NAME OF WORK: Tender for Design, Supply, Installation, Testing and Commissioning of Hot Water Generation system for various buildings at the Permanent Campus of Nalanda University, Rajgir, Bihar.

Pre-Bid Response Issued on 29.07.2021	
BIDDER'S QUERY	NU REPLY
1. E-tender processing fees is Rs.15,000.00+tender processing fees is Rs.7000.00, kindly explain total both amount to be paid or only e tender processing fees to be paid.	The tender fee RS 15000/- related clause may be read as E-tender processing fees is Rs. 7,500/- in favor of "Nalanda University" payable at Rajgir. And, others processing fees are payable to the web-portal maintaining agency i.e., payable to "ITI LTD". Through e-payment gateway.
2. For MSME and small-scale players in Solar Water Heater above processing fees are on higher side so kindly consider minimum amount for tender processing fees.	The tender fee RS 15000/- related clause may be read as E-tender processing fees is Rs. 7,500/- in favor of "Nalanda University" payable at Rajgir. And, others processing fees are payable to the web-portal maintaining agency i.e., payable to "ITI LTD". Through e-payment gateway.
3. NIT - Page no 12 Point no.1 - In eligible criteria — 3 similar works not each costing not less than 1.30 Cr. or 2 similar works each costing not less than 1.94 Cr. and also said gross value of the completed work kindly explain 1.30cr will be the gross value within the last 7 years or 1.30Cr would be the completed order on 1 single location.	The similar works are mentioned in the NIT, one or many locations are not mentioned in the NIT. Herein one works means in a work order issued by the owner. Three similar works each costing not less than Rs.1.30 Crores (Rupees One Crore Thirty Lakh only) or completed two similar works each costing not less than Rs.1.94 Crores (Rupees One Crore Ninety-Four Lakh only) or completed one similar work costing not less than Rs.2.58 Crores (Rupees Two Crore Sixty-One Lakh only) during the last seven (7) years ending previous day of the last day of submission of Tender. For this purpose, cost of work shall mean gross value of the completed work. This should be certified by an officer not below the rank of Executive Engineer/Project Manager or equivalent. For the purpose of this clause, "similar work" shall mean "Supply, Installation, Testing and Commissioning of Heat Pump and/or PHE, heating/cooling system and and/or Solar PV System or Solar HOT WATER SYSTEM within a single order in last seven years in India".

NAME OF WORK: Tender for Design, Supply, Installation, Testing and Commissioning of Hot Water Generation system for various buildings at the Permanent Campus of Nalanda University, Rajgir, Bihar.

Pre-Bid Response Issued on 29.07.2021	
BIDDER'S QUERY	NU REPLY
4. NIT - Page no.12 Point 2 - Average annual turnover 1.60cr for last 5 consecutive years can you exclude last financial year of Covid 19 pandamic and this year of Covid 20-21 pandamic?	NIT condition prevails. It is asked upto 31 st March 2021. As per Tender- The bidder should have had average annual financial turnover (gross)of Rs.1.62 Crores (Rupees One Crore Sixty-Two Lakh only) of Similar works during the immediate last five consecutive financial years balance sheets, ending 31st March 2020, duly audited by Charted Accountant. Year in which no turnover is shown would also be considered for working out the average.
5. NIT - Page no.13 Point no 4-solvency certificate of value not less than 1.30cr required bank charges of Rs.50000 immediately before our selection as vendor for your tender. For any vendor this is crucial financial position to get it done with this charges and after your tender this solvency certificate will not useful anymore for any other tender. Therefore can you make changes that after selected as final vendor bank solvency required.	NIT condition prevails. It is asked upto 31st March 2021.
6. NIT - Page no.17 Point no. 10 — Performance Guarantee of 3% - can you accept bank guarantee of national bank, kindly confirm.	The instrument issued by any national scheduled bank will be acceptable. It should be scheduled bank declared by the RBI. As per NIT- This guarantee shall be in the form of Deposit at Call receipt of any scheduled bank/Banker's cheque of any scheduled bank/Demand Draft of any scheduled bank/Demand Draft of any scheduled bank or Government Securities or Fixed Deposit any Scheduled Bank Receipts or Guarantee Bonds of or the State Bank of India in accordance with the prescribed form.

