

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF KENTUCKY)
UTILITIES COMPANY FOR AN ORDER)
AUTHORIZING THE ISSUANCE OF)
SECURITIES AND THE ASSUMPTION)
OF OBLIGATIONS)

CASE NO. 2007-

437

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OCT 04 2007

PUBLIC SERVICE
COMMISSION

**MOTION FOR DEVIATION FROM RULES AND FOR INCORPORATION BY
REFERENCE**

Kentucky Utilities Company ("KU") hereby moves, pursuant to 807 KAR 5:001(14), for a deviation from 807 KAR 5:001(11) and for incorporation by reference pursuant to 807 KAR 5:001(5)(5). In support of this Motion, KU states as follows:

1. This case concerns KU's request, pursuant to KRS 278.300, for authorization for the issuance of securities, assumption of obligations and entrance into all necessary agreements and other documents relating thereto.

2. Among the reasons for KU's need for debt financing cited in the Application were capital expenditures in connection with KU's pollution control project. Commission Rule 807 KAR 5:001(11)(d) provides that a copy of KU's contract with Fluor Enterprises, Inc., (the "Construction Contract") for construction of KU's pollution control project be annexed to KU's Application.

3. The Construction Contract has been previously filed with the Commission in a prior case also requesting authority for financing, Case No. 2006-00187 (*In the Matter of: The Application of Kentucky Utilities Company for an Order Authorizing the Issuance of Securities and the Assumption of Obligations*). In Case No. 2006-00187, KU requested and was granted

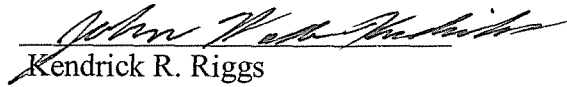
confidential protection for the Construction Contract. If the Construction Contract was filed in the present case, KU would again request confidential protection for portions of the contract. Additionally, in Case No. 2006-00414 (*In the Matter of: The Application of Kentucky Utilities Company for an Order Authorizing the Issuance of Securities and the Assumption of Obligations*) in Case No. 2007-00024 (*In the Matter of: The Application of Kentucky Utilities Company for an Order Authorizing the Issuance of Securities and the Assumption of Obligations*) and Case No. 2007-00115 (*In the Matter of: The Application of Kentucky Utilities Company for an Order Authorizing the Issuance of Securities and the Assumption of Obligations*) KU requested and was granted a deviation from Commission rules and incorporation of the Construction Contract filed in Case No. 2006-00187 by reference only.

4. If the Construction Contract was filed in the record of this case, this duplicative filing of information already contained in the Commission files would serve no purpose and represent a needless burden on the Company for photocopying and would also needlessly burden the Commission which would again have to consider the issue of whether the confidential information in the Construction Contract should be protected.

THEREFORE, Kentucky Utilities Company respectfully requests that the redacted Construction Contract, contained in the record of Case No. 2006-00187 be made a part of the record in the present case by reference only, pursuant to 807 KAR 5:001(5)(5).

Dated: October 4, 2007.

Respectfully submitted,



Kendrick R. Riggs
John Wade Hendricks
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Counsel for Kentucky Utilities Company

400001.128224/490714.1

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

**THE APPLICATION OF KENTUCKY UTILITIES)
COMPANY FOR AN ORDER AUTHORIZING)
THE ISSUANCE OF SECURITIES AND THE)
ASSUMPTION OF OBLIGATIONS)**

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COMMISSION

**PETITION OF KENTUCKY UTILITIES COMPANY FOR CONFIDENTIAL
PROTECTION PURSUANT TO 807 KAR 5:001, SECTION 7**

Kentucky Utilities Company (“KU” or the “Company”) hereby petitions the Kentucky Public Service Commission (“Commission”) pursuant to 807 KAR 5:001, Section 7, and KRS 61.878(1)(c), to grant confidential protection for certain information contained in KU’s contracts with Mactec Engineering and Irby Construction Company (collectively, the “Transmission Line Contracts”) attached to KU’s Application as Exhibit 2. In support of this Petition, KU states as follows:

1. The Kentucky Open Record Act exempts from disclosure certain confidential commercial information. KRS 61.878(1)(c). To qualify for this exemption and maintain the confidentiality of the information, a party must establish the disclosure of the commercial information would permit an unfair advantage to competitors of the party seeking confidentiality.

2. The information contained in portions of the Transmission Line Contracts that KU seeks to protect is the product of extensive negotiations between KU and its contractors. These provisions represent prices, concessions, terms and conditions that KU has been able to negotiate for KU’s and its customers’ benefits.

3. Making these provisions publicly available would allow the Company’s competitors, who also seek to negotiate the best construction contracts possible, to take advantage of any

concessions and favorable terms and conditions the Company has been able to negotiate in their own negotiations.

4. KU's contractors, and others in the construction industry, would not favor public disclosure of concessions that they had made because those concessions would be used against them in future negotiations with other customers. They would therefore be more likely to insist on standard contract provisions and less willing to negotiate terms with KU in the future, thus jeopardizing KU's ability to obtain the best possible contracts, placing it at an additional competitive advantage. In addition, other contractors would be in position to determine which terms and conditions KU is willing to accept, and to ascertain contract pricing information, thus placing the Company at a competitive disadvantage with contractors and suppliers who could use this information in future negotiations or proposals, resulting in increased prices for KU and its ratepayers.

5. The information contained in the Transmission Line Contracts that the Company seeks to protect is not publicly known and is not disseminated within the Company except to persons with a legitimate business need to know and act on this information.

6. There is no public interest to be served by disclosure of the confidential provisions of the Transmission Line Contracts.

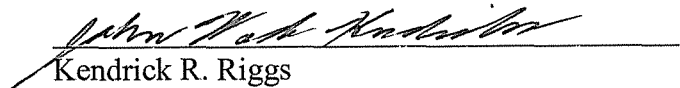
7. All of the information for which the Company seeks confidential protection demonstrates on its face that it merits confidential protection. If, however, the Commission disagrees, the Commission must hold an evidence hearing to protect the due process rights of the Company and supply the Commission with a complete record to enable it reach a decision with regard to this matter. Utility Regulatory Commission v. Kentucky Water Service Company, Inc., Ky. App., 642 SW 2nd 591, 592-594 (1982).

8. In accordance with the provisions of 807 KAR 5:001 Section 7, the Company is filing with Commission one set of the Transmission Line Contracts with the confidential information highlighted and ten copies with the confidential information redacted.

WHEREFORE, Kentucky Utilities Company respectfully requests that the Commission grant confidential protection to the information at issue, or in the alternative, schedule an evidentiary hearing on all factual issues while maintaining confidentiality of the information pending the outcome of the hearing.

Dated October 4, 2007.

Respectfully submitted,




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502-627-2088

Counsel for Kentucky Utilities Company

CERTIFICATE OF SERVICE

The undersigned hereby certifies that an informational copy of this Petition for Confidential Protection, along with a copy of Kentucky Utilities Company's Application with the Confidential Information redacted, was mailed to Dennis Howard II, Assistant Attorney General on October 4, 2007.



J. Wade Hendricks

400001.128224/493021.1

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF KENTUCKY UTILITIES)
COMPANY FOR AN ORDER AUTHORIZING)
THE ISSUANCE OF SECURITIES AND THE) CASE NO. 2007- 437
ASSUMPTION OF OBLIGATIONS)

MOTION FOR INCORPORATION BY REFERENCE

Kentucky Utilities Company (“KU”) hereby moves for incorporation by reference only, pursuant to 807 KAR 5:001(5)(5). In support of this Motion, KU states as follows:

1. This case concerns KU’s request, pursuant to KRS 278.300, for authorization for the issuance of securities, assumption of obligations and entrance into all necessary agreements and other documents relating thereto.

2. Among the reasons for KU’s need for debt financing cited in KU’s Application were capital expenditures in connection with construction of a transmission line (the “Transmission Line”) between Louisville Gas and Electric Company’s Mill Creek generation station and KU’s Hardin County substation. KU requested a certificate of public convenience and necessity for the Transmission Line in Case No. 2005-00467 (*In the Matter of: The Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for the Construction of Transmission Facilities in Jefferson, Bullitt, Meade and Hardin Counties, Kentucky*).

3. The record in Case No. 2005-00467 contains a detailed description of the Transmission Line which KU believes may assist the Commission in its review of the present Application.

4. If the record in Case No. 2005-00467 were filed in the record in this case, this duplicate filing of information already contained in the Commission files would serve no purpose, needlessly clutter the Commission's files, and represent a burden on the KU for copying.

WHEREFORE, Kentucky Utilities Company respectfully requests that the record in Case No. 2005-00467 be made a part of the record in the present case by reference only, pursuant to 807 KAR 5:001(5)(5).

Dated: October 4, 2007.

Respectfully submitted,



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October 4, 2007

HAND DELIVERY

Elizabeth O'Donnell
Executive Director
Public Service Commission of Kentucky
211 Sower Boulevard
Frankfort, Kentucky 40602

2007-437

Re: Kentucky Utilities Company

Dear Ms. O'Donnell:

Enclosed for filing please find the original and ten copies of the Application of Kentucky Utilities Company for an Order Authorizing the Issuance of Securities and the Assumption of Obligations, along with a Petition for Confidential Protection for certain confidential information contained in an exhibit to the Application, with one copy of the confidential information filed under seal. We are also simultaneously filing a Motion for Deviation from Rules and for Incorporation by Reference and a separate Motion for Incorporation by Reference. Extra copies of the Application, the Petition and the Motions are enclosed to be file stamped and returned to the undersigned.

Please do not hesitate to contact me if you have any questions or require additional information.

Very truly yours,

J. Wade Hendricks

JWH/dvg
Enclosures

cc: Dennis Howard, II, Esq.
Daniel Arbough
Lonnie Bellar
Rick Lovekamp

Elizabeth O'Donnell
October 4, 2007
Page 2

Allyson Sturgeon, Esq.
Don Harris
John Wiedmar

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COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF KENTUCKY UTILITIES)	
COMPANY FOR AN ORDER AUTHORIZING)	
THE ISSUANCE OF SECURITIES AND THE)	CASE NO. 2007- <u>437</u>
ASSUMPTION OF OBLIGATIONS)	

APPLICATION

Kentucky Utilities Company (“KU” or the “Company”) hereby requests, pursuant to KRS 278.300, that the Commission authorize the issuance of securities, assumption of obligations and entrance into all necessary agreements and other documents relating thereto as more fully described herein. Specifically, KU requests authority to obtain long-term debt financing from an affiliate within the E.ON AG (“E.ON”) holding company system. In support of this Application, KU states as follows:

1. The Company’s full name is Kentucky Utilities Company. The post office address of the Company is One Quality Street, Lexington, Kentucky 40507. KU is a Kentucky and a Virginia corporation, a utility as defined by KRS 278.010(3)(a), and as of July 31, 2007 provides retail electric service to approximately 503,000 customers in seventy-seven counties in Kentucky, 30,000 customers in southwestern Virginia and five customers in Tennessee. A description of KU’s properties is set out in Exhibit 1 to this Application. A certified copy of the Company’s Articles of Incorporation was filed with the Commission in Case No. 2005-00471 (*In the Matter of: The Application of Louisville Gas and Electric Company and Kentucky Utilities Company for Authority to Transfer Functional Control of their Transmission System*) and is incorporated by reference herein pursuant to 807 KAR 5:001, Section 8(3).

2. KU obtains financing through numerous sources of capital, including the form of debt that is the subject of this Application. KU does not assign specific financing to any particular project or use, and does not project finance capital projects. All components of KU's capital structure are used to fund capital expenditures. Thus the uses cited below are general reasons for KU's need for debt financing, rather than projects to which specific financing will be assigned.

3. KU anticipates incurring capital expenditures during the remainder of 2007 and the first quarter of 2008 for pollution control facilities at the Company's Ghent Generating Station in Carroll County, Kentucky and the Company's E.W. Brown Generating Station in Mercer County, Kentucky (the "Pollution Control Project"). The Pollution Control Project is described in the previously filed construction contract (the "Construction Contract") which, by Motion filed concurrently herewith, KU is requesting be incorporated by reference, and in Case No. 2004-00426 (*In the Matter of: The Application of Kentucky Utilities Company for a Certificate of Public Convenience and Necessity to Construct Flue Gas Desulfurization Systems and Approval of its 2004 Compliance Plan for Recovery by Environmental Surcharge*).¹ During the remainder of 2007 and the first quarter of 2008, KU anticipates incurring up to \$91 million in additional construction costs over the \$276 million originally budgeted for 2007 in connection with the Pollution Control Project.²

¹ The Commission granted the requested Certificate of Public Convenience and Necessity by Order dated June 20, 2005, in Case No. 2004-00426. By Order dated December 22, 2006 in Case No. 2006-00493 (*In the Matter of: Application of Kentucky Utilities Company to Modify Certain Certificates of Public Convenience and Necessity to Construct Duct Work for Two Flue Gas Desulfurization Units at the Ghent Power Station*), however the Commission modified the Order in Case No. 2004-00426, to permit construction of three Flue Gas Desulfurization Systems to serve Ghent Generating Units 1, 3 and 4, rather than Generating Units 2, 3 and 4 as originally approved. In addition, the Commission modified a prior certificate awarded in Case No. 1992-00005, to permit use of the existing Ghent Unit 1 FGD to serve Ghent Generating Unit 2.

² The Company makes every effort to finance eligible portions of the Pollution Control Project with tax-exempt debt. See Case No. 2007-00115 (*In the Matter of: The Application of Kentucky Utilities Company for an Order Authorizing the Issuance of Securities and the Assumption of Obligations*), Order of April 30, 2007, Case No. 2006-00414 (*In the Matter of: The Application of Kentucky Utilities Company for an Order Authorizing the Issuance of Securities and the Assumption of Obligations*), Order of November 20, 2006, Case No. 2006-00187 (*In the Matter of: The Application of Kentucky Utilities Company for an Order Authorizing the Issuance of Securities and the Assumption of Obligations*), Order of June 16, 2006, Case No. 2005-00183 (*In the Matter of: The Application of*

4. KU also anticipates that because of favorable weather and a compressed construction schedule, it will incur accelerated capital expenditures during the remainder of 2007 and the first quarter of 2008 for its share of construction costs for a transmission line (the “Transmission Line”) between Louisville Gas and Electric Company’s Mill Creek Generating Station and KU’s Hardin County Substation. KU requested a Certificate of Public Convenience and Necessity for the Transmission Line in Case No. 2005-00467 (*In the Matter of: The Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for the Construction of Transmission Facilities in Jefferson, Bullitt, Meade, and Hardin Counties, Kentucky*).³ The Transmission Line is described in the record of Case No. 2005-00467, which, by Motion filed concurrently herewith, KU is requesting be incorporated by reference, and in the Transmission Line Contracts as defined below, attached hereto as Exhibit 2. During the remainder of 2007 and the first quarter of 2008, KU anticipates incurring up to \$15 million in accelerated construction costs in connection with the Transmission Line.

Description of KU’s Position Within the Holding Company and the Affiliate

5. E.ON U.S. LLC (“E.ON US”) is an indirect subsidiary of E.ON. KU is a wholly owned subsidiary of E.ON US. E.ON US Holding GmbH, is also a subsidiary of E.ON. Fidelia Corporation (“Fidelia”), a finance company subsidiary organized in Delaware, is a subsidiary of E.ON U.S. Holding GmbH. Fidelia lends money to companies in the E.ON holding company

Kentucky Utilities Company for an Order Authorizing the Issuance of Securities and the Assumption of Obligations), Order of June 20, 2005 and Case No. 2005-00357 (*In the Matter of: The Application of Kentucky Utilities Company for an Order Authorizing the Issuance of Securities and the Assumption of Obligations*), Order of October 14, 2005, authorizing the Company to issue securities and assume obligations in connection with private activity bond allocations from the Kentucky Private Activity Bond Allocation Committee. The Company intends to continue seeking allocations from the state ceiling for private activity bonds and the opportunity to finance additional, eligible portions of the Pollution Control Project with tax-exempt financing resulting in lower costs.

