RETAIL ENERGY CODE

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NON-CONFIDENTIAL CONSOLIDATED IMPACT ASSESSMENT RESPONSES

R0096 CSS MESSAGE REGENERATION FUNCTIONALITY

On 06 November 2025 the Code Manager issued an impact assessment to industry to seek feedback on the proposed solution for R0096 CSS Message Regeneration Functionality.

The purpose of this document is to consolidate the responses and for the Code Manager to answer any questions raised within those responses.

DOCUMENT VERSION	1.0
RESPONSE TYPE	NON-CONFIDENTIAL
DATE ISSUED	10 December 2025
RESPONSIBLE COMMITTEE	Technical Expert Panel
LEAD ANALYST	Bela Ashworth, Maxime van Eyseren

DATE IMPACT ASSESSMENT ISSUED	06 November 2025
RESPONSE DEADLINE	29 November 2025

Question 1:	Did you attend the Change Issues Group on 06 November 2025?	
RESPONDENT DETAILS	**RESPONSE**	**CODE MANAGER COMMENTS**
SP Energy Networks (Distribution Network Operator)	No.	Thank you for your comments.
National Grid Electricity Distribution (Distribution Network Operator)	Yes.	Thank you for your comments.
Xoserve (GRDA)	Yes.	Thank you for your comments.

Question 2:	Do you have any comments on the proposed solution?	
RESPONDENT DETAILS	**RESPONSE**	**CODE MANAGER COMMENTS**
SP Energy Networks (Distribution Network Operator)	We are supportive of this change as the impact of no 'retry' on the major incident referenced was high across the industry with manual processes having to be put in place by other parties to resolve the issue. There was a time lag that meant that customers were affected. We do however believe that this should have been a requirement of the system when it was built, rather than a happy path solution, that assumed that all files would always be processed.	Thank you for your comments.

National Grid Electricity Distribution (Distribution Network Operator)	The key part of this change request is a retry functionality therefore the solution additions look to accomplish this in a ledger check, which identifies any mismatches by recording the desired workflow.	Thank you for your comments.
Xoserve (GRDA)	The document scope states that this is intended only as a Proof of Concept (Section 1.7.1). Is this correct? One assumes that assessment of value for money is being conducted outside of this PIA. We assume that there are no requirements on CSS Users, and that ALL functionality is 'self heal' in the CSS solution. If I have misunderstood this point, then we will need to revisit the PIA response. There is a significant level of detail within the document related to the CSS system (as you would expect with a document of this nature), but would advocate that there should be an explicit section related to messages / impacts to CSS Users (even where this is 'No impact'.	Thank you for your comments. As part of the initial design deliverables, the CSS Provider was tasked with developing a Proof of Concept (PoC) to demonstrate the functionality of R0096 and how it would be delivered. This PoC was intended to validate the approach rather than represent the final implementation. Additionally, the Code Manager can confirm that there will be no impacts on CSS Users. The proposed solution will operate as a contingency mechanism, activated only if CSS processes fail.

Question 3:	Do you agree the proposed solution addresses the problem statement? If not, please provide details	
RESPONDENT DETAILS	**RESPONSE**	**CODE MANAGER COMMENTS**
SP Energy Networks (Distribution Network Operator)	Based on the information provided we believe that the proposed solution addresses the problem statement.	Thank you for your comments.

