



national treasury

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TRANSVERSAL CONTRACTING

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Ref: RT29-2024

QUESTIONS AND ANSWERS –RT29-2024: AUDIT AND TID CONVERSION OF EXISTING PREPAYMENT METERS AND THE SUPPLY, DELIVERY, INSTALLATION, MANAGEMENT, AND MAINTENANCE OF SMART METERING SOLUTION FOR A PERIOD OF THIRTY-SIX (36) MONTHS

#	QUESTIONS	ANSWERS
1	<ul style="list-style-type: none"> Request deadline extension by at least 2 weeks to 24th November 2023 A solution sizing depends on the total number of meters installed in the system which number is not disclosed anywhere on tender documents. This means sizing and costing are delayed as a result. Solution pricing requires input from external partners and internal approvals before the final number can be offered. 	<ul style="list-style-type: none"> The Closing Date for this bid is 10 November 2023. Bidders should base their costing for a smart metering system on a minimum order of 1000 smart meters installed but the actual price in the pricing schedule is the price per single meter installed.
2	What is the total number of meters a Smart Meter Solution must handle? (Water/Electricity)	<ul style="list-style-type: none"> The numbers vary from institution to institution. Rather base your price on each meter per service. e.g. (R20 smart water meter; R30 electricity meter; R5 TID field verification) The placed municipal order will vary from municipality to municipality and could range from 1000 smart meters to +300000 smart meters and is dependent on the municipality's available budget for a smart metering system rollout. Bidders should price per smart meter installed, on a total installed 1000 smart meter system but the itemized price in the tender pricing schedule is a price per meter.
3	There is 4 summary of deliverables namely: <ul style="list-style-type: none"> i. TID compliance and readiness ii. Smart Meter Solution iii. Smart Load management iv. Onsite management oversight 	<ul style="list-style-type: none"> Yes, they can hence we are not looking for ONLY ONE service provider. The TID compliance may be tendered separately from the end-to-end smart metering solution. Yes JV/Consortium are allowed to share scope. Should there be a requirement to subcontract, all parties will be required to submit a copy of the Subcontracting Agreements. It is understandable that a JV/Consortium will be the only option for companies looking to share scope.

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	<p>Can a bidder respond to deliverables of their interest, or bidders are required to respond to all deliverables regardless of their line of business? Are JV/Consortium allowed to share scope? Note that bidders are not the same, some supplies software only, other hardware, and others both.</p>	
4	<p>“Annexure A section 2.1 line #1 “The smart metering system must comprise an electronic.”. What is the meaning of the statement? Kindly rephrase this requirement. The</p>	<ul style="list-style-type: none"> • Should read:” The smart metering system must comprise an electronic smart water /electricity metering device or meter which communicates with a main data collector, whereby this data can then be seamlessly integrated into the municipality’s billing system”
5	<p>SETA-accredited training requirements – Individual product houses already run training programs around their application/systems. Will this training not be sufficient to be offered to municipal users? What are the requirements for a training program to be certified SETA accredited?</p>	<ul style="list-style-type: none"> • For Any smart metering installations taking place on a municipal network, the deployed staff will have to have internal High/Low Voltage Regulation training to work on the municipal network, and smart metering installers will have to be trained according to the NRS057 standard. Both require training certification and approval from the head of the electricity department (designated person in terms of the OHS Act) prior to any smart metering installations taking place on a municipal network • Municipal staff will also require training on any installed smart metering system, for which the service provider will be responsible.
6	<p>Seamless integration to municipal billing systems requirements. What billing system is this? How many municipalities will expose their billing system to our Smart Meter Solution? Will the integration specification document be shared with bidders to investigate seamless integration requirements?</p>	<ul style="list-style-type: none"> • The bidder should provide a breakdown on company letterhead confirming what systems they can integrate with; • The municipalities using RT29 as a transversal appointment process may have different financial billing systems and the appointed tenderer will have to seamlessly integrate into their used billing system
7	<p>“Annexure A section 2.1 line #1 “You are referring to SCADA legislation as well as other system that might require integration” Is this about SCADA as in Supervisory Control and Data Acquisition system or Municipal Standard Chart of Accounts framework? If SCADA “Supervisory...”, will the treasury share the integration specification of such a SCADA system to integrate?</p>	<ul style="list-style-type: none"> • MSCOA is the legislation the document is referring to. • The proposed smart metering system should have the capability to integrate into all major Supervisory control and data acquisition systems (SCADA). If the system cannot integrate a letter of commitment should be given that integration will be completed after 6 months of appointment.
8	<p>Any reason for the use of SMS as opposed to IP-based communication/notifications to consumers? Is treasury fixed on one way (SMS) of notifying consumers?</p>	<ul style="list-style-type: none"> • SMS is the primary requirement for tender; however, alternative solutions can be provided.