³The Commission consolidated Case No. 2005-00467 with Case No. 2005-00472 (*In the Matter of: Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for the Construction of Alternative Transmission Facilities in Jefferson, Bullitt, Meade, and Hardin Counties, Kentucky*). On May 26, 2006, the Commission granted the certificate requested in Case No. 2005-00467, and dismissed Case No. 2005-00472 as moot.

system and upon request of the Company would lend money to the Company as set out in this Application.⁴

Description of the New Long-Term Debt

6. This Application relates to the issuance of long-term unsecured debt by KU to Fidelia. The Company proposes to borrow money from Fidelia in an amount not to exceed \$100 million at various times during the remainder of 2007 and through March, 2008.⁵ The Company anticipates issuing unsecured notes to Fidelia with final maturity not to exceed thirty years. The Company anticipates utilizing a range of maturities that are reflective of operating and market conditions and cash flow requirements. Such borrowings would only occur if the interest rate on the loan would result in an equal or lower cost of borrowing than the Company could obtain in a loan from E.ON or in the capital markets on its own. All borrowings from Fidelia would be at the lowest of 1) E.ON's effective cost of capital; 2) Fidelia's effective cost of capital; and 3) the Company's effective cost of capital determined by reference to the effective cost of a direct borrowing by the Company from an independent third party for a comparable term loan that could be obtained at the time of the loan (the "Best Rate Method"). The Best Rate Method assures the Company that it will not pay more for a loan from Fidelia than it would pay in the capital markets for a similar loan. The Company's treasury group has evaluated its capital

⁴In five other proceedings in recent years, the Commission has previously approved other, long-term debt financing between KU and an affiliate within the E.ON holding company system. See Case No. 2007-00024 (*In the Matter of: The Application of Kentucky Utilities Company for an Order Authorizing the Issuance of Securities and the Assumption of Obligations*), Order of March 19, 2007, Case No. 2006-00155 (*In the Matter of: The Application of Kentucky Utilities Company for an Order Authorizing the Issuance of Securities and the Assumption of Obligations*), Order of May 22, 2006, Case No. 2005-00117 (*In the Matter of: The Application of Kentucky Utilities Company for an Order Authorizing the Issuance of Securities and the Assumption of Obligations*), Order of May 10, 2005, Case No. 2003-00301 (*In the Matter of: The Application of Kentucky Utilities Company for an Order Authorizing the Issuance of Securities and the Assumption of Obligations*), Order of September 22, 2003 and Case No. 2003-00059 (*In the Matter of: The Application of Kentucky Utilities Company for an Order Authorizing the Issuance of Securities and the Assumption of Obligations*), Orders of April 14, 2003 and April 30, 2003.

⁵ This authority is in addition to the \$295,000,000 in long-term unsecured debt to Fidelia authorized by the Commission by Order dated March 19, 2007 in Case No. 2007-00024 (*In the Matter of: The Application of Kentucky Utilities Company for an Order Authorizing the Issuance of Securities and the Assumption of Obligations*). Of that \$295 Million, \$75 Million was borrowed on March 30, and \$50 Million on June 20. On September 14, 2007 the Company borrowed an additional \$100 Million under the existing authority.

requirements through the remainder of 2007 and the first quarter of 2008, and the appropriate sources of capital available to it (both existing and potential). The Company has determined that it is cost effective to borrow money from Fidelia through this intercompany loan facility and desires to take advantage of this opportunity.

7. The interest rates will be set at the time of issuance of each note and would depend on the maturity of the notes. The interest rate on each note would be the lower of (a) the average of three quotes obtained by the affiliate company from international investment banks for an unsecured bond issued by E.ON for the applicable term of the loan; and (b) the lowest of three quotes obtained by the Company from international investment banks for a secured bond issued by the Company with the applicable term of the loan. This method complies with the Best Rate Method because this rate would be determined using the lower of the average of actual quotes obtained based upon the credit of E.ON or the lowest of three actual quotes obtained by the Company.

8. A note would be executed by the Company each time a loan was made by Fidelia to the Company stating the interest rate, maturity date and payment terms. Attached to the Application as Exhibit 3 is the form of the intercompany loan agreement and note. Issuance expenses for the intercompany loans described herein will not exceed, in total, the sum of \$50,000. In connection with the issuance of the debt, KU may enter into one or more interest rate hedging agreements (T-bill lock, swap or similar agreement, collectively the "Hedging Facility") either with an E.ON affiliate or with a bank or financial institution. The Hedging Facility would be an interest rate agreement designed to allow the Company to lock in the underlying interest rate on the loan in advance of the closing of the loan. The Hedging Facility will set forth the specific terms under which the Company will agree to make payments, and the other terms and conditions of any rights or obligations thereunder.

9. No contracts have been made for the disposition of any of the securities which KU proposes to issue.

10. A redacted copy of the Construction Contract for the Pollution Control Project was filed with the Commission in Case No. 2006-00187 (*In the Matter of: The Application of Kentucky Utilities Company for an Order Authorizing the Issuance of Securities and the Assumption of Obligations*), and incorporated by reference in Case Nos. 2006-00414, 2007-00024 and 2007-00115. By Motion filed concurrently herewith, KU is requesting that the Construction Contract be incorporated by reference herein.

11. Redacted copies of KU's contracts with Mactec Engineering and with Irby Construction Company (both, collectively, the "Transmission Line Contracts") for construction of KU's Transmission Line are attached hereto as Exhibit 2. By Motion filed concurrently herewith, KU is requesting that portions of the Transmission Line Contracts be granted confidential protection.

12. KU shall, as soon as reasonably practicable after the issuance of each note referred to herein, file with the Commission a statement setting forth the date or dates of issuance of the notes, the proceeds of such notes, the interest rates, costs or gains with the Hedging Facility, and all fees and expenses involved in such issuance.

13. Exhibit 4 to this Application contains the financial exhibit required by 807 KAR 5:001, Section 11(2)(a), and described by 807 KAR 5:001, Section 6. It also contains information required by 807 KAR 5:001, Section 11(2)(b).

14. Exhibit 5 to this Application is a certified copy of KU's Board of Directors resolution authorizing the issuance of the notes, and the transactions related thereto as discussed in this Application.

15. Other requirements of the Commission's regulation regarding this Application, 807 KAR 5:001, Section 11, including (1)(b) regarding the amount and kind of notes, etc., and (1)(c) regarding the use to be made of the proceeds, have been supplied in the discussion above in Paragraphs 2 through 8 of this Application.

WHEREFORE, Kentucky Utilities Company respectfully requests that the Commission enter its Order, authorizing it to issue securities and to execute, deliver and perform the obligations of KU under the intercompany loan agreement and the notes, as set forth in this Application. KU further requests that the Order of the Commission specifically include provisions stating:

1. KU is authorized to issue and deliver its unsecured notes in an aggregate principal amount not to exceed \$100 million in the manner set forth in its Application.

2. KU is authorized to execute, deliver and perform the obligations of KU under, *inter alia* the loan agreement with Fidelia Corporation, the notes, and such other agreements and documents as set out in its Application, and to perform the transactions contemplated by such agreements.

Respectfully submitted,



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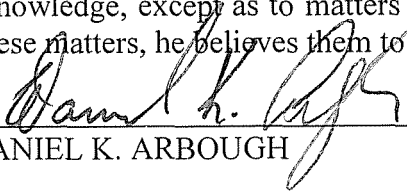
Allyson K. Sturgeon
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502-627-2088
Counsel for Kentucky Utilities Company

VERIFICATION

COMMONWEALTH OF KENTUCKY

COUNTY OF JEFFERSON

Daniel K. Arbough being first duly sworn, deposes and says that he is Treasurer for Kentucky Utilities Company, that he has read the foregoing Application and knows the contents thereof, and that the same is true of his own knowledge, except as to matters which are therein stated on information or belief, and that as to these matters, he believes them to be true.



DANIEL K. ARBOUGH

Subscribed and sworn before me this 27th day of September, 2007.

My Commission Expires: August 31, 2011



NOTARY PUBLIC, STATE AT LARGE

KENTUCKY UTILITIES COMPANY

A DESCRIPTION OF APPLICANT'S PROPERTY, INCLUDING A
STATEMENT OF THE NET ORIGINAL COST OF THE PROPERTY
AND THE COST THEREOF TO APPLICANT

July 31, 2007

The applicant owns and operates four coal fired steam electric generating stations having an estimated total effective capacity, with all equipment in service, of about 2,934 Mw; a hydroelectric generating station having an estimated total effective capability of about 24 Mw; and seventeen gas/oil peaking units having an estimated total effective capability of about 1,499 Mw.

The applicant's owned electric transmission system included 110 substations with a total capacity of approximately 16,978 Mva and approximately 4,031 miles of lines. The electric distribution system includes 480 substations with a total capacity of approximately 6,180 Mva, 13,805 miles of overhead lines, and 1,881 miles of underground conduit.

Other properties include office buildings, service centers, warehouses, garages and other structures and equipment.

The net original cost of the property and cost thereof to the applicant at July 31, 2007, was:

	<u>Utility Plant</u>
Original Cost	
Intangible Plant	\$ 27,664,660
Production Plant	2,173,112,306
Transmission Plant	509,768,754
Distribution Plant	1,018,237,942
General Plant	81,132,475
Transportation Plant	18,955,798
Construction Work in Progress	732,653,042
Total Plant at Original Cost	\$ 4,561,524,977
Less Reserve for Depreciation	1,891,246,116
Net Original Cost	<u>\$ 2,670,278,861</u>

This Contract is entered into, effective as of January 30, 2007, between Louisville Gas & Electric Company / Kentucky Utilities Company (herein referred to as "LG&E/KU or Company") whose addresses are 220 West Main, P.O. Box 32000, Louisville, Kentucky 40232 or One Quality Street, Lexington, KY 40507 and

Mactec Engineering
(hereinafter referred to as "Contractor")

ADDRESS: 2025 Leestown Road, Suite S
Lexington, KY 40511

The parties hereto agree as follows:

1.0 GENERAL

Contractor shall perform the following: **Geotechnical analysis for the 20.5 mile (approximate) Mill Creek – Flarhity Road – PSI 345kv transmission line as indicated in the RFP # 602387 and any associated drawings.**

1.0 Company will use the Contractor as its primary Contractor for services as described in the attached descriptions of work.

1.2 Codes and Standards

1.2.1 All design requirements and information contained herein represent Company's minimum requirements and shall be reviewed by the Contractor for compliance with all local, state, and federal requirements.

1.2.2 The Contractor is responsible for obtaining all applicable permits, except as noted within.

1.2.2.1 LG&E/KU shall obtain any necessary environmental permits should they be required.

1.3 Conflicts

1.3.1 In the event of variation between the LG&E/KU Standards and the Specifications or the Drawings, the Specifications and the Drawings shall govern. In the event of variations between these Specifications and the Drawings, the Drawings shall govern.

1.3.2 Contractor shall be solely responsible for advising LG&E/KU in writing of any conflicts between the Specifications and Drawings and the Work, including performance and levels of quality. Contractor agrees that his obligations, liabilities, and warranties shall not be diminished or extinguished due to his/her meeting the requirements of the Specifications/Drawings.

1.3.3 Contractor shall perform the Work in accordance with these Specifications, and the attached Standards and Drawings referred to herein. If for any reason it is necessary to deviate therefrom, permission shall first be obtained from LG&E/KU. Contractor shall perform the Work in a manner consistent with recognized good practice for power plant service and in accordance with such detailed instructions as may be issued by LG&E/KU.

1.4 Before beginning work, the Contractor shall verify all measurements at the Site and shall obtain all necessary additional information for the completion of the Work, including actual location of in place equipment to which the Contractor's work connects and exact location of new and existing structures and equipment, for interference's or difficulties that may exist. Drawings supplied with this Contract are for reference only. Any discrepancies shall be brought to the attention of LG&E/KU immediately.

1.5 Safety

1.5.1 Safety is of utmost importance to LG&E/KU. (Safety Rules and Regulations must be signed and become part of this agreement. – Documentation completed during supplier certification procedures are considered part of this contract.)

1.5.2 Hard hats supplied by Contractor for their employees must be of one color. Red hard hats are prohibited by Contractors on this Project.

- 1.5.3 LG&E/KU expects the Contractor to comply with all LG&E Safety Procedures and local, state, and federal regulations. In addition to the items above, particular attention should be given to the following safety issues:
- 1.5.3.1 Fall Protection. LG&E/KU enforces fall protection for heights greater than four feet.
 - 1.5.3.2 Eye Covering. Refer to LG&E/KU Eye Covering Policy.
 - 1.5.3.3 Lead Paint and Asbestos.
 - 1.5.3.4 Hard Hats.
 - 1.5.3.5 Confined Space. Refer to LG&E/KU Web Confined Space Procedures.
 - 1.5.3.6 Respirators. Respirators must be worn during any oxygen-acetylene burning or welding , and arc welding.
 - 1.5.3.7 Excavation.
- 1.6 Contractor employees are prohibited from wearing white coveralls during any phase of the Work. White coveralls are exclusively used for asbestos workers. Other limitations on other colors of coveralls may be required.
- 1.7 Contractor shall not work any employee more than ten consecutive hours in any day or work more than six consecutive days in any week. If it is necessary to exceed these requirements to maintain the work schedule, written permission from LG&E/KU must be obtained before Contractor will be allowed to deviate from the above.

2.0 DESCRIPTION OF WORK

- 2.1 Except as otherwise expressly provided herein, Contractor shall supply all labor, supervision, materials, equipment, tools, and warehousing, and shall pay all expenses necessary or appropriate in the performance of the Work as defined in the enclosed specification documents. The Contractor shall unload, store, protect, remove from storage, and erect the Project as described within the specifications.
- 2.2 NO MATERIALS CONTAINING ASBESTOS SHALL BE SUPPLIED OR USED IN THE PERFORMANCE OF WORK.
- 2.3 Without limitation, Contractor shall meet all requirements set forth in the lead construction standard 29 CFR 1926.62 and confined spaces in accordance with 29 CFR 1910.146.
- 2.4 The Work shall be consistent in quality, service, price, and timing and include, but not be limited to, the enclosed written description of the Work as shown on the Drawings and Specifications:
- 2.4.1 See attached: “(Bid Documentation and Construction Specifications)”
- 2.5 LG&E/KU shall furnish or cause to be furnished to Contractor without cost to Contractor the following items for or in connection with performance of the Work:
- 2.5.1 Lead paint abatement. Contractor shall give LG&E/KU 48-hour notice of areas where lead paint needs to be abated. The Contractor shall clearly mark with spray paint areas requiring lead abatement.
 - 2.5.2 Asbestos abatement. Contractor shall give LG&E/KU 48-hour notice of areas where asbestos needs to be abated.
 - 2.5.3 Other work as described in the Drawings and Specifications.
 - 2.5.4 The Contractor shall furnish field supervision who is knowledgeable of site, work rules, gate procedures, and equipment and property, efficient, state of the art techniques.
 - 2.5.5 The Contractor shall have the experience and capability to cover the full breadth of services detailed in this document.

3.0 SPECIFICATIONS, EXHIBITS AND DRAWINGS

All work shall be performed in strict accordance with the following specifications, exhibits and drawings which are incorporated herein by reference.

3.1 SPECIFICATIONS

Defined in Specifications Documentation provided by LG&E/ Kentucky Utilities with RFP 602387

3.2 DRAWINGS

As provided with RFP 602387

4.0 TEMPORARY FACILITIES AND UTILITIES**4.1 FURNISHED BY CONTRACTOR**

Except as expressly set forth in previous sections, Contractor shall supply, install, properly maintain and remove all temporary facilities and utilities necessary for performance of the Work as determined by the Company site coordinator on a per job basis, including but not limited to:

- 4.1.1 All temporary buildings
- 4.1.2 All sanitary facilities, including janitorial services
- 4.1.3 First-aid facilities
- 4.1.4 Fuels and lubricants
- 4.1.5 Transportation on and off site
- 4.1.6 Communication facilities
- 4.1.7 Maintenance of Contractor's laydown, storage and work areas and roads within such areas
- 4.1.8 Rigging, scaffolding and all equipment for erection
- 4.1.9 Electric panel and distribution wiring. Connection to and disconnection from, the power source shall performed by Company. (Adequate wiring for lead to the power source the responsibility of the Contractor.)
- 4.1.9 All cranes and other necessary equipment and materials for lifting and moving equipment.
- 4.1.11 All small tools
- 4.1.12 Temporary lighting
- 4.1.13 All standard expendable or consumable construction items and supplies
- 4.1.14 Containers, ice, cups for drinking water
- 4.1.15 Cost of unloading, loading and storing all materials, equipment and supplies
- 4.1.16 Transportation of Contractor's employee's from the parking lot to the job site. (if applicable)
- 4.1.17 Dumpsters and waste disposal in accordance with the Article title "Cleanup" set forth in the attached Standard Terms. Disposal shall be in landfills per the LG&E/KU Standard Terms and Conditions.

4.2 FURNISHED BY LG&E/KU.

LG&E/KU shall supply to the Contractor the following:

4.2.1 Storage space adjacent to the construction site for performance of Work. However, the Contractor shall be responsible for security of materials stored in these areas. LG&E/KU must approve the location of all storage areas in advance.

