Class 3 Supply Point Migration Workshop

12th July 2019

Workshop Agenda

10:30 – 10:40	Workshop Kick Off
10:40 – 10:45	Product Classes
10:45 – 11:15	The AUGE and the UIG Weighting Factors
11:15 – 11:30	AUDIENCE QUESTIONS
11:30 – 12:30	Class 3 Forecasts and Impacts
12:30 – 13:00	AUDIENCE QUESTIONS
13:00 – 13:30	Lunch in the business lounge
13:30 – 14:30	Mitigation Option
14:30 - Close	Audience Debate and Agree Next Steps

Why are we here today?

Changes to UIG Weighting Factors for 19/20 gas year.

Significant commercial benefit of a shipper holding a site in Class 3 compared to Class 4.

Our latest customer insight suggests a **vast movement of sites into Class 3 over the coming months.**

As we communicated at last months DSC Change Management and UNC MOD Panel committees, **our system is suddenly presented with the real risk of not being able to handle such inbound meter read volumes without significant financial investment.**

We do not believe that investing significantly in our systems today is value for money for our customers.

We have conducted a thorough mitigation options assessment and **we believe to have identified a medium term solution option that we believe will benefit all industry participants.**

Time is not on our side. We feel we must act immediately as a collective group to safeguard our system estate.

Our primary focus is that of maintaining a service provision as the CDSP.

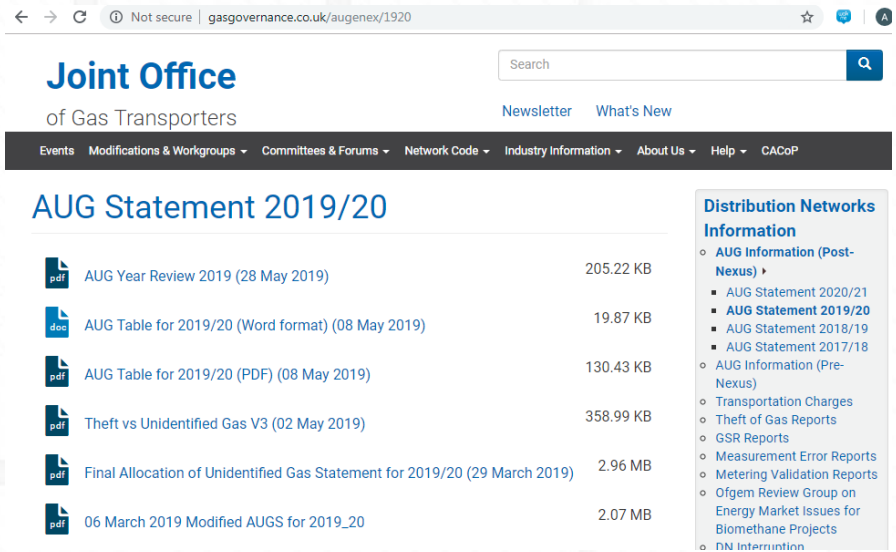
This workshop aims to secure support for this mitigating option and in turn the sponsorship of a corresponding urgent UNC modification that we propose is submitted to the July UNC Mod Panel.

An Introduction to Product Classes

	Class 1	Class 2	Class 3	Class 4
Nomination Process	Shipper Nominates	Shipper Nominates	NDM Algorithm Estimates	NDM Algorithm Estimates
Allocation Process	Daily Reading from DMSP by 11:00 am on Gas Flow Day +1	Daily Reading from Shipper by end of Gas Flow Day +1	NDM Algorithm Estimates	NDM Algorithm Estimates
Meter Reading			**Batched Daily Readings** (Weekly, Fortnightly, Monthly)	Single Periodic Readings
Monthly Reconciliation	By Exception following resync or estimate	By Exception following resync or estimate	**All Read Meter Points**	All Read Meter Points

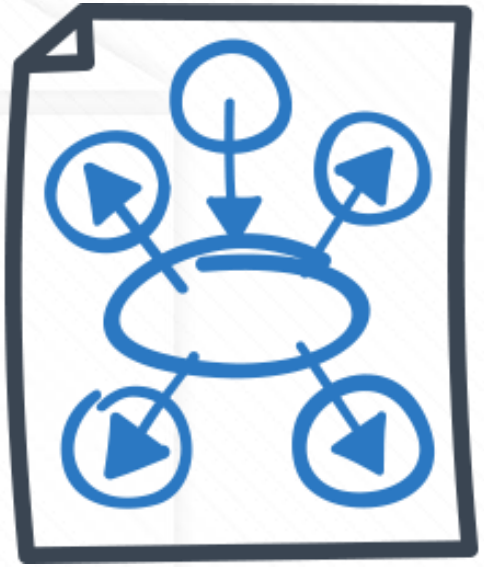
The Allocation of Unidentified Gas Expert

- The Allocation of Unidentified Gas Expert (AUGE) **calculates the weighting factors that share UIG to different market sectors** during Nomination, Allocation and Reconciliation processes.
- The post-Nexus AUGE role was created by MOD 0473
- **Xoserve appointed the company DNV GL** as the AUGE following a regulated procurement process.
- A panel of industry stakeholder reps participated in the selection process including shortlisting tenders and selecting a preferred bidder.
- All relevant information relating to the AUGE can be found here.

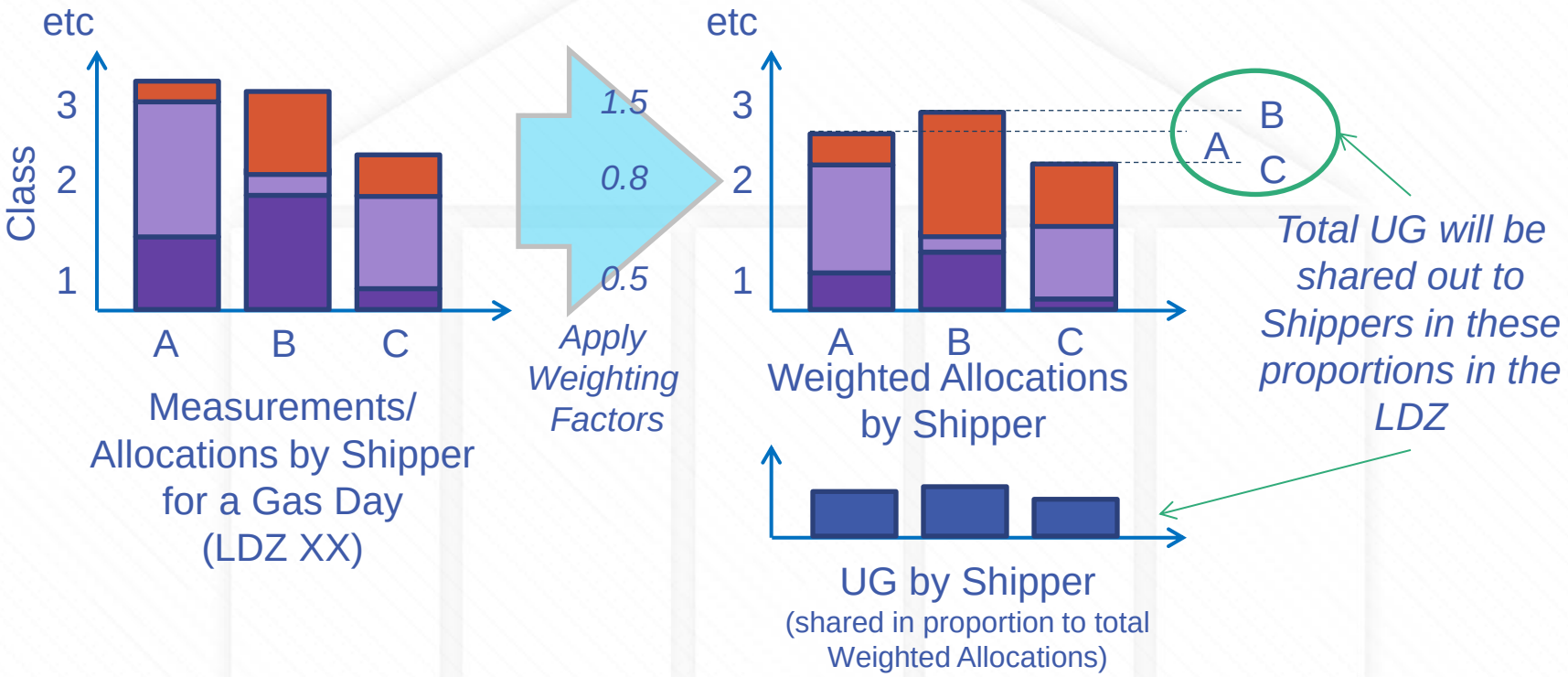


The UIG Weighting Factors

- UIG is shared out in each LDZ based on **Weighted Daily Throughput**
- Relative levels of the individual factors determine the sharing. Same Weighting Factors in all LDZs.
- Weighting factors are multipliers and do not need to add up to any particular value.
- Factors share out UIG – they don't determine the level of UIG.



Weighting Factors Worked Example



Notes:

- Weighting factors are multipliers and do not need to add up to any fixed value
- Above diagrams are for illustration only and not accurate or to scale

UIG Factor Relative Weights Over Time

2017-18 → 2018-19 → 2019-20

EUC Band	Class 1	Class 2	Class 3	Class 4
1	0.18	52.39	52.43	111.94
2	0.18	51.6	51.5	115.73
3	0.18	53.16	53.11	114.52
4	0.18	54.94	55.05	54.25
5	0.18	54.82	55.13	59.18
6	0.18	50.69	51.14	54.23
7	0.18	40.41	40.89	39.5
8	0.18	21.87	22.19	18.53
9	0.18	0.18	0.18	0.18

EUC Band	Class 1	Class 2	Class 3	Class 4
1	0.17	43.06	46.41	94.64
2	0.17	43.06	46.41	109.77
3	0.17	43.06	44.06	107.52
4	0.17	43.06	43.6	43.76
5	0.17	43.06	46.06	43.2
6	0.17	44.54	46.06	42.65
7	0.17	32.41	46.06	42.33
8	0.17	4.38	33.4	42.24
9	0.17	0.17	0.17	0.17

EUC Band	Class 1	Class 2	Class 3	Class 4
1	0.2	4.07	24.23	163.68
2	0.2	4.07	15.33	110.79
3	0.2	4.07	10.2	17.92
4	0.2	3.89	7.71	12.51
5	0.2	3.5	6.75	7.87
6	0.2	2.86	6.2	4.31
7	0.2	1.96	4.93	2.14
8	0.2	0.78	1.82	1.7
9	0.2	0.2	0.2	0.2

The 2019-20 step change appears to be the tipping point and triggered Shippers to plan significant migration into Class 3

Why the Step Change? Theft Assessment

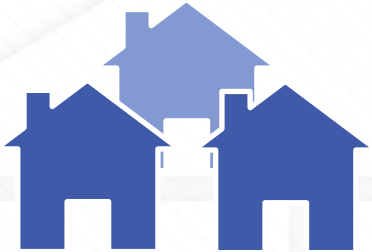
- The AUGE assesses the theft risk for each part of the market and assign relative UIG weighting factors.
- In general, the smaller the site and the less often it is read, the higher the theft risk.
- A new source of data and a change to the method have changed the weightings this year.

