

| MARKET CODE CHANGE PROPOSAL | | Draft Form Version 1.2 | |
|--|---|--|-------------|
| Market Code Change Proposal Ref (Assigned by CMA) | MCCP037 | Version Number (Assigned by CMA) | Version 4.0 |
| Title of the change | Submission of Automated Remote Reads (updated March 2010) | | |
| 1. GENERAL DETAILS | Proposers are reminded that Change Proposals must be countersigned by the Proposer's Contract Manager or the person designated by the signatory to the Market Code Framework /Accession Agreement | | |
| Company: | Business Stream | Org ID if assigned: | |
| Signature: | Pass signed copy to the TP Secretary before the start of the TP meeting at which the MCCP is to be presented; please remove this text. | Date: | 22/03/10 |
| | | Name: | Tom May |
| Contact details for the Proposal - the contact should be able to deal with queries regarding this Market Code Change Proposal and need not be the same person who has countersigned the Change Proposal | | | |
| Name: | | Tom May | |
| Email Address: | | Tom.May@Business-stream.co.uk | |
| Telephone and or Mobile: | | 07825 843981 | |
| Number of Associated Documents | 00 | Name or link to documents | |
| If the MCCP will also affect the Operational Code, an OCCP must also be raised | | | |
| Indicate if there is an associated OCCP | | OCCP Ref: CMA use only | |
| URGENT – IF PROPOSER HAS INDICATED THIS MCCP IS URGENT, STATE REASONS HERE | | | |
| The CMA Chief Executive will review this information and make a decision as to whether to take this MCCP forward as urgent as defined as under Market Code Part 8.7.1 (ii) (e) | | | |
| <p>The proposal to allow 'smart meter reads' was initially submitted in August 2009 and has been subject to a legal objection by Scottish Water and further general discussions in December 2009. The paper was further discussed at length at the February 2010 Technical Panel meeting where agreement was reached on a way forward.</p> <p>This proposal is now urgent and a resolution by vote is required by the next Technical Panel meeting.</p> <p>This vote should agree the appropriate way forward in the market place although we recognise the proposals may not be implemented immediately, subject to Central Systems development requirements.</p> <p>We consider the delays are stifling innovation which should be a cornerstone of the market. The rollout of smarter metering solutions will benefit the market and customers. For the purposes of this paper smarter metering solutions will refer only to remote / data logging equipment (AMR) which are attached to Scottish Water metering assets. For avoidance of doubt the paper does not refer to 'smart meters' which physically replace existing Scottish Water meter assets. Scottish Water is creating a definition of the appropriate nature of loggers which can be attached to their assets, this will be a "non-market" document.</p> | | | |
| 2. MARKET CODE CHANGE PROPOSAL DETAILS | | | |
| A | ISSUE or DEFECT WHICH THIS MARKET CODE CHANGE PROPOSAL SEEKS TO ADDRESS required under Market Code Part 8.7.1 (ii) (b) | | |

The Market Code and associated CSD documents are clear in their requirements for the submission of Regular Cyclic Reads, whether that be monthly or bi-annual reads. CSD 0202 is also explicit on the types of reads which can be sent to the CMA and for avoidance of doubt these are shown below.

| Meter Read Type | Meter Read Name |
|-----------------|-------------------------|
| I | Initial Read |
| F | Final Read |
| E | End Read |
| O | Opening Read |
| X | Temporary Disconnection |
| Y | Reconnection |
| C | Regular Cyclic Read |
| U | Customer Read |
| T | Transfer Read |

The description of these read types does not prescribe how the reads are taken with the exception that there is a distinction between Regular Cyclic Reads and Customer Reads. The CSD is silent on the issue of whether AMR reads could be submitted as one of either the Regular Cyclic Read (our preference) or as a proxy to a Customer Read.

