

**Yearly Volume Estimates
(YVEs) Settlement Impact
Audit**

Findings Report

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1. Executive Summary

This audit analysed the influence of Yearly Volume Estimates (YVEs) on the accuracy of settlement. MOSL conducted the audit including all market and non-market meters. In September 2025 R1 data, YVEs continue to affect settlement at R1 for roughly 9–10% of meters (about 8.6% through the YVE cap) which is similar to the result of last year's audit using July 2024 R1 data. YVE Caps drive an average underestimation of c36% at R1 compared with actual reads. This effect is largely **temporary**, with the proportion of meters affected by the YVE cap falling to **0.2%** by the final RF run as actual reads arrive. The longer-term influence of YVEs is concentrated on a small cohort of meters with **no read history at RF**. Retailer practices remain highly variable (0–37% of meters affected by the cap across retailers), suggesting some retailers set YVEs too low. MOSL has contacted the largest outliers to revisit their YVE settings and will monitor progress, with a formal follow-up in one year.

2. Introduction

Yearly Volume Estimates (YVEs) are estimates of the annual volume supplied to an occupied premises, in cubic meters. Wholesalers can submit an initial YVE upon meter installation and thereafter retailers can amend the value. The supplying retailers are obligated to maintain and update the YVEs when necessary, e.g. after changes in business use.

YVEs affect consumption estimates in two ways:

- YVEs can be applied as estimates of consumption in the absence of meter reads. When YVEs are absent, CMOS will use Industry Level Estimates (ILEs) instead.
- YVEs can serve as a benchmark when CMOS uses read history to estimate consumption. CMOS will compare the estimated value to the YVE, and if the estimate is larger than three times the value of YVE, CMOS will use the 3*YVE value (known as the YVE cap) as the estimated consumption instead.

If YVEs are used appropriately, they can safeguard the settlement process and customers from erroneous bills caused by wrong meter reads. After a change of use, YVEs can also help retailers bring the settlement values in line with the new expected usage.

In 2024-25, MOSL and the Consumer Council for Water (CCW) conducted an audit looking at the impact of YVEs on settlement, as well as on customers. This included reviewing the consistency of YVE calculations with bill estimates calculations and estimated transfer reads, as well as consumption capped in settlement due to low YVEs.

That audit noted that:

- **YVE caps, when used, have a substantial impact on consumption estimates** – analysis on 32,000 meters showed that estimates would have been c44% higher without the cap applied on average¹.
- Retailer practice on YVEs varies substantially. **Some retailers have a much higher proportion than average of meters settle using the YVE cap, indicating that they may be setting YVEs too low.**
- However, **the effect of YVEs to reduce estimates in settlement does not appear to typically flow through to customer bills.** A sample examined indicated that most bills do not use the YVE driven settlement value, with other tools used to estimate consumption instead.

The [findings of the MOSL-CCW report](#) were presented to the Performance Assurance Committee (PAC) in March 2025, where the committee supported the proposal of another YVE audit this year, this time focusing on YVEs' impact on settlement

3. Relevance to market risks

If YVEs are used improperly, they can influence settlement and therefore impact wholesalers and customers. YVEs can temporarily reduce payments from retailers to wholesalers until an actual read is submitted. YVEs could impact wholesalers' cash flows (in turn threatening the funding of services to customers) and understanding of consumption patterns which could affect wholesalers' ability to manage their water balance, identify leaks, etc.

¹ Separate analysis (performed as part of the annual assessment of CMOS parameters) noted that YVE caps significantly suppress settlement; the P1 estimated volume capped by YVEs was 3.25 million m³ lower than R3 actual volume in June 2024. The CMOS parameter review assesses, among other things, whether a 3 times multiplier is appropriate for the YVE Cap method.

YVEs can also affect customer outcomes when meters aren't read regularly. Very low YVEs may lead to underbilling, masking true consumption. Conversely, overly high YVEs can result in customers being overbilled upfront and later refunded once an actual read is obtained. Both situations create misrepresentation of water consumption, which may lead to water efficiency issues and bill shock.

This section refers to risks and issues listed in the [Risks and Issues Tracker](#). CSE006 is one of the top ten risks identified in the market.

Issue reference and description	Customer impact
CSE006: Estimates of consumption data are inadequate – driving inaccurate settlement and billing where meters not read	3 – High impact
WEC002: Retailers are not incentivised to promote water efficiency	2 – Medium impact

4. Audit Objectives

As stated in the published statement of work, this audit aims to establish:

- The amount of consumption suppressed at R1 due to low YVEs and the numbers of meters affected by YVEs
- The number of meters affected by YVEs at RF.

In our analysis, we review the data across various categories of meters. This year's audit also includes non-market meters in the settlement analysis as suggested by PAC from last year's YVE audit.

5. Scope and approach

The settlement impact of YVEs was analysed using data from the May 2024 R1, May 2024 RF and September 2025 R1 settlement runs, covering all market data i.e. not only on selected retailers or wholesalers.

