
Wholesale Retail Code Change Proposal – Ref CPW066

Modification proposal	CPW066 – Estimation Review
Decision	The Authority has decided to approve the alternative solution of this Change Proposal
Publication date	4 November 2019
Implementation date	14 February 2020

Background

The Wholesale Retail Code (WRC) defines a process whereby the Industry Level Estimates (ILE) are used as rounded median estimates of expected flows through water meters for occupied properties, according to meter sizes. These are included in CSD 0207 *Charge Calculation, Allocation and Aggregation*, and were set prior to market go-live.

ILEs are only used in a limited number of cases (4% of metered volume in June 2017 R3 Settlement), with use of ILEs diminishing as the market matures and meter reads are entered into the central market operating system (CMOS). The Panel's Final Report outlined that these estimates are used in two main cases:

- 1) **Where there is no meter read history and no Yearly Volume Estimate (YVE):** this is where a water meter has been installed, only an initial read has been provided and the meter has no YVE specified by either the Wholesaler or Retailer. In this scenario, any calculation of settlement charges for an invoice period after the meter's installation date will be based purely on the meter's ILE.

- 2) **Where excessive estimates based on potentially erroneous meter read history need to be capped:** this is where the consumption volumes for a settlement period after a water meter's latest read are being estimated and the meter has no YVE. In this case, the metered volume for the period is usually estimated by extrapolating the meter's read history; the meter's ILE is only used to calculate an upper volume cap which prevents some extreme meter reads from distorting settlement (by leading to large forward extrapolation).

The Market Operator (MOSL), supported by a Panel sub-group, has developed a Change Proposal to amend the values of the ILEs in CSD 0207¹. An alternative solution has also been developed by the sub-group which amends the definition of ILEs in CSD 0207, rather than the values.

The issue

There is an obligation within Section F.1.2. of CSD 0207 for the Market Operator to review the appropriateness of ILEs on a yearly basis, using at least two years of data from the market operation. This obligation requires MOSL to make recommendations to the Panel as to whether a Change Proposal should be raised to update the ILEs. This provision was written to improve the accuracy of primary charge calculation where possible.

MOSL undertook a first review of the ILEs and presented the findings at the April 2019 Panel meeting. The review was underpinned by analysis undertaken on primary charges calculated in settlement runs for three invoice periods and the role of the ILEs in the calculation methodologies. The review concluded that the ILE values included in CSD 0207 are not representative of metered median consumption observed in the market, and are therefore not consistent with their definition in CSD 0207. The analysis concluded that overall, the ILE values included in CSD 0207 are higher than their respective observed median estimates by a factor of two to three.

A Panel sub-group was established to review the use of ILEs and develop a Change Proposal.

The modification proposal²

MOSL investigated different options to amend the ILEs. As a result, the sub-group developed two solutions – the proposed solution and an alternative solution.

The proposed solution of CPW066 sets out to:

- 1) Amend the definition of the ILEs in CSD 0207, providing further clarity of what they represent, by:
 - a. Removing the word 'initial' in F1.1
 - b. Removing 'observed' and adding 'actual settlement' in F1.2.

¹ The values in CSD 0207 are based on rounded median estimates of the expected flows through meters of the given Water Chargeable Meter Size for Occupied Premises.

² The proposal and accompanying documentation is available on the MOSL website at <https://www.mosl.co.uk/market-codes/change#scroll-track-a-change>

- 2) Amending the ILE values in CSD 0207, reducing them to the medians observed in the market. It proposes a reduction of the estimates to rounded versions of the observed medians.

The alternative solution of CPW066:

The sub-group discussed amending the ILE values in the proposed solution but, after reviewing analysis on the impacts of ILEs on volume estimation, determined that it was more appropriate to amend the definition of the ILEs, leaving their values unchanged, and:

- Replacing 'Rounded Median' with 'calculated' in F1.1
- Removing the word 'initial' in F1.1
- Removing 'observed' and adding 'actual settlement' in F1.2.