CSD 0203 (Meter Read Submission: Validation) is also silent on the issue of AMR reads. Error codes listed in this document are shown below.

| DV _E Value | DV _A Value | Acceptance (OK) or Error Return Code as per D4004 |
|---|--|---|
| DV _E <= 0 | DV _A = 0; SPID Vacant = True | OK |
| | DV _A = 0; SPID Vacant = False | BZ |
| | -3 < DV _A < 0 | BN |
| | DV _A <= -3 | BV |
| | 0 < DV _A | BH |
| | 0 < DV _E | DV _A = 0; SPID Vacant = True |
| DV _A = 0; SPID Vacant = False | | BZ |
| -3 < DV _A < 0 | | BN |
| DV _A <= -3 | | BV |
| DV _A < 0.2 * DV _E | | BL |
| 2 * DV _E < DV _A | | BH |
| 0.2 * DV _E <= DV _A <= 2 * DV _E | | OK |
| | | |

The Market Code and Operational Code are also silent on the issue of submitting AMR reads as a proxy for Regular Cyclic Reads or Customer Reads too. While the CSDs and Codes are silent on this issue the assumption is that AMR reads are not allowed to be submitted, therefore in practice we do not submit AMR reads to the CMA.

Recent correspondence between the Water Industry Commission for Scotland (WICS) and Scottish Water noted that the legal objection of Scottish Water did not appear to stand up to scrutiny. Taking this to a natural conclusion highlights that AMR reads can be allowed in the market and our assertion is that they should explicitly be allowed to avoid future doubt.

The rollout of AMR technology is critical to the future of the sector, technology is developing and solutions are available with lifespans equally that of meters. The benefits of AMR reads being allowed in the market are:

1. more frequent reads could be sent to the CMA
2. more accurate wholesale charging because of reduced manual errors
3. encourage the roll out of technology / innovation
4. better servicing of customers in remote areas
5. increase efficiency in the market place
6. enable reading of over 30,000 recently installed internal meters
7. Improved customer service and new service development opportunities
8. Improved water efficiency

The economics of AMR solutions is relatively simple in the water industry as we stand today. Sending meter readers to sites is expensive and resource intensive, and reducing the costs associated with physical visits (for Regular Cyclic Reads) is critical to enable a viable rollout of AMR technology. Only this will allow the benefits identified above to be realised. To reduce the need to visit sites means that AMR reads must be given an equal weighting to Regular Cyclic Reads. Giving AMR reads an equal weighting to 'Customer Reads' would currently mean sites need to be physically visited regularly making AMR uneconomical.

We recommend that AMR reads be given an equal weighting to Regular Cyclic Reads and that a new read type is created to facilitate this within the next year. Until a new read type is developed, in the short-term, the Customer Read type can be used as an alternative to start AMR reads entering the market. The assumption behind this would therefore be that a Regular Cyclic Read would continue to be a physical read of the meter.

Once a new AMR read type is created and is in use we concur with Scottish Water that regular auditing will be required to ensure that the AMR and Scottish Water asset are in-line with each other. This does not require a new read, but will require a relaxation of Regular Cyclic Read requirements when Licensed Providers have invested in AMR equipment.

The standard would be that a physical read of the meter would take place a minimum of once every two years. A physical read would include both Regular Cyclic Reads and those reads used for all "start" and "stop" charging activity. In this regard, we strongly believe that all "start" and "stop" charging activity will have to continue to be based on physical visit reads not on AMR reads in the short term. In other words, the following reads must not be AMR reads:

- I – Initial Read
- F – Final Read
- E – End Read
- O – Opening Read
- X – Temporary Disconnection
- Y – Reconnection
- T – Transfer Read

Where a Regular Cyclic Read or an AMR read is submitted, this must still meet the standard timing conventions in CSD0202. The submission of a physical meter read (such as a Regular Cyclic Read) at a minimum of once every two years would highlight any significant discrepancies between the AMR unit and the meter, and is in line with other utility sectors. If there was any variance or dispute between reads this would be dealt with in the same manner that existing reads are reviewed i.e. with the CMA as an intermediary if required.