Changes to Theft Assessment Data and Method

- Previous AUGE Analysis used theft data from Xoserve.
- This year the AUGE used theft data from the Theft Risk Assessment Service (TRAS) too. The theft assessment methodology also changed.
- These datasets have differences…

Xoserve and TRAS Theft Data Differences

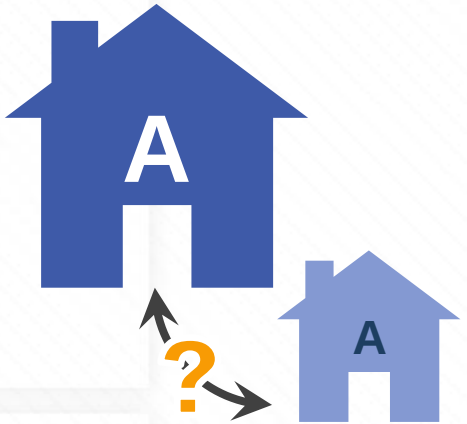
Xoserve recorded fewer thefts but more energy per theft…



…TRAS recorded more thefts but less energy per theft

Incomplete match of MPRNs between data sources…

…and 25% matching MPRNs have different consumptions recorded

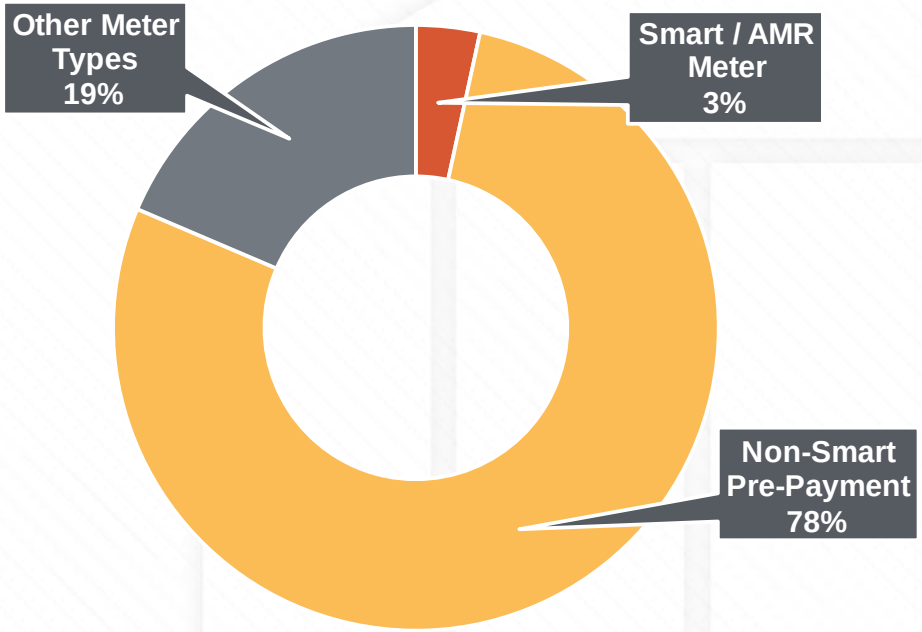


Xoserve is participating in a cross-industry review group to rationalise reported theft data

New Theft Method

- AUGE Take recorded thefts and adjust them using TRAS data to remove the impacts of different Shipper's theft strategies to calculate a view of unbiased, actual theft levels
- This replaced a series of assumptions around theft levels used in previous years
- This unbiased theft assessment is the key driver for the factor change.

Meter Type Unbiased Theft Risk



The Majority of Unbiased Theft is from Non-Smart Pre-Payment Meters (PPM)

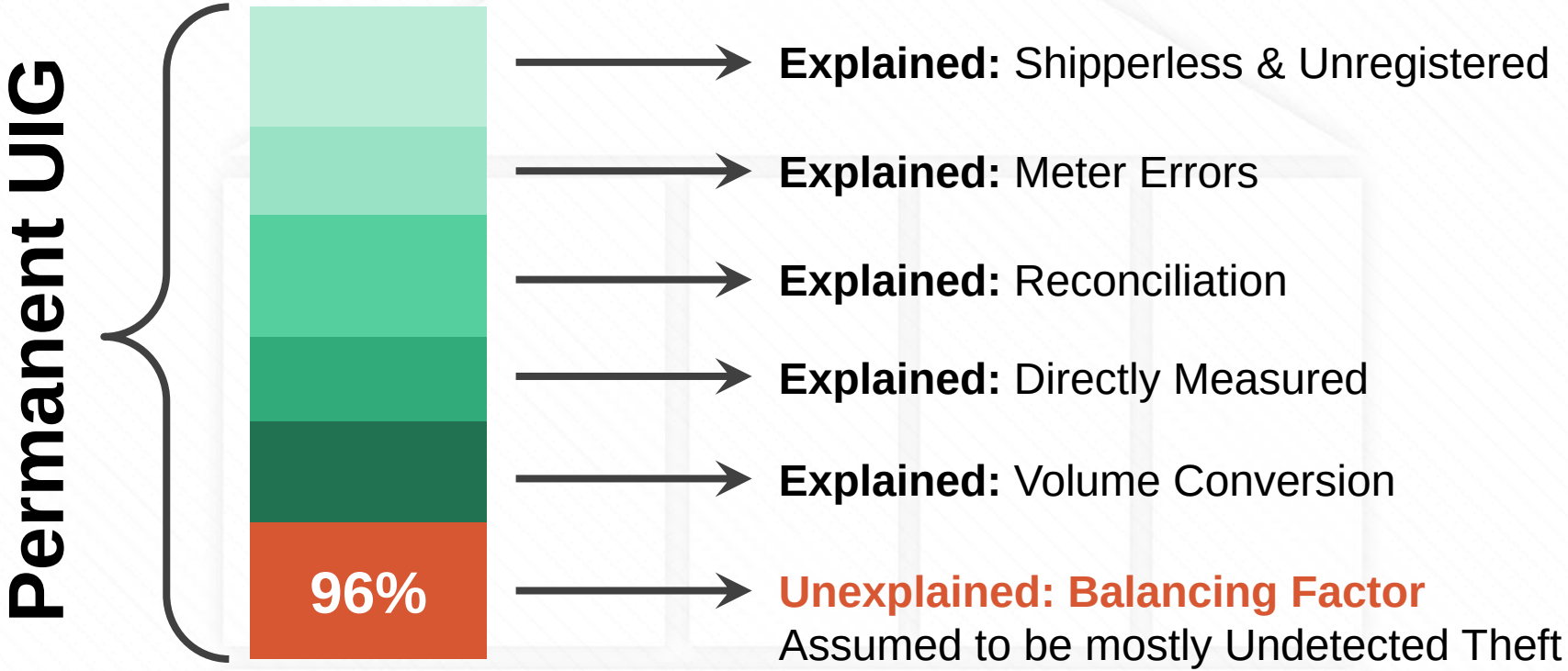
Most PPM are in EUC1 & Class 4

Concern from a Shipper that a lot of PPM theft is financial and the energy is still recorded, so there is reduced UIG impact.

Recorded losses for PPM in TRAS are consistent with other meter types.

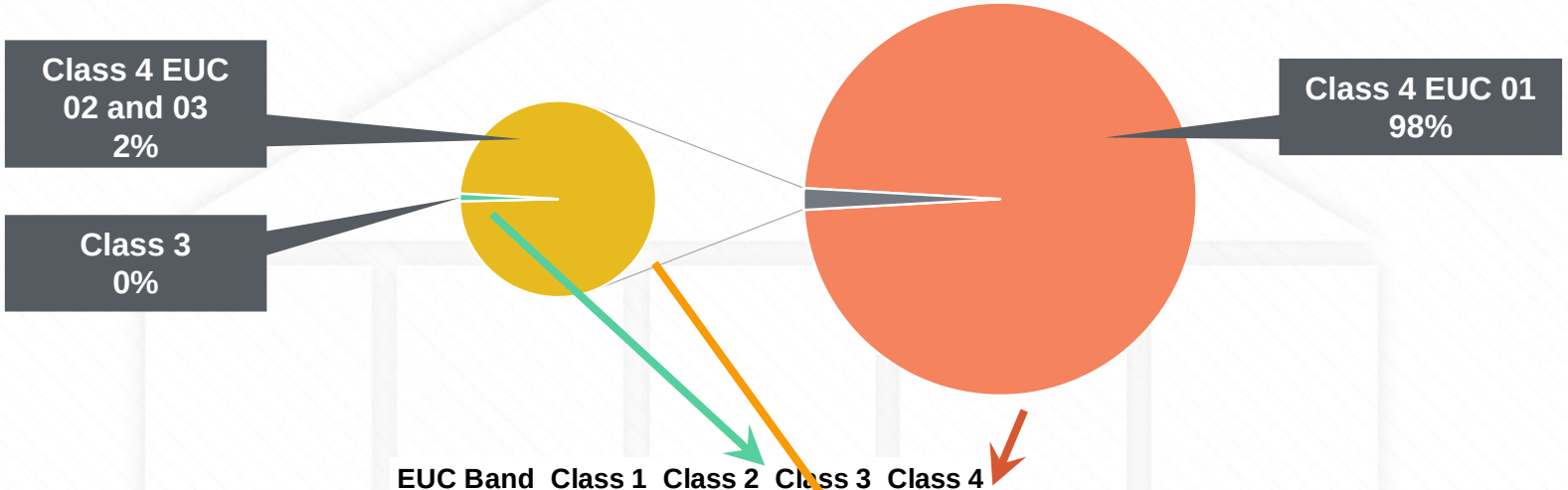
Source: Final 2019-20 Allocation of Unidentified Gas Statement, Pages 99-100

AUGE Factor Weighting



Note: Example only, not comprehensive or to scale

Theft Assessment to 2019-20 Factors



Pie chart shows proportions of unbiased thefts in EUCs and Product Classes, and how this effects the 2019-20 weighting factors

