGD HS BR123
WFGD HS GH234

Capital Cost Sensitivity: ______

SO_2 Environmental Controls:

Unit	SO2 Tech	SO2 Rem %	Cost (M$)	In-Service
Brown 1	FS HS+Wet FGD	98%	234M$ Br123	2009
Brown 2	FS HS+Wet FGD	98%	234M$ Br123	2009
Brown 3	FS HS+Wet FGD	98%	234M$ Br123	2009
Ghent 1	Existing FGD	93%	0	1992
Ghent 2	FS HS+Wet FGD	98%	425M$ Gh234	2008
Ghent 3	FS HS+Wet FGD	98%	425M$ Gh234	2007
Ghent 4	FS HS+Wet FGD	98%	425M$ Gh234	2009

SO_2 Allowances Purchased: 677,793
SO_2 Tons Emitted: 2,515,638
Largest Annual SO_2 Purchase (as a % of EPA Allocation): 115%
NO_x Allowances Purchased: 152,403
NO_x Tons Emitted: 605,043

SO_2 Price Curve Multiplier: 1.00

DIFFERENCE CALCULATIONS

	Case05 Allowance Price ($Nominal/ton)			Case05 Combined Company Allow. Purchases				Base Case Allowance Price ($Nominal/ton)			Base Case Combined Company Allow. Purchases				Difference	
Year	NOx	SO2	Production $	NOx $	SO2 $	Capital $	NPV Total $	NOx	SO2	Production $	NOx $	SO2 $	Capital $	NPV Total $	Total $	Cumulative Total $
2005	3146	392	[redacted]	-	-	11,233	[redacted]	3146	392	[redacted]	-	-	11,233	[redacted]	-	-
2006	3063	405	[redacted]	-	-	23,749	[redacted]	3063	405	[redacted]	-	-	23,749	[redacted]	-	-
2007	2599	412	[redacted]	-	-	49,380	[redacted]	2599	412	[redacted]	-	-	49,380	[redacted]	-	-
2008	2352	419	[redacted]	-	4,604	66,004	[redacted]	2352	419	[redacted]	-	4,604	66,004	[redacted]	-	-
2009	2308	407	[redacted]	-	-	86,439	[redacted]	2308	407	[redacted]	-	-	78,372	[redacted]	8,067	8,067
2010	1874	536	[redacted]	-	-	84,845	[redacted]	1874	536	[redacted]	637	-	74,429	[redacted]	11,122	19,189
2011	1666	547	[redacted]	-	3,539	75,707	[redacted]	1666	547	[redacted]	3,042	3,657	66,404	[redacted]	7,560	26,749
2012	1752	558	[redacted]	-	6,925	67,522	[redacted]	1752	558	[redacted]	3,196	6,989	59,217	[redacted]	6,287	33,036
2013	1731	569	[redacted]	-	6,777	60,188	[redacted]	1731	569	[redacted]	4,256	6,844	52,776	[redacted]	4,513	37,550
2014	2344	580	[redacted]	-	7,074	53,613	[redacted]	2344	580	[redacted]	6,247	7,151	47,002	[redacted]	1,555	39,105
2015	2400	592	[redacted]	-	13,904	52,930	[redacted]	2400	592	[redacted]	11,867	13,980	41,814	[redacted]	312	39,417
2016	2596	604	[redacted]	2,627	13,216	49,135	[redacted]	2596	604	[redacted]	12,482	13,369	37,142	[redacted]	5,095	44,512
2017	2656	616	[redacted]	3,590	12,888	43,605	[redacted]	2656	616	[redacted]	12,838	13,023	32,916	[redacted]	4,412	48,924
2018	2668	628	[redacted]	3,471	12,949	38,607	[redacted]	2668	628	[redacted]	12,152	13,079	29,091	[redacted]	2,929	51,854
2019	2674	641	[redacted]	4,107	12,918	34,093	[redacted]	2674	641	[redacted]	11,513	13,012	25,634	[redacted]	2,931	54,784
2020	2713	653	[redacted]	3,771	12,373	30,020	[redacted]	2713	653	[redacted]	11,641	12,468	22,511	[redacted]	1,603	56,388
2021	2807	666	[redacted]	4,515	11,951	26,347	[redacted]	2807	666	[redacted]	12,224	12,017	19,693	[redacted]	774	57,161
2022	2833	680	[redacted]	4,285	11,702	23,038	[redacted]	2833	680	[redacted]	11,634	11,758	17,154	[redacted]	350	57,512
2023	2861	693	[redacted]	4,318	10,900	20,057	[redacted]	2861	693	[redacted]	11,251	10,954	14,868	[redacted]	(22)	57,489
2024	2918	707	[redacted]	4,571	10,635	17,375	[redacted]	2918	707	[redacted]	11,181	10,687	12,814	[redacted]	(438)	57,051
2025	2977	721	[redacted]	4,588	10,427	14,916	[redacted]	2977	721	[redacted]	10,922	10,461	10,921	[redacted]	(807)	56,244
2026			[redacted]	-	-	12,493	[redacted]			[redacted]	-	-	9,009	[redacted]	3,484	59,728
2027			[redacted]	-	-	9,223	[redacted]			[redacted]	-	-	6,200	[redacted]	3,023	62,751
2028			[redacted]	-	-	6,571	[redacted]			[redacted]	-	-	3,961	[redacted]	2,610	65,361
2029			[redacted]	-	-	2,838	[redacted]			[redacted]	-	-	706	[redacted]	2,132	67,493
2030			[redacted]	-	-	1,218	[redacted]			[redacted]	-	-	-	[redacted]	1,218	68,711
2031			[redacted]	-	-	1,052	[redacted]			[redacted]	-	-	-	[redacted]	1,052	69,763
2032			[redacted]	-	-	902	[redacted]			[redacted]	-	-	-	[redacted]	902	70,665
2033			[redacted]	-	-	768	[redacted]			[redacted]	-	-	-	[redacted]	768	71,433
2034			[redacted]	-	-	648	[redacted]			[redacted]	-	-	-	[redacted]	648	72,081
2035			[redacted]	-	-	472	[redacted]			[redacted]	-	-	-	[redacted]	472	72,553
Totals			13,700,985	39,843	162,783	964,988	14,868,599			13,671,906	147,085	164,055	813,000	14,796,046	72,553	

APPENDIX E

Base Case

NO_x SUMMARY BY YEAR

Unit NOx EMISS RATE (#/MMBTU)	Ownership	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Brown 1	KU	0.502	0.502	0.501	0.502	0.502	0.501	0.501	0.501	0.502	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501
Brown 2	KU	0.321	0.320	0.321	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320
Brown 3	KU	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270
Ghent 1	KU	0.055	0.054	0.054	0.056	0.056	0.059	0.066	0.064	0.068	0.065	0.066	0.063	0.060	0.058	0.059	0.058	0.057	0.058	0.055	0.058	0.059
Ghent 2	KU	0.301	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300
Ghent 3	KU	0.039	0.038	0.039	0.038	0.038	0.039	0.038	0.038	0.038	0.039	0.039	0.038	0.038	0.038	0.038	0.038	0.038	0.039	0.039	0.038	0.038
Ghent 4	KU	0.040	0.039	0.041	0.042	0.040	0.040	0.040	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.040	0.039	0.039
Green River 3	KU	0.392	0.393	0.392	0.392	0.391	0.392	0.393	0.393	0.392	0.392	0.392	0.392	0.391	0.392	0.391	0.391	0.391	0.391	0.391	0.391	0.391
Green River 4	KU	0.382	0.381	0.381	0.381	0.381	0.381	0.382	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.380	0.381	0.381	0.381
Tyrone 3	KU	0.381	0.381	0.383	0.384	0.388	0.382	0.383	0.383	0.388	0.386	0.387	0.389	0.392	0.388	0.391	0.391	0.391	0.391	0.395	0.395	0.398
Cane Run 4	LGE	0.325	0.326	0.326	0.327	0.327	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328
Cane Run 5	LGE	0.373	0.375	0.379	0.379	0.379	0.374	0.373	0.374	0.377	0.378	0.378	0.380	0.381	0.382	0.383	0.385	0.385	0.385	0.387	0.387	0.388
Cane Run 6	LGE	0.308	0.308	0.309	0.306	0.305	0.303	0.302	0.303	0.303	0.304	0.305	0.306	0.306	0.307	0.307	0.308	0.308	0.309	0.309	0.310	0.310
Mill Creek 1	LGE	0.266	0.266	0.267	0.267	0.267	0.265	0.264	0.265	0.265	0.265	0.266	0.266	0.267	0.267	0.267	0.267	0.268	0.268	0.268	0.268	0.268
Mill Creek 2	LGE	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252
Mill Creek 3	LGE	0.057	0.059	0.060	0.059	0.058	0.060	0.059	0.058	0.057	0.057	0.058	0.058	0.059	0.058	0.058	0.060	0.059	0.057	0.059	0.058	0.060
Mill Creek 4	LGE	0.039	0.039	0.040	0.040	0.039	0.041	0.040	0.040	0.041	0.040	0.040	0.040	0.040	0.039	0.039	0.039	0.041	0.039	0.040	0.039	0.040
Trimble County 1	LGE	0.049	0.047	0.047	0.047	0.047	0.048	0.048	0.047	0.047	0.047	0.047	0.047	0.048	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047
Trimble County 2	KU	0.000	0.000	0.000	0.000	0.000	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070
Trimble County 2	LGE	0.000	0.000	0.000	0.000	0.000	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070
Peakers	KU	0.076	0.074	0.073	0.075	0.074	0.075	0.075	0.076	0.076	0.072	0.070	0.069	0.068	0.068	0.067	0.066	0.065	0.065	0.064	0.064	0.063
Peakers	LGE	0.072	0.070	0.070	0.071	0.071	0.072	0.072	0.075	0.073	0.070	0.069	0.068	0.068	0.067	0.066	0.066	0.064	0.064	0.064	0.064	0.063