Scottish Water has full knowledge of all AMR units installed through their non-market logging form and can also control the equipment installed through this form.

This approach will allow AMR reads to be explicitly allowed in the market immediately as Customer Reads and allow market documents to be updated running parallel to development for the enduring fix (ie new read types).

We recommend that the proposed new read type is delivered via the metering working group which is investigating a number of new read types. This will ensure that the impact and cost of the work is fully understood as part of this work packages.

Finally, Scottish Water has offered to provide detailed information on the meters deployed and currently being installed, and information on devices which can be associated with each other. Any particular conditions applying will also be advised; for example, in the case of electromagnetic meters, some manufacturers require to calibrate the meter consumption display panel and transmission equipment, given the sensitivity of their equipment. This would be useful for the market and should be brought forward as soon as possible as a non market activity.

| | | | | | | | | | |
|--|--|--------------------|------------------------------|----------------------------|---------------------------------------|--|-----------------------|--------------------|---|
| B | DESCRIPTION OF NATURE AND PURPOSE OF THE CHANGE AND HOW IT MEETS THE MARKET CODE OBJECTIVES AND PRINCIPLES FOR THE MARKET DOCUMENTS required under Market Code Part 8.7.1 (ii) (c) | | | | | | | | |
| <p>The Proposer should indicate which principles the change supports and whether there is any adverse effect on any principle(s).</p> <table border="0"> <tr> <td>a) Proportionality</td> <td>e) Barriers to entry</td> </tr> <tr> <td>b) Transparency</td> <td>f) Customer contact</td> </tr> <tr> <td>c) Simplicity, cost-effectiveness and security</td> <td>g) Non-discrimination</td> </tr> <tr> <td>d) Non-exclusivity</td> <td>h) Not detrimental to Scottish Water's core functions</td> </tr> </table> | | a) Proportionality | e) Barriers to entry | b) Transparency | f) Customer contact | c) Simplicity, cost-effectiveness and security | g) Non-discrimination | d) Non-exclusivity | h) Not detrimental to Scottish Water's core functions |
| a) Proportionality | e) Barriers to entry | | | | | | | | |
| b) Transparency | f) Customer contact | | | | | | | | |
| c) Simplicity, cost-effectiveness and security | g) Non-discrimination | | | | | | | | |
| d) Non-exclusivity | h) Not detrimental to Scottish Water's core functions | | | | | | | | |
| <p>Immediate Changes</p> <p>We propose the following change:</p> <ol style="list-style-type: none"> slight revision to CSD 0202 allow submission of AMR reads as a 'U' read <p>The immediate change is proportional to allow innovation to develop; it is transparent in that it ensures Scottish Water concerns about auditing are addressed. The change is very simple and does not impact adversely on any trading parties. Scottish Water is protected through non-market functionality ie their data logging form. The immediate changes do not discriminate either.</p> <p>Enduring Changes</p> <p>The enduring changes require minor changes to the Central Systems ie the creation of one new read type and some changes to the market documents. These changes are proportional when we consider that this could facilitate the rollout of AMR technology. The changes proposed are relatively simple even allowing for audit requirements and are transparent for all parties. Creating a requirement to visit the meter every two years and provide a Regular Cyclic Read protects Scottish Water and Licensed Providers from any "drift" between the two reading sources..</p> | | | | | | | | | |
| C | IMPACT – required under Market Code Part 8.7.1 (ii) (d), (f) and (g) | | | | | | | | |
| <p>The Proposer should indicate the sections of the Market Code affected, whether the Operational Code or CSDs, Wholesale Services Agreement or License is impacted and whether there are likely to be implications on:</p> <table border="0"> <tr> <td>a) Central Systems</td> <td>c) CMA Interfaces/ Processes</td> </tr> <tr> <td>b) Trading Party's systems</td> <td>d) Trading Party's business processes</td> </tr> </table> | | a) Central Systems | c) CMA Interfaces/ Processes | b) Trading Party's systems | d) Trading Party's business processes | | | | |
| a) Central Systems | c) CMA Interfaces/ Processes | | | | | | | | |
| b) Trading Party's systems | d) Trading Party's business processes | | | | | | | | |
| <p>Immediate changes</p> <ol style="list-style-type: none"> would have no impact on the Central Systems, U type reads will be used: could have impact on trading party's systems if they chose to pursue a strategy of using AMR technology would have no impact on CMA interfaces or Processes under this proposal could have impact on trading party's business processes if they chose to pursue a strategy of using AMR technology <p>Enduring changes:</p> <ol style="list-style-type: none"> Will have an impact on the Central Systems as one new read type will be required, an 'AMR Read type' Could have impact on trading party's systems if they chose to pursue a strategy of using AMR technology Will require the CMA to update performance measure statistic code to allow for the new read type The CMA may have to mediate if there is a dispute between audit reads taken by Scottish Water and a Licensed Provider Could have impact on trading party's systems if they chose to pursue a strategy of using AMR technology | | | | | | | | | |
| D | DRAFT LEGAL TEXT – required under Market Code Part 8.7.1 (ii) (d) | | | | | | | | |