EUC Band	Class 1	Class 2	Class 3	Class 4
1	0.2	4.07	24.27	163.68
2	0.2	4.07	15.33	110.79
3	0.2	4.07	10.2	17.92
4	0.2	3.89	7.71	12.51
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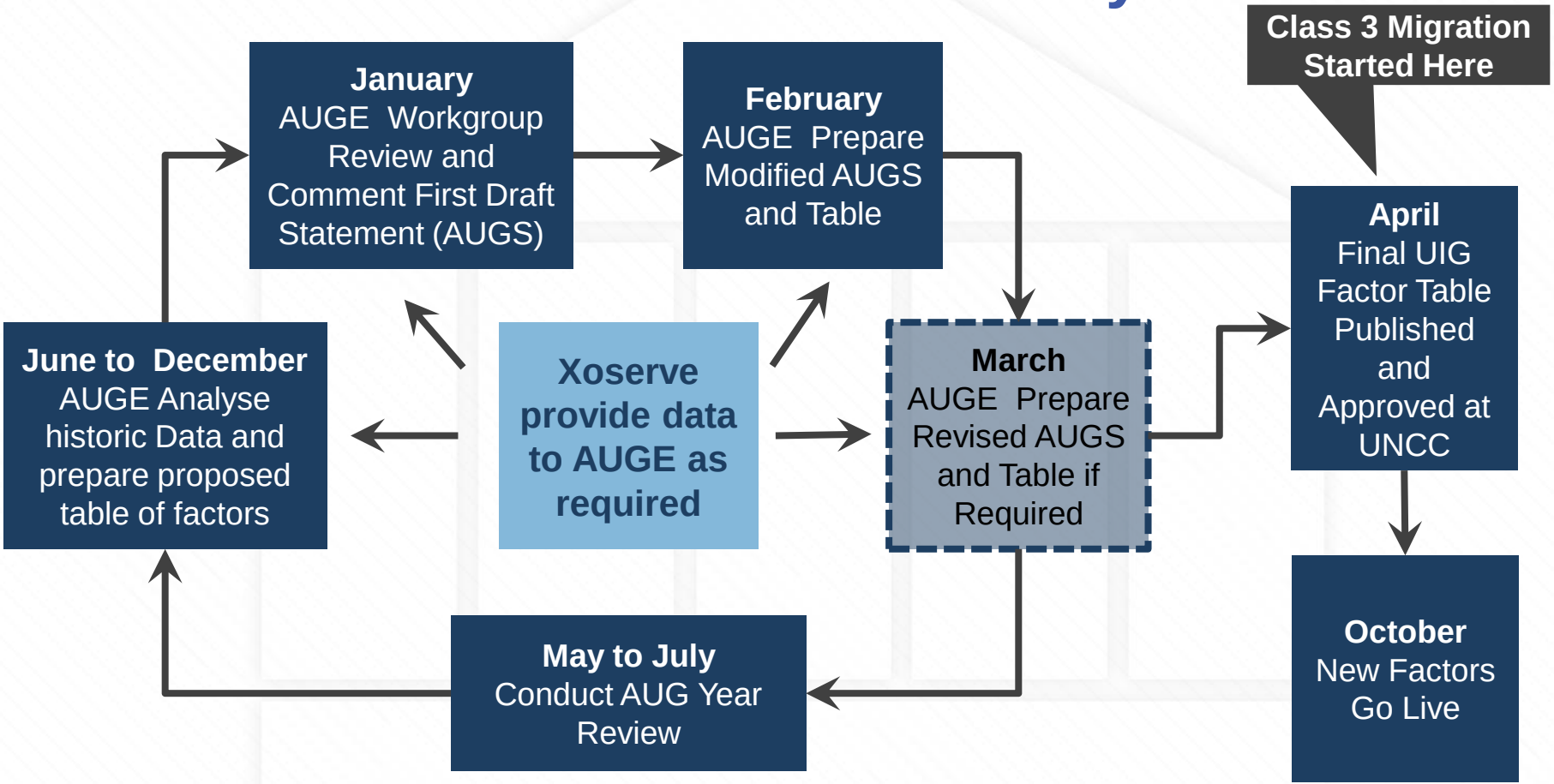
AUGE Process Annual Cycle

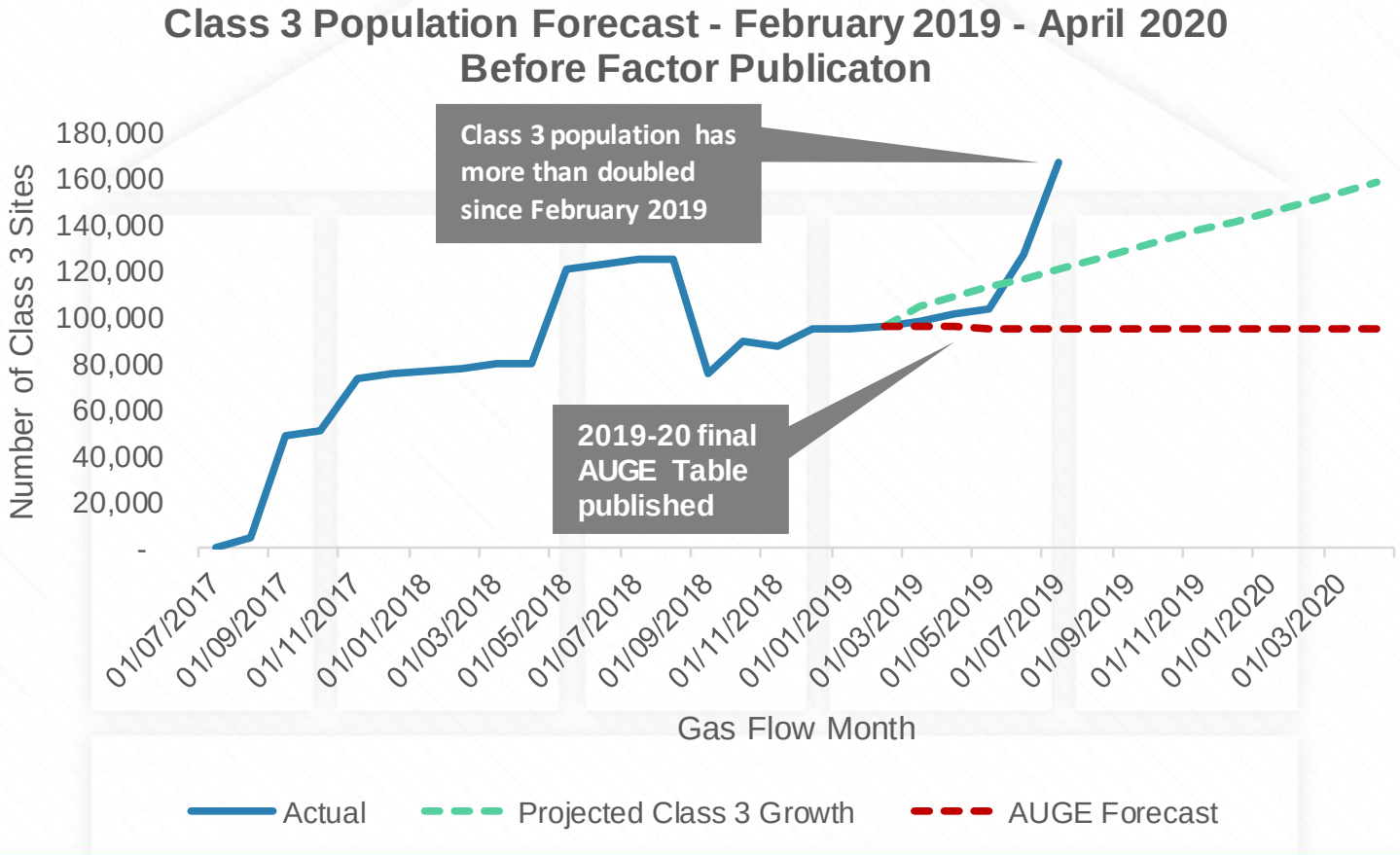


AUDIENCE QUESTIONS.....

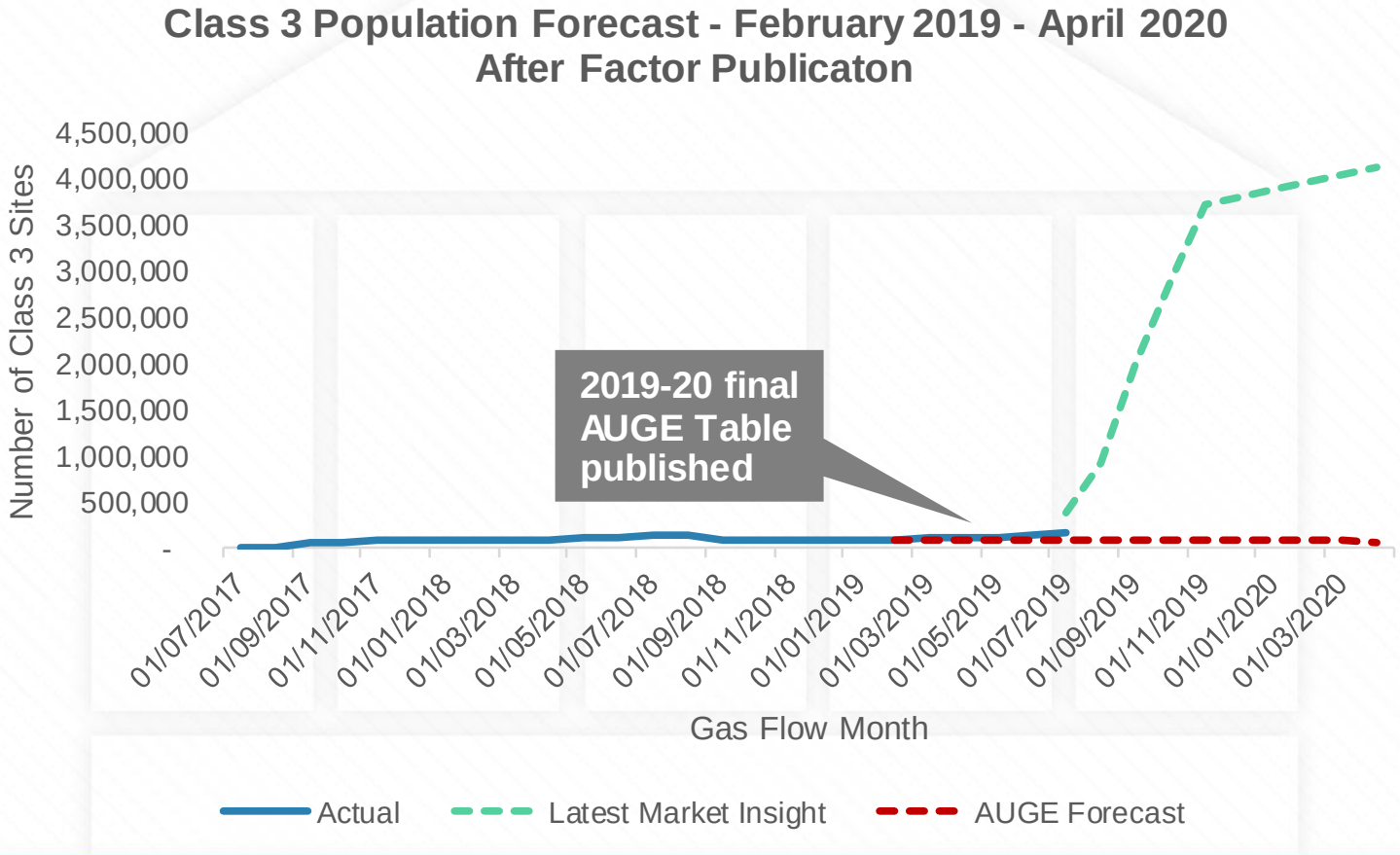
Market Forecasting

- Xoserve formally survey our customers twice a year for a view of their planned Class 2 and 3 migration.
- We had no indication of significant planned migrations from customers until May 2019.
- Xoserve UK Link Roadmap is to migrate ISU to SAP HANA, enabling us to process market level daily reads by end of 2021.
- The sudden and unpredictable move to Class 3 poses a short term capacity risk to industry systems.