This investigation also compared results across various meter categories:

- Biannually read vs. monthly read meters
- Internal vs. external meters
- Smart vs. traditional meters

MOSL has also included non-market meters (NMM) into this audit following code change CPW143 Wholesaler Maintenance of YVEs for Non-Market Meters, which allowed YVEs to be used for these meters.

Retailers were ranked according to the proportion of their meters being capped by YVE using September 2025 R1 data. The retailers with proportions that deviated significantly (compared to market average) from the yearly estimate as calculated with CMOS read history were contacted and asked to review their YVE values.

6. Finding

6.1. Overall impact on settlement

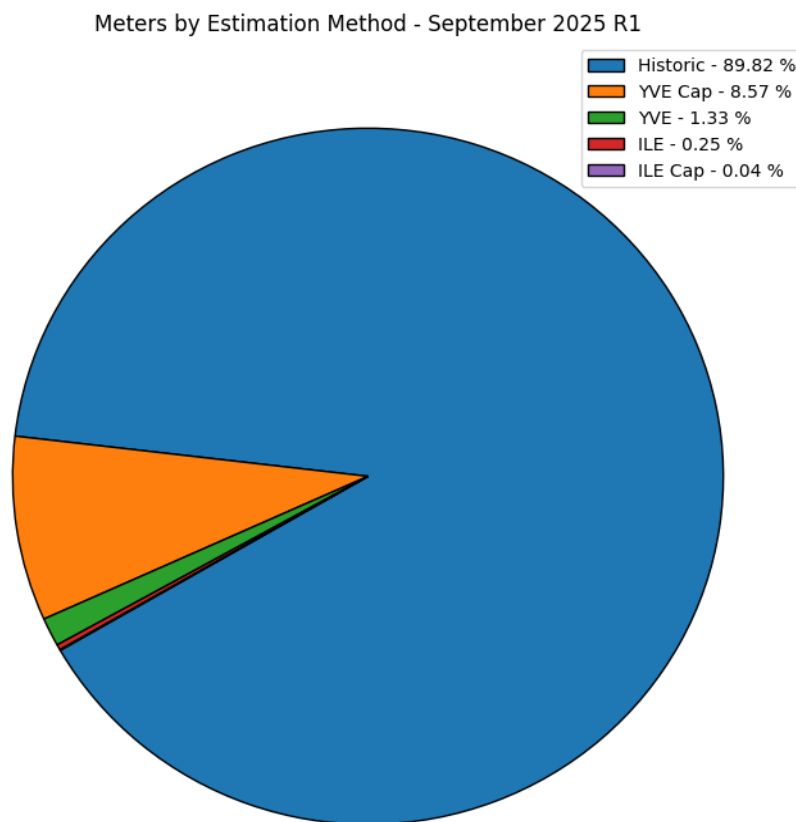
The settlement engine can use various methods to determine the volume of consumption used to calculate primary charges. If a meter read was taken and submitted to CMOS after the end of the invoice period, CMOS can use that information, and the meter is deemed to settle on actual volume. Where this is not the case, CMOS must instead estimate the volume consumed.

Meters where at least part of the volume must be estimated can settle on different methods:

- Historic – CMOS will attempt to produce an estimate from the average usage rate across a minimum set of reads spanning a 12-month period.
- YVE – where there is only an initial read (no read history), CMOS will use the YVE to estimate consumption.
- ILE – where there is no read history and the YVE is absent; CMOS will use the ILE instead to estimate consumption.
- YVE Cap – when the volume calculated by the “Historic” method is larger than three times the YVE, the meter will then settle on YVE cap, i.e. settlement uses $3 \times \text{YVE}$ as the estimated volume.

- ILE Cap – in the absence of YVE and when the volume estimated using the “Historic” approach is larger than 10*ILE, the meter settles on ILE Cap, i.e. settlement uses 10*ILE as the estimated volume.

More information on how CMOS estimates volumes for settlement purposes can be found in this [guidance document](#).



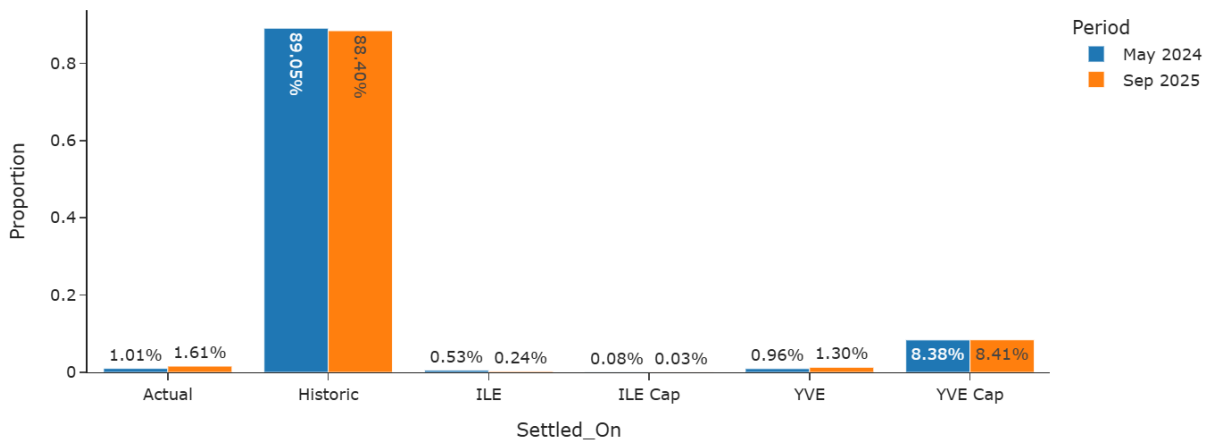
Finding #1 (market insight) - The prevalence of YVEs in affecting settlement at R1 remains stable – affecting almost 10% of meters (mostly via the YVE cap).

