



水務署
Water Supplies Department

香港灣仔告士打道七號入境事務大樓
Immigration Tower, 7 Gloucester Road, Hong Kong.

電子郵件
e-mail wsdinfo@wsd.gov.hk

電話
Telephone 3461 9472

圖文傳真
Facsimile 3461 9956

檔號
Reference (19) in WSD/ST MEP/51/120/17 Pt. 1

11 July 2025

To: Applicants of Advanced Metering Infrastructure (AMI) System

Dear Sirs/Madams,

Announcement of Adoption of Wireless Advanced Metering Infrastructure (AMI)

The Water Supplies Department (WSD) is pleased to announce the planned adoption of wireless Advanced Metering Infrastructure (AMI) as an alternative to the existing wired AMI system, effective from **1 November 2025**.

Background

Since 2018, WSD has implemented a wired AMI system. However, the current wired AMI system can be complicated and costly for both developers and WSD in terms of design, application, and approval processes. In response to industry feedback, WSD has been actively liaising with the industry to introduce more technology options for implementing AMI systems.

Following comprehensive evaluation and testing of various potential technologies, WSD has identified wireless AMI utilizing LTE Cat. 1 as a technically feasible and viable option. Recent advancements in wireless technology, combined with significant reductions in wireless communication service fees, have made wireless AMI a more cost-effective alternative to the wired system.

Mandatory Requirements for Wireless AMI System

To ensure successful implementation, all wireless AMI application must comply with the following mandatory requirements:

1. **Power Supply:** Provision of power supply outlet in close proximity to all indoor water meter installation locations.
2. **Equipment Panel:** Provision of a weatherproof stainless steel equipment

panel (W300mm x H450mm x D220mm) at rooftop of each building, complete with power supply and data cable connection to a nearby Telecommunications and Broadcasting Equipment Room (TBE) room.

3. **Signal Strength:** LTE Cat. 1 signal with RSRP \geq -105 dBm at all water meter installation locations.

Procurement and Implementation Timeline

Applicants will be allowed to procure wireless AMI equipment through WSD's bulk procurement contracts, ensuring cost efficiency and standardization. Applicants may also choose to supply their own wireless AMI equipment, as long as the equipment fully complies with WSD's technical, performance, communication, and data security standards and requirements. All relevant equipment details must be submitted to WSD for prior approval.

The complete wireless AMI system application information pack, including technical proposal template, application forms, cost, testing and commissioning forms, sample O&M manual, and sample handover documents will be released on **1 November 2025**. Wireless AMI applications will be accepted starting from that date.

The earliest date for wireless water meter distribution will be **1 April 2026**. Development projects that cannot accommodate this timeline should continue using the wired AMI system.

Transitional Arrangements

For development projects with technical proposals submitted **on or before 31 October 2025**, regardless of approval status, provided that water meters have not been distributed to the applicant, the applicant will be permitted to switch to the wireless AMI system. However, all mandatory requirements listed above must still be fulfilled, and the earliest meter distribution date remains **1 April 2026**.

Purpose of Early Notification

This early notification is provided to allow the industry more time to plan, prepare, and evaluate the transition to wireless AMI systems. WSD recognizes the importance of moving with technological advancements while ensuring seamless service delivery to our customers while partnering with the industry.

We believe the adoption of wireless AMI system will significantly reduce the cost and effort required during system design, application and approval process, installation, testing and commissioning, documentation, and troubleshooting to both the developers and to the WSD.

Enquiries

For any enquiries regarding wireless AMI system, please contact Electrical and Mechanical Engineer/Technical Development (1) at 3461 9782 during office hours.