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9	What does 1st phase after the tender award look like? How many municipalities are involved in the 1ST phase?	<ul style="list-style-type: none"> It is unknown how many municipalities will make use of the RT 29 transversal contract but there are 179 municipalities in South Africa and these municipalities have approximately 32 million electricity and water points.
10	How many end users will be required in the 1st Phase?	<ul style="list-style-type: none"> This will be dependent on uptake by respective municipalities per financial year of the duration of the Contract.
11	How is the onboarding plan of other additional municipalities, 2nd Phase and 3rd Phases, etc?	<ul style="list-style-type: none"> This will be dependent on uptake by respective municipalities per financial year of the duration of the Contract.
12	Do you need a Multi-Org solution? - One Smart Meter Solution, many municipalities onboard? Data integrity not compromised - Individual municipalities are completely independent within one system.	<ul style="list-style-type: none"> Municipalities will have a stand-alone system, but the solution will be provided across all participating municipalities. The main data collector and licensing will be for one electricity and water service provider only and installed smart meters will communicate with this platform and will be unique for that municipality. The metering hardware may vary depending on the solution proposed by the service provider, with a primary OEM solution for evaluation purposes and there could be alternatives that the municipalities could elect to utilize. Alternatives will not be utilized for evaluation purposes.
13	Annexure A 3.3.3. In some cases, a successful bidder may be required to provide energy in terms of start and end readings as opposed to consumption. In these cases, the service provider shall create pseudo registers to contain start and end readings for energy consumed in each time-of-use period.	<ul style="list-style-type: none"> This will be dependent on the municipality's billing system and how they load their kWh/KVA meter and water readings as either continuous or reset readings. The solution provided must be an end-to-end solution.
14	Annexure A 4.4.1. The ICT has adopted an MS SQL database, which integrates easily with other applications/systems. The MS SQL 2016 database is to be utilized. → What is the background of mentioning "MS SQL 2016 DB"? Will the DB be provided by the "National Treasury"? Typically access to the data can be achieved via defined interfaces/API regardless of the kind of the (in state-of-the-art) DB.	<ul style="list-style-type: none"> Service providers can make use of any database system to communicate with the municipality's financial system, but this must be illustrated in the tender returnable and demonstrated, where requested as part of the adjudication process to confirm that the deployed database/system integrates correctly.
15	Annexure A 4.7.1. The server environment refers to the supply authority's server administration functionality as outlined in applicable ICT policy. Who will provide the infrastructure (e.g. server, storage, network elements,...)?	<ul style="list-style-type: none"> Where the municipality has an ICT facility, the service provider will install all smart metering equipment in a designated area of the municipality's ICT premises. The appointed tenderer will provide all equipment associated with the smart metering solution along with the backing up of this system either on-site and/or on the cloud depending on the municipality's requirements.
16	Annexure A 4.4.1. Suggest ICT adopting MS SQL database. MS SQL 2016 DB is to be utilized. What is the meaning of this, will the treasury provide a database to the winning bidder?	<ul style="list-style-type: none"> Service providers can make use of any database system to communicate with the municipality's financial system, but this must be noted in the tender returnable and

