

Purchasing Division 120 City Hall, 411 W. 1st Street Duluth, MN 55802-1189 TEL. 218-730-5340 purchasing@duluthmn.gov

INVITATION TO BID COAL FOR DULUTH STEAM PLANT

BID NUMBER: 19-06AA BID OPENING: Friday, March 22, 2019 AT 2:00 PM

The City of Duluth, MN seeks sealed bids for a three year contract to furnish and deliver approximately 56,000 tons of coal meeting the attached specifications. The City anticipates placing an initial order for 14,000 tons this spring, and estimates a need of approximately 21,000 annually for 2020 and 2021. Actual requirements may be greater or less than the quantities specified. Subsequent orders will be placed on as-needed basis.

QUESTIONS: Please submit any questions regarding this Invitation to Bid via e-mail to purchasing@duluthmn.gov. Responses will be provided to all interested bidders as an addendum to this solicitation.

INSTRUCTIONS TO BIDDERS

By submitting a bid, Bidders are acknowledging that they have read the City of Duluth General Bid Specifications, which are included in this bid package.

Sealed bids must be received in Purchasing before 2:00 PM local time on the bid opening date specified above. The City Purchasing Agent or her designee will conduct a public bid opening in Room 120 immediately following receipt of the bids.

No alternatives to the specification will be considered unless specifically requested.

The City of Duluth reserves the right to accept the bid which, in its judgment, provides the best benefit to the City, to waive informalities and to reject any and all bids.

The following documents must be submitted with your bid:

- 1. **Acknowledgment of Addendum.** Any changes to this solicitation will be announced via Addendum. Bidders must indicate that they have reviewed any addendum(s) by initialing and dating on the bid form where indicated. Failure to acknowledge addendum(s) may result in your bid being deemed non-responsive.
- 2. **Affidavit of Non-Collusion.** The successful bidder shall be required to execute the attached affidavit stating that he/she has not entered into a collusive agreement with any other person, firm, or corporation in regard to any bid submitted.
- 3. **Bidder Qualifications.** In order for their Bids to be considered, bidders must demonstrate that they are qualified to satisfactorily perform the specified work. Each prospective bidder shall submit with their Bid written evidence of their qualifications to perform the work. Such evidence shall include all information necessary to certify that the bidder:
 - a. Is regularly engaged in supplying fuel of the quality specified;
 - b. Does not anticipate change in ownership or major policy during the period of the proposed work. If such change is anticipated, the scope and effect thereof shall be defined;
 - c. Has adequate capability available to do the work properly and in accordance with scheduled requirements:
 - d. Has adequate financial status to meet the financial obligations incident to the work; and
 - Has no just or proper claims pending against them regarding the quality or performance of their work.

Each bidder shall submit a written description of their mine, transport and coal terminal facilities. This information is required to enable the Purchaser to evaluate the stability and availability of the coal supply. Topics to be discussed in the written description shall include instruments by which Bidder controls sufficient coal to fulfill the terms of the agreement, and the Bidder's existing coal storage and handling facilities and equipment capabilities.

4. **Exceptions to Specifications.** Bidders shall list in the space provided on the Bid form any and all exceptions or conflicts between their Bid and the specifications. All exceptions shall be specific in nature and reference the applicable article of the specifications. If the bidder takes no exceptions, he/she shall write "None" in the space provided. Bids which do not comply with this requirement will be considered irregular and may be rejected at the discretion of the City. In case of conflicts not stated as directed, these specifications and documents shall govern.

The City of Duluth is an Equal Opportunity Employer. Contractor shall comply with all applicable Equal Employment Opportunity laws and regulations.

