PROCUREMENT
The UNIVERSITY *of* OKLAHOMA

The Board of Regents of the University of Oklahoma invites interested parties to submit Bids for the Goods or Service identified below. Please read carefully. All communications, clarifications, questions, or any other matter relating to the Solicitation must be made only through the University Contact. Bids must be submitted to OUBIDS@ouhsc.edu.

Solicitation Title:	**PACKAGED CENTRIFUGAL WATER CHILLERS**
Solicitation No.:	**B-23154-23**
Issue Date:	**November 22, 2022**

☐**Request for Proposal** ☒**Invitation to Bid**

Schedule of Events (all times Central)	
Pre-Bid Conference	**N/A**
Site Visit (Locations, Date, Time) Check if Mandatory ☐	**N/A**
Pre-Bid Question Deadline	**December 13, 2022**
Answers Available	**December 15, 2022**
Bid Deadline	**January 5, 2023**
Interview/Demonstration	**N/A**
Tentative Award Date	**January 17, 2023**
Bid must be emailed to OUBIDS@ouhsc.edu	

University Information	
University Contact:	Roy Goodson
Address (Street, City, Zip):	840 Research Parkway, Suite 172
	Oklahoma City, OK 73104
Contact Email:	floyd-goodson@ouhsc.edu

THIS SOLICITATION CONSISTS OF THIS SOLICITATION PACKET, THE INSTRUCTIONS, GENERAL TERMS, DEFINITIONS, AND INSURANCE REQUIREMENTS AS SET FORTH BELOW. BIDDERS SHOULD CAREFULLY READ EACH DOCUMENT.

PROCUREMENT
The UNIVERSITY *of* OKLAHOMA

SCOPE OF WORK

1. Overview, Purpose, and Summary

PART 1 – OVERVIEW

The scope of this ITB is the purchase of two (2) 4,000 Ton centrifugal water chillers as specified for a forthcoming new central utility plant, hereinafter referred to as "Plant 3", at The University of Oklahoma's Health Sciences Center Campus, Oklahoma City, Oklahoma in accordance with the ITB and Section 236416, Centrifugal Water Chillers, as prepared by Frankfurt-Short-Bruza Associates, P.C. The equipment specified will be purchased by The University of Oklahoma for installation under a separate construction contract. The equipment shall be furnished complete with all items included in the specifications.

PART 2 - LOCATION OF PROJECT
The centrifugal water chillers purchased under this ITB are scheduled for installation in the Summer/Fall of 2024 at the forthcoming Plant 3 facility at the University of Oklahoma Health Sciences Center Campus, located at 801 Northeast 8th Street, Oklahoma City, Oklahoma 73104.

PART 3 – DRAWINGS AND PICTURES (see Attachment A)

#1: Site map annotated with nearby street intersection and project location.
#2: Site plan annotated with area of work and truck service.

PART 4 - PROJECT REFERENCES
List a minimum of two chilled water systems where the centrifugal water chiller proposed for this project (capacity range 2,000 Ton – 4,000 Ton) has been installed and operating for not less than two (2) years with the proposed refrigerant compressor, compressor motor, compressor motor VFD, and chiller control panel, other than the University of Oklahoma. List the date the system started producing chilled water and provide a point of contact including name, title, phone number, and email address.

a. _____
_____
_____

b. _____
_____
_____

2. Schedule

Chillers furnished under this ITB will be installed in Summer/Fall 2024 as part of a separate construction contract. Seller shall state below the estimated duration of time in weeks between receipt of purchase order and:

(1) shipping date of first chiller _____,

(2) shipping date of second chiller _____.

3. Expected Budget. (Based on the University's understanding, expectations, background, and knowledge of scope, the Expected Budget is neither a minimum nor maximum amount for this Solicitation.)

Budget is estimated at $2.6 Million per Unit, Total of approximately $5.2 Million for both Units.

Please review the SOLICITATION SPECIFICATIONS **for additional criteria, requirements, and information.**

PROCUREMENT
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SOLICITATION INSTRUCTIONS

BIDDERS MUST COMPLY WITH THE SOLICITATION INSTRUCTIONS. The Solicitation Instructions ("Instructions") govern the bidding and selection process for the University's acquisition of Goods and Services through a competitive process. Compliance with the Instructions is material to determining whether a Bid is responsive. Bidders should read all parts of these Instructions carefully. All terms, conditions, provisions, requirements, and language may be stated or phrased differently than in previous Solicitations, irrespective of past interpretations, practices, trade usage, or customs. In no event shall the Bidder's failure to read and understand any Solicitation, Contract, Contract Document, or other documents, part, specification, or requirement included with, referenced in, or incorporated into a Solicitation provided by the University constitute grounds for a claim during or after a Solicitation or Contract award. Please see the University's Formal Competition policy located here (Policies and Procedures (ou.edu)) for more information.

