



Southern Water – Smart Metering Request for Information

Request for Information

For the avoidance of doubt, the purpose of the Periodic Indicative Notice (PIN) and this subsequent Request for Information (RFI) is to conduct a market testing exercise only, and will not formally begin the procurement nor constitute any commitment by Southern Water to undertake any procurement exercise nor form a commercial strategy in a particular form. Any follow-up discussions are solely for information and planning purposes. Southern Water is not liable for any costs, fees or expenses incurred by any party in replying to, participating in, or attending any event in response to the PIN; all costs associated with responding to this pre-market consultation will be solely at the interested party's expense. Southern Water is reserving its position as to whether to undertake a procurement.

This exercise does not constitute a Request for Proposal (RFP) or a promise to issue an RFP in the future. The communication and follow-up discussions do not commit Southern Water to contract for any supply or service whatsoever. Not responding to this pre-market consultation does not preclude participation in any future RFP or tender, if any is issued. Notes will be taken during any discussions, and SW reserves the right to share a general, anonymised summary of any feedback received to help with developing our plans. We may issue additional Requests for Information, organise further supplier engagement events, and engage in additional dialogue with potential suppliers as we continue to develop our plans. We may also issue further Periodic Indicative Notices (PINs) to launch further formal market engagement / consultation processes prior to formally issuing any RFP or tender.

The information contained in this document and the supporting documentation is presented in good faith and does not purport to be comprehensive, or to have been independently verified, nor will any warranty in respect of it, expressed or implied, be given.

Name of company providing response	Morrison Water Services
Date completed	09/08/2023
Please describe any relevant experience and capabilities within this field.	<p>Morrison Water Services (MWS) is a dedicated water sector services provider, with a turnover of £500m per annum and numerous long-term frameworks across the water sector client base, including metering services for Thames Water, Yorkshire Water, Welsh Water and United Utilities. We also operate in the energy retail sector, installing SMART meters with E.ON and EDF. Our direct field force capability of 2,500 is additionally supported by 1,500 field staff from our M Group Services sister company, Morrison Data Services.</p> <p>We have significant experience in delivering domestic and commercial meter installations and as part of our ongoing framework with Thames Water we have now installed over 1 million meters.</p> <p>Learning from our experience, we continue to be an innovator and have developed an AI platform to ensure accurate data is captured when exchanging or installing a meter - thereby reducing possible human errors and the time needed for validation.</p> <p>MWS and the wider M Group Services have significant and extensive capability / experience in delivering the 'end to end' services for smart metering which include the following.</p> <ul style="list-style-type: none"> • Network installation (Morrison Telecom Services) • Physical meter installation (Morrison Water Services) • Customer journey (Morrison Water Services) • Data management (Morrison Water + Energy Services) • Customer / Call centre (Morrison Water Services) • Digital Models (Morrison Water + Energy Services) • Meter reading (Morrison Data Services)

	<ul style="list-style-type: none"> Leak repair (Morrison Water Services) Comms pipe relay (Morrison Water Services) <p>We can offer the full end-to-end service in collaboration with various external third parties to ensure complete scope of delivery with the assurance of competent field teams and efficient scheduling and customer journey management.</p> <p>Yorkshire Water – Water Services Partnership</p> <p>Duration: April 2015 – April 2028 Devices installed: c.85,000 meters int/ext Size: c.£12m pa Location(s): Yorkshire Technology variation / stack: AMR / AMI Responsibilities: Appointment booking, install, maintenance and commission. Partnership / consortium: N/A</p> <p>Welsh Water: Water Network Alliance</p> <p>Duration: Nov 2018 – Nov 2025 Devices installed: c.25,000 per annum – 16,000 replacements and 9000 new connections Size: c.£4m pa Location(s): Wales Technology variation / stack: AMR Responsibilities: 6,888 dig and 35,000 surveys. Appointment booking, install, maintenance and commission. Partnership / consortium: N/A</p> <p>Thames Water: SMART Metering</p> <p>Duration: Apr 2010 – Apr 2025 Devices installed: Optant Metering Programme c.25,000 per annum, R&R replacement 30,000 – 60,000 p/a, Progressive Metering Programme 50,000-100,000 p/a. We have fitted in excess of 1 million meters. Size: c.£50m pa Location(s): London Technology variation / stack: AMI Responsibilities: Work is split in to 3 streams: OMP (Optant Metering Programme): customer requested installations; R&R Replacement programme: Rolling replacements 6,888 dig and 35,000 surveys. Appointment booking, install, maintenance and commission. Partnership / consortium: Collaboration with technical partner Arquiva</p>
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	<p>United Utilities: Enhanced Metering</p> <p>Duration: April 2021 – April 2025 Devices installed: c.15,000 per annum Size: c.£8m Location(s): North West, England Technology variation / stack: AMR Responsibilities: MWS provides non-metered customers with dummy bills following external meter installations, enabling them to switch to a meter with no increase in cost for 2 years. Customer focus and innovation are key to our success on this framework. Partnership / consortium: N/A</p>
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Section 1: Capabilities and Delivery Considerations