CITY OF DULUTH

Amanda Ashbach Purchasing Agent



GENERAL BID SPECIFICATIONS

Purchasing Division 120 City Hall, 411 W. 1st Street Duluth, MN 55802-1189 TEL. 218-730-5340 purchasing@duluthmn.gov

- General. This document covers bids requested by the City of Duluth ("City"), including those requested on behalf of its Agents and Authorities. Each authority may issue their own purchase order or contract and will be responsible for it. The City of Duluth Authorities are as follows:
 - a. Duluth Airport Authority
 - b. Spirit Mountain Recreational Area Authority
 - c. Duluth Entertainment and Convention Center
 - d. Duluth Transit Authority
 - e. Duluth Economic Development Authority
 - f. Duluth Housing and Redevelopment Authority
- 2. <u>Investigation by Bidders.</u> Bidders are responsible for thoroughly reading and understanding the information, instructions, and specifications contained in this Invitation for Bids, and for investigating the site conditions at the Project location(s), if applicable. At the time of the opening of bids, each bidder will be presumed to have read and to be thoroughly familiar with the plans, specifications and contract documents (including all addenda). The failure or omission of any bidder to examine any form, instrument, or document shall in no way relieve the bidder from any obligation in respect to their bid.
- 3. <u>Bidder Questions.</u> Responses to general questions regarding the Invitation for Bids may be made at the discretion of the City. Every request for such interpretation should be in writing and delivered via e-mail or postal mail to the Purchasing Division before the deadline indicated on the Invitation for Bids, or if no deadline is specified, at least five (5) days prior to the scheduled bid opening. Responses will be issued in writing in the form of an Addenda or e-mail to prospective bidders.
- Changes, Corrections & Withdrawal of Bids. Erasures or other changes to the bid must be initialed and dated, however no special conditions shall be made or included on the bid form by the bidder.
 - Bidders may make requests to withdraw/replace their bids by notifying the Purchasing Division in writing prior to the bid opening.
- 5. <u>Unit Pricing.</u> If the total bid price is based on unit pricing, the City will verify the extended bid price for each item (obtained by multiplying the unit bid price by the bid item quantity). If any item is incorrectly calculated, the City will use the unit bid price to recalculate the extended item price and the total bid price.
- Sales Tax. The City has a sales tax exemption certificate, which will be provided upon request.
- Bid Submission. All bids must be complete, signed, and transmitted in a sealed envelope plainly marked with the bid number, subject matter, and opening date.
 - Bids may be mailed to the Purchasing Office, City Hall, 411 West 1st Street, Room 120, Duluth, MN 55802 or dropped off in person at the same address. Bids must be received by Purchasing before 2:00 PM local time on the date specified. Bids will not be accepted via e-mail unless specifically stated in the Invitation for Bids.
- 8. Non-Collusion Clause. By submitting a bid, the bidder, their agent and/or employee(s) hereby affirm that the attached bid or bids have been arrived at by the bidder independently and have been submitted without collusion with, and without agreement, understanding or planned common course of action with any other vendor of materials, supplies, equipment or services described in the Invitation for Bids, designed to limit independent bidding or competition
- Award. Award, if made, will be to the responsible bidder submitting the lowest bid which complies with the conditions of the Invitation for Bids and specifications. A bid summary will be posted on the City website immediately following the bid opening. Awards for construction services and parts /supplies over \$100,000 must be approved by City Council.
- Bidder Qualifications. Per Sec 41.23(e) of Duluth City Code, price may not be the only consideration for award. The City will make such investigations as deemed necessary to determine the ability, capacity

and skill of the bidder to perform the work and perform it in the time specified without delay or interference, the reputation and experience of the bidder, the quality of the bidder's performance of previous contracts or services, and the sufficiency of the financial resources, equipment available and ability of the bidder to perform the contract. Bidders shall furnish to the City all such information and data for this purpose, when requested.

Minnesota law requires that, in order to transact business in the State, including submitting a response to this request for bids/proposals, a corporate entity of any kind must either be organized under Minnesota law or have a Certificate of Authority from the Minnesota Secretary of State to do business in Minnesota (M.S. 303.03) By submitting this bid/proposal as a corporation, you are certifying that the responding corporation complies with this requirement.