Yours faithfully,



(LAW Yiu Yip, Charles)
Senior Electrical and Mechanical Engineer/
Technical Development
Water Supplies Department

Appendices:

Appendix A – Change Request Form

Appendix B – Template of Technical Proposal of AMI Wireless Scheme

Appendix C – Wireless Signal Coverage Test Form

Appendix D – Template of T&C Report of AMI Wireless Scheme

AMI OUTSTATION DESIGN CHANGE REQUEST FORM

PROJECT DETAILS	AMI Project No.		Application Serial No.		Approval Date of Current Design	
	Site Address				Meters Collected: Yes/No*	
					Estimated OP Date:	
	Requested by (The Applicant or his Representative)		Date		Contact No.	Email Address
DESCRIPTION OF CHANGE	<input type="checkbox"/>	We want to change the AMI Outstation design based on reference designs and WSD Standard Specification E-89-01 (Mar 2025) published by Water Supplies Department on 14/3/2025.				
	<input type="checkbox"/>	We want to change the AMI Outstation design from wired metering scheme to wireless metering scheme.				
CHANGE IMPACTS	Scope	The scope of the plumbing proposal including the no. of water meters involved will remain the same.				Yes/No*
	Deliverables	We will re-submit the design proposal for the AMI installation including drawings, materials, equipment and work programme for the approval of the Water Authority.				Yes/No*
	Cost	We will absorb and bear all costs associated with the provision and abandonment of the AMI infrastructure already built but not to be used by the AMI Outstation under the new design.				Yes/No*
	Timeline	We will extend/adjust our project timeline to account for the design change.				Yes/No*
	Technical	For wireless metering scheme, we will ensure each smart meter installation location has adequate signal strength for data transmission between the smart meter and the backend server of the Water Authority.				Yes/No*

-REPLY FROM WATER AUTHORITY

To: The Applicant

- ☐ Your request for design change is agreed. The Water Authority will take no responsibility whatsoever for such change as requested. Please proceed with the submission of the new design proposal as soon as possible.
- ☐ Your request for design change is not agreed. Please proceed with the installation, testing and commissioning of the AMI Outstation under the current design.

Yours faithfully,

Senior Electrical and Mechanical Engineer/
Technical Development
Water Supplies Department

Date:

* delete as appropriate

(This document is for information purposes only and subject to revision.)

Technical Proposal for Wireless AMI Outstation

Part I – General Information

Address of Premises:	
Name of Consumer (in English) :	
(In Chinese) :	
ASN/CCID No. (if applicable):	
WSD AMI Reference No. (if applicable):	

No. and Size of Wireless Fresh Water Meters Involved

Size	DN 15	DN 25	DN 40	DN 50	DN 80*	DN 100*	DN 150*	DN 200*	DN 250*	DN 300*
No.										

* Pulse counter will be used.

Please tick the appropriate box

- ☐ I will pay for the Smart Water Meters, Pulse Counters (if any) and SIM Cards [#] and collect them from WSD.
- ☐ I will pay for the Smart Water Meters and Pulse Counters (if any) [#] and collect them from WSD. The SIM Cards for the Smart Meters and Pulse Counters (if any) will be procured on my own.

[#] Payment shall be settled within 30 days upon approval of the Technical Proposal or before collection of Meters, whichever is earlier.

☐ Other: *(Please specify)* _____

Target Pre-sale Date (if applicable): _____

(Technical Proposal should be approved by the WSD beforehand)

Target Date of Collection of Meters from WSD: _____

(Technical Proposal should be approved by the WSD beforehand)

Target Date of Effecting of Water Supply: _____

(Wireless AMI Outstation should be completed and handed over beforehand)

Submitted by:		Company Name:	
Telephone No.:		Email Address:	
	Date of Submission:		

Part II – Documents to be Included

Please tick the appropriate box

<u>Technical Proposal</u>		Included in the Proposal	Not Applicable
(1)	<p>Drawings/Layout Plans showing:</p> <p>(a) The site location and boundary of the development; and</p> <p>(b) Locations of water meters (e.g. common floor plan).</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p>
(2)	<p>Initial signal coverage test report showing:</p> <p>(a) The signal strength measured at each location of water meter room/cabinet</p> <p>(b) The proposed remedial plan for poor signal coverage locations.</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p>
(3)	<p>Documents including:</p> <p>(a) Copy of related Special Conditions in Land Lease (if applicable)</p> <p>(b) Appointment letter issued by the Developer to entrust the Works to the Contractor (if applicable)</p> <p>(c) AMI Outstation Design Change Request Form (if applicable)</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>
(4)	<p>Other information required by the Water Supplies Department (WSD). Please specify:</p> <p>_____</p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>

Wireless Signal Coverage Test Form (Before/After* Meter Installation)		
AMI Project No.:		
Site Address:		Test Date:
Testing Instrument:		
Instrument	Model and Type	Serial No

Note:

1. Location map and layout plan of the site should be attached to this form when submitted.
2. Each test point should be tested at least three times successively with minimum interval of 5 minutes.
3. Test should be conducted under real working conditions, e.g. access door in closed state.