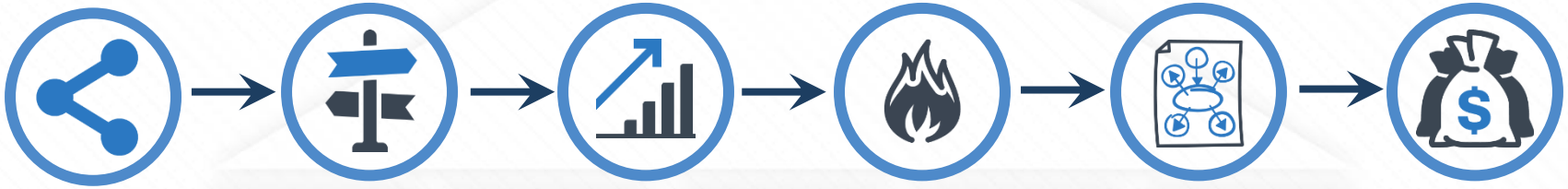
Class 3 Forecast – February 2019



Class 3 Forecast – July 2019

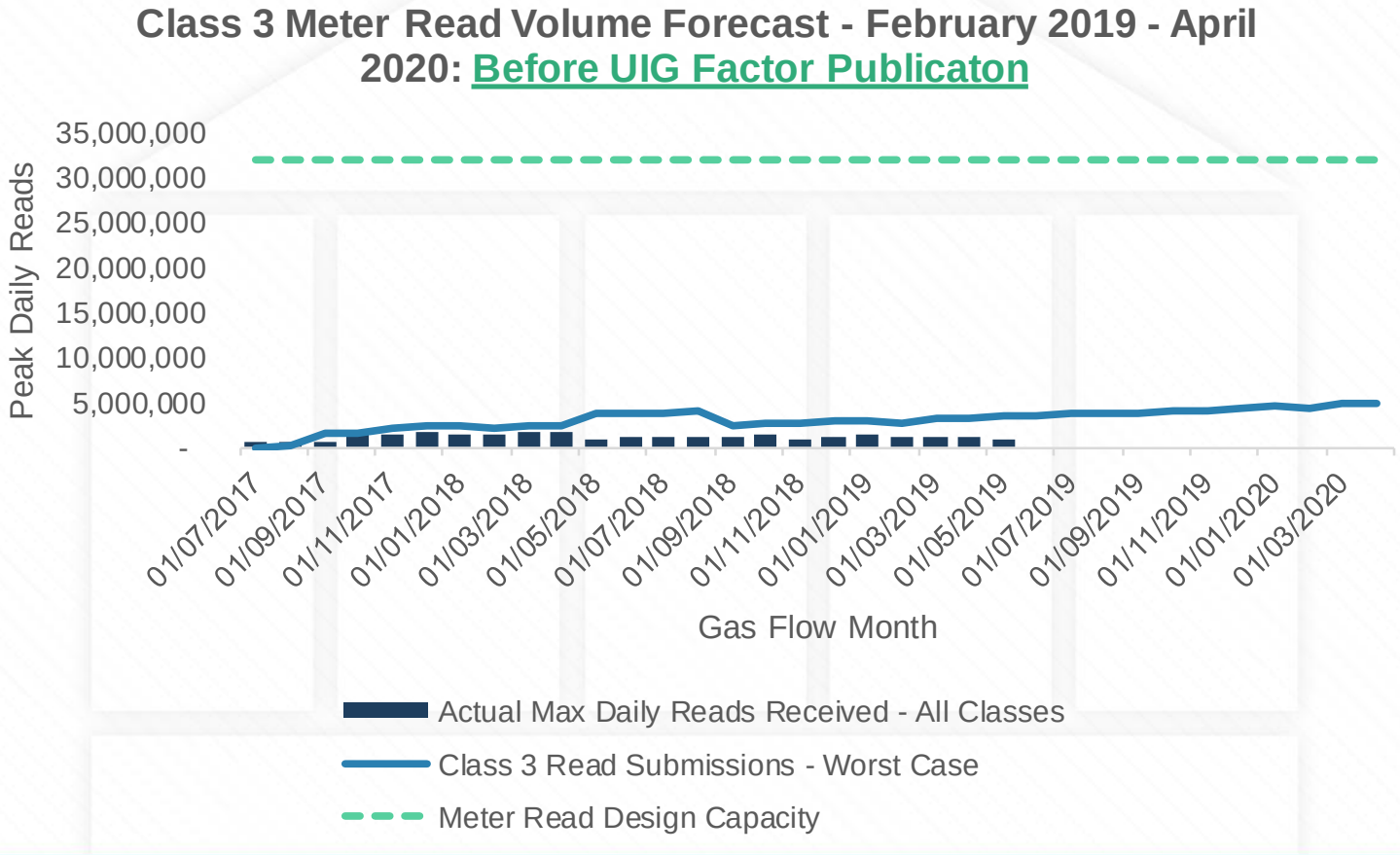


Potential Industry System Impacts

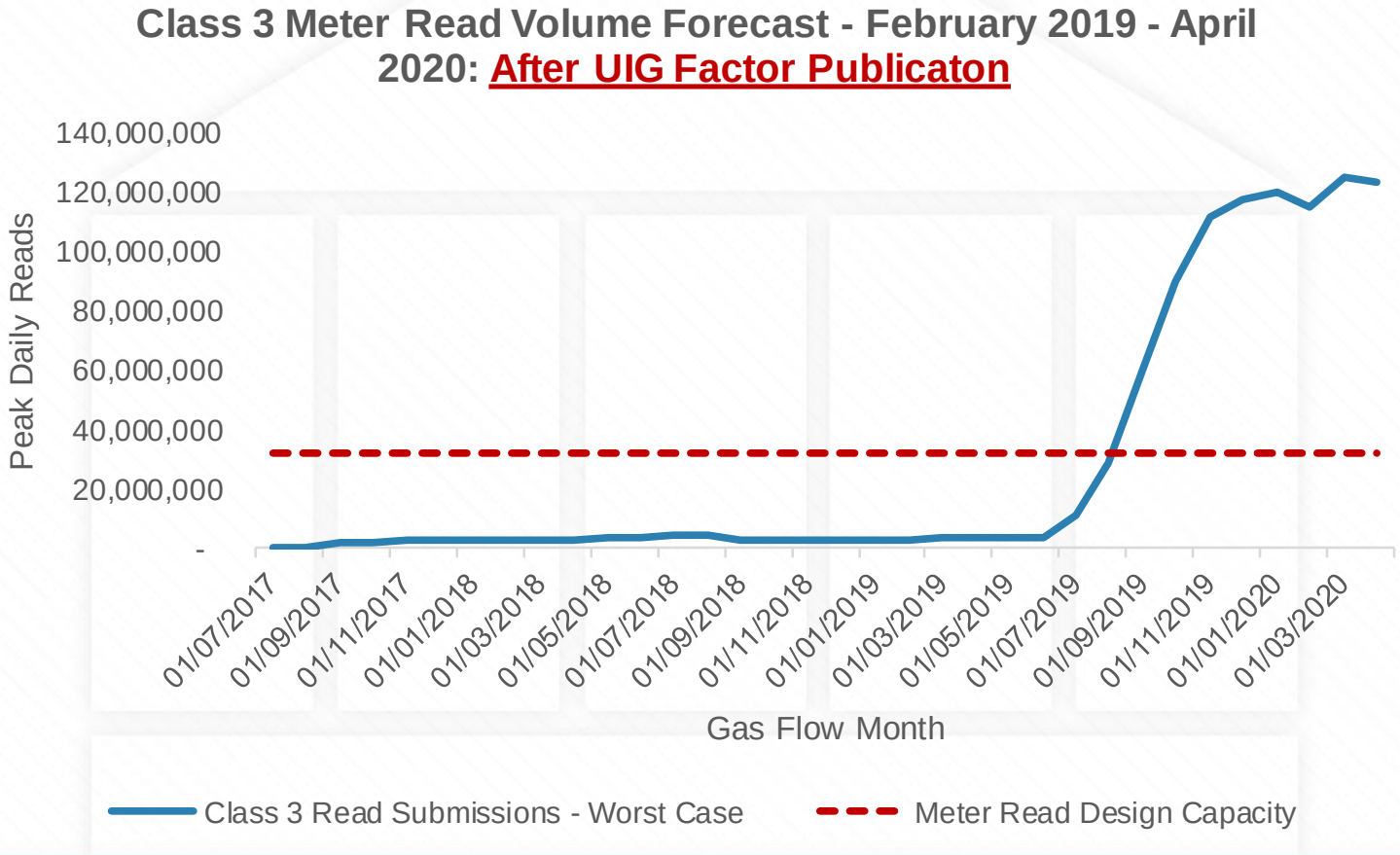


IX File Transfers	Class Change Movements	Inbound Meter Read Volumes	AQ Calculation	Reconciliation Calculation	Amendment Invoice Supporting Information
Can the IX network and each Shipper's terminal handle the projected traffic volumes	Can the UK Link system process the desired class change volume without impacting switching	Can the UK Link System process the peak daily Class 3 read load – over 120m reads against design spec of 32m	More Class 3 sites could mean more AQ calculations every month. Currently ~9m a month.	A Class 3 site creates 30x more variances than a Class 4 site…	… which means 30x increase in AML records for that site. Potentially 120m+ new records each month.

Projected Class 3 Read Volumes



Projected Class 3 Read Volumes



System Capacity

- UK Link System Design Capacity specifies
  - 4m meter Reads on an Average Day
  - 32m on an Exceptional Peak day (UK Link Manual).
- The Exceptional peak figure is the number of reads **the system has been architected to process given enough resource**
- The 4m figure is the **average** daily number the system can process **at maximum** while running all other processes
- We need notice to scale the system in line with the UK Link Manual IS Service Capacity Plan Process

System Capacity

- The peak daily reads seen to date on one day is 1.7m
- The average is around 450k
- Given our plan to migrate UK Link to SAP HANA, which removes some of these capacity maximum considerations, we don’t think it’s an effective use of our customer’s money to massively scale the current UK Link system

Industry Impacts

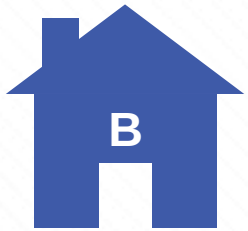
- From 1st October 2019, a Class 3 site will attract 1/7th the UIG compared to Class 4
- The NDM Uplift Factors have seen largely negative UIG in Gas Year 2018-19 which has incentivised remaining in Class 4 for smaller sites.
- The removal of the uplift factors and the new AUG weighting factors have changed the equation.

Weighting Factors – Current Example

House A and House B are on the same road. They have the Same AQ and both have Smart Meters.

This example based on national Class 3 AQ as of June 2019 and assumes national annual average UIG of 3.18%

AQ: **11,000 kWh**	AQ: **11,000 kWh**
EUC Band **01**	EUC Band **01**
Class **3**	Class **4**
Weight Factor: **46.41**	Weight Factor: **94.64**
UIG: **234 kWh (2.13%)**	UIG: **477 kWh (4.34%)**
UIG Cost at SAP: £4.18	**UIG Cost at SAP: £8.53**



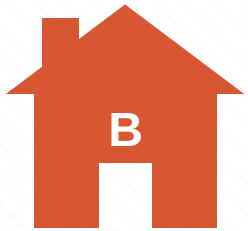
All Energy and Financial values are simulated based on AQ and are annual figures, Average SAP used is 1.788p / kWh

Weighting Factors – October ‘19 Example

House A and House B are on the same road. They have the Same AQ and both have Smart Meters.

