RETAIL ENERGY CODE

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01	Initial Assessment Report
02	Preliminary Change Report
03	Final Change Report

CHANGE REPORT

R0067 – INTRODUCTION OF CSS REFRESH FUNCTIONALITY

CHANGE REPORT	PRELIMINARY
DOCUMENT VERSION	2.0
ISSUED DATE	05/04/2023
DOCUMENT APPROVAL STATUS	ISSUED FOR CONSULTATION

RESPONSIBLE COMMITTEE	TECHNICAL EXPERT PANEL	CHANGE PATH	SELF GOVERNANCE
PRIORITY STATUS	HIGH	URGENCY	STANDARD

DEADLINE FOR ALTERNATIVE CHANGE PROPOSALS	05/04/2023

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CHANGE OVERVIEW

CSS Market Messages sent by the Central Switching Service (CSS) to Switching Data Service Providers (SDSPs) are either not being received, being received after Gate Closure, or are being received out of the order that they were originally sent in. This Change Proposal seeks to introduce a refresh functionality to mitigate these issues for SDSPs however, it is being tested initially for the Gas Retail Data Agent (GRDA) as the impacts are most prominent within its service. Once delivered, the refresh functionality will be available for other SDSPs who may wish to connect their systems.

	High Impact: Gas Retail Data Agent, Gas Shippers
	Medium Impact: Central Switching Service Provider
	Low Impact: Energy Suppliers, Consumers

CODE MANAGER'S RECOMMENDATION

The Code Manager recommends Change Proposal R0067 is **APPROVED** for implementation on 18 December 2023 as an extraordinary REC release.

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BACKGROUND

1 BACKGROUND

Since the Switching Arrangements went live in July 2022, there have been several observed incidents whereby the SDSPs have not received the expected messages from the CSS; they have been received after Gate Closure or they have been received out of sequence.

Change request CR-D061 was raised under the Switching Programme to introduce functionality that would allow data to be refreshed where misalignment had been identified, reducing the burden on CSS service operations to resolve the issue and without having the need to manually intervene.

The functionality proposed by the above change request has already been built by the CSS Provider in its role as the Smart Meter Data Service Provider (SMDSP) both for Registration Data and for missed Gate Closure messages. This functionality could equally be applied for use by the SDSPs.

The Service Provider Impact Assessment validated the messages to be included in the solution for this Change Proposal are:

- Registration SecuredActive Synchronisation;
- Registration Cancelled Synchronisation; and
- Registration Event Synchronisation.

This Change Proposal is being progressed as a high priority in view of the potential Consumer detriment caused by the time taken to manually correct data errors and the potential risk to gas settlement accuracy.

Although this Change Report focusses on benefits to the GRDA, the refresh functionality will also be available to the Electricity Enquiry Service (EES), Gas Enquiry Service (GES) and Electricity Registration Data Service (ERDS) once their own system changes are made.

2 PROBLEM STATEMENT

CSS messages are not received by the GRDA in the order they were sent, or after Gate Closure, so it can be difficult to detect and often require significant manual effort to resolve. This issue can directly impact Consumer switching experiences causing disruption and possible delays in a switch.

3 USER STORIES

REF.	USER STORIES
CONSUMER USER STORIES	
C1	As a Consumer, I want the Switching process to work successfully, so that I can switch Energy Supplier without delays or issues.
MARKET PARTICIPANT USER STORIES	