- 11. <u>Bid Opening.</u> The City Purchasing Agent or her designee will conduct a public bid opening in Room 120 immediately following receipt of the bids. Results will be posted online at http://www.duluthmn.gov/purchasing/bids-request-for-proposals/ once all bids have been reviewed.
- 12. <u>Rejection of Bids.</u> The City of Duluth reserves the right to reject any and all bids and to waive any informalities or irregularities in bids received whenever such rejection or waiver is in its best interests.
 - The City reserves the right to reject any bid if the evidence obtained by the City through such investigation fails to satisfy the City that the bidder is properly qualified to carry out the obligations of the contract and to complete the work as required by the plans and specifications.
- 13. <u>Liquidated Damages for Failure to Enter into Contract.</u> The successful bidder, upon their failure or refusal to accept a purchase order or execute and deliver the contract, proof of insurance and bonds required within 10 days after receipt of a notice of the acceptance of their bid, shall forfeit to the City, as liquidated damages for such failure or refusal, the security deposited with their bid (if required).
- 14. Equal Employment Opportunity. Contractor will be required to comply with all applicable Equal Employment Opportunity (EEO) laws and regulations. Affirmative action must be taken to insure that the employees and applicants for employment are not discriminated against because of their race, color, creed, sex or national origin. The City of Duluth is an equal opportunity employer.
- 15. Quantities. The City reserves the right to increase or decrease the quantities of items within reason, unless otherwise noted.
- 16. Prevailing Wages. Per Sec 2-26 of Duluth City Code, payment of not less than the prevailing wage and salary rates specified in the contract documents and the conditions of employment with respect to certain categories and classifications of employees is required for all "Public Works" type projects estimated to exceed \$2,000. This does not apply to off-site production and manufacturing of parts and supplies.
- Validity of Bids: All bids must remain firm for 60 days from the date
 of bid opening, unless another period is noted in bid documents or if
 an extension is agreed upon, in writing prior to the end of the 60-day
 period.
- Insurance. All vendors doing work on City property, except vendors making routine deliveries, shall submit an insurance certificate verifying insurance coverage as per current city requirements.
- Reports. Contractors will be required to provide all data required by the city, state or federal funding source(s) for reporting purposes; including, but not limited to job creation and retention data, itemized invoices, payroll records, certifications and licenses.

ACKNOWLEDGMENT OF ADD	ENDA: Add	endum #	Initi	al/Date	
COAL OPTION 1 (Western Sub-bi	ituminaus) Na	ame of Coal			
Price Breakdown (per ton):	ituiiiiious) ite				
Coal Base Price					
Rail Transportation					
Rail Fuel					
Railcar					
Dock					
Truck Transportation					
Truck Fuel					
Total Base Price per Ton					
Mining Facility Information:		T			
Mine Company Name					
Name of Mine					
Mine Location (County, State)					
Seams					
Seams					
Type of Mine (Deep or Surface)					
Rail or Barge Line Serving Mine/S Point					
Mine Current Annual Production in	n Tons/Year				
Coal Characteristics:					
As Received Analysis, percent	Typical		Range	(Low to High)	
Moisture					
Volatile Matter					
Fixed Carbon					
Ash					
Sulfur					
Chlorine					
	· ·			·	

Hydrogen

Heating Value-Btu/lb.			
Hardgrove Grindability Index			
Size (Percent by Weight)	Typical	Range	(Low to High)
3" x 1"			
1" x 3/4"			
3/4" x 1/2"			
1/2" x 1/4"			
1/4" x 0 (Less than 30%)			

<u>Warranty For Coal Quality – Option 1</u>. The Seller certifies that the quality of coal supplied over any monthly period will be equal to or better than each of the following weighted average characteristics as a standard, on an "as received" basis, as established by analysis as provided in these specifications.

Coal Characteristics (As Received Basis):

Moisture - not more than	%
Ash - not more than	%
Sulfur - not more than	%
Sulfur Dioxide when burned - not more than	lb SO ₂ /MMBtu
Chlorine	%
Base Heating Value	Btu/lb
Minimum Heating Value - not less than	Btu/lb
Ash Fusion (Reducing Atmosphere) Initial Deformation - not less than	°F
Grindability (Hardgrove Index)-not less than	

The successful bidder shall submit a report by a certified laboratory, a leach test of the fly ash so that a continuation of our co-disposal permit can be obtained. The report is due by September 1 of the contract year.