NAME OF WORK: Tender for Design, Supply, Installation, Testing and Commissioning of Hot Water Generation system for various buildings at the Permanent Campus of Nalanda University, Rajgir, Bihar.

NIT No: NU/Engg/74/2021-22/N02/03 Dated 12.07.2021		
Pre-Bid Response Issued on 29.07.2021		
BIDDER'S QUERY	NU REPLY	
7. NIT - Page no.18 - Point no.18 – the tender for the work shall remain open for 90 days from the date of opening of technical tender. – this is very old term taking into consideration up going market rates of Evacuated Tubes, SS304,316,MS fabrication material, and Solar system related all accessories. Within last 2 months rates of above material almost escalated by 35-40% and coming 6 months rates will be increase 15-20% higher than today. Therefore this term should be for minimum 30 to maximum 45days inshort you have to take decision as fast as you can after opening of technical bid. Kindly understand the situation of market and take the decision.	NIT Conditions prevails. Such escalation comes under clause 10 under schedule F which is not applicable in this NIT.	
8. NIT - Page no.24 Article no.1 – Commitment of the Owner – The Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles- in this article if any local villager or local party ask for any charges can you provide protection to vendor?	The NIT condition prevails. The work is required to be executed inside NU campus and not in the villager or local party's building roofs, and hence no such hindrance would be inside campus. However, contractor has to ensure the site visit to understand the site condition and submit an affidavit in the form G format published with the NIT. However, the cited clause is related to the INTEGRITY AGREEMENT to avoid any conflict of interest or similar kind of thing. We have not noticed such illegal demand by any party/person/society, if observed then it will be required to be reported before the govt administration as per the rule provisions.	

NAME OF WORK: Tender for Design, Supply, Installation, Testing and Commissioning of Hot Water Generation system for various buildings at the Permanent Campus of Nalanda University, Rajgir, Bihar.

Pre-Bid Respo	nse Issued on 29.07.2021 NU REPLY
9. NIT - Page no.70 Point-Employment of Technical Staff and employees – in this table the mentioned qualification of civil engineer is not required for solar water heating system and heat pump installation instead of civil engineer mechanical engineer, DME (Diploma in mechanical engineer) and for planning and billing B.com or master in business administration and same for store in charge B.Com is the required qualification as per this table you are saying if minimum qualification of technical representative is not meet then rate of recovery column will be applicable, kindly correct the qualification criteria for the aforesaid work as per tender BOQ.	The domain engineer will be acceptable as per the instruction of the EIC. The combination of civil and mechanical engineer will be acceptable for the effective execution of the project after award of the issuance of the LOA.

NAME OF WORK: Tender for Design, Supply, Installation, Testing and Commissioning of Hot Water Generation system for various buildings at the Permanent Campus of Nalanda University, Rajgir, Bihar.

NIT NO. NO/Lingg/74/2021-22/NO2/03 Dated 12.07.2021		
Pre-Bid Response Issued on 29.07.2021		
BIDDER'S QUERY	NU REPLY	
10. NIT - Page no 78 - Excepted Risk:- In this point lockdown or situation like lockdown or any command by related state or local authority for lockdown or restrict entry in a state this should be consider situation beyond the contractors control and also tender authority control. Kindly do the needful for this point.	The NIT condition prevails. As per the latest govt orders, the construction related projects were exempted from the lockdown restriction. For any force measures like conditions duly announced by the govt is well defined in the NIT. Kindly refer to the NIT page 89, clause 5.2, If the work(s) were delayed by: (i) Force majeure, or (ii) Abnormally bad weather, or (iii) Serious loss or damage by fire, or (iv)Civil commotion, local commotion of workmen, strike or lockout, affecting any of the trades employed on the work, or (v) Delay on the part of other contractors or tradesmen engaged by Engineer-in-Charge in executing work not forming part of the Contract, or (vi) Any other cause like above which, in the reasoned opinion of the Engineer-in-Charge is beyond the Contractor's control. Then upon the happening of any such event causing delay, the Contractor shall immediately give notice thereof in writing to the Engineer In Charge for entry in the hindrance register (physical or web-based as prescribed in Schedule F) but shall nevertheless use constantly his best endeavors to prevent the delay in overall completion of the work or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-Charge to proceed with the works. The contractor shall have no claim of damages for extension of time granted or rescheduling of milestone/s for evens listed in sub clause 5.2.	
11. Technical Specification page no.2 point no.2 – MNRE certification is not valid for solar water heater manufacturers. Old certificates are available with all vendors as per MNRE list, can we submit that?	The basic idea behind this clause is that the manufacturer's product should be BIS certified and the manufacturer should comply the MNRE standards and specification related guidelines set by the MNRE. The manufacturer should be well known and confirming to the laid down specifications and standards by the MNRE.	