National Grid Electricity Distribution (Distribution Network Operator)	Yes, we are inclined to agree with the solution should address the problem statement.	Thank you for your comments.
Xoserve (GRDA)	Our reading is that the CSS solution will be able to self identify instances where messages have not completed and reinitiate these. For example paragraph 3.4.3.9 references 'internal only' integration / ticketing. As such there is no User requirement to prompt resolution (either via new messages or via tickets) – if so, we agree with the principle. We do note that in Fig 5 there is no integration with the Service Desk to RECEIVE notifications should Users detect issues, should this be included even only as a logical flow? I note that para 4.2.5 references functional issue stalls – quoting the instance of duplicate MPxN in an OFAF transaction. What will be done in these instances as it is assumed that these result in processing stalls? What will be the resolution path that these instances follow – will these be functionally resolved as a result of this change? Is this intended to provide the solution for the change raised as scenario 1 in R0178 – i.e. Deactivation of an active reg. whilst in-flight switch in progress? IF not, will this not cause external ticketing prompting User action – is this considered Out of Scope? Should this be referenced as part of some of the design e2e design? NB: I acknowledge that OS-04 / 06 references Mis-use and Malicious User intent – but should these components be updated in the event that instances are identified – for example the multiple MPxN in OFAF? Note: I cannot see any specific SLAs that the solution will adhere to. These should be explicit – else there is the potential impact to Users –	Thank you for your comments. The CSS solution is designed to self-identify and resolve issues internally without requiring user intervention for failed CSS processes. If a user does detect an issue, it would still be expected they should raise a ticket through the standard Service Desk process; however, this would be outside the scope of the CSS solution and is not part of the CSS 'self-heal' design. Regarding the OFAF transaction scenario (e.g., duplicate MPxN) and Deactivation of an active reg. whilst in-flight switch in progress, these are considered out of scope for R0096 as they do not result from CSS process failure. Therefore, the resolution path for such instances will follow existing operational procedures and is not addressed by this change but will be addressed by REC Change R0178. While performance metrics and SLAs are not presented in a single table, they are defined in **Section 4.7.1** and reinforced in **Section 5**:

	i.e. they will notice that the application has stalled. We note references to 35 mins in 2.2.2, but also 4.8.4.1 references 5 minutes. What should the User expectation be? Other document observations: 4.7.1 – The RPO should be nil? It references a single operation (which I assume is a single transaction being processed), but this self heal should ensure that this is processed? 4.7.5 – No scale in Fig 7 / 8. Not sure what this shows?	• **Availability:** Cosmos DB (99.999%), Azure Functions (99.95%), Service Bus (99.99% UK South, 99.9% UK West). • **Recovery Time Objective (RTO):** A stalled operation should be detected and resumed **within 5 minutes**. • **Recovery Point Objective (RPO):** No more than one operation's progress lost, though design intent is effectively zero loss. Note: The RTO value of 5 minutes is configurable. The **35-minute reference in 2.2.2** relates to normal gate closure delays (waiting state), not recovery time. Regarding the RPO, practically the design aims for near nil RPO (<2 mins). The Recovery Point System **ensures operations resume from the last checkpoint within seconds**, reducing the risk of lost or duplicated messages and avoiding costly manual interventions. Fig. 7 and 8: These charts illustrate **transaction time distribution for synchronous and asynchronous operations**, showing that recovery logic does

		not breach service-level thresholds. Lack of axis labels is a documentation gap; they should show time vs. operation count.

Question 4:	Are there any alternate solutions that would better meet the needs of the problem statement?	
RESPONDENT DETAILS	**RESPONSE**	**CODE MANAGER COMMENTS**
SP Energy Networks (Distribution Network Operator)	SPEN have not identified an alternate solution.	Thank you for your comments.
National Grid Electricity Distribution (Distribution Network Operator)	Not that we can think of at this time.	Thank you for your comments.
Xoserve (GRDA)	We don't offer any alternatives as our understanding is that there are no User impacts of this solution.	Thank you for your comments.

Question 5:	Do you think we have identified and considered all processes and scenarios that may be impacted through the implementation of the proposed change?

RESPONDENT DETAILS	RESPONSE	CODE MANAGER COMMENTS
SP Energy Networks (Distribution Network Operator)	We have not identified any additional scenarios; however, we are not familiar with the CSS system at the level detailed in the Detailed design document and as such we have only considered industry processes.	Thank you for your comments.
National Grid Electricity Distribution (Distribution Network Operator)	Yes. From our understanding the change is implemented from the CSS perspective. We are satisfied all options have been considered.	Thank you for your comments.
Xoserve (GRDA)	I am not aware that this instances where messages can be stalled have been published, but assume that CSS will provide this assurance based on identified instances.	Thank you for your comments.