The Solicitation Instructions are available for review and download at the following link
Solicitation Instructions

BID RESPONSE

Bids are required to be structured into separate, labelled, and easily identifiable sections using the Bid packet structure below. A Bid submitted using any other structure may be determined to be non-responsive as set forth in the Instructions. Any section of the Bid packet that is not applicable to the Bid shall have a page inserted to denote the section is not applicable. As way of example, if business references are not required, the Bid should contain a page after the "Business References" section heading that reads "Not Applicable", "N/A" or some similar notation. **All forms, attachments, and other required documents referenced in the Solicitation are available for review and download at the following link** Solicitations (ou.edu)**.**

- **Section One – Administrative Documents**
  - A completed and executed Bid Proposal Cover Page
  - All documents requested in this Solicitation Packet or the Bid Proposal Cover Page
  - A brief summary of the company and marketing information and materials relevant to the Solicitation.
  - Signed Amendment(s), if any, located at the same online link as the Solicitation. The Bidder shall acknowledge agreement with each Amendment, if any, by inserting the Amendment in this section, signed by or on behalf of the Bidder.
- **Section Two - Response to Specifications and Requirements shall be limited to <u>essential</u> pages only.**
  - The Bid shall show the ability of the Bidder to meet or exceed the qualifications, specifications, and other matters set forth in the Solicitation.
  - The Bid must reflect for each requirement or specification whether they can be met by an out-of-the-box solution or whether customization is required.
  - If service level agreements are required, the proposed service level agreements shall be inserted in this section.
  - A list of all Subcontractors included as part of a submitted Bid.

- **Section Three – Pricing**
  - Unless otherwise stated in the Scope of Work or Solicitation Specifications, the Bid shall include a firm, fixed price for the term, including optional renewal terms, Travel and Subsistence Expenses, warranties, subscriptions, ongoing maintenance and support, and other costs, fees, charges, or expenses of any kind that will be charged by the Bidder.
    - The Bidder shall guarantee unit prices are correct.
    - For hourly work, the Bidder shall provide a breakdown of hourly rates for each service or occupation.
- **Section Four – Proposed Exceptions**
- **Section Five – Additional Bidder Terms**
  - Any additional terms that the Bidder requests be applicable to the Contract shall be inserted in this section and shall be provided in Word format. THE UNIVERSITY HAS NO RESPONSIBILITY TO INDEPENDENTLY REVIEW AN ENTIRE BID FOR ADDITIONAL TERMS AND ANY SUCH TERMS NOT SUBMITTED IN THIS SECTION OF THE BID SHALL NOT BE CONSIDERED. Should a Bidder be awarded a Contract, the University shall not be required to execute additional documents not included in a Bid. For example, if a Bidder typically uses an ordering document in connection with an acquisition, the ordering document template shall be included in the Bid.
- **Section Six - Offer of Value-Added Goods or Services**
  - If a Bid includes an offer of value-added Goods or Services, such offer shall be inserted in this section and include associated pricing and any other information relevant to such value-added offer. However, the University is not obligated to purchase value-added Goods or Services.

BID FORMAT

- The font shall be 12-point Times New Roman. The top, bottom, left and right margins shall be at least one inch, excluding headers and footers. All pages must be numbered.
- Responses must be submitted on the forms provided, where applicable. Where a form is not provided, responses must be submitted in MS Word format (.doc or .docx) or Adobe PDF (.pdf).
- Each Bidder shall submit a complete proposal in clear, concise language.
- Proposals should be tabbed and organized in easily identifiable parts mirroring the organization of this ITB.
- The Bidder shall not submit any items other than those requested in the Attachments/forms. The additional information will not be considered in the evaluation.

GENERAL TERMS AND CONDITIONS
INSURANCE REQUIREMENTS
RULES OF USAGE AND DEFINTIONS

The University's General Terms and Conditions ("General Terms") sets forth the terms and conditions for Contracts resulting from Solicitations issued or awarded by the University. The University's Insurance Requirements ("Insurance Requirements") sets forth all required Insurance types and limits (as applicable), conditions, and requirements for Solicitations issued or awarded by the University. The Rules of Usage and Definitions ("Definitions") set forth the way all terms, conditions, provisions, requirements, specifications, and other language set forth in the Solicitation, Solicitation Packet, Instructions, General Terms, Insurance Requirement Contract, or Contract Documents are used and defined unless specifically stated otherwise therein. The General Terms, Insurance Requirements, and Definitions apply to all Solicitations issued or awarded by the University and are incorporated by reference to all Bids and resulting Contracts. They may only be amended as set forth therein or in the Instructions.

