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CLARIFICATIONS # 1

Contract name.: Supply, Installation, Maintenance of relevant equipment and services for the introduction of consumption-based heat metering and thermostatic heating valves in District Heating, Prishtina Reference No.: BD / QPBS / 2021/003 Date: 22.04.2021		
No.	Question	Answer
1.	In the file Biding Document, respectively page 93, SR 3 - Technical Specifications file Annex 2 – Part 2 – Supply Requirements: We would like to have clarification answer from your team for following Questions for: 6.4.2.3 HEAT CALCULATOR MFK requirements: Total elapsed time of operation (h) Our questions: Other systems can provide total elapsed time of operation in days instead of hours which is enough for this type of information.	See the Addendum #2 on the bidding document.
2.	Table 9 Technical data heat calculation unit MFK requirements: Selectable yearly or monthly reading date minimum 24 months values via display or wireless Mbus Our questions: The other Systems offers: - 15 monthly values by display or wireless M-Bus telegramm - 24 monthly and semimonthly consumption values by optical interface	See the Addendum #2 on the bidding document.

	- Last 365 days daily consumption values by optical interface Our Understanding is that the datas should be colleceted mainly by wireless M-Bus. The Wireless M-Bus Meters can be readout by the Gateway which collects the data and sends them to the server by GSM. This should be enough since with the last 15 monthly consumption values the consuption of the whole year is measured to make the billing by the other system. Other Systems offer the possibility to read out the daily consumption data for the last 365 days by the optical interface. This helps a lot for clarification in a case there is some inconsistency regarding the billing according to the wireless M-Bus consumption data. Only one manufacturer can produce it according to MFK requirements	
3.	MFK requirements: Temperature range 5°C to 95°C Our question: It's not clear if this temperature range refers to the medium of the flow sensor or the ambient temperature range of the calculator unit. The flow sensor of the other systems has the temperature range of 15°C-90°C and the calculator has the ambient temperature range in the field of 5°C-55°C. That should be enough for common use. Usually the temperature in the forward flow is not higher than 70°C.	This temperature refers to the supply flow temperature. See the Addendum #2 on the bidding document.
4.	6.4.3.2. GENERAL MFK requirements: - kC value - kQ value Our questions: Heat cost allocators don't have the feature to show those factors on the screen. They are predefined based on radiator type and size, and are integrated factor during radiator energy output calculation. Their visibility on the screen is totally irrelevant to the user. Other Systems offer the possibility to read out the monthly and half monthly consumption data of the complete lifetime of an heat cost allocator by the optical interface. This helps a lot for clarification in a case there is some inconsistency regarding the billing according to the wireless M-Bus consumption data. The above mentioned factors kc and kq can only one manufacturer notify in the display, according to MFK requirements.	See the Addendum #2 on the bidding document.

5.	Table 11 Technical data heat cost allocator MFK requirements: Ambient temperature 5°C to 70°C Our question: Heat cost allocators are mounted on the radiators which are inside apartments, ambient temperatures of 70°C are unlikely to occure. We can provide heat cost allocator with an ambient temperature range -25°C to 60°C that is more the enough for common use. MFK requirements: IrDA interface Our questions: IrDA interface is not available as a communication protocol for most of heat cost allocators manufacturers, although optical interface is by its nature some kind of IrDA based communication. By the optical interface the devices can be programmed the same way like with the IrdA Interface. Only one manufacturer can produce it according to MFK requirements.	See the Addendum #2 on the bidding document.
6.	7.1.1.2 Data collection network node MFK requirements: Up to 12 network nodes can communicate with each other on a network and exchange the respective consumption data Synchronising of the received meter readings in between different data collection gateways (if more than one gateway is installed in one building) The transmission range shall be extendable with network nodes installed at various spots inside the building up to 12 pieces Our questions: It is not necessary that the nodes (Description of the manufacturer Qundis) need to communicate between each other or synchronise the data between each other since they only have the funktion to extend the Network. In other Systems where the Gateway collects the consumption data of the devices by wireless M-Bus and sends them as a file to the server has the same functionality. On the server the consumption data can be consolidated and converted in the format which is required. Instead of nodes in the other system more Gateways could be mounted in the building to extend the network and	It's the Suppliers decision to choose a suitable data collection and transmission technology to fulfil the functional requirements. This can either be done via network nodes, which are communication with each other and having one master gateway sending the data via GSM or with individual gateways, which are directly transmitting the collected data via GSM

	there you have no limitation of quantity. The temperature range of the node is from 0°C to +55°C and the IP class is 20 so it can only be mounted inside of the building. The Gateway of the other System can be mounted even outside since it has a temperature range of -20°C to +60°C and an IP class of 65 (rain water resistant). So you are more flexible in the mounting position as with the nodes. Often outside the wirless M-Bus devices can be received much better so you need less Gateways for a network than nodes and the GSM signal is stronger too for the transmission.	
7.	Table 12 Technical data network node MFK requirements: Display with 4-digit LCD Our questions: It is not comprehensible why an node or Gateway has the requirements of an digital LCD Display since it can be configurated from outside or USB Interface and Software of the Gateway producer. In other Systems all the programmed datas can be easily seen by the Gateway configuration software on the PC too. So it is not necessarsy that there is an LCD Display. Only one manufacturer can produce it according to MFK requirments.	See the Addendum #2 on the bidding document.
8.	MFK requirements: 5 years (monthly data read-out) and 10 years backup battery, exchangeable Our questions: The battery at the other system can be easily exchanged at any time because of plug an play. Even in the case of an empty or malfunction of the battery the last received consumption data of the devices is being stored in an non-volatile FLASH memory in the Gateway which lasts even longer than 10 years. A backup battery on a battery powered gateway is at the other system not required.	See the Addendum #2 on the bidding document.
9.	Tabel 12 Technical data network node MFK requirements: M-Bus, and irDA interface Our questions: The Node needs an Interface to be programmed which is a specific requirement for their system to extend the network. This is not necessary for the other	See the Addendum #2 on the bidding document.

	system. This offers Repeaters to extend the network and they don't need to be programmed because they are plug and play. The focus should be on Gateways because they have a better receiving performace and felxibility of the mounting position. The focus should be that the network is extenable and not how. In a building either wirless M-Bus or M-Bus is installed. A combination is unusual and can not be provided by others. Only one manufacturer can produce it according to MFK requirements.	
10.	7.1.1.3. Data collector network node and SCADA system MFK requirements: The network nodes are equipped with an M-bus interface that can be integrated in a wired M-bus system or connect to SCADA system. The interface can also be used simultaneously to read out data locally or configure the network on site. Our questions: In a building either wirless M-Bus oder M-Bus is installed. A combination is unusual and can not be provided with the Gateways of the other system. The requirement, that a network can be configurated form outside is understandable but it should not be specified how. At the other system the Gateway can be configurated by SMS commands or USB Interface. The concept of the Gateway is to collect the datas and to transfere them on the server where they can be much easier handled.	See the Addendum #2 on the bidding document.
11.	Table 13 Technical data GSM/GPRS M-Bus Master MFK requirements: Reading reports HTTP, FTP, SMTP (e-mail) Our questions: It is not necessary that the consumption data is being transfered in all of this reports. Other sytems only provide FTP and SMPT. Only one manufacturer can produce it according to MFK requirements.	FTP and SMTP are acceptable
12.	7.1.2. HANDHELD UNIT (WALK BY READOUT DEVICE) MFK requirements: have a range of up to 800m (with suitable external antenna) consist of a tablet/ terminal unit with wireless M-Bus radio module providing a plug & play PC communication via USB and suitable read-out software	The handheld units shall provide best possible wireless M-Bus receiving performance. In a wide open area with direct optical visibility a transmission range of 800m shall be reachable. This ensures also a maximum

	Our questions: The common handheld wireless M-Bus receivers have a range of approximately 20-30 meters in front of or inside of an residential building. It can approximately read meters over two floors depending on the basic structure of the building. There are other handhelds which are connected to the Readout PC by bluetooth and have a better receiving performace. The walk-by readout Software of the other system is also available for Windows or Android Tablets or Smartphones which makes handling much easier. 800m of range is almost impossible with wireless M-Bus technology in populated areas with many obstacles linke buildings. 800m range could be possible in a wide open area with optical visibility, but for the puprose of meter readouts in urban areas with a common handheld this is impossible.	transmission range in densely populated city areas as well. Texhnologies similar or more advanced than the one required are also accepted.
13.	Are you going to accept bid security from insurance company or just from Bank directly ?	As required in Section I. Instructions to Bidders, clause 22 , Bid security shall be an unconditional bank guarantee substantially in the format of Form of Bid Security (Bank Guarantee) , included in Section IV. Bid Forms.
14.	Could you please specify the proposed contract duration /implementation duration, we don't seem to find it.	As required in Letter of Invitation for Bids the supplier is expected to execute the contract in its entirety in 12 months from the contract signing date.
15.	In case of not doing business in the Purchaser's Country, the Bidder shall be represented by an Agent in the Country. What does an Agent mean by your standards is that an agent who is registered within Kosovo registry for Business or what do you mean by an Agent ?	Yes your understanding is correct, as indicated in Section I. Instructions to Bidders, clause 18.3 *in case of a Bidder not doing business within the Purchaser's Country, the Bidder shall be (if awarded the Contract) represented by an Agent in the country equipped and able to carry out the Supplier's maintenance, repair and spare parts-stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications.*
16.	Due to the increase of Covid-19 cases, unfortunately, production and work flow around the world have slowed down. Consequently, we are experiencing delays receiving bids related to the materials used in this project. We would hereby ask	As published in Addendum #1, deadline for submmmsion has been extended.