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		demonstrated where requested as part of the adjudication process to confirm that the deployed database/system integrates correctly.
17	Will treasury provide ICT infrastructure or bidders must cost the ICT infrastructure?	<ul style="list-style-type: none"> Bidders must cost all aspects of the installed end-to-end smart metering solution.
18	Annexure A 7.1 suggests a system to be tested in a municipal environment. Is it one municipality or many municipalities?	<ul style="list-style-type: none"> The bidder will be required to demonstrate their solution at each municipality that participates in the RT 29 transversal contract
19	Pricing schedule item 21 - Prepaid Bulk SMSs for all consumers: Estimated at 100 000 000 SMS p.a. for smart meter data communication to the main data collector using cellular modems installed at each metering point. The best practice is IP-based remote connection and data acquisition. Is treasury open to other ways except for Bulk SMS?	<ul style="list-style-type: none"> SMS is the primary requirement for tender, however, alternative solutions can be provided but must be indicated as such.
20	Pricing schedule item 40 - Fixed price to integrate smart metering system to existing SCADA network for DEMAND load control application, per Supply authority site SCADA location. Will treasury share integration spec to existing SCADA system?	<ul style="list-style-type: none"> No, the appointed service provider must supply the end solution to integrate the demand control of a smart metering system into a SCADA system to provide the desired load control.
21	What is the name of the MSCOA application treasury would like Smart metering solution to integrate into? Will treasury share MSCOA platform integration specs for integration testing?	<ul style="list-style-type: none"> MSCOA is not a platform, but a municipal standard chart of accounts to address the uniformity in the recording of transactions; improved data quality and credibility; uniformity across data sets; standardized key business processes; standardization and alignment of the government
22	TID rollover, will the SP be required to upgrade meters themselves or will this be given to consumers to apply upgrade token?	<ul style="list-style-type: none"> The supplier will be required to either upgrade the meter to a KR2 TID status or alternatively: Get the customer to do this using customer self-help platforms. Either approach will be dependent on the municipality participating in the RT29 transversal contract
23	As an OEM are we allowed to submit our product and services under multiple bids?	<ul style="list-style-type: none"> OEMs participating in a JV/Consortium may not participate in competing bids. OEMs under exclusive supply arrangements may not participate in competing bids.
24	Do municipalities have to use this transversal contract to purchase smart meters and/or for the TID rollover? Are they still allowed to run their own tenders?	<ul style="list-style-type: none"> Municipalities can make use of the RT29 transversal contract as the intent is to speed up SCM processes. Municipalities may make use of their SCM process if they want to however they will have to comply with MFMA Circular 112 before any procurement outside of RT29 is executed.
25	Clarification 1: P2/14 Line 1 Smart Metering Solution Point 4 • “The smart metering system must comprise an electronic.” Should there be some further detail?	<ul style="list-style-type: none"> Should read:” The smart metering system must comprise an electronic smart water /electricity metering device or meter which communicates with a main data collector and

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		<p>whereby this data can then be seamlessly integrated into the municipality's billing system"</p>
26	<p>Clarification P4/14 Automated Meter Reader System The Legal Metrology Act requires all products used for measurement to be NRCS-typed approved. The NRCS is clear on the fact that Automated Meter Reader Systems are for waterfall under the Legal Metrology Act, however, the NRCS is still working on how to issue a product type approval for Automated Meter Reader Systems. Does the Automated Meter Reader System have to be NRCS-type approved?</p>	<ul style="list-style-type: none"> At this stage the nationally adopted approach for Smart Metering systems is NRS 049 in compliance with the issued regulations with the Electronic Communications Act no. 36 of 2005
27	<p>Clarification P7/14 Smart Water Preferable smart water meters are plastic meters and must be protected against sunlight and corrosion. It is currently a legal requirement for water meters to be installed in some form of a protective enclosure. Currently, water meters are supplied in a meter installation box, an above-ground box, a surface mount box, or a wall mount box. These meter installation boxes also included the municipal trickle flow (open/closed/trickle) ball valve and the consumer stopcock (open/closed) ball valve. Is there a requirement for a water meter installation box? If so, which water meter installation box is required? Clarification P7/14</p>	<ul style="list-style-type: none"> The deployed solution, of a smart water metering system, by the appointed tenderer is to be compliant with all legal aspects and the tenderer must include this as part of the system he is tendering on. For smart water meters the service provider should be mindful of vandalism, therefore the meter requirement should cater to such, also the municipality will advise the appointed service provider of their preferred meter type.
28	<p>Smart Water 3.2.5. AMR capabilities specification is as follows: Maximum flow range of one pulse per second. Currently, domestic water meters with pulse output have a pulse ratio of 0.5 liters per pulse, i.e., the meter sends a pulse every 0.5 liters. What is the pulse ratio that is required?</p>	<p>1 pulse per 0,5 litre.</p>