Question 6:	Do you believe the solution appropriately accounts for the industry's move to the new MHHS arrangements whilst the industry manages both MHHS and non-MHHS Metering Points?	
RESPONDENT DETAILS	**RESPONSE**	**CODE MANAGER COMMENTS**
SP Energy Networks (Distribution Network Operator)	We have not identified any issues relating to MHHS.	Thank you for your comments.
National Grid Electricity Distribution (Distribution Network Operator)	The ultimate goal is to have fully functioning processes that stand up during the process of migration and thereafter. When the CSS message functionality was faulty it caused a number of issues. By introducing the regeneration functionality this should, hopefully, mean that manual interventions are not required and the relevant systems are reliable. By having a Recovery Point System, Resilience Upgrades, Built-In Testing and Design Evolution we believe this appropriately accounts for both arrangements.	Thank you for your comments.

Xoserve (GRDA)	N/a	n/a

Question 7:	What lead time would be required for your business to implement the proposed solution? Please provide justification.	
RESPONDENT DETAILS	**RESPONSE**	**CODE MANAGER COMMENTS**
SP Energy Networks (Distribution Network Operator)	We do not believe at this point that there would be an impact on MPRS, and therefore the only requirement that we would have is that there is no difference from our perspective and no lead time would be required. If it transpires that changes are required to the MPRS system, then these will need a separate impact assessment of the change requirements.	Thank you for your comments. We note your assessment and confirm that no changes will be required to the MPRS system as part of REC Change R0096.
National Grid Electricity Distribution (Distribution Network Operator)	NA	N/A
Xoserve (GRDA)	We do not believe that there are any requirements on the GRDA as part of this solution. We note that there are also no external User trials phases.	Thank you for your comments.

Question 8:	Are you aware of any constraints on when this change can be delivered?	
RESPONDENT DETAILS	**RESPONSE**	**CODE MANAGER COMMENTS**

SP Energy Networks (Distribution Network Operator)	We have noted in the Detailed design document that there is an assumption that the solution will be implemented post MHHS migration (1.7.8 Assumptions, ref AS-05). We are of the view that this change should be implemented at the earliest opportunity for the benefit of the industry.	Thank you for your comments. We acknowledge your assumption regarding MHHS migration and note that, based on current planning, this Change will not be deliverable before November 2027 due to the time required for build and testing.
National Grid Electricity Distribution (Distribution Network Operator)	Not that we are aware of.	Thank you for your comments.
Xoserve (GRDA)	As we understand that there are no User impacts we don't offer any constraints. Note: AS-03 – Out of date. EoGC is no longer proceeding, but assume this reflects the point in time the document was produced?	Thank you for your comments. R0169 is no longer proceeding. The reference in AS-03 reflects the point-in-time when the document was produced.

Question 9:	Do you foresee any risks to your qualification or migration plans to be delivered as part of MHHS implementation caused by the delivery of this change?	
RESPONDENT DETAILS	**RESPONSE**	**CODE MANAGER COMMENTS**
SP Energy Networks (Distribution Network Operator)	N/A – DNO's are already qualified and managing migrations.	Thank you for your comments.
National Grid Electricity Distribution (Distribution Network Operator)	NA	N/A

Xoserve (GRDA)	N/A	N/A

Question 10:	Would implementing the proposed solution incur any costs to your business? If so, please provide details breaking down design/build/test costs and on-going costs. If preferable, please indicate which of the below ranges your costs may fall: A) Nil; B) Up to £9,999; C) Between £10,000 and £49,999; D) Between £50,000 and £99,999; or E) more than £100,000.