Immediate changes

CSD 202 - 2.6 Customer Meter Reads

Meter Read Type – U. The Licensed Provider may supply a Customer Read in place of a Regular Cyclic Read on up to ten (10) occasions in any calendar year for a meter related to Supply Points designated as monthly read, and on up to one (1) occasion per calendar year for those meters related to Supply Points that are designated as biannually read. ~~An AMR / data logging read is considered an eligible Customer Read.~~

Enduring changes

CSD 202 - Section 2. Provision of Meter Read(s)

See changed table below

| Meter Read Type | Meter Read Name |
|------------------------|--------------------------|
| I | Initial Read |
| F | Final Read |
| E | End Read |
| O | Opening Read |
| X | Temporary Disconnection |
| Y | Reconnection |
| C | Regular Cyclic Read |
| U | Customer Read |
| T | Transfer Read |
| <u>R</u> | <u>AMR / Remote Read</u> |

CSD 202 - Section 2.1 to 2.8

All remain the same except for sections 2.6 and new section 2.9

Section 2.6 (this would revert back to the existing text)

Meter Read Type – U. The Licensed Provider may supply a Customer Read in place of a Regular Cyclic Read on up to ten (10) occasions in any calendar year for a meter related to Supply Points designated as monthly read, and on up to one (1) occasion per calendar year for those meters related to Supply Points that are designated as biannually read. ~~An AMR / data logging read is considered an eligible Customer Read.~~

Section 2.9 –

Meter Read Type – R. The Licensed Provider may supply an AMR Read in place of a Regular Cyclic Read or Customer Read. In accordance with Sections 5.9.1A and 5.9.1B of the Market Code, physical reading of the register of the Scottish Water asset meter must be submitted not less than once every two years.

AMR Reads are not applicable for Pseudo Meters and will be rejected as set out in CSD0104 Section 7.

AMR Reads will only be accepted for SPIDs where an AMR unit / logger is in place. Where Scottish Water does not believe this is appropriate it will raise a dispute with the CMA. The CMA will work with Licensed Providers and Scottish Water to seek resolution. Where there is a dispute over the value of an AMR Read, Licensed Providers and Scottish Water both have the ability to raise a dispute in the normal manner.

The performance measures and frequency of AMR Reads will be assessed in line with those set out in CSD0002 (Performance Standards).

AMR Reads must only be entered as ‘R’ type reads and will not be accepted under the following reads:

- Initial Read, Final Read, End Read, Opening Read, Temporary Disconnection, Reconnection, Transfer Read, Audit Read

Market Code

5.9.1A Means of taking the meter reading

5.9.1.A1 Where a Meter Read is taken on one of the events referred to in Section 5.9.5 above, the reading will always be taken by the physical reading of the register of the Scottish Water asset meter. The register of the Scottish Water asset meter shall provide the sole evidence of the quantity of water supplied.