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29	<p>Clarification P7/14 Smart Water 3.2.5. AMR capabilities specification is as follows: c) Sigfox</p> <p>There are various communications technologies available, including RF, Sigfox, LoRa, and NBloT.</p> <p>The RT29-2024 PRICING SCHEDULE allows for the Smart meter solution to be either Sigfox or LoRa.</p> <p>In terms of communications technologies, the efficiency of the technology improves as you move from Sigfox to LoRa to NBloT.</p> <p>Please can you confirm that we are able to submit offers for Sigfox, LoRa, and NBloT solutions?</p>	<ul style="list-style-type: none"> Tenderers can offer alternatives to Sigfox LoRa or NBloT and they must specify their intended communication platform which they intend to use as part of the smart metering system, inclusive of coverage.
30	<p>Clarification P7/14 Smart Water 3.2.5. AMR capabilities specification is as follows:</p> <p>Easy mounting: vertical or horizontal</p> <p>This goes back to the question above with regard to the installation of the water meters.</p> <p>The different water meter installation boxes have different configurations, the one that is currently used by the municipalities is the above-ground box, whilst the sub-metering market generally uses the wall mount box.</p> <p>There are a number of municipalities in the Western Cape that use the surface mount box.</p> <p>Which water meter installation box configuration is required?</p>	<ul style="list-style-type: none"> Tenderers can use either of these approaches as long as it complies with legal requirements and forms part of the tendered solution. Also do not limit yourselves. For example, Northern Cape might have ground level and other provinces might have wall mounts. Hence it is advisable not to limit yourself.
31	<p>Clarification P7&8/14 Smart Water 3.3. SYSTEM OUTPUTS</p> <p>These system outputs are for electricity and do not apply to water.</p> <p>Please could you advise as to what the system outputs are for water?</p>	<ul style="list-style-type: none"> End-to-end smart water solution.
32	<p>Clarification P8/14 Smart Water 3.5. Testing and Certification 3.5.1. All meters shall be tested by the successful bidder for accuracy of the complete metering installation, and a test certificate for each metering point be submitted to the municipality.</p> <p>The verification certificates as required by the Legal Metrology Act have to be done in an NRCS-designated facility and by an NRCS-appointed verification officer.</p> <p>It is not possible to issue the legally required verification certificates in the field.</p>	<ul style="list-style-type: none"> Correct !!! All installation and certification must be NRCS compliant.

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	<p>Please can you confirm that the accuracy testing and verification certificates are the ones generated by an NRCS-designated facility and by an NRCS-appointed verification officer?</p>	
33	<p>Clarification P8/14 Smart Water 3.5. Testing and Certification 3.5.1. All meters shall be tested by the successful bidder for accuracy of the complete metering installation, and a test certificate for each metering point be submitted to the municipality. Also, a commission report is to be submitted to the supply authority for each installation by a successful bidder. The commission report should have the following data: This seems to refer to electricity meters only. Please can you advise as to what specification is this test conducted against and what certificate format is required as this is not governed by NRCS for example? Please can you advise what the requirements are for water meters?</p>	<ul style="list-style-type: none"> NRCS Compliant.
34	<p>Clarification P9/14 Smart Water 3.5.2 Certification 3.5.2.1. Successful bidders should submit a) Valid test report/certificate issued by SABS for its smart meters and related smart devices. Please note that this requirement does not meet with the compulsory requirements of the Legal Metrology Act, 2014: Act No. 9 of 2014. The Legal Metrology Act is the overriding document and supersedes any requirements, waivers, or other complications from the municipalities, or any other government department. The Legal Metrology Act, 2014 requires that each major variant of a product requires ab NRCS Type Approval. SABS texting may form part of this process, however, SABS approval is not legally sufficient by itself. Please could we request that you clarify this requirement for a report/certificate issued by SABS?</p>	<ul style="list-style-type: none"> SABS compliance for all hardware.
35	<p>Clarification P9/14 Smart Water 3.5.2 Certification 3.5.2.1. Successful bidders should submit: b) DLMS certification o For Smart metering - and more generally, smart devices - needs a globally accepted standard language that ensures interoperability, efficiency, and security.</p>	<ul style="list-style-type: none"> DLMS is not applicable for water.