On the basis of the assumptions as laid out in *Appendix 1: Southern Water Smart Metering Programme Information*, and *Appendix 2: Supporting Guidance on Component Inclusions / Exclusions*, please provide answers to the following questions.

1. What components of the Smart Metering solution can you offer either yourself, or via partners? Please complete the table below to indicate your response (using appendix 2).

Component	Directly Supplied by your company	Supplied by you via a Partner (provide named partner)
1. Meter Asset	Yes*	
2. Meter Replacement	Yes*(part)	
3. Communications Network	Yes*	
4. Meter Data Management	Yes*	
5. Integration to Southern Water Systems	Yes*	
6. Demand Reduction	Yes*(part)	
7. Financing	Yes*	

*We would look to supply the above either fully or in part (depending on which component) via a partnership. This would be as part of a joint venture/consortium with others.

2. Referencing *Appendix 1: Southern Water Smart Metering Programme Information*, Page 18, what type of commercial structure would you propose (taking into consideration, Payment terms (including expectations on revenue commencement), contract length, warranties, performance incentives, allocation of key risks)

1. Our preference would be a separate direct contract for installation/exchange of meters, potentially bundled with other services (e.g. demand management, and possibly also meter reading). This would be separate and distinct from any meter provision, communications or financing elements.
2. This preference is based on the fact that we can provide this through direct delivery and/or established supply chain relationships. For example, our Thames Water contract is on a very similar delivery model basis, and could easily be adapted to include the demand management elements which we would deliver through a combination of in-house expertise and technology partners which we already work with as part of South West Water leakage contract, and various other similar contracts elsewhere in the UK.
3. We do have a close working relationship with various communications, meter provision and financing outfits via our various metering contracts across the UK, in particular Thames Water Smart Metering and also, from a financing perspective, through our Energy Smart Metering contracts (e.g. E.ON). These relationships are operational however, as opposed to contractual, with these parties having a direct contract with our end clients.
4. Should an all-encompassing service be mandated however we would look to form a joint venture or consortium bid with one of our partners, or alternatively consider forming part of their supply chain as a sub-contractor.
5. Our view is that while this would push the complexity of logistical management into the supply chain it would mean forming contractual relationships with parties with which we have not historically had. This would involve understanding and allocating risks across each aspect which would involve risk pricing to reflect the potential that we might be exposed to other party's failings.
6. We understand the logic and rationale for the view that this would reduce complexity for Southern Water and potentially reduce the risk of delivery failure. However, in our view it would cause the various parties to price risk, and potentially reduce Southern Water control and influence in end-to-end delivery. We believe better value could be achieved via direct contracts and potentially an associated alliancing mechanism (with modest value) to support close joined up working in pursuit of an efficient delivery. This could take the form of an incentive payment payable on various joint outcomes being met and would represent a more equitable spread of risk across all parties, including Southern Water who undoubtedly play a get role in ensuring the end-to-end process is effectively delivered.
7. A potential way to de-risk an end-to-end offering for potential bidders might be for there to be a discovery phase, possibly on a cost-plus basis, with a pricing re-calibration downstream. This could take the form of a trial phase of the deployment with a chance for both parties to assess the effectiveness of different technical and commercial models.
8. In terms of the specifics of the commercial terms our view is as follows:
 - Pricing structure:

- Our expectation would be that Southern Water would have a preference for an amortised service charge type model, payable from meter installation.
- Ideally there would be a separate fixed amount that would be payable to cover setup and ongoing run costs. This would reduce overall volume risk and help smooth cash flow.
- In addition, we would look for an inclusion of abortive visit charges and other reasonable charges back to Southern Water where factors outside of our control prohibit successful deployment.
- Payment terms (including expectations on revenue commencement):
 - 30 days would be our ideal position, or even better would be advance payment, with an enhancement to rates, and/or service levels as part of this.
 - Point of payment would be mostly on install (as this represents a large portion of the cost), with an additional amount at the point of communications going live, i.e. meter connected/polling, and an ongoing maintenance/comms monthly charge.
 - If a finance aspect were incorporated naturally such terms would be built into a meter asset provision (MAP) style arrangement and would be incorporated into an amortised charge.
- Contract length:
 - Minimum 4 years with a breakpoint thereafter, ideally with a further 4 year extension period - this is relatively long in order for performance to bed in and setup/bid costs to be recovered.
- Warranties:
 - We would be happy to provide parent company guarantees if required, and this would be preferred to a performance bond.
 - In terms of metering kit warranties we would offer these in line with industry norms, likely 10-15 years. Many of our partners will be open to offering an extended period subject to an additional charge. Batteries would be separate, likely 5 years.
- Performance incentives:
 - As mentioned above, an element of remuneration linked to overall performance, e.g., a bonus payment linked to KPI performance would be attractive.
- Allocation of key risks:

Risk area	Allocation	Notes
Installation, planning and scheduling, customer management	MWS	MWS would own the customer engagement process, including lettering, texting, email, etc.
Campaign management, deployment strategy and planning	MWS/SW (joint)	This would be managed by MWS in coordination with its partners. A significant element of SW involvement would be required, to specifically support campaign

			<p>management and customer targeting. We would agree areas of focus, etc with SW prior to execution and would want to manage this a part of a joint board.</p> <p>A key dependency would be provision of a portfolio of deployment candidates from SW, with some form of risk sharing if required to factor in the level of customer engagement.</p>
	Meter asset provision logistics	MWS via partners, i.e. meter manufacturer.	<p>Our meter manufacturer partners would own this up to a period re-install, i.e., lead time requirements, advance notice of orders. MWS would then store/warehouse meters, possibly via a delivery partner (e.g., drop box model). This is a key risk if there is stranded labour due to non-delivery of meters, but this risk would be own via any consortium bid vehicle (e.g., JV), with MWS passing risk to the partner under an SLA arrangement. If SW were unable to provide a sufficient portfolio of candidate customers for MWS/it's partners to engage with this</p>

		would become a SW risk
Communications performance	MWS via partners, i.e., comms provider.	We would manage this via a commercial agreement with our partners, with any rollout of comms networks being synchronised to be ahead of any installation roll out, with a temporary comms solution if needed.
Meter assets performance	MWS via partners	
Delivery of demand reduction targets	MWS, and ideally some joint elements with SW	This would be managed by MWS in coordination with its partners. A significant element of SW involvement would be required, specifically to support with campaign management and customer targeting.
Financing	MWS via partners	

- Governance – Linked to all aspects of the E2E a governance structure that holds all parties to account and to ensure swift decision making (e.g. alliance style board) would be beneficial, and we would want this to be a contractual obligation on all parties.
- Expected cost of finance provided:
 - This would be dependent on the structure of the contract and detailed T&Cs, as well as meter warranty requirements, technical specs, etc, but our view from our financing partners is that this would be in the region of 10-15%, but this would be heavily influenced by deal structure, risks, etc. A further element that would impact these is the structure of drawdown of funds, e.g., bullet or Pari Pasu, and whether hedge break gains/losses are borne by MWS/financing partners or SW.
- Meter asset ownership:
 - We would anticipate any financing arrangement required by Southern Water would be on an off-balance sheet basis, in line with the relevant IFRS standards or UK GAAP (FRS102).

- Our understanding of such arrangements is that all assets and liabilities would sit on the balance sheet of any JV on the basis that all risks and rewards of ownership of such assets being passed to the JV.
- The JV would 'control' the assets and benefit from the rewards enabled by such control, with control being demonstrated via the various tests/indicators.
- While it is possible than under a financing arrangement Southern Water may have legal title to such assets, and this may be an indicator of control, it may be possible to structure such an arrangement such that control is passed to the financier/JV, whilst legal title could remain with Southern Water – ultimately it would depend on the ultimate balance of risks transfer and would require a detailed review.

3. What risks do you foresee with the delivery of the programme ambition to replace ~1 million meters between 2025 and 2030. How would you propose that these are mitigated? How would this influence the premiums placed on the finance offering?