8.57% of the meters had their consumption estimates capped by the YVE (similar to last year’s audit - 8.40%). A further 1.33% of meters are estimated directly using the YVE (previous audit – 1.0%). In the following section, we compare the meters’ settlement methods across different runs and types of meters.

6.2. Settlement impact in different runs

Comparing the meters affected by YVEs between May 2024 and September 2025 on the same settlement run R1, the prevalence of different settlement methods between the two periods is extremely stable.

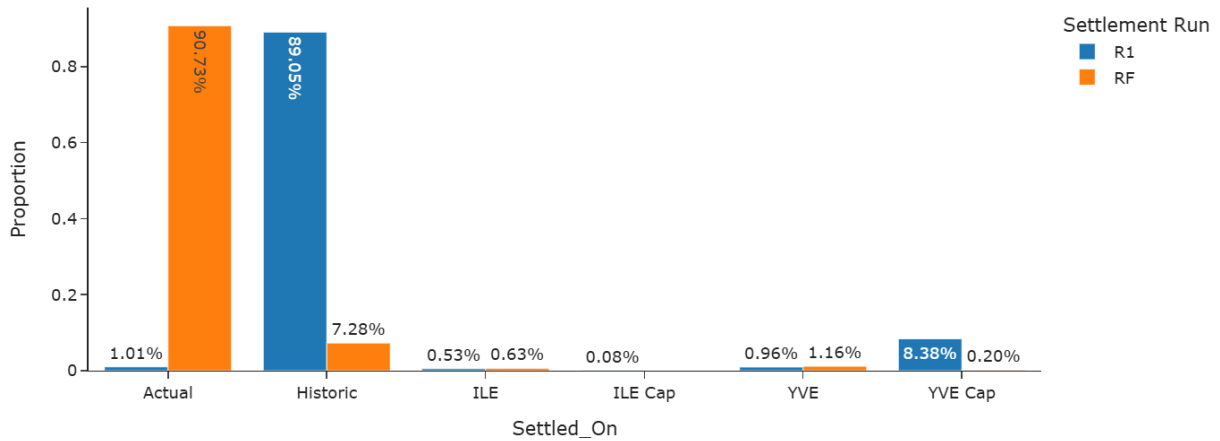
Meters by Settlement Methods - Settlement Run R1



Finding #2 (market insight) – the impact of YVE caps reducing estimated consumption for settlement is temporary. By the final RF settlement run, most meters have had actual reads allowing consumption to be ‘trued up’. YVE’s by this stage only affect 0.2% of meters.

When comparing R1 and RF of the same period (May 2024), meters at RF are expectedly more likely to settle on Actual. In terms of YVE impact, the vast majority of meters that settled on YVE Cap at R1 received an actual read before RF, giving us assurance that the impact of YVE caps is temporary. However, it appears that meters which did not have any read history at R1 often don’t receive an actual read before RF, meaning that if a meter settled on YVE at R1, it is likely to still settle on YVE at RF.

Meters by Settlement Methods - May 2024



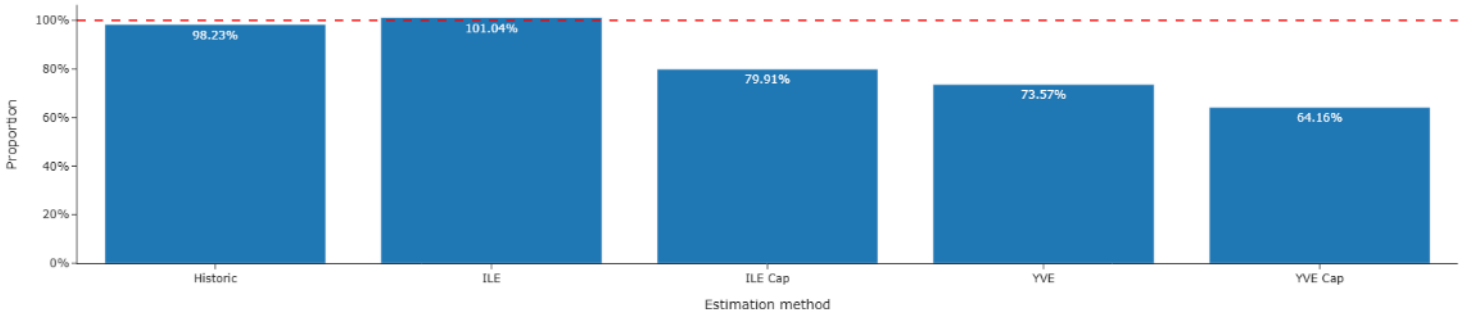
6.2.1. Impact on estimated volumes

The following chart shows the difference between estimated volume at R1 and actual volume at RF in May 2024 for different estimation methods. This difference is visualised by using a ratio of estimated volume at R1 to actual volume at RF.