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	<p>We are not aware of any DLMS-certified water meters, does this refer to electricity meters only?</p>	
36	<p>Clarification P9/14 Smart Water 3.5.2 Certification 3.5.2.1. Successful bidders should submit: d) Sigfox Please note that this seems to contradict the request in the RT29-2024 PRICING SCHEDULE where it seems to allow for both Sigfox and LoRa. Please can you advise? As stated previously there are various communications technologies available, including RF, Sigfox, LoRa and NBloT, with the efficiencies of the technology improving as you move from Sigfox to LoRa to NBloT. Please can you confirm that we are able to submit offers for Sigfox, LoRa and NBloT solutions?</p>	<ul style="list-style-type: none"> • Yes.
37	<p>Clarification P9/14 Smart Water 3.5.2 Certification 3.5.2.1. Successful bidders should submit Electricity meters and smart metering equipment to comply with NRS049:2016 minimum standards. Our understanding is that this standard has not been finalised as yet. Is the Eskom specification 240-126910106 (Particular Requirements for Eskom Smart Metering System) still applicable?</p>	<ul style="list-style-type: none"> • Yes, there has to be compliance with this Standard.
38	<p>RT29-2024 PRICING SCHEDULE RT29-02-003 RT29-002SM Smart meter solution Network Densification – Sigfox Base stations Please can you confirm what is meant by this? RT29-02-005 RT29-002SM Smart meter solution Smart Metering Licenses Once-off annual fee Is this for the connectivity only, or does it include all the other services provided?</p>	<ul style="list-style-type: none"> • Sigfox is a communications platform but tenderers can offer any other alternative solution as long as they state their intended communication platform which will be used for the smart metering end solution.
39	<p>RT29-02-014 RT29-002SM Smart meter solution Price to install a single-phase smart “split type”, electricity meter, customer interface unit and provide a detailed commissioning report and the associated guaranteed monthly billing for a period of three years, post smart meter installation, per smart meter, by making use of cellular</p>	<ul style="list-style-type: none"> • Tenderers must price for a single phase smart split type meter installation making use of any communication to a main data collector.

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	<p>communication. Price per meter (outright purchase)/ Price per meter per month (Rental option)</p> <p>Is this for a cellular communication-based electricity meter or is it related to sending the billing information to the customer's cell phone via cellular communication?</p>	
40	<p>RT29-02-024 RT29-002SM Smart meter solution Price to supply ultrasonic smart water meter (20mm/25mm) Per meter/device</p> <p>i. As far as we are aware there is no ultrasonic smart water meter that meets the legal requirements of the Legal Metrology Act.</p>	<ul style="list-style-type: none"> Tenderers must propose their solution and comply accordingly.
41	<p>With regards to the regulations for water in South Africa, the overriding document is the Legal Metrology Act, 2014: Act No. 9 of 2014. The Legal Metrology Act is the overriding document and supersedes any requirements, waivers, or other complications from the municipalities, or any other government department.</p> <p>The implementation of the Legal Metrology Act is governed by the Legal Metrology Regulations (Legal Metrology Regulations 2018 877). These regulations specify requirements for the registration of importers, manufacturers, and persons who offer for sale any prescribed measuring instrument, product or service subject to any relevant legal metrology technical regulation to establish the coverage of legal metrology in South Africa.</p>	<ul style="list-style-type: none"> Tenderers must propose their solution and must meet regulatory compliance
42	<p>The water meter standards as per the South African Bureau of Standards (SABS) are covered by the South African National Standard SANS 1529: Water meters for cold and hot potable water.</p> <p>There are five parts to this South African National Standard.</p> <p>Part 1: Metrological characteristics of mechanical water meters of nominal bore not exceeding 100 mm. (SANS 1529-1:2019 Edition 2.04)</p> <p>Part 3: Physical dimensions. (SANS 1529-3:2006 Edition 1.1)</p> <p>Part 4: Mechanical meters of nominal bore exceeding 100 mm but not exceeding 800 mm. (SANS 1529-4:2004 Edition 1.01)</p> <p>Part 9: Requirements for electronic indicators used with mechanical water meters, electronic water meters, and electronic pre-payment water measuring systems. (SANS 1529-9:2019 Edition 2.02)</p>	<ul style="list-style-type: none"> NRCS will apply.