SCRUBBER REMOVAL EFF.		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Brown 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Brown 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Brown 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Green River 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Green River 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Tyrone 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cane Run 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cane Run 5		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cane Run 6		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Trimble County 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Trimble County 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Trimble County 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peakers		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peakers		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

TONS NOx EMITTED		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Brown 1	KU	659	606	689	595	745	1,647	1,542	1,609	1,405	1,655	1,728	1,722	1,772	1,787	1,847	1,656	1,903	1,924	1,949	1,961	1,974
Brown 2	KU	669	767	684	787	844	1,866	1,820	1,852	1,869	1,870	1,688	1,896	1,925	1,947	1,966	1,973	1,979	1,798	2,010	2,031	2,031
Brown 3	KU	1,147	1,274	1,590	1,519	1,704	3,677	3,569	3,242	3,724	3,798	3,827	3,912	4,027	3,992	3,668	4,104	4,247	4,304	4,326	4,394	4,426
Ghent 1	KU	452	446	423	447	452	1,037	1,122	1,092	1,140	996	1,123	1,080	1,052	1,023	1,032	1,019	915	1,028	991	1,028	1,044
Ghent 2	KU	1,784	1,853	1,768	2,316	1,936	4,912	4,865	4,394	4,949	4,908	4,963	5,006	5,044	5,008	4,600	5,142	5,227	5,278	5,299	5,245	5,302
Ghent 3	KU	322	319	353	343	343	692	747	756	757	767	772	774	693	773	775	776	780	785	783	703	784
Ghent 4	KU	328	325	333	338	355	785	773	781	778	787	791	713	793	795	797	796	800	801	723	805	804
Green River 3	KU	284	301	364	342	321	762	666	724	770	793	832	770	901	906	949	945	996	1,011	889	1,024	1,058
Green River 4	KU	469	455	515	496	489	1,002	1,038	1,091	1,125	1,168	1,207	1,203	1,122	1,278	1,357	1,326	1,376	1,405	1,402	1,273	1,433
Tyrone 3	KU	276	300	378	358	340	678	691	758	801	821	854	874	856	906	1,000	971	1,042	1,048	1,073	965	1,089
Cane Run 4	LGE	766	784	801	760	718	1,374	1,102	1,339	1,312	1,462	1,465	1,507	1,594	1,414	1,718	1,683	1,743	1,763	1,796	1,820	1,839
Cane Run 5	LGE	880	823	959	848	735	1,633	1,475	1,581	1,644	1,732	1,626	1,869	1,979	2,004	2,084	2,123	2,202	1,972	2,280	2,292	2,340
Cane Run 6	LGE	1,089	1,122	1,019	971	965	2,194	1,955	2,065	2,124	2,138	2,256	2,086	2,388	2,318	2,454	2,434	2,527	2,560	2,296	2,633	2,644
Mill Creek 1	LGE	1,112	1,052	1,111	1,055	1,080	2,430	2,502	2,224	2,599	2,452	2,675	2,534	2,719	2,578	2,781	2,403	2,820	2,661	2,843	2,706	2,884
Mill Creek 2	LGE	1,027	1,146	948	1,128	1,098	2,561	2,135	2,536	2,406	2,603	2,463	2,631	2,518	2,663	2,328	2,702	2,556	2,746	2,565	2,778	2,819
Mill Creek 3	LGE	373	389	389	387	377	892	816	854	728	849	825	879	850	891	842	918	783	877	848	899	866
Mill Creek 4	LGE	301	308	316	309	308	673	684	662	709	609	722	680	730	676	722	679	750	621	741	689	750
Trimble County 1	LGE	304	296	298	296	300	721	661	719	653	713	661	717	608	714	655	711	660	718	658	722	607
Trimble County 2	KU	0	0	0	0	0	591	1,008	1,015	1,010	1,015	1,017	1,020	1,016	1,019	1,020	1,022	1,020	1,021	1,021	1,024	1,021
Trimble County 2	LGE	0	0	0	0	0	208	354	356	355	356	357	358	357	358	358	359	358	358	359	360	359
Peakers	KU	114	135	174	199	267	273	249	298	384	427	476	506	573	579	755	746	845	943	1,058	1,154	1,199
Peakers	LGE	50	63	82	95	126	126	116	142	176	198	231	248	283	289	370	381	430	487	549	600	626
NOx EMISSIONS (TONS)																						
Total		**12,405**	**12,763**	**13,196**	**13,588**	**13,501**	**30,734**	**29,889**	**30,089**	**31,416**	**32,117**	**32,557**	**32,985**	**33,799**	**33,919**	**34,077**	**34,868**	**35,957**	**36,110**	**36,477**	**37,102**	**37,497**

ALLOWANCES	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
KU EPA Allocated NOx Allowances	6,764	6,764	6,569	6,569	6,569	14,814	14,814	14,814	14,814	14,814	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345
LGE EPA Allocated NOx Allowances	5,683	5,683	6,002	6,002	6,002	12,295	12,295	12,295	12,295	12,295	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246
Total KU/LGE EPA Allocated NOx Allowances	12,447	12,447	12,571	12,571	12,571	27,109	27,109	27,109	27,109	27,109	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591
KU/LGE Extension	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KU's Portion of OMU Surplus/Shortfall	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Combined Company Purchases	0	0	0	0	0	483	2,780	2,980	4,307	5,008	9,966	10,394	11,208	11,328	11,486	12,277	13,366	13,519	13,886	14,511	14,906
Sell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL KU/LGE ALLOWANCES	**12,447**	**12,447**	**12,571**	**12,571**	**12,571**	**27,592**	**29,889**	**30,089**	**31,416**	**32,117**	**32,557**	**32,985**	**33,799**	**33,919**	**34,077**	**34,868**	**35,957**	**36,110**	**36,477**	**37,102**	**37,497**
EOY Increase (+)/Decrease in Bank	42	-316	-625	-1,017	-930	-3,142	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ALLOWANCE BANK																					
Total KU/LGE Allowance Bank (End of Year)	6,029	5,713	5,088	4,071	3,142	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Case01- Base + Br3 SCR 2010