Ash Characteristics:

Mineral Analysis	Typical (percent)	Ignited Basis Range (Low to High)
Phosphorous Pentoxide, P ₂ O ₅		
Silica, SiO ₂		
Ferric Oxide, Fe ₂ O ₃		

Typical	Range (l	ow to High)
Typical	Range (l	ow to High)

COAL OPTION 2 (Western Sub-bitumin	ous) Name of Coal	
Price Breakdown (per ton):		
Coal Base Price		_
Rail Transportation		_
Rail Fuel		_
Railcar		_
Dock	- 	_
Truck Transportation		_
Truck Fuel		_
Total Base Price per Ton		_

Mining	Facility	Inform	ation:
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Mine Company Name	
Name of Mine	
Mine Location (County, State)	
Seams	
Type of Mine (Deep or Surface)	
Rail or Barge Line Serving Mine/Shipping Point	
Mine Current Annual Production in Tons/Year	

Coal Characteristics:

As Received Analysis, percent	Typical	Range (Low to High)
Moisture		
Volatile Matter		
Fixed Carbon		
Ash		
Sulfur		
Chlorine		
Hydrogen		
Heating Value-Btu/lb.		
Hardgrove Grindability Index		
Size (Percent by Weight)	Typical	Range (Low to High)
3" x 1"		
1" x 3/4"		
3/4" x 1/2"		
1/2" x 1/4"		
1/4" x 0 (Less than 30%)		

Warranty For Coal Quality - Option 2. The Seller certifies that the quality of coal supplied over any
monthly period will be equal to or better than each of the following weighted average characteristics as a
standard, on an "as received" basis, as established by analysis as provided in these specifications.
Coal Characteristics (As Received Basis):

Moisture - not more than

Ash - not more than	%
Sulfur - not more than	%
Sulfur Dioxide when burned - not more than	lb SO ₂ /MMBtu
Chlorine	%
Base Heating Value	Btu/lb
Minimum Heating Value - not less than	Btu/lb
Ash Fusion (Reducing Atmosphere) Initial Deformation - not less than	°F
Grindability (Hardgrove Index)-not less than	

The successful bidder shall submit a report by a certified laboratory, a leach test of the fly ash so that a continuation of our co-disposal permit can be obtained. The report is due by September 1 of the contract year.

Ash Characteristics:

Mineral Analysis	Typical (percent)	Ignited Basis Range (Low to High)
Phosphorous Pentoxide, P ₂ O ₅		
Silica, SiO ₂		
Ferric Oxide, Fe ₂ O ₃		
Alumina, A1 ₂ O ₃		
Titania, TiO2		
Lime, CaO		
Magnesia, MgO		
Sulfur Trioxide, SO ₃		
Potassium Oxide, K ₂ O		
Sodium Oxide, Na ₂ O		
Undetermined		
Fusion Temperature of Ash (Reducing Atmosphere)	Typical	Range (Low to High)
Initial Deformation		
Softening (H=W)		
Hemispherical (H=1/2W)		
Fluid		

Fusion Temperature of Ash (Oxidizing Atmosphere)	Typical	Range (Low to High)
Initial Deformation		
Softening (H=W)		
Hemispherical (H=1/2W)		
Fluid		
Viscosity T ₂₅₀ , °F		

Signature		Date
Name/Title		
Company Name		
Address		
City, State, Zip		
Tel	E-Mail	