Test Results

Network Operator	Technology	Frequency Band (e.g. B5)	Physical Cell Identity (PCI)	In-building Signal Booster installed (Y/N)
	LTE Cat 1			
Reference Value	RSRP (dBm)			
LTE 4G	> -105			

Location Point	Floor (e.g. 40/F)	Time Stamp (e.g. 14:00)	RSSI (dBm)	RSRP (dBm)	RSRQ (dB)	SINR (dB)	Result (Pass- ✓/Fail- ✗)	Remark

Remedial Plan for Poor Signal Reception Locations

e.g. Network operator is agreed to provide cellular repeaters near the building for signal improvement before the occupation of the building.

Tested by:		Post:	Witnessed by:		Post:
Signature:			Signature:		
Company:			Company:		
Date:			Date:		

* delete as appropriate

(This document is for information purposes only and subject to revision.)

Testing and Commissioning (T&C) Report for Wireless AMI Outstation

Part I – General Information

Address of Premises:	
Name of Consumer (in English) :	
(In Chinese) :	
ASN/CCID No. (if applicable):	
WSD AMI Reference No. (if applicable):	

No. and Size of Wireless Fresh Water Meters Involved

Size	DN 15	DN 25	DN 40	DN 50	DN 80*	DN 100*	DN 150*	DN 200*	DN 250*	DN 300*
No.										

* Pulse counter will be used.

Please tick the appropriate box

- ☐ I have collected Smart Water Meters, Pulse Counters (if any) and SIM Cards from WSD.
- ☐ I have collected Smart Water Meters and Pulse Counters (if any) from WSD. The SIM Cards for the Smart Meters and Pulse Counters (if any) had been procured on my own.
- ☐ Other: *(Please specify)* _____

Target/Actual Pre-sale Date (if applicable): _____
(Technical Proposal should be approved by the WSD beforehand)

Actual Date of Collection of Meters from WSD: _____
(Technical Proposal should be approved by the WSD beforehand)

Target Date of Effecting of Water Supply: _____
(Wireless AMI Outstation should be completed and handed over beforehand)

Submitted by:		Company Name:	
Telephone No.:		Email Address:	
	Date of Submission:		

Part II – Documents to be Included

Please tick the appropriate box

<u>T&C Report</u>		Included in the Report	Not Applicable
(1)	<p>Latest Drawings/Layout Plans showing:</p> <p>(a) The site location and boundary of the development; and</p> <p>(b) Locations of water meters (e.g. common floor plan).</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p>
(2)	<p>Final signal coverage test report showing:</p> <p>(a) The signal strength measured at each location of water meter room/cabinet</p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>
(3)	<p>As-built Meter Installation Table (MIT) including:</p> <p>(a) The Meter ID and service address of each water meter in the building that requires individually metered water supply; and</p> <p>(b) The numbers, sizes and types of water meters; and</p> <p>(c) Corresponding SIM Card CCID to each meter (if SIM Cards are procured by the applicant).</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>
(4)	<p>Record Documents including:</p> <p>(a) Copy of the latest Technical Proposal approval letter; and</p> <p>(b) Proof showing that the SIM Cards payment had been settled (if SIM Cards are procured by the applicant).</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p>
(5)	<p>Documents including:</p> <p>(a) Copy of related Special Conditions in Land Lease (if applicable)</p> <p>(b) Appointment letter issued by the Developer to entrust the Works to the Contractor (if applicable)</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p>

(This document is for information purposes only and subject to revision.)

(6)	Other information required by the Water Supplies Department (WSD). Please specify: <hr/>	<input type="checkbox"/>	<input type="checkbox"/>
-----	---	--------------------------	--------------------------