M1	As the CSS Provider, I want the messages I send to GRDA to be received and processed successfully, so that there are no interruptions to the Switching process or the Consumers' Switching experience.
M2	As the CSS Provider, I want the functionality to be available for GRDA to automatically resolve issues when messages are not received in the correct order or are received after Gate Closure, so that this work does not have to be done manually and the volume of incidents is reduced.
M3	As the GRDA, I want to be able to detect when I have not received the expected CSS messages, so that I am able to request that the missing messages are sent to me to process without needing to raise a ticket to the CSS Provider.
M4	As the GRDA, I want to be able to request a refresh of CSS messages when they are not received in the correct order or they are received after Gate Closure, so that I am able to maintain an accurate reflection of the current Switch status and minimise impacts on CSS Users and Consumers.
M5	As a Losing Shipper, I want central systems to exchange the required information to complete the Switch submitted, so I am not liable for transportation costs past the intended date of my appointment to the Supply Meter Point.
M6	As an Energy Supplier, I want central systems to exchange required information to complete the Switch I have submitted, so that I am able to enter actual meter readings from the date the Switch should complete and issue accurate billing.

PROPOSAL

4 SUMMARY OF ANALYSIS UNDERTAKEN

This Change Proposal originates from a change request raised under the Switching Programme as CR-D061, which aimed to introduce a refresh functionality such as is being proposed as the solution for this Change Proposal. Although this change request was not implemented prior to the CSS Go-Live Date, the functionality exists in the Smart Meter Data Service (SMDS). The GRDA identified this functionality would provide benefits to the service it provides.

The Code Manager held workshops to discuss the solution, impacts, and urgency for this Change Proposal, which was attended by the SDSPs and the CSS Provider. This activity clarified that the scope of this Change Proposal was only necessary for use by the GRDA at this point in time. It would immediately mitigate risks to settlement by reducing the number of missing/delayed messages. Other SDSPs have also expressed an interest in making use of this functionality in the future, which could be explored through internal system changes and would not require a further REC Change Proposal.

Through the Service Provider impact assessments, it was confirmed that the refresh functionality already in use for the SMDSP could be repurposed.