COAL OPTION 2 (Western Sub-bit	:uminous) Na	me of Coal	
Price Breakdown (per ton):			
Coal Base Price			
Rail Transportation			
Rail Fuel			
Railcar			
Dock			
Truck Transportation			
Truck Fuel			
Total Base Price per Ton			
Mining Facility Information:			
Mine Company Name			
Name of Mine			
Mine Location (County, State)			
Seams			
Type of Mine (Deep or Surface)			
Rail or Barge Line Serving Mine/Sh Point	nipping		
Mine Current Annual Production in	Tons/Year		
Coal Characteristics:			
As Received Analysis, percent	Typical	Rang	e (Low to High)
Moisture			
Volatile Matter			
Fixed Carbon			
Ash			
Sulfur			
Chlorine			
Hydrogen			
Heating Value-Btu/lb.			
Hardgrove Grindability Index			
Size (Percent by Weight)	Typical	Rang	e (Low to High)
3" x 1"			

1" x 3/4"		
3/4" x 1/2"		
1/2" x 1/4"		
1/4" x 0 (Less than 30%)		

<u>Warranty For Coal Quality</u>. The Seller certifies that the quality of coal supplied over any monthly period will be equal to or better than each of the following weighted average characteristics as a standard, on an "as received" basis, as established by analysis as provided in these specifications.

Coal Characteristics (As Received Basis):

Moisture - not more than	%
Ash - not more than	%
Sulfur - not more than	%
Sulfur Dioxide when burned - not more than	lb SO2/MMBtu
Chlorine	%
Base Heating Value	Btu/lb
Minimum Heating Value - not less than	Btu/lb
Ash Fusion (Reducing Atmosphere) Initial Deformation - not less than	°F
Grindability (Hardgrove Index)-not less than	

The successful bidder shall submit a report by a certified laboratory, a leach test of the fly ash so that a continuation of our co-disposal permit can be obtained. The report is due by September 1 of the contract year.

Ash Characteristics:

Mineral Analysis	Typical (percent)	Ignited Basis Range (Low to High)
Phosphorous Pentoxide, P ₂ O ₅		
Silica, SiO ₂		
Ferric Oxide, Fe ₂ O ₃		
Alumina, A1 ₂ O ₃		
Titania, TiO ₂		
Lime, CaO		
Magnesia, MgO		

Sulfur Trioxide, SO ₃		
Potassium Oxide, K ₂ O		
Sodium Oxide, Na ₂ O		
Undetermined		
Fusion Temperature of Ash (Reducing Atmosphere)	Typical	Range (Low to High)
Initial Deformation		
Softening (H=W)		
Hemispherical (H=1/2W)		
Fluid		
Fusion Temperature of Ash (Oxidizing Atmosphere)	Typical	Range (Low to High)
Initial Deformation		
Softening (H=W)		
Hemispherical (H=1/2W)		
Fluid		
Viscosity T ₂₅₀ , °F		

AFFIDAVIT AND INFORMATION REQUIRED OF BIDDERS

Affidavit of Non-Collusion:

I hereby swear (or affirm) under penalty of perjury:

- 1) That I am the bidder (if the bidder is an individual), a partner in the bidder (if the bidder is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the bidder is a corporation);
- 2) That the attached bid or bids have been arrived at by the bidder independently and have been submitted without collusion with and without agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment or services described in the invitation to bid, designed to limit independent bidding or competition;
- 3) That the contents of the bid or bids have not been communicated by the bidder or its employees or agents to any person not an employee or agent of the bidder or its surety on any bond furnished with the bid or bids and will not be communicated to any such person prior to the official opening of the bid or bids;
- 4) That a family relationship between a City of Duluth employee and bidder/proposer are in non-collusion; and
- 5) That I have fully informed myself regarding the accuracy of the statements made in this affidavit.

Signed:
Firm Name:
Subscribed and sworn to me before this day of,
NOTADY BUDLIC
NOTARY PUBLIC
My commission expires:
Bidder's Federal Identification Number

Specification for Coal for Duluth Energy Systems Revised 3.6.19

GENERAL. This section covers the general description, the scope of supply, and technical requirements for the supply of coal and services to be furnished under these specifications.

The coal covered by these specifications will be fired in Duluth Steam Plant, which is operated and managed by Duluth Energy Systems. The Duluth Steam Plant is located at 1 Lake Place, Duluth, MN, near the intersection of Railroad Street and Lake Avenue.