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	<p>SANS1529-1 and SANS1529-9 are gazetted as compulsory specifications. As such water meters that are covered by SANS1529-1 and SANS1529-9 are regulated by The National Regulator for Compulsory Specifications (NRCS).</p>	
43	<p>In terms of the Legal Metrology Act, 2014 it is therefore a legal requirement for the supply of water meters into the South African market to have the following in place: Product : NRCS Type Approval (SABS texting may form part of this process, however, SABS approval is not legally sufficient by itself) Each major variant of the product needs to be submitted by the manufacturer/supplier to the NRCS for approval. Facility : NRCS Designation Every water meter that is supplied to the South African market is required to have a verification certificate. These verification certificates can only be issued by an NRCS-designated verification body, which is designated in terms of Section 7 of the Legal Metrology Act, 2014. Verification Officer : NRCS The water meter verification certificates have to be issued by an NRCS-designated facility and by an NRCS-certified verification officer. In summary: To be legally allowed to supply water meters into the South African market the product being supplied has to be NRCS type approved, the facility providing the NRCS verification certificates has to be NRCS designated, and the verification officer doing the verification certificates has to be NRCS appointed. Please can you confirm what the requirements are, and are we able to submit other offers?</p>	<ul style="list-style-type: none"> NRCS will apply.
44	<p>RT29-02-024 RT29-002SM Smart meter solution Price to supply ultrasonic smart water meter (20mm/25mm) Per meter/device Currently, almost all of the water meter installations done by municipalities are for a 15mm installation. This includes Johannesburg Water, Mangaung Metropolitan Municipality, and many others.</p>	<ul style="list-style-type: none"> Service Providers should not limit themselves, the tenders must submit a solution that will cater to residential, commercial, and industrial solutions. Noting that residential can be 15mm. 20mm and 25mm. There are some municipalities with older infrastructure that are still on 25mm water pipes which relates to 6kpa water pressure. (with a 6kpa water pressure passing through a 15mm water meter “may” affect the pulsing...depending on the solution you will be providing)

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	<p>Is this not 15mm and 20mm there is confusion regarding how sizing is done, some manufacturers call a 15mm meter a DN20 meter based on whether the ID or OD of the water meter is measured.</p> <p>Please can you advise as to why there is only pricing required for a 20mm and 25mm solution when the majority of municipal installations are 15mm?</p> <p>Please can you confirm that we can submit 15mm solutions?</p> <p>15mm and 20mm may be tendered.</p>	<ul style="list-style-type: none"> Therefore, the tenders must not limit themselves to only one size.
45	<p>RT29-02-025 RT29-002SM Smart meter solution Price to supply Sigfox or LoRa enabled pulse device Per device</p> <p>Is this a pulse port reader device for doing AMR, not prepayment?</p>	<ul style="list-style-type: none"> It is for AMR.
46	<p>RT29-02-028 RT29-002SM Smart meter solution Price to install smart water meter with 220V electrical mains connection to the municipal grid in compliance with SANS10142. All electrical equipment must be suitably rated to withstand the ingress of water. The 220V supply will be used to supply the smart water meter with a continuous electrical supply independent of the installed smart meter backup battery life span. Price to include all hard wiring, electrical equipment, and weatherproof enclosures for a connection to the municipal electricity grid Per meter</p> <p>Please can you confirm that this is a requirement for a smart water meter that is connected to the municipal electricity grid?</p>	<ul style="list-style-type: none"> Applicable to electricity and not water.