This simulation of 2019-20 factors based on Class 3 AQ as of June 2019 and assumes national annual average UIG of 3.18%

AQ: **11,000 kWh**	AQ: **11,000 kWh**
EUC Band **01**	EUC Band **01**
Class **3**	Class **4**
Weight Factor: 24.23	**Weight Factor: 161.68**
UIG: 84 kWh (0.76%)	**UIG: 567 kWh (5.16%)**
UIG Cost at SAP: £1.50	**UIG Cost at SAP: £10.15**



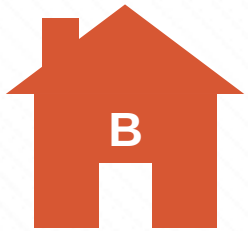
All Energy and Financial values are simulated based on AQ and are annual figures, Average SAP used is 1.788p / kWh

Weighting Factors – Projected Example

House A and House B are on the same road. They have the Same AQ and both have Smart Meters

This simulates the effect of 33% of Class 4 AQ moving to Class 3 and assumes national annual average UIG of 3.18%

AQ: **11,000 kWh**	AQ: **11,000 kWh**
EUC Band **01**	EUC Band **01**
Class **3**	Class **4**
Weight Factor: 24.23	**Weight Factor: 161.68**
UIG: 116 kWh (1.06%)	**UIG: 785 kWh (7.14%)**
UIG Cost at SAP: £2.08	**UIG Cost at SAP: £14.04**



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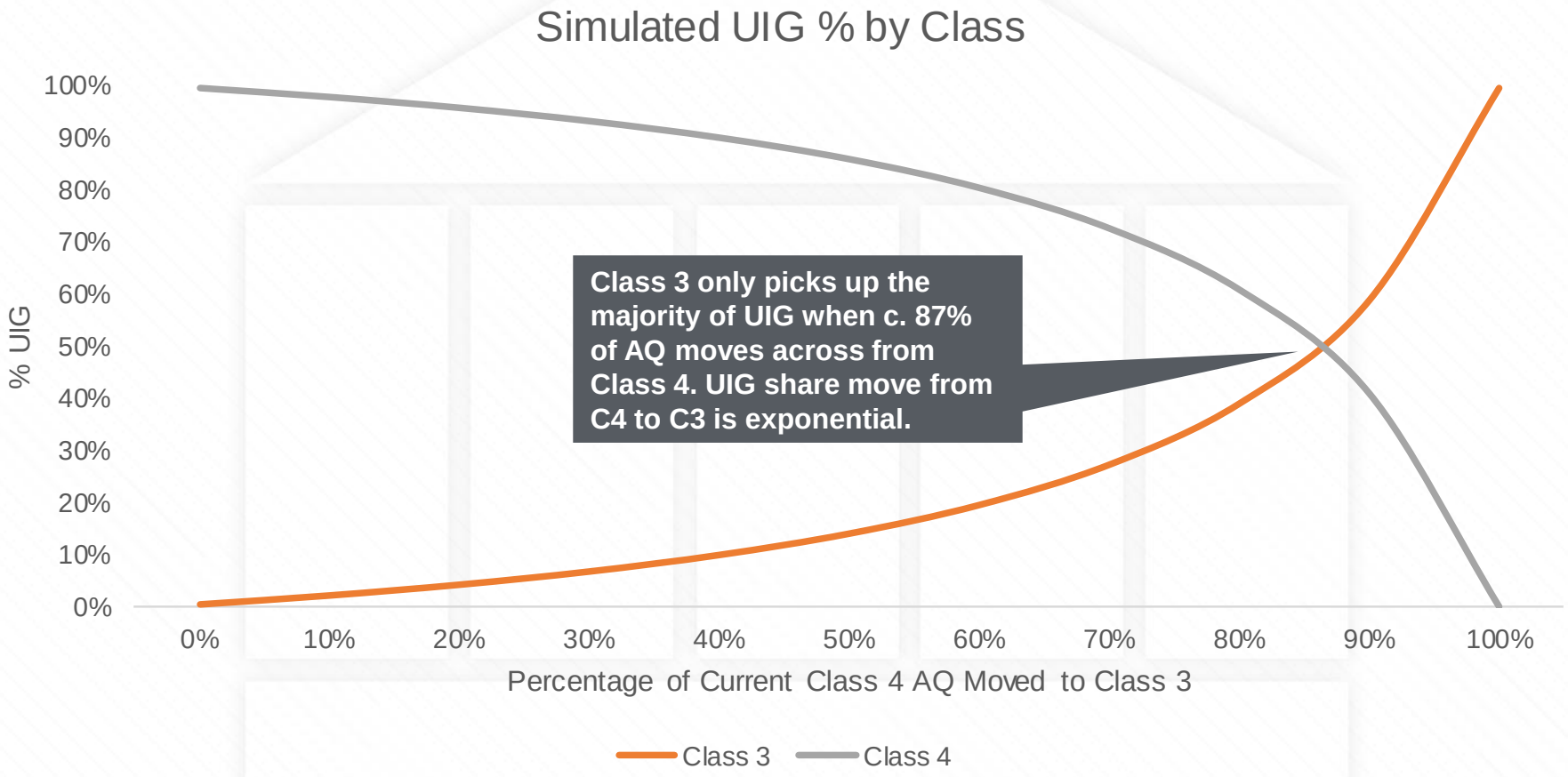
The UIG Tipping Point



Class 3 Read Performance

Overall no Class meets the UNC read performance obligation. Class 3 read performance falls far short.

94.5% Class 1 Read Performance Obligation is 97.5%	**63%** Class 2 Read Performance Obligation is 97.5%	**63%** Class 3 Read Performance Obligation is 90%	**551k** sites unread since Nexus Go-Live
86% Class 4 AQ > 293k Monthly Read Performance Obligation is 90%	**76%** Class 4 Smart Monthly Read Performance	**92%** Class 4 Annual Read Performance Obligation is 1 read per site per year	**13% of AQ** is not read to required standard

Market Level Impacts

- If **all** customers move **all** remotely read meters to Class 3 then most shippers will see a relatively small change in their UIG share – **on average, shippers would attract 13% more UIG compared to all sites remaining in Class 4.**
- Only shippers with significantly more remote read equipment than average in EUCs 01 and 02 stand to benefit in this scenario
- Shippers that have fewer than sites in EUCs 01 and 02 with daily read capability would pick up the UIG balance.

AUDIENCE QUESTIONS.....

LUNCH in the Business Lounge

Key Principles considered in Mitigation Options

- As part of the options considered for mitigation we have considered lots of options
- We had two key principles uppermost in our mind when considering these options

- The UIG Weighting Factors have gone through due process and are due to be effective from 1st October 2019.

- Shippers should not face disproportionate change to resolve this problem. We have *tried* to limit Shipper impacts, and in doing so shoulder the burden of change.

Back in 2015…

- We ALL saw this coming.
- It was acknowledged by **everyone** in the Nexus Workgroup that the Batch Submission rules did not work at large volume take up of Class 3 Supply Meters.
- We assumed that we would have a lead time of steady incrementing C3 Supply Meters in which to remedy this once it became a problem…
- We didn't see the game changer of the UIG Weighting Factors.

Mitigation Options Assessment

23 mitigation ideas underwent an options assessment

Variables analysed

Customer Commercial Benefit – how well would the option deliver the commercial value offered by the new Class 3 UIG weighting factors?

Customer Changes Required? – would we perceive the need for our customers to make changes to their processes/systems to implement the option?

Cost to deliver? – how much of an investment would be required to introduce the option?

Timescales to deliver? – how quickly do we believe we could introduce the option...particularly important given the rolling 12-monthly AUGE process for determination of the UIG factors.

Level of risk reduction to UK Link processing of :

- **IX file traffic**
- **Class Change Migration**
- **Inbound Meter Read processing**
- **Rolling AQ Calculation**
- **Class 3 Reconciliation**
- **Amendment Invoice and ASP/AML supporting information generation**