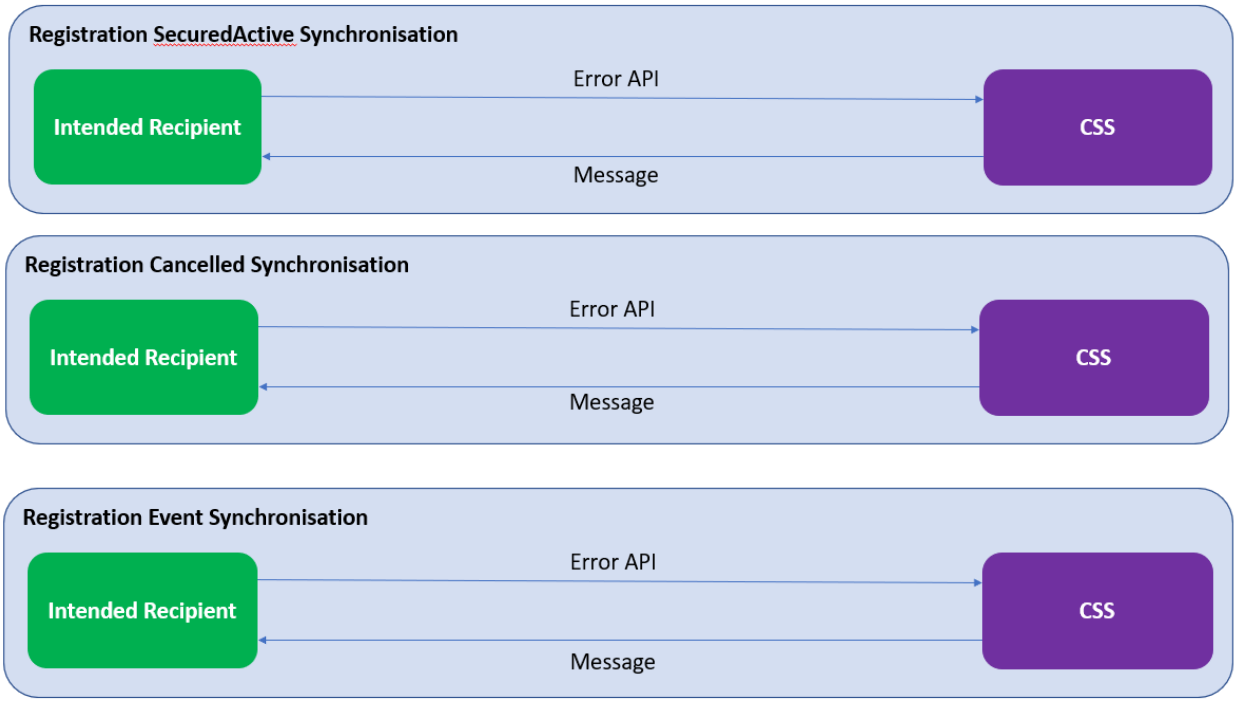
5 PROPOSED SOLUTION

This Change Proposal aims to introduce functionality to refresh three CSS messages. This functionality will be made available to the GRDA to ensure high impact incidents, such as late Gate Closure messages, can be resolved.

The Preliminary Impact Assessment validated that the messages to be included in the final solution are:

- Registration SecuredActive Synchronisation;
- Registration Cancelled Synchronisation; and
- Registration Event Synchronisation.

The proposed solution is to repurpose existing functionality that is used by the SMDSP, this is summarised in the extract from the SMDSP solution document. The following diagram provides additional clarity on the requirements specification.



The messages that are sent back using the new functionality that will contain the original 'EventDate' and will now include a timestamp. To amend the original 'EventDate' would result in a higher complexity design and build, as it would diverge from the SMDSP design.

6 DRAFT LEGAL TEXT

The legal text changes to deliver the proposed solution to R0067 can be found here.

The documents being amended by this Change Proposal are:

- Schedule 1 – Interpretations and Definitions to introduce a newly defined term of Market Message Refresh;

- Schedule 24 – Switching Data Management to include a Market Message Category of "Refresh" in paragraph 2.5; and
- Schedule 27 – RMP Lifecycle to introduce a new interface table in paragraph 8 that sets out the processes for sending and responding to refreshed messages.

7 SUMMARY OF IMPACT ASSESSMENT ACTIVITY

7.1 SERVICE PROVIDER IMPACT ASSESSMENTS

Three Parties responded to impact assessments as part of the R0067 solution analysis. This included responses from the CSS Provider, GRDA and the RECCo system integrator. Updated detailed impact assessments were required to reassess the impact of replanning the environment delivery pathway and to provide clarification of a design query. The information below is in reference to the latest impact assessments received.

Central Switching Service (CSS) Provider	• The CSS Provider submitted its detailed impact assessment response on 07 March 2023. • The impact assessment response confirmed that the proposed solution is both viable and implementable. • The response also confirmed that minimal effort is required in the CSS design and build phase and that most of the implementation complexity comes from the associated testing. Pre-Integration Testing (PIT) is to be completed prior to SIT. SIT will include CSS and GRDA interfaces and be performed using the CSS SITb environment. Following SIT testing, the changes will be deployed in the CSS UITb, SITa and UITa environments prior to implementation. • An estimated time to deliver the solution was provided as 34 weeks, with an estimated cost of £295,000 for the design, build, test and implementation of the proposed solution with no anticipated on-going operational costs. Further details of these costs can be found in section 11 of this report. • The cost quoted is inclusive of a £10,000 provisional cost for the ServiceNow element of the CSS. This cost will be confirmed or removed during the design phase of implementation.
Gas Retail Data Agent (GRDA)	• The GRDA provided its detailed impact assessment response on 09 December 2022. An updated response was received on 29 March 2023, where it was confirmed that there were no changes required to its original impact assessment. • The impact assessment response confirmed that the solution is both viable and implementable. • An estimate of 50-60 WDs was provided, to implement the solution. A breakdown of costs for this work was provided of between £48,850 and £71,275, with an ongoing operational

	cost of £60,000 to £66,000 per annum. Further details of these costs can be found in section 11 of this report. • Whilst direct savings, related to the implementation of this Change Proposal, could not be provided, an in-depth explanation of the impact of receiving late messages from CSS, and how this impacts gas settlement, has been provided and included within the case for change.
System Integrator	• The system integrator confirmed that its scope is limited to project management support only to deliver the R0067 solution at a cost of £26,635.