NO_X SUMMARY BY YEAR

Unit NOx EMISS RATE (#/MBTU)	Ownership	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Brown 1	KU	0.502	0.502	0.501	0.502	0.502	0.501	0.501	0.501	0.502	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501
Brown 2	KU	0.321	0.320	0.321	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320
Brown 3	KU	0.270	0.270	0.270	0.270	0.270	0.033	0.033	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032
Ghent 1	KU	0.055	0.054	0.054	0.056	0.056	0.062	0.071	0.066	0.069	0.065	0.069	0.068	0.061	0.058	0.059	0.058	0.057	0.057	0.056	0.058	0.058
Ghent 2	KU	0.301	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300
Ghent 3	KU	0.039	0.038	0.039	0.038	0.038	0.039	0.038	0.038	0.038	0.039	0.039	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.039	0.038	0.038
Ghent 4	KU	0.040	0.039	0.041	0.042	0.040	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.040	0.039	0.039
Green River 3	KU	0.392	0.393	0.392	0.392	0.391	0.392	0.393	0.393	0.392	0.392	0.392	0.392	0.391	0.392	0.391	0.391	0.391	0.391	0.391	0.391	0.391
Green River 4	KU	0.382	0.381	0.381	0.381	0.381	0.381	0.382	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381
Tyrone 3	KU	0.381	0.381	0.383	0.384	0.388	0.382	0.383	0.383	0.388	0.386	0.388	0.389	0.392	0.388	0.391	0.391	0.391	0.391	0.395	0.396	0.398
Cane Run 4	LGE	0.325	0.326	0.326	0.327	0.327	0.328	0.329	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328
Cane Run 5	LGE	0.373	0.375	0.379	0.379	0.379	0.374	0.373	0.374	0.377	0.378	0.378	0.380	0.381	0.382	0.383	0.385	0.385	0.385	0.387	0.387	0.388
Cane Run 6	LGE	0.308	0.308	0.309	0.306	0.305	0.302	0.301	0.302	0.302	0.304	0.304	0.305	0.306	0.306	0.307	0.307	0.308	0.309	0.309	0.309	0.310
Mill Creek 1	LGE	0.266	0.266	0.267	0.267	0.267	0.265	0.264	0.265	0.265	0.265	0.266	0.266	0.267	0.267	0.267	0.267	0.268	0.268	0.268	0.268	0.268
Mill Creek 2	LGE	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252
Mill Creek 3	LGE	0.057	0.059	0.060	0.059	0.058	0.060	0.059	0.058	0.057	0.056	0.058	0.058	0.059	0.058	0.058	0.060	0.059	0.057	0.058	0.058	0.059
Mill Creek 4	LGE	0.039	0.039	0.040	0.040	0.039	0.041	0.040	0.041	0.041	0.040	0.040	0.040	0.040	0.039	0.039	0.039	0.041	0.039	0.040	0.039	0.040
Trimble County 1	LGE	0.049	0.047	0.047	0.047	0.047	0.048	0.048	0.047	0.047	0.047	0.048	0.047	0.049	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047
Trimble County 2	KU	0.000	0.000	0.000	0.000	0.000	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070
Trimble County 2	LGE	0.000	0.000	0.000	0.000	0.000	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070
Peakers	KU	0.076	0.074	0.073	0.075	0.074	0.075	0.075	0.076	0.076	0.072	0.070	0.069	0.068	0.068	0.067	0.066	0.065	0.065	0.064	0.064	0.063
Peakers	LGE	0.072	0.070	0.070	0.071	0.071	0.072	0.072	0.074	0.073	0.070	0.069	0.068	0.067	0.067	0.066	0.066	0.064	0.064	0.064	0.064	0.063
SCRUBBER REMOVAL EFF.																						
Brown 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Brown 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Brown 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Green River 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Green River 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Tyrone 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cane Run 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cane Run 5		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cane Run 6		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Trimble County 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Trimble County 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Trimble County 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peakers		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peakers		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
TONS NOx EMITTED		**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Brown 1	KU	659	606	689	596	745	1,649	1,548	1,613	1,409	1,656	1,732	1,730	1,774	1,766	1,649	1,657	1,803	1,926	1,950	1,962	1,976
Brown 2	KU	669	767	684	787	844	1,834	1,794	1,828	1,845	1,837	1,664	1,863	1,899	1,924	1,949	1,952	1,960	1,780	1,996	2,018	2,021
Brown 3	KU	1,147	1,274	1,590	1,519	1,704	489	476	429	489	501	503	513	521	519	469	525	533	537	539	549	549
Ghent 1	KU	452	446	423	447	452	1,069	1,170	1,107	1,135	988	1,163	1,141	1,055	1,017	1,024	1,009	916	1,018	990	1,020	1,035
Ghent 2	KU	1,784	1,853	1,768	2,316	1,936	4,836	4,814	4,332	4,874	4,801	4,874	4,892	4,952	4,895	4,532	5,045	5,161	5,198	5,239	5,191	5,247
Ghent 3	KU	322	319	353	343	343	686	743	752	752	762	768	768	689	769	770	771	777	782	779	697	780
Ghent 4	KU	328	325	333	338	355	781	770	778	773	784	787	711	790	791	794	792	797	800	721	800	801
Green River 3	KU	284	301	364	342	321	764	670	723	775	793	830	772	904	907	950	945	997	1,013	889	1,024	1,059
Green River 4	KU	469	455	515	496	489	1,000	1,036	1,094	1,127	1,170	1,211	1,208	1,124	1,279	1,358	1,327	1,376	1,407	1,402	1,274	1,434
Tyrone 3	KU	276	300	378	358	340	679	694	760	802	827	855	880	858	907	1,002	971	1,042	1,048	1,074	966	1,091
Cane Run 4	LGE	766	784	801	760	718	1,380	1,095	1,344	1,318	1,466	1,466	1,511	1,594	1,411	1,716	1,678	1,740	1,760	1,793	1,817	1,636
Cane Run 5	LGE	880	823	959	848	735	1,638	1,478	1,590	1,647	1,732	1,627	1,874	1,978	2,004	2,083	2,122	2,202	1,971	2,279	2,291	2,340
Cane Run 6	LGE	1,089	1,122	1,019	971	965	2,155	1,927	2,035	2,084	2,101	2,231	2,049	2,343	2,285	2,421	2,404	2,502	2,536	2,275	2,610	2,624
Mill Creek 1	LGE	1,112	1,052	1,111	1,055	1,080	2,396	2,472	2,199	2,569	2,413	2,642	2,504	2,696	2,546	2,757	2,382	2,805	2,648	2,829	2,697	2,877
Mill Creek 2	LGE	1,027	1,146	948	1,128	1,098	2,520	2,082	2,506	2,384	2,575	2,429	2,605	2,495	2,639	2,314	2,683	2,545	2,735	2,576	2,767	2,613
Mill Creek 3	LGE	373	389	389	387	377	886	812	851	725	844	819	873	846	885	837	914	780	875	846	896	864
Mill Creek 4	LGE	301	308	316	309	308	667	680	656	704	603	717	676	725	672	719	676	747	619	740	688	749
Trimble County 1	LGE	304	296	298	296	300	722	662	713	655	714	667	718	617	714	654	712	662	718	657	722	607
Trimble County 2	KU	0	0	0	0	0	590	1,006	1,013	1,008	1,012	1,016	1,018	1,015	1,017	1,019	1,022	1,020	1,020	1,020	1,024	1,021
Trimble County 2	LGE	0	0	0	0	0	207	353	356	354	356	357	358	357	357	358	359	358	358	359	360	359
Peakers	KU	114	135	174	199	267	273	250	298	385	428	477	507	575	580	757	747	847	944	1,059	1,156	1,198
Peakers	LGE	50	63	82	95	126	126	117	142	176	199	232	249	283	290	371	383	431	488	549	600	626
NOx EMISSIONS (TONS)																						
Total		**12,405**	**12,763**	**13,196**	**13,588**	**13,501**	**27,349**	**26,645**	**27,120**	**27,990**	**28,552**	**29,067**	**29,422**	**30,088**	**30,194**	**30,702**	**31,074**	**32,088**	**32,180**	**32,561**	**33,127**	**33,505**
ALLOWANCES																						
KU EPA Allocated NOx Allowances		6,764	6,764	6,569	6,569	6,569	14,814	14,814	14,814	14,814	14,814	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345
LGE EPA Allocated NOx Allowances		5,683	5,683	6,002	6,002	6,002	12,295	12,295	12,295	12,295	12,295	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246
Total KU/LGE EPA Allocated NOx Allowances		12,447	12,447	12,571	12,571	12,571	27,109	27,109	27,109	27,109	27,109	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591
KU/LGE Extension		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KU's Portion of OMU Surplus/Shortfall		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Combined Company Purchases		0	0	0	0	0	0	0	0	0	0	5,446	6,831	7,497	7,603	8,111	8,483	9,497	9,589	9,970	10,536	10,914
Sell		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======
TOTAL KU/LGE ALLOWANCES		**12,447**	**12,447**	**12,571**	**12,571**	**12,571**	**27,109**	**27,109**	**27,109**	**27,109**	**27,109**	**28,037**	**29,422**	**30,088**	**30,194**	**30,702**	**31,074**	**32,088**	**32,180**	**32,561**	**33,127**	**33,505**
EOY Increase (+)/Decrease in Bank		42	-316	-625	-1,017	-930	-240	464	-11	-881	-1,443	-1,030	0	0	0	0	0	0	0	0	0	0
ALLOWANCE BANK																						
Total KU/LGE Allowance Bank (End of Year)		**6,029**	**5,713**	**5,088**	**4,071**	**3,142**	**2,901**	**3,365**	**3,354**	**2,473**	**1,030**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Case02- Base + Gh2 SCR 2010