	you kindly grant us an extension one (1) month deadline for submitting the offer.	
17.	Due to the health situation of the Covid-1 9 pandemic, causing disturbances among our suppliers and in order to obtain their feedback concerning certain equipment to be provided as part of your project, we would hereby ask you kindly grant us an extension (1) one Month deadline for submitting the offer.	As published in Addendum #1, deadline for submmmsion has been extended.
18.	<u>In the file Bidding Document, respectively page 93, SR 3 - Technical Specifications file Annex 2 – Part 2 – Supply Requirements:</u> Data collection/ metering system Respectively 7.1.1 Data Collection /Transmission gateway: <u>Our Question</u>: Should the Gateway transfere the datas directly to the server of Thermokos or is it also allowed that, they are frist transfered to the cloud of the Gateway Supplier/Manufacturer and then Thermokos picks up the consuption data from there?	The data shall directly be transferred to the central metering and billing station at Termokos premises.
19.	6.4.1 Cabinet Lockable meter cabinet for installation of a group of in average approximately 5 compact heat meters (assumed average heat meter size with Qp =1,5m³/h) consisting of 1 mm hot dip galvanized steel sheet, white powder coated in RAL 9010. Depending on the available space, the cabinet shall either be surface, or in-wall mounted. In-wall mounted cabinets shall be adjustable in depth to take account of limited space conditions and different connection positions to the existing apartment distribution pipes. <u>Our Question:</u> In above mention sepcification it is requested Cabinet, but in BoQ we could not locate them. So question is are foreseen to supply Cabinets according to	Yes. Heat meter cabinets are required but deemed to be included in Pos 3.1. -Heat meters (Column No. 5 – Installation materials) in the Price Schedule. For more details see chapter 4.7.3.2 Price column for Installation materials (see column No. 5) in Part 2 – Supply Requirements. It is expected to have 3 heat meters per cabinet in average which summarizes in roughly (4.300/3) =~1.500 heat meter cabinets

	prescription or no? If yes, please what is quantity? We noticed also in tecnical specification content <u>5. Civil works</u>	
20.	6.4.2 Heat meter <u>Our question :</u> What is size of Meters? 1,5m³/h, 2.5m3/h, 6.0m3/h etc.?	Expected heat meter size: Qp=1,5m³/h. It's the Contractors obligation to choose a suitable heat meter size which could in certain cases exceed the expected average required Qp.
21.	6.2.1 Circulation pump In the BoQ are requested : Heat circulation pump - DN40 Heat circulation pump - DN50 Heat circulation pump - DN65 Heat circulation pump - DN80 <u>Our question</u>: Please can you provide us a.m. Pumps Q (m3/h) and H (bar or kpa)?	The following pump data list has only tentative character with expected average pump sizes for each DN. It's the Contractors obligation to choose a suitable pump size which can either exceed or fall below the average required pump DN. DN40: Q=12,5m³/h, H=8m DN50: Q=25m³/h, H=10m DN65: Q=35m³/h, H=12m DN80: Q=50m³/h, H=12m
22.	<u>Our questions regard civil works:</u> 1. - Emptying and filling the system before and after the completion of works. (Who will do it?) 2. - During execution of works, changing of Thermostatic radiator valves, if Damage to pipes, radiators and verticals during works. According to our experience in most appartmants are old brass radiators more than 50years, in this case due to their age they can be damaged, who will be responiosbel for this or who will pay to exchange with new radiatorrs or pipes?	1. The Contractor is responsible for emptying and filling the system with DH district heating water via the make-up water line of the DH substation. 2. This contract is not covering replacement of radiators or radiator piping (except for cases where an adaption of the piping is required for installing new thermostatic valves). The replacement of defect radiators is the sole responsibility of the house/apartment owner. 3. Please refer to the general condition of the contract.

	3. - Damage of obsolete pipes in substations during works. 4. - Works on radiators, boilers, etc. Instaled from inhabitants by themselves? 5. - Painting pipes with anti-corrosion only for new or existing pipes? Is there any investigation and can we have aproximate quantity? 6. - Verticals in the bathroom that also serve as radiators, what will be done with it?	4. See answer to question 2. 5. Painting is only needed for new installed uninsulated pipe sections (only expected in very rare cases e.g. at uninsulated connection points). 6. Verticals in the bathroom shall remain untouched when no standardized thermostatic radiator valves can be installed. In this case a balancing valve and a temperature control valve in the common riser pipe shall be foreseen (see corresponding position in the BoQ) to limit the return flow temperature.
23.	In ''Section III Qualification and Evaluation Criteria'' of Bidding Document under the request: Similar Experience as a mandatory qualification criterion is noted: Participation as a contractor, management contractor, or subcontractor in at least 3 contracts within the last 10 years, at least one with a total value of at least 2 Mio EUR that have been successfully and substantially completed and that are similar to the proposed Good and Related Services. This Criteria will be a reason why local and regional companies / operators would not be able to participate in this Project even if we they have experience and are working in this field for more than a decade. We would kindly ask you to change criteria to: Participation as contractor, management contractor, or subcontractor the total of the all contracts within the last 10 years, with a total value of at least 3 Mio EUR that have been successfully and substantially completed and that are similar to the proposed Good and Related Services.	Qualification criteria remains unchanged.
24.	Request for clarification Clarification 1.	Qualification Criteria remains unchanged.

	In ''Section III Qualification and Evaluation Criteria'' of Bidding Document under the request: Similar Experience as a mandatory qualification criterion is noted: *Participation as a contractor, management contractor, or subcontractor in at least 3 contracts within the last 10 years, at least one with a total value of at least 2 Mil. EUR that have been successfully and substantially completed and that are similar to the proposed Good and Related Services.* Based on experiences and common practices from the region there are always projects with similar technical requirements and complexity which not exceed almost never 2 mil Euro of the total value. Such kind of request for that exact value seems very unusual and represents discriminatory criteria because it will prevent participation in the bidding process for all companies which significantly exceed the requested value of 2 Mil Euro but with several projects which are equal by complexity with the requested one. Please, for reformulation of mentioned qualification criteria to: Participation as contractor, management contractor, or subcontractor the total of the all contracts within the last 10 years, with a total value of at least 2 Mil. EUR that have been successfully and substantially completed and that are similar to the proposed Good and Related Services.s.	
25.	What is the exact number of apartments connected to the district heating system? How much residential area is heated (m2)?	Around 14,000 HH customers but the number is increasing with new network extensions. Until 2020 residential area is about 900,000 m2
26.	What is the exact number of district heating substations connected to the district heating system?	Approximately 470
27.	Are district heating substations connected to the district heating system indirect or direct?	Indirect with heat exchanger for hydraulic separation.
28.	Are district heating substations equipped with the control cabinet and electronic controller? How is data transfered to distribution SCADA?	Currently the situation in the DH network is very heterogeneous.

		Roughly 200 substations (IHS) are already equipped with a PLC unit, whereas 300 IHS will be completely rehabilitated and equipped with a new PLC unit during the next 2 years (2021-2023). Data connection to SCADA: 50 IHS: Connection via telephone network 150 IHS: Connection via GSM/ GPRS 300 IHS: Radio network (e.g. LORA or other standard)
29.	What kind of regulation is in the district heating substations? Do district heating substations have control valve (flow and temperature control) on primary side?	Temperature control of secondary supply flow temperature. Yes, all new IHS will be equipped with a control valve.
30.	Does the electronic controller in district heating substations control secondary supply temperature (T3)?	Yes. See answer to question 29
31.	What kind/type of SCADA system is implemented for distribution/heating substations?	Cloud based DH substation SCADA system. Will be implemented during the next 2 years (2021-2023).
32.	Is integration of data from new devices to distribution SCADA system in scope of this project?	Only indirectly as a data exchange between the DH substation SCADA system and the new metering and billing station shall be implemented via suitable data interface.
33.	Financial questions: How are the phases of the project defined (ex. Delivery of equipment, istallation of equipement, data agreggation, …)? Will payment be made accordingly (after each phase) or at the end of the project?	Terms of Payment are specified on Section VIII. Special Conditions of Contract, clause GCC 14.1.
34.	Referring to Technical Evaluation Criteria - Sub-criteria section 1.1, max 5 references to be provided and each has 6 points for in country reference. If the bidder will provide all in one contract, One reference covers 3 years turnover 15	As indicated in criteria 1.1 for one reference can be granted:

	M Euro with similar business, will the bidder take just 6 grade or total 30 grade will be granted?	- 4 points per reference -5 points for each reference in region (in South East Europe (Albania, Bosnia & Herzegovina, Bulgaria, Croatia, Montenegro, Kosovo, North Macedonia, Serbia, Rumania, Slovenia, Greece, Turkey) - 6 points for in country reference
35.	Referring to Technical Evaluation Criteria - Sub-criteria section 1.2 (Installed Base) and Experience Section Specific Experience in Key Activities we found discrepancy in given number. While in Sub-criteria 1.2 is written that under 40.000 heat allocators we will not gain any point in Experience Section Specific Experience in Key Activities appear 4.000 pcs and same for thermostatic radiator temperature control valves in Sub-criteria 1.2 it is needed more than 20.000 to be evaluated while in Experience Section Specific Experience in Key Activities appear number 1.000. Please can you confirm?	Regarding the evaluation criteria, sub-criteria, and point system specified under *Section III. Qualification and Evaluation Criteria, 8 Technical Evaluation Criteria* to each responsive offer will be given a technical score (St). A Bid shall be rejected at this stage if fails to achieve the minimum technical score indicated in the BDS (70 points). Regarding the qualification requirements, specified under *Section III. Qualification and Evaluation Criteria, Specific Experience in Key Activities*, All qualification requirements shall be considered on a pass/fail basis.
36.	On the tender documentation we came across the term Billing Cycle, does that mean a monthly, quarterly or yearly cycle.	Billing period: Oct-April Billing intervall: Monthly
37.	In order to better understand we would like to know the relationship in quantity between the number of pumps according to the dimension DN (40, 50, 65 and 80), for example: Circulation pump DN 40 pcs. 25 in relation to Balancing valve DN 40 pcs. 10, Differential pressure control valve DN 40 pcs. 10, Differential pressure control valve pcs. 5 and so on for the respective diameters of pumps and valves and eventual installation of Heat meters?	There is no relationship between these DN.
38.	Also for Valves DN15 and DN 20, where are they placed and with which added equipment? In this way we can approximate the idea of the quantity of pipes as	It's the contractor responsibility to accommodate the new equipment in the existing pipes.

	well as their insulation according to the description in the documentation which attracts a considerable cost. A technological scheme (P&I diagram) would help us position the correct installation, offer the relevant price and plan the supply of relevant equipment and the appropriate accompanying material (pipes, flanges, insulation, etc.) given that this project lasts 12 months.	
39.	The number of substations would help in planning the works and awarding the price according to the volume of works (the number of substations determines the number of employees and the bid price)?	287 buildings (about 253 heating substations)
40.	The pumps are defined with DN and PN but lack Q (l / s) and H (m) which are very important first for giving the correct price and then for supply in order for the system to function properly after installation?	See answer to question 21
41.	Cassettes in relation to the number of apartments with mechanical and construction demolition attract significant costs (lump sum?) In this case we do not know the number, dimensions and composition of elements in the cassette. Therefore, a technological scheme with component units (P&I diagram) could help us for the closest possible offer?	We guess that cassettes means heat meter cabinets. It is expected to have 3 heat meters per cabinet in average which summarizes in roughly (4.300/3) =~1.500 heat meter cabinets. Each heat meter within the cabinet shall be equipped with manual shut-off valves and temperature sensor.
42.	Missing list of spare parts with respective quantity for 5 years Note: The price should include the maintenance team for 5 years??	Please refer to the ITB 19.3
43.	In how many buildings are these 14.500 apartments?	See answer to question 39.

44.	How many readers and communication devices are in this System according to the number of buildings (apartments)?	At least each building staircase should be equipped with a data collection gateway/ node. The number of gateways/ nodes correspond with the number of building staircases. It depends on the technical solution!
45.	In the documentation we can not find any description about automation of building SubStations for: - Remote control of the temperature needed for this building; - Legal metering heat meter (Calorimeter); - remote working scheme of the control loop(s) and temperature; - monitoring of the condition of the hot liquid on entrance of the building; - limitations of flow per building from the central position; - limitation of the refill to secondary site and monitoring of losing liquid;	The main goal of this project is to equip all buildings with metering equipment and thermostatic valves. The full rehabilitation of the building heating system is not covered by the project funds. Therefore only a small budget is reserved for replacement of some pump and control valves in the building heating system (only if existing pumps are defect and not running anymore a replacement is foreseen). The new DH substation PLC units provide all listed functions. However new installed pumps are not required to be connected to the DH substation PLC unit (even it would be useful and in some cases also possible) due to limited budget. The DH substation documentation can be provided after project reward.
46.	in the specifications there is nothing about "M-Bus wireless Readers" and transport network to the central position ? - Someone will come to those readers with fiber-optic IP transport network ? - Collecting data will be done via mobile network (3G/4G/5G) ? - this will make a initial cost of buying SIM cards and monthly expenses for data transfer !	1.In chapter 7.1.1.3 in Part 2 – Supply Requirements. GSM/GPRS wireless M-Bus Masters are described which have to be equipped with GPRS SIM cards for data transfer via mobile network (3G/4G/5G). 2.No 3. See answer 1
47.	Do you have server room - infrastructure with proper Back-Up and redundancy (MCC or/and TermoKos) where will be installed SCADA and billing application ?	No suitable hardware infrastructure is currently available for running the metering software. Therefore a new hardware inc. Servers allowing all required software functions shall be installed at Termokoses

	- If not, can we calculate expenses for installing this application on some IP-Cloud ? (this will produce monthly expenses for the owner of the application) - Is it allow Application and/or Data to have Back-Up out of the Kosovo ? (Some Worldwide Cloud Solutions have better prices)	premises. All data incl. the backup data shall be stored on cloud for disaster recovery reasons. This is responsibility of contractor. Server rooms can be located in new contractors local offices temporarily until permanent transfer to Termokos,the best solution scenario should be applied.
48.	The payment terms will be based on monthly progress with signed installation notes? (1M€ ???)	Terms of Payment are specified on Section VIII. Special Conditions of Contract, clause GCC 14.1.
49.	. Payment for different kind of equipment should be on separated books / invoices? • Wireless M-bus Readers, • Connection network with building controller, • SCADA and • Billing software and equipment, • Substations, • Thermostatic radiator valves ? • Heat meters and heat allocators ?	Terms of Payment are specified on Section VIII. Special Conditions of Contract, clause GCC 14.1.
50.	Access to the apartments should be the responsibility of MCC/TermoKos ? If for one or more apartments MCC / Termokos does not provide access, does it mean that we can or cannot do the billing for the building?	Refer to the Annex 2.SR 3.5.1.1.

51.	Implementation period of 1Year should be postponed by the delivery time of goods of two months . We request the extension of the start date of works for 2 months from the date of signing the contract, respectively the payment of the advance in order to supply materials for the start of work, respecting the deadline for the completion of works for 12 months?	The request remains in force as it described in the Bid document.
52.	in GCC 14.1 paragraph (E), The billing period is one month?	The current billing period is 1 month.
53.	in the GCC 14.1 paragraph (D), there is first payment and second payment. how they are defined?	First and second payment are very clear defined in SCC 14.1 paragraph (D) - The sum of approved working hours until the issuance of payment request shall be invoiced.
54.	Questions and suggestions regarding Heat meters, heat cost allocators and reading equipment: Reference 6.4.2. Heat meters: In the bidding-document, SR 3 - Technical Specifications or estimated quantities and cost estimate documents there are no dimensions of heat meters needed to make an offer. How many pcs of which dimensions are estimated to be installed? Please put in the documents estimated amount of which dimensions is needed.	See answer to question 20.
55.	In the 6.4.2.3 Heat calculator is written that The energy calculator shall have some of the following communication interfaces according to EN 1434-3: - Wireless M-Bus (OMS) – standard with plug-in module - M-Bus - only if alternative technical solution is necessary	See the Addendum #2 on the bidding document.

	- 1 pulse output - only if alternative technical solution is necessary Calculators that allow plug-in modules are exposed to the possibility of manipulation. We recommend that you allow the possibility of offering compact calculators that can be delivered with wM-Bus or M-Bus + 1 pulse output.	
56.	In the Table 9. - Technical data heat calculation unit, can we offer heat meters with better characteristics? For example: Temperature range 5°C to 95°C – we can offer - 0°C to 150°C Ambient temperature 5-55°C (93% relative humidity) Storage temperature (at the minimum) -5°C to 50°C – we can offer -20 ... + 65 Temp. difference range 3-90°C – we can offer 3 ... 130 Resolution 0,01 K Measuring cycle 2/ 60s Display min LCD – 7 digits – we can offer 8-digit + additional character Protection class (flow sensor) IP 65 – we can offer - IP 68 Protection class (housing) IP 54 Decimal places up to 2 after comma	See the Addendum #2 on the bidding document. Better performing equipment are acceptable

	Power supply Lithium battery Battery lifetime 10 years Data storage Non-volatile memory (NVM) Except for: Reading dates Selectable yearly or monthly reading date minimum 24 months values via display or wireless M-Bus – we can offer 15 monthly values 15 monthly values is more than enough even if you read the meters once a year and save the reading in the billing software. Please change this requirement because there is no need for 24 monthly values to be saved in the meter.	
57.	Reference 6.4.3. Heat cost allocators: 18. In the part 6.4.3.2. General your requirements for the HCA shall display the following values: • Current consumption • Due date • Due date value • Checksum • kC value • kQ value • Display test	See answer to question 4.