The General Terms are available for review and download at the following link

Invitation to Bid

Request for Proposal

The Insurance Requirements are available for review and download at the following link
Insurance Requirements

The Definitions are available for review and download at the following link
Rules of Usage and Definitions

THIS SOLICITATION CONSISTS OF THIS SOLICITATION PACKET, THE INSTRUCTION, GENERAL TERMS, DEFINITIONS, INSURANCE REQUIREMENT, AND AMENDMENTS OR ATTACHMENTS THERETO. EACH IS HEREBY INCORPORATED BY REFERENCE.

Bid must be emailed to OUBIDS@ouhsc.edu

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SOLICITATION SPECIFICATIONS

In addition to the **SCOPE OF WORK**, these Solicitation Specifications set forth additional qualifications, specifications, pricing, evaluation criteria, and other information relating to the Solicitation.

1.1 Mandatory Requirements.

Proposals shall include the following information:

1. General arrangement drawings with overall operating dimensions including a floor plan, foundation plan, and four elevations. Drawings shall include fully assembled chiller and chiller compressor variable frequency drive (VFD). Drawings shall indicate all manufacturer recommended clearances with all mechanical and electrical customer connections identified including service, size, and connection type.

2. Duplicate information required for any alternate chiller selections deviating from the requirements of the ITB that the Seller wishes to propose.

1.2 Technical Requirements.

1. Bid Option #1: Documentation for refrigerant recovery unit in accordance with Section 236416 paragraph 1.6.A (see Attachment A) including catalog data, general arrangement drawings, and power requirements annotated to indicate the salient characteristics of the specific model being proposed.

2. Bid Option #2: Documentation for chiller spring isolation mounts in accordance with Section 236416 paragraph 1.6.B (see Attachment A) including detail drawings identifying isolator physical size, isolator locations, and isolator quantity.

3. Bid Option #3: Description of Extended Warranty coverage, conditions, and exclusions in accordance with Section 236416 paragraph 1.6.C (see Attachment A).

1.3 Evaluation Criteria.

Proposals will be evaluated based on proposal pricing, full-load and part-load energy efficiency, compliance with the requirements of the Invitation to Bid (ITB), feedback from Seller's project references, field services, and warranty terms. The specifications

establish the minimum requirements for furnishing the chillers and accessories specified. Equipment exceeding these requirements will be evaluated based on the specified value and credit given as appropriate. Likewise, equipment that does not meet or exceed the specified values will be evaluated accordingly.

1.4 Manufacturer.

A. The Seller shall state the manufacturer's name and catalog number (where applicable) of materials and equipment upon which this bid is based.

1. The use of the terms "or equal" or "as specified" by the Seller in this bid evaluation form is not acceptable and will be considered nonresponsive.

2. This proposal is based on materials and equipment from the following manufacturers and the Seller proposes to furnish the following items for each chiller.

	Name of Manufacturer	Identification Model or Type
Refrigerant Compressor	_____	_____
Compressor Motor	_____	_____
Compressor Motor VFD	_____	_____
Compressor Lubricating Oil Pump	_____	_____
Compressor Lubricating Oil Filter	_____	_____
Compressor IGV Valve Actuator	_____	_____
Flow Switch, Cond/Chilled Water	_____	_____
Temp. Sensor, Cond/Chilled Water	_____	_____
Refrigerant Pressure Relief Device	_____	_____
Water Side Anti-Corrosion Coating	_____	_____
Chiller Control Panel	_____	_____

1.5 Equipment Furnished.

A. The Seller shall specifically list all items of equipment that will be furnished and delivered to the site which will be field installed by the Chiller Installation Contractor (hereinafter referred to as the "Installing Contractor"). If not listed herein under Basis of Bid below, it shall be considered the Seller's responsibility for factory installation.

BASIS OF BID ITEMS

1.6 Equipment Data.

A. General Characteristics:

a. Nominal Capacity _____ tons

b. Overall Operating Dimensions length _____ ft.-in.

width _____ ft.-in.

height _____ ft.-in.

c. Shipping Weight _____ lbs.

d. Operating Weight _____ lbs.

e. Compressor Weight _____ lbs.

f. Compressor Motor Weight _____ lbs.

B. Manufacturer Recommended Clearances:

a. Front _____ ft.-in.

b. Left _____ ft.-in.

c. Right _____ ft.-in.

d. Rear _____ ft.-in.

e. Top _____ ft.-in.