NO_X SUMMARY BY YEAR

Unit NOx EMISS RATE (#/MMBTU)	Ownership	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Brown 1	KU	0.502	0.502	0.501	0.507	0.507	0.501	0.501	0.501	0.502	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501
Brown 2	KU	0.321	0.320	0.321	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320
Brown 3	KU	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270
Ghent 1	KU	0.055	0.054	0.054	0.056	0.056	0.060	0.067	0.063	0.068	0.065	0.065	0.062	0.061	0.058	0.059	0.058	0.057	0.057	0.055	0.058	0.058
Ghent 2	KU	0.301	0.300	0.300	0.300	0.300	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.036	0.037	0.037	0.036	0.037	0.037
Ghent 3	KU	0.039	0.038	0.039	0.038	0.038	0.039	0.038	0.038	0.038	0.039	0.039	0.038	0.038	0.038	0.038	0.038	0.038	0.039	0.039	0.038	0.038
Ghent 4	KU	0.040	0.039	0.041	0.042	0.040	0.040	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.040	0.039	0.039
Green River 3	KU	0.392	0.393	0.392	0.392	0.391	0.392	0.393	0.393	0.392	0.392	0.392	0.392	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
Green River 4	KU	0.382	0.381	0.381	0.381	0.381	0.381	0.382	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381
Tyrone 3	KU	0.381	0.381	0.383	0.384	0.388	0.382	0.383	0.383	0.388	0.386	0.388	0.389	0.392	0.388	0.391	0.391	0.391	0.391	0.395	0.395	0.398
Cane Run 4	LGE	0.325	0.326	0.326	0.327	0.327	0.328	0.328	0.328	0.326	0.328	0.326	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328
Cane Run 5	LGE	0.373	0.375	0.379	0.379	0.379	0.374	0.373	0.374	0.377	0.378	0.378	0.380	0.381	0.382	0.383	0.385	0.385	0.385	0.387	0.387	0.388
Cane Run 6	LGE	0.308	0.308	0.309	0.306	0.305	0.303	0.301	0.303	0.303	0.304	0.305	0.305	0.306	0.307	0.307	0.308	0.308	0.309	0.309	0.309	0.310
Mill Creek 1	LGE	0.266	0.266	0.267	0.267	0.267	0.265	0.264	0.265	0.265	0.265	0.266	0.266	0.267	0.267	0.267	0.267	0.268	0.268	0.268	0.268	0.268
Mill Creek 2	LGE	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252
Mill Creek 3	LGE	0.057	0.059	0.060	0.059	0.058	0.060	0.059	0.058	0.057	0.057	0.058	0.058	0.059	0.058	0.058	0.060	0.059	0.057	0.059	0.058	0.060
Mill Creek 4	LGE	0.039	0.039	0.040	0.040	0.039	0.041	0.040	0.040	0.041	0.040	0.040	0.040	0.040	0.039	0.039	0.039	0.041	0.039	0.040	0.039	0.040
Trimble County 1	LGE	0.049	0.047	0.047	0.047	0.047	0.048	0.048	0.048	0.048	0.047	0.048	0.047	0.048	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047
Trimble County 2	KU	0.000	0.000	0.000	0.000	0.000	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070
Trimble County 2	LGE	0.000	0.000	0.000	0.000	0.000	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070
Peakers	KU	0.076	0.074	0.073	0.075	0.074	0.075	0.075	0.076	0.076	0.072	0.070	0.069	0.068	0.068	0.067	0.066	0.065	0.065	0.064	0.064	0.063
Peakers	LGE	0.072	0.070	0.070	0.071	0.071	0.072	0.072	0.074	0.073	0.070	0.069	0.068	0.067	0.067	0.066	0.066	0.064	0.064	0.064	0.064	0.063

SCRUBBER REMOVAL EFF.																						
Brown 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Brown 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Brown 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Green River 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Green River 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Tyrone 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cane Run 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cane Run 5		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cane Run 6		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Trimble County 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Trimble County 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Trimble County 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peakers		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peakers		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

TONS NOx EMITTED		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Brown 1	KU	659	606	689	595	745	1,648	1,544	1,609	1,406	1,656	1,728	1,723	1,773	1,788	1,848	1,656	1,903	1,925	1,949	1,962	1,974
Brown 2	KU	669	767	684	787	844	1,843	1,802	1,831	1,848	1,843	1,665	1,872	1,902	1,921	1,950	1,951	1,961	1,783	1,995	2,018	2,020
Brown 3	KU	1,147	1,274	1,590	1,519	1,704	3,668	3,558	3,231	3,714	3,788	3,820	3,900	4,013	3,980	3,858	4,091	4,236	4,294	4,316	4,363	4,402
Ghent 1	KU	452	446	423	447	452	1,028	1,119	1,075	1,131	980	1,109	1,065	1,053	1,014	1,032	1,010	908	1,017	985	1,021	1,035
Ghent 2	KU	1,784	1,853	1,768	2,316	1,936	669	659	592	659	661	659	663	662	662	596	664	666	668	667	667	668
Ghent 3	KU	322	319	353	343	343	684	737	747	748	755	761	762	684	763	767	768	772	778	777	696	778
Ghent 4	KU	328	326	333	338	355	776	765	774	771	779	782	706	786	786	791	789	795	798	719	800	801
Green River 3	KU	284	301	364	342	321	762	667	722	770	793	832	770	904	907	950	945	997	1,013	889	1,025	1,058
Green River 4	KU	469	455	515	496	489	1,002	1,039	1,091	1,126	1,169	1,208	1,204	1,124	1,279	1,358	1,327	1,376	1,406	1,402	1,274	1,434
Tyrone 3	KU	276	300	378	358	340	676	693	758	800	827	854	875	857	907	1,001	971	1,042	1,049	1,074	966	1,089
Cane Run 4	LGE	766	784	801	760	718	1,381	1,104	1,344	1,317	1,463	1,471	1,508	1,599	1,414	1,719	1,683	1,744	1,763	1,797	1,820	1,639
Cane Run 5	LGE	880	823	959	848	735	1,636	1,478	1,587	1,650	1,735	1,627	1,873	1,981	2,005	2,086	2,123	2,203	1,972	2,280	2,292	2,342
Cane Run 6	LGE	1,089	1,122	1,019	971	965	2,188	1,949	2,057	2,105	2,118	2,236	2,067	2,374	2,313	2,447	2,426	2,520	2,555	2,292	2,620	2,631
Mill Creek 1	LGE	1,112	1,052	1,111	1,055	1,080	2,411	2,481	2,205	2,575	2,419	2,644	2,505	2,697	2,547	2,759	2,385	2,804	2,646	2,829	2,694	2,875
Mill Creek 2	LGE	1,027	1,146	948	1,128	1,098	2,544	2,120	2,517	2,387	2,584	2,447	2,613	2,504	2,645	2,318	2,690	2,548	2,738	2,579	2,767	2,611
Mill Creek 3	LGE	373	389	389	387	377	890	814	851	726	846	821	875	847	887	839	915	781	875	846	898	864
Mill Creek 4	LGE	301	308	316	309	308	669	681	657	705	603	717	675	724	671	718	675	747	619	740	687	749
Trimble County 1	LGE	304	296	298	296	300	729	662	722	658	717	665	717	609	714	655	711	661	717	657	722	608
Trimble County 2	KU	0	0	0	0	0	585	1,000	1,009	1,003	1,009	1,012	1,015	1,013	1,015	1,017	1,020	1,019	1,020	1,020	1,024	1,020
Trimble County 2	LGE	0	0	0	0	0	206	351	355	352	355	356	356	356	357	357	369	358	358	358	360	358
Peakers	KU	114	135	174	199	267	273	250	298	385	428	477	508	575	580	757	747	847	945	1,060	1,156	1,201
Peakers	LGE	50	63	82	95	126	126	117	142	176	199	233	249	284	290	370	382	431	488	550	600	627
NOx EMISSIONS (TONS)																						
	Total	**12,405**	**12,763**	**13,196**	**13,688**	**13,501**	**26,393**	**25,669**	**26,176**	**27,011**	**27,723**	**28,123**	**28,500**	**29,321**	**29,443**	**29,991**	**30,288**	**31,320**	**31,426**	**31,780**	**32,431**	**32,781**