	HCA that we can offer doesn't have Checksum, but instead offers more information like monthly values, Sensor mode etc. Please change or erase this part of technical specification.	
58.	Also in the Table - Technical data heat cost allocator, can we offer Heat cost allocators with better characteristics? Temperature range 35°C to 95°C – we can offer 35 °C to +130 °C Ambient temperature 5°C to 70°C Minimum temperature difference 5K Device type 2-sensor device (measuring mode shall be able to be changed between 2-sensor or 1-sensor mode) Clip on remote sensor Selectable 1.5m, 2.5m or 5m (cable length) Display(min) LCD – 7 digits – we offer 5 digits (more than enough) Power supply 3V lithium battery Battery lifetime 10 years Reading dates (storage) 13 - 15 monthly values – we can offer 18 monthly values by opto and 15 values by radio 15 values Interface IrDA interface and Wireless M-Bus telegram data transmission per EN 13757-4, transmission of AMR and/or WALK BY, communication in S-mode, T or C-mode to read all OMS compliant	All better performing equipment are acceptable.
59.	Reference 7.1.1.2 Data collection gateway:	See the Addendum #2 on the bidding document.

	One of your requirements is for the network node to be adaptable to local conditions with energy supply over battery and to process 1000 devices. We have more than twenty years experience in the meter reading equipment, and the experience has taught us that battery operated gateways with processing of 1000 devices and never works in as is for a long time. That kind of network requires constant servicing and is not stable. Because of that we stopped producing and selling that kind of gateways and limited our gateways on main power supply and processing up to 500 devices. The same is with repeaters, we offer only repeaters with external power supply. Please change your requirements in the way that gateways with power supply can be offered, in that way you will get a more sustainable and better quality network.	
60.	<u>2 Scope and limits of Supply</u> The scope of supply comprises the rehabilitation/ replacement of heat, control- and metering equipment in all the buildings connected either directly or via a secondary/tertiary network to the DH-system within the city of Prishtina. The Contract contains different modification and adaption works on the internal building heating system. Depending on the internal heating system configuration (dual pipe system and vertical/ horizontal system) of each building the following parts of the system could be affected and need an update and/ or must be refitted with new equipment. Heat distribution equipment (located in common areas of the building)	Yes if hydraulically necessary. However, the concept is to use dynamic thermostatic radiator valves which can handle a changing differential pressure.

	• Replacement of exis ng unregulated pumps with new frequency controlled circula ng pumps in all risers pairs of the buildings and also in main distribu on pipes if necessary • Differen al pressure control valve and balancing valves in riser pipes for adjus ng and limi ng the flow rate in each riser pair if an independent adjustment of the differen al pressure is not possible (only if hydraulically required) • Adjustment of piping insofar necessary to install the foreseen new equipment Q 1: Please clarify if the requirement for balancing valves is mandatory request or also PICV can be used (pressure-independent combi valves).	
61.	Heat metering and billing system (either located in each apartment or the corridor in front of the apartment, based on baseline studies) • Parametriza on equipment for configura on of heat meters and heat cost allocators via wireless communication interface Q2: Please for clarifica on if with the wireless is understood also IRD wireless connection?	Yes.
62.	• Central metering and billing server station incl. suitable interface to the DH substa on SCADA system (transmission of meter readings of DH substaton heat meters) Q3: Please specify where in BOQ are located informa on about energy meters or the interface for DH substaton heat meters?	Energy meters are specified on the 3.1 position of BOQ. The DH substation SCADA system is going to be installed in during the next 2 years (2021-2023) as a cloud based solution where all measured data are centrally stored on an external datacentre server. The DH substation meter readings are to be imported via suitable interface.

63.	Table 9 Technical data heat calculation unit **Technical data** — **Description** Temperature range — 5°C to 95°C Ambient temperature — 5-55°C (93% relative humidity) Storage temperature — (at the minimum) -5°C to 50°C Temp. difference range — 3-90°C Resolution — 0,01 K Measuring cycle — 2/ 60s Display min — LCD – 7 digits Protection class (flow sensor) — IP 65 Protection class (housing) — IP 54 Decimal places — up to 2 after comma Power supply — Lithium battery	See the Addendum #2 on the bidding document.

	Battery lifetime: 10 years Data storage: Non-volatile memory (NVM) Reading dates: Selectable yearly or monthly reading date minimum 24 months values via display or wireless M-Bus	
64.	Q4: Please specify where is information about the size of the heat meters?	See answer to question 20.
65.	Q5: The requirement for temperature range is strange because usually it is in range of up to 90°C. Please for additional clarification about temperature range and for correction from 95 to 90.	See the Addendum #2 on the bidding document.
66.	Q6: Please for additional clarification about resolution value. Is the requested value correct and based on what it was specified?	Temperature resolution value is correct.
67.	Q7: Please for additional clarification about values defined under the request Reading Dates. Usually the normal values are 12 months! What are the reasons for such a request of 24 months? Is that vendor specific?	See the Addendum #2 on the bidding document.
68.	Table 11 Technical data heat cost allocator Technical Data: Description	Based on analysis of existing building surveys: Flat panel: 75% Cast iron: 25% The final percentage between flat panel and cast iron might slightly be different after the building surveys in

	Temperature range	35°C to 95°C	all remaining buildings are finished (to be done by the Contractor). The final price to be given shall be a suitable combination price also based on the Contractors experience.
	Ambient temperature	5°C to 70°C	
	Minimum temperature difference	5K	
	Device type	2-sensor device (measuring mode shall be able to be changed between 2-sensor or 1- sensor mode)	
	Clip on remote sensor	Selectable 1.5m, 2.5m or 5m (cable length)	
	Display(min)	LCD – 7 digits	
	Power supply	3V lithium battery	
	Battery lifetime	10 years	
	Reading dates (storage)	13 - 15 monthly values	
	Interface	IrDA interface and Wireless M-Bus telegram data transmission per EN 13757-4, transmission of AMR and WALK BY, communication in S-mode- or C-mode to read all OMS compliant	
	Kcvalues	Kc values data base (software)	

	Q7: Type of the radiator is important data using to calculate the cost of accessories per radiator. Please for information about types of radiators in use	
69.	<u>6.4.4 Parametrization equipment</u> The parametrization equipment shall allow a pre-setting of all new heat meter and HCA equipment according to the correct installation conditions (e.g. exact type of radiator for HCA). The equipment shall be equipped with a wireless communication interface for connecting with a PC or tablet (e.g. wireless M-Bus USB stick) with a corresponding PC configuration software. The required parametrization equipment must be handed over to the Beneficiary as part of the As- Built documentation. Q8: Please for clarification if with the wireless is understood also IRD wireless connection?	Yes. All different forms of wireless communication interfaces are accepted for parameterization of the equipment..
70.	7.1.1.1 Installaton locaton The data collection gateway shall be installed in freely accessible areas in the building with best possible wireless reception. Preferably in the basement of each building staircase. The location to be agreed with Consultant. If the wireless reception in the building is bad the installation of a second gateway (or more, depending on the size of the building and the number of building floors) should be foreseen. Q9: Please for information about number of locations and number of GW.	The e final number of nodes/ gateways may change during implementation depending on the individual suppliers system capabilities. If it turns out during implementation that a higher number of gateways are required, they shall be charged by the Contractor.
71.	7.1.1.1 Data collection network node	The final number of nodes/ gateways may change during implementation depending on the individual suppliers system capabilities.

	The network node receives and processes from heat cost allocators, heat and water meter within a wireless M-bus system and shall fulfil the following requirements: • adaptable to local conditions with energy supply over baiery • Processing of 500 devices • Up to 12 network nodes can communicate with each other on a network and exchange the respec8ve consump8on data • Synchronising of the received meter readings in between different data collec8on gateways (if more than one gateway is installed in one building) • At least monthly data collec8on and transfer (via M-bus / SCADA system or via gateway / GSM / Cloud) within baiery supply • The transmission range shall be extendable with network nodes installed at various spots inside the building up to 12 pieces Q 10: The number of network nodes based on requirments is too small. The amount of 800 pieces won`t be enough for all 276 buildings written in tender specification... If we calculate that in average we have 8 stories high buildings, and there is a need for 4 network nodes per building... the number will increase between 1200 and 1600 network nodes. Please for specific clarification!	If it turns out during implementation that a higher number of gateways are required, they shall be charged by the Contractor.
72.	7.1.1.1 Data collector network node and SCADA system Please for following clarifications:	Q11: We confirm that Data collection/ transmission gateway is the equivalent term of Data collection network node . The gateways shall transmit the meter reading data to the central metering and billing station. This station shall have a communication interface with the DH substation SCADA system.

