**X** Serve

# **Amendment Invoice Task Force Update**

24<sup>th</sup> June 2019

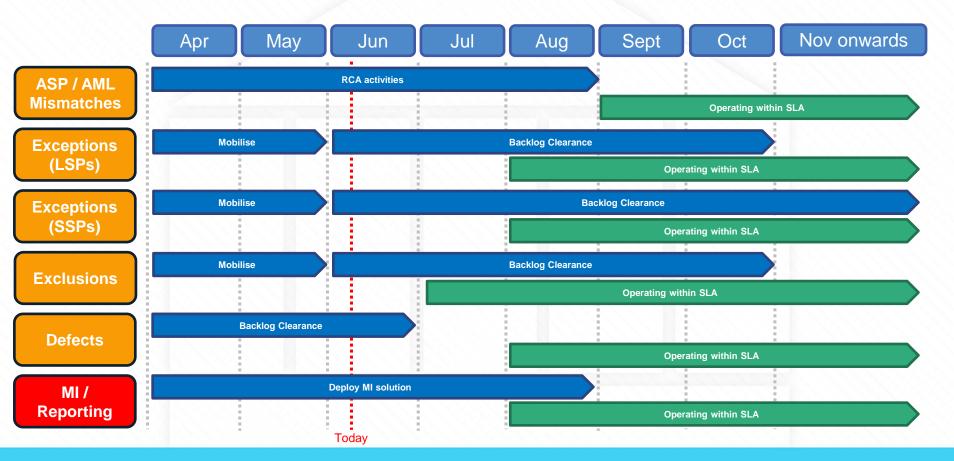
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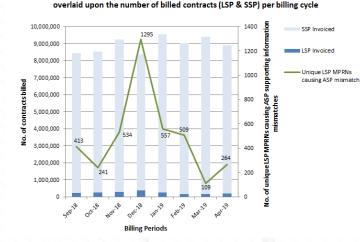
# **Progress since Last Update**

- We have agreed the variation contract with our 3rd party supplier, this will allow us to monitor delivery of SLAs.
- Monitoring of the invoice cycle has helped stabilise the process and we continue to see a reduction in mismatches on the supporting information files each month.
- Our invoicing team have been working hard to reduce the backlog of ASP correction files. In May they successfully produced and issued 95% of ASP correction files before the payment due date.
- We continue to work through the backlog of defects.
  - Following feedback from customers we have added the defect detection date to the defect list published on Xoserve.com.

# **Summary Resolution Plan**

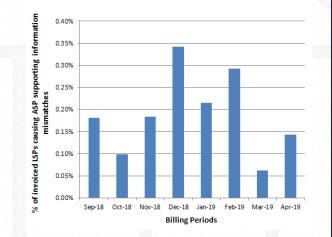


# **Supporting Information Mismatches (ASP)**

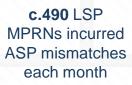


Trend of unique LSP MPRNs causing ASP supporting information mismatches

#### % of invoiced LSPs causing ASP mismatches



c.242,000 LSPs billed each month on the Amendment Invoice





Current average of **0.19%** of billed LSPs incurring K88/89 mismatches each month

### SLA

- Mismatches are corrected 'in cycle' and associated defects are cleared in time for the second following cycle from detection.
- Correction of mismatches should be invisible to shippers. During transition to this any correction files issued are delivered within **3 business** days of payment due date issue and meet communicated quality and format requirements on first delivery.
- There should be no unresolved causes to mismatches of more than 2 invoice cycles in age.

### Target Date to operate within SLA

September 2019

Current SLA RAG Status (ASP only)

Amber

### **RAG Justification**

- 95% of ASP mismatch correction files issued to customers ahead of the payment due date.
- 100% of AML mismatch correction files issued to customers ahead of the payment due date, although not inside D-3 payment due date SLA target.
- Automation activities to issue all ASP correction files immediately after delivery of online ASP file proven with POC environment.
- Mismatch defect fix turnaround timescales currently tracking at c.59 calendar days.

# **Supporting Information Mismatches (ASP)**



Downward trend of total number of shippers impacted by ASP supporting information mismatches



94% ASP offline correction files issued to customers ahead of payment due date

(c.15% 6 months ago)



### **Planned Automations**

Phase One

- Replace the current manual effort associated with producing monthly offline ASP correction files.
- Aims to deliver full K88/89 records, for MPRNs that previously incurred a mismatch within the online system generated ASP file. K88 record will contain full net off position.
- · Expectation that customers will receive their ASP correction file immediately after receipt of their online ASP file.
- Currently in UAT, expecting to parallel run automation outputs during March'19 billing cycle, in readiness for a
  phased roll-out commencing from the April'19 billing cycle.