5.0 TERM

5.1 This Contract shall become effective January 30, 2007 and continue through January 29, 2008, subject to the Article titled "Termination at LG&E/KU's Option" set forth in the attached Standard Terms. LG&E/KU makes no promise or guarantee as to the amount of Work to be performed under this Contract.

6.0 PERFORMANCE SCHEDULE

6.0 SCHEDULE

6.1.1 Contractor shall perform the work in accordance with the following schedule:

Date	Bid Due Date	01/11/07
	Begin Work	02/12/07
	Complete Work	05/14/07

6.1.2 Due to financial damages which LG&E/KU will incur if this system is not operational on the above dates, time is of the essence. It is the Contractor's total responsibility to adhere to the schedule submitted. The Contractor shall expend all necessary manpower and resources to maintain steady progress to meet the scheduled dates at no additional cost to LG&E/KU. This includes expediting all subcontractors as necessary. It is also the Contractor's responsibility to inform LG&E/KU immediately if the schedule has slipped.

6.1.3 Liquidated Damages – LG&E/KU and Contractor shall recognize that time is of the essence in this Contract and that LG&E/KU may suffer substantial loss if the Work is not completed by the completion date noted above and shown in the contract. LG&E/KU and Contractor also recognize difficulties involved in determining the actual loss suffered by LG&E/KU if the Work is not completed on time. Accordingly, LG&E/KU and Contractor agree that, as liquidated damages for delay, Contractor shall pay LG&E/KU the amounts shown below, which the parties agree is a reasonable amount in light of the anticipated harm caused by untimely performance: (\$500 / day)

Contractor shall notify LG&E/KU of all subcontractors and the subcontractor's employees to be utilized in performance of Work at least forty-eight (48) hours prior to start of subcontractor's Work. Subcontractors will be denied access to LG&E/KU facilities without the required notification.

6.2.1 Contractor shall arrange or coordinate material storage at the job site or shop to avoid material theft or damage.

6.2.2 Contractor shall notify Company's site coordinator at least one full working day prior to working any Saturday, Sunday or Company holiday.

6.3 Contractor shall notify Company of all subcontractors to be utilized in performance of Work at least forty-eight (48) hours prior to start of Work. Contractor shall be responsible for performance of work by subcontractor; a Contractor's representative must be onsite at all times that a sub-contractor is working.

7.0 STANDARD TERMS AND CONDITIONS

7.1 Company Standard Terms and Conditions - General Services which was completed during the Contractor Certification Process and is hereby incorporated by reference herein and is thereby made a part of this Contract.

8.0 SPECIFIC REPORTING REQUIREMENTS

Contractor shall promptly submit the schedules and reports set forth below:

8.0 **To be defined as project dictates.

*that is not considered an "act of God" or caused solely or in part by LG&E/KU
PK 2/4/07
L.K 2-15-07*

*Agreement (Master Agreement # 12645)
PK
L.K 2/4/07
2-15-07*

9.1 COMPENSATION

9.1

Full compensation to Contractor for full and complete performance by Contractor of the Work, compliance with all terms and conditions of this Contract and for Contractor's payment of all obligations incurred in, or applicable to, performance of the Work (hereinafter referred to as the "Contract Price") shall be on a per unit basis totaling to a lump sum price, unless noted otherwise.

9.1.1 For accounting and progress payment purposes, the lump sum is broken down as follows:

Materials	\$	_____
Sales Tax	\$	_____
Labor	\$	_____
Equipment	\$	_____
Total	\$	not to exceed _____ (includes contingency for potential changes in scope & incidental charges)_

9.1.2 At LG&E/KU's sole option, adjustments to the Contract Price for changes in the scope or description of Work shall be on a unit basis as set forth in this Contract or in accordance with predetermined Labor and Equipment Rate Schedules attached and made a part of this contract.

10.0 SPECIAL INSTRUCTIONS

10.1.1 See the Article titled "Invoicing and Payment Procedure" in the Standard Terms.

10.2.2 Invoices shall include **Contract No. 20372** and shall be prepared in one original and one copy to be distributed as follows:

Original: Accounts Payable Department
 Kentucky Utilities c/o
 Ted Hornbuckle
 One Quality Street
 Lexington, KY 40507

10.1 WARRANTY

Warranty provisions are specified in the LG&E/KU Standard Terms and Conditions and apply to Seller and Seller's subcontractors and suppliers. If modified warranty terms are agreed to between LG&E/KU, these modifications will be incorporated into the Purchase Order.

11.0 DRUG TESTING

In addition to, and not in lieu of, the legal obligation imposed by this Contract, the Contractor shall be required to plan and implement a drug and alcohol testing policy in accordance with the testing requirements and methodologies set forth in, without limitation, Title 49 of the United States Code of Federal Regulation, Parts 199, 382, 391, 392 and 395, and any amendments thereto. Notwithstanding any definition of "employee" set forth in applicable regulations, the Contractor's plan shall cover all employees performing Work under this Contract, regardless of the nature of the Work to be performed by the employee at this job site. The Contractor shall defend, indemnify and hold harmless LG&E/KU, affiliated companies, and all of their directors, officers, employees, agents and representatives from any and all liability, loss, or expense, including attorney's fees, arising by claims of any person or entity and related directly or indirectly to the Contractor's acts or omissions, or to the acts or omissions of its subcontractors, agents or representatives, in carrying out the drug and alcohol testing policy. Contractor shall maintain records in accordance with applicable regulations and, upon reasonable notice, shall allow inspection and audit of its records by LG&E/KU with respect thereto. Furthermore, upon reasonable notice, Contractor shall allow LG&E/KU to conduct on-site inspections of its drug and alcohol testing procedures and methodologies if requested. Any subcontractors to be used by Contractor in carrying out its obligations under this section shall be subject to the approval of LG&E/KU.

12.0 CONTRACTUAL NOTICES

See the Article titled "Notices" in the Standard Terms for provisions governing contractual notices.

12.1 Company address: Kentucky Utilities Company
One Quality Street
Lexington, Kentucky 40507
Attn: Tom Masters, C.P.M.
Supply Chain
(859) 367-1268
(859) 367-1177 (FAX)

12.2 Contractor's Address: Mactec Engineering
2025 Leestown Road, Suite S
Lexington, KY 40511
Attn: Joseph S Cooke, PE

(859) 255-3308
(859) 254-2327 (FAX)

13.0 ENTIRE AGREEMENT

This Contract, including all specifications, exhibits and drawings listed in this Contract and the Standard Terms, constitutes the entire agreement between the parties relating to the Work and supersedes all prior or contemporaneous oral or written agreements, negotiations, understandings and statements pertaining to the Work or this Contract.

The parties hereto have executed this Contract on the dates written below, but it is effective*** as of the date first written above.

LOUISVILLE GAS & ELECTRIC COMPANY / KENTUCKY UTILITY COMPANY

BY: [Signature]
TITLE: Acting Supply Chain Mgr
DATE: 2-15-2007

MACTEC ENGINEERING

BY: [Signature]
TITLE: Office Manager
DATE: 2/9/07



Amendment To Mactec Engineering Contract

#20372

Amendment # 1

This amendment to the subject Contract is to provide additional billing rates and coverage of an addition to the scope of work as defined in the attached documentation originally provided to Mactec's Joseph S Cooke, PE for pricing in an electronic email version from Tom Masters dated June 4, 2007. Original pricing, where applicable, and additional units not in the original contract (see ATTACHMENT) are incorporated herein by signature of this amendment. Only pre-approved work by an authorized E.ON U.S. representative (LGE/KU) shall be considered as binding and billable against this contract. Revised total value for this contract shall not exceed [REDACTED] which includes a contingency for potential changes in scope or incidental charges. This amendment does not guarantee any amount of work to be assigned and may be increased or decreased at the company's discretion.

**ALL OTHER CONTENT AS ESTABLISHED IN THE ORIGINAL CONTRACT
REMAINS INTACT AND FULLY ENFORCEABLE.**

As amended herein, the Contract shall continue in full force and effect.

IN WITNESS WHEREOF, the parties hereto have executed this Amendment on the day and year below written.

LOUISVILLE GAS & ELECTRIC / KENTUCKY UTILITIES COMPANY

BY

TITLE

DATE

MACTEC ENGINEERING

BY

TITLE

DATE



engineering and constructing a better tomorrow

June 11, 2007

LG&E/KU
One Quality Street
Lexington, Kentucky 40507
Phone: (859) 367-5664
Facsimile: (859) 367-5766

ATTN: Mr. Tom Masters


Subject: **Cover Letter-Proposal for Geotechnical Analysis Services
Mill Creek Power Plant – Flarity Road 345kV Transmission Line
Proposal Contract Amendment
Jefferson to Hardin Counties, Kentucky
MACTEC Proposal No. Prop07Lexi-0003
LG&E/KU RFP-RFQ #602387 Amendment Dated June 4, 2007**

Dear Mr. Masters:

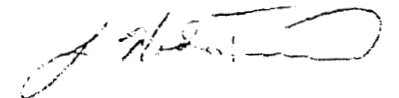
MACTEC Engineering and Consulting, Inc. (MACTEC), appreciates the opportunity to offer our continued services on this project. As requested, please find the completed pricing on additional units attached to this cover letter. All work shall be covered under the time and equipment rates in the current contract and under the terms and scope set forth therein.

We appreciate your consideration of MACTEC for this work and look forward to working with you on this project.

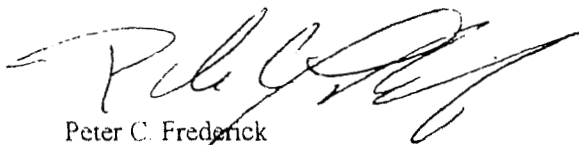
Sincerely,
MACTEC ENGINEERING AND CONSULTING, INC.



Joseph S. Cooke, PE
Senior Engineer



J. Wade Turner, PE
Kentucky Area Manager/Principal



Peter C. Frederick
Office Manager/Principal

Attachments: Project Estimate-KU Provided Sheets
Copies Submitted: 3 (one original and two copies)

MACTEC Engineering and Consulting, Inc.
2456 Fortune Drive, Suite 100 • Lexington, KY 40509 • Phone: 859.255.3308 • Fax: 859.254.2327

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**LOUISVILLE GAS & ELECTRIC CO.
MILL CREEK POWER PLANT – FLARITY ROAD 345KV TRANSMISSION LINE PROJECT
REQUEST FOR QUOTE, SCOPE OF WORK AND SPECIFICATIONS**

Louisville Gas & Electric Co. (LGE) is interested in obtaining a proposal with a company or consortium that is capable of self-performing the geotechnical analysis work for our Mill Creek - Hardin County 345kv transmission line (section 1) a distance of approximately 20.5 miles. The successful proposal should provide all necessary field exploration, laboratory testing, and engineering geotechnical analysis for the project scope of work listed below. LGE reserves the option to award any or all of a proposal.

Amendment: Section 2 and 3 the addition of geotechnical analysis work for our Mill Creek - Hardin County 345kv transmission line a distance of approximately 21.5 miles. And provide Best Management Practices (BMP), erosion plans and maps for approx. 31.1 miles from Mill Creek – Hardin Co, excluding the 10.9 miles of Fort Knox Property.

1.0 SCOPE OF WORK

Provide complete geotechnical analysis for the 20.5 mile Mill Creek. – Flarhity road 345kv transmission line per LGE specifications and procedures. This quote shall include a cost analysis to provide each of the unit items listed below.

Amendment: Provide in addition to the above complete geotechnical analysis for the 21.5 miles Flaherty road – Hardin Co 345kv transmission line per LGE specifications and procedures. Also provide a BMP, erosion plan and maps for approx. 31.1 miles from Mill Creek – Hardin Co, excluding the 10.9 miles of Fort Knox Property.

2.0 GENERAL INFORMATION:

- All borings shall be logged by a full time graduate engineer.
- Provide rates for all laboratory testing procedures including but not limited to:
 - Visual soil classification
 - Moisture content
 - Calibrated hand penetrometer
 - Atterburg limits.
 - Unconfined compression test – soil.
 - Unconfined compression test – rock.
 - Consolidation testing – w/one rebound cycle.
 - Triaxial testing – 3 circles. Q test and R test with pore pressure measurement.
 - Grain size analysis.
- Provide labor and equipment rates including but not limited to:
 - Regional mobilization, each.
 - Site to Site mobilization, each.
 - Split spoon sampling, each.
 - Shelby tube sampling, each.
 - Hollow stem auger drilling per foot.
 - Solid stem auger soundings per foot.
 - N size rock coring per foot.
 - Per diem (daily per man)
 - Dozer time per hour.
- LGE/KU will supply staking of borings for drilling.

- Tower types involved in this project:
 - Type TAD double circuit dead-end tower see American Bridge drawing T-12852 for details.
 - Type AD double circuit dead-end tower see American Bridge drawing T-12950 for details.
 - Type E-MOD double circuit dead-end tower see American Bridge drawing T-11015-A for details.
 - Type 3DS single circuit dead-end tower see American Bridge drawing T-12540 for details.
 - Type 3CS single circuit angle tower see American Bridge drawing T-12538.
 - Type L23 single circuit dead-end tower on anchor bolts, see American Bridge drawing J 1477 for details.
 - **Amendment:**
 - Type 2-pole double circuit dead-end poles to be provided per request on contractor
 - Type 3-pole double circuit dead-end poles to be provided per request on contractor

3.0 GENERAL SPECIFICATIONS:

GEOTECHNICAL EXPLORATION – GENERAL SCOPE:

Four borings to a minimum depths ranging from of 25ft to 55ft. were specified in the bid units including 5 ft. rock core in two of the four borings if bedrock is encountered. If bedrock is encountered shallower than 40 ft. depth, the boring shall be extended until auger refusal. Ten feet of rock core shall be obtained below the depth of auger refusal from two of the four borings. Shelby tube samples shall be taken at 5 ft. intervals. Standard Penetration test taken at 2.5 ft. intervals to 15 ft. and 5 ft. intervals thereafter. All borings shall be logged by a full time graduate engineer.

LABORATORY TESTING – SCOPE:

Classify soil samples in accordance with the Unified Soil Classification System. Include Calibrated Penetrometer and moisture content determination testing on all cohesive soil samples. Perform Atterberg limits testing on representative cohesive soils, particularly those with high shrink-swell potential. Perform at least one unconfined compression strength test on each rock core.

ENGINEERING REPORT – SCOPE:

Prepare an engineering report containing a summary of the soil and groundwater conditions encountered, recommendations for the appropriate foundation alternative, including design bearing capacities, shaft friction values, pile capacities, estimated foundation settlement and other information necessary to guide the design and construction of the proposed structure.

STRUCTURE DESIGN – SCOPE:

Perform design calculations to determine, in concert with LG&E Design Team, the most economical lattice tower foundation system. Prepare 24X36 inch size reproducible structural drawings in AUTOCAD 2005 showing the foundation dimensions, elevations, materials, reinforcing steel sizes, details and locations, anchor bolt drawings will be supplied by LG&E/KU as well as all other pertinent information necessary. Provide specifications for any special foundation installation such as driven piles, drilled concrete shafts, etc.

ENGINEERING REPORT – SCOPE:

Prepare an engineering report containing a summary of the soil and groundwater conditions encountered, recommendations for the appropriate foundation alternatives, including design bearing capacities, shaft friction values, pile capacities, estimated foundation settlement and other information necessary to guide design and construction of the foundations for the proposed structure.

4.0 GEOTECHNICAL, STRUCTURAL AND CONSTRUCTION ENGINEERING CONSULTING SERVICES

Provide unit rates fees for appropriate personnel, equipment, laboratory tests and expenses to be used on a time and material basis (after approval of a budget submittal for each authorized task) to be used for consulting on geotechnical, structural and construction related issues or problems that are not included in the scope foundation investigation and structural design services above (or for adjustments in cases where the actual work substantially differs from the scope detailed above).

Notes:

The boring locations are presumed to be accessible to ATV mounted drilling equipment. If a dozer is required to remove trees or to assist the drill rig in gaining access to the exploration site, it will be reimbursed in accordance with the unit rates provided. The use of the dozer must be approved in advance and an estimated cost provided for approval.

Standard Penetration test sampling in the borings will be at 2.5 ft intervals to 10 ft depth and at 5 ft intervals below that depth.

All rock cores will be NX size (nominally 2.375 inches in diameter) and will be stored and transported in boxes designed specifically for the purpose.

The cores shall be transported to a location designated by LG&E at an appropriate time after the completion of the exploration. Soil samples shall be sealed in glass jars marked with the appropriate identifying information.