8 DELIVERY AGAINST CHANGE PROPOSAL PLAN

This Change Proposal Plan has been re-baselined due to additional information becoming available. All activity within this re-baselined plan has been completed within the expected timescales.

The Change Proposal Plan can be found here.

9 KEY RISKS, ASSUMPTIONS, ISSUES AND DEPENDENCIES

9.1 ASSUMPTIONS AND DEPENDENCIES

No.	ASSUMPTION	NOTES	HOW/WHEN TO VALIDATE
A1	Existing functionality can be repurposed.	The solution currently in place for the SMDSP can be re-purposed for this Change Proposal.	Validated by Service Provider impact assessment.

No.	DEPENDENCY	NOTES	HOW/WHEN TO VALIDATE
D1	There is a dependency on the technical specification.	Where the technical specification differs from the assumptions of the GRDA, progress will need to be halted and the plan revisited.	Open.
D2	There is a dependency on End-to-end (E2E) testing.	There will be no gaps in GRDA testing. Once E2E testing has been completed, the code will be placed in a hold freeze state until there is an agreed implementation date.	Validated by Service Provider impact assessment.

D3	There is a dependency on the approval of CSS Provider, GRDA and system integrator costs being approved.	RECCo will need to approve the costs associated with R0067 prior to publishing the Final Change Report.	Open.

10 PROPOSED IMPLEMENTATION DATE AND APPROACH

PROPOSED IMPLEMENTATION DATE	18/12/2023	**PROPOSED IMPLEMENTATION APPROACH**	BIG BANG

It is proposed that this Change Proposal be implemented within an extraordinary REC release on 18 December 2023 which aligns with the project deployment plan. This is appropriate due to the positive benefits of the solution.

11 BUSINESS CASE ASSESSMENT

11.1 COSTS

	DESIGN/ DEVELOPMENT COSTS	ONGOING OPERATIONAL COSTS
CSS PROVIDER	£295,000[1]	N/A
GRDA	£48,850 TO £71,275	£60,000 TO £66,000 PER ANNUM
system integrator	£26,635	N/A
TOTAL	£370,485 - £392,910	£60,000 TO £66,000 PER ANNUM

The costs shown above are the aggregated costs for the design, build and test activities from the CSS Provider, GRDA and system integrator, as provided in their impact assessment responses in March 2023.

11.2 BENEFITS

11.2.1 TANGIBLE BENEFITS

The tangible benefit of implementing this Change Proposal is cost avoidance for the Losing Shippers and the correct apportionment for the Gaining Shipper, achieved by the reduction of resolution timescales for missing messages, as well as mitigating the risk of incidents of missing messages being left outstanding. As such, this section refers to a “beneficial cost point” rather than “payback period” to reflect that the tangible benefit relates to accurate charging.