As one of the leading providers of Smart Metering services in the UK MWS is seeing significant interest in Smart Meter services. Most water utility companies have either come to market early or are planning a Smart meter programme as part of their AMP 8 investment. This significant requirement has a number of impacts in the market.

The first and most pressing risk which we foresee is that a lack of availability of SMART meter stock and other components may be an issue. Given the volume of meters to install across the industry, it may be advisable to use more than one meter supplier to eliminate this as a risk. As an independent, we can provide multivendor support and supply management, as well as providing forecast reporting on the number of meters required to vendors up to 6 months in advance to allow smooth delivery and avoid disruptions to the meter installation programme.

Further to the above, another potential risk is the possibility of a lack of available resources to meet SWS' delivery programme. Upon our appointment to this contract, we would ensure that we engaged sufficient resources to fulfil the programme requirements, bringing new staff on board where necessary to avoid any delays in the programme. We have a ready-made workforce via our sister company Morrison Data Services and we also have a dedicated training academy meaning all new starters can be trained quickly and deployed out into the field.

Another possible risk we foresee is issues around the integration of our systems with yours. To alleviate this risk, we have developed our systems to be easily interfaced with any system, including all mainstream systems (MS, Oracle, SAP) as well as bespoke Client systems. Should we be selected to be part of this programme, we will undertake design as part of the mobilisation period to ensure that our systems' compatibility and standards are built in as part of the integration.

The final key risk we foresee on this programme is a potential lack of customer awareness of planned work. Early customer awareness is critical to the successful delivery of any SMART Metering programme. Upon award, MWS will ensure that customer journey scripts are in place immediately, allowing all customers to be kept well-informed of what we're doing long before we begin. As part of our Every Customer Counts philosophy, we always follow the below principles regarding customer communication:

- Inform customers of our works in advance.
- Listen to a customer's problems and honestly answer any query they have.
- Clearly explain any paperwork a customer may have.
- Communicate with customers to confirm and appointments, make them aware that we are en-route and confirm the time of arrival via the customer's preferred contact method.
- Proactively communicate with affected customers and key stakeholders during service delivery, explaining what we are doing before, during and on completion of the works.
- Keep checking that the customer is happy with everything and signpost them to someone else if they need help or information, we are unable to provide.
- Undertake multichannel communications, such as early written notices, personal visits, telephone calls, social media posts, letters, and proactive outbound text messaging, using the communication that is appropriate for the individual customer's needs.

4. What communications network(s) would you propose for use to ensure coverage across the Southern Water region?

At present there are a wide variety of telecommunications options available to the water sector, from fixed network through to the provision of NB-IoT. Infrastructure investment is significant and costly, especially when meeting coverage in rural areas. Roll out of infrastructure is one of the critical path items for a SMART meter roll out. It is our belief that investment into national infrastructure is required to provide sustainable infrastructure and avoid closed networks, which require significant investment to update once deployed – a cost which is not passed on by large mobile network providers. However, the best frequencies to operate below ground assets needs to be reserved by providers, which is where industry collaboration can influence this provision.

Through collaboration with our partners, MWS can provide optimal design for fixed network or mobile communications solutions. We maintain strong relationships with several telecoms providers, including Vodafone and BT, together with fixed network providers such as Suez and Arqiva. Additionally, our sister Company Magdalene is an industry expert in providing and installing network infrastructure either with telecoms or fixed network providers.

As part of our service delivery model, we will provide support on down time on aerials as well as providing installation support on repeaters to address communication issues in rural areas or city

black spots. We can also modify customer sites if signals are poor to provide and relocate meters if required to ensure better connectivity.

At MWS, we consider ourselves a 'comms agnostic' organisation, being both open to and capable of working with any comms provider to meet the requirements of SWS' programme. We have experience in both the provision of NBIOT meter solutions and the installation of fixed network architecture, as well as having separate experience in the provision of open protocol network solutions. With several potential technical solutions on the market, we would seek to work with SWS to identify the solution that best meets your needs and would be more than happy to consider any solutions you prefer.

5. Using Appendix 2: Supporting Guidance, describe your experience delivering Demand Reduction capabilities and your typical timeframe to start realising benefits?