	Q 11: Can you confirm that Data collection/ transmission gateway is the equivalent term of Data collection network node and Data collector network node and SCADA system? Q 12: If the answer to the previous question is negative then please for additional information. Q13: Can you confirm that all 800 pcs of Data collection/transmission gateways should contain also the function of the GSM gateway and how many of them should be connected to the SCADA system? 1. If the answer to question 3. is negative then please for the exact specification of the number of Data collection/transmission gateways with GSM gateway functionality and number of Data collection/transmission gateways acting just as simple network mode.	Q13: Yes all 800 pcs. shall be equipped with a GSM gateway. It must be ensured that all meter reading data can automatically be transferred to the meter and billing station of Termokos without need of manual readout.
73.	As you are probably aware, countries in European Union are going through a close dowri period due to a spike in cases of Covid 19 pandemic. This, pretty much has stopped the business activities in most sectors which have greatly affected the companies in the business sector subject to this procurement activity. Both our Italian and German partners have closed their' businesses and unable to work due to current state wide pandemic regulation. On the other hand, the complexity of this procurement activity requires great preparation ·in order to meet both the administrative requirements and technical requirements for potential contract execution. Thus our questions is: could you postpone the deadline of the bidding for 4 (four) weeks, keeping in mind the current pandemic lock down regulations.	As published in Addendum #1, deadline for submmmsion has been extended.

	You have taken great measures and requirements for COVID 19 safety during contract execution, hopefully you will accommodate such a request for the biding application as well.	
74.	Tender References; Section III Qualification and Evaluation Criteria'' of Bidding Document under the request: Similar Experience as a mandatory qualification criterion is noted: Participation as a contractor, management contractor, or subcontractor in at least 3 contracts within the last 10 years, at least one with a total value of at least 2 Mio EUR that have been successfully and substantially completed and that are similar to the proposed Good and Related Services. This Criteria make impossible for any local company to be part of this tender. Even in region there also is not possible to find any partner/company that fulfils these criteria and if you do not change these criteria this will be e discrimination of local and regional companies. This can be only Please can you change this criteria to: Participation as a contractor, management contractor, or subcontractor in all contracts within the last 10 years, must have the total value of at least 1.5 Mio EUR, that have been successfully and substantially completed and that are similar to the proposed Good and Related Services.	Qualification criteria remains unchanged!
75.	Because of the complexity of this project, its many unknowns and due to the situation created by the pandemic, we are asking for an extension of the deadline for submitting an offer for an additional two weeks. The project specification contains limited information about the existing conditions of the current district heating network present in Prisht ina, and we, together with our partners in Prishtina are doing an evaluation of the network to better be able to offer in this project.	As published in Addendum #1, deadline for submmmsion has been extended

	Additionally, due to many restrictions imposed by the pandemic, we and our solution partners are facing many shortages in the human resources capabilities, exacerbating the need for more time in preparing complete and viable solutions and offers.	
76.	Technical specification “Central metering and billing server station” Point 7.1.3 requests integration with SCADA system Cogeneration unit (WinCC 7.5). Can you please specify which data exchange interface consists by WinCC 7.5 (file exchange, Web Service, ESB - CIM IEC 61968-9)?	Communication Interface: OPC-UA
77.	Technical specification “Enveloping and printing machine” Point 7.1.4 requests minimal technical requirements. What is the weight [g/m2] of paper/bills (for Enveloping and printing machine)?	80g/m2
78.	Technical specification “Enveloping and printing machine” Point 7.1.4 requests minimal technical requirements. How many sheets of paper will be put into one envelope (for Enveloping and printing machine)?	one paper for Enveloping and one for printing machine” bills
79.	Technical specification “General of Heat pumps” Point 6.2.1.2 requests optionally feasible control modes. As dp-T is typically not used for residential use, should heat pump mandatory fulfil this feature?	Is not mandatory but optional. All other requirements in chapter 6.2.1 shall be fulfilled.
80.	We hereby ask you to extend the deadline for submission of bid for minimum 1 month. Namely, in order to prepare and submit an adequate and best possible offer according to the specifications. Beside that current situation with Covid-19 significantly slow down all processes regarding official documentation preparation.	As published in Addendum #1, deadline for submmmsion has been extended

81.	The installation of HCA and TRV has to be done in private owned flats. Who will be responsible to insure access to the flats? For sure there will be flats that will be not accessible due to various reasons and equipment will be not mounted. How such cases will be treated as the payment terms require the finishing of the whole building?	Termokos will facilitate the nomination of responsible persons in each building who will be the main contact person for the Consultant and the Supplier. This contact person will be responsible for: 1. support the communication with the individual heating consumers (households), together with Termokos, 2. provide access to all affected rooms in all common areas of the building, 3. organise and coordinate appointments with the heating consumer (households) to allow access to the individual apartments, 4. define interconnection points with building utility systems (e.g. electricity, water, sewage system) required for the functioning of the new installed equipment and also for the Suppliers working tools.
82.	The technical descriptions for heat cost allocators are extremely detailed and are a photographic copy of a well know product, delivered by a single manufacturer. The requirement of a Manufacturer Authorization form puts this manufacturer in a monopoly position. On other side any deviation from the Technical requirements is a risk for disqualification. Could you accept technical offers with products that satisfy the purpose of the product but do not fully comply with useless requirements in TS (as number of digits on the display, or cable length of the remote sensor or due date value on the display, etc). The asked device also does not support the upcoming data transmition technologies as LoRa, IoT, etc. and there is a risk to be out fashioned in few years.	Data collection gateway: It's the Suppliers decision to choose a suitable data collection and transmission technology to fulfil the functional requirements. This can either be done via network nodes, which are communication with each other and having one master gateway sending the data via GSM with individual gateways, which are directly transmitting the collected data via GSM

83.	The retrofit/replacement of cabinets is a significant cost in the project. Could you please clarify the number of cabinets to be replaced or if not possible, could you change the price schedules including a position – cabinet's retrofit/replacement?	See answer to question 19.
84.	Please specify what data will be able to the Contractor regarding the execution of the project. Are there drawings of the heating installations? Could you provide a copy of the baseline study that will be available to the Contractor?	A copy of the baseline study will be provided.
85.	Point 3.5.1 asks for provide office and storage place. The required premises are described as containers/temporary buildings. Is it possible such premises to be rented in existing buildings? Some of the Bidders could have sufficient facilities in Pristina.	Yes. That is possible. Anyhow are the required negotiations with the building owner the responsibility of the Contractor.
86.	The Technical requirements for the heat meter specify PT1000 temperature sensors that are rarely use by heat meters manufacturers for such small meters and do not provide any value to the project. That requirement will increase the cost of the project due to the lack of competition among producers. Could PT500 sensors be used instead of PT1000?	No.
87.	Section IV. Technical and Financial Offer Bid Forms, Description of Goods. It is requested: "The Bidder shall also furnish a list giving full particulars, including available sources and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the Goods following commencement of the use of the Goods by the Purchaser. Unless specified otherwise in the BDS and Section III. Qualification and Evaluation Criteria, these prices shall not be included in the bid evaluation." In the Technical offer it is forbidden to be included any financial information: Section I. ITB, para. 12.2 "The Technical Offer shall not include any financial information other than the	Refer to ITB 19.3 It should be drafted as a separate document based on supplier experience.

	required information in Form BSF5". Please clarify where we have to enclose the spare parts list with prices?	
88.	Section II. BDS, para 22.1: "Scanned copy of postal/courier receipt as evidence that the Bid Security has been dispatched to the Purchaser". Is there an option for the original of Bid Security to be delivered to MFK by hand at the day of Bid submission?	The request remains in force as it described in the Bid document.
89.	Letter of Technical offer – the form asks the participant to address it to Mr. or Ms. ……, Procurement Director, but we could not find the name of the person on this position. Please provide it.	Only insert full legal name of the Purchaser (Millennium Foundation Kosovo)
90.	Financial Statements for last three years – last three financial years are 2020, 2019, 2018, but year 2020 is not closed and we don`t have audited financial statements, as the term for it is 30.06.2021. Please clarify financial statements for which years we have to submit with our Bid?	The audited financial statements should be presented for the last three years: 2018, 2019 and 2020.
91.	BSF6 - Compliance with Sanctions Certification Form – at the Bidding stage do you expect listing each staff member, consultant, sub-contractor, vendor and supplier?	Your understanding is correct for more please refer to Section IX. - Contract Annexes, Annex B: Compliance with Sanctions Certification Form, under instructions for completing form.
92.	BSF3 – What exactly data sheets, licenses, permits or other documents regarding health and safety do you expect at bidding stage, because in SR6 are not pointed any documents to be provided from bidder.	Please refer to Section VIII. Special Conditions of Contract no. 49.
93.	The Technical specifications for HCA and Data collection are copy of Qundis-Siemens WTT6XX devices and corresponding dedicated Cloud service. The descriptions are very detailed and do not leave any room for alternatives. This	Will not be rejected as long as the main characteristic technical requirements are being fulfilled.

