This document was used to aid CDSP assessment of high level options.

Any viable candidate options were further evaluated and contributed to the development of the proposed solution as described in the workshop material and subsequent modification proposal.

This is a working document developed to narrow down possible solutions and steer the discussion to a pragmatic solution. It was not designed for publication but we are happy to share it with our customers following requests at the Class 3 Workshop.

While Xoserve are happy to discuss any of these options with our customers, the focus of Class 3 activities is on the option agreed at the Workshop. This document should not be used for anything other than background and discussion.

Item	Mitigation Option	Rationale for Option	Projected Outcome	CUSTOMER COMMERCIAL BENEFIT: HIGHEST WEIGHTING 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 t	Commercial Benefit Rationale	LEVEL OF PROTECTION TO UK LINK: HIGH WEIGHTING	Estimated Xoserve Cost to deliver: HIGH WEIGHTING Low - £0-250k Medium - £250k to £1m High - £1m+	Ongoing Cost: MEDIUM WEIGHTING	Estimated Time to deliver: HIGH WEIGHTING	Reduces risk to... IX: MEDIUM WEIGHTING	Reduces risk to... CLASS CHANGE MIGRATION: MEDIUM WEIGHTING	Reduces risk to... INBOUND METER READ PROCESSING: HIGH WEIGHTING	Reduces risk to... AQ CALCULATION: LOW WEIGHTING	Reduces risk to... CLASS 3 RECONCILIATION: LOW WEIGHTING	Reduces risk to... AMENDMENT INVOICE AND ITS SUPPORTING INFORMATION: MEDIUM WEIGHTING	Xoserve comments on Option
0	**Boost UK Link Systems Capacity**	This workstream is underway in parallel to the Mitigation option	This workstream is underway in parallel to the Mitigation option	All		TBC	-	-	-	-	-	-	-	-	-	**Selected**: This workstream is underway in parallel to the Mitigation option
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	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	**Rejected**: Breaks principle of preserving the natural market operation. Factors have been approved through agreed industry processes. Might not actually slow migrations.
2	**Disable Class 3** Functionality in UK-Link	Remove 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 nominations for shippers. We could also see Shippers mass migrate to Class 2 which would bring some of the same capacity challenges.	High	Medium	No	12+ months	Fully	Fully	Fully	Fully	Fully	Fully	**Rejected**: Breaks principle of preserving the natural market operation. Retrograde step in move toward daily settlement.
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	Medium	No	6 to 12 months	No	No	No	No	Partial	Partial	**Rejected**: This energy variance creation is actually pretty lightweight - it's lower impact that processing actual reads.
4	**Profile smoothing of read submission**	To smooth 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	All	No long term impact to shippers but may slow down Class 3 migration	Medium	Medium	Yes	3 to 6 months	Partial	Partial	Partial	No	No	No	**Modified and Selected**: We're asking customers to smooth read submission
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. Also Xoserve would be changing market dynamic which we don't want to do.	High	High	Yes	6 to 12 months	Partial	Partial	Partial	Partial: Lowers short term risk	Partial	Partial	**Rejected**: Breaks principle of preserving the natural market operation. Ruleset to enforce would be complex and constantly changing. Questions around what would happen to sites above quota through other portfolio changes.
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	High	Yes	6 to 12 months	Fully	Partial	Fully	Partial	No	No	**Modified and Selected**: We won't limit the reads that customers can send but we will load a reduced number in to UK Link.
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	Medium	No	6 to 12 months	Partial	No	Partial	No	No	No	**Selected** in combination with making Class 3 read batches Weekly as a maximum.
8	**Split Class 4 by meter type** (e.g. Smart, Non-Smart) and allocate different UIG weighting factors	Based on the AUGE assessment of UIG assumes that meters read more frequently carry less UIG risk. This is not explicitly part of the AUGE methodology outputs and so there is no mechanism in UNC or capability in the system create the desired commercial incentive while preserving the checks for reduced risk that inform the AUGE UIG factor analysis.	Unless AUGE changes its methodology, this is unlikely to create the desired UIG benefit	None	Does not deliver benefit	High	Medium	No	12+ months	Partial	Partial	Partial	Partial	Partial	Partial	**Rejected**: Requires system changes to ISU and Gemini to implement as would need to break allocation down into more granular segments to UIG allocation. The AUGE would also have to develop a new statement to apportion the weighting factors to a new matrix. We investigated applying a Pseudo Class 3 factor to Smart / AMR sites but that is as unilateral as changing the weighting factors and would cost some customers a lot of money while only benefitting relatively few of them. We do think that the industry should revsit the AUGE factors to ensure they remain fit for purpose.
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 changes its methodology, this is unlikely to create the desired UIG benefit	None	Does not deliver benefit	High	Medium	No	12+ months	Partial	Partial	Partial	Partial	Partial	Partial	**Rejected**: While we believe this is a good idea longer term, this is a significant change to the market design and would take a very long time to implement