Customer reads from SMART meters have provided benefits in analysing dynamic customer demand, moving away from estimated consumption through to individual customer profiles. Providing the ability to analyse individual consumptions allows for advanced warning of customer side leaks which can then trigger communication with customers on emerging issues with their supply pipe. The data provided can also initiate the need for water efficiency home visits where the number of users within a household can be compared with the area average. High users can then be targeted to reduce consumption (where the greatest savings are made) and users provided with water efficiency devices as part of a water efficiency campaign. This can be effective when targeting customers in water stressed areas or during a drought.

Our head end system offer includes hydraulic modelling and machine learning capabilities and as part of our proposed service delivery model we can provide automated Customer Side Leakage (CSL) detection, linked to job management systems which can generate letters or text message alerts to customers. We can also provide Graphical User Interfaces (GUIs) on GIS backgrounds for any customer, with point displays on individual customer data. Through our modelling capability we can report on individual properties or total demand, including splitting areas to known demographics or physical layouts of the network such as DMAs or Zones. Our head end modelling platform can highlight continuous reads over 24 hours, indicating potential CSL and can compare properties to their neighbours using the near neighbour technique. We can also compare customers to standard usage profiles for different sized properties confirming high usage. Customers with high usage are then informed and put on our CSL customer journey which can ultimately lead to large CSLs being investigated with our provers to assist the customer to fix their leaks. Our journey also includes letters, emails, and text messages to remind customers to fix their leaks which is managed with our customer contact centre.

We can acquire all data to provide detailed demand analysis for the water balance or analyse water consumption benefits before and after the meter install. We can extrapolate meter reads from SMART Meters through to non-SMART metering households, providing dynamic water balance for seasonal or different customer demographics. We can also create bespoke customer dash boards to analyse a variety of data sets in real time. Our head end system for smart metering can create a network water

balance and being data agnostic, we can also integrate existing asset data such as district meters, acoustic loggers, or water quality sensors.

Our customer journeys for compulsory or non-compulsory metering allows put a customer on a complete end to end journey from meter install through to bill comparison. At the start of the customer journey, we advise the customer of the benefits of a smart meter where our awareness campaign details that a smart meter is the fairest way to pay for the actual amount of water used. Within the literature provided to customers on our Thames Water contract, we state that customers can use around 17% less water when they are installed with a smart meter.

Our call centre, literature and operative communications with the customer has the same tailored message to the customer, which is that the customer, will save on energy bills and that they can monitor their water use (for showers, baths, washing up etc.) and manage their cost of water consumption during the bill comparison journey. The bill comparison journey begins once the meter has been installed and activated. At this point the client customer centre informs the customer, monthly of their usage with periodic reviews with the customer at 3 months, 6 months, and 10 months. Over this one-year period excess usage is typically not charged for the customer, thereby avoiding “bill shock” and allowing the customer to manage their consumption to levels they are comfortable with. If you will save with a meter, you can have the credit added to your account if you choose to switch to a metered bill within that year. This means that you can get back any money that you would have saved by switching early.

This process was put in place to encourage customers to act on their smart metering data, as in the early stages of our Thames Water contract, customers did not always act on their high consumption or fix CSLs when contacted. The level of engagement with customers depends on the degree of consumption and we prioritize customers with high demand (typically within the first three months) to extract the most benefit for the programme.

In addition to the above and further to discussion with SWS, we are able to work with our partner Aqualogic to provide water efficiency and home audits to customers, as well as to potentially install water saving devices. Visiting people’s homes and engaging with them in their own surroundings via a home water audit enables the homeowner to reduce their usage and general water demand while offering a credible assessment. Water saving tips and guidance will be offered throughout the visit of the customer’s home and on completion a report is auto generated by our system and emailed directly to the customer. The engineer will provide a calculated outcome of how much water the home uses per month/year and how much the customer could use with efficiency measures as well as the cost of that on a metered tariff.

Section 2: Additional Services

If you are interested in providing additional services to those described in this document, that could be complementary to our programme ambition, please describe the added value you could provide here:

Real time customer data is one of the cornerstones of our digital transformation capability and head end systems, powering our Digital Twin (real time hydraulic model) which can handle millions of data points per minute, rivalling traditional SCADA systems. VariSim Delta has been designed to deliver a real time water balance to assess leakage and customer behaviour on the water network. Currently provided to Yorkshire Water, VariSim Delta provides the unique capability of converting customer consumption to modelled pressures for every pipe on a water network. Anonymised customer data is used to predict ideal water pressures and then compared with measured pressures to identify anomalies. The hydraulic losses are then investigated, and often have revealed leaks, pipe blockages or unaccounted for water.