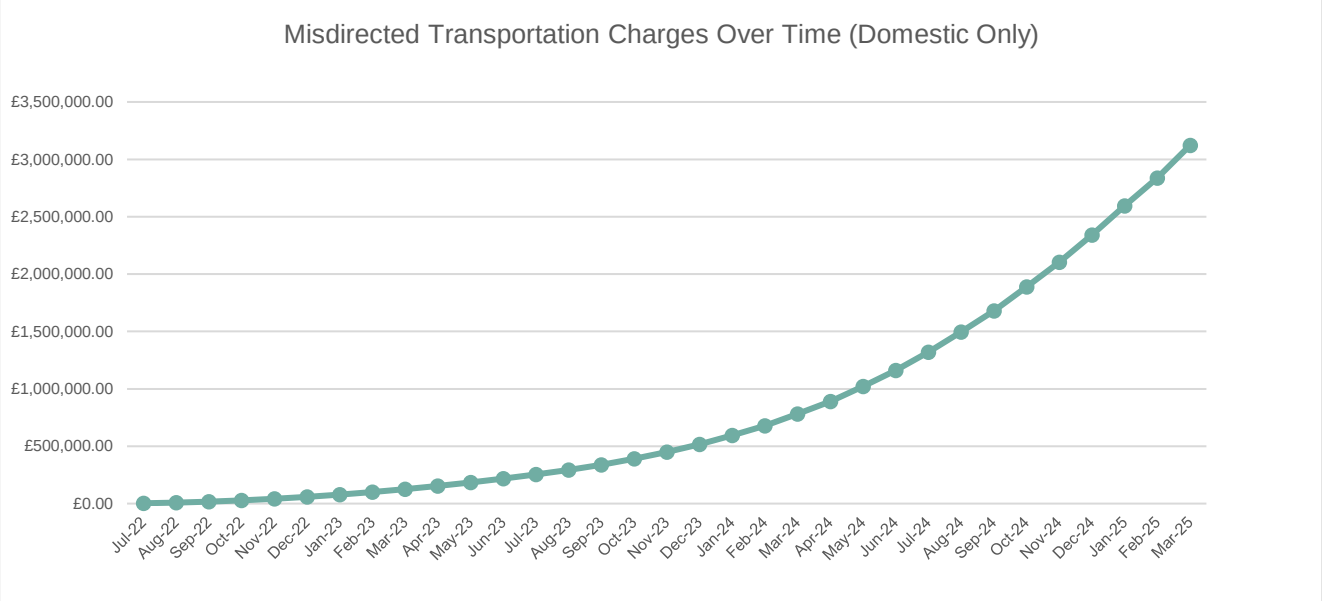
[1] Price inclusive of a provisional £10,000 cost for Service Now, to be confirmed during the design phase.

The table below sets out the potential costs that relate to the daily misdirected transportation charges incurred by the Losing Shipper, where the new registration has not been processed due to a missing message from the CSS. This has been broken down into three categories: small domestic, the average industrial and commercial (Avg. I&C) and large daily metered Supply Meter Points.

TANGIBLE BENEFITS	Domestic	Avg. I&C	Large Daily Metered Supply	Benefits Confidence
Transportation charges incurred by Losing Shipper (Daily per Site)	£2.49	£68.34	£15,481.85	HIGH

Between 24 July 2022 and 03 January 2023, there have been 200 cases of missing messages sent by the CSS Provider to the GRDA. There is currently no process to resolve these missing messages which have been building up since 24 July 2022. However, this has only impacted domestic sites meaning the Losing Shippers have seen associated transportation charges to date of approximately £81,174 (based on data from 24 July 2023 to 03 January 2023).

The graph below depicts the anticipated cost incurred by Losing Shippers since CSS Go-Live and until March 2025, due to domestic registrations not being processed because of missing messages. The forecast assumes that, after remaining low for the next six months, switching volumes will return to levels similar to those seen before November 2021, as well as registration issues remaining unresolved over that period.



There is limited information to account for the tangible benefits associated with this Change Proposal due to:

- Impacts to date only being available for domestic Supply Meter Points;
- Switching volumes are low; and
- The CSS having been live for only nine months.

Consequently, to support the case for change, and provide an indicative view of the costs associated with this issue, the Code Manager has conducted analysis of the potential benefit of the cost avoidance of misdirected transportation charges for Losing Shippers and the correct charges being applied to the Gaining Shipper, based on a set of assumptions.