The City intends to purchase coal of similar quality and under similar conditions of sale that were previously used by Duluth Energy Systems.

WORK INCLUDED UNDER THESE SPECIFICATIONS. The work under these specifications and documents shall include furnishing coal which meets the characteristics, quantities, and schedule requirements specified, and delivering the coal in dump trucks to the Duluth Steam Plant.

COAL CHARACTERISTICS. The coal shall be sub-bituminous with the following characteristics:

Heating Value not less than 8,800 Btu/lb.

Moisture Total (surface & inherent) less than 27%

Ash less than 6%

Sulfur not more than 0.5% by weight

Chlorine not more than 20 mg/kg

Ash fusion temperature [Reducing / Softening (H=W)] of not less than 2,100°F

Grindability (Hardgrove Index) not less than 50%

Minimum Size of ¼" x 0; Maximum Size of 3" x 3"

The coal shall be substantially free from impurities and foreign matter such as, but not limited to, dirt, bone, slate, earth, rock, pyrite, wood, tramp metal and mine debris.

Ash shall meet Minnesota Pollution Control Agency's disposal requirements.

NOTE: The fines (0-1/4") of any coal options provided shall not exceed the typical analysis, as written by the bidder, by more than 25%. The ash fusion, initial deformation-reducing atmosphere, shall not fall below the bidder's bid by 4%.

Failure to meet these requirements will result in a written notification from Duluth Energy Systems to the supplier requesting a reimbursement for additional expenses incurred by Duluth Energy Systems because of this analysis at a negotiated rate. Failure to agree to terms may result in cancellation of the contract. All expenses (incurred to procure coal required by Duluth Energy Systems) in excess of the original contract price shall be borne by the original supplier.

FUEL DELIVERY SCHEDULE. Supplier must have access to a certified truck scale for all deliveries and be able to deliver coal to the Steam Plant 24 hours per day 365 days per year as the steam load requires. It is anticipated that initial delivery will be required November 1 and continuing through October 31 of the years stated in the Bid Request.

Specification for Coal for Duluth Energy Systems Revised 3.6.19

Daily deliveries may be required. Daily coal requirements will be scheduled by a telephone call from the Steam Plant.

SOURCE AND DEDICATION. The basic source of coal to be delivered by the Bidder shall be as bid and accepted by the City. The awarded supplier shall covenant with the City that it has assigned a sufficient quantity of coal to fulfill its annual contract obligations.

COAL LOADING. Coal to be sold and delivered hereunder shall be F.O.B. the Duluth Steam Plant and loaded in dump trucks with freight charges to be paid by the Supplier. Coal trucks must use operating alarms when backing up to coal hopper and coal must be covered during hauling.

SAMPLING AND ANALYSIS. Coal to be furnished shall be sampled at least monthly by Duluth Energy Systems at the Duluth Steam Plant.

All of the samples shall be divided into three parts, and placed into suitable air tight containers and sealed. One part shall be retained and analyzed by an independent qualified testing laboratory; second part shall, if requested, be delivered to the supplier by mutually agreeable means and analyzed by the supplier; the third part shall be retained by Duluth Energy Systems not less than thirty (30) days in one of the aforesaid containers, properly labeled and identified, to be analyzed if a dispute arises due to a difference between Duluth Energy Systems' and Supplier's analyses. Each party hereto shall assume the cost of analyzing their part of each sample.

The analysis of the third part of any sample, should its analysis be found necessary, shall be made by an independent commercial testing laboratory, mutually acceptable, and the results of such analysis shall be controlling. The cost of the analysis made by such commercial laboratory shall be shared equally by the parties hereto.

Duluth Energy Systems shall mail copies of each analysis to Supplier, including a summary of the individual analysis and weights serving as the basis for a monthly invoice. Such analyses and reports shall be deemed acceptable unless protested by Supplier within twenty-five (25) days after receipt thereof.