Finding #3 (market insight) - where the YVE cap is used, this still appears to drive to an underestimation of consumption at R1 (c36% lower than actual consumption once meter reads are taken).

Estimates based on historic data and ILEs are fairly accurate as the estimated values were on average within 2% of the actual values. On the contrary, YVEs and ILE Caps were less accurate with estimated volume only being 73.57% and 79.91% of the actual volume respectively. YVE caps were the least reliable method for calculating volumes with the actual volume being on average only 64.16% of the actual volume. In other words, this means that for every 100 m³ of actual consumption, estimates using YVE Cap are underestimating the consumption by 35.84 m³.

Average value of estimated volume as a proportion of actual volume in May 2024, by estimation method



6.3. Types of meters affected by YVE

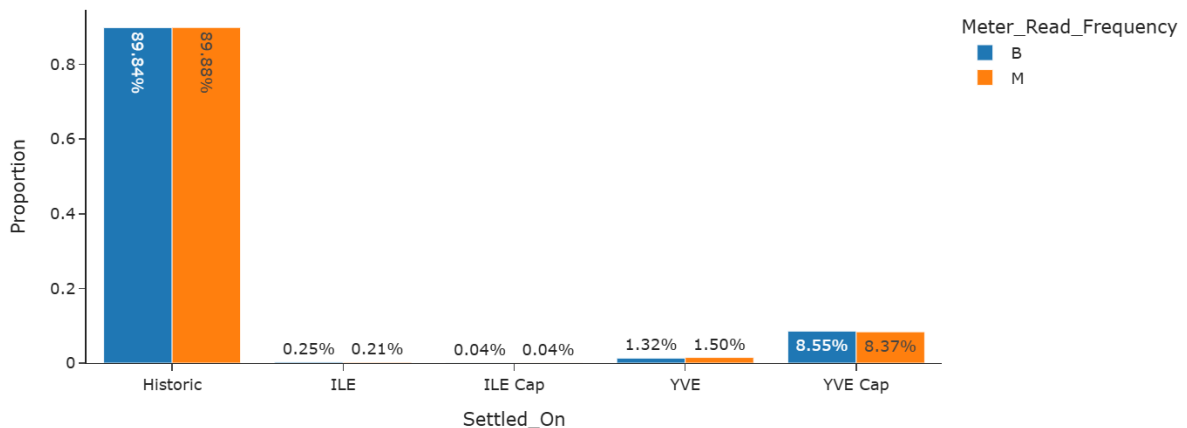
In this section we focus on estimation methods, comparing the results of various meter categories across different settlement runs.

Finding #4 (market insight) - The long-term impact of YVEs is mainly felt on meters that have no read history at RF, where monthly meters, external meters or smart meters are overrepresented. This suggests that a handful of these meters are particularly difficult to read.

6.3.1. Biannual and Monthly-read meters

Biannual and monthly meters have similar estimation methods to each other in September 2025 R1.

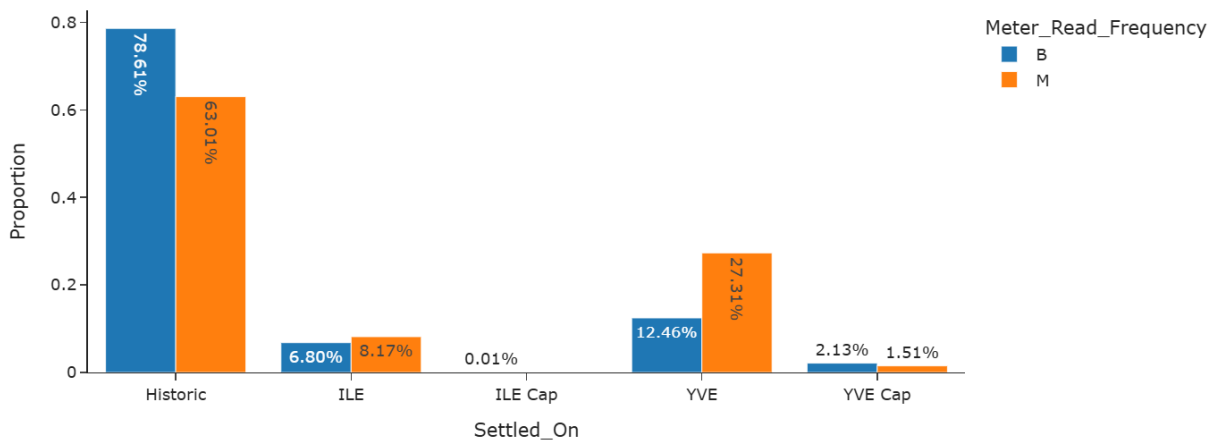
Biannual/Monthly-read meters by Estimation Methods - September 2025 R1