#### Phase Two

- Completely remove the need for mismatch correction files by accommodating any mismatches found (as a result of process error/system defects) into the online system generated ASP files issued to customers.
- Forecasting complete removal of ASP correction files by January 2020.

### SLA

- Mismatches are corrected 'in cycle' and associated defects are cleared in time for the second following cycle from detection.
- Correction of mismatches should be invisible to shippers. During transition to this any correction files issued are delivered within **3 business** days of payment due date issue and meet communicated quality and format requirements on first delivery.
- There should be no unresolved causes to mismatches of more than **2 invoice cycles** in age.

Target Date to operate within SLA

September 2019

Current SLA RAG Status (ASP only)

Amber

#### **RAG Justification**

- 94% of ASP mismatch correction files issued to customers ahead of the payment due date.
- Automation activities to issue all ASP correction files immediately after delivery of online ASP files proven with POC environment.
- Mismatch defect fix turnaround timescales currently tracking at c.59 calendar days.

# **Supporting Information Mismatches (AML)**



c.8.7m SSPs billed each month on the Amendment Invoice



0.06% of billed SSPs MPRNs incurred AML mismatch in April's billing cycle (5594 sites)



**100%** of AML offline correction files issued to customers ahead of payment due date

(<u>Warning</u>: Most within 2-3days of payment due date – not within defined SLA)



Reductions in negative AML customer feedback since the introduction of ABAP routines, in Jan'19, to generate offline correction files.

### SLA

- Mismatches are corrected 'in cycle' and associated defects are cleared in time for the second following cycle from detection.
- Correction of mismatches should be invisible to shippers. During transition to this any correction files issued are delivered within 3 business days of payment due date issue and meet communicated quality and format requirements on first delivery.
- There should be no unresolved causes to mismatches of more than **2 invoice cycles** in age.

#### Target Date to operate within SLA

September 2019

Current SLA RAG Status (AML only)

Amber

#### **RAG Justification**

- Awaiting accurate MI to demonstrate AML mismatches per MPRN per shipper.
- 100% of AML mismatch correction files issued to customers ahead of the payment due date.
- Automation activities underway to issue all AML correction files earlier. Roll-out to commence from June'19 billing cycle.
- Mismatch defect fix turnaround timescales currently tracking at c.59 calendar days.



### **Planned Automations**

- Fast track the provision of the existing ABAP generated offline AML correction files.
- Aims to deliver current AML correction file at least one week earlier than currently provided, in-line with expectations of defined mismatch SLA.
- Currently undergoing IS operations feasibility assessment. Targeting roll-out commencing from the June'19 billing cycle.

# **Exceptions**

#### What is an exception?

 Business or Technical processing errors generated within our system, that cause reconciliations at individual sites, to be held back off the Amendment Invoice until resolved.



112,016 distinct MPRNs currently have unresolved exceptions within our systems



Less than 1% Percentage of gas consuming sites in Britain with open exceptions blocking reconciliations from the Amendment Invoice

### SLA

- Known exceptions are corrected 'in cycle'; new exceptions within the gift of Xoserve and its partners to correct are cleared in time for the second cycle from detection, as is any defect that caused the exception.
- Exception backlogs should be no more than 2 invoice cycles old.

Target Date to operate within SLA

August 2019

#### **Current SLA RAG Status**

Amber

#### **RAG Justification**

- Cataloguing of all known exception resolution paths underway and making good progress.
- Significant reduction witnessed in the clearance of sites previously held in the exception backlog, with a 50% reduction seen over the last two billing cycles.
- Provision of new MI to track all reconciliations, including those that fall in a state of exception and /or exclusion, expected to be made available during July.
- Current backlog continues to house exceptions dating back over 6-months.



Currently no accurate mechanism available to quantify value of reconciliation held back from the invoice.



Reporting initiatives underway, in-line with MI SLAs, to provision customers with all MPRNs within their portfolio held back from the monthly invoice owing to unresolved exceptions.

# **Exclusions**

#### What is an exclusion?

Until permanent system fixes are deployed to address charge calculation errors, monthly profiling of new reconciliations received that
relate to the scenario of the open defect is performed, with "bill blocks" applied to that MPRN to <u>safeguard the accuracy of the
amendment charge calculations</u> by exclusion from the AMS.



**13,487** distinct MPRNs currently have bill blocks placed upon them (8% LSPs, 92% SSPs)



35% reduction over the last 2-months in the number of distinct MPRNs bill blocked/excluded from the AMS



Currently no accurate mechanism available to quantify value of reconciliation held back from the invoice.



Reporting initiatives underway to provision customers with all MPRNs within their portfolio held back from the monthly invoice as a consequence of bill blocks.