NAME OF WORK: Tender for Design, Supply, Installation, Testing and Commissioning of Hot Water Generation system for various buildings at the Permanent Campus of Nalanda University, Rajgir, Bihar.

Pre-Bid Response Issued on 29.07.2021		
BIDDER'S QUERY	NU REPLY	
no.2 point no.4 – the system asked by you as per tender BOQ is of Evacuated tube technology. The system is very delicate from the point of view of ware and tare and mechanical strength and sustainability of ETC tubes against hot water pressure or thermic fluid pressure is also very less compare to flat plate collectors. The evacuated tube can sustain only 1.5Kg / cm .per sq. In this point you are asking 48 hours' time to solve minor complaints but system like ETC complaint will be always arises. We mean to say technology selected by your architect is good but sustainability and 0 maintenance in this system is not possible. We strongly suggested go for flat plate collector systems with same technology as per tender BOQ. Here in tender BOQ 300LPD system is without heat exchanger and system 600LPD and above is with heat exchanger. Kindly think over on this change.	ETC system is required as per the specifications and hence NIT conditions prevails.	

NAME OF WORK: Tender for Design, Supply, Installation, Testing and Commissioning of Hot Water Generation system for various buildings at the Permanent Campus of Nalanda University, Rajgir, Bihar.

NIT No: NU/Engg/74/2021-22/N02/03 Dated 12.07.2021

Pre-Bid Response Issued on 29.07.2021 BIDDER'S QUERY NU REPLY

13. **Technical Specification page no.2 point no.6 -** The supplier shall guarantee the performance of the system for the rated output of 55 degree C – kindly note the atmospheric heat loss in any insulation (as per tender BOQ you asked rock wool as insulation) 10degree C/PUF. The operating temperature of the system is 25 degree C.

As per winter season in Bihar ambient should dropped below 10 degree C. If ambient will below 10 and 15 degree C. then maximum temperature of the solar water heater will be 50-55 degree C. in hot water storage stand for that specific day. The next day early morning in user point the expected hot water would be between 45-52 degree C. considering hot water running losses in insulated CPVC pipe. Against science how can 55 degree C. hot water we can provide in winter season? Therefore kindly think over on this point. To increase hot water temperature as per this point you asked only increase number of collectors are not useful. Here force circulation system with fixed temperature only the solution. Your comments on this point is must.

Kindly refer to schematic diagram and BOQ, the recirculation pump has been already considered for the forced and continuation circulation to avoid any such cold-water packet /layer formations.

The bidder has to consider the same recirculation pump as force circulation system with fixed temperature only the solution as the electrical backup provision is also considered. The contractor has to consider the power supply from and including CONTROL PANEL. Considering all such losses upto 10 deg, In case of the solar water heater system, bidder may consider its output temperature with forced circulation at 65 deg including all software and hardware.

NAME OF WORK: Tender for Design, Supply, Installation, Testing and Commissioning of Hot Water Generation system for various buildings at the Permanent Campus of Nalanda University, Rajgir, Bihar.

Pre-Bid Response Issued on 29.07.2021	
BIDDER'S QUERY	NU REPLY
14. Technical Specification Point 7. Page 2 – Replacement of parts and accessories like vaccum tubes, antidust rings and silicon washer is always required in evacuated tube collector systems. Therefore again we strongly recommend system with flat plate collector and heat exchanger and force circulation.	ETC system is required as per the specifications and hence NIT conditions prevails.
15. Technical Specification -Point no. 9 Page no.16 - The tanks will be mounted on stands made out of angle iron frame of 35x35x4mm up to 2000 liters and 65x65x6mm for capacity above 2000 liters.	Stands for tank size Upto 2000 Lit-: The minimum size of the angle would be MS iron 65x65x6mm / 75x 40 ISMC C channel or as per the structural design with load calculation by the bidder whichever will be more and it will be approved by the client before its supply and installation.
As per above specifications for 2000Kgs – 2000Ltrs – 35X35X4mm MS angles is not sufficient to sustain weight. Here at least 75X40mm ISMC C channel is required. As well as above 2000ltr size of MS angle will be increase. Kindly confirm the thickness of angle once again.	Stands for tank size above 2000 Lit: The minimum size of the angle would be 75X75x6mm / ISMC C channel or as per the structural design with load calculation by the bidder whichever will be more and it will be approved by the client before its supply and installation.