Mitigation Options Assessment

Item	Mitigation Option	CUSTOMER COMMERCIAL BENEFIT [illegible]	Commercial Benefit Rationale	LEVEL OF PROTECTION TO UK LINK (from risk of system overload)	Mitigation Mechanism e.g. System Change, Behavioural Change, Rate Limiting	Impacted Systems ISU, Marketflow, Gemini etc.	Change Framework and Owner e.g. UNC Mod, CP, CR, etc.	Estimated Xoserve Cost to deliver Low - £0-250k Medium - £250k to £1m High - £1m+	Ongoing Cost	Estimated Time to deliver	Reduce risk to... IX	Reduce risk to... CLASS CHANGE MIGRATION	Reduce risk to... INBOUND METER READ PROCESSES	Reduce risk to... AQ CALCULATION	Reduce risk to... CLASS 3 RECONCILIATION	Reduce risk to... AMENDMENT INVOICE AND ITS SUPPORTS
5	Quota for class 3 utilisation - rules stay same but limit number of meter points that can be class 3	Partial	… update and assigning and maintaining levels to individual …	High	ALL	ISU	MOD, CP	High	Yes	6 to 12 months	partial	Partial	Partial	Partial: Lowers short term risk	Partial	Partial
1	Change the UIG weighting factors to flatten the step change between Class 3 and Class 4	None	Lessens the benefit of moving and may cause customers to review their commercial aspirations	High	Behavioural	None	UNC mod - shipper/Ofgem/GT	Low (DAR)	No	1 to 3 months	Partial: Lowers short term risk	Partial: Lowers short term risk	Partial: Lowers short term risk	Partial: Lowers short term risk	Partial: Lowers short term risk	Partial: Lowers short term risk
16	Change UK Link Manual to allow a fixed quota of Class Changes per customer in a given timeframe.	Partial	Would limit the amount of meter points that could move and so reduce the potential commercial benefit	Medium	Behavioural, Rate Limiting	ISU	MOD? UNCC	Medium	Yes	12+ months	Partial	Partial	Partial	Partial	Partial	Partial
6	Reduce the volume of C3 reads customers can send to Xoserve	All	Full benefits available to shippers but risk to reconciliation	Medium	more on Xoserve system change to introduce validation/quota	ISU, Market flow? potential NEW tool?	MOD, CP	High	Yes	6 to 12 months	Fully	Partial	Fully	Partial	No	No
23	Delay AMS invoice (by one month)	All	Allows full migration of sites to C3	Medium	Rate Limiting	ISU	MOD, CP	Medium	No	6 to 12 months	No	No	No	No	Partial	Partial
17	Temporarily fix Class 3 to LSP sites only	None	Only LSP sites can benefit where differential between factors in the classes is lower	Medium	System Change	ISU	MOD, CP	Low	Yes	12+ months	Fully	Fully	Fully	Fully	Fully	Fully
18	Validate and Process Class 3 reads offline and then load into UK-Link	All	Allows full migration of sites to C3	Medium	System Change	ISU, New tool	CP	High	Yes	12+ months	No	No	Partial	Partial	No	No
19	Mandate the weekly provision of batched meter reads for C3 sites	All	Allows full migration of sites to C3	Medium	System Change	ISU, marketflow	CP	Low	No	6 to 12 months	Partial	No	Partial	No	No	No
20	Provide an alternative means for shippers to send C3 meter reads to Xoserve other than IX	All	Allows full migration of sites to C3	Low	System Change	Marketflow, IX	CP	High (TBC with ERR)	Yes	12+ months	Fully	No	No	No	No	No
21	Create a holding pen for C3 reads and process at a convenient time	All	Allows full migration of sites to C3	Medium	System Change	ISU	CP	Medium	Yes	3 to 6 months	No	No	Partial	No	No	No
24	Only allow sites in C3 where their usage pattern is materially different from Allocation profile.	Partial	Allows full migration but many sites would likely be bumped back to C4	Low - feel there would still be a rush to C3 and then we'd have the extra problem of running a complex validation …	System Change	ISU	MOD, CP	High	No	12+ months	Partial	Partial	Partial	Partial	Partial	Partial
4	… state with Xoserve as to when they can submit C3 meter reads to us and an agreed quota of reads	Partial	No long term impact to shippers but may slow down Class 3 migration	Medium	system change Xoserve to enable rate limiting, potential shipper system change	ISU, Market flow, potential NEW tool	CP, UK link committee	Medium	Yes	3 to 6 months	Partial	Partial	Partial	No	No	No
3	Remove the current functionality of Xoserve to perform daily estimation for C3 sites for days whereby we haven't received a daily read within a batch	All	Full benefits available to shippers	Low	system change Xoserve, need to confirm if there is a potential shipper system change if we advise shippers of current estimates	UK Link	CR if just Xoserve system, CP if shipper	Medium	No	6 to 12 months	No	No	No	No	Partial	Partial
2	Disable Class 3 functionality in UK-Link	None	Disadvantaging customers who have genuine sites within class 3 as they would be moved out and pick up larger UIG shares by default if class 4, and class 2 would introduce the overhead of daily … for shippers	High	system change Xoserve, potential shipper system change	UK link, Market flow, Gemini	UNC mod - shipper/Ofgem/GT CP potential UK link committee (UK link manual)	Medium	No	12+ months	Fully	Fully	Fully	Fully	Fully	Fully
22	Do Nothing - Based UK Link Systems	All		TBC	TBC	All		-	-	-	-	-	-	-	-	-
8	Split Class 4 by meter type (e.g. Smart, Non-Smart) and allocate different UIG weighting factors	None	Does not deliver benefit	High	Xoserve system change	ISU	MOD, CP	Medium	No	12+ months	No	No	No	No	No	No
9	Split Class 4 by meter read frequency (weekly, fortnightly, monthly, bi-annually, annually) and allocate different UIG weighting factors	None	Does not deliver benefit	High	Xoserve system change	ISU	MOD, CP	Medium	No	12+ months	No	No	No	No	No	No
11	Automatically move sites to C4 if poor meter read performance at C3 (see MOD664)	All	Delivers benefit and ensures that Class 3 is used as intended and not just as a mechanism for shippers …	Medium - would still see increased …	Xoserve system change, shipper behavioural	ISU	MOD (In Progress), CP	Low (MOD in awaiting ROM)	Yes	3 to 6 months	Partial	Partial	Partial	Partial	Partial	Partial
12	Meter Read Performance Incentive (make regular?)	All	Delivers benefit and ensures that Class 3 is used as intended and not just as a mechanism for shippers to lower their UIG liability	Medium - would still see increased volumes but some system loads …	Xoserve system change, shipper behavioural	ISU	MOD (In Progress), CP	Low	Yes	12+ months	Partial	Partial	Partial	Partial	Partial	Partial

Mitigation Options Assessment

Item	Mitigation Option	Rationale for Option	Projected Outcome	CUSTOMER COMMERCIAL BENEFIT All - delivers commercial value of new C3 weighting factors. Partial - delivers some, but not all, of the commercial value of the new C3 weighting factors. None - delivers no commercial value on offer from the new C3 weighting	Commercial Benefit Rationale	LEVEL OF PROTECTION TO UK LINK (from risk of system overload)	Mitigation Mechanism e.g. System Change, Behavioural Change, Rate-Limiting etc.	Impacted Systems ISU, MarketFlow, Gemini etc.	Change Framework and Owner e.g. UNC Mod, CP, CR, etc.	Estimated Xoserve Cost to deliver Low - £0-250k Medium - £250k to £1m High - £1m+	Ongoing Cost	Estimated Time to deliver	Reduces risk to... IX	Reduces risk to... CLASS CHANGE MIGRATION	Reduces risk to... INBOUND METER READ PROCESSING	Reduces risk to... AQ CALCULATION	Reduces risk to... CLASS 3 RECONCILIATION	Reduces risk to... AMENDMENT INVOICE AND ITS SUPPORTING INFORMATION
5	**Quota for class 3 utilisation** - rules stay same but limit number of meter points that can be class 3	Caps Class 3 uptake to manageable capacity	Allows maximum uptake of class 3 without risking UK link system failure	Partial	places artificial limit of class 3 update and assigning and maintaining levels to individual shippers would be complex	High	ALL	ISU	MOD, CP	High	Yes	6 to 12 months	partial	Partial	Partial	Partial: Lowers short term risk	Partial	Partial
1	**Change the UIG weighting factors** to flatten the step change between Class 3 and Class 4	To reduce the UIG incentive to move to Class 3 from Class 4 should remove the short term financial incentives to migrate sites from Class 4 to Class 3.	Fewer class changes, potential impact to competition	None	Lessen the benefit of moving and may cause customers to review their commercial aspirations	High	Behavioural	None	UNC mod - shipper/Ofgem/GT	Low (BAU)	No	0 to 3 months	Partial: Lowers short term risk	Partial: Lowers short term risk	Partial: Lowers short term risk	Partial: Lowers short term risk	Partial: Lowers short term risk	Partial: Lowers short term risk
16	Change UK Link Manual to **allow a fixed quota of Class Changes per customer in a given timeframe**.	Slowing the flow of sites into C3 will give us time to scale the system	Sites will still move to class 3 but in more manageable timeframe. Could be after the C3 factors become less attractive which could slow migration further	Partial	Would limit the amount of meter points that could move and so reduce the potential commercial benefit	Medium	Behavioural, Rate Limiting	ISU	MOD? UNCC	Medium	Yes	12+ months	Partial	Partial	Partial	Partial	Partial	Partial
6	**Reduce the volume of C3 reads customers can send** to Xoserve	If behavioural - Reduce system capacity requirement for class 3 read processing routine but not prevent actual reads being received. If system validation built - Reduce system capacity requirement for class 3 read processing routine	sites can move into Class 3 to get the UIG benefits, however as there will be fewer actual reads, reconciliation will be less accurate	All	Full benefits available to shippers but risk to reconciliation	Medium	none or Xoserve system change to introduce validation/quota	ISU, Market flow? potential NEW tool?	MOD, CP	High	Yes	6 to 12 months	Fully	Partial	Fully	Partial	No	No
23	**Delay AMS invoice** (by one month)	[illegible] it's own pace to catch up from large capacity spikes	[illegible] system	All	Allows full migration of sites to C3	Medium	Rate Limiting	ISU	MOD, CP	Medium	No	6 to 12 months	No	No	No	No	Partial	Partial
17	Temporarily fix **Class 3 to LSP sites only**	Would cap sites eligible for C3 at c. 200k	Removes capacity constraint problem	None	Only LSP sites can benefit where differential between factors in the classes is lower	Medium	System Change	ISU	MOD, CP	Low	Yes	12+ months	Fully	Fully	Fully	Fully	Fully	Fully
18	Validate and **Process Class 3 reads offline** and then load into UK-Link	Offloading processing to non-production system could reduce load on central system	Reduce risk to core systems for meter read processing. Reads would still need to loaded to ISU and other processing to take place	All	Allows full migration of sites to C3	Medium	System Change	ISU, New tool	CP	High	Yes	12+ months	No	No	Partial	Partial	No	No
19	Mandate the **weekly provision of batched meter reads** for C3 sites	Flatten read submission profile	Would reduce maximum potential meter read load by 75%	All	Allows full migration of sites to C3	Medium	System Change	ISU, marketflow	CP	Low	No	6 to 12 months	Partial	No	Partial	No	No	No
20	Provide an **alternative means for shippers to send C3 meter reads to Xoserve** other than IX	Reduce risk to IX	Would remove potential IX bottleneck from shippers that may not have the network capacity to send daily reads. This could actually make the situation worse for Xoserve by removing some of the structural protection smaller IX kit gives us.	All	Allows full migration of sites to C3	Low	System Change	Marketflow, IX	CP	High (TBC with RNN)	Yes	12+ months	Fully	No	No	No	No	No
21	Create a **holding pen for C3 reads** and process at a convenient time	Would allow Xoserve to process reads during system quiet time and make use of the capacity we have	Sites would still move to C3 and reads be submitted as normal. We would have to actively release reads into ISU for processing	All	Allows full migration of sites to C3	Medium	System Change	ISU	CP	Medium	Yes	3 to 6 months	No	No	Partial	No	No	No
24	Only allow sites in **C3 where their usage pattern is materially different from Allocation profile**.	Would redefine class 3 to be for exceptional sites where NDM profiles don't work at rec	Fewer sites in C3 eventually but system would need to validate	Partial	Allows full migration but many sites would likely be bumped back to C4	Low - feel there would still be a rush to C3 and then we'd have the extra problem of running a complex validation on c. 750m reads	System Change	ISU	MOD, CP	High	No	12+ months	Partial	Partial	Partial	Partial	Partial	Partial
4	**Mandate customers to book slots with Xoserve as to when they can submit C3 meter reads** to us **and an agreed quota of reads**	To soothe demand and give more control to how Xoserve need to scale the system	Allows shippers to submit their class 3 readings but requires more planning for submission timescales	Partial	No long term impact to shippers but may slow down Class 3 migration	Medium	system change Xoserve to enable rate limiting, potential shipper system change	ISU, Market flow, potential NEW tool	CP, UK link committee	Medium	Yes	3 to 6 months	Partial	Partial	Partial	No	No	No
3	**Remove the current functionality of Xoserve to perform daily estimation for C3 sites for days whereby we haven't received a daily read** within a batch	Reduce system capacity requirement for class 3 daily estimate routine but not prevent actual reads being received.	Potentially release available system capacity to process actual reads	All	Full benefits available to shippers	Low	system change Xoserve, need to confirm if there is a potential shipper system change if we advise shippers of current estimates	UK Link	CR if just Xoserve system, CP if shipper	Medium	No	6 to 12 months	No	No	No	No	Partial	Partial
2	**Disable Class 3** Functionality in UK-Link	Reduce system capacity requirement for class 3 transactional activities	All class 3 sites moved to class 4 by default with opportunity for shippers to move them to class 2 where appropriate	None	Disadvantaging customers who have genuine sites within class 3 as they would be moved out and pick up larger UIG shares by default if class 4, and class 2 would introduce the overhead of daily noms for shippers	High	system change Xoserve, potential shipper system change	UK link, Market flow, Gemini	UNC mod - shipper/Ofgem/GT CP potential UK link committee (UK link manual)	Medium	No	12+ months	Fully	Fully	Fully	Fully	Fully	Fully
22	Do Nothing - **Boost UK Link Systems Capacity**	This is happening anyway	This is happening anyway	All		TBC	TBC	All		-	-	-	-	-	-	-	-	-
8	**Split Class 4 by meter type** (e.g. Smart, Non-Smart) and allocate different UIG weighting factors	Based on the belief that AUGE assessment of UIG assumes that meters read more frequently carry less UIG risk. This is not part of the Auge methodology and so this split is unlikely to crate the desired commercial [illegible]	Unless AUGE change methodology, this is unlikely to create the desired UIG benefit	None	Does not deliver benefit	High	Xoserve system change	ISU	MOD, CP	Medium	No	12+ months	No	No	No	No	No	No
9	**Split Class 4 by meter read frequency** (weekly, fortnightly, monthly, bi-annually, annually) and allocate different UIG weighting factors	Based on the belief that AUGE assessment of UIG assumes that meters read more frequently carry less UIG risk. This is not part of the Auge methodology and so this split is unlikely to crate the desired commercial incentive	Unless AUGE change methodology, this is unlikely to create the desired UIG benefit	None	Does not deliver benefit	High	Xoserve system change	ISU	MOD, CP	Medium	No	12+ months	No	No	No	No	No	No
11	**Automatically move sites to C4 if your meter read performance at C3 is poor** (MOD664)	Would reduce load on system having to estimate class 3 energy between reads at rec	Could reduce class 3 volumes overall if read performance stays as-is and [illegible]	All	Delivers benefit and ensures that Class 3 is used as intended and not just as a [illegible]	Medium - would still see increased volumes but [illegible]	Xoserve system change, shipper behavioural	ISU	MOD (In Progress), CP	Low (MOD is awaiting ROM)	Yes	3 to 6 months	Partial	Partial	Partial	Partial	Partial	Partial
12	**Meter Read Performance Incentive** (make urgent?)	Would remove commercial incentive to move sites to class 3 if Shipper not confident they could meet read requirements.	Could reduce class 3 volumes overall if read performance stays as-is and disincentivise moves to class 3 to gain UIG benefit without submitting daily reads. However, if commercial incentives are right, this could actually increase class 3 read submission rates and system load.	All	Delivers benefit and ensures that Class 3 is used as intended and not just as a mechanism for shippers to lower their UIG liability	Medium - would still see increased volumes but some system loads could be reduced	Xoserve system change, shipper behavioural	ISU	MOD (In Progress), CP	Low	Yes	12+ months	Partial	Partial	Partial	Partial	Partial	Partial
14	**Xoserve to obtain C3 reads directly from the DCC/AMR service provider.**	If Xoserve pull reads then we could schedule this daily to smooth system load	Xoserve control class 3 read load into UK-Link and so could manage the resource requirements more effectively. Reduced overheads on shippers as they don't need to submit class 3 reads to us	All	full benefits available to shippers	Medium - would still see increased volume but we could balance it	Xoserve system change, shipper behavioural	ISU	MOD, CP, SEC	High	Yes	12+ months	Partial	No	Partial	No	Fully	Fully
15	**Only allow sites to be migrated to C3 based on a certain set of agreed site/meter characteristics** (i.e. SMART / AMR)	A significant proportion of current Class 3 sites do not have Daily Read equipment recorded on UK Link. If this is also true on site then Shippers will submit period reads which will require UK link to estimate daily energy between them, increasing system load	Fewer sites in Class 3. The sites in class 3 will still be able to submit batched daily reads	All	most benefits available to shippers - Class 3 requirements will become more strict	Low	Xoserve system change, shipper behavioural	ISU	MOD, CP	Medium	No	12+ months	No	Partial	No	No	No	No
7	**Mandate shippers to adhere to the meter read submission frequency** set on confirmation of Class 3 sites.	Spread read submissions by shippers to make capacity requirements to our systems more predictable	Allows shippers to move sites to class 3 and submit their class 3 readings but requires more planning for submission timescales	All	full benefits available to shippers	Low	Xoserve system change, shipper behavioural, rate limiting	ISU	MOD, CP	Medium	No	6 to 12 months	No	No	No	No	No	No
10	Redefine Class 3 to require daily reads but **that doesn't require daily NOMs**	Moving to class 2 would require shippers to submit reads each day which would smooth system load. Not requiring noms (Option: Xoserve could 'nominate' using NDM algorithm prediction, for example) would remove some of the overhead on shippers	Potential increase in class 2 population could smooth system demand. More Gemini activity is likely in terms of class 2 nomination and read submissions.	All	Class 2 picks up less UIG than class 3 some commercial benefits of shippers could be greater	Medium - would still see increased volumes but some system loads could be reduced	Xoserve system change, shipper behavioural, rate limiting	ISU, Gemini	MOD, CP	High	No	12+ months	TBC	No	TBC	No	Fully	Fully