The sub-group provided the following rationale:

- There was no strong evidence to suggest that the ILE values require amendment. This was based primarily on:
 - Low materiality - the sub-group noted the low usage of ILEs in volume estimation in settlement runs, the low charges involved, the small number of meters affected, as well as the diminishing use of the ILEs and the growing use of YVEs in volume estimation.
 - Changing ILEs to median observed values would lead to less accurate settlement. Additional analysis undertaken, as outlined in section 4 of the Panel's Final Report, showed that where volumes were estimated in the P1 April 2017, P1 April 2018 and P1 September 2018 settlement runs, and were subsequently recalculated in later runs using actual meter reads, the current ILEs would forecast volume consumption more closely aligned to the actual consumption calculated by settlement, than estimates based on observed median values in the proposed solution.
- The sub-group's preference was to amend the ILE definition to clarify what they represent, rather than amend the ILE values themselves. The sub-group noted that the existing estimates were originally derived from Scottish Code Subsidiary Documents, some pre-market input from water companies and other market participants and some analysis of Scottish meter reading results. As such, the current ILEs were a blend of median and mean consumption averages, rather than 'rounded median estimates'.

Industry consultation and assessment

A Request for Information on the draft Change Proposal was published on 12 July 2019 and closed on 29 July 2019. There were a total of 18 responses received, 11 from Wholesalers and seven from Retailers.

Views on whether the definition of ILEs should be amended

The majority (12 of 18 respondents of which, seven were Wholesalers and five were Retailers) agreed that the definition of ILE required amendment. The main reason cited was that the current definition was not an accurate description of intended use or calculation of ILEs.

A Wholesaler stated that amending the definition provides clarification to the ILE values. A Retailer stated the current definition was inaccurate and will need to be corrected to ensure the accuracy in the market framework. A Retailer shared a similar opinion and cited that the definition and values required amendment to ensure accuracy in settlement.

Out of those respondents who disagreed with amending the definition of ILEs, a mixture of reasons were cited. A Wholesaler stated that there was underlying data quality issues associated with the volume of long unread meters that needed to be addressed and did not believe it was appropriate to review ILEs at present. A further Wholesaler cited that the materiality impact of this Change Proposal was low as settlement based on ILEs is minimal.

A Retailer who disagreed with amending the definition stated that the current definition was clear and no case for change had been made by the Panel or its sub-group. It believed that the alternative solution had been drafted to be ambiguous to allow MOSL and the Panel to set values of the ILEs as they saw fit and ILEs should be based on estimates regardless of the nature of the estimates.

In response to the feedback from the respondents, MOSL clarified that the analysis showed that existing ILEs are higher than the median values definition in CSD 0207. There was some evidence that existing ILEs differ from mean actual volumes, but the extent is smaller and difficult to determine with the limited dataset of actual volumes currently available. Therefore, the alternative solution does not amend the ILE as the impact of long unread meters and annual weather variations are not yet visible. Future reviews by the Market Operator may identify the need to amend the ILE to align with mean volumes.

Views on whether the ILE values should be amended

Half of the respondents (9 of 18 respondents) disagreed with the ILE values being amended. A Wholesaler who disagreed stated that as there is a large number of long unread meters in the market, it would be an unfair assessment as the observed values are based on meters with reads. It further highlighted that the values in the proposed solution could disincentivise Retailers to provide meter reads and if Retailers felt the ILE is incorrect, they have the ability to enter an YVE which would supersede the ILE in the estimation algorithm. Three Wholesalers stated that there was no real evidence that amending the values could provide any benefit. It was cited that as the market continues to resolve the long unread meter issues, settlement based on ILE would be minimal. A further Wholesaler highlighted that it would like to see the market address the symptoms rather than the cause. Specifically, it stated that if YVEs were compulsory, the need for ILEs would diminish. It suggested a potential incentive be developed via the Market Performance Standards (MPS) on settlement that settles on ILEs.

A Retailer who also disagreed with the ILE values being amended stated that there was merit in maintaining consistent ILE values and the current values would have no detriment on final settlement. It also noted that Wholesalers and Retailers can provide YVEs to overcome settlement based on ILE.

The main reasons cited by those who agreed with the ILE values being amended cited that the analysis had proven the values to be too high and the proposed values were more appropriate. A Retailer stated that the evidence suggested inaccuracies within the current ILE values which warrant amendment. It also stated that amending the current values would improve the market's data quality. A further Retailer highlighted the impact inflated meter reads estimates from ILEs have on customers, recognising that ultimately it is the customer who pays.