	limits the bidders to the above-mentioned equipment and decreases the possibility of free competition and technical improvements. In the same time point 19.4 of ITB says: Standards for workmanship, process, material, and equipment, as well as references to brand names or catalogue numbers specified by the Purchaser in the Schedule of Requirements, are intended to be descriptive only and not restrictive. A Bidder may offer other standards of quality, brand names, and/or catalogue numbers, provided that it demonstrates, to Purchaser's satisfaction, that the substitutions ensure substantial equivalence or are superior to those specified in the Schedule of Requirements. Question: If a technical offer complying to the relevant standards and the completely covering the purpose of the project but not in all details as specified in the Technical specifications will be rejected?	Data collection gateway: It's the Suppliers decision to choose a suitable data collection and transmission technology to fulfil the functional requirements. This can either be done via network nodes, which are communicating with each other and having one master gateway sending the data via GSM or with individual gateways, which are directly transmitting the collected data via GSM.
94.	Heat Cost Allocators: Is it a must HCA to have minimum 7 digits /most of the HCA on the market have 5-6 digits plus some more informational segments/?	This request remains as described in Biding document.
95.	Is it acceptable HCA to have better resolution i.e. <5K minimum temperature difference?	This request remains as described in Biding document.
96.	Why is required 2-sensor device but measuring mode shall be able to be changed between 2-sensor or 1-sensor mode?	See the Addendum #2 on the bidding document.
97.	Is it a must power supply to be 3V?	Yes, the minimum power supply is 3V.

98.	Is it a must the visibility of the Checksum?	It should be possible to read out the checksum via configuration tool.
99.	Is it a must temperature range to be up to 95 °C /having in mind that the radiator temperatures would never achieve it/?	No. But please keep in mind that 90°C could theoretically be the maximum supply flow temperature (without temperature mixture cycle in the riser)
100.	As far as the main goals is data to be transferred by RF is it acceptable to propose a HCA which is keeping and transmitting all the required data, which is covering all the requirements but having different display sequence?	Yes. Another display sequence is accepted as long as all relevant data are transferred to the data collection gateway/ node.
101.	About the Enveloping and printing machine: 1.What exactly mean the requirements for the core functions: “Folding, Enveloping, Assembling of Envelopes”. 2.What is the expected workflow? 3.What is the expected end result-product /what kind of folding, what kind of envelops etc./?	See the Addendum #2 on the bidding document.
102.	What exactly means the last requirement: “Envelope printer – technical data according above specification for the printing machine”. Is it a separate printing device? How exactly it must be situated in the work flow?	If the connection is available in the same process of printing the bills and folding envelope it will be cost efficiency.
103.	There must be mistakes in descriptions	A) See the Addendum #2 on the bidding document.

	A) the first one of the technical requirements says “Printing machine type: Color Laser Multifunctional” but the seventh one says “Printing method: BW laser beam printing”; B) the LAN network operation capabilities are mentioned in section “printing from memory”.	B) the LAN network operation capabilities are mentioned in section “printing from memory”.
104.	Some of the requirements seem to be behind the project goals /like A3 feeder, support for 256gsm paper etc/.	If the bill format changes in the future its optional.
105.	In the file Biding Document, respectively page 93, SR 3 - Technical Specifications file Annex 2 – Part 2 – Supply Requirements: We would like to have clarification answer from your team for following Questions for: 6.3.2 Control valve (only applicable in 1-pipe systems) Differential pressure independent control valve suitable for usage in heating applications with adjustable flow control and measuring function. The valve shall allow the following functions: • Differential pressure independent flow control • Balancing/ Pre-setting of max. flow • Measuring point • Temperature actuator for limiting/ controlling the return flow temperature • Regarding the design data (p, T) and the material see Table 6. The control valve is necessary to control and automatically adjust the flow rate and control the return flow temperature independently in each apartment distribution pipe.	Technical description Temperature Actuator The temperature actuator shall allow an automatic adaptation of the actual valve stroke for continuous control of the return flow temperature. This can be realised with a separate actuator with position indicator in combination with a return flow temperature sensor. See the Addendum #2 on the bidding document.

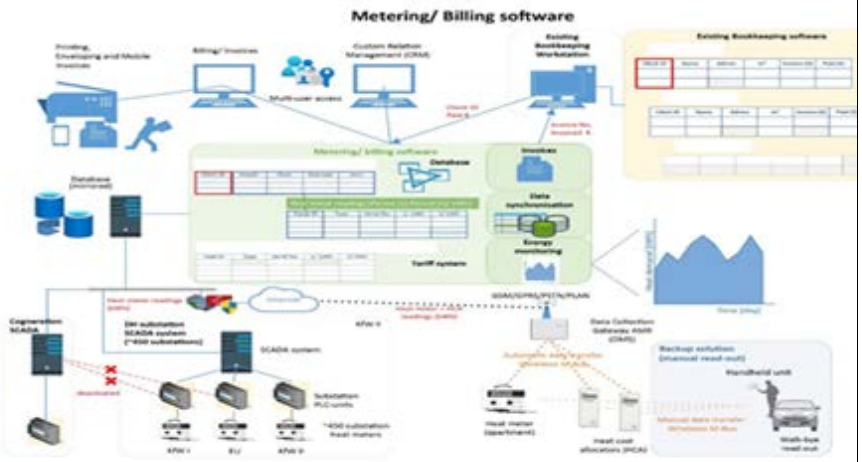
This control valve is only required for 1-pipe systems where the return flow temperature would increase under part load conditions due to the bypass flow.

Our Question:

- We need more technical description of the actuator “Temperature Actuator”. In the technical specification is described the usage of the set (Differential pressure independent control valve + Temperature actuator) “The control valve is necessary to control and automatically adjust the flow rate and control the return flow temperature independently in each apartment distribution pipe.”

If you look at BoQ the dimensions of the valves are between DN 25 and DN100. It is no possible to install some of these valves in the apartments.

1.19	Differential pressure independent control valve - DN25*	6.3.2	5 p
1.20	Differential pressure independent control valve - DN32*		5 p
1.21	Differential pressure independent control valve - DN40*		5 p
1.22	Differential pressure independent control valve - DN50*		5 p
1.23	Differential pressure independent control valve - DN65*		5 p
1.24	Differential pressure independent control valve - DN80*		5 p
1.25	Differential pressure independent control valve - DN100*		5 p

106.	7.2 Software: <u>Our Question:</u> **SR 4 - Drawings** *Please see Annex 3 attached to Bidding Documents (see extract below):* Schema Metering and Billing Software.p  Do the bidders have to provide system architecture based on their proposed system or not? Please clarify?	Yes. Bidders have to provide system architecture (hardware + software) to fulfill the functional requirements stated in chapter 7.1 and 7.2 in Part 2 - Supply Requirements. The scheme visualizes the system boundaries and interfaces to other systems (hardware + software) in a very simplified way. Anyhow shall the system be integrated into the internal Termokos network and allow a data exchange with the following existing systems: 1. System interface to substation SCADA system (data import of DH substation meter readings) 2. System interface with existing bookkeeping software 3. System interface to SCADA system Cogeneration Unit Termokos (Siemens WinCC 7.5)

107.	For SR 6 Environmental Health and Safety we will just provide our; a. ISO 45001 certificates and b. filled version of BSF3 form. Is there any other document that we need to provide under this section?	Refere to SR6
108.	The Companies who will bid as JV shall fill BSF1 or BSF2 Forms? Which form we have to fill?	You should fill both forms.
109.	The Companies who will bid as JV shall fill the BSF6 Compliance with Sanctions Certification Form on the behalf of JV or all the companies in the JV shall fill seperately? Please clarify.	As part of their Bid, each Bidder (including any associate of such eligible entity or person that submits a Bid) shall complete and submit the Compliance with Sanctions Certification Form as per Section IX. Contract Annexes. Detailed instructions on how to complete this Form are also provided in the same Section.
110.	1. In Section III. Qualification and Evaluation Criteria, page #48, table "Experience", the Specific Experience in Key Activities in the fourth column the instruction says: "at least one member must cover the minimum requirement under sub criteria No. 4 completely". In the first column there are 4 paragraphs that are not bulleted / numbered as follows: For the above or other contracts executed during the period stipulated in Similar Experience section above, a minimum experience in the following key activities: Installation of at least 1000 thermostatic radiator temperature control valves Supply or installation of at least 4000 heat cost allocators Supply or installation of at least 1000 heat meters Implementation of at least one project with the reading and billing software. <u>Question:</u> Please confirm that what you are referring to as sub criteria no.4 is:	See the Addendum #2 on the bidding document.