Bore holes shall be backfilled with bentonite or neat cement grout to within 1 ft of the ground surface at completion with the top plugged with concrete.

For the purposes of this project, each structure location drilled will be considered a single geotechnical exploration, geotechnical laboratory testing project, geotechnical report and structural design. Regardless of whether the results of more than one structure are combined into a single report or plan sheet.

Combined work products must have sufficient definition to permit the clear identification of the soil, rock and water conditions at each site as well as the specific foundation recommendations at each site and the specific structure details for each structure foundation.

Unit site prices shall include both geotechnical and structural engineering recommendations. All drilling, sampling, laboratory testing, and site to site mobilization necessary to complete foundation designs shall also be part of the lump sum bid per site.

Page Down --

5.0 UNIT SPECIFICATIONS:

LG&E Company		AIP#	
Geotechnical units			
MILL CREEK TO HARDIN CO. SECTION 1 345 KV LINE.			
Amendment to Unit			
Contractor:			
Item	Structure number	Description	Totals
5.32	Tower #134	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.33	Tower #140	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.34	Tower #149	Type 3CS single circuit light-angle tower site 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.35	Tower #163	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.36	Tower #175	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.37	Tower #180	Type 3BS single circuit long-span tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.38	Tower #186	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.39	Tower #194	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.40	Tower #202	Type 3CS single circuit light-angle tower site 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.41	Tower #210	Type 3CS single circuit light-angle tower site 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.42	Tower #214	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.43	Tower #222	Type 3CS single circuit light-angle tower site 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	

LG&E Company

AIP#

Geotechnical units**MILL CREEK TO HARDIN CO. SECTION 1 345 KV LINE.
Amendment to Unit**

Contractor:

Item	Structure number	Description	Totals
5.44	Tower #230	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.45	Tower #233	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.46	Tower #236	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.47	Tower #240	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.48	Tower #241	Type 3CS single circuit angle tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.49	Tower #242	Type 3CS single circuit angle tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.50	Tower #245	Type 3CS single circuit angle tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.51	Tower #247	Type 3CS single circuit angle tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.52	Struct. #249	Type 3-120', double circuit dead-end steel poles site. 3 borings to a minimum depth of 30-ft. each as specified under section 2.0	
5.53	Tower #268	Type TAD double circuit angle tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.54	Tower #269	Type TAD double circuit angle tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	

06/11/07

LG&E Company		AIP#	
Geotechnical units			
MILL CREEK TO HARDIN CO. SECTION 1 345 KV LINE.			
Amendment to Unit			
Contractor:			
Item	Structure number	Description	Totals
5.55	Struct. #276	Type 2 – 140', double circuit dead-end steel poles site 2 borings to a minimum depth of 30-ft. each as specified under section 2.0	
5.56	Tower #282	Type TAD double circuit angle tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.57	Tower #285	Type HT double circuit angle tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.58	Tower #286	Type TAD double circuit angle tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.59	Tower #287	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
		Project LA – Tower #25 has been changed to Tower #24	
5.60	Tower #24A	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 25-ft. each as specified under section 2.0	
5.61	Tower #24B	Type 3CS single circuit angle tower site. 4 borings to a minimum depth of 25-ft. each as specified under section 2.0	
		BMP Plan (31.1 miles minus 10.9 miles = 20.2 miles). Estimated ½ of the line at a unit rate of \$1,300 per mile and ½ of the line at \$1,800 per mile = \$13,130 and \$18,180. Total of \$31,310.	
		PROJECTED TOTAL FOR LINE ITEMS ON PAGES 4 TO 6:	



engineering and constructing a better tomorrow

June 11, 2007

LG&E/KU
One Quality Street
Lexington, Kentucky 40507
Phone: (859) 367-5664
Facsimile: (859) 367-5766

ATTN: Mr. Tom Masters

Subject: **Cover Letter-Proposal for Geotechnical Analysis Services**
Mill Creek Power Plant – Flarity Road 345kV Transmission Line
Proposal Contract Amendment
Jefferson to Hardin Counties, Kentucky
MACTEC Proposal No. Prop07Lexi-0003
LG&E/KU RFP-RFQ #602387 Amendment Dated June 4, 2007

Dear Mr. Masters:

MACTEC Engineering and Consulting, Inc. (MACTEC), appreciates the opportunity to offer our continued services on this project. As requested, please find the completed pricing on additional units attached to this cover letter. All work shall be covered under the time and equipment rates in the current contract and under the terms and scope set forth therein.

We appreciate your consideration of MACTEC for this work and look forward to working with you on this project.

Sincerely,
MACTEC ENGINEERING AND CONSULTING, INC.

Joseph S. Cooke, PE
Senior Engineer

J. Wade Turner, PE
Kentucky Area Manager/Principal

Peter C. Frederick
Office Manager/Principal

Attachments: Project Estimate-KU Provided Sheets
Copies Submitted: 3 (one original and two copies)

MACTEC Engineering and Consulting, Inc.
2456 Fortune Drive, Suite 100 • Lexington, KY 40509 • Phone: 859 255 3308 • Fax: 859 254 2327

building the future through state-of-the-art architectural design

www.mactec.com

**LOUISVILLE GAS & ELECTRIC CO.
MILL CREEK POWER PLANT – FLARITY ROAD 345KV TRANSMISSION LINE PROJECT
REQUEST FOR QUOTE, SCOPE OF WORK AND SPECIFICATIONS**

Louisville Gas & Electric Co. (LGE) is interested in obtaining a proposal with a company or consortium that is capable of self-performing the geotechnical analysis work for our Mill Creek - Hardin County 345kv transmission line (section 1) a distance of approximately 20.5 miles. The successful proposal should provide all necessary field exploration, laboratory testing, and engineering geotechnical analysis for the project scope of work listed below. LGE reserves the option to award any or all of a proposal.

Amendment: Section 2 and 3 the addition of geotechnical analysis work for our Mill Creek - Hardin County 345kv transmission line a distance of approximately 21.5 miles. And provide Best Management Practices (BMP), erosion plans and maps for approx. 31.1 miles from Mill Creek – Hardin Co, excluding the 10.9 miles of Fort Knox Property.

1.0 SCOPE OF WORK

Provide complete geotechnical analysis for the 20.5 mile Mill Creek. – Flarhity road 345kv transmission line per LGE specifications and procedures. This quote shall include a cost analysis to provide each of the unit items listed below.

Amendment: Provide in addition to the above complete geotechnical analysis for the 21.5 miles Flaherty road – Hardin Co 345kV transmission line per LGE specifications and procedures. Also provide a BMP, erosion plan and maps for approx. 31.1 miles from Mill Creek – Hardin Co, excluding the 10.9 miles of Fort Knox Property.

2.0 GENERAL INFORMATION:

- All borings shall be logged by a full time graduate engineer.
- Provide rates for all laboratory testing procedures including but not limited to:
 - Visual soil classification
 - Moisture content
 - Calibrated hand penetrometer
 - Atterburg limits.
 - Unconfined compression test – soil.
 - Unconfined compression test – rock.
 - Consolidation testing – w/one rebound cycle.
 - Triaxial testing – 3 circles. Q test and R test with pore pressure measurement.
 - Grain size analysis.
- Provide labor and equipment rates including but not limited to:
 - Regional mobilization, each.
 - Site to Site mobilization, each.
 - Split spoon sampling, each.
 - Shelby tube sampling, each.
 - Hollow stem auger drilling per foot.
 - Solid stem auger soundings per foot.
 - N size rock coring per foot.
 - Per diem (daily per man)
 - Dozer time per hour.
- LGE/KU will supply staking of borings for drilling.

- Tower types involved in this project:
 - Type TAD double circuit dead-end tower see American Bridge drawing T-12852 for details.
 - Type AD double circuit dead-end tower see American Bridge drawing T-12950 for details.
 - Type E-MOD double circuit dead-end tower see American Bridge drawing T-11015-A for details.
 - Type 3DS single circuit dead-end tower see American Bridge drawing T-12540 for details.
 - Type 3CS single circuit angle tower see American Bridge drawing T-12538.
 - Type L23 single circuit dead-end tower on anchor bolts, see American Bridge drawing J 1477 for details.
 - **Amendment:**
 - Type 2-pole double circuit dead-end poles to be provided per request on contractor
 - Type 3-pole double circuit dead-end poles to be provided per request on contractor

3.0 GENERAL SPECIFICATIONS:

GEOTECHNICAL EXPLORATION – GENERAL SCOPE:

Four borings to a minimum depths ranging from of 25ft to 55ft. were specified in the bid units including 5 ft. rock core in two of the four borings if bedrock is encountered. If bedrock is encountered shallower than 40 ft. depth, the boring shall be extended until auger refusal. Ten feet of rock core shall be obtained below the depth of auger refusal from two of the four borings. Shelby tube samples shall be taken at 5 ft. intervals. Standard Penetration test taken at 2.5 ft. intervals to 15 ft. and 5 ft. intervals thereafter. All borings shall be logged by a full time graduate engineer.

LABORATORY TESTING – SCOPE:

Classify soil samples in accordance with the Unified Soil Classification System. Include Calibrated Penetrometer and moisture content determination testing on all cohesive soil samples. Perform Atterberg limits testing on representative cohesive soils, particularly those with high shrink-swell potential. Perform at least one unconfined compression strength test on each rock core.

ENGINEERING REPORT – SCOPE:

Prepare an engineering report containing a summary of the soil and groundwater conditions encountered, recommendations for the appropriate foundation alternative, including design bearing capacities, shaft friction values, pile capacities, estimated foundation settlement and other information necessary to guide the design and construction of the proposed structure.

STRUCTURE DESIGN – SCOPE:

Perform design calculations to determine, in concert with LG&E Design Team, the most economical lattice tower foundation system. Prepare 24X36 inch size reproducible structural drawings in AUTOCAD 2005 showing the foundation dimensions, elevations, materials, reinforcing steel sizes, details and locations, anchor bolt drawings will be supplied by LG&E/KU as well as all other pertinent information necessary. Provide specifications for any special foundation installation such as driven piles, drilled concrete shafts, etc.

ENGINEERING REPORT – SCOPE:

Prepare an engineering report containing a summary of the soil and groundwater conditions encountered, recommendations for the appropriate foundation alternatives, including design bearing capacities, shaft friction values, pile capacities, estimated foundation settlement and other information necessary to guide design and construction of the foundations for the proposed structure.

4.0 GEOTECHNICAL, STRUCTURAL AND CONSTRUCTION ENGINEERING CONSULTING SERVICES

Provide unit rates fees for appropriate personnel, equipment, laboratory tests and expenses to be used on a time and material basis (after approval of a budget submittal for each authorized task) to be used for consulting on geotechnical, structural and construction related issues or problems that are not included in the scope foundation investigation and structural design services above (or for adjustments in cases where the actual work substantially differs from the scope detailed above).

Notes:

The boring locations are presumed to be accessible to ATV mounted drilling equipment. If a dozer is required to remove trees or to assist the drill rig in gaining access to the exploration site, it will be reimbursed in accordance with the unit rates provided. The use of the dozer must be approved in advance and an estimated cost provided for approval.

Standard Penetration test sampling in the borings will be at 2.5 ft intervals to 10 ft depth and at 5 ft intervals below that depth.

All rock cores will be NX size (nominally 2.375 inches in diameter) and will be stored and transported in boxes designed specifically for the purpose.

The cores shall be transported to a location designated by LG&E at an appropriate time after the completion of the exploration. Soil samples shall be sealed in glass jars marked with the appropriate identifying information.

Bore holes shall be backfilled with bentonite or neat cement grout to within 1 ft of the ground surface at completion with the top plugged with concrete.

For the purposes of this project, each structure location drilled will be considered a single geotechnical exploration, geotechnical laboratory testing project, geotechnical report and structural design. Regardless of whether the results of more than one structure are combined into a single report or plan sheet.

Combined work products must have sufficient definition to permit the clear identification of the soil, rock and water conditions at each site as well as the specific foundation recommendations at each site and the specific structure details for each structure foundation.

Unit site prices shall include both geotechnical and structural engineering recommendations. All drilling, sampling, laboratory testing, and site to site mobilization necessary to complete foundation designs shall also be part of the lump sum bid per site.

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5.0 UNIT SPECIFICATIONS:

LG&E Company		Geotechnical units		AIP#
MILL CREEK TO HARDIN CO. SECTION 1 345 KV LINE. Amendment to Unit				
Contractor:				
Item	Structure number	Description		Totals
5.32	Tower #134	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0		
5.33	Tower #140	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0		
5.34	Tower #149	Type 3CS single circuit light-angle tower site 4 borings to a minimum depth of 20-ft. each as specified under section 2.0		
5.35	Tower #163	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0		
5.36	Tower #175	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0		
5.37	Tower #180	Type 3BS single circuit long-span tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0		
5.38	Tower #186	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0		
5.39	Tower #194	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0		
5.40	Tower #202	Type 3CS single circuit light-angle tower site 4 borings to a minimum depth of 20-ft. each as specified under section 2.0		
5.41	Tower #210	Type 3CS single circuit light-angle tower site 4 borings to a minimum depth of 20-ft. each as specified under section 2.0		
5.42	Tower #214	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0		
5.43	Tower #222	Type 3CS single circuit light-angle tower site 4 borings to a minimum depth of 20-ft. each as specified under section 2.0		

06/11/07

LG&E Company

AIP#

Geotechnical units**MILL CREEK TO HARDIN CO. SECTION 1 345 KV LINE.
Amendment to Unit**

Contractor:

Item	Structure number	Description	Totals
5.44	Tower #230	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.45	Tower #233	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.46	Tower #236	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.47	Tower #240	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.48	Tower #241	Type 3CS single circuit angle tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.49	Tower #242	Type 3CS single circuit angle tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.50	Tower #245	Type 3CS single circuit angle tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.51	Tower #247	Type 3CS single circuit angle tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.52	Struct. #249	Type 3-120', double circuit dead-end steel poles site. 3 borings to a minimum depth of 30-ft. each as specified under section 2.0	
5.53	Tower #268	Type TAD double circuit angle tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.54	Tower #269	Type TAD double circuit angle tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	

06/11/07

LG&E Company		AIP#	
Geotechnical units			
MILL CREEK TO HARDIN CO. SECTION 1 345 KV LINE.			
Amendment to Unit			
Contractor:			
Item	Structure number	Description	Totals
5.55	Struct. #276	Type 2 - 140', double circuit dead-end steel poles site 2 borings to a minimum depth of 30-ft. each as specified under section 2.0	
5.56	Tower #282	Type TAD double circuit angle tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.57	Tower #285	Type HT double circuit angle tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.58	Tower #286	Type TAD double circuit angle tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
5.59	Tower #287	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 20-ft. each as specified under section 2.0	
		Project 1A - Tower #25 has been changed to Tower #24	
5.60	Tower #24A	Type 3DS single circuit dead-end tower site. 4 borings to a minimum depth of 25-ft. each as specified under section 2.0	
5.61	Tower #24B	Type 3CS single circuit angle tower site. 4 borings to a minimum depth of 25-ft. each as specified under section 2.0	
		BMP Plan (31.1 miles minus 10.9 miles = 20.2 miles). Estimated 1/2 of the line at a unit rate of \$1,300 per mile and 1/2 of the line at \$1,800 per mile = \$13,130 and \$18,180. Total of \$31,310.	
		PROJECTED TOTAL FOR LINE ITEMS ON PAGES 4 TO 6:	



TRIMBLE COUNTY OVERHEAD LINE CONSTRUCTION CONTRACT (EAST FT. KNOW – FLAHERTY)

This instrument is entered into, effective as of June 1, 2007, between Kentucky Utilities Company (herein referred to as "Company") whose address is One Quality Street, Lexington, KY 40507 and

Irby Construction Company
(hereinafter referred to as "Contractor")

ADDRESS: 817 South State Street

Jackson, MS 39201-5908

The parties hereto agree as follows:

1.0 GENERAL

This instrument shall be a Statement of Work issued by Company as contemplated under that certain GENERAL SERVICES AGREEMENT - E.ON U.S. SERVICES INC. AND AFFILIATES dated [on even date herewith/March 28, 2007] and entered into among the parties hereto (a copy of which is attached hereto for reference purposes and is herein called the "E.ON U.S. Standard Terms and Conditions"). The E.ON U.S. Standard Terms and Conditions, this instrument (and all exhibits and attachments hereto), together with any purchase orders that may be issued by Company in connection with the Work described herein (herein referred to as the "Contract"), shall constitute the entire agreement among the parties with respect to the Work described herein.