This has created several scenarios setting out the potential cost and length of time it will take to exceed the cost of this solution. These scenarios are:

1. Domestic only sites are impacted, with an average resolution timescale of 83 days or 163 days.
2. A mixture of domestic, average I&C and large daily metered supplies are impacted by the issue under current switching volumes with the average resolution time (83 days).
3. A mixture of domestic, average I&C and large daily metered supplies are impacted by the issue under current switching volumes with the maximum resolution time (163 days).

The full analysis document detailing the assumption made within each scenario can be found here.

The table below summarises the cost for each scenario, the potential time each would take to exceed the cost of implementing this solution.

Scenario Number	Number of incomplete Registrations	Resolution days	Transportation Costs (per annum)	Beneficial Cost Point. (Lower and upper cost if different)
Scenario 1	448	83	£92,588.16	Between 4 and 4.2 years
		163	£181,829.76	Between 2 and 2.2 years
Scenario 2	448	83	£1,475,885.79	Between 92 and 97 days
Scenario 3	448	163	£2,898,426.31	Between 47 and 49 days.

This could result in potential annual cost avoidance benefits of between £93K and £2.9m in avoided misdirected transportation charges to Losing Shippers.

11.2.2 INTANGIBLE BENEFITS

In addition to the tangible benefit associated with avoiding misdirected transportation charges, there are several intangible benefits associated with the implementation of this solution. These are set out in the table below.

Whilst the tangible benefits represent the cost saving for Losing Shippers, these benefits represent the way that this solution will mitigate potentially serious issues that the GRDA, CSS Provider and Consumers currently face.

INTANGIBLE BENEFITS	BENEFITS DESCRIPTION
Compliance with the REC	Each message not received by the GRDA represents an incomplete registration of a Supply Meter Point. In these situations, the GRDA and CSS Provider would not meet the obligations relating to the registration, as set out within Schedule 23 – Registration Services.
Reduced risk of detriment to Consumer Switching and billing	Currently, a missing or delayed message from the CSS will result in a misalignment between the systems of the GRDA and the CSS Provider. When the misalignment relates to a registration message, there will be a delay in that registration being processed, causing issues for the Switch of that Supply Meter Point. This Change Proposal proposes a solution that will allow for more timely resolutions, as there will be a defined mechanism for the GRDA to autonomously initiate requests for the missing messages to be resent. Currently, the GRDA requires the CSS Provider to manually investigate each individual case and have observed that in some instances these investigations have not reached a conclusion.
Reduced risk of misalignment between industry systems	As well as incorrectly applying transportation charges to the Losing Shipper, there are several further impacts affecting the Gaining Shipper which will consequently impact the Registered Supplier and Consumer. When there is an issue with messages being out of sync or missing; • The Gaining Shipper will be unable to submit meter readings, resulting in estimated readings being used, causing charging impacts and transaction rejections. • The Gaining Shipper will be unable to submit supply and meter point amendments, including settlement data corrections resulting in further charging impacts and transaction rejections. • There could be incorrect contact details held within emergency and broadcast contact data held in central systems, as well as Priority Service Register data. This would also be issued to network operators.

	• The Gaining Shipper will not be receiving transportation charges until the registration is resolved. It is worth noting that to date this issue has only occurred for smaller Supply Meter Points, and as such the volumes of gas that has been at risk of incorrect allocation has been minimal. However, if this should impact a larger Supply Point, and in particular Daily Metered Supply Points (Class 1 or 2), the impact could be far more material to the gas industry. Any uncertainty over the Responsible Shipper for the nomination of gas volumes into the Total System for Class 1 sites may result in the Losing Shipper not taking the necessary corrective actions, resulting in imbalance charges or, in extreme cases, National Grid taking action to balance the Total System by purchasing gas from the On-the-Day Commodity Market (OCM). This will have a material impact, as the prices may vary to those that were covered by an existing contract. All issues described here are exacerbated by the current volatility in the price of wholesale gas.
Future use of the solution	Whilst it was agreed during the solution analysis phase of this Change Proposal that this solution would only be delivered for the GRDA, an interest in having access to this solution has been expressed by the ERDA and EES for use under the MHHS target operating model. It could be used to ensure that all messages are received daily prior to 21:00 local time, as there will be an SLA placed on Distribution Network Operators to complete all MHHS service appointments by this time.