Examining May 2024 RF, meters were most likely to settle on Actual at RF, especially monthly read meters². However, when settling on an estimate, monthly meters were more likely than biannual meters to have never been read at all and to settle on YVE or ILE. Conversely, biannual meters were more likely to settle on estimates than monthly meters, but when they did, they were more likely to settle on historic estimates.

This tells us that YVEs have long-lasting impacts on meters with no read history until RF, and that monthly meters are overrepresented in meters that settle on YVE. The new Market Performance Framework metrics under M01 may help resolve this issue by making the performance charge for missed monthly reads seven times higher than for biannual reads, so we may see a decrease in monthly meters settling on YVE or ILE at RF as the incentive to obtain a read is stronger.

Biannual/Monthly-read meters by estimation methods - May 2024 RF

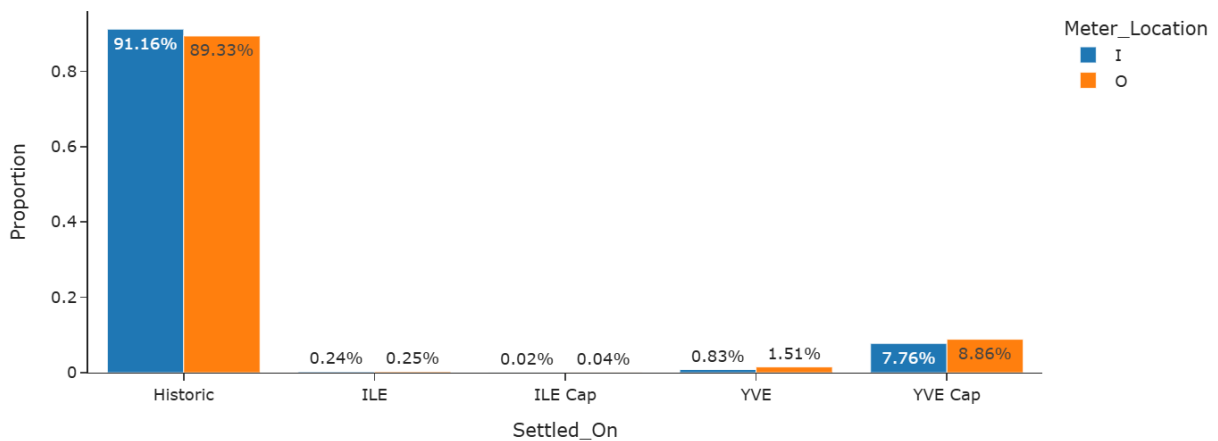


² In the settlement run RF of May 2024, 90.7% of the Biannual meters were calculated by actual meter reads; however, for the monthly read meters, the value was 95.7%.

6.3.2. Internal and External meters

There was not much difference in the proportions of estimation methods for internal and external meters in September 2025 R1. External meters are slightly less likely to settle on Historic method, and a bit more likely to be impacted by YVEs.

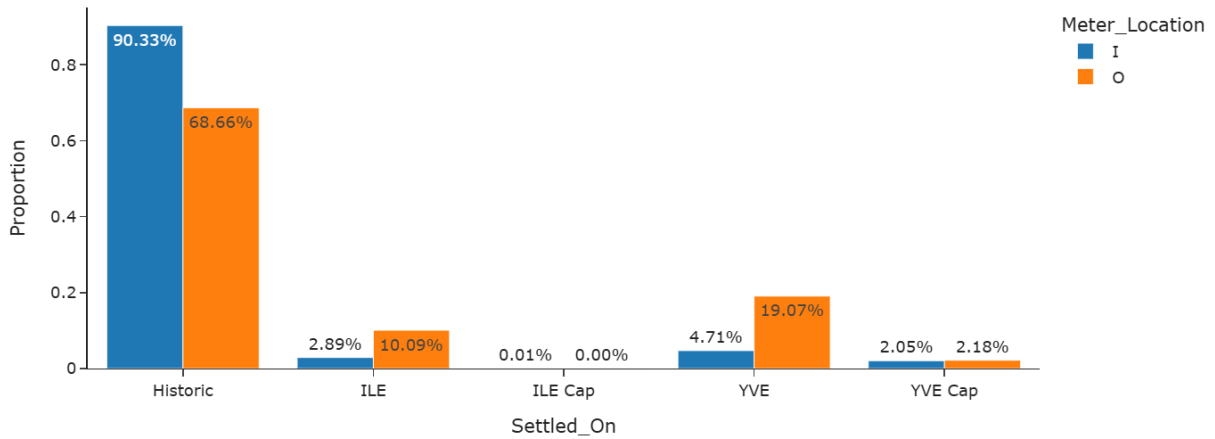
Internal(I)/External(O) meters by Estimation Method - September 2025 R1



Again, examining May 2024 RF, meters were most likely to settle on Actual at RF, especially external meters³. However, when settling on an estimate, external meters are relatively likely to have no previous readings, which pushes them toward YVE or ILE. Internal meters show the opposite pattern: they settle on estimates more frequently, but those estimates are typically derived from historical data rather than from the YVE or ILE value.