In response to the views expressed by respondents, MOSL stated that the proposed solution would update the ILE values to rounded median values based on data from the first two years of market operation. This is consistent with the current definition in F.1.1 in CSD 0207 and therefore the Proposed Solution would not change the ILE definition. The reference to 'Initial' would be removed since the initial ILE values set at market opening would no longer exist.

The alternative solution would not change the ILE values since these are closer to actual settlement volumes when aggregated across the market. However, these are not rounded median estimates and the alternative solution would amend the definition of ILE in CSD 0207. To address the concern that poor estimates could be used for ILE, the alternative defines the ILE in F.1.1 as calculated estimates and

adds clarification to F.1.2 that the Market Operator's review of the ILE table should use two years of actual settlement volumes through meters at Occupied Premises.

Views on the redline drafting

The majority (14 of 18 respondents) agreed with the redline drafting of the proposed solution to update the ILE values. Respondents to this question highlighted that amending the definition and values were clear and reflective of the current situation. Two Wholesalers that agreed further stated that whilst they agree the red line drafting addresses the goal of the proposed solution, they do not support the solution.

The majority (10 of 18 respondents) agreed with the redline drafting of the alternative solution. The main reasons cited were that the solution was clear and delivers its purpose. Those respondents who did not agree with the redline drafting were mainly on the basis that they preferred the proposed solution. A Wholesaler stated that the removal of the word 'rounded median' implies any estimation is permitted and thus the control of the ILE calculation is reduced, and it provides a fair representation of each meter size.

Implementation timescales if the ILEs are changed

Five respondents highlighted that if the ILE values are amended as per the proposed solution, the implementation date should not be delayed as this would be detrimental to the customer. In contrast, 11 respondents highlighted that the implementation date should align with the start of the financial year.

In response to the feedback provided, MOSL stated that the proposed solution would implement a script-based amendment to ILE values which would be delivered independently from a formal CMOS release and could align with the start of the financial year.

Panel recommendation

The Panel considered this Change Proposal at its meeting on 27 August 2019. The Panel discussed the mixed views of those in favour and against the proposed solution. The Panel shared the view of the sub-group and recommended, by unanimous decision, that the Authority approve the alternative solution. This recommendation has been made on the basis of improving the principle(s) of transparency and efficiency. The recommended date of implementation is 8 November 2019.

The Panel unanimously agreed to recommend the rejection of the proposed solution to the Authority on the basis it would not facilitate the objectives and principles of the WRC. In particular, it was highlighted that using the lower ILE values set out in the proposed solution would lead to less accurate settlement. As a result, this would hinder the Market Terms objective to calculate Primary Charges and not promote efficient, economic and coordinated operation of the market under the efficiency principle.

We would like to highlight that following the Panel recommendation, we received a letter from Castle Water that provides further information to support the views it raised in its Request for Information response. Whilst we do not support information being sent to Ofwat outside of the formal code change process, for transparency we have shared this information with MOSL and the Panel.

Our decision

We have considered the issues raised by the Change Proposal and the supporting documentation provided in the Panel's Final Report, as well as the points raised by Castle Water in its letter to us, and have decided to approve the alternative solution of CPW066. We have concluded that the implementation of the alternative solution to CPW066 will better facilitate the principles and objectives of the WRC detailed in Schedule 1 Part 1 Objectives, Principles and Definitions, and is consistent with our statutory duties.

Reasons for our decision

Having reviewed the evidence provided by the Panel in its Final Report, we understand the rationale for the Change Proposal. Whilst we recognise the intent of the proposed solution, we believe the alternative solution better facilitates the principles of the WRC and is more aligned to our statutory duties. Data quality has been identified as a key market friction, and increasing the accuracy of settlement will ultimately provide a flow through benefit to current and future customers. We share the view highlighted by some respondents to the Request for Information that the market should be focusing on submitting accurate meter reads into CMOS and, estimation based on ILEs should be a last resort.

Whilst ILEs are only used in a limited number of cases (4% of metered volume in June 2017 R3 Settlements) and the market should focus on submitting meter reads so that ILEs are used in even fewer circumstances over time, those customers who are billed on the basis of ILEs will benefit from having bills that more closely reflect their actual consumption. In the interests of current and future customers, we believe the alternative solution is more likely to ensure customers receive a bill that better

reflects their actual consumption – as demonstrated by MOSL’s analysis in section 4 of the Panel’s Final Report, and explained below.