Our digital transformation capability also includes multiparameter probes from our partner Intellitect Water, offering flow, pressure, and temperature with add on modules for water quality. Together with the Insight platform the battery or mains power devices present an opportunity to virtually monitor flows around the network, splitting a DMA into smaller virtual sections. Utilising probes and smart meters we can check night lines by comparing demand data from probes strategically installed to monitor supplies to groups of customers. A big feature of the solution is that the device is a modular unit and can be installed on through bore hydrants presenting a low-cost installation solution which can be moved around a network. Starting with a pressure transient logger the base unit can then be upgraded with a temperature and flow probe with the high-end modules, then further upgraded with a water quality sensor. Flow source tracking is our new technique offering the ability to track water from the source district meter to the customers' homes. Grouping customers to a probe we can show age of water analysis and with the water quality sensor built into each probe, the effects of outages or water quality incidents.

To transition customers from an estimated consumption to a metered tariff can be challenging, especially during a cost-of-living crisis. On our SMART metering programmes, we have seen a dramatic change in customer consumption when metered, with customers becoming more proactive when engaged on their daily allowances. Allowing customers, the option of a transitional period can help shape tariffs to avoid bill shock, a practice adopted in the energy industry where customers are also provided with energy meters allowing them to monitor the cost of energy. MWS are working with partners to provide SMART apps which allow for similar visibility of water consumed.

SMART meter data can also be utilised when looking at pressure management in a district metered area (DMA) where high meter penetration can help inform operators if certain water pressures can reduce consumption during peak hours. A live water balance can also help calculate leakage by viewing minimum net night flow or total volume, allowing for potential leakage reduction savings by managing data allowances in real time.

Metering all customers has the potential to reduce the carbon footprint of operation through identifying accurate leakage levels. As a result, it is now becoming a quickly adapted process within the water industry. With water being a vital resource for our future, collective responsibility to save water is a message we are spreading across all users. The ESG responsibility can be articulated to customers through data provided on SMART apps and devices, an idea which, though ambitious in its concept, is rapidly turning into reality.

As well as the data capabilities described above MWS also have advanced customer service and stakeholder engagement services. All MWS employees are trained in customer-focused competencies such as communication skills, empathy, tolerance, and the ability to respond to customers appropriately. In addition, all employees working on SWS contracts will have been fully inducted into your processes, systems, and customer standards as a baseline, ensuring that they are able to provide exemplary service to every customer from day one. As part of this training our employees are taught to identify vulnerable customers. This allows them to prioritise services as necessary and to make sure that all individual customer needs are met.

Section 3: Indicative Costs

On the basis of the assumptions as laid out in *Appendix 1: Southern Water Smart Metering Programme Information*, and *Appendix 2: Supporting Guidance*, please provide answers to the following questions.

1. What is your indicative cost of delivering the components described, based on our provided programme details in Appendix 1.

	Cost	
	CAPEX	OPEX
What is your indicative cost for those components, based on volume of meters, time horizon, and guidance notes?	Design & Build / Deliver	Operate & Maintain (Total Cost per Year)
1. Meter Asset		
2. Meter Replacement	See table below	See table below
3. Communications Network		
4. Meter Data Management		
5. Integration to Southern Water Systems		
6. Demand Reduction		

2. Please provide an estimate of the total cost, including financing, of delivering your stated solution.

The table below is a cost forecast for deployment and maintenance and is indicative only and based on high level assumptions as provided in the SWS documentation. A full specification would be required to cost with greater accuracy. Our prices are based on indicative 'per meter' costs with risk and uncertainty premiums added, we have assumed that the rollout is in line with the stated profile and the meter mix is split evenly throughout the programme. Costs include a basic customer journey but not the full project overhead as this depends on the operating model selected. The maintenance element assumes that 0.5% of the deployed portfolio require a replacement each year using a blended visit cost to reflect the job mix. No battery replacement programmes are assumed.