C. Refrigeration System Data:

a. Refrigeration Circuit Quantity _____

b. Total Compressor Quantity _____

c. Compressor Stage Quantity _____

d. Compressor Type _____

e. Compressor Motor Type _____

f. Compressor Motor RPM @ Design _____

g. Metering Device Type _____

h. Refrigerant Type _____

i. Total Refrigerant Charge _____ lbs.

D. Condenser:

a. Nominal Pipe Connection Size _____ inches

b. Pipe Connection Type _____

c. Tube Length _____ ft.-in.

d. Tube Outside Diameter _____ inches

e. Tube Wall Thickness _____ inches

f. Tube Enhancement _____

g. Tube Material _____

h. Number of Tube Passes _____

E. Evaporator:

a. Nominal Pipe Connection Size _____ inches

b. Pipe Connection Type _____

c. Tube Length _____ ft.-in.

d. Tube Outside Diameter _____ inches

e. Tube Wall Thickness _____ inches

f. Tube Enhancement _____

g. Tube Material _____

h. Number of Tube Passes _____

F. Compressor Motor Variable Frequency Drive:

a. Overall Dimensions length _____ ft.-in.

width _____ ft.-in.

height _____ ft.-in.

b. Weight _____ lbs.

c. Short Circuit Current Rating (SCCR) _____ kAIC

G. List of All Electrical Services Required:

a. QTY & Description: _____ V / ϕ / Hz

_____ MCA

_____

b. QTY & Description:

_____ MOCP

_____ V / ϕ / Hz

_____ MCA

c. QTY & Description:

_____ MOCP

_____ V / ϕ / Hz

_____ MCA

d. QTY & Description:

_____ MOCP

_____ V / ϕ / Hz

_____ MCA

e. QTY & Description:

_____ MOCP

_____ V / ϕ / Hz

_____ MCA

f. QTY & Description:

_____ MOCP

_____ V / ϕ / Hz

_____ MCA

_____ MOCP

H. Performance Data at Specified Design Conditions:

a. Guaranteed Capacity _____ Tons

b. Evaporator EWT _____ °F

c. Evaporator LWT _____ °F

d. Evaporator Design Flow _____ gpm

e. Evaporator Design Pressure Drop _____ ft.wc.

f. Evaporator Design Fouling Factor _____ hr-ft2-F/Btu

g. Condenser EWT _____ °F

h. Condenser LWT _____ °F

i. Condenser Design Flow _____ gpm

j.	Condenser Design Pressure Drop	_____	ft.wc.
k.	Condenser Design Fouling Factor	_____	hr-ft2-F/Btu
l.	Total Electrical Power Demand	_____	kW
m.	Full Load Efficiency	_____	kW/Ton
n.	Heat Rejection to Ambient, Chiller	_____	Btuh
o.	Hear Rejection to Ambient, Each VFD	_____	Btuh
p.	Sound Power Level, Chiller	_____	dB(A)
q.	Sound Power Level, VFD Cooling Fan	_____	dB(A)
r.	VFD Maximum Input Current Distortion	_____	%

I. Performance Data at Part Load / Non-Design Conditions:

a.	NPLV.IP per AHRI Standard 550/590	_____	kW/Ton
b.	Minimum stable continuous load without surge at design lift (43°F)	_____	Tons
c.	Minimum stable continuous load without cycling at minimum lift	_____	Tons
d.	Minimum lift at minimum load above	_____	°F
e.	Minimum evaporator flow rate	_____	gpm
f.	Minimum condenser flow rate	_____	gpm
g.	Minimum CEWT at full condenser flow and specified design evap. conditions	_____	°F
h.	Efficiency at above operating condition	_____	kW/Ton
i.	Chiller capacity at design condenser flow, 60°F CEWT, 54°F EEWT, and 42°F ELWT	_____	Tons

J. Part Load Performance Matrix:

Seller shall populate the table below with kW/Ton predicted performance data for each of the specified operation conditions. If the proposed chiller cannot operate reliably at any particular data point, Seller shall enter "N/A" for that condition. Performance shall assume the following:

a) Evaporator water flow is variable while evaporator water temperatures are held constant at the specified design conditions.
b) Condenser water flow is constant.

%	**CEWT (°F)**						
LOAD	85.0	80.0	75.0	70.0	65.0	60.0	55.0
100%							
90%							
80%							
70%							
60%							
50%							
40%							
30%							

1.7 Field Services.

a. Total personnel hours to be provided per chiller for total field services. _____hrs

b. Total personnel hours to be provided for on-site classroom instruction and hands-on field training. _____hrs