ALLOWANCES																					
KU EPA Allocated NOx Allowances	6,764	6,764	6,569	6,569	6,569	14,814	14,814	14,814	14,814	14,814	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345
LGE EPA Allocated NOx Allowances	5,683	5,683	6,002	6,002	6,002	12,295	12,295	12,295	12,295	12,295	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246
Total KU/LGE EPA Allocated NOx Allowances	12,447	12,447	12,571	12,571	12,571	27,109	27,109	27,109	27,109	27,109	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591
KU/LGE Extension	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KU's Portion of OMU Surplus/Shortfall	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Combined Company Purchases	0	0	0	0	0	0	0	0	0	0	0	5,647	6,730	6,852	7,400	7,697	8,729	8,835	9,189	9,840	10,190
Sell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======
TOTAL KU/LGE ALLOWANCES	**12,447**	**12,447**	**12,571**	**12,571**	**12,571**	**27,109**	**27,109**	**27,109**	**27,109**	**27,109**	**22,591**	**28,238**	**29,321**	**29,443**	**29,991**	**30,288**	**31,320**	**31,426**	**31,780**	**32,431**	**32,781**
EOY Increase (+)/Decrease in Bank	42	-316	-625	-1,017	-930	716	1,520	933	98	-614	-5,532	-262	0	0	0	0	0	0	0	0	0
ALLOWANCE BANK																					
Total KU/LGE Allowance Bank (End of Year)	**6,029**	**5,713**	**5,088**	**4,071**	**3,142**	**3,857**	**5,377**	**6,310**	**6,408**	**5,794**	**262**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Case03- Base + Gh2 SCR 2008

NO_X SUMMARY BY YEAR

Unit NOx EMISS RATE (#/MMBTU)	Ownership	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Brown 1	KU	0.502	0.502	0.501	0.502	0.502	0.501	0.501	0.501	0.502	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501
Brown 2	KU	0.321	0.320	0.321	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320
Brown 3	KU	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270
Ghent 1	KU	0.055	0.054	0.054	0.056	0.056	0.060	0.067	0.063	0.068	0.065	0.065	0.062	0.061	0.058	0.059	0.058	0.057	0.057	0.055	0.058	0.058
Ghent 2	KU	0.301	0.300	0.300	0.039	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.036	0.037	0.037	0.036	0.037	0.037
Ghent 3	KU	0.039	0.038	0.039	0.038	0.038	0.039	0.038	0.038	0.038	0.039	0.039	0.038	0.038	0.038	0.038	0.038	0.038	0.039	0.039	0.038	0.038
Ghent 4	KU	0.040	0.039	0.041	0.042	0.040	0.040	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.040	0.039	0.039
Green River 3	KU	0.392	0.393	0.392	0.392	0.391	0.392	0.393	0.393	0.392	0.392	0.392	0.392	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391	0.391
Green River 4	KU	0.382	0.381	0.381	0.381	0.381	0.381	0.382	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381
Tyrone 3	KU	0.381	0.381	0.383	0.384	0.388	0.382	0.383	0.383	0.388	0.386	0.388	0.389	0.392	0.388	0.391	0.391	0.391	0.391	0.395	0.395	0.398
Cane Run 4	LGE	0.325	0.326	0.326	0.327	0.327	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328
Cane Run 5	LGE	0.373	0.375	0.379	0.379	0.379	0.374	0.373	0.374	0.377	0.378	0.378	0.380	0.381	0.382	0.383	0.385	0.385	0.385	0.387	0.387	0.388
Cane Run 6	LGE	0.308	0.308	0.309	0.306	0.305	0.303	0.301	0.303	0.303	0.304	0.305	0.305	0.306	0.307	0.307	0.308	0.308	0.309	0.309	0.309	0.310
Mill Creek 1	LGE	0.266	0.266	0.267	0.267	0.267	0.265	0.264	0.265	0.265	0.265	0.266	0.266	0.267	0.267	0.267	0.267	0.268	0.268	0.268	0.268	0.268
Mill Creek 2	LGE	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252
Mill Creek 3	LGE	0.057	0.059	0.060	0.059	0.058	0.060	0.059	0.058	0.057	0.057	0.058	0.058	0.059	0.058	0.058	0.060	0.059	0.057	0.059	0.058	0.060
Mill Creek 4	LGE	0.039	0.039	0.040	0.040	0.039	0.041	0.040	0.040	0.041	0.040	0.040	0.040	0.040	0.039	0.039	0.039	0.041	0.039	0.040	0.039	0.040
Trimble County 1	LGE	0.049	0.047	0.047	0.047	0.048	0.048	0.048	0.048	0.048	0.047	0.048	0.047	0.048	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047
Trimble County 2	KU	0.000	0.000	0.000	0.000	0.000	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070
Trimble County 2	LGE	0.000	0.000	0.000	0.000	0.000	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070
Peakers	KU	0.076	0.074	0.073	0.075	0.074	0.075	0.075	0.076	0.076	0.072	0.070	0.069	0.068	0.068	0.067	0.066	0.065	0.065	0.064	0.064	0.063
Peakers	LGE	0.072	0.070	0.070	0.071	0.071	0.072	0.072	0.074	0.073	0.070	0.069	0.068	0.067	0.067	0.066	0.066	0.064	0.064	0.064	0.064	0.063
SCRUBBER REMOVAL EFF.																						
Brown 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Brown 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Brown 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Green River 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Green River 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Tyrone 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cane Run 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cane Run 5		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cane Run 6		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Trimble County 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Trimble County 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Trimble County 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peakers		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peakers		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
TONS NOx EMITTED		**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Brown 1	KU	659	606	689	595	751	1,648	1,544	1,609	1,406	1,655	1,728	1,723	1,773	1,788	1,848	1,656	1,903	1,925	1,949	1,962	1,974
Brown 2	KU	669	767	684	787	837	1,843	1,802	1,831	1,848	1,843	1,665	1,872	1,902	1,921	1,950	1,951	1,961	1,783	1,995	2,018	2,020
Brown 3	KU	1,147	1,274	1,590	1,520	1,705	3,668	3,558	3,231	3,714	3,788	3,820	3,900	4,013	3,980	3,658	4,091	4,236	4,294	4,316	4,363	4,402
Ghent 1	KU	452	446	423	445	449	1,028	1,119	1,075	1,131	980	1,109	1,065	1,053	1,014	1,032	1,010	908	1,017	985	1,021	1,035
Ghent 2	KU	1,784	1,853	1,768	317	255	669	659	592	659	661	659	663	662	662	596	664	666	668	667	667	668
Ghent 3	KU	322	319	353	338	340	684	737	747	748	755	761	762	684	763	767	768	772	778	777	696	778
Ghent 4	KU	328	325	333	340	351	776	765	774	771	779	782	706	786	786	791	789	795	798	719	800	801
Green River 3	KU	284	301	364	342	321	762	667	722	770	793	832	770	904	907	950	945	997	1,013	889	1,025	1,058
Green River 4	KU	469	455	515	496	492	1,002	1,039	1,091	1,126	1,169	1,208	1,204	1,124	1,279	1,358	1,327	1,376	1,406	1,402	1,274	1,434
Tyrone 3	KU	276	300	378	358	338	676	693	758	800	827	854	875	857	907	1,001	971	1,042	1,049	1,074	966	1,089
Cane Run 4	LGE	766	784	801	760	718	1,381	1,104	1,344	1,317	1,463	1,471	1,508	1,599	1,414	1,719	1,683	1,744	1,763	1,797	1,820	1,639
Cane Run 5	LGE	880	823	959	850	735	1,636	1,478	1,587	1,650	1,735	1,627	1,873	1,981	2,005	2,086	2,123	2,203	1,972	2,280	2,292	2,342
Cane Run 6	LGE	1,089	1,122	1,019	971	963	2,188	1,949	2,057	2,105	2,118	2,236	2,067	2,374	2,313	2,447	2,426	2,520	2,555	2,292	2,620	2,631
Mill Creek 1	LGE	1,112	1,052	1,111	1,044	1,067	2,411	2,481	2,205	2,575	2,419	2,644	2,505	2,697	2,547	2,759	2,385	2,804	2,646	2,829	2,694	2,875
Mill Creek 2	LGE	1,027	1,146	948	1,118	1,092	2,544	2,120	2,517	2,387	2,584	2,447	2,613	2,504	2,645	2,318	2,690	2,548	2,738	2,579	2,767	2,611
Mill Creek 3	LGE	373	389	389	385	375	890	814	851	726	846	821	875	847	887	839	915	781	875	846	898	864
Mill Creek 4	LGE	301	308	316	306	305	669	681	657	705	603	717	675	724	671	718	675	747	619	740	687	749
Trimble County 1	LGE	304	296	298	299	300	729	662	722	658	717	665	717	609	714	655	711	661	717	657	722	608
Trimble County 2	KU	0	0	0	0	0	585	1,000	1,009	1,003	1,009	1,012	1,015	1,013	1,015	1,017	1,020	1,019	1,020	1,020	1,024	1,020
Trimble County 2	LGE	0	0	0	0	0	206	351	355	352	355	356	356	356	357	357	359	358	358	358	360	358
Peakers	KU	114	135	174	200	267	273	250	298	385	428	477	508	575	580	757	747	847	945	1,060	1,156	1,201
Peakers	LGE	50	63	82	95	126	126	117	142	176	199	233	249	284	290	370	382	431	488	550	600	627
NOx EMISSIONS (TONS)																						
Total		**12,405**	**12,763**	**13,196**	**11,565**	**11,786**	**26,393**	**25,589**	**26,176**	**27,011**	**27,723**	**28,123**	**28,500**	**29,321**	**29,443**	**29,991**	**30,288**	**31,320**	**31,426**	**31,780**	**32,431**	**32,781**
ALLOWANCES																						
KU EPA Allocated NOx Allowances		6,764	6,764	6,569	6,569	6,569	14,814	14,814	14,814	14,814	14,814	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345
LGE EPA Allocated NOx Allowances		5,683	5,683	6,002	6,002	6,002	12,295	12,295	12,295	12,295	12,295	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246
Total KU/LGE EPA Allocated NOx Allowances		12,447	12,447	12,571	12,571	12,571	27,109	27,109	27,109	27,109	27,109	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591
KU/LGE Extension		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KU's Portion of OMU Surplus/Shortfall		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Combined Company Purchases		0	0	0	0	0	0	0	0	0	0	0	1,910	6,730	6,852	7,400	7,697	8,729	8,835	9,189	9,840	10,190
Sell		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======
TOTAL KU/LGE ALLOWANCES		**12,447**	**12,447**	**12,571**	**12,571**	**12,571**	**27,109**	**27,109**	**27,109**	**27,109**	**27,109**	**22,591**	**24,501**	**29,321**	**29,443**	**29,991**	**30,288**	**31,320**	**31,426**	**31,780**	**32,431**	**32,781**
EOY Increase (+)/Decrease in Bank		42	-316	-625	1,006	785	716	1,520	933	98	-614	-5,532	-3,999	0	0	0	0	0	0	0	0	0
ALLOWANCE BANK																						
Total KU/LGE Allowance Bank (End of Year)		**6,029**	**5,713**	**5,088**	**6,094**	**6,879**	**7,594**	**9,114**	**10,048**	**10,145**	**9,531**	**3,999**	-	-	-	-	-	-	-	-	-	-