£m - 2023 prices - not financed	Yr1	Yr2	Yr3	Yr4	Yr5	Total
Combined Deployment Costs	11.32	15.69	16.43	19.39	13.26	76.09
Maintenance Cost	0.12	0.27	0.44	0.63	0.76	2.22
Total Deployment and Maintenance	11.43	15.96	16.87	20.02	14.03	78.31

3. Please summarise the calculations/methodology behind your estimated cost and any other significant assumptions included:

Methodology

- This cost forecast is indicative only and based on high level assumptions as provided in the SWS documentation. A full specification would be required to cost with greater accuracy.
- Our prices are based on indicative 'per meter' costs with risk and uncertainty premiums added, we have assumed that the rollout is in line with the stated profile and the meter mix is split evenly throughout the programme.
- Costs include a basic customer journey but not the full project overhead as this depends on the operating model selected.
- The maintenance element assumes that 0.5% of the deployed portfolio require a replacement each year using a blended visit cost to reflect the job mix. No battery replacement programmes are assumed.

Assumption details:

1. Excludes the cost of system integration and mobilisation, operational setup, property/depots if needed, and project management/administration overhead - we would seek to recover as rechargeable costs.
2. Includes provision of a basic customer journey, labour/vehicles/plant
3. Basic dig, surface materials and backfill only, additional costs for e.g., coloured tarmac and significant traffic management.
4. Daytime operation costs, additional charges if works required out of hours.
5. Assumes MWS control of customer journey using configured version of our Salesforce platform to drive efficiency.
6. Rates are weighted to include max 3 visits and associated aborts, lower do-job rates available if no-fault aborts and overheads priced separately.
7. All costs at 2023 prices, indexation required in any contract.
8. TUPE if applicable and any other labour transfer costs excluded.
9. Labour costs based on a blend of MWS experience nationally, would be refined for a tender response based on detailed engagement with our supply chain and M-group companies.
10. Productivity based on our experience of smart rollouts nationally, this is sensitive to final customer journey, smart propositions from SWS to incentivise customer engagement, local factors.
11. Assumes that the comms solution is light touch and only requires initial pairing not significant additional process steps.
12. Clean Out job assumes no specialist jetting equipment required.
13. Rates include an element of risk to reflect uncertainties at this stage of the engagement, including the overall operating model and the risks passed to MWS as meter installer.
14. Maintenance included based on 0.5% of meters requiring a visit/replacement per year, no assumption included for any battery replacement activity within the initial 5-year period.

4. If we had to complete the rollout more slowly (over 10 year rollout), what be the key changes to your costs?

A longer rollout allows fewer operational people to be recruited, equipped, and mobilised as peak FTE demand will be around half that required over a shorter 5-year rollout. However, attrition over a 10-year timeframe will offset some of this benefit and the dynamics of the labour market may be significantly different by the 2030s meaning costs could rise.

Overall, we would expect lower Operative FTE costs from this scenario but there is a degree of uncertainty due to the long timeframe.

Running the programme for a longer duration will also mean that management and administrative overhead will increase on a per meter basis as, for example, management resources will not change in number materially but will be required for a longer duration. The same dynamic would apply to other overhead items such as any facilities required.

There is a longer term benefit to deploying meters in a 10-15 year rolling programme, as it allows meter replacements to be carried out by a BAU workforce which can be maintained at a steady size replacing meters as they reach end of life. This avoids the cost of on-off activity and the mobilisation and de-mobilisation of teams to manage more intense programmes.

5. If we had to complete more quickly (over 3 years), what be the key changes to your costs?

A shorter rollout will lead to some efficiencies in overhead and management areas but will drive a material increase in the number of operational resources required. For example, if 100 FTE were required to deliver a 5-year programme this would increase to 167 to produce the same output over 3 years. This means significantly higher recruitment and mobilisation costs, as well as an increased risk of not being able to secure the higher resources required, driving up costs in the market. A shorter programme may also make the work less attractive to certain groups of potential installers, such as apprentices.

A shorter timescale also reduces resilience in the rollout, limiting time to recover any delays and requiring a steep ramp-up to full output quickly after mobilisation. Recovering any lost output in a short period could require further resources and additional cost.

6. Are there any areas where your view of inclusions or exclusions is different to what is specified in supporting Appendix 2: Supporting Guidance.

Three key exclusions to note in our costs; while the estimate includes basic appointment booking and use of our bespoke configured Salesforce system, we have not included the project costs for system integration and configuration as there is insufficient information to do so at this stage.

The costs also exclude project overheads for property, depots, management and administration – as we don't know the operating model we can't forecast this accurately.

We have also not included the up-front mobilisation costs of the programme and resources as the specific requirements and other material factors (such as where labour would be sourced) are not yet understood.