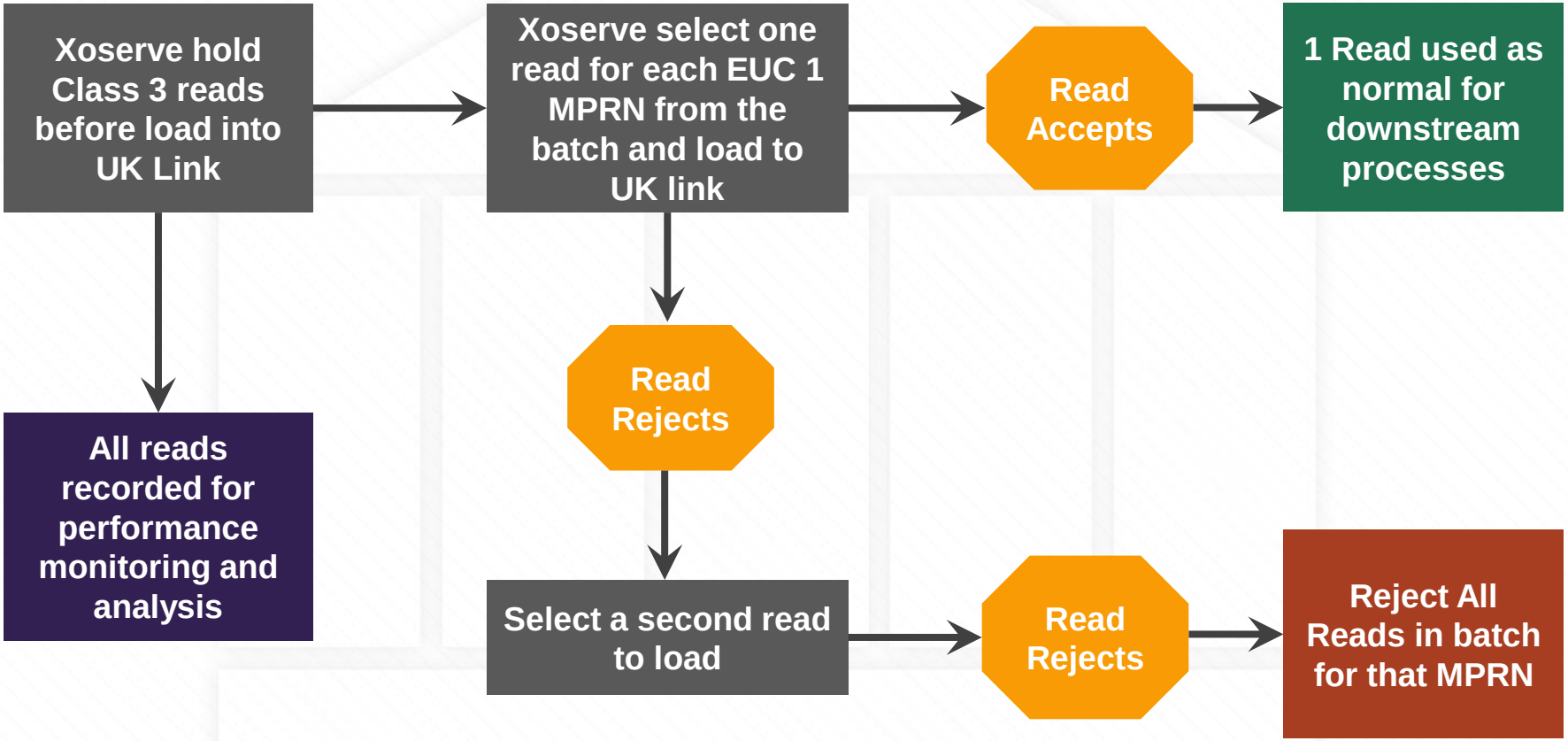
Mitigation Proposal

- An Urgent Modification is proposed
  - This is multi facetted
  - We are seeking views in this forum to develop our thinking and finalise the modification
  - Some of these proposals we are asking people to start to undertake in advance of the modification going live