NAME OF WORK: Tender for Design, Supply, Installation, Testing and Commissioning of Hot Water Generation system for various buildings at the Permanent Campus of Nalanda University, Rajgir, Bihar.

Pre-Bid Response Issued on 29.07.2021	
BIDDER'S QUERY	NU REPLY
9 Page no.16 - The tanks will be mounted on stands made out of angle iron frame of 35x35x4mm up to 2000 liters and 65x65x6mm for capacity above 2000 liters. As per above specifications for 2000Kgs – 2000Ltrs – 35X35X4mm MS angles is not sufficient to sustain weight. Here atleast 75X40mm ISMC C channel is required. As well as above 2000ltr size of MS angle will be increase. Kindly confirm the thickness of angle once again.	Stands for tank size Upto 2000 Lit-: The minimum size of the angle would be MS iron 65x65x6mm / 75x 40 ISMC C channel or as per the structural design with load calculation by the bidder whichever will be more and it will be approved by the client. Stands for tank size above 2000 Lit: The minimum size of the angle would be 75X75x6mm / ISMC C channel or as per the structural design with load calculation by the bidder whichever will be more and it will be approved by the client.
16. Technical Specification -Point no.10 page no.6 - For the glycol system, suitable drain tank to be provided as per standard practice. Pumping maybe provided on system larger than 600LPD. As per above it is not clear that you need force circulation system with fixed temperature or differential temperature system or you need only circulation pump? Why glycol is required with expansion tank? Can you focus on this in details with your intension to buy this system we have doubt and clear understanding which type of systems for what temperature purpose you required.	Kindly refer to the schematic, circulation pump has been considered in the design drawings and BoQ as well which refers the forced circulation system. The bidder has to consider the suitable circulation pumps and forced circulation system with timer and control communicable interlocked auto systems. There must be manual or bypass options also for the warrant and compelling circumstances.

NAME OF WORK: Tender for Design, Supply, Installation, Testing and Commissioning of Hot Water Generation system for various buildings at the Permanent Campus of Nalanda University, Rajgir, Bihar.

NAME OF WORK: Tender for Design, Supply, Installation, Testing and Commissioning of Hot Water Generation system for various buildings at the Permanent Campus of Nalanda University, Rajgir, Bihar.

Pre-Bid Response Issued on 29.07.2021	
BIDDER'S QUERY	NU REPLY
	output requirement for required volume per
	day.
	Capacity Tube size Collector Area (LPD) (Sq.m)
	Dia:47mm Dia:47mm Dia:58mm Length:1500mmLength:1800mm Length:1800mm
	100 14nos 12 10 1.5
	125 18 15 13 1.93 150 21 18 15 2.25
	200 28 23 19 3.0
	250 34 28 23 3.75
	300 40 33 27 4.5
	400 52 43 35 6 Above 12 Tubes per 10 Tubes per 8 Tubes per 1 2 2 2 2 4 100 PP
	500LPD 100LPD 100LPD 100LPD 1.3sq.m/100LPD
	The more details of the heat exchanger area
	confirming to the LPD will be required to be designed
	by the bidder, may be as per the widely used method
	of calculating the heat transfer capacity UA and
	eventually sizing the heat exchanger is the
	logarithmic mean temperature difference LMTD
	method, applied between the inlet and outlet of the
	heat exchanger as per the MNRE standards.
18. Technical Specification -Page no.	Please refer to the BoQ sheet, the sizes of the het
7 – Heat Pump – capacity of heat	pumps are mentioned.
pump input power and output power is	The BoQ Item No 2 is for Approx. Heating Capacity
not given anywhere in tender BOQ. You	1
have to at least mentioned capacity of	The BoQ Item No 3 is for Approx. Heating Capacity
heat pump.	- Heat Pump Mode: 10.0 KW
	The BoQ Item No 4 is for Approx. Heating Capacity
	- Heat Pump Mode: 17.0 KW
19. Technical Specification -Page	The Electrical sizes are required to be designed by
no.14- RE-CIRCULATION PUMPS - in	the bidder to undertake the adequate circulation of
this point recirculation pump capacity is	the system.
not given to calculate pump capacity	However, it is mentioned that minimum Flow = 6
proposed plumbing design from your	Cum per Hour
plumbing consultant is required or	Head = 15 meter.
recirculation pump capacity directly	Whatever will be adequate size to undertake the
required. To calculate recirculation	force circulations confirming to the site requirements
pump capacity is not solar vendors job.	(Hostel 28 users per cluster – like I1 =I2=I8=G1=-
This is responsibility of PMC (Project	G8=H1=H8 wherein 1 heat pump on each
Management Consultant). Therefore	building has been considered. Herein one I1 = I2