Case04- Base + Br3 & Gh2 SCR 2010

NO_X SUMMARY BY YEAR

Unit NOx EMISS RATE (#/MMBTU)	Ownership	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Brown 1	KU	0.502	0.502	0.501	0.502	0.502	0.501	0.501	0.501	0.502	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501
Brown 2	KU	0.321	0.320	0.321	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320
Brown 3	KU	0.270	0.270	0.270	0.270	0.270	0.033	0.033	0.033	0.033	0.033	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032
Ghent 1	KU	0.055	0.054	0.054	0.056	0.056	0.062	0.073	0.066	0.070	0.066	0.069	0.067	0.064	0.058	0.059	0.057	0.057	0.057	0.056	0.058	0.058
Ghent 2	KU	0.301	0.300	0.300	0.300	0.300	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.036	0.037	0.037
Ghent 3	KU	0.039	0.038	0.039	0.038	0.038	0.039	0.038	0.038	0.038	0.039	0.039	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.039	0.038	0.038
Ghent 4	KU	0.040	0.039	0.041	0.042	0.040	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.040	0.039	0.039
Green River 3	KU	0.392	0.393	0.392	0.392	0.391	0.392	0.393	0.393	0.392	0.392	0.392	0.392	0.391	0.392	0.391	0.391	0.391	0.391	0.391	0.391	0.391
Green River 4	KU	0.382	0.381	0.381	0.381	0.381	0.381	0.382	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381
Tyrone 3	KU	0.381	0.381	0.383	0.384	0.388	0.382	0.383	0.383	0.388	0.386	0.388	0.389	0.392	0.388	0.391	0.391	0.391	0.391	0.395	0.395	0.398
Cane Run 4	LGE	0.325	0.326	0.326	0.327	0.327	0.328	0.329	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328
Cane Run 5	LGE	0.373	0.375	0.379	0.379	0.379	0.374	0.373	0.374	0.377	0.378	0.378	0.380	0.381	0.382	0.383	0.385	0.385	0.385	0.387	0.387	0.388
Cane Run 6	LGE	0.308	0.308	0.309	0.306	0.305	0.303	0.301	0.302	0.302	0.303	0.304	0.306	0.306	0.306	0.307	0.307	0.308	0.309	0.309	0.309	0.309
Mill Creek 1	LGE	0.266	0.266	0.267	0.267	0.267	0.265	0.264	0.265	0.265	0.265	0.266	0.266	0.267	0.267	0.267	0.267	0.268	0.268	0.268	0.268	0.268
Mill Creek 2	LGE	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252
Mill Creek 3	LGE	0.057	0.059	0.060	0.059	0.058	0.060	0.059	0.058	0.057	0.057	0.058	0.058	0.059	0.058	0.058	0.060	0.059	0.057	0.059	0.058	0.059
Mill Creek 4	LGE	0.039	0.039	0.040	0.040	0.039	0.041	0.040	0.041	0.041	0.040	0.040	0.040	0.040	0.039	0.039	0.039	0.041	0.039	0.040	0.039	0.040
Trimble County 1	LGE	0.049	0.047	0.047	0.047	0.047	0.048	0.049	0.048	0.048	0.048	0.048	0.048	0.049	0.047	0.048	0.047	0.048	0.047	0.047	0.047	0.048
Trimble County 2	KU	0.000	0.000	0.000	0.000	0.000	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070
Trimble County 2	LGE	0.000	0.000	0.000	0.000	0.000	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070
Peakers	KU	0.076	0.074	0.073	0.075	0.074	0.075	0.075	0.077	0.076	0.072	0.070	0.069	0.068	0.068	0.067	0.066	0.065	0.065	0.064	0.064	0.063
Peakers	LGE	0.072	0.070	0.070	0.071	0.071	0.072	0.072	0.075	0.073	0.069	0.069	0.068	0.068	0.067	0.066	0.066	0.064	0.064	0.064	0.064	0.063

SCRUBBER REMOVAL EFF.																						
Brown 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Brown 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Brown 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Green River 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Green River 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Tyrone 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cane Run 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cane Run 5		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cane Run 6		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Trimble County 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Trimble County 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Trimble County 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peakers		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peakers		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