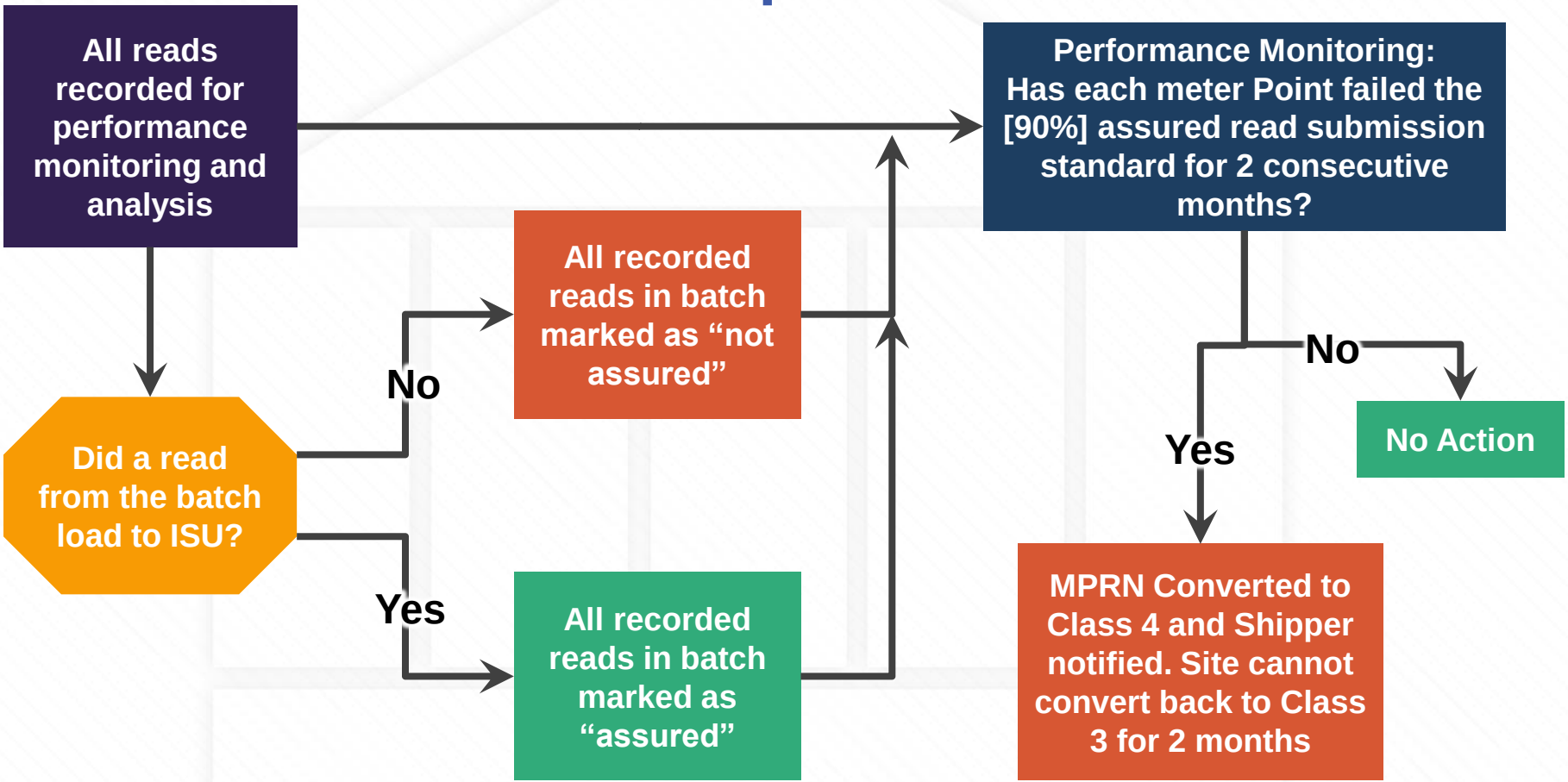
Mitigation Components Overview

- Class 3 **Batch Submission rule amendment**
- Amendment of Class 3 Meter Reading **Performance assessment at Supply Meter Point level**
- CDSP can **move non performant individual Supply Meter Points out of Class 3**
- **Enforceable capacity management of Class change**
- Loading of Meter Readings into Staging table
  - EUCs 2-9 – ALL C3 Readings get passed to UKL processes
  - EUC 1 – Only certain Readings get passed to UKL processes
- Staging table will be used to determine Meter Reading performance and NDM Demand Estimation
- **Processing of Non Opening Replacement Readings will be suspended**

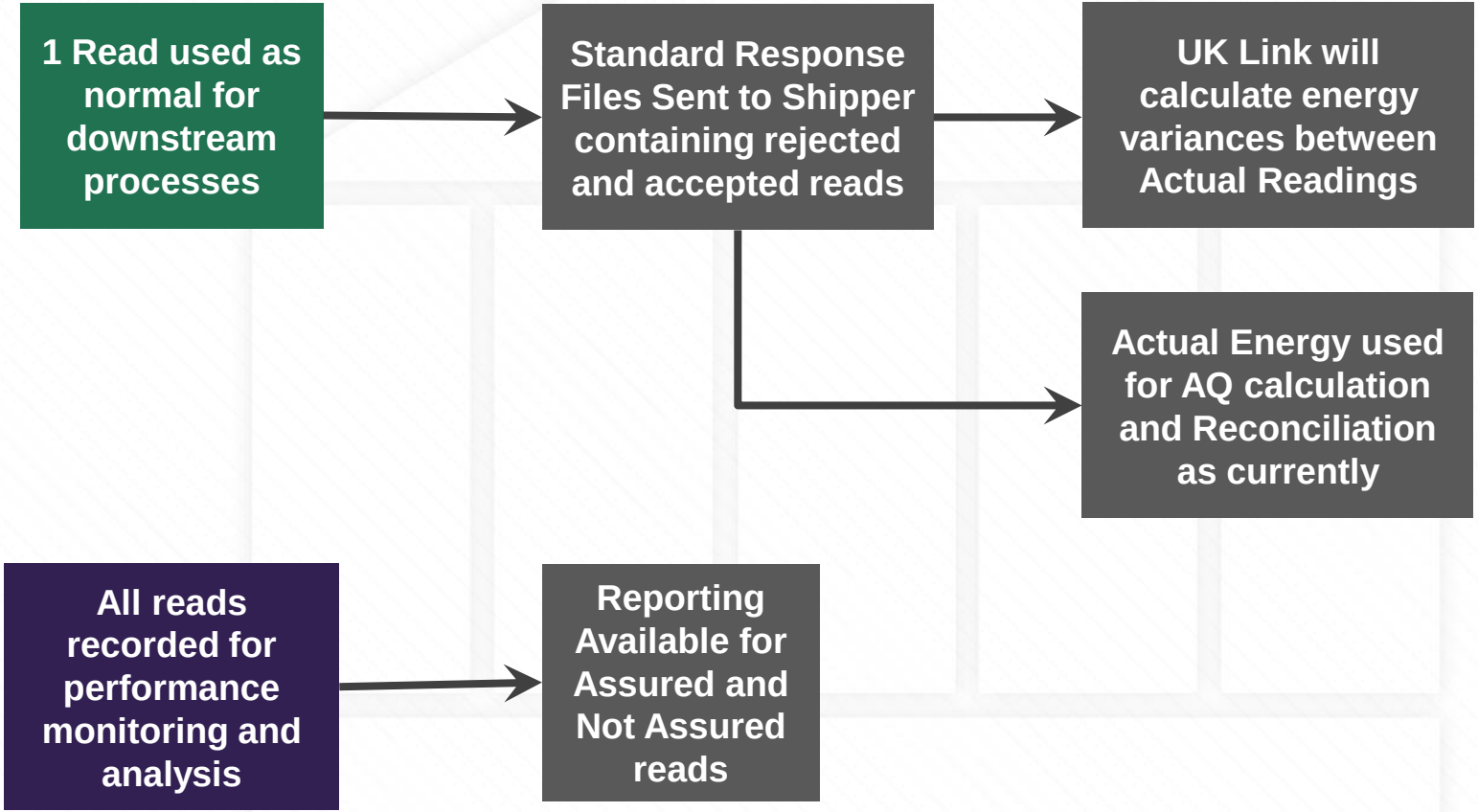
Medium Term Mitigation Overview



Medium Term Option Overview



Medium Term Mitigation Overview



Mitigation Components Development

- Class 3 Batch Submission rule amendment
  - All Class 3 reads to be sent in **a maximum of weekly batches** and reads must **be no older than [8 calendar days]**

+ Flattens profile of Reading Submissions so best utilises capacity of industry infrastructure
+ Simple rule – avoids industry scheduling of submission
- Requires some Shippers to change Batch Submission processes (aligns to some models of submission)

Mod development questions: None identified.

Mitigation Components Development

- Amendment of Class 3 Meter Reading **Performance assessment at Supply Meter Point level**
- CDSP can **move non performant** individual Supply Meter Points out of Class 3
  - Currently Reading Performance is assessed against Shipper portfolio, this approach ensures that the UIG weighting factor is applied where Supply Meter Point demonstrates capability

+ In line with AUG principles
+ Enables removal of non performant Supply Meter Points
- Punitive against SMPs with short term equipment breakdown

Mod development questions:

- Retention of existing performance level [90% readings obtained] applied at SMP level?
- Period of non performance prior to Class Change is [two] consecutive months.

Mitigation Components Development

- Enforceable capacity management of Class change
  - Explicit capability for CDSP to **reject Class Change capacity breach**
  - Detail for capacity allocation to be described in the UK Link Manual?

  \+ Protects UK Link against uncontrolled move to Class 3

  \- Risks capability for capable Supply Meter Points to access UIG Factors

  \- Potentially onerous process to determine and communicate capacity by User

  Mod development questions:
  - Treatment of Confirmation and Reconfirmation Class Change
  - Capacity allocation approach [request volume vs portfolio vs performance]
  - Period of non performance prior to Class Change is [two] consecutive months.

Mitigation Components Development

- Loading of Meter Readings into Staging table
  - **EUCs 2-9 – ALL C3 Readings get passed** to UKL processes
  - **EUC 1 – Only certain Readings get passed** to UKL processes
    - Initially proposed as Weekly load
- Staging table will be used to determine Meter Reading performance and NDM Demand Estimation
  - \+ Protects downstream UK Link processes against excessive volumes
  - \+ Enables increase of EUC1 Readings to be loaded by CDSP one capacity available
  - \+ Maintains principle of Class 3 for EUC 2-9
  - \+ Could be used to prove candidate SMP performance before move to Class 3?
  - \- Does not maintain principle of Class 3 for EUC 1, whilst weekly Readings only loaded
  - \- System change for Shippers if response files counted in, only Readings pass to UKL get URS
  - \- Visibility of Meter Readings utilised in UKL will need to be obtained from URS?
  - \- Potentially complex build for possible non enduring solution option

Mod development questions:

- Validation only applied to readings passed to UKL, ‘assured’ Reading logic to determine performance
- Proposed nil response to Staging Table Readings
- Only readings passed to UKL will be available to DES?

Mitigation Components Development

- Processing of Non Opening Replacement Readings will be suspended
  - Re-reconciliation is enormously intensive processing, proposed to suspend processing

+ Removes disproportionate processing burden on UKL
- Reduces Shipper flexibility
~ Meter Readings will be obtained from automated devices, therefore limited requirement

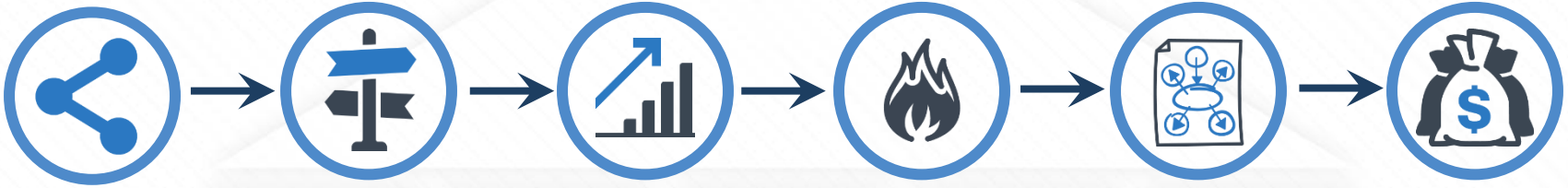
Mod development questions: None identified.

Short Term Mitigation: Smooth System Load

All Class 3 reads to be sent in **a maximum of weekly batches** and reads must **be no older than [8 calendar days]**

Shippers to **agree Class 3 migration volumes in advance** with Xoserve Advocacy Team to de-risk switching processes

Projected Mitigation System Impacts



IX File Transfers	Class Change Movements	Inbound Meter Read Volumes	AQ Calculation	Reconciliation Calculation	Amendment Invoice Supporting Information
IX traffic peaks reduced. Could still see bottlenecks with larger AML files	Class Change activity managed in line with system load	Meter Read volumes smoothed and controlled to scale with processing capability	More Class 3 sites could mean more AQ calculations every month. Currently ~9m a month	Removing Class 3 re-recs reduces risk to AMS calculation job performance	30x increase in AML records for a Class site compared to Class 4. Potentially 120m+ new records each month

AUDIENCE QUESTIONS.....

Next Steps

- Progress with the Urgent modification
- Planned to provide at short notice to July Panel
- Timescales of the modification to be defined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