³ In the settlement run RF of May 2024, around 93% of external meters were settled on actual meter reads, that was 84% for internal meters.

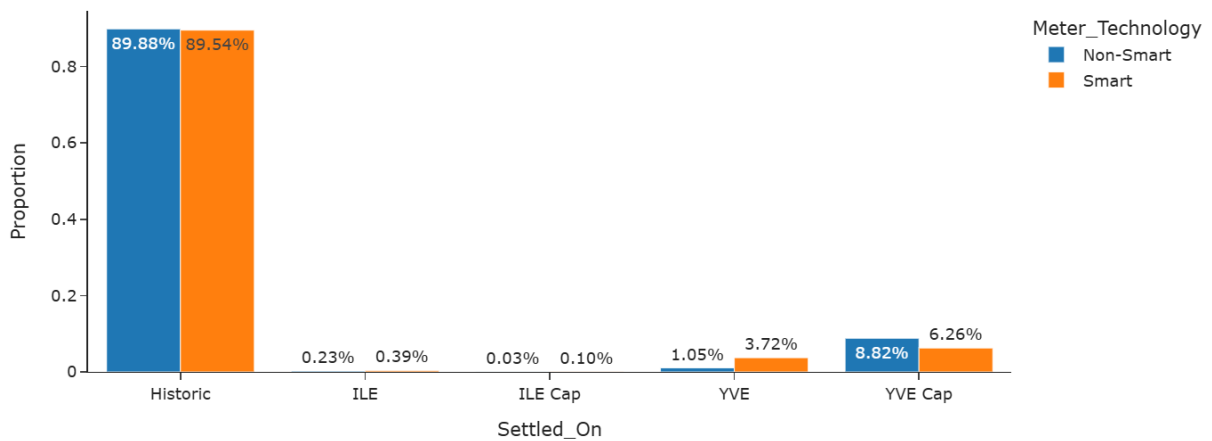
Internal(I)/External(O) meters by Estimation Methods- May 2024 RF



6.3.3. Smart and Traditional meters

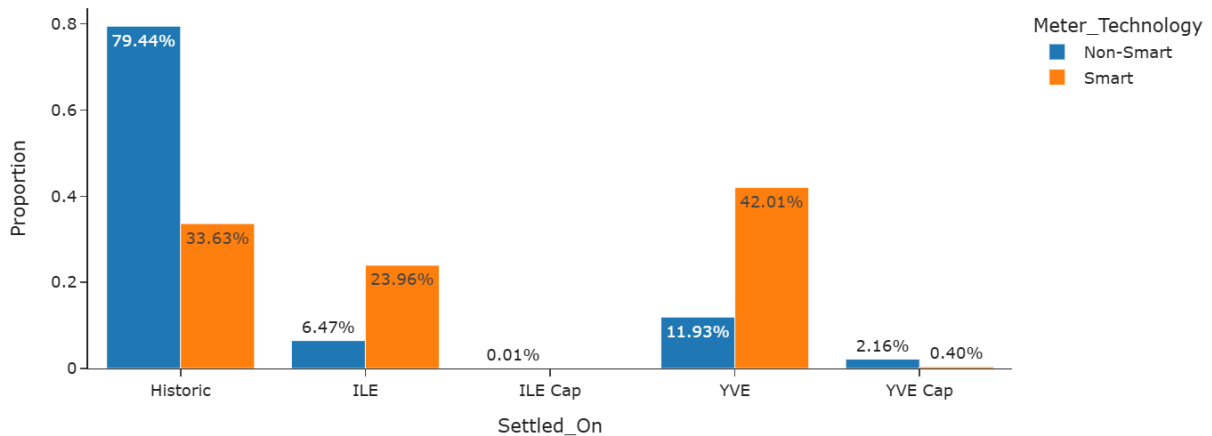
Smart meters are less likely than traditional meters to settle on YVE Cap, potentially because smart meters that are getting regular reads can be given accurate YVEs, but are more likely to settle on YVE than traditional meters. This is also the case for May 2024 RF as shown below.

Traditional(Non-Smart)/Smart meters affected by YVE - September 2025 R1



In May 2024 RF, smart meters were expectedly most likely to settle on Actual at RF⁴. However, when they settled on estimations, they had a higher possibility to settle on YVEs or ILEs, i.e. more likely than traditional meters to have no read history. This suggests an issue with these smart meters, potentially them being flagged as smart when they are not transmitting yet. [CPW163 Smart AMI Meter Definition](#), implemented in December 2025, may help reduce the number of smart meters settling on YVE at RF. On the other hand, traditional meters were more likely to settle on estimates than smart meters, especially on estimates based on read history.