10	Redefine Class 3 to require daily reads like Class 2 but **not require Shippers to nominate daily.**	Would require shippers to submit reads each day which would smooth system load. Not requiring nominations (Xoserve would effectively 'nominate' using NDM algorithm prediction, and Allocation would be the result of the daily read submissions with the NDM algorithm infilling any missing energy) would remove the Class 2 overhead on shippers	Smooth system demand, potentially reduce Class 3 uptake if read standards are tighter. Rec would be by exception rather than BAU which would cut AML volumes significantly.	All	full benefits available to shippers	Medium - would still see increased volumes but some system loads could be reduced	High	No	12+ months	Partial	No	Partial	No	Fully	Fully	**Rejected**: While we believe this is a good idea longer term, this is a significant change to the market design and would take a very long time to implement
11	**Automatically move sites to C4 if your meter read performance at C3 is poor** (MOD664)	Would reduce load on system having to conduct various mitigation processes for missing data, and preserve the intent of Class 3 (better settlement) and the UIG factors (meters that read daily carry a lower Theft risk)	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	Low (MOD is awaiting ROM)	Yes	3 to 6 months	Partial	No	No	Partial	Partial	Partial	**To be Developed in Mod 0664** **Selected**: While this doesn't resolve the issue in isolation, moving non-performant Meter Points back to Class 4 supports the other components of the option. **Post-Meeting Note:** Removed from the Draft Mod in response to Workshop feedback.
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	Low	Yes	12+ months	Partial	No	No	Partial	Partial	Partial	**To be Developed in Mod 0699** **Selected for separate Mod Development**: While this doesn't resolve the issue in isolation, moving non-performant Meter Points back to Class 4 supports the other components of the option. MOD timescales mean this is unlikely to be in place to be used though. **Post-Meeting Note**: Removed from the Draft Mod in response to Workshop feedback.
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	High	Yes	12+ months	Partial	No	Partial	No	Fully	Fully	**Rejected**: While we believe this is a good idea longer term, this is a significant change to the market design and would take a very long time to implement
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	Medium	No	12+ months	No	Partial	No	No	No	No	**Rejected**: While we believe this is a good idea, there are still enough remote read capable sites in the market to cause a capacity problem.
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.	Partial	Would limit the amount of meter points that could move and so reduce the potential commercial benefit	Medium	Medium	Yes	12+ months	Partial	Partial	Partial	Partial	Partial	Partial	**Selected**: Principle used to smooth Class 3 migration in line with system capacity.
17	Temporarily fix **Class 3 to LSP sites only**	Would cap sites eligible for C3 at c. 250k	Removes capacity constraint problem	None	Only LSP sites can benefit where differential between factors in the classes is lower anyway	Medium	Low	Yes	12+ months	Fully	Fully	Fully	Fully	Fully	Fully	**Rejected**: Breaks principle of allowing market to operate naturally.
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	High	Yes	12+ months	No	No	Partial	Partial	No	No	**Modified and Selected**: We will not fully validate the reads offline but we will shift some of the processing out of the ISU Application.
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	Low	No	6 to 12 months	Partial	No	Partial	No	No	No	**Selected**: While this doesn't resolve the issue in isolation, smoothing read submission supports the other components of the option
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 huge daily read batches. This could actually make the situation worse for ISU application by removing some of the structural protection of the IX network capacity.	All	Allows full migration of sites to C3	Low	High	Yes	12+ months	Fully	No	No	No	No	No	**Rejected**: Only mitigates risk to IX and would introduce cost and complexity for limited benefit
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	Medium	Yes	3 to 6 months	No	No	Partial	No	No	No	**Modified and Selected**: All reads held in the ISU staging table and a manageable volume loaded into UK-Link
23	**Delay AMS invoice** [by one month]	Delaying the AMS invoice could allow UK like to run at it's own pace to catch up from large capacity spikes	Delay to invoice but reduced risk to system	All	Allows full migration of sites to C3	Medium	Medium	No	6 to 12 months	No	No	No	No	Partial	Partial	**Rejected**: Impacts customer cashflow timings. Only de-risks the AMS processes and those are not at highest risk. We think there are better ways to reduce this risk without impacting customers.
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 which would need them to migrate, this takes time.	None	Allows full migration but many sites would likely be bumped back to C4	Low	High	No	12+ months	Partial	Partial	Partial	Partial	Partial	Partial	**Rejected**: Validating this would be challenging and potentially increase system load. The usage profile of a site is not a principle behind the lower UIG factors in Class 3 - the reliable provision of daily reads is - and so proceeding with this option unfairly impacts the market dynamic and some customer groups.
25	Proposed Option: **Combination of above**: Shippers to agree migrations in advance Meter reads to be sent in maximum of weekly batches Xoserve to hold reads in staging area Only select reads loaded to UK Link MOD 664 mechanism used to manage read performance Xoserve to create energy variances between actual reads	No single option provides comprehensive mitigation to the issue, but a combination of options could provide this.	Reduce risk to processes in all system areas while maintaining commercial benefit.	All	No impact to Class 3 migrations, limited impact to customer systems and processes.	Medium	TBC, Likely Medium	No	6 to 12 months	Partial	Partial	Partial	Partial	Partial	Partial	**Proceeding with this option**. While we acknowledge that it doesn't completely mitigate the risk, it presents the best approach to manage system load in line with available capacity across all risk areas while maintaining the commercial benefit of the factors for our customers.