Contractor shall perform the following: **Mill Creek Power Plant to Hardin County 345 kV Line Construction E.ON-US Project # 118216 Sections B & C** (the "Project"). Specifically described in Sections 1.1 through 12.0 and the following Attachments:

- Section 0.0 – Scope Overview
- Section 1.0 – General Information
- Section 2.0 – General Specifications
- Section 3.0 – Specifications –Conductor & Accessories
- Section 4.0 – Specifications –Towers
- Section 5.0 – Specifications –Steel & Wood Poles
- Section 6.0 – Specifications –Optical Ground Wire Installation
- Section 7.0 – Specifications – Concrete Drilled Shafts
- Section 9.0 – Construction Units plus T & E Rates
- Section 10.0 –Appendix

hereof (hereinafter referred to as the "Work") and Company shall compensate the Contractor for the Work, under all the terms and conditions hereof.

1.1 Company will use the Contractor as its primary Contractor for services as described in the attached descriptions of work.

1.2 Codes and Standards

1.2.1 All design requirements and information contained herein represent Company's minimum requirements and shall be reviewed by the Contractor for compliance with all local, state, and federal requirements.

1.2.2 The Contractor is responsible for obtaining all applicable permits, except as noted within.

1.2.2.1 Company shall obtain any necessary environmental permits should they be required.

1.3 Conflicts

1.3.1 In the event of a conflict between the body of this instrument, the E.ON U.S. Standard Terms and Conditions, the Specifications, and the Drawings, the following will govern in the order set forth below:

- (a) the E.ON Standard Terms and Conditions;
- (b) the Drawings;
- (c) the Specifications; and
- (d) the body of this instrument.

- 1.3.2 Contractor shall be solely responsible for advising Company in writing of any conflicts between the Specifications and Drawings and the Work, including performance and levels of quality. Contractor agrees that his obligations, liabilities, and warranties shall not be diminished or extinguished due to his/her meeting the requirements of the Specifications/Drawings.
- 1.3.3 Contractor shall perform the Work in accordance with these Specifications, and the attached Standards and Drawings referred to herein. If for any reason it is necessary to deviate therefrom, permission shall first be obtained from Company. Contractor shall perform the Work in a manner consistent with recognized good practice for power plant service and in accordance with such detailed instructions as may be issued by Company.
- 1.4 Before beginning work, the Contractor shall verify all measurements at the Site and shall obtain all necessary additional information for the completion of the Work, including actual location of in place equipment to which the Contractor's work connects and exact location of new and existing structures and equipment, for interference's or difficulties that may exist. Drawings supplied with this instrument are for reference only. Any discrepancies shall be brought to the attention of Company immediately.

1.4 Safety

- 1.5.1 Safety is of utmost importance to Company (Safety Rules and Regulations are incorporated as part of this agreement.
- 1.5.2 Hard hats supplied by Contractor for their employees must be of one color. Red hard hats are prohibited by Contractors on this Project.
- 1.5.3 Company expects the Contractor to comply with all Company Safety Rules and Regulations and local, state, and federal regulations. In addition to the items above, particular attention should be given to the following safety issues:
- 1.5.3.1 Fall Protection Company enforces fall protection for heights greater than four feet.
- 1.5.3.2 Eye Covering. Refer to Company Eye Covering Policy.
- 1.5.3.3 Lead Paint and Asbestos.
- 1.5.3.4 Hard Hats.
- 1.5.3.5 Confined Space. Refer to Company Web Confined Space Procedures.
- 1.5.3.6 Respirators. Respirators must be worn during any oxygen-acetylene burning or welding, and arc welding.
- 1.5.3.7 Excavation.
- 1.5.4 Contractor employees are prohibited from wearing white coveralls during any phase of the Work. White coveralls are exclusively used for asbestos workers. Other limitations on other colors of coveralls may be required.
- 1.5.5 Contractor shall not work any employee more than ten consecutive hours in any day or work more than six consecutive days in any week. If it is necessary to exceed these requirements to maintain the work schedule, written permission from Company must be obtained before Contractor will be allowed to deviate from the above.
- 1.5.6 The safety management and expectations for contractors and subcontractors are exactly the same: NO ONE GETS HURT WHILE WORKING ON COMPANY SYSTEMS.
- 1.5.7 All contractors and subcontractors working on Company properties SHALL follow all safety rules and work procedures that are found in the O.S.H.A. 1910-269 standards, Company safety rules and regulations and the safety manuals for the contractors and subcontractors.
- 1.5.8 It is the responsibility of the Contractor to have "all" of its employees on the Company's system trained and tested with data verifying each employees training entered by the Contractor into the Company's Passport Database. The Contractor must notify the Company when a subcontractor is being used on Company's Systems and must insure the subcontractor employees are also trained and tested with data verification in the Company's Passport Database.

- 1.5.9 Proper Personal Protective Equipment shall be used at all times which includes safety footwear.
- 1.5.10 Daily job briefing must be done following O.S.H.A. 1910-269 standards. This process should be used to define the hazards associated with the daily job activities. If the scope of work changes, there must be an additional job briefing completed.
- 1.5.11 Safety audits will be performed by Company personnel and there must be safety audits completed by the Contractor on their crews and subcontractor crews. Supporting paperwork verifying audit findings must be provided to the Company Safety Management personnel.
- 1.5.12 Contractor shall provide an activity based hazard analysis (JHA) for those jobs with the highest injury / illness rates, and those jobs with the potential to cause severe or disabling injuries or illness.
- 1.5.13 Contractor shall designate a responsible supervisor to act as a full time safety representative to visibly oversee the contractor's work on the job site.
- 1.5.14 Contractor shall complete and document job briefings and submit to E Company's job proponent.
- 1.5.15 Contractor shall notify the Company whenever subcontractors are used and they shall be trained and certified through Company's passport program.
- 1.5.16 Contractor shall provide a workforce that is compliant trained and qualified to perform the work.

2.0 DESCRIPTION OF WORK

- 2.1 Except as otherwise expressly provided herein, Contractor shall supply all labor, supervision, materials, equipment, tools, and warehousing, and shall pay all expenses necessary or appropriate in the performance of the Work as defined in the enclosed specification documents. The Contractor shall unload, store, protect, remove from storage, and erect the Project as described within the specifications.
- 2.2 NO MATERIALS CONTAINING ASBESTOS SHALL BE SUPPLIED OR USED IN THE PERFORMANCE OF WORK.
- 2.3 Without limitation, Contractor shall meet all requirements set forth in the lead construction standard 29 CFR 1926.62 and confined spaces in accordance with 29 CFR 1910.146.
- 2.4 The Work shall be consistent in quality, service, price, and timing and include, but not be limited to, the enclosed written description of the Work as shown on any of the Drawings and Specifications:
 - 2.4.1 See attached: "Sections 0.0 through 10.0 in Attachments and any pertinent drawings as distributed by Company Engineering"
- 2.5 Company shall furnish or cause to be furnished to Contractor without cost to Contractor the following items for or in connection with performance of the Work:
 - 2.5.1 Lead paint abatement. Contractor shall give Company 48-hour notice of areas where lead paint needs to be abated. The Contractor shall clearly mark with spray paint areas requiring lead abatement.
 - 2.5.2 Asbestos abatement. Contractor shall give Company 48-hour notice of areas where asbestos needs to be abated.
 - 2.5.3 Other items as expressly described in the Drawings and Specifications.
 - 2.5.4 The Contractor shall furnish field supervision personnel who are knowledgeable of the site, the work rules, the safety rules and regulations, the gate procedures, and any other equipment and property used in the performance of the Work, and are knowledgeable of efficient, state of the art techniques for performance of the Work.
 - 2.5.5 The Contractor shall have the experience and capability to cover the full breadth of services detailed in this document.

3.0 SPECIFICATIONS, EXHIBITS AND DRAWINGS

All Work shall be performed in strict accordance with the following specifications, exhibits and drawings which are incorporated herein by reference.

3.1 SPECIFICATIONS

Defined in Attachments (Sections 0.0 through 10.0 Project 118216 and associated drawings listed below)

3.2 DRAWINGS

The Project includes the following drawing sets:

- 1) (15) 345KV plan & profile sheets numbered sheet 1 of 15 through 15 of 15.
- 2) (5) MACTEC Geologic maps 3112070387-SP-39-45, SP-46-59, SP-60-100, SP-101-107, and SP-108-133.
- 3) (10) detail sheets 118216-D1 through 118216-D10.
- 4) (1) foundation detail sheet 118216-F1.
- 5) (27) American Bridge erection and setting drawings for type 3CS, 3DS, EMOD, and B5 towers.
- 6) (9) Penn Summit Tubular typical H-frame assembly drawings.
- 7) (2) H-frame pole setting drawings DETAIL 1 PS-DC and DETAIL 1 PS-SC.

4.0 TEMPORARY FACILITIES AND UTILITIES

4.1 FURNISHED BY CONTRACTOR

Except as expressly set forth in Section 2.6, Contractor shall supply, install, properly maintain and remove all temporary facilities and utilities necessary for performance of the Work as determined by the Company site coordinator on a per job basis, including but not limited to:

- 4.1.1 All temporary buildings
- 4.1.2 All sanitary facilities, including janitorial services
- 4.1.3 First-aid facilities
- 4.1.4 Fuels and lubricants
- 4.1.5 Transportation on and off site
- 4.1.6 Communication facilities
- 4.1.7 Maintenance of Contractor's laydown, storage and work areas and roads within such areas
- 4.1.8 Rigging, scaffolding and all equipment for erection
- 4.1.9 All cranes and other necessary equipment and materials for lifting and moving equipment.
- 4.1.10 All small tools
- 4.1.11 Temporary lighting
- 4.1.12 All standard expendable or consumable construction items and supplies
- 4.1.13 Containers, ice, cups for drinking water
- 4.1.14 Cost of unloading, loading and storing all materials, equipment and supplies
- 4.1.15 Transportation of Contractor's employee's from the parking lot to the job site.
- 4.1.16 Dumpsters and waste disposal in accordance with the Article title "Cleanup" set forth in the attached E.ON U.S. Standard Terms and Conditions. Disposal shall be in landfills per the E.ON U.S. Standard Terms and Conditions.

4.2 FURNISHED BY COMPANY

Company shall supply to the Contractor the following:

- 4.2.1 Storage space adjacent to the construction site for performance of Work. However, the Contractor shall be responsible for security of materials stored in these areas. Company must approve the location of all storage areas in advance.
- 4.2.2 Space for the location of material trailer(s), and tool trailer(s) in the area designated by Company.

5.0 TERM

- 5.1 This Contract shall become effective June 1, 2007 and continue through May 31, 2008, subject to the Article titled "Termination at E.ON U.S.'s Option" set forth in the attached E.ON U.S. Standard Terms and Conditions. Company makes no promise or guarantee as to the amount of Work to be performed under this Contract.

6.0 PERFORMANCE SCHEDULE

6.1 SCHEDULE

- 6.1.1 Contractor shall perform the work in accordance with the following schedule:

Date	Prebid Meeting	04/12/07
	Bid Due Date	05/07/07
	Begin Work	06/18/07
	Complete Work	06/18/08

- 6.1.2 Due to financial damages which Company will incur if this system is not operational on the above dates, time is of the essence. It is the Contractor's total responsibility to adhere to the schedule submitted. The Contractor shall expend all necessary manpower and resources to maintain steady progress to meet the scheduled dates at no additional cost to Company. This includes expediting all subcontractors as necessary. It is also the Contractor's responsibility to inform Company immediately if the schedule has slipped.

- 6.2 Contractor shall notify Company of all subcontractors and the subcontractor's employees to be utilized in performance of Work at least forty-eight (48) hours prior to start of subcontractor's Work. Subcontractors will be denied access to Company facilities without the required notification. Contractor shall be responsible for performance, training, and safety of work by subcontractor; a Contractor's representative must be onsite at all times that a sub-contractor is working.
- 6.2.2 Contractor shall arrange or coordinate material storage at the job site or shop to avoid material theft or damage.
- 6.2.3 Contractor shall notify Company's site coordinator at least one full working day prior to working any Saturday, Sunday or Company holiday.

7.0 [RESERVED]

8.0 SPECIFIC REPORTING REQUIREMENTS

Contractor shall promptly submit the schedules and reports set forth below:

- 8.1 **To be defined as project dictates.

9.0 COMPENSATION

9.1

Full compensation to Contractor for full and complete performance by Contractor of the Work, compliance with all terms and conditions of this Contract and for Contractor's payment of all obligations incurred in, or applicable to, performance of the Work (hereinafter referred to as the "Contract Price") shall be on a per unit basis, unless noted otherwise. Contractor shall be compensated based on the actual number of units constructed per the attached unit price schedule. Any work outside these units must have prior documented approval by authorized Company representatives and will be billed per the attached time and equipment rates.

9.1.1 For accounting and progress payment purposes, the lump sum is broken down as follows:

Materials	\$ _____
Sales Tax	\$ _____
Labor	\$ _____
Equipment	\$ _____ n/a _____

Total \$ base price of _____ not to exceed _____ which includes contingency for adders as needed -- **note any potential adders must have pre-approval from designated E.ON authorized personnel to be considered for billing__

9.1.2 At Company's sole option, adjustments to the Contract Price for changes in the scope or description of Work shall be on a per unit basis as set forth in this Contract or in accordance with predetermined Labor and Material Rate Schedules attached and made a part of this Contract.

9.2 SPECIAL INSTRUCTIONS

9.2.1 See the Article titled "Invoicing and Payment Procedure" in the E.ON U.S. Standard Terms and Conditions.

9.2.2 Invoices shall include Contract No. 21882 and shall be prepared in one original and one copy to be distributed as follows:

Original: Accounts Payable Department
 Kentucky Utilities c/o
 Tom Hines
 198 W. Broadway
 Danville, KY 40422

10.0 WARRANTY

Warranty provisions are specified in the E.ON U.S. Standard Terms and Conditions and apply to Seller and Seller's subcontractors and suppliers. If modified warranty terms are agreed to by Company, these modifications will be incorporated into the Purchase Order.

11.0 DRUG TESTING

In addition to, and not in lieu of, any other legal obligation imposed by this Contract, the Contractor shall be required to plan and implement a drug and alcohol testing policy in accordance with the testing requirements and methodologies set forth in, without limitation, Title 49 of the United States Code of Federal Regulation, Parts 199, 382, 391, 392 and 395, and any amendments thereto. Notwithstanding any definition of "employee" set forth in applicable regulations, the Contractor's plan shall cover all employees performing Work under this Contract, regardless of the nature of the Work to be performed by the employee at this job site. The Contractor shall defend, indemnify and hold harmless Company, affiliated companies, and all of their directors, officers, employees, agents and representatives from any and all liability, loss, or expense, including attorney's fees, arising by claims of any person or entity and related directly or indirectly to the Contractor's acts or omissions, or to the acts or omissions of its subcontractors, agents or representatives, in carrying out the drug and alcohol testing policy. Contractor shall maintain records in accordance with applicable regulations and, upon reasonable notice, shall allow inspection and audit of its records by Company with respect thereto. Furthermore, upon reasonable notice, Contractor shall allow Company to conduct on-site inspections of its drug and alcohol testing procedures and methodologies if requested. Any subcontractors to be used by Contractor in carrying out its obligations under this section shall be subject to the approval of Company.

11.0 CONTRACTUAL NOTICES

See the Article titled "Notices" in the E.ON U.S. Standard Terms and Conditions for provisions governing contractual notices.

11.1 Company address: Kentucky Utilities Company
One Quality Street
Lexington, Kentucky 40507
Attn: Tom Masters, C.P.M.
Supply Chain
(859) 367-1268
(859) 367-1177 (FAX)

11.2 Contractor's Address: Irby Construction Company
817 South State Street
Jackson, MS 39201-5908
Attn: John Hopper, VP Operations
(601) 709-4729 ext. 7227
(601) 960-7231 (FAX)

12.0 ENTIRE AGREEMENT

This instrument, together with all exhibits and attachments hereto (including, without limitation, all specifications and drawings attached hereto) and the E.ON Standard Terms and Conditions, constitutes the entire agreement between the parties relating to the Work and supersedes all prior or contemporaneous oral or written agreements, negotiations, understandings and statements pertaining to the Work or this Project.

The parties hereto have executed this instrument on the dates written below, but it is effective as of the date first written above.

KENTUCKY UTILITIES COMPANY
BY: [Signature]
TITLE: Supply Chain Mgr
DATE: 6-12-07

IRBY CONSTRUCTION COMPANY
BY: [Signature]
TITLE: Vice President / Operations
DATE: June 11, 2007

MILL CREEK POWER PLANT TO HARDIN COUNTY 345 KV LINE
E.ON-US PROJECT #118216
SECTIONS B AND C

SCOPE

This specification defines the technical requirements and procedures for concrete work, steel and wood pole, lattice steel tower, conductor, shield wire and OPGW installation for the construction of miles of the Mill Creek to Hardin county 345 KV line. Construction will begin at tower #39 and end at tower #133.