Traditional(Non-Smart)/Smart meters affected by YVE - May 2024 RF



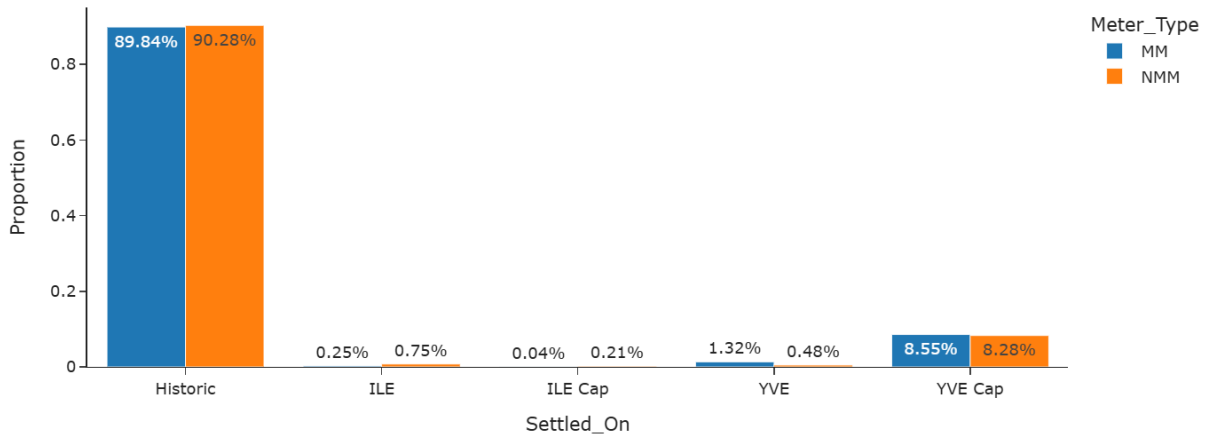
6.3.4. Market meters (MM) and non-market meters (NMM)

YVEs for non-market meters were introduced by [CPW143 Wholesaler Maintenance of YVEs for Non Market Meters](#), implemented in May 2024. Comparing the data between market meters and non-market meters for September 2025 R1, they are roughly comparable across various estimation methods. MOSL recently conducted a post-implementation review (PIR) on CPW143

⁴ In the settlement run RF of May 2024, 97.3% of smart meters were settled on actual meter reads, that was around 90% for traditional meters.

using July 2025 R1 data, which showed comparable results (looking at the proportion of non-market meters settling on YVE). That PIR will be published in early 2026.