### SLA

- Known exclusions are executed 'in cycle'; new exclusions within the gift of Xoserve and its partners to correct are cleared in time for the second cycle from detection, as is the defect that caused the exclusion.
- Exclusion backlogs should be no more than 2 invoice cycles old.
- Correction of billed exclusions should be performed no later than 2 invoice cycles after detection.

#### Target Date to operate within SLA

July 2019

#### Current SLA RAG Status

Amber

#### **RAG Justification**

- 13,487 distinct MPRNs have bill blocks placed on them, a reduction of 6,979 over the last two months.
- Current backlog still contains exclusions dating back over 6-months.
- Charge calculation defect fix turnaround timescales currently tracking at c.59 calendar days.

### **Defects**



16 Defects currently open and awaiting fix deployment



59 days Average fix timescales for AMS/ASP/AML impacting defects



Fixes prioritised based on perceived impact upon AMS charges and ASP/AML mismatches.



Defects can also require 'data fixes', particularly those impacting charge calculation, which can be complex.

### SLA

· Defects, including associated data fixes, within the gift of Xoserve and its partners to resolve should be cleared within 2 invoice cycles of being raised.

Target Date to operate within SLA

August 2019

**Current SLA RAG Status** 

Amber

#### **RAG** Justification

- Defect fix turnaround timescales currently tracking at c.59 calendar days.
- Previous 6-months' worth of defect data demonstrates a historic volume of open defects continually tracking around circa.30.

# **MI / Reporting**

ASP financial mismatch communicated to customers within 24hours of AMS delivery.



- Real-time internal MI available for **defects**.
- Defect fix register published weekly for customers on Xoserve.com

Accurate MI currently unavailable for AML mismatches immediately thereafter AML file generation.

Accurate MI currently unavailable for **exceptions** and **exclusions**, at an individual site level per shipper <u>immediately</u> <u>after AMS delivery</u>.

### SLA

- All MPRN recs received are accounted for and valued; allocation across invoices, exceptions, exclusions and mismatches is shared at shipper level with individual shippers at the end of each invoice cycle
- Exceptions, Exclusions and mismatches are communicated within **2 business days** following invoice receipt.

Target Date to operate within SLA

August 2019

#### **Current SLA RAG Status**

Red

#### **RAG Justification**

 Revised MI/Reporting requirements captured and signed-off with development teams. New provision of MI expected to be made available during July.



Initiatives are underway to provision the necessary data for AML mismatches, exceptions and exclusions, per MPRN, per shipper, at the relevant times during the monthly billing cycle. Until such a time, the defined SLA will be unachievable.

# **Summary Resolution One Pager**

<u>Mismatches</u>	<b>Exceptions</b>	<b>Exclusions</b>	<u>Defects</u>	MI / Reporting		
<ul> <li>Mismatches are corrected 'in cycle' and associated defects are cleared in time for the second following cycle from detection.</li> <li>Correction of mismatches should be invisible to shippers. During transition to this any correction files issued are delivered within 3 business days of payment due date issue and meet communicated quality and format requirements on first delivery.</li> <li>There should be no unresolved causes to mismatches of more than 2 invoice cycles in age.</li> </ul>	<ul> <li>Known exceptions are corrected 'in cycle'; new exceptions within the gift of Xoserve and its partners to correct are cleared in time for the second cycle from detection, as is any defect that caused the exception.</li> <li>Exception backlogs should be no more than 2 invoice cycles old.</li> </ul>	<ul> <li>Known exclusions are executed 'in cycle'; new exclusions within the gift of Xoserve and its partners to correct are cleared in time for the second cycle from detection, as is the defect that caused the exclusion.</li> <li>Exclusion backlogs should be no more than 2 invoice cycles old.</li> <li>Correction of billed exclusions should be performed no later than 2 invoice cycles after detection.</li> </ul>	<ul> <li>Defects, including associated data fixes, within the gift of Xoserve and its partners to resolve should be cleared within 2 invoice cycles of being raised.</li> </ul>	<ul> <li>All MPRN recs received are accounted for and valued; allocation across invoices, exceptions, exclusions and mismatches is shared at shipper level with individual shippers at the end of each invoice cycle</li> <li>Exceptions, Exclusions and mismatches are communicated within 2 business days following invoice receipt.</li> </ul>		
Target Date to operate within SLA						
September 2019	August 2019	July 2019	August 2019	August 2019		
Current SLA RAG Status						
Amber	Amber	Amber	Amber	Red		
		RAG Justification				
<ul> <li>94% of ASP mismatch correction files issued to customers ahead of the payment due date.</li> <li>100% of AML mismatch correction files issued to customers ahead of the payment due date, although not inside D-3 payment due date SLA target.</li> <li>Automation activities to issue all ASP correction files immediately after delivery of online ASP files proven within PoC environment.</li> </ul>	<ul> <li>Cataloguing of all known exception resolution paths underway and making good progress.</li> <li>Significant reduction witnessed in the clearance of sites previously held in the exception backlog, with a c.50% reduction seen over the last two billing cycles.</li> <li>Provision of new MI to track all reconciliations, including those that fall in a state of exception and/or exclusion, expected to be made available during July.</li> <li>Current backlog continues to house exceptions dating back over 6-months.</li> </ul>	<ul> <li>13,487 distinct MPRNs currently have bill blocks placed upon them, a reduction of 6,979 over the last two months.</li> <li>Current backlog continues to house exceptions dating back over 6-months.</li> <li>Charge calculation defect fix turnaround timescales currently tracking at c.59 calendar days.</li> </ul>	<ul> <li>Defect fix turnaround timescales currently tracking at c.59 calendar days.</li> <li>Previous 6-months' worth of defect data demonstrates a historic volume of open defects continually tracking around circa.30.</li> </ul>	Revised MI/Reporting requirements captured and signed-off with development teams. New provision of MI expected to be made available during July.		