Specific Experience in Key Activities	For the above or other contracts executed during the period stipulated in Similar Experience section above, a minimum experience in the following key activities: Installation of at least 1000 thermostatic radiator temperature control valves	Must meet requirement	Must meet requirement	N/A	at least one member must cover the minimum requirement under sub criteria No. 4 completely.	Form EXP-3

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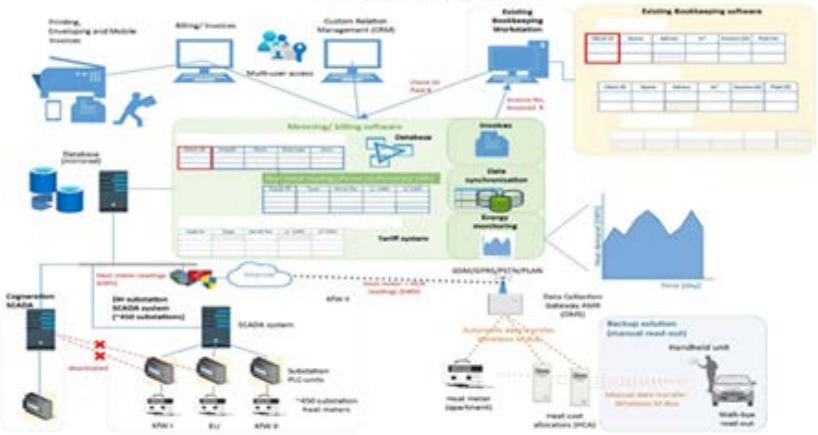
Section III. Qualification and Evaluation Criteria

111.	Can you please let us know what types of radiators are currently installed in the buildings that will be the scope of this project? We need the type of radiator, power and dimensions. This information is required for estimating the installation plate for the HCA.	Based on analysis of existing building surveys: Flat panel: 75% Cast iron: 25% The final percentage between flat panel and cast iron might slightly be different after the building surveys in all remaining buildings are finished (to be done by the Contractor). The final price to be given shall be a suitable combination price also based on the Contractors experience.
112.	Can you please explain detail and with some examples the following functionality: “grouping and mapping functions for analyzing consumer patterns, behavior changes in heat consumption”	One of the main project objectives is to change the consumer behavior and raise the awareness of reasonable utilization of valuable heating energy. The individual heat consumer shall be encouraged to save heating energy by e.g. closing the window, regulating the temperature by adjusting the thermostatic valve, lowering the room temperature in certain rooms if possible, etc.

		This changed behaviour/pattern shall be visualized when analysing/ comparing the heat demand of different metering periods depending on certain parameters. -) apartment size -) size of household living in apartment -) apartments in the same building -) building age -) city district -) etc. The software shall allow grouping/mapping of different consumer groups based on these parameters.
113.	Please specify all the system with which metering and billing system will be integrated, what type of communication is possible, what data will be transferred between the system and for which purpose will this data be transferred.	All collected metering data (consumer sub-meter) shall be transferred to the metering and billing system. Additional DH substation meter readings collected in the SCADA system are required for computing the individual consumer heat demand and need to be transferred to the metering and billing system e.g. via OPC-UA.
114.	Can you please explain detail and with some examples the following functionality: "Module for online payments and direct download in installed software in real time with the possibility of advancing and adjusting payments according to market demand"	The module should offer access to customer account of payment, the customer ID and customer Transaction for the payment. The payment amount should not be limited (to any amount). Processing of payment should be connected to the host bank of the customers and will be appeared in customer account of transaction according to the CBK rules within 24 hours. The payment will be only in euro currency. The module will contain only reading data and back up system from Termokos data base exchange .
115.	Is it required to make android & iOS app or can this app be accessed via internet browser (Chrome, Firefox etc.) from any type of device (smart phone, tablet, PC)?	Yes all android & iOS system for easy access from any type of devices.

116.	In the document “PART 2 – Supply Requirements (Annex 2)” is specified technical data for network node and for GSM/GPRS M-Bus Master. In the excel sheet “Price schedule for Goods and Related Services” there is only one listed as Data collection/ transmission gateway. Please specify separately in the excel sheet network node and gateway the same as it is in the supply requirements document.	The data collection/transmission gateway shall include the price for the gateway and the GPRS M-Bus Master (see Pos 7.1.1 in Part 2). Depending on the Suppliers technical solution.
117.	Will GSM services be provided by the purchaser or managing company MFK/Termokos?	The GSM/ GPRS contract incl. all SIM cards will be provided by Contractor.
118.	What is the estimated number of buildings with: a. Less than 6 floors? b. 6-10 floors c. 10+ floors	Based on analysis of existing building surveys: a) 44% b) 31% c) 25% The final share might slightly be different after the building surveys in all remaining buildings are finished (to be done by the Contractor).
119.	Can you please re-evaluate the number of the network nodes? The number of network nodes is too small - 800 pieces won`t be enough for all 276 buildings written in tender specification. In average we have 8 stories high buildings, and you will need 4 network nodes per a building... so between 1200 and 1600 network nodes will be needed. And regard the GSM/Cloud read out, you need additional hardware Gateway per a building... around 300 pieces	1.The e final number of nodes/ gateways may change during implementation depending on the individual suppliers system capabilities. If it turns out during implementation that a higher number of gateways are required, they shall be charged by the Contractor.

120.	**SR 4 - Drawings** *Please see Annex 3 attached to Bidding Documents (see extract below):* Schema Metering and Billing Software.p **Metering/ Billing software**  <u>Our Question:</u> - Do the bidders have to provide system architecture based on their proposed system or not? - In the tender documents it is mentioned that new provided system needs to be integrated with existing Bookkeeping Workstation. - At which level and methods these integration needs to be?	Yes. Bidders have to provide system architecture (hardware + software) to fulfill the functional requirements stated in chapter 7.1 and 7.2 in Part 2 - Supply Requirements. Data exchange with bookkeeping on database level should contain at least. ● Customer ID ● Amount € paid ● Invoice No. ● Amount € invoiced ● Date of payment ● Accounting data of the costumer ● Customer transactions

	- Could you provide more details regarding the integration that you would like to have? Please clarify?	
121.	In the present version of the technical requirements data acquisition from HCA and apartment heat meters is restricted to wMbus transmitting devices combined a set of local receivers and battery powered GPRS gateways in each building. Practically some of the technical requirements are limiting the choose to a single supplier /Qundis-Siemens WTI6XX devices and corresponding dedicated Cloud service./. Basically Wireless Mbus technology is a short range RF communication limited to 800 m in open areas but practically limited to 15-30 m in urban areas and inside buildings. Such limited range require a lot of local receivers especially in buildings having heavy concrete construction or metal components. Battery powered wMbus/GPRS receivers and gateways have a limited life cycle and need replacement and maintenance every 2-5 years but only in case of very limited data transfer 1-2times monthly. The most advanced LoRaWAN technology has up to 16 000 m range in open areas and 1000- 3000 m in urban areas. Inside the buildings it has at least 3-4 times better performance than wMbus. It is based on the same free RF spectrum and requires much less gateways. LoRa advantages: Battery life time 10 years; Maintenance free; Data transfer 3-6 times in 24 hours /real time data/; Two way communication; Protected AES encrypted protocol; Easy expansion and implementation of other services like water and other utility metering, consumption management, security and environment control sensors, fire alarms, smart lightning etc.; The most flexible solution may include a combination of mixed implementation	

	of wMbus and LoRaWAN devices. In addition usually it is possible gateways to be powered from the power supply used for heating substations. Other free LPWAN solutions for data transfer between gateways and central station can be implemented. Questions: 1. Is it acceptable to propose wMbus and Mbus network nodes from other producers and having equivalent key functionalities and covering the same or better data acquisition performance? 2. Is it acceptable to replace GPRS gateways with more advanced 4G or LoRaWAN gateways? 3. Is it acceptable to propose a LoRaWAN implementation having at least 2-3 times better coverage and 10-20 times better data acquisition performance /3-6 reading per day/. 4. Is it acceptable to propose a mixed wMbus and LoRaWAN implementation? 5. Is it acceptable to propose other free LPWAN solutions for data transfer between gateways and central station.	1. Yes. As long as the same functionality can be guaranteed. 2. Yes, if the reliability and functionality can be guaranteed at the same or even lower operating costs for Termokos. 3. It could be possible.Deal with higher amount of data. 4. Yes accepted 5. Yes accepted
122.	References; <u>Section III Qualification and Evaluation Criteria'' of Bidding Document under the request: Similar Experience as a mandatory qualification criterion is noted:</u> *Participation as a contractor, management contractor, or subcontractor in at least 3 contracts within the last 10 years, at least one with a total value of at least 2 Mio EUR that have been successfully and substantially completed and that are similar to the proposed Good and Related Services.*	Qualification criteria remains unchanged!