WORK INCLUDED

The Contractor shall provide all labor, equipment, tools, material and supervision to complete the construction of miles of 345 KV line and associated work described below:

- 1) Install (20) concrete drilled shaft foundations as shown on drawings. Contractor shall furnish all labor, equipment and material.
- 2) Install (56) single circuit 345 KV steel H-frame structures and (21) double circuit steel 345 KV H-frame structures including all insulator assemblies, grounding, etc as shown on drawings. Steel structures, insulators and grounding material provided by E.ON-US.
- 3) Install (8) type 3DS 345 KV dead-end lattice steel towers, (7) type 3CS 345 KV medium angle lattice steel towers, (3) type EMOD 345 KV double circuit dead-end lattice steel towers, and (1) type B5 138 KV dead-end lattice steel tower. Lattice steel towers, insulator assemblies and grounding material provided by E.ON-US.
- 4) Install (2) wood pole 138 KV dead-end H-frame, (1) 138 KV tangent H-frame, and (1) wood pole 69 KV dead-end H-frame structures including cross arms, X-braces, guys, anchors, etc.
- 5) Install 10.80 miles of 6-954 ACSR 45/7 conductors beginning at tower #39 and ending at tower #111 including all spacers, dampers, clamps and compression fittings. Conductor, spacers, dampers, clamps and compression fittings supplied by E.ON-US.
- 6) Install 10.80 miles of 1-7 no 8 ALWD shield wire and 1- OPGW beginning at tower #39 and ending at tower #111 including all dampers, clamps, marker balls,

etc. 7 no. 8 ALWD, OPGW, dampers, clamps and marker balls furnished by E.ON-US.

- 7) Install 2.58 miles of 6-954 ACSR 45/7 and 3-954 ACSR 45/7 conductors beginning at tower #111 and ending at tower #133 including all spacers, dampers, clamps and compression fittings. Conductor, spacers, dampers, clamps and compression fittings supplied by E.ON-US.
- 8) Install 2.58 miles of 2- OPGW beginning at tower #111 and ending at tower #133 including all dampers, clamps, etc. 7 no. 8 ALWD, OPGW, dampers, clamps furnished by E.ON-US.
- 11) Transfer 27 attachments of 636 ACSR conductor and (8) attachments of 7/16" steel static wire at various locations for existing 138 KV. Transfer (6) attachments of 392.5 ACAR at various locations for existing 69 KV.
- 12) Remove 2.58 miles of 138 KV wood H-frames, 3-636 ACSR conductors, 2- 7/16" EHSS shield wire including all insulators, grounds and miscellaneous material.
- 13) Remove 0.38 miles 8M CW shield wire and (5) top wood poles.

Section 1.0 General Information

GENERAL INFORMATION

MILL CREEK POWER PLANT TO HARDIN COUNTY 345 KV

**PROJECT NUMBER 118216
CONTRACT AND SPECIFICATIONS
FOR THE CONSTRUCTION OF MILL CREEK TO HARDIN COUNTY 345 KV BETWEEN
TOWER #39 AND TOWER #133**

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1.0 GENERAL INFORMATION

1.1 Definitions

The following terms when used in the Contract shall have the meanings specified.

- 1) Engineer - The person designated by the Company to act as project manager for all work covered by this Contract.
- 2) Inspector - The person or persons designated by the Engineer to act as the Company's authorized representative in the capacity of an Inspector for all work covered by this Contract.

1.2 General Provisions Relating to Bids

Bids shall be submitted upon the construction unit forms provided herein.

Should any persons contemplating the submission of a bid be in doubt as to the correct meaning of any part of the Contract, he may obtain an interpretation by contacting the Engineer.

Any addenda to these specifications issued prior to award of the Contract by the Company shall be considered a portion of the Contract.

The Company reserves the right to accept or reject any or all bids for any reason and to award the Contract in the best interests of the Company.

1.3 Construction Material

The following manufacturers have been selected to provide the required material items:

- 1) Penn Summit - Tubular steel H-frames.
- 2) Alcoa Conductor Accessories - Compression Deadends and Splices, Repair Sleeves, and Conductor Dampers.

- 3) PLP - Conductor spacers.
- 4) (To be determined) - Optical Ground Wire.
- 5) ABB - Tower Steel.

1.31 Construction Material delivery schedule

- 1) Tubular steel H-frames to begin arriving on 5/21/07 and complete by 07/31/07.
- 2) Lattice tower steel to begin arriving on 06/23/07 and complete by 08/23/07.
- 3) Braced post insulators, 10"-30,000# porcelain insulators, clamps, compression bodies and line hardware to begin arriving on 07/23/07 and complete by 08/23/07.
- 4) 10"-40,000# porcelain insulators to begin arriving on 09/03/07 and complete by 10/01/07.
- 5) Conductor, 954 ACSR 45/7, shield wire 7 no.8 ALWD and OPGW to begin arriving on 08/15/07 and complete 09/03/07.

The Company shall furnish the material items specified above to the Contractor at a storage site at West Point Kentucky storage yard located on Main Street and U.S.31W on Fort Knox property.

Material furnished by the Company and located at the Company's storage yard shall be loaded on the Contractor's vehicles by the Contractor at his expense. The locating of the load on the Contractor's vehicles and the tie-down of the load shall be done and directed by the Contractor. The tie-down devices shall be furnished by the Contractor.

The Contractor shall be responsible for the risk of loss of all material furnished him by the Company until such material is incorporated in the Work and such Work is accepted by the Company. However, Contractor shall not have title or ownership interest in any such material and shall keep such material separately stored and identified as being the property of the Company.

All work of loading, unloading, hauling, handling, storing, caring for, reloading, rehauling of all Company furnished material as required to transport all such items from the point of delivery to storage areas and to the place of installation, and to return any materials which are to be returned to the Supplier or the Company, shall be performed by the Contractor. The Contractor shall sign a material receiving report after picking up Company furnished materials.

Material furnished to the Contractor shall be stored off the ground; blocked and supported where necessary to prevent overstressing, bending or damage; and protected from weather where necessary to protect packaging. Material shall be stacked, binned and/or piled according to like kinds of items and packaging and placed in accessible rows and order in accordance with good warehousing practices.

Contractor shall assume full responsibility for care, custody and control of Company furnished material described herein during the performance of the work specified. This responsibility shall include, but not be limited to, responsibility for protection from loss, damage and/or theft of material, work in progress and/or completed work as described herein. At the completion of the work, the Contractor shall be responsible for the delivery of all Company furnished unused material to the Company's warehouse facility and storage yard. All original inventory control records shall become the property of the Company and shall be delivered to the Company as part of the satisfactory completion and acceptance of the work performed under this Contract.

The Contractor will be charged for any material lost or damaged beyond repair after delivery to the Contractor. The Contractor will be charged for any material not installed or returned to the Company, the same amount of dollars that the material cost the Company at the point of delivery or an amount equal to the replacement cost to the Company at such point of delivery, whichever is greater; or if directed by the Engineer during the progress of the work, the Contractor shall replace entirely at his expense (for which the Contractor shall receive no reimbursement from the Company) such material with equivalent grades of material or articles as approved by Company Standards and the Engineer and shall deliver such material to the site, as directed. Any material damaged after delivery to the Contractor, which in the opinion of the Engineer can be repaired satisfactorily, shall be repaired entirely at the expense of the Contractor and the Contractor shall receive no reimbursement from the Company by reason of such repair.

The unit costs submitted in the Bid Proposal shall exclude the material purchase costs for all items listed above, but the Contractor's costs for loading, unloading, storing and

safeguarding the materials furnished by the Company to the Contractor shall be included in the Contractor's bid for installing said materials and no separate payment shall be made therefor.

All materials used in construction which make up a permanent part of the finished line will be furnished by the Company. All rope slings, bolts, clevises, rider arms, blocks, etc. required for construction as well as any other expendable materials required for construction of the line shall be provided by the contractor. None of the materials furnished by the Company which go to make up a permanent part of the line shall be used by the Contractor on a temporary basis.

Section 2.0 General Specifications

GENERAL SPECIFICATIONS

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2.0 SPECIFICATIONS: GENERAL**2.1 Contractor's Responsibilities**

The Contractor shall be responsible for the following:

- 1) Receiving and warehousing of materials supplied to the Contractor as listed in General Information at a storage site provided by the Company. Contractor shall verify the Company's inventory records and accept responsibility for warehousing and storage of the materials within five (5) days after award of the Contract. Contractor shall load, transport, install and/or return all material items supplied from Company storage yards which have been assigned to the Contractor. A procedure will be established for the Contractor to purchase replacement materials from the Company's warehouses. Material items that have been issued to the Contractor that are lost, stolen or damaged shall be replaced at the Contractor's expense.
- 2) Providing the manpower, equipment, and supervision to adequately construct the line within the time allotted. Providing a suitable means of communication between his employees and working out with the Engineer a system of cross-communication by radio between the Contractor and at least two Company vehicles.
- 3) Complying with all agency and private property owners' requirements.
- 4) All injury to livestock caused by Contractor's personnel.
- 5) Giving the Company reasonable notice of starting new work and shall provide without extra charge, reasonable and necessary assistance and facilities for inspection. All work and material shall be at all times open to the inspection, acceptance, or rejection by the Company's Inspector.
- 6) Acquiring, at his expense, all permits, licenses or certificates required of contractors by local, state or federal statutes.

- 7) Locating underground facilities such as gas, water and sewer lines, drain tiles, etc. which may be encountered in digging or drilling holes and performing his work in such a manner as to prevent damage to such facilities. The resident engineer will provide as much assistance as possible in locating existing obstructions. The approximate location of known cables and/or pipelines is shown on the plan and profile drawings. The Contractor shall repair immediately any damaged facilities to the satisfaction of the facility owner and shall secure and submit to the construction inspector one copy of a written release, signed by representatives of the Contractor and facility owner suffering the damages within thirty (30) days after completion of the repair work.
- 8) Repair of ALL damage to public roads including furnishing and spreading of rock to the satisfaction of the governing body. The Company will furnish rock as needed on any private road and the Contractor will spread the same without cost to the Company. The Contractor shall restore the roads to the satisfaction of property owners or otherwise adjust damages and obtain signed releases.
- 9) Notifying the Company in writing within 3 working days of any claims or complaints made by any person arising out of or connected with work performed under this contract. Such notice shall also be given to Contractor's insurance carrier for action as required. This notice shall include but not be limited to:
 - a) The name and address of the person making the claim or complaint.
 - b) The nature of the claim or complaint including a description of alleged damages to persons or property.
 - c) The location of alleged damages.
 - d) The time and date when alleged damages occurred.
 - e) The name and address of Contractor's employee or employees to whom the claim or complaint was made.

- f) The names and addresses of any witness to alleged damages.
- 10) Securing the necessary working authorization from other utilities when crossing their lines that require de-energizing.
- 11) Familiarizing himself with the character of the soil topographic relief, use of the land traversed by the route of the line, as well as roadways, railroads, streams and other conditions pertaining to the right of way which might affect performance of the work outlined herein. The Contractor shall, at all times, endeavor to maintain favorable public relations.
- 12) Consulting property owners along route of line prior to entering their property with construction equipment regarding installation of gates or gaps in fences which must be crossed and in the use of private gates and roads so that the owner will have a minimum of inconvenience and damage or loss of crops or livestock.
- 13) Securing rights of ingress and egress (in writing and supply Company with a copy, at Contractor's expense) over lands OTHER THAN lands over which easements have been granted or ingress and egress permits signed for reasonable access to the right of way; and assume responsibility for their maintenance and restoration.

2.2 Company's Responsibilities

The Company shall be responsible for the following:

- 1) Providing payment for all material items furnished as designated in General Information.
- 2) Obtaining the transmission line right of way.
- 3) Providing basic line design.
- 4) Providing quality control inspection of the contract work.

- 5) Assisting Contractor in making contacts and arrangements for crossing utility lines as required by Contractor for proper clearances during stringing operations.
- 6) Cooperating in any way possible regarding technical or construction advice as requested by Contractor, however, the methods and equipment used to obtain the results required by these specifications will be the sole responsibility of the Contractor.
- 7) Obtaining clearances required for construction on company facilities.

2.3 Hunting

No hunting is allowed on the project. No firearms shall be allowed on the project except for security personnel.

2.4 Engineering and Surveying

The Contractor shall be responsible for supplying the survey equipment and manpower necessary to ensure that the phase conductors are sagged in accordance with Conductor Specifications. It shall be the Contractor's responsibility to supply the construction engineering not specifically reserved for the Company in these specifications.

2.5 Right of way and Construction Roads

All construction roads shall be flagged by the Contractor and approved by the Inspector and/or the appropriate representative of the landholder prior to any clearing or cutting of roadbeds. (The Contractor shall be responsible for construction roads that he may deem necessary, both on and off the transmission line right of way). It shall be permissible to simply drive over vegetation intercepted by access roads wherever possible rather than remove it. The boundaries of all roads will be clearly marked before construction to prevent equipment operators from making unnecessary wide roadbeds.

Existing roads shall be used whenever possible. All existing roads utilized during construction shall be left in the same or better condition than originally found.

Construction access roads are subject to requirements of persons or agencies granting the right of way. Construction requirements, location, restoration, etc. will be stipulated by the agency or private landowner.

The Contractor should carefully study the Plan and Profile maps of the line to determine location of access roads and impacts, if any, on the Contractor's construction plan.

Trees and brush removed in the construction of roads shall be disposed of as directed by the landowner (or his agent) or as directed by the inspector.

Roads shall be maintained to the standards to which they were constructed while the Contractor is working in the area and until the Company's inspection in the area is completed.

Care is to be exercised so that fences along or across the transmission line right of way are not damaged. Should damage occur to any fence, it is to be repaired immediately to original condition at the Contractor's expense. In no case shall a fence be left down overnight. Any damage to fences is to be reported to the Inspector immediately.

For EHV lines any wire fence that parallels the transmission line within 200 feet of the centerline of the tower or pole line shall be grounded at points not more than 500 ft. apart, with ground rods.

At each point where the transmission line crosses a wire fence, ground rods shall be installed on the fence at the right of way lines and the centerline of the right of way.

For EHV lines fences which are already on metal posts shall be considered to be grounded.

Where construction activities require the movement of equipment or personnel through existing fences, and gates have not been previously installed, the Contractor shall install gates for such access and agrees to use same. Before cutting the fence for the gate, the Contractor shall install adequate braces and gate posts on each side of the gate opening, as shown on the gate installation drawing so that the fence on either side will remain with full tension in its wires. Gates, hinges, chain, locks and gate post

will be furnished by the Company, however, the Contractor will bear cost of labor to install and remove same as required by landowners.

After completion of the line construction work, the Contractor shall remove all the temporary gates along the right of way, dispose of all debris and material removed and restore the fences to as near their original condition as possible, unless instructions are issued by the construction inspector, or are included in the right of way special agreements, to leave certain gates in place.

The Contractor shall provide the necessary tools, materials, and labor for splicing fences where damage has occurred or gates have been removed.

The Contractor shall be responsible for arrangements for seeding disturbed areas on the right of way including construction roads when disturbance is necessary in the performance of the work.

The Contractor shall be responsible for any unauthorized disturbance which may occur. The Contractor shall fill all ruts and holes left by his equipment and grade access roads and disturbed areas of the easement strip, as necessary to return the right of way to as near its original condition as practicable and to the satisfaction of the Inspector.

2.6 Use of Construction Roads

Existing roads shall be marked for use as access roads wherever feasible. Such roads may require upgrading by the Contractor in order to accommodate construction traffic. It is the intent of the Company to hold construction of new roads to the absolute minimum.

2.7 Public Safety and Protection of Property

The Contractor shall so conduct its operation as not to close or obstruct any portion of any railroad, road or other property until notified by the Company that it has permits therefor, obtained from the governmental or other authorities having jurisdiction thereof. If any of the above are required to be kept open and shall be damaged or rendered unsafe by the Contractor's operations, the Contractor shall, at its expense, make such repair and provide such temporary guards, bridges, lights and other

signals as necessary for public safety and as shall be acceptable to the governmental or other authorities having jurisdiction thereof. Parties owning other right of way shall not be denied access to their right of way as a result of construction activities. Unless otherwise specifically provided in the Contract, the Contractor shall not do any work that would affect any pipeline, telephone, telegraphic or electric transmission line, irrigation ditch or other structure, nor enter upon the right of way or lands appurtenant thereto, until notified by the Company that proper authority has been obtained therefor. Thereafter and before it begins such work, the Contractor shall give the Company due notice of its intention to do so, and it shall give said companies or parties convenient access and reasonable cooperation in their removing, shoring, supporting or otherwise protecting such lines, ditches and structures and for replacing same. The Contractor shall not be entitled to any extension of time or any extra compensation on account of any postponement, interference or delay caused by any such line, ditch or other structure being on or adjacent to the site work.