### In summary...

- Since January 2019 we have strived to ensure that month-on-month progress is being made, we understand that we have a way to go to provide our customers with the reassurances they need during the delivery of their monthly Amendment Invoice supporting information.
- We also acknowledge that whilst safeguarding the integrity and accuracy of the AMS invoice itself, we must look to reduce the current levels of MPRNs held back off the invoice as a result of exceptions and/or exclusions, 1.1% and 0.09% of Britain's gas market respectively.
- Please feel free to contact <u>Alex.Stuart@Xoserve.com</u> or <u>Deborah.Coyle@Xoserve.com</u> should you have any questions or queries you would like to discuss.

### **Transparency and Communication is key**

X Amendment Invoice   Xoserve X	•	
← → C @ https://www.xoser	.com/services/issue-management/amendment-invoice/	\$ <b>Q</b>
xoserve	About Us Services Systems Change Resources Communication	ns Contact Us Search
	Amendment Invoice (AN	AS) Issues
Home > Services > Issue Manage	ant > Amendment Invoice	
Amendment Invoice		
Unidentified Gas (UIG)		
Annual Quantity (AQ)		



We will continue to provide frequent updates via our website, our dedicated task force customer email distribution list, and via the monthly DSC Change and Contract Committees.

Continuation of one-on-one customer operational team visits can be scheduled by reaching out to <u>Deborah.Coyle@Xoserve.com</u>

### Amendment Invoice Task Force Update

Friday 5th April 2019

#### Dear Customers and Industry Colleagues,

Progress within our Amendment Invoice (AML/ASP) Task Force continues to be made, with a further reduction in month-onmonth mismatches witnessed for large supply points within the February 2019 billing cycle that has recently completed, as well as a reduction observed in the number of shippers incurring supporting information mismatches altogether. Despite this month-on-month progress that we've seen since the December 2018 billing cycle, we acknowledge that work is required to fully address this issue and alleviate all of our customers concerns surrounding the monthy Amendment Invoice and its supporting information files.

"We're driving reductions in month-on month supporting information mismatches for large supply points, as well as reducing the overall number of shippers impacted each month..."

Please find outlined below some of the key progress updates from within the team.

#### Line in the Sand Activities

In parallel to all of the ongoing workstream activities within the Task Force, a number of operational resources within Xoserve have been ring-fenced to ensure that all necessary Line in the Sand (LIS) activities relevant to the Amendment Invoice are completed prior to the yearly movement of the LIS. Please find detailed some key information in relation to our Amendment Invoice LIS undertakings.

#### What is the Line in the Sand?

The Line in the Sand is the UK gas industry's common term for the Code Cut-Off Date (defined in UNC General Terms – Section C). The concept of a Code Cut-Off Date was introduced to limit the duration of retrospective charges and credits, to give all parties more certainty on historic energy bils.

The LIS is currently reset annually to a date 3 years in the past, and rolls forward once a year on April 1st, to simplify the changes for all parties. As of 1 April 2019, the LIS moves to 1 April 2016 (i.e. 3 years ago), and will move forward by another year to 1 April 2017, on 1 April 2020, and so on each year. Thus the LIS is always a date between three and four years in the past.

#### How does the Line in the Sand impact the Amendment Invoice?

In practice having a LIS means that no retrospective adjustments can be processed for periods before that date (once the March Amendment Invoice has been issued in late April each year). Where a proposed adjustment or reconciliation spans the LIS date, only the post-LIS portion will be charged/credited, and any earlier periods will not be corrected, leaving the previous billed/reconciled position unchanged. Our invoicing system calculates the energy for the whole period, using the start and end dates, but spits it on the prevaing LIS date.