NAME OF WORK: Tender for Design, Supply, Installation, Testing and Commissioning of Hot Water Generation system for various buildings at the Permanent Campus of Nalanda University, Rajgir, Bihar.

Pre-Bid Response Issued on 29.07.2021	
BIDDER'S QUERY	NU REPLY
pump capacity is required instead of calculations by us as a solar vendor.	=I8=G1=G8=H1=H8 are individually considered as one building.
	Similarly, all Bungalows, Apartments and others buildings are tabulated herein below.
We request you to kindly provide the preferred make list to understand the product quality range. As per the published tender requirement, Jaquar comply and provide better products with all necessary test certificates as per the govt norms.	The preferred list is published herein below.

Name	Name of Work: Supply, Installation, Testing and Commissioning of Solar Water Heaters at Nalanda University Phase 1, Rajgir, Bihar		
Docume	Document: PREFERD MAKE LIST		
Sr. No	Equipment	Preferd Make	
1	Solar Hot Water System	TATA power, Racold, Benchmark, Havels and equivalent as etc. as per EIC approvals	
2	Air To Water Heat Pump	AO Smith, Jaquar, Bluebox, Kehems, Balief, Climaveneta , Crompton GREAVES and Racold as per the EIC approvals	
3	Mounting Structure	Tata Steel/ Jindal Steel / TISCO / RINL	
4	String Monitoring Boxes	Trinity Touch/Hensel/VNT/Fairwood/Spillsberg/Eaton Salaris / Statcon /Machine Pulse	
5	TTA LT Panels including switchgears	ABB / Schneider / Siemens	
6	Control Relay (Electromechanical and Numeric)	ABB/Siemens/Schneider	
7	Meter	Secure / Schneider / L&T / ABB/Siemens	
8	Cables	DC Cable: Polycab/KEI/Lapp	
9	Cables	AC Cable: Polycab/KEI/ RR Kables	
10	Plant Lightening Arrestor	Erico /LPI/ Cape /OBO / DEHN	
11	SPD	DEHN / Cape / OBO / Socomech	
12	Connector	Multi contact/Amphenol/Koyo/Bizlink / Elcon / Stsubli	
13	IP Base CCTV	Honeywell/Bosch / Sony	
14	Thermostat for Auto Cutoff	Danfoss/Seimens/Honeywell	
15	MCBs / RCCBs / RCBO	ABB/Siemens/Schneider	
16	LED indication lamps and Push Buttons	ABB/Siemens/Schneider	
	SS HOT WATER TANK FOR	Kingspure / Heron/ J Steel or SS 316 Tank as per MNRE	
17	SOLAR	approved Manufacturer	
18	HOT WATER TANK FOR HEAT PUMP	As per Heat Pump Manufacturer.	
	Hot water pipe and tank	Lloyd / Rockwool/ As per Heat Pump or ETC solar	
19	Insulation	Manufacturer	
20	Aluminum Cladding for Hot water pipe and hot water tank	Jindal / Hindalco /Indal	
21	CPVC PIPES	Astral / Finolex / Ashirvaad/supreme	
22	VALVES	Zoloto/ Sant / Advance	
23	Pressure Guage	H Guru/ Fiebig / Wika	
24	Temperature Guage	H Guru/ Fiebig / Wika	
25	Heating Element for Hot water tank	Theeta / Kerone / or as per MNRE approved Manufacturer	
26	Pumps	Armstrong / Grundfos / ITT Bell & Gossett / Wilo / XYLEM/ Lubi	

The system distribution is tabulated below to understand, design and calculate the actual force circulation of the hot water within the same line items of circulation pump under the same price.