The Contractor shall preserve and protect all cultivated and planted areas and vegetation such as trees, plants, shrubs and grass on or adjacent to the premises, which, as determined by the Company, do not reasonably interfere with the performance of the work. The Contractor shall be held responsible for damage to any such areas and vegetation and for unauthorized cutting of trees and vegetation, including without limitation, damage arising from the performance of its work through operation of equipment or stockpiling of materials. The Contractor shall be required to restore any such damaged areas and to replace damaged trees and vegetation at his expense. Reseeding both within and outside of the right of way disturbed by the Contractor's operation shall be done by the Contractor as part of the work.

The Contractor shall take reasonable precautions to protect, in place all public land survey monuments and private property corners. In the event that any such land markers or monuments are destroyed during construction, depending on the type of monument destroyed, the Contractor shall at his expense see that they are re-established or referenced in accordance with the following:

- 1) The procedures outlined in the "Manual of Instructions for the Survey of Public Land of the United States".
- 2) The specifications of the County Surveyor.

The Contractor shall remove, repair, replace and/or construct improvements which are damaged, destroyed or made necessary which arise from the performance of its work.

2.8 Erosion Control

Roads shall be closed (put to bed) at the end of construction.

All closed road beds and other areas where soil disturbance has occurred shall be seeded by Contractor as part of the Work.

Planting of grasses and browse shall be done during the season most favorable for an adequate catch.

2.9 Waste Disposal

Disposal of any materials, wastes, effluents, trash, garbage, oil, grease, chemicals, etc. shall be subject to applicable Local, State, and Federal laws and regulations. If any waste material is dumped in unauthorized areas, the Contractor shall remove the material and restore the area. If necessary, contaminated ground shall be excavated, disposed of, and replaced with suitable fill material compacted and finished with topsoil all at the expense of the Contractor.

All non-combustible wastes such as conductor, ceramic or metal scraps shall be hauled away and properly disposed of.

Combustible wastes such as packaging material shall be hauled away and disposed of upon leaving any work area.

2.10 Burning

Generally, burning shall not be permitted. In instances where disposal by burning seems preferable, it shall require the prior approval of the Company and shall be done in conformance with applicable laws and regulations.

In cases where the landowner or Federal agency with jurisdiction would prefer that cleared vegetation be burned, the material shall be piled by the Contractor in such a manner and in such a location as to minimize fire risk. The actual burning shall then require Company approval and shall be done in conformance with applicable laws and regulations.

2.11 Cleanup

The Contractor shall cleanup the work as it progresses from day to day and shall remove from the right of way and adjoining premises, driveways, roads and streets, all waste material and rubbish. When the work is completed in each section of line, the Contractor shall remove from the right of way all tools, equipment, rubbish and debris for which, in the opinion of the Inspector, the Contractor or his subcontractors are responsible, and shall leave the working areas free and clear from all obstructions unless otherwise permitted by the specifications or by the Inspector. Prior to acceptance of the completed work, the Contractor shall make sure that the entire right of way has been cleared of equipment, surplus material and debris, and has been returned to as near its original condition as practicable. All disturbed areas must be reseeded.

Section 3.0 Specifications – Conductor & Accessories

SPECIFICATIONS: CONDUCTOR AND ACCESSORIES

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3.0 SPECIFICATIONS: CONDUCTOR AND ACCESSORIES

3.1 Conductor

The conductor specified for use on this project shall be furnished by the Company in accordance with the conditions in General Information.

The bid price for installation of conductor shall include all costs related to storage, transportation, installation and/or return of all conductor supplied from Company warehouses which have been assigned to the Contractor. It shall also include the installation of compression splices and repair sleeves.

The Company shall purchase the amount of conductor required for the length of the line plus 2 percent. The line length is defined as the horizontal centerline survey length as determined from survey stations measured along the centerline of the transmission line. Any conductor required in excess of this 2 percent shall be provided by the Contractor at his expense.

The Contractor shall return promptly to the Company's delivery point all returnable reels and shall load and secure the reels for return aboard the Supplier's cars or trucks per vendor's printed instructions. This work shall be included in the unit bid for installation and no separate payment shall be made therefore.

The Company shall deduct from the payments due the Contractor the amount equal to the Supplier's current reel charge for each reel that is not returned to the supplier. Contractor shall be liable for any reel damages incurred during his operations. Amount invoiced by vendor for reel repair shall be deducted from any sums due Contractor.

3.2 Items Requiring Special Attention

Items requiring special attention include the bolts in line hardware and accessories, and the compression fittings. The Contractor shall follow installation instructions from the manufacturers of such items and shall adhere to the following installation procedure.

The Contractor shall use torque wrenches to tighten bolts used with suspension clamps, dead-end paddles, vibration dampers, jumper conductor connectors, and bundle conductor spacers and spacer-dampers. All of these bolts shall be torqued to the manufacturer's recommended values. The Inspector will make spot checks of bolt torques and, if deficiencies are found, the Contractor shall re-torque bolts to the extent deemed necessary.

When required, Alcoa Filler Compound is to be used as a filler paste in the compression splices, dead-end bodies and jumper terminals. Connection surfaces on jumper terminals and dead-end bodies shall be thoroughly cleaned and coated with Alcoa No. 2 EJC before bolting together. Joints are to be straight and free from loose strands and made up in such a manner that straightening will not be necessary. Before and during the compression of

the joints, dead-end bodies and jumper terminals, care must be taken to prevent "bird-caging" of the cable strands.

Jumper terminal pads (paddles) shall be connected with aluminum bolts. The aluminum bolts shall be torqued to the following specifications:

½ inch bolts	25 ft. lbs.
5/8 inch bolts	40 ft. lbs.

The Contractor shall arrange for proper supervision of the installation of compression fittings to ensure that compression splices are centered, that the correct length of steel strand is inserted into the fitting, and that the steel sleeves of splices and dead-ends are properly compressed onto the steel strands. Where aluminum sleeves are used for conductor compression fittings, care must be exercised to ensure that compression deformations do not become sources of corona discharge. The Inspector shall witness and approve the installation of each and every compression fitting and reject any compression fitting which is installed without the Inspector being present to witness the installation operation.

3.3 Conductor Stringing and Sagging

The equipment and methods used for stringing the conductors shall be such that the conductors or towers will not be damaged or injured, and shall be subject to the approval of the Engineer. All stringing operations shall be conducted so that at no time will any suspension attachment or tangent structure be subjected to longitudinal loads and at no time will any tension tower be subjected to torsion resulting from longitudinal loads on opposing faces at opposite ends of cross arms. Any procedure used during the stringing operations which will scratch, groove, kink, mar, twist or otherwise damage the conductor will not be permitted.

Every reasonable precaution against conductor damage shall be utilized. Should the conductor contact the ground or become damaged during Contractor's operations, the Contractor shall repair or replace the damaged sections, including furnishing of necessary additional materials at no additional cost to the Company. Damage is any deformity or foreign matter on the surface of the conductor which can be detected by sight or touch. Damage includes, but is not limited to, nicks, scratches, abrasions, kinks, basketing, popped-out strands or broken strands. Slightly abraded sections may be repaired by dressing with a fine emery cloth. Where the damage is more severe, either compression type repair sleeves shall be installed or the damaged section cut out and a compression splice installed, as directed by the Engineer.

Compression-type repair sleeves may be used to repair minor damage to the conductor, provided, that:

- 1) At the location of the damage on the conductor to be repaired, not more than one-third of the outer aluminum strands are damaged over a length of not more than 4 inches.
- 2) There are no broken aluminum strands, and the cross-sectional area of any damaged strand is not reduced by more than 25 percent.
- 3) The minimum distance between two repair sleeves, or between a repair sleeve and a splicing sleeve, is not less than 1,000 feet.

All repair sleeves and compression splices shall be applied to the conductor in accordance with the recommendations of the manufacturer. To develop mechanical strength and electrical conductivity, it is essential that sleeves used for making compression joints be centered properly. The installation of such joints shall be carefully supervised to ensure this is done.

All sections of the conductors damaged by the application of gripping attachments shall be replaced before the conductors are sagged in place.

All conductor stringing and sagging operations shall be performed during daylight hours.

Before installation of the conductor, the Contractor shall notify the Engineer of the type and manufacturer of the compression tool and the catalog number of the dies to be used for the Engineer's approval.

The Contractor shall notify the Inspector one week prior to the stringing, sagging, clipping or splicing of the conductor.

Stringing sheaves of minimum diameter at the bottom of the conductor or wire groove of 15 times the conductor diameter may be hung on the insulator strings or from hangers of suitable lengths and design to properly distribute load to the arm. The sheave shall support the conductor at its permanent elevation when clipped in. Sheaves shall be of low friction design using either ball or roller bearings.

Sheave surfaces in contact with the conductor shall be factory lined with bonded neoprene or Company approved equivalent.

Sheaves for ACSR shall be so designed that the bull-line or pulling line does not damage the sheave liners. Provisions shall be made that any line or equipment contacting the sheave liners shall not damage or deposit foreign matter on the liners and thereby damage or be transferred to the conductor.

Sheaves found by the Inspector to be operating improperly or to be in such condition as, in his opinion, may cause damage to the conductor shall be removed and restored to proper operation and condition or replaced.

Permanent splices shall not be permitted to travel through the sheaves unless approved in writing by the Engineer.

Stringing equipment shall be set up in such a location as to avoid overloading structures by imposing an excessive load on the tower or cross arms. A minimum horizontal distance of 5 times the vertical attachment height shall be a guide for setting up stringing equipment.

All roads and clearing for positioning wire stringing equipment shall conform to General Specifications.

To avoid contact with the ground, or any object above ground level, the conductor shall be strung by the controlled-tension method using neoprene-lined bull-wheel-type tension stringing equipment. In order to minimize the danger of failure, the design must be such that when the desired tension is obtained, the same constant tension will be held so long as the brakes are left at this setting whether the brakes are actuated manually, pneumatically, hydraulically or electrically. The equipment shall be so designed that there can be no conduction of heat to the conductor generated by the braking action of the bull wheels. There shall be slight mechanical braking on the reels to prevent loose conductor between the reels and the bull wheels.

Tension machines shall be designed and maintained to provide even tension during stringing and sagging operations, and to assure safe and damage-free handling and stringing of the conductor. Changes in tension shall be gradual.

Bull wheels or tensioning equipment shall have a minimum diameter, at the bottom of the groove of 35 times the conductor diameter. The depth of the grooves shall be at least 75 percent of the diameter of the wire and the width of the grooves shall be between 112 percent and 118 percent of the nominal wire diameter. Bull wheels shall be lined with neoprene and shall be kept clean and in good working order. Wire damaged by tensioning equipment shall not be accepted.

The Contractor shall be required to back guy conductor previously strung and sagged to prevent over tensioning the previous sag section. The sub-conductors of a given phase must be pulled simultaneously at the same rate and at the same tension. Pulls may be limited to a maximum length of 20,000 feet if so directed by the Inspector.

During the stringing operation and before sagging if it becomes necessary to leave the conductor in the travelers for longer than 24 hours, the conductor shall be left at reduced tension.

The stringing operation shall be conducted with due regard to the safety of personnel and to the avoidance of over-straining or damaging towers or parts thereof.

The conductors shall be sagged in accordance with sag charts provided by the Company. The Engineer and the Contractor will be jointly responsible for selecting sag spans,

setting sag targets, and providing instrument men as needed. The calculation of sag correction and clipping offset data shall be the responsibility of the Company. If the stop watch method of sagging has been specified, the Contractor will be responsible for installing and removing the needed ropes.

The conductor temperature shall be checked by a thermometer approved by the Engineer. The thermometer shall be held at least 40 feet above ground for a minimum period of 45 minutes. The temperature so read shall be used as the sagging temperature.

Sag shall be checked during each sagging operation in a minimum of two spans. Normally the sag shall be checked at the third points. The rear span shall be brought to sag first, then the front span. The method used for sagging shall be subject to approval by the Company.

The Inspector or Engineer may require that the sag be checked in more than two spans. This will normally occur on extra long pulls or in rough terrain.

The Contractor shall assist in keeping an accurate sagging log listing the spans where sag is checked, the temperature, time, transit set-up data, reel numbers of each sub-conductor, computed sag, and any pertinent remarks. The Contractor shall not exceed the tension prescribed by more than 10 percent at any time during the stringing and sagging operations.

After the conductors are sagged, a plumb line from the centerline of bridge on suspension type towers shall be marked on conductors immediately. This marking of conductors may be done with the aid of a transit. Clipping offsets, if required, shall be made from this mark.

To avoid damage by vibration while in the stringing blocks, the clipping operations shall be completed within four working days after the conductor has been strung. Conductor remaining in the stringing sheaves more than four working days shall be subject to inspection and repair or replacement.

Clipping may begin in a pull immediately following the sagging operation. In all cases, the Inspector shall be given an opportunity to check the sag before beginning the work. The clipping operation shall not be closer than one structure behind the catch-off structure until the next pull has been spliced on and brought up to sag.

After clipping the conductors, a visual inspection shall be made of the structure to make sure that all conductor hardware parts are properly installed and tightened. Particular attention should be given to the insulator strings and suspension assemblies to be sure that all cotter keys are properly seated, and all strings are hanging vertically. To prevent sub-conductor damage from sub-conductor contact spacers or spacer dampers shall be installed within 72 hours of completing the clipping operation.

Payment for installation of conductor shall be based at the unit price as indicated on the Construction Units which shall be a three phase conductor mile, such price shall include the cost of stringing, splicing and sagging the conductors, of installing jumper loops, and clipping in of the conductors as determined from survey stations measured horizontally along the centerline of the transmission line.

3.4 Crossing Other Facilities

Electric supply and communication lines shall be protected by guard structures installed by the Contractor or by other means equally effective to prevent contact between the cables or conductors being strung and the line crossed.

Railroad, road and highway crossings shall be protected by guard structures installed by the Contractor as required by local or state authorities or owners of said railroads or roads for the purpose of maintaining traffic during stringing operations. The expense of required guard structure flagmen and watchmen shall be borne by the Contractor.

The owner of a crossed facility shall be notified by the Contractor at least 10 calendar days in advance of the time he intends to cross a power line, communication line, road, highway or railroad. The Contractor shall, at his own expense, arrange to have such work done by the owner of the crossed facility as may be required. The Company shall be notified in writing by the Contractor of his intention to effect any crossing at least 10 days in advance of such crossing. The written notice to the Company shall state the location of the crossing to be made, the date of such crossing and the length of time which will be required to effect the crossing.

The Company shall be responsible for acquiring a clearance or hold tag on Company facilities. Said crossing shall not be effected until authorized by the Inspector. The Contractor shall be responsible for the adequacy of his preparation to make the crossing with a minimum of delay and inconvenience to the public.

When the de-energizing of lines to be crossed is required, the Contractor shall, at his own expense, secure the necessary working authorization from the line owner involved. All work shall be done during regular daylight hours. Upon completion of the work, the Contractor shall immediately notify the line owner that the lines are clear.

The Contractor shall furnish and install all guard structures required for crossing over electric supply and communication lines, railroads, roads, highways, obstructions and for the protection of the conductor. In the event the Contractor and the Inspector do not agree on the necessity of a guard structure, the Inspector's decision will be binding on the Contractor. Immediately upon completion of clipping in a section of the line, the Contractor shall remove and dispose of all guard structures, including the entire length of poles and backfill of holes.

A guard structure shall consist of a pole with timbers attached or two or more poles joined by timbers with guys or braces when required. In all cases, there shall be provisions for avoiding damage to the conductor by the guard structures.

Guard structures near roads and power and communication circuits shall be clearly marked or located to minimize possible interference with traffic and shall comply with all pertinent Federal, State and local regulations.

All guard structures shall be of adequate strength to withstand the stresses to which they may be subjected.

3.5 Conductor and Overhead Ground wire Accessories

Spacers or spacer dampers for bundled conductor are to be installed in all spans.

They shall be installed as specified in the Detailed Specifications and drawings.