Our decision supported by the Panel sub-group’s analysis

The Panel sub-group requested MOSL undertake some further analysis to investigate the accuracy of volume estimation. This analysis suggested that the existing ILEs, are more accurate than the proposed solution’s new ILE values based on median metered volumes for estimating volumes in settlement. This analysis only includes those meters which had their volumes estimated in P1 runs and later recalculated in R3/RF runs using actual meter reads³.

April 2017

Estimation Routine	P1 April 2017 Volume (millions of m ³)	RF April 2017 Volume (millions of m ³)	Percentage Difference (+/-)
Capped ILE	1.71	1.81	+5.85%
Capped YVE	0.87	1.78	+104.60%
ILE	1.43	1.24	-13.29%
New ILE	0.52	1.24	+138.46%
YVE	0.27	0.29	+7.41%
Meter Reading History	55.78	58.21	+4.36%

Table 3 – volume estimation in P1 April 2017 compared to actual volume later recalculated in RF April 2017

April 2018

Estimation Routine	P1 April 2018 Volume (millions of m ³)	R3 April 2018 Volume (millions of m ³)	Percentage Difference (+/-)
Capped ILE	1.5	2	+33.33%
Capped YVE	0.72	1.93	+168.06%
ILE	0.79	0.8	+1.27%
New ILE	0.27	0.8	+196.30%
YVE	0.77	0.65	+15.58%
Meter Reading History	49.05	50.41	+2.77%

Table 4 – volume estimation in P1 April 2018 compared to actual volume later recalculated in R3 April 2018

September 2018

Estimation Routine	P1 September 2018 Volume (millions of m ³)	R3 September 2018 Volume (millions of m ³)	Percentage Difference (+/-)
Capped ILE	1.26	1.6	+26.98%
Capped YVE	1.37	2.72	+98.54%
ILE	0.52	0.62	+19.23%
New ILE	0.19	0.62	+226.32%
YVE	0.68	0.73	+7.35%
Meter Reading History	52.13	53.95	+3.49%

Table 5 – volume estimation in P1 September 2018 compared to actual volume later recalculated in R3 September 2018

Figure 1. MOSL settlement analysis from section 4 of the Panel’s Final Report on CPW066

³ Meter sample sizes:

- April 2017 run: 998,885 meters (4010 meters calculated on ILE) ,
- April 2018 run: 842,267 (6989 meters calculated on ILE)
- September 2018 run: 850,411 (7850 meters calculated on ILE)

Figure 1 illustrates the analysis undertaken on primary charges calculated in settlement runs for three invoice periods and the role of the ILEs in the calculation methodologies. By comparing the 'ILE' (existing ILE values) and 'New ILE' (amended ILE values in the proposed solution), it clearly shows the existing ILE volumes estimated in the P1 runs are much closer to those later recalculated in R3/RF runs based on actual meter reads, than the 'New ILE' volumes estimated.

In addition to the above, we note the concerns raised in the Final Report that amending the ILE values, as per the proposed solution, would affect the calculation of primary charges and how Retailers may bill customers. The proposed solution would introduce lower ILE values that could - on average - materially under-estimate market volumes and lead to Retailers paying lower charges for volumes based on ILE values. If Retailers choose to bill customers on the same basis then those customers would similarly be paying lower charges. There could then be cost shocks for Retailers and customers when the ILE is superseded by actual meter reads or an YVE in subsequent settlement runs, with the analysis showing these tend to have - on average - materially higher volumes. As such, we are supportive of the alternative solution as it retains the existing ILE values which - on the basis of available evidence - are on average closer to actual settlement volumes.

Finally, we would like to highlight that information that is relevant to the Panel change process should be submitted to the Panel directly, as opposed to Ofwat separately. In turn, the Panel should ensure that it has considered all such submissions before making its recommendation, and provide details within the Final Report as relevant.

We have set out below our views on which of the code principles are better facilitated by the Change Proposal.

Transparency

We consider this Change Proposal helps to enable transparency with the definition of ILEs being amended to reflect what they represent in terms of a blend of median and mean consumption averages.

Decision notice

In accordance with paragraph 6.3.7 of the Market Arrangements Code, the Authority approves this Change Proposal.

Georgina Mills
Director, Business Retail Market