WEIGHING. The weights of the coal delivered F.O.B. Duluth Steam Plant hereunder by the Supplier shall be determined on scales, to be furnished and maintained by Supplier, at the point of shipment. The weights thus determined shall be accepted as the quantity of coal for which invoices are to be rendered and payments made in accordance with the terms of the contract. The aforementioned scales shall be inspected and certified by an agency agreeable to the Supplier and the Duluth Energy Systems.

Duluth Energy Systems shall retain the right to have a representative present at any time to observe the weighing of the coal at the Supplier's facility. If either party should at any time question the accuracy of the scales, such party may request, at its expense, a prompt test and adjustment of scales by an agency agreeable to both the Supplier and Duluth Energy Systems. If any inspection reveals error in weight in excess of 1/2 percent (½%), weights of coal shipped during one-half of the period since the test immediately preceding shall be adjusted by the amount of the error shown.

FREIGHT CHARGES AND RISK OF LOSS. Supplier shall pay all freight and other charges applicable to the delivery of the shipment and shall bear the risk of loss of said shipment until received by the Duluth Energy Systems.

Specification for Coal for Duluth Energy Systems Revised 3.6.19

SHIPPING NOTICES. Promptly after loading each shipment, Supplier shall notify Duluth Energy Systems of shipment including an estimate of the delivery time.

BTU ADJUSTMENT. A BTU adjustment factor of + or -5% shall apply off the bid BTU value per pound of coal. Should the coal delivered to the plant have a BTU value between the upper and lower limits, no price adjustment shall occur. Should the BTU quality be less or greater than the 5% limit of the bid coal, a BTU quality adjustment shall apply. The final payment price per ton for coal shall be the contract price adjusted for BTU content and shall be determined by the following variables and equations:

BtuF – As delivered coal higher heating value Btu rounded to the nearest 10 BTUs/lb. CP - Contract price in \$/ton.

Btu - Contractor's guaranteed coal higher heating value in Btu/lb rounded to the nearest 10 Btu's /lb.

BtuC - Final Btu correction factor

FPP - Final payment price per ton in \$/ton rounded to the nearest \$0.01

The final Btu correction factor is: BtuF + 400/Btu=BtuC X CP = FFP

In no event shall the adjustment defined herein relieve the Supplier from its obligation of supplying Duluth Energy Systems with coal having a heating value greater than the minimum heating value stated by the Supplier under the Bid Data section.

FORCE MAJEURE. The parties hereto agree to incorporate the following force majeure provision, substantially as written, within the contract: 'Force Majeure' including Force Majeure affecting the (Name of) Mine, the (Name of) Terminal, Duluth Energy Systems' Steam Plant, transportation and other suppliers, includes war, fire, flood, strike, acts of terrorism, railroad car shortage, labor trouble, accident, riot, acts of God, acts or orders of federal or state government or its agencies, and any contingencies of like or different character beyond reasonable control of either party interfering with the production, supply, storage, transportation, loading or unloading of the coal by Seller or the receiving and utilization of coal by Purchaser, Seller and Purchaser shall be excused from the performance of any obligation under this Agreement when the cause of such nonperformance is Force Majeure except that the Purchaser shall not be excused from accepting and paying for coal already delivered or en route by Seller to Duluth Energy Systems' Steam Plant. Provided the party claiming Force Majeure gives the other party prompt written notice of such claim, the obligation of the party giving such notice so far as it is affected by the Force Majeure shall be suspended during, but not longer than, the continuation of the Force Majeure. Deliveries of coal excused by an event of Force Majeure shall not be made up except by mutual agreement. If a Force Majeure condition is not removed within sixty (60) days, the party not claiming Force Majeure may terminate this Agreement.

FUEL ADJUSTMENT. Bidders must provide a breakdown for all fuel adjustments and surcharges.

METHOD OF PAYMENT. The Supplier shall invoice the City on or about the first day of each month for deliveries made during the previous month. Invoices should be submitted to the City of Duluth, c/o Duluth Energy Systems. Invoices may be submitted via email to accountspayable@duluthmn.gov. The City will pay the Supplier within thirty (30) days of receipt of invoice the total amount of such invoice plus any adjustments for deviations in coal heating value for the coal received during the previous invoice period.