#### What LIS tasks are the Xoserve Amendment Invoice Task Force currently undertaking?

Reconciliations which are still held in Exceptions or Exclusions at the point that the LIS moves could be affected, if the adjustment/reconciliation period spans back before the new LIS date. For 1<sup>st</sup> April 2019, only amendments/reconciliations to Larger Supply Points (LSPs), those sites with an annual quantity (AQ) greater than 73.200 kWh, are affected, as Meter Point Reconciliation did not apply to Smaller Supply Points prior to Project Nexus Go-Live. **X** Serve

# **Appendices**

### What is the Amendment Invoice?

The Amendment Invoice is used to adjust both the energy and transportation charge positions that were previously invoiced.





- Shippers receive actual meter readings from sites within their portfolio, confirming their actual gas consumption.
- Readings are submitted into Xoserve, which dependent upon the read type trigger a "reconciliation".
- · Inputs include:
  - DMSP or Shipper Check Reads for Class 1-4
  - · Cyclic & RGMA Reads for Class 1-4
  - · Estimates between actuals for Class 1 and 2
  - Class Change reads
  - Shipper Transfer reads
  - Non read triggers including CMS queries (RFA, DMQ, TOG and Back Billing)
- Invalid meter reads are rejected back to the originator

 Once reads or a consumption adjustment are received, a variance period is created that shows the exact amount used by that particular meter point.

Consumption

- This value can be reconciled against what has been invoiced previously.
- For DM sites consumption is available based on daily actual reads or estimated reads.
- For NDM sites consumption is estimated daily for billing and demand forecasting. This estimated consumption is reconciled upon receipt of actual reads.

 Energy and Transportation charges are calculated based upon the actual and deemed energy positions for each site.

Charges

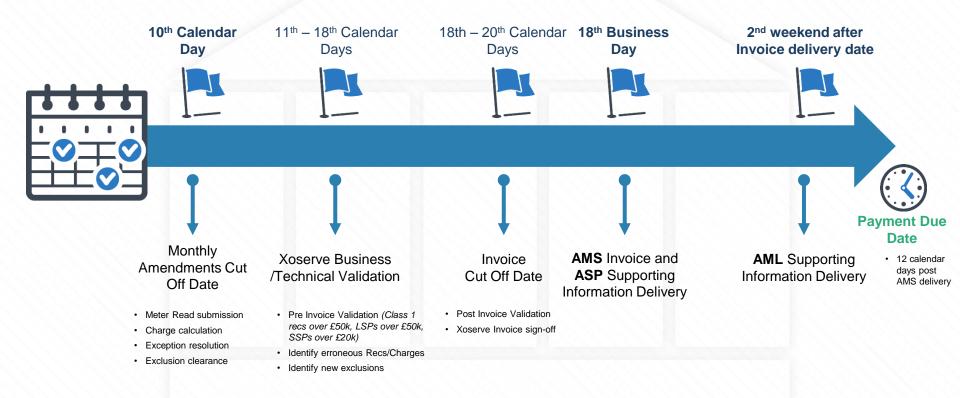
- For DM sites reconciliation charges are only performed when there has been estimated reads derived or a drift has been noted on a site visit.
- For NDM sites reconciliation charges are calculated between estimated and actual consumption, with the difference converted to financial values (credit or debit).

 The Amendment Invoice (.AMS) is issued to all shippers on a monthly basis, on the 18<sup>th</sup> business date of each month.

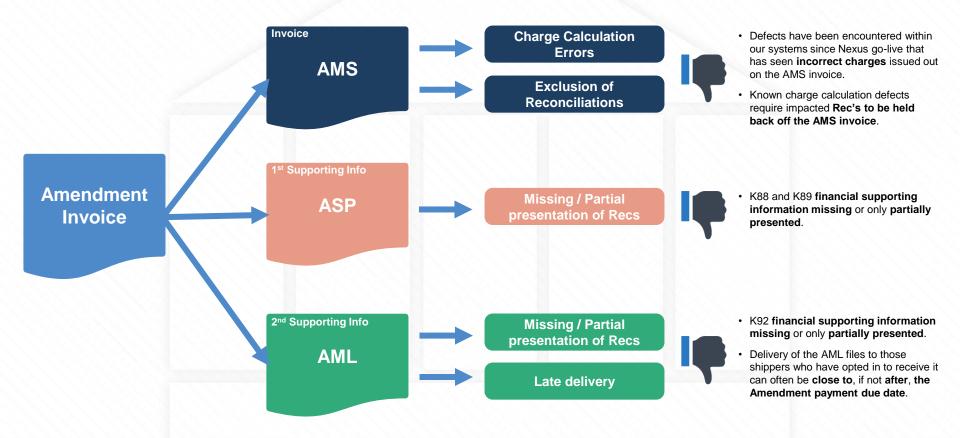
Invoice

- The invoice contains numerous elements, with charges identified by relevance to site type.
- The AMS also serves as a vehicle to redistribute unidentified gas (UIG) through the network and across all shippers, as well as allowing for any other consumption adjustments.