	- This make us as local company impossible to be part of this tender. We have regional partner and please be aware that also in region there you can not to find any company that can met the recuerement "*one with a total value of at least 2 Mio EU.* So please change this criteria to make possible that local and regional companies can attend in the tender. Please change these criteria to: "*Participation as a contractor, management contractor, or subcontractor in all contracts within the last 10 years, must have the total value of their Contract / References of at least 1 Mio EUR, that have been successfully and substantially completed and that are similar to the proposed Good and Related Services.*	
123.	References; Section III Qualification and Evaluation Criteria'' of Bidding Document under the request: Similar Experience as a mandatory qualification criterion is noted: *Participation as a contractor, management contractor, or subcontractor in at least 3 contracts within the last 10 years, at least one with a total value of at least 2 Mio EUR that have been successfully and substantially completed and that are similar to the proposed Good and Related Services.* - This make us as local company impossible to be part of this tender. We have regional partner and please be aware that also in region there you can not to find any company that can met the recuerement "*one with a total value of at least 2 Mio EU.* So please change this criteria to make possible that local and regional companies can attend in the tender. Please change these criteria to: "*Participation as a contractor, management contractor, or subcontractor in all contracts within the last 10 years, must have the total value of their Contract / References of at least 1 Mio EUR, that have*	Qualification criteria remains unchanged!

	been successfully and substantially completed and that are similar to the proposed Good and Related Services.	
124.	Bid References; Section III Qualification and Evaluation Criteria'' of Bidding Document under the request: Similar Experience as a mandatory qualification criterion is noted: *Participation as a contractor, management contractor, or subcontractor in at least 3 contracts within the last 10 years, at least one with a total value of at least 2 Mio EUR that have been successfully and substantially completed and that are similar to the proposed Good and Related Services.* <u>Question:</u> Please can you change these criteria, since this requirement is discriminatory and exclusive. Successful local and regional companies are unfairly and discriminatory excluded from participating in this tender. Your request should be - <u>*companies that have implemented over the last ten years at least 5-6 projects of the same nature, where the total amount of contracts completed is over 1 mil. Euro.*</u> We hope for your positive reflection, otherwise we should use all the possibilities of appeal up to the highest instances of the state department.	Qualification criteria remains unchanged!
125.	Software perspective: What is the existing bookkeeping system? How should the software be integrated with it?	The existing bookkeeping system is very simple. The current bookkeeping system most of the data are maintained by employers. The software system should integrate important data that needs for the accounting system on daily bases, monthly bases and yearly bases and data exchange between modules. Bidders have to provide system architecture (hardware + software) to fulfill the functional requirements stated in chapter 7.1 and 7.2 in Part 2 -Supply Requirements. Data exchange with bookkeeping on database level

		should contain at least. ● Customer ID ● Amount € paid ● Invoice No. ● Amount € invoiced ● Date of payment ● Accounting data of the costumer ● Customer transactions
126.	Software perspective: Will Invoices be issued to private persons only or to companies as well?	Both to individual (customers) and to commercial customers (companies)
127.	Software perspective: What is the layout of the Invoices and what are the law requirements regarding issuing invoices in Kosovo?	Company logo and address of company, Name and Surname ,Address and number of invoice and ID of customer, VAT nr, amount of kwh and amount in euro, date of reading, date of bill, customer category, meter number etc.
128.	Software perspective: What is the CRM that will be integrated? How will we integrate with it?	Answer is in Chapter 7.2- PART 2 – Supply Requirements (Annex 2)
129.	Software perspective: Are there any specific requirements regarding the Database of the metering/billing software?	The main specific requirements are data exchange and being able to integrate (connect and read) with current data software and open data for the future software advanced integrated.
130.	Software perspective: Could the metering/billing software be a cloud solution?	The contractor shall also envisage and budget for data collection and storing in a cloud solution as well as data protection for at least 36 months after the final launch of metering services for Termokos and issuance of

		completion certificate.
131.	Software perspective: Is there any existing SCADA system? If yes, how can we integrate with it? If not, should we deliver it as well?	Answer is in Chapter 7.2 PART 2 – Supply Requirements (Annex 2)
132.	Equipment perspective: Heat meters: 1. We would like to know, what exact type of heat meters are supposed to be delivered. 1.1. if the heat meter needs to be ½'' or ¾'' (price differs) 1.2. If the heat meter needs to be mechanical or ultrasonic – According to the word document on page 92 from the bid. In section 6.4.2.2. it is stated "Flow sensor (mechanical impeller not allowed)" . There is a significant price difference between the mechanical heat meter and ultrasonic one.	Smart meters.
133.	Equipment perspective: Our heat meters that we can supply, also does not meet the specified technical data "24 months values via display or wireless M-Bus", they support only up to 18th months. However since the reading will be done monthly this data can be stored on a remote server for a longer period of time. Keep in mind that all those technical data descriptions are copied directly from the webpage of a certain meters manufacturer. Therefore, would we qualify with this product as equivalent with your request or we should use another one?	See the Addendum #2 on the bidding document.
134.	Infrastructure information: We would like to know how many buildings are the scope of this tender, in order to better calculate if the amount of Gateways will be sufficient.	287 buildings (about 253 heating substations)

135.	Infrastructure information: We would like to know what type of radiators are installed at the moment in those buildings and if you have some numbers for each type: Alluminium, Cast iron, Steel panel? There is no specification regarding a machine that is needed for the steel panel radiators and pipes in bathrooms. This machine is doing point welding and needs to be ordered as well, if required.	Based on analysis of existing building surveys: Flat panel: 75% Cast iron: 25% The final percentage between flat panel and cast iron might slightly be different after the building surveys in all remaining buildings are finished (to be done by the Contractor). The final price to be given shall be a suitable combination price also based on the Contractors experience.
136.	Heat cost allocators: What exact types of HCA's are required. In the specification it is mentioned some with external sensors. Will there be a mix of different types?	See the Addendum #2 on the bidding document.
137.	Administrative: Is it enough only for the Joint Venture Leader to sign the financial offer?	The authorized representative of the Bidder signing the "Bid" of the Technical and of the Financial Offer shall provide within the Technical Offer an authorization in the form of a written letter of authorization demonstrating that the person signing has been duly authorized to sign the "Bid" on behalf of the Bidder.
138.	Administrative: Does JV partners need to authorize by Power of Attorney the leader partner?	You should attach the agreement among all members of the joint venture/association (and which is legally binding on all members), which shows that: 1. all members shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms; 2. one of the members shall be nominated as

		being in charge, authorized to incur liabilities and receive instructions for and on behalf of all members of the joint venture/association; and 3. the execution of the entire Contract, including payment, shall be done exclusively with the member in charge.
139.	Administrative: The financial declarations forms and other forms with company details are they sufficient to just place the data or it is needed to also provide proof of evidence with the bid? If proof is needed, does it need to be audited company? If proof is in another language (not English) will our company translation and signature/stamp suffice the request or it should be translated to licensed translating companies?	Please refer to specific form some of them request evidence some not, example *FIN-1: Financial Situation* request evidence.
140.	Administrative: Instead of MAF to bidder, is it allowed MAF to Dealer with specified Bid details, then DAF to Bidder. Will such scenario make us eligible for the tender?	Yes, If they are authorized from the manufacturer.
141.	Administrative: Regarding Form EXP-3: Specific Experience in Key Activities: Since we have contracts with each individual building and the condition is at least 1000 unit, how many contracts we shall include, or just explain underneath in the comments the situation.	The *Section III. Qualification and Evaluation Criteria, under Specific Experience in Key Activities criteria* can be fulfilled either combined or with separate project references.
142.	After analyzing the above mentioned tender dossier, specifically the documents:. ,,SR 1 - List of Goods and Delivery Schedule (Annex 3)" & ,,SR2 - List of Related Services and Completion Schedule (Annex 3)" We conclude tha some technical information is missing. For this reason we hereby submit the below questions (following on page no. 2)	The following pump data list has only tentative character with expected average pump sizes for each DN. It's the Contractors obligation to choose a suitable pump size which can either exceed or fall below the average required pump DN. DN40: Q=12,5m³/h, H=8m

	Question No. 1 Regarding these positions: Pos. No. 1.5 Heat circulation pump - DN40 Pos. No. 1 .6 Heat circulation pump - DN50 Pos. No. 1 .7 Heat circulation pump - DN65 Pos. No. 1 .8 Heat circulation pump - DN80 For these positions technucal data such as Flow (Q) and Height (H) are missing. Our question is: May you please provide us such data? Pos. No. 1.5 Heat circulation pump - DN40 Q =? H =? Pos. No. 1.6 Heat circulation pump - DN50 Q =? H =? Pos. No. 1.7 Heat circulation pump - DN65 Q =? H =? Pos. No. 1 .8 Heat circulation pump - DN80 Q =? H =?	DN50: Q=25m³/h, H=10m DN65: Q=35m³/h, H=12m DN80: Q=50m³/h, H=12m
	Question No. 2 Regarding these positions: Pos. No. 1 .1 2 Balancing valve - DN25 Pos. No. 1.1 3 Balancing valve - DN32 Pos. No. 1. 14 Balancing valve - DN40 Pos. No. 1 .1 5 Balancing valve - DN50 Pos. No. l. 1 6 Balancing valve - DN65 Pos. No. 1. 17 Balancing valve - DN80 Pos. No. 1. 1 8 Balancing valve - DN 1 00 Our question is: Are there required to be offered a Balancing valve ,,Dynamic" or ,,Static" ?	“dynamic” valves with all the required functions which can be realized with the twin valve combination (balancing valve + differential pressure valve).