RESPONDENT DETAILS	RESPONSE	CODE MANAGER COMMENTS
SP Energy Networks (Distribution Network Operator)	We have not identified any cost relating to the implementation of this change, however if there are costs for changes to MPRS to accommodate this then costs would be incurred. At this point we would have no view on what MPRS costs would be.	Thank you for your comments.
National Grid Electricity Distribution (Distribution Network Operator)	A. Nil.	Thank you for your comments.
Xoserve (GRDA)	As we understand that there are no User impacts, nor any testing requirement. I would expect that we might have administrative costs of reviewing documents, but do not see any functional impacts as a result of this change.	Thank you for your comments.

Question 11:	Do you identify any benefits to your business through the implementation of the proposed solution?

RESPONDENT DETAILS	RESPONSE	CODE MANAGER COMMENTS
SP Energy Networks (Distribution Network Operator)	The implementation of this would potentially remove the impact of having to manually correct information on the MPRS system.	Thank you for your comments.
National Grid Electricity Distribution (Distribution Network Operator)	The ultimate goal is to have fully functioning processes that stand up during the process of migration and thereafter. When the CSS message functionality was faulty it caused a number of issues. By introducing the regeneration functionality this should, hopefully, mean that manual interventions are not required and the relevant systems are reliable.	Thank you for your comments.
Xoserve (GRDA)	In principle, yes. There are no reasons to objecting to self-heal functionality in CSS. However, the extent of the impacts to consumer activities is unknown to us – e.g. if a Registration event stalls prior to GRDA receiving the messages, requiring a Supplier to resubmit and the original Switch Date being missed. I would also qualify this as I suspect that the R0096 functionality will not actively seek to resolve functional stalls – such as those defined in R00178. I suspect that this change might simply better classify these functional issues, but assume that these will require changes to CSS which will be charged and not considered issues within CSS. It is for the Code Managers to make representation whether this is the correct course of action.	Thank you for your comments. The design intent of R0096 is to enable **self-healing for technical stalls** by resuming operations from the last successful checkpoint. This should significantly reduce the likelihood of missed Switch dates caused by technical issues or the requirement for Parties to re-submit messages. However, if a stall occurs before GRDA receives messages and the original Switch date is missed, the impact would depend on existing business rules and participant behaviour (e.g., whether a Supplier resubmits). The solution does not override market rules or participant processes, it focuses on improving resilience and reducing manual intervention.

		R0096 does **not actively resolve functional stalls** caused by business rule conflicts or data quality issues. These remain outside the scope of this change and will be addressed by REC Change R0178.

Question 12:	Taking into consideration both the costs and the benefits seen by your organisation, do you consider this change should be made?	
RESPONDENT DETAILS	**RESPONSE**	**CODE MANAGER COMMENTS**
SP Energy Networks (Distribution Network Operator)	We are supportive of this change.	Thank you for your comments.
National Grid Electricity Distribution (Distribution Network Operator)	Yes, we are inclined to agree that this change should be made.	Thank you for your comments.
Xoserve (GRDA)	We cannot provide any effective assessment of the business case. It is not possible to say based on the information that we are aware of. The costs of this change are unclear – as this design document ONLY appears to be planned delivery of a PoC and design artefacts, but I may have misunderstood the purpose of the document. We have no visibility of the number of transactions that could be at a stalled status. Nor the nature of these transactions. We can perform reconciliation activities only on instances where a pending is received, and then the Secured Active (or cancellation) is not.	Thank you for your comments. The document outlines design artefacts and PoC slices (Section 4.1.7) to validate feasibility. It does not represent full delivery scope or cost estimates. These were developed during DIA and the cost for design, build and test phases will be shared as part of the consultation.

	If the instances and types of stalled transactions is not yet published then this information should be published so this assessment can be made.	

Question 13:	Do you have any other comments relating to this Change Proposal?	
RESPONDENT DETAILS	**RESPONSE**	**CODE MANAGER COMMENTS**
SP Energy Networks (Distribution Network Operator)	No further comments.	N/A
National Grid Electricity Distribution (Distribution Network Operator)	NA.	N/A
Xoserve (GRDA)	We have made a few detailed observations regarding the document within the above responses.	Thank you for your comments.