MM/NMM meters affected by YVE - September 2025 R1



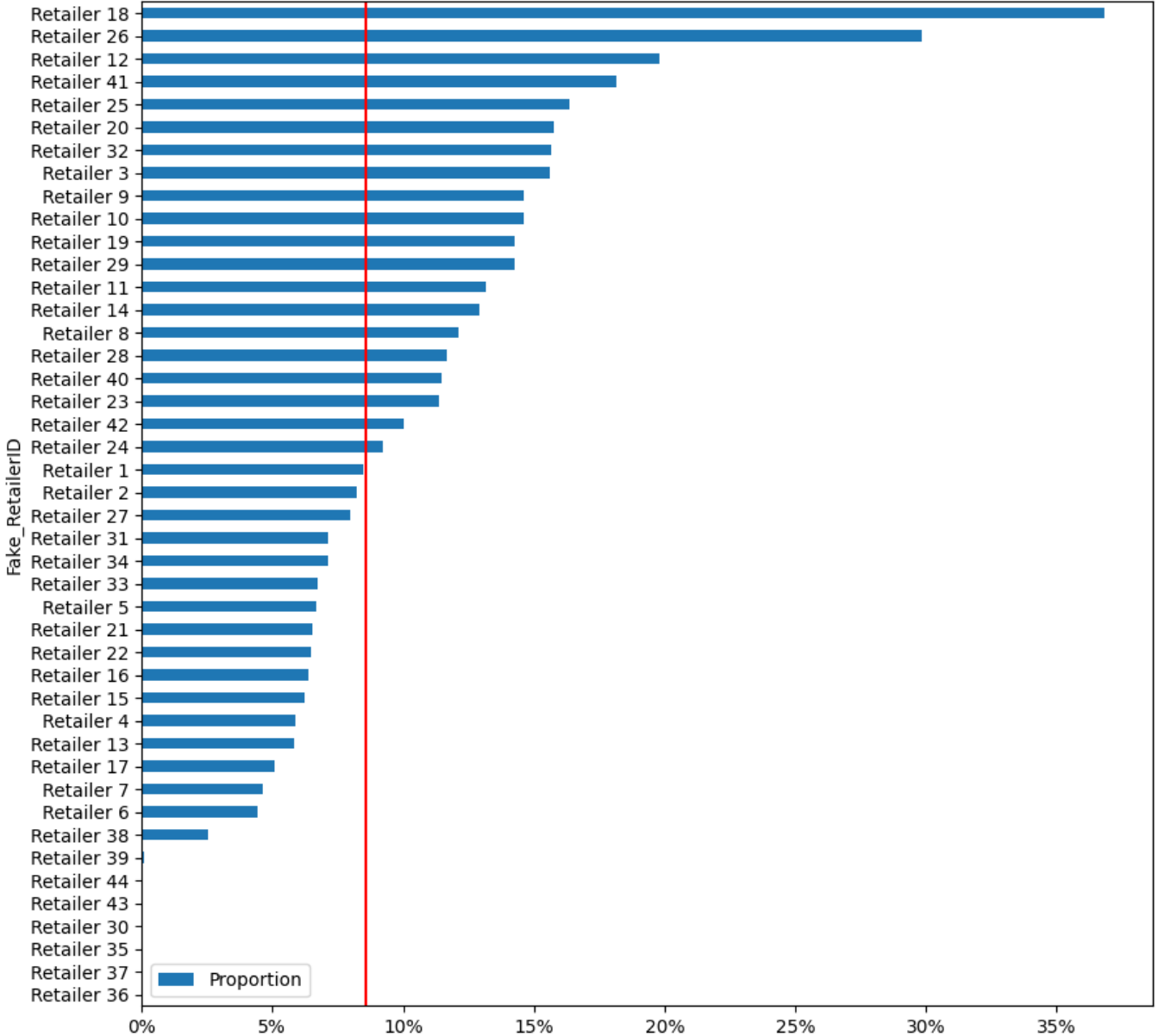
6.4. Meters capped by YVE – Retailers

Our audit shows that the consumption of 8.6% of meters estimated at R1 were settled on estimation by YVE Cap. This is similar to the value (8.4%) reported in last year’s audit (conducted on R1 data from July 2024).

Finding #5 (potential market issue) - retailer practices appear to remain highly variable, in line with the previous audit. The proportion of meters affected by YVE Caps at R1 varies from 0% to 37% across different retailers. This indicates that some retailers are still setting YVEs too low on average.

Breaking down the meters by retailers, we can see proportions of meters capped by YVE ranging from 0% to 36.8%. Among the retailers’ proportions exceeding market average, we have selected and contacted seven retailers and asked them to review their YVE values. For some of the retailers we contacted, communication was carried out through their third-party management provider. A high proportion of meters settling on YVE cap suggests that YVE values have been set too low. We will run a similar analysis next year and assess whether their figures have been brought in line with the rest of the market.

Meters Settled on YVE Cap - September 2025 R1



— Market average (8.57%)

One of the retailers we contacted asked us to re-run the analysis using the latest November 2025 R1 data, as they had conducted work on their YVEs in October 2025. The refreshed analysis showed they had filled the previously blank YVE values, with no meters settling on ILE or ILE cap. However, the share of meters settled on the YVE cap rose from 19.8% to 21.1%, indicating their YVE values still need reviewing.

7. Conclusion and next steps

Yearly Volume Estimates can be a tool for retailers to proactively manage estimated consumption in settlement to support settlement accuracy. When they are neglected or applied poorly, though, they can create unnecessary risks for both wholesalers and customers.

The analysis found that around 1% of meters settling on estimated consumption at R1 are estimated directly using the YVE value, and 8.6% of the meters are capped by the YVE, which is comparable to the proportions set out in last year's audit. Comparing R1 and RF, we can see that the impact of YVEs is largely through the YVE cap at R1, and mainly through the YVE at RF. The YVE cap impact is significant; YVE caps create an estimate that is substantially lower (circa 36% on average) than the actual level of consumption. It is reassuring that only 0.2% of meters are still affected by YVE cap by RF – the above impact is therefore only temporary.

Through the analysis, we contacted seven retailers with the highest YVE cap proportion. This indicates that their YVEs are typically being set too low, delaying the payment for some consumption until actual reads are taken. The contacted retailers' figures will be revisited next year.

Overall the improvements seen in last year's audit have been sustained, so we are not making any market-wide recommendations. More generally, YVEs may not be the ideal approach to managing consumption estimates in settlement given the burden they can place on retailers and the risk they can pose to customer outcomes. MOSL will examine different alternatives for volume estimation as part of its [settlement strategy](#). This work may enable the market to replace YVEs with a more robust alternative in the medium-to-long term. The case for moving to new estimation routines will require thorough assessment.

7.1. Performance Assurance Committee views

The Performance Assurance Committee (PAC) reviewed these findings on 30 January 2026. The Committee welcomed the report.

Members raised a question on whether current YVE Cap factor (currently 3 as $\text{YVE Cap} = 3 \times \text{YVE}$) is set at the right level. For this question, MOSL conducts an annual internal review of volume estimating caps including YVE Caps and ILE Caps to determine if $3 \times \text{YVE}$ is the appropriate value for YVE Cap. The findings of this audit will be fed into the review that will take place in 2026.