Sr. No	Parcel	Building Name	Floors	Rooms	Occupancy Per Room	Total Occupancy	Hot Water Demand (LPCD)	Hot Water Demand (LPD)	Diversity	Hot Water Demand (LPD)	Heating Capacity-7 KW	Heating Capacity- 10.0 KW	Heating Capacity-17 KW
1	Hostel	11	G+2.5	14	2	28	50	1400	75%	1050		1	0
	1105101	12	G+2.5	14	2	28	50	1400	75%	1050		1	0
		13	G+2.5	14	2	28	50	1400	75%	1050		1	0
		14	G+1.5	10	2	20	50	1000	75%	750		1	0
		15	G+0.5	6	2	12	50	600	75%	450	1		0
		16	G+1.5	10	2	20	50	1000	75%	750		1	0
		17	G+1.5	10	2	20	50	1000	75%	750		1	0
		18	G+2.5	14	2	28	50	1400	75%	1050		1	0
		H 1	G+1.5	10	2	20	50	1000	75%	750		1	0
		H 2	G+1.5	10	2	20	50	1000	75%	750		1	0
		H 3	G+1.5	10	2	20	50	1000	75%	750		1	0
		H 4	G+0.5	6	2	12	50	600	75%	450	1		0
		H 5	G+1.5	10	2	20	50	1000	75%	750		1	0
		H 6	G+1.5	10	2	20	50	1000	75%	750		1	0
		H 7	G+1.5 G+1.5	10 10	2	20 20	50 50	1000 1000	75% 75%	750 750		1	0
		по	G+1.3	10	2	20	30	1000	7370	730		1	0
		G 1	G+1.5	10	2	20	50	1000	75%	750		1	0
		G 2	G+1.5	10	2	20	50	1000	75%	750		1	0
		G 3	G+1.5	10	2	20	50	1000	75%	750		1	0
		G 4	G+2.5	14	2	28	50	1400	75%	1050		1	0
		G 5	G+2.5	14	2	28	50	1400	75%	1050		1	0
		G 6	G+2.5	14	2	28	50	1400	75%	1050		1	0
		G 7	G+2.5	14	2	28	50	1400	75%	1050		1	0
		G 8	G+1.5	10	2	20	50	1000	75%	750		1	0
		E1	G+2.5	14	1	14	50	700	75%	525	1		0
		E2	G+2.5	14	1	14	50	700	75%	525	1		0
		E3	G+2.5	14	1	14	50	700	75%	525	1		0
		E8	G+1.5	10	1	10	50	500	75%	375	1		0
		A 1	G+1.5	5	3	15	50	750	75%	563	1		0
		A 6	G+2.5	7	3	21	50	1050	75%	788		1	0
		A7	G+2.5	7	3	21 21	50 50	1050	75%	788		1	0
		A 8	G+2.5	/	3	21	50	1050	75%	788		1	U
2	Faculty Apartment												
		2BHK	G+3	8	5	40	50	2000	60%	1200		7	
		ЗВНК	G+3	8	5	40	50	2000	60%	1200		7	
		3BHK +	G+3	8	6	48	50	2400	60%	1440		5	
	Familia D. 1												
3	Faculty Bungalow	45 nos	G+1	1	5	5	60	300	100%	300			-
		43 1105	G+1	1	3)	00	300	100%	300			
4	VC Bungalow												
		1 nos	G+1	1	5	5	60	300	100%	300	1		0
5	Campus Inn	1 nos	G+3	72	1	72	60	4320	50%	2160			2
6	International Center	1 nos	G+2	51	1	51	60	3060	50%	1530			2
7	Sport Complex	1 nos											1
												-	
8	Medical Center	1 nos				20	50	1000	75%	750		1	0

Best Regards

-S/d-

(Registrar)