**Key timings** 



# Why is the Amendment Invoice such a hot topic?



### Our understanding of the impact upon our customers....



- Missing or incomplete view of invoicing supporting information creates uncertainty for shippers to price their own customer contracts accurately.
- Difficulties with the ability to conduct future business planning, including price strategy modelling, without
  complete and trustworthy historical view of amendment invoice supporting information.



### **CASHFLOW MANAGEMENT**

- Limited visibility of site specific reconciliations excluded from the monthly Amendment Invoice cause difficulties in predicting cash flow forecasts for both credit and debit invoices.
- Timely receipt of ASP correction files and AML online/offline files cause challenges with subsequent validation of the monthly Amendment Invoice ahead of the payment due date.



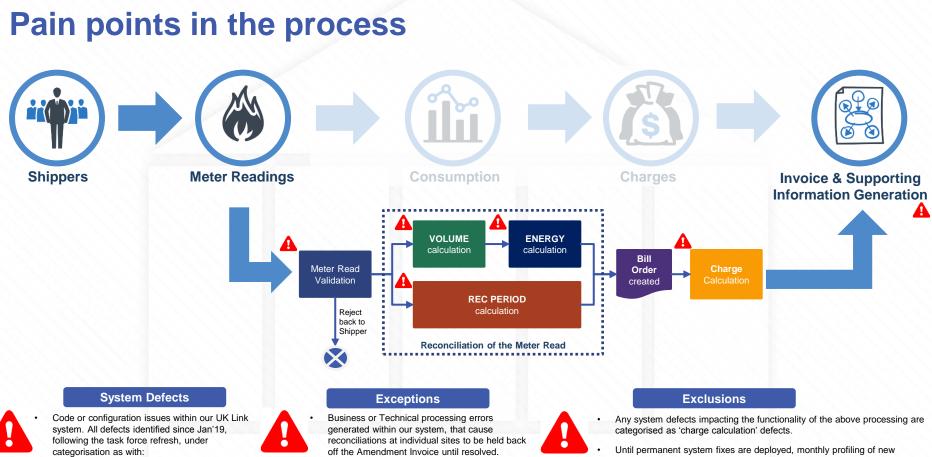
### **GREATER WORKFORCE COSTS**

- The delivery of offline correction files for ASP and AML files, post the delivery of the system generated online files, may require manual intervention by some shippers to load them into their own billing systems.
- A mistrust of the supporting information files since Nexus go-live has led to greater emphasis on the validation of each monthly invoice, leading to greater labour costs.



### **UNC Service Provision Failure**

Missing or incomplete ASP and AML information constitutes a failure of Xoserve, as the CDSP, to adequately provision accurate invoicing supporting in accordance with Section S of the UNC TPD, which are GT UNC obligations.



- AMS Charge Calculation
- ASP/AML Financial Mismatch
- ASP/AML Non-Financial Mismatch

Until permanent system fixes are deployed, monthly profiling of new reconciliations received that relate to the scenario of the open defect is performed, to safeguard the accuracy of the amendment charge calculations by exclusion from the AMS.

### **Facts and Figures**



c.9 million MPRNs billed each month on the Amendment Invoice



0.22% of billed Large Supply Points (LSPs) incur ASP K88/89 mismatches each month



75% of ASP mismatch correction files issued ahead of the monthly payment due date



1.1% Percentage of gas consuming sites in Britain with open exceptions blocking reconciliations from the Amendment Invoice

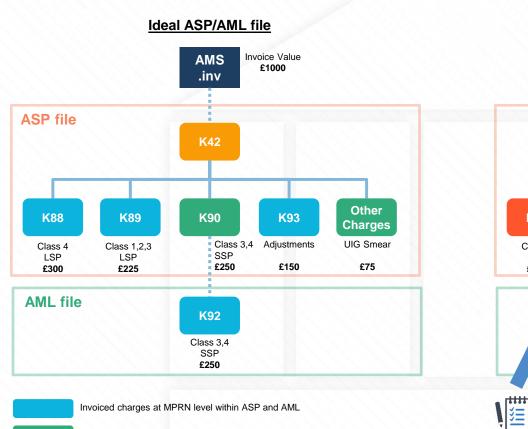


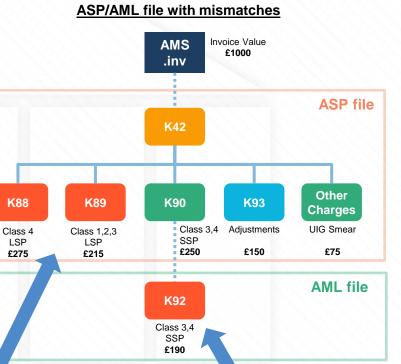
- 0.6% of LSP
  population currently
  bill blocked
- 0.08% of SSP population currently bill blocked