TONS NOx EMITTED		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Brown 1	KU	669	606	689	595	745	1,650	1,550	1,613	1,411	1,658	1,734	1,735	1,776	1,789	1,849	1,657	1,904	1,927	1,950	1,963	1,977
Brown 2	KU	669	767	684	787	844	1,811	1,773	1,807	1,823	1,810	1,642	1,840	1,875	1,896	1,934	1,928	1,939	1,763	1,978	2,003	2,007
Brown 3	KU	1,147	1,274	1,590	1,519	1,704	495	483	432	493	499	499	506	516	511	465	518	528	531	535	545	545
Ghent 1	KU	452	446	423	447	452	1,058	1,178	1,095	1,138	987	1,143	1,119	1,070	1,004	1,019	985	910	1,011	985	1,015	1,027
Ghent 2	KU	1,784	1,853	1,768	2,316	1,936	664	655	588	658	658	657	661	660	660	595	663	665	666	666	664	665
Ghent 3	KU	322	319	353	343	343	680	734	742	742	749	756	757	680	757	762	762	769	774	774	690	773
Ghent 4	KU	328	325	333	338	355	772	763	770	766	775	779	704	782	782	788	785	792	795	717	794	797
Green River 3	KU	284	301	364	342	321	770	670	725	775	798	831	773	906	907	949	946	997	1,013	889	1,025	1,059
Green River 4	KU	469	455	515	496	489	996	1,039	1,098	1,128	1,167	1,213	1,210	1,127	1,280	1,358	1,328	1,377	1,407	1,402	1,274	1,435
Tyrone 3	KU	276	300	378	358	340	685	697	761	808	830	856	880	859	907	1,002	972	1,044	1,048	1,075	966	1,092
Cane Run 4	LGE	766	784	801	760	718	1,386	1,097	1,345	1,321	1,466	1,467	1,514	1,597	1,411	1,717	1,678	1,741	1,760	1,793	1,817	1,635
Cane Run 5	LGE	880	823	959	848	735	1,640	1,483	1,592	1,656	1,731	1,630	1,877	1,983	2,008	2,090	2,122	2,203	1,972	2,280	2,291	2,340
Cane Run 6	LGE	1,089	1,122	1,019	971	965	2,126	1,926	2,029	2,070	2,081	2,210	2,021	2,333	2,279	2,413	2,393	2,495	2,528	2,270	2,696	2,610
Mill Creek 1	LGE	1,112	1,052	1,111	1,055	1,080	2,377	2,453	2,178	2,542	2,373	2,610	2,470	2,670	2,513	2,735	2,360	2,787	2,631	2,811	2,683	2,864
Mill Creek 2	LGE	1,027	1,146	948	1,128	1,098	2,501	2,067	2,487	2,363	2,546	2,415	2,587	2,480	2,620	2,303	2,668	2,535	2,725	2,569	2,757	2,604
Mill Creek 3	LGE	373	389	389	387	377	885	809	848	723	840	815	870	843	881	834	911	778	872	843	893	862
Mill Creek 4	LGE	301	308	316	309	308	663	677	652	699	598	711	671	720	667	715	671	744	616	738	685	748
Trimble County 1	LGE	304	296	298	296	300	729	670	719	662	720	669	720	622	715	659	714	664	717	656	722	608
Trimble County 2	KU	0	0	0	0	0	583	998	1,007	1,000	1,007	1,010	1,013	1,011	1,013	1,015	1,018	1,018	1,019	1,019	1,024	1,020
Trimble County 2	LGE	0	0	0	0	0	205	351	354	352	354	355	356	355	356	357	358	358	358	358	360	358
Peakers	KU	114	135	174	199	267	274	250	300	386	429	478	509	576	582	758	748	848	946	1,061	1,157	1,200
Peakers	LGE	50	63	82	95	126	126	117	142	176	199	233	250	285	291	371	383	432	489	551	601	626
NOx EMISSIONS (TONS)																						
Total		**12,405**	**12,763**	**13,136**	**13,588**	**13,501**	**23,078**	**22,439**	**23,284**	**23,690**	**24,274**	**24,713**	**25,041**	**25,725**	**25,827**	**26,688**	**26,569**	**27,527**	**27,570**	**27,920**	**28,523**	**28,853**

ALLOWANCES	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
KU EPA Allocated NOx Allowances	6,764	6,764	6,569	6,569	6,569	14,814	14,814	14,814	14,814	14,814	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345
LGE EPA Allocated NOx Allowances	5,683	5,683	6,002	6,002	6,002	12,295	12,295	12,295	12,295	12,295	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246
Total KU/LGE EPA Allocated NOx Allowances	12,447	12,447	12,571	12,571	12,571	27,109	27,109	27,109	27,109	27,109	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591
KU/LGE Extension	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KU's Portion of OMU Surplus/Shortfall	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Combined Company Purchases	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,029	4,979	5,329	5,932	6,262
Sell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======
TOTAL KU/LGE ALLOWANCES	**12,447**	**12,447**	**12,571**	**12,571**	**12,571**	**27,109**	**27,109**	**27,109**	**27,109**	**27,109**	**22,591**	**22,591**	**22,591**	**22,591**	**22,591**	**22,591**	**24,620**	**27,570**	**27,920**	**28,523**	**28,853**
EOY Increase (+)/Decrease in Bank	42	-316	-625	-1,017	-930	4,031	4,670	3,826	3,419	2,836	-2,122	-2,460	-3,134	-3,236	-4,097	-3,978	-2,907	0	0	0	0
ALLOWANCE BANK																					
Total KU/LGE Allowance Bank (End of Year)	**5,029**	**5,713**	**5,088**	**4,071**	**3,142**	**7,173**	**11,843**	**15,668**	**19,088**	**21,923**	**19,801**	**17,352**	**14,218**	**10,982**	**6,884**	**2,907**	-	-	-	-	-