Conductor spacer or spacer dampers may be installed from a carriage or other device supported directly on the conductors or from a vehicle on the ground directly below the conductor, at the Contractor's option. The sheaves, rollers or trolleys, of a carriage or other device supported directly on, or coming in contact with, the conductors shall be provided with neoprene lining or treads to prevent abrasion or other damage to the conductor. Special care shall be taken in the installation of spacers or spacer dampers to avoid damage to the conductor.

Special care and inspection in accordance with Items Requiring Special Attention are necessary to ensure that spacer dampers are properly installed. Bolted-type spacer damper components shall be properly aligned and if aluminum alloy bolts are used, they shall be breakaway type to ensure that bolts are tightened to the torque recommended by the manufacturer. The centerline distance between wheels of carriage used to install spacer shall match sub-conductor spacing as closely as necessary to avoid affecting the final alignment of clamp segments or the proper tightening of clamp bolts.

Payment for attaching bundled-conductor spacer dampers will be made at the unit price per spacer damper bid therefore in the Construction Units. Payment for attaching bundled-conductor spacers in conductor jumper loops shall be made as part of the jumper assembly at the unit price as bid in the Construction Units.

Vibration dampers shall be installed in all spans of transmission line segments as follows:

- 1) Vibration dampers shall be installed on the overhead ground wire as specified in Detailed Specification.
- 2) The basis of payment for installation of dampers shall be on a per unit or per assembly basis installed.

Splices (full tension) for ACSR conductors shall be compression splices installed in accordance with the manufacturer's recommendations. There shall be no splices in railroad, State and Federal highway or communication circuit crossing spans or adjacent spans (without the approval of the Inspector) or within 50 feet of suspension points and 100 feet of dead-end clamps. Minimum distance between two splices on any one sub-conductor shall be 1,500 feet unless otherwise specified by the Inspector. The Contractor shall plan his operations to minimize the use of splices and to eliminate splicing in single spans which are dead-ended at both ends.

Each compression splice shall be examined by an Inspector.

The basis for payment of compression splices and repair sleeves shall be included in the unit price for installing the conductor.

Compression dead-ends shall be used exclusively for dead-ending conductor. No dead-end shall be installed until the adjacent tangent towers are clipped in.

Compression dead-ends shall be installed in accordance with the manufacturer's recommendations. Each dead-end shall be examined by the Inspector.

Jumper loops shall be made up between terminal fittings and formed into shape such that the insulator string shall hang plumb.

The basis for payment for installation of compression dead-ends and jumper terminals shall be on a per unit installed as listed in the Construction Units.

The conductor and overhead ground wire accessories for use on this project shall be furnished by the Company in accordance with the conditions in General Information.

The bid prices for installation of conductor and overhead ground wire accessories shall include all costs related to receipt, storage, transportation, installation and/or return of all conductor and overhead ground wire accessories supplied from Company warehouses which have been assigned to the Contractor.

The Company shall purchase the exact amount of conductor and overhead ground wire accessories required for the work specified. Any conductor and overhead ground wire accessories damaged or destroyed shall be replaced by the Contractor at his expense.

4.0 SPECIFICATIONS: TOWERS

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Section 4.0 Specifications – Towers

SPECIFICATIONS: TOWERS

4.0 SPECIFICATIONS: TOWERS

4.1 Layout

The Company will locate towers with center hub and two reference points. The Contractor shall give the Company 24 hours notice for additional tower location work, and provide such help as necessary for replacing hubs and reference points which may have been removed or destroyed.

The Company will furnish the Contractor with a layout card for each tower. The card will depict the tower type and leg combinations, setting dimensions, depth of anchor below center stake, and the distance and direction of reference points for Contractor's use in tower anchor layout. It shall be the Contractor's responsibility to check orientation of tower legs before starting excavation. Any anchor put in misaligned shall be replaced at the Contractor's expense.

4.2 Excavation

From information furnished by the Company, the Contractor will layout and excavate holes to the proper depth. If the excavation is made below the proper depth, the hole must be refilled to grade with gravel or crushed rock and thoroughly tamped. Cost of gravel and labor for such grading shall be included in unit price for setting anchors.

Caution shall be exercised in use of explosives in vicinity of buildings, structures, etc. Blasting damage is the responsibility of the Contractor.

Compensation shall be paid on a per foot depth basis for any extra excavation in anchor holes. Extra excavation shall be determined by subtracting four times the setting depth shown on tower print from the total excavated depth of all four legs. Tower legs will vary in length to minimize extra excavation. Extra depth shall be classified as per type of tower.

Contractor will set anchors on solid level bottom with a vertical tolerance of 1/4 inch between anchors and a horizontal tolerance of 1/2 inch in distance between legs or for a shift from the tower center stake.

4.3 Backfilling

After anchor grillages are set, Contractor shall backfill and tamp by hand to the top of the grillage beams. Backfill above grillage beams may be placed either by hand or mechanically. In either case, the amount of backfill to be placed before tamping shall not exceed 12 inches. The backfill is to be compacted by machine tampers. Leg angles shall be securely braced to prevent movement while backfill

is placed. Care must be exercised in tamping so that a uniform pressure is applied to all sides of leg angle. All pieces of wood or other trash shall be removed from the excavation before the backfilling. Excess dirt shall be spread over the site, and any excess rock uncovered with excavation in cultivatable or pasture areas shall be buried or otherwise disposed of to the satisfaction of the Inspector at the Contractor's expense. Finished site grading shall conform as nearly as possible to the natural contours.

4.4 Assembly and Erection

Towers shall be erected by any suitable method which will not damage or distort structural members of towers or their foundations. The erection methods employed shall not interfere with adjacent or intersecting utility lines or other improvements. Towers shall be erected so that the vertical axis through the center of gravity shall not be out of plumb by more than 1" for every 40 feet of height.

Contact surfaces of joints shall be cleaned of foreign materials and dirt before assembly. Mud and appreciable amounts of dirt shall be removed from members before erection. Mud shall also be removed after the tower is erected.

Only such torque-controlled wrenches will be allowed as will neither deform the nuts and bolts nor injure the galvanized coatings by flaking or cutting. Each bolt shall be securely tightened with an approved torque-controlled wrench which has a built-in automatic torque cut-off feature. Air impact wrenches without torque-control feature shall not be used. The Company reserves the right to disallow the type of wrenches which do not meet the Inspector's approval. The following torques should apply while installing bolts:

5/8"	70 ft. lbs.
3/4"	125 ft. lbs.
7/8"	125 ft. lbs.

Steel members shall be carefully handled to avoid bending or damage to galvanizing. Bare wire rope and steel chains shall not be used when lifting steel. Tower steel shall not be thrown or dumped from cars or trucks and pieces shall not be skidded over each other. Steel members shall not be dragged over the ground surface. In piling galvanized members, they shall be kept off the ground and from contact with the bed of trucks by suitable wood blocking. Pieces of wood shall be used to keep layers of piled members apart to protect the galvanized surface.

Normal erection operations include the correction of minor misfits by moderate amounts of reaming, chipping or cutting, chamfering of holes, clipping, back cutting, blocking out or shearing of one end of members, grinding the heel of angles, and the drawing of elements into line through the use of drift pins. Such corrections will be allowed only as approved and directed by the Inspector. Such

corrections shall be considered incidental to erection of structures and no payments shall be made for such operations as described above and shall be a part of the Contract. Reaming shall be defined as elongating holes by not more than 1/16" through the use of reamers. Errors which cannot be corrected by the foregoing means or which require major changes in member configuration shall be reported to the Inspector. All field corrections involving the removal of galvanizing shall have a heavy coat of Galvanox or approved equivalent applied to the affected area before assembly and erection of structure. Tower members bent or kinked will be discarded. Minor distortions in tower members may be straightened subject to the approval of the Inspector. If, when a piece is straightened, the galvanized coating is scratched, cracked, scorched, peeled or in any way damaged, corrective measures shall be taken as approved and directed by the Inspector.

Tower bolts shall be installed so that the nuts are in an upward or outward position, unless such position is clearly impracticable and another arrangement is approved by the inspector. Nuts shall be put on bolts so that the flat, slightly concave surfaces are against the tower member. Tower vendors furnish 5% extra bolts. It shall therefore be the Contractor's responsibility to insure that bolts installed shall be as shown on the tower erection drawings. Any shortages which occur will be presumed to result from installation of improper sizes and the Contractor shall replace the shortages at his expense.

When portions of the tower are being assembled prior to erection, the assembly shall be on surfaces or on blocking which will provide sufficient support to prevent distortion of the tower steel. If all bolts in an assembly are not installed, at least 50% of the bolts in each connection shall be inserted and nuts shall be finger-tightened only. All bolts in a joint shall be inserted before any bolt in the joint is fully tightened.

When erecting assembled portions of the tower, a bridle and spreader with proper points of attachment shall be used when necessary to avoid distortion or overstressing. Adequate tag lines shall be used to insure that any portion of the tower being lifted will not drag on the ground or against any portion of the tower already erected. At all times at least 50% of the bolts in each connection of erected tower members shall be inserted. Until all the bolts in the face of a segment of a tower are inserted, nuts on the bolts inserted in that face during erection shall be finger-tightened only. A segment of tower is defined as that vertical portion of a tower between horizontal planes established by the ends of leg members. When it is difficult to obtain a fit, all bolts in related connections shall be loosened to facilitate fitting.

The bolts in an erected section of a tower may be tightened, but not palnuted, after erection of the next higher section. When erection is complete and initial tightening of the bolts is done, all bolts shall be finally checked for tightness and palnuts installed.

The Contractor is to install missing bolts, replace bolts, install any missing steel, replace damaged steel, install palnuts, or otherwise perform any task necessary to insure that the existing towers conform to the specifications outlined in this Contract, before any conductor loads are applied.

The Company has included the various construction loading conditions that were used for the design of the towers. Contractor shall conduct all his construction operations in such a manner that the design loadings, excluding overload factors, shall not be exceeded.

After completion of all wire stringing, sagging, etc., and during the final inspection period, the Contractor shall remove all step bolts to a height of 12 feet above the ground. The bolts removed shall be returned to the storage site specified by the Inspector.

The Contractor shall be paid for towers on the basis of a complete tower erected in place with all bolts tightened.

All towers shall be paid for on the basis of the component assemblies (tower body, body extensions and leg extensions) actually used, at the unit prices included in the construction units. The aerial patrol tower number signs shall be installed on every tower. Payment for the number signs shall be included in the unit price for installing the tower body.

In the event material furnished by the Company does not conform to its requirements, the Company reserves the right to replace the material at no cost to the Contractor as expeditiously as possible. There shall be no extra cost to the Company due to any unforeseeable delay in the replacement of the material. In the event the material furnished by the Company requires field modifications, the Contractor shall submit to the Company the amount he proposes to charge for such work and obtain approval before proceeding with the work. The Inspector shall have sole responsibility and final authority in determining whether the material shall be replaced or modified in the field. The Contractor shall furnish the Inspector a daily report of any field modifications required which shall list the tower number, location and piece mark of the item modified and the description of the modification made.

*Section 5.0 Specifications – Steel & Wood
Poles*

SPECIFICATIONS: STEEL AND WOOD POLES

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5.0 SPECIFICATIONS - STEEL & WOOD POLES

5.1 Construction Materials

- 1) All materials which will be permanent parts of the line will be furnished by the Company.
- 2) Guard poles of varying lengths will be furnished by the Company. Used poles will be utilized to the extent that they are available. They may be obtained at LG&E Auburndale storage yard located on enterprise drive, Louisville, Kentucky. Proper accounting of poles used must be made by Contractor (i.e., each load of poles hauled from yard for use as clearance poles must be counted and signed for) and any pole lost, stolen or otherwise not accounted for will be bought from the Company upon completion of line construction. Prices for such poles shall be determined by Company's accounting records. Poles shall be returned to their origin unless other instructions are given by the Company's inspector.
- 3) The Contractor will furnish all rope slings, bolts, clevises, rider arms, blocks, etc. required for guard structure installations as well as any other expendable materials required for construction of the line and none of the materials furnished by the Company which go to make up a permanent part of the line shall be used by the Contractor on a temporary basis.
- 4) All materials supplied by the Company will be stored at [REDACTED] [REDACTED] Material received at [REDACTED] will be unloaded by the Company. Poles and associated material will be shipped to [REDACTED] and will be unloaded and accounted for by the Contractor and the Company's construction inspector as a part of this contract. Every carload shall be thoroughly inspected before unloading begins for evidence of damage in transit. No damaged shipment may be unloaded until appropriately photographed by Company personnel and an appropriate carrier representative has been notified and has concluded his inspection. Undamaged loads must be unloaded within 24 hours after they spotted.
- 5) This material must be handled with care and the Contractor must pay for any material broken, damaged or lost due to negligence of his employees or agents.
- 6) Construction materials may be placed on the shoulders of roads or highway right-of-way only as required for their installation.
- 7) All small hardware and conductor accessories requiring secure storage will be put in a KU trailer, if available. Otherwise, suitable storage facilities will be supplied by the Contractor and locked. Any trailer that is owned by Company shall be moved as necessary, by Contractor as part of the contract work, and returned to its original location at conclusion of the job unless otherwise instructed.

- 8) Before the contract is considered complete, the Contractor will sort, package or crate and deliver to [REDACTED] all materials salvaged for re-use, left over as excess or hauled out and not used. Salvaged or excess materials shall be dismantled and sorted to the satisfaction of the resident engineer and all returns shall be reported to and examined by same before leaving the storage yard.

NOTE: Unless permission has been obtained from the Company in writing, the Contractor shall NOT use the Company's storage yard or substation sites for parking his equipment, tools or construction materials. Contractor shall be responsible for removal of all trash, rubbish and other flammable substances from proximity of materials stored in the yard.

5.2 General Requirements

A. The Contractor Shall:

- 1) Furnish supervision, labor, insurance, tools, equipment and transportation necessary to construct this transmission line in accordance with these specifications and drawings.
- 2) Familiarize himself with the character of the soil, topography relief, use of the land traversed by the route of the line, as well as roadways, railroads, streams and other conditions pertaining to the right-of-way which might affect performance of the work outlined herein. The Contractor shall, at all times, endeavor to maintain favorable public relations.
- 3) Consult property owners along route of line prior to entering their property with construction equipment regarding installation of gates or gaps in fences which must be crossed and use of private gates and roads so that the owner will suffer a minimum inconvenience, damage or loss of crops or livestock.
- 4) Give the Company reasonable notice of starting new work and shall provide without extra charge, reasonable and necessary assistance and facilities for inspection. All work and material shall be at all times open to the inspection, acceptance, or rejection by the Company's construction inspector.
- 5) Not take advantage of errors, or omissions, if any, in the plans and/or discrepancies between plans and specifications and the Company will make such corrections and supply such omissions as may be necessary and the Company's interpretation shall be final. Any bulletins or addenda issued during the time of bidding shall be considered a part of these specifications. Any question concerning these plans and specifications shall be referred to the resident engineer.

- 6) Determine which of the existing lines to be crossed with this line must be de-energized during stringing operations and notify Company's resident engineer of the need for outages at least 5 working days in advance of such outage. The Contractor will not be compensated for lost time unless 5 working days' notice has been given.
- 7) Acquire, at his expense, all permits, licenses or certificates required of contractors by local, state or federal statutes.
- 8) Locate underground facilities such as gas, water and sewer lines, drain tiles, etc. which may be encountered in digging or drilling holes and perform his work in such a manner as to prevent damage to such facilities. The resident engineer will provide as much assistance as possible in locating existing obstructions. The approximate location of known cables and/or pipelines is shown on the plan and profile drawings. The Contractor shall repair immediately any damaged facilities to the satisfaction of the facility owner and shall secure and submit to the construction inspector one copy of a written release, signed by representatives of the Contractor and facility owner suffering the damages within 60 days after completion of the repair work.
- 9) Do all work embodied in this project in an acceptable manner with a minimum amount of inconvenience and damage to lands crossed by the line.
- 10) Assume responsibility for maintenance of ALL public roads including furnishing and spreading of rock to the satisfaction of the governing body. The Company will furnish rock as needed on any private road and the Contractor will spread the same without cost to the Company. The Contractor shall restore access roads to the satisfaction of property owners or otherwise negotiate settlements for damages.
- 11) Secure rights of ingress and egress, in writing and at Contractor's expense, over lands not subject to Company's easements which Contractor elects to cross to gain access to its work. A copy of each such contract shall be given to the Company. Responsibility for maintenance and restoration of those routes shall be borne by the Contractor.
- 12) Notify the Company in writing within 3 working days of any claims or complaints made by any person arising out of or connected with work performed under this contract. Such notice shall also be given to Contractor's insurance carrier for action as required. This notice shall include but not be limited to:
 - a. The name and address of the person making the claim or complaint.