54 days Average fix timescales for AMS/ASP/AML impacting defects

### ASP and AML mismatches...





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Workaround: AML Offline

time as receipt of online file

Correction File issued at the same

Workaround: ASP Offline

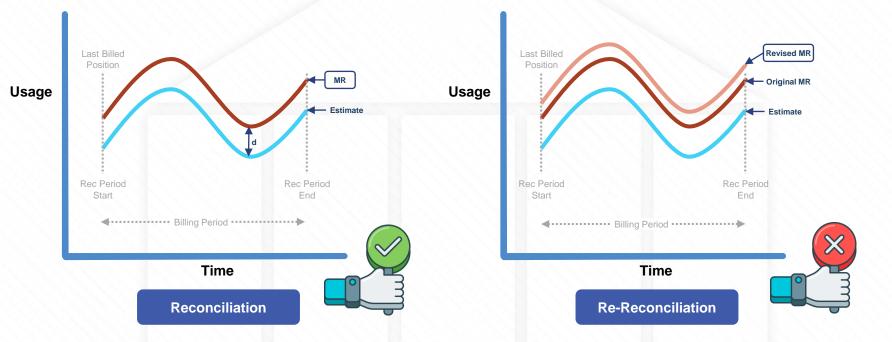
Correction File issued after

receipt of online file

Invoiced charges at aggregated level within ASP

### Our understanding of the problem....

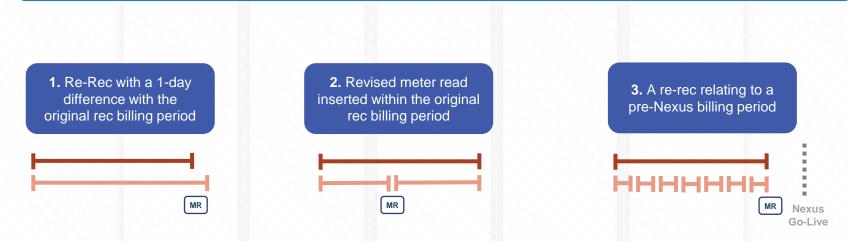




Root cause analysis conducted to-date suggests the majority of ASP and AML supporting information mismatches can be attributed to **<u>Re-Reconciliation</u>** scenarios.

# **Reconciliation is complex by nature**

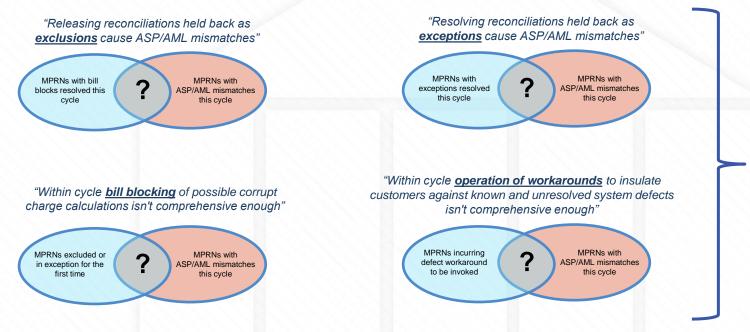
Specifically, root cause analysis has identified three core <u>**Re-Reconciliation**</u> scenarios that are the major contributors to monthly ASP/AML supporting information mismatches.



RCA activity has identified numerous defects over the last two months in relation to these scenarios which all receive high fix priority.

• The RCA team has also introduced proactive checks in advance of AMS and ASP file generation to identify and exclude any impacted sites with 'Re-Recs' that are likely to cause mismatches.

# Insulating customers from the issue carries an element of risk...



RCA conducted upon the mismatches incurred within customer ASP files during the last three bill cycles has identified findings that have <u>confirmed</u> all four of these mismatch hypotheses.

Future mitigations, as well as closer in-cycle monitoring, have been identified, and agreed with our operational teams.

As with any IT system, especially one that processes in excess of 8million bills per month, any form of manual intervention carries an element of risk.