5.9.1.A.2 Each Regular Cyclic Read will always be taken by the physical reading of the register of the Scottish Water asset meter, except where the Regular Cyclic Read may be substituted by a Customer Read or AMR Read as allowed for under the Market Code. The register of the Scottish Water asset meter shall provide the sole evidence of the quantity of water supplied.

5.9.1.A.3 Each AMR Read will always be taken by the Licensed Provider or its agent from the data logger or other transmission devices attached to the Scottish Water asset meter rather than by the physical reading of the register of the Scottish Water asset meter.

5.9.1B Timing of physical reading meter reading

Licensed Providers shall ensure that a physical reading of the register of the Scottish Water asset meter takes place a minimum of once during the period from the date of last physical reading to the second anniversary of that date.

5.9.4 Regular Cyclic Reads

(i) In relation to Monthly Read Meters for all Supply Points for which it is Registered, each Licensed Provider shall carry out or procure that its agent shall carry out a Regular Cyclic Read or an AMR read, these having equal weighting, and submit this to the CMA once a Month in accordance with CSD 0202 (Meter Read Submission: Process). The Licensed Provider shall be entitled to arrange for Customer Reads to be carried out (instead of the Licensed Provider or its agent carrying out a Regular Cyclic Read) on up to ten (10) occasions in any calendar year per Supply Point and in accordance with CSD 0202 (Meter Read Submission: Process). Where more than two (2) Customer Reads are submitted in a calendar year, the Licensed Provider (or agent) reads shall be separated by no more than seven (7) months.

(ii) In relation to Bi-annually Read Meters for all Supply Points for which it is Registered, each Licensed Provider shall carry out or procure that its agent shall carry out a Regular Cyclic Read and submit this or an AMR Read, these having equal weightings, at least once every six (6) months in accordance with CSD 0202 (Meter Read Submission: Process). To avoid doubt, the Licensed Provider shall be entitled to arrange for Customer Reads to be carried out (instead of the Licensed Provider or its agent carrying out a Regular Cyclic Read), but only on one (1) occasion in any calendar year per Supply Point and in accordance with CSD 0202 (Meter Read Submission: Process).

Schedule 1 – Definitions, Interpretation and Hierarchy

“AMR Read” the Meter Read with Meter Read Type R provided to the CMA in accordance with CSD 0202 (Meter Read Submission: Process) and given equal weighting to a Regular Cyclic Read.

Other changes

We also consider changes may be required to the validation processes in the CSDs e.g. CSD0203.

The definition of this legal text would require support from the CMA in terms of ensuring consistency with existing validation rules which are not all explicitly mentioned in the CSDs.

3. IMPLEMENTATION DETAILS - PROPOSED IMPLEMENTATION DATE OR LEAD TIME

Timescale must not overlap with the period of consultation with the Commission and should take account of the impacts identified in Section C. Any quoted lead time should commence from date of approval.

The implementation date could in theory be almost immediate as few textual changes are required to the immediate change.

The implementation date for the enduring process will be driven by the time it takes to create two new read types. Refinements to the market code and CSD legal text should run in parallel to the development.

4. ANY OTHER COMMENTS

We consider this is a critical change in terms of moving the market forward in terms of metering, customer service, settlement accuracy and innovation. Allowing AMR Reads an equal weighting as Regular Cyclic Reads will encourage their rollout and improve customer service and market data.

If the AMR Reads are not given equal weighting to regular cyclic reads in an enduring solution our analysis shows that a large scale rollout of AMR technology is not viable.

The full text of the objectives and principles for the Market Code are set out in The Water Services (Codes and Services) Directions 2007 which can be downloaded from the Commission's website (http://www.watercommissioner.co.uk/view_Directions.aspx)