Case05- Base + Gh2 SCR 2010, Br3 SCR 2016

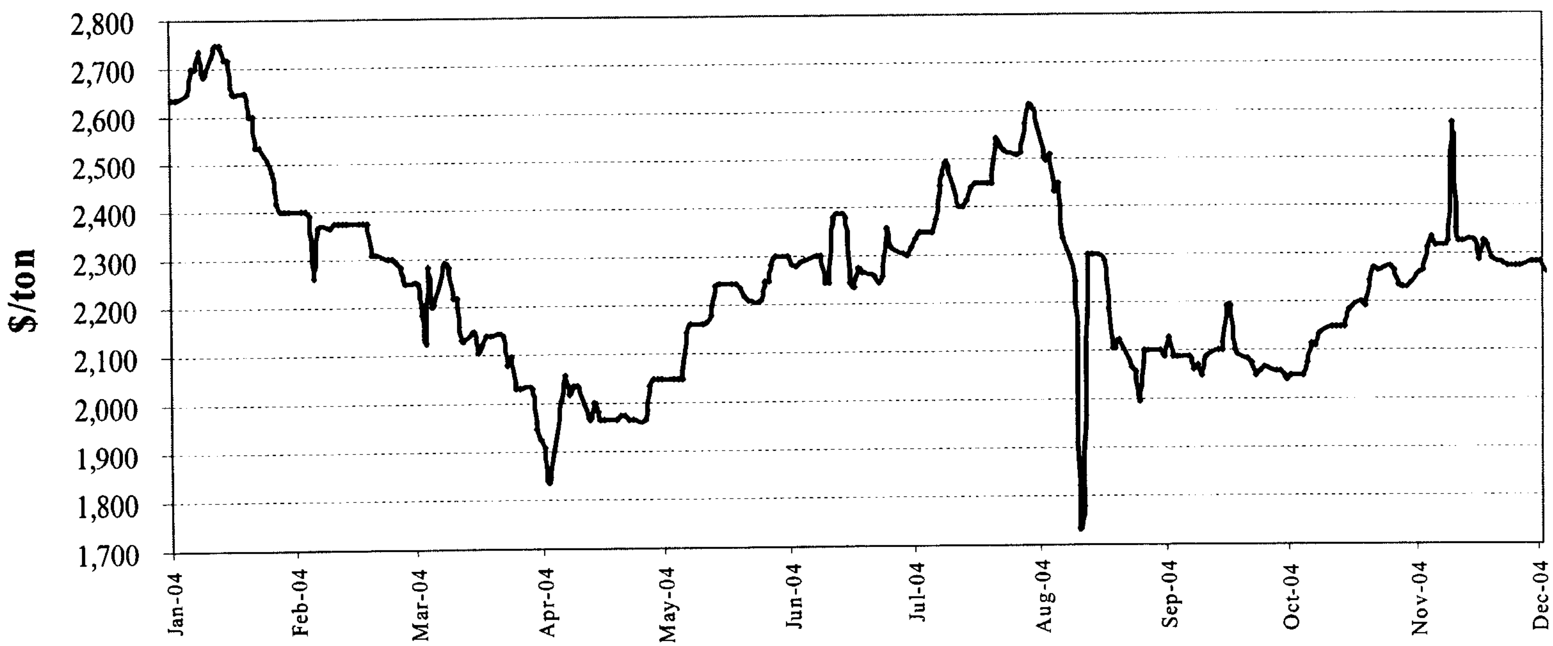
NO_X SUMMARY BY YEAR

Unit NOx EMISS RATE (#/MBTU)	Ownership	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Brown 1	KU	0.502	0.502	0.501	0.502	0.502	0.501	0.501	0.501	0.502	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501
Brown 2	KU	0.321	0.320	0.321	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320
Brown 3	KU	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032
Ghent 1	KU	0.055	0.054	0.054	0.056	0.056	0.060	0.067	0.063	0.068	0.065	0.065	0.067	0.064	0.058	0.059	0.057	0.057	0.057	0.056	0.058	0.058
Ghent 2	KU	0.301	0.300	0.300	0.300	0.300	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.036	0.037	0.037
Ghent 3	KU	0.039	0.038	0.039	0.038	0.038	0.039	0.038	0.038	0.038	0.039	0.039	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.039	0.038	0.038
Ghent 4	KU	0.040	0.039	0.041	0.042	0.040	0.040	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.040	0.039	0.039
Green River 3	KU	0.392	0.393	0.392	0.392	0.391	0.392	0.393	0.393	0.392	0.392	0.392	0.392	0.391	0.392	0.391	0.391	0.391	0.391	0.391	0.391	0.391
Green River 4	KU	0.382	0.381	0.381	0.381	0.381	0.381	0.382	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381	0.381
Tyrone 3	KU	0.381	0.381	0.383	0.384	0.388	0.382	0.383	0.383	0.388	0.386	0.388	0.389	0.392	0.388	0.391	0.391	0.391	0.391	0.395	0.395	0.398
Cane Run 4	LGE	0.325	0.326	0.326	0.327	0.327	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.328	0.326	0.326	0.328	0.328
Cane Run 5	LGE	0.373	0.375	0.379	0.379	0.379	0.374	0.373	0.374	0.377	0.378	0.378	0.380	0.381	0.382	0.383	0.385	0.385	0.385	0.387	0.387	0.388
Cane Run 6	LGE	0.308	0.308	0.309	0.306	0.305	0.303	0.301	0.303	0.303	0.304	0.305	0.305	0.306	0.306	0.307	0.307	0.308	0.309	0.309	0.309	0.309
Mill Creek 1	LGE	0.266	0.266	0.267	0.267	0.267	0.265	0.264	0.265	0.265	0.265	0.266	0.266	0.267	0.267	0.267	0.267	0.268	0.268	0.268	0.268	0.268
Mill Creek 2	LGE	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252	0.252
Mill Creek 3	LGE	0.057	0.059	0.060	0.059	0.058	0.060	0.059	0.058	0.057	0.057	0.058	0.058	0.059	0.058	0.058	0.060	0.059	0.057	0.059	0.058	0.059
Mill Creek 4	LGE	0.039	0.039	0.040	0.040	0.039	0.041	0.040	0.040	0.041	0.040	0.040	0.040	0.040	0.039	0.039	0.039	0.041	0.039	0.040	0.039	0.040
Trimble County 1	LGE	0.049	0.047	0.047	0.047	0.047	0.048	0.048	0.048	0.048	0.047	0.048	0.048	0.049	0.047	0.048	0.047	0.048	0.047	0.047	0.047	0.048
Trimble County 2	KU	0.000	0.000	0.000	0.000	0.000	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070
Trimble County 2	LGE	0.000	0.000	0.000	0.000	0.000	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070
Peakers	KU	0.076	0.074	0.073	0.075	0.074	0.075	0.075	0.076	0.076	0.072	0.070	0.069	0.068	0.068	0.067	0.066	0.065	0.065	0.064	0.064	0.063
Peakers	LGE	0.072	0.070	0.070	0.071	0.071	0.072	0.072	0.074	0.073	0.070	0.069	0.068	0.068	0.067	0.066	0.066	0.064	0.064	0.064	0.064	0.063
SCRUBBER REMOVAL EFF.																						
Brown 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Brown 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Brown 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ghent 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Green River 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Green River 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Tyrone 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cane Run 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cane Run 5		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cane Run 6		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 3		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mill Creek 4		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Trimble County 1		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Trimble County 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Trimble County 2		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peakers		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peakers		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
TONS NOx EMITTED		**2006**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Brown 1	KU	659	606	669	595	745	1,648	1,544	1,609	1,406	1,655	1,728	1,735	1,776	1,789	1,849	1,657	1,904	1,927	1,960	1,963	1,977
Brown 2	KU	669	767	684	787	844	1,843	1,802	1,831	1,848	1,843	1,665	1,840	1,875	1,896	1,934	1,928	1,939	1,763	1,978	2,003	2,007
Brown 3	KU	1,147	1,274	1,690	1,619	1,704	3,668	3,558	3,231	3,714	3,788	3,820	506	516	511	465	518	528	531	535	545	545
Ghent 1	KU	452	446	423	447	452	1,028	1,119	1,075	1,131	980	1,109	1,119	1,070	1,004	1,019	985	910	1,011	985	1,015	1,027
Ghent 2	KU	1,784	1,853	1,768	2,316	1,936	669	659	592	659	661	659	661	650	660	595	663	665	666	666	664	665
Ghent 3	KU	322	319	353	343	343	684	737	747	748	755	761	757	680	757	762	762	769	774	774	690	773
Ghent 4	KU	328	325	333	338	355	776	765	774	771	779	782	704	782	782	788	785	792	796	717	794	797
Green River 3	KU	284	301	364	342	321	762	667	722	770	793	832	773	906	907	949	946	997	1,013	889	1,025	1,059
Green River 4	KU	469	455	515	496	489	1,002	1,039	1,091	1,126	1,169	1,208	1,210	1,127	1,280	1,358	1,328	1,377	1,407	1,402	1,274	1,435
Tyrone 3	KU	276	300	378	358	340	676	693	758	800	827	854	880	859	907	1,002	972	1,044	1,048	1,075	966	1,092
Cane Run 4	LGE	766	784	801	760	718	1,381	1,104	1,344	1,317	1,463	1,471	1,514	1,597	1,411	1,717	1,678	1,741	1,760	1,793	1,817	1,635
Cane Run 5	LGE	880	823	959	848	735	1,636	1,478	1,587	1,650	1,735	1,627	1,877	1,983	2,008	2,090	2,122	2,203	1,972	2,280	2,291	2,340
Cane Run 6	LGE	1,089	1,122	1,019	971	965	2,188	1,949	2,057	2,105	2,118	2,236	2,021	2,333	2,279	2,413	2,393	2,495	2,528	2,270	2,595	2,610
Mill Creek 1	LGE	1,112	1,052	1,111	1,055	1,080	2,411	2,481	2,205	2,575	2,419	2,644	2,470	2,670	2,513	2,735	2,360	2,787	2,631	2,811	2,683	2,864
Mill Creek 2	LGE	1,027	1,146	948	1,128	1,098	2,544	2,120	2,517	2,387	2,584	2,447	2,587	2,480	2,620	2,303	2,668	2,535	2,725	2,569	2,757	2,604
Mill Creek 3	LGE	373	389	389	387	377	890	814	851	726	846	821	870	843	881	834	911	778	872	843	893	862
Mill Creek 4	LGE	301	308	316	309	308	669	681	657	705	603	717	671	720	667	715	671	744	616	738	685	748
Trimble County 1	LGE	304	296	298	296	300	729	662	722	658	717	665	720	622	715	659	714	664	717	656	722	608
Trimble County 2	KU	0	0	0	0	0	585	1,000	1,009	1,003	1,009	1,012	1,013	1,011	1,013	1,015	1,018	1,018	1,019	1,019	1,024	1,020
Trimble County 2	LGE	0	0	0	0	0	206	351	355	352	355	356	356	355	356	357	358	358	358	358	360	358
Peakers	KU	114	135	174	199	267	273	250	298	385	428	477	509	576	582	758	748	848	946	1,061	1,157	1,200
Peakers	LGE	50	63	82	95	126	126	117	142	176	199	233	250	285	291	371	383	432	489	551	601	626
NOx EMISSIONS (TONS)																						
Total		**12,405**	**12,763**	**13,196**	**13,588**	**13,501**	**26,393**	**25,589**	**26,176**	**27,011**	**27,723**	**28,123**	**25,041**	**25,725**	**25,827**	**26,688**	**26,569**	**27,527**	**27,570**	**27,920**	**28,523**	**28,853**
ALLOWANCES																						
KU EPA Allocated NOx Allowances		6,764	6,764	6,569	6,569	6,569	14,814	14,814	14,814	14,814	14,814	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345	12,345
LGE EPA Allocated NOx Allowances		5,683	5,683	6,002	6,002	6,002	12,295	12,295	12,295	12,295	12,295	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246	10,246
Total KU/LGE EPA Allocated NOx Allowances		12,447	12,447	12,571	12,571	12,571	27,109	27,109	27,109	27,109	27,109	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591	22,591
KU/LGE Extension		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KU's Portion of OMU Surplus/Shortfall		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Combined Company Purchases		0	0	0	0	0	0	0	0	0	0	0	2,187	3,134	3,236	4,097	3,978	4,936	4,979	5,329	5,932	6,262
Sell		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======
TOTAL KU/LGE ALLOWANCES		**12,447**	**12,447**	**12,571**	**12,571**	**12,571**	**27,109**	**27,109**	**27,109**	**27,109**	**27,109**	**22,591**	**24,778**	**25,725**	**25,827**	**26,688**	**26,569**	**27,527**	**27,570**	**27,920**	**28,523**	**28,853**
EOY Increase (+)/Decrease in Bank		42	-316	-625	-1,017	-930	716	1,520	933	98	-614	-5,532	-262	0	0	0	0	0	0	0	0	0
ALLOWANCE BANK																						
Total KU/LGE Allowance Bank (End of Year)		**6,029**	**5,713**	**5,088**	**4,071**	**3,142**	**3,857**	**5,377**	**6,310**	**6,408**	**5,794**	**262**	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

APPENDIX F

NO_x Spot Daily Market Price Indicators

(January 1, 2004 to January 14, 2005)



This information was provided by Cantor Fitzgerald.