### **Task Force Structure**

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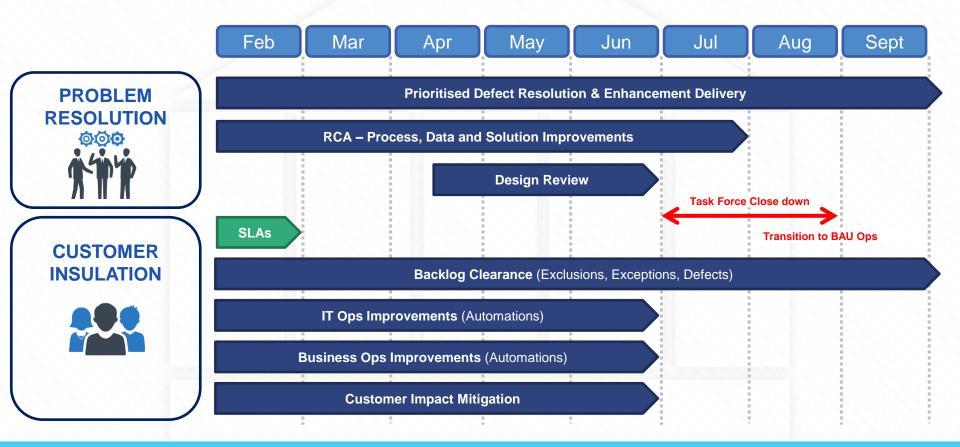
### **CUSTOMER INSULATION**

Workstream	Objective	
Prioritised Defect Resolution & Enhancement Delivery	<ul> <li>Continued delivery of prioritised functional defects</li> <li>Identification of delivery enhancements aimed at insulating customers from issue until enduring resolutions deployed</li> </ul>	
Root Cause Analysis	<ul> <li>Deep dive activities to identify root causes of mismatches incurred.</li> <li>Resolutions to root causes identified and proposed.</li> <li>Identification of workarounds for defects.</li> </ul>	
Design Review	Review the Amendment Invoice solution design	

**PROBLEM RESOLUTION** 

Workstream	Objective	
SLA Definition	<ul> <li>Development and agreement of SLAS for Invoice, ASP, AML production (turnaround, quality, Customer footprint impact etc.)</li> </ul>	
Backlog Clearance	<ul> <li>Clearance of residual mismatches/defects, exclusions, exceptions</li> </ul>	
IT Ops Improvements	<ul> <li>Delivery of improvements to IS operational processes</li> <li>Delivery of automations, MI to improve operational processes</li> </ul>	
Business Ops Improvements	<ul> <li>Delivery of improvements to business operational processes</li> <li>Delivery of automations, MI to improve operational processes</li> </ul>	
Customer Impact Mitigation	<ul> <li>Front of House for managing impact to customers and providing them with mitigations for known issues</li> </ul>	

# **Task Force High-Level Approach**



## **Task Force SLAs**

#### Mismatches

- Mismatches are corrected 'in cycle' and associated defects are cleared in time for the second following cycle from detection.
- Correction of mismatches should be invisible to shippers. During transition to this any correction files issued are delivered within 3
   business days of payment due date issue and meet communicated quality and format requirements on first delivery.
- There should be no unresolved causes to mismatches of more than 2 invoice cycles in age.

#### Exceptions

- Known exceptions are corrected 'in cycle'; new exceptions within the gift of Xoserve and its partners to correct are cleared in time for the second cycle from detection, as is any defect that caused the exception.
- Exception backlogs should be no more than 2 invoice cycles old.

#### Exclusions

- Known exclusions are executed 'in cycle'; new exclusions within the gift of Xoserve and its partners to correct are cleared in time for the second cycle from detection, as is the defect that caused the exclusion.
- Exclusion backlogs should be no more than 2 invoice cycles old.
- Correction of billed exclusions should be performed no later than 2 invoice cycles after detection.

#### Defects

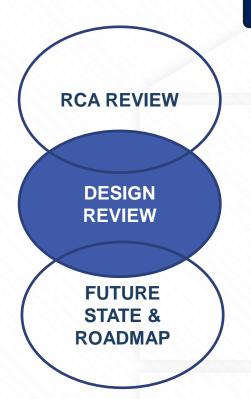
Defects, including associated data fixes, within the gift of Xoserve and its partners to resolve should be cleared within 2 invoice cycles of being raised.

#### **MI / Reporting**

- All MPRN recs received are accounted for and valued; allocation across invoices, exceptions, exclusions and mismatches is shared at shipper level with individual shippers at the end of each invoice cycle
- Exceptions, Exclusions and mismatches are communicated within 2 business days following invoice receipt.



# **Design Review**



### Objective

- Analysis of observed issues and systems behaviours to identify a comprehensive defect set for issues to date and proposed resolutions
- Review of design and code to identify inherent design issues proactively before impacting our customers.
- Review of design alignment to requirements
- Define the requirements for Amendment Invoices future state
- Define the target end state for Amendment Invoices
- Define the roadmap for getting there



### **Design Review Questions**

- Has the Amendment Invoice solution been well designed, taking into account its intended and future use?
- Has the Amendment Invoice solution been designed in such a way that it will deliver the performance, quality and timeliness requirements of Xoserve's customers?
- Has the Amendment Invoice solution been designed with the scope, scale and characteristics of Xoserve's customers' data in mind?

# **Design Review - Keytree**