Note that our costs provide an installer capable of paring the meter with the comms network but assume the cost of any specialist equipment required will be paid by the comms provider.

Appendix 1 – Southern Water Smart Metering Programme

[See attachment available via Southern Water sourcing platform, Bravo]

Appendix 2 – Supporting Guidance on Component Inclusions / Exclusions

The tables in this section are to provide guidance on what Southern Water anticipates to be included in the costs for the different elements of the smart metering value chain.

Purpose:

The purpose of this section is to support respondents to this Request for Information complete the questions by demonstrating what Southern Water anticipates to include or exclude from scope items. This is not a list of Southern Water requirements.

Further information:

We provide clear definitions as to what's required in the specification but allow flexibility in how suppliers respond to allow for more responses & innovative responses.

The specifications in the document are not the same as requirements but will support detailed requirements gathering.



1. Meter Devices

We would expect meter devices to typically **include**:

- Meter device that is compliant with key UK technical standards
- Concentric meter devices or in-line meter devices
- A range of meter sizes from 15mm to 150mm
- Provision of data using AMR technology
- Provision of data over an AMI communication network
- Maximal battery life
- Other capabilities (such as leak, battery, and tamper alarms)
- Warranty (assuming linked to the battery life of the meter)
- Any additional devices (end points) required to transmit data from meter to a communications network.

We would expect meter devices to typically **exclude**:

- All other components (installation and commissioning, communications network, meter data management, system integration, demand reduction)

2. Meter Replacement

We would expect meter replacement to typically **include**:

- Planning and scheduling of field operatives to deliver installations.
- Appointment booking capability to manage appointments, particularly for internal installations.
- Notifying customers on the day of replacement
- Field operatives with skills and equipment to remove an existing meter and install a new meter
- Field operatives with skills and equipment to commission the meter (connect a meter to a communications network)
- Technology to capture data at point of install about the meter device, work completion (or non-completion), property data, other network data
- For more complex replacements (e.g. External inline water meter replacements, Bulk Meter replacement up to 150mm, boundary box/meter chamber replacement), then traffic management and permits may need to be included

We would expect meter devices to typically **exclude**:

- All other components (meter devices, communications network, meter data management, system integration, demand reduction)

3. Communications Network

We would expect the communications network to typically **include**:

- Installation of the communications network OR enablement of an existing communications network
- Planning and management of the rollout (if not an existing communications network)
- All parts required to enable the network to function (e.g. power of site, network server software, head-end system)
- Provide data in a consolidated format
- Maintenance of the communications network (e.g. including power, technical support, account management, engineering call out team)
- Appropriate warranties linked to provision of the communications network
- Technical support of systems to enable the above

We would expect the communications network to typically **exclude**:

- All other components (meter devices, meter replacement, meter data management, system integration, demand reduction)

4. Meter Data Management

We would expect meter data management to typically **include**:

- Collect and store data from an AMR or visual meter reader (meter reads, alarms)
- Collect and store data from an AMI communications network
- Cleanse data where necessary (e.g. if data is in different formats or de-duplication of data)
- Handle data securely (encrypted and secure, both at rest and in transit)
- Report on non-communicating, or intermittently communicating meters
- Able to store images (e.g. of installations, manual readings, meter inaccessibility etc)
- Technical support of systems to enable the above

We would expect meter data management to typically **exclude**:

- All other components (meter devices, meter replacement, communications network, system integration, demand reduction)
- Data analytics and visualisation of meter read data for other purposes is included under “demand reduction”

5. Integration to Southern Water Systems – Inclusions / Exclusions not included for this RFI

6. Demand Reduction

We would expect demand reduction capabilities to typically **include**:

- Reporting on customers who have unusual consumption or high usage
- Reporting on total demand and by key demographics
- Show household customers their usage (over different time horizons) via their online Southern Water portal
- Show non-household customers their usage

- Provide tailored advice to customers to help them reduce their usage (analysing customer consumption and using behavioural techniques)
- Use analytics to determine to an appropriate degree of certainty a customer has a leak
- Inform customers that they have a suspected leak, and manage a process to remind them to resolve the leak
- Technical support of systems to enable the above

We would expect meter data management to typically **exclude**:

- All other components (meter devices, meter replacement, communications network, meter data management, system integration)

7. Financing – Inclusions / Exclusions not included for this RFI (see Appendix 1 for current assumptions)