11.3 COST BENEFIT ANALYSIS SUMMARY

Based on the information gathered through Service Provider impact assessments, and the assumptions as described within section 11.2.1 of this document, there is a financial benefit available to Losing Shippers to implement this change and ensures that charges are correctly applied to the Gaining Shipper. It also removes customer detriment from inaccurate billing and improves switching confidence.

Whilst there is an ongoing annual cost to the industry, ensuring the correct costs are proportioned to the appropriate industry Party, as well as the intangible benefits described represents a positive case for change.

12 CASE FOR CHANGE

12.1 SELF GOVERNANCE

The Code Manager considers that there is a positive case for change to implement this Change Proposal, on the basis that the proposed solution;

- is both viable and possible to implement, and it appropriately resolves the problem statement;
- enables Market Participants to gain access to the solution in the future;
- facilitates the mitigation of the material risks posed to Consumers, gas settlement, and Losing Shippers; and,
- creates a more positive outcome for Consumer Switching.

13 CODE MANAGER'S RECOMMENDATION

Based on the evidence provided in sections 11 and 12 of this report, the Code Manager considers that a positive business case can be made for implementing this solution, and recommends that the Technical Expert Panel:

- **APPROVE** the proposed change solution;
- **APPROVE** the proposed implementation approach; and
- **APPROVE** the proposed implementation date of 18 December 2023 as a big-bang, extraordinary REC release.

14 CONSULTATION PLAN AND NEXT STEPS

The consultation on this Preliminary Change Report for R0067 will be published on the REC Portal on 14 April 2023 and will close on 28 May 2023**.**

Following consultation, the Code Manager will produce an updated version of this Preliminary Change Report (referred to as the Final Change Report). This will include the outcome of the consultation, setting out a summary of the consultation submissions and the Code Manager's response.

The Final Change Report will be raised on 10 May 2023 for the Technical Expert Panel to make its determination.

15 APPENDIX

CHANGE PROPOSAL	R0067 – Change Proposal Form
LEGAL DRAFTING	Link to PDFs Link to EMAR
ANY OTHER DOCUMENTS / LINKS	R0067 - Change Proposal Plan

	Appendix A – Extract from SMDSP solution document R0067 – Cost Benefit Analysis and Conclusions

16 GLOSSARY

TERM	DEFINITION
Annual Quantity (AQ)	has meaning given to it in the UNC.
Central Switching Service (CSS)	means the Systems and processes provided or procured by the CSS Provider for the purpose of providing the Address Management Service and the Registration Service.
CSS Go-Live Date	means the time and date designated as such by the Authority.
CSS Provider	means the DCC when performing functions under or in relation to this Code (but always excluding its functions under the Smart Energy Code and its roles as CSS Systems Integrator, SI Provider and Switching Operator), including in respect of the Central Switching Service and including in effecting the design, build and testing of any System that will allow it to perform functions under this Code after the CSS Go-Live Date. This role is the CSS Procurer and Manager function as described in the E2E Data Migration Plan, E2E Integration Plan, E2E Post Implementation Plan, E2E Testing Plan, E2E Transition Plan: Implementation Approach and E2E Transition Plan: In-Flight Switches Approach.
CSS User	means each organisation which is Qualified to use the CSS, together with each Switching Data Service Provider (other than the CSS Provider) the categories of which are set out in the Central Switching Service Schedule.
Daily Metered Site	A site with a large AQ (more than 58.6 million kWh) that is required to submit readings daily for settlement purposes. Also known as a class 1 site within the UNC.
Electricity Enquiry Service (EES)	means the service described as such in the EES Service Definition.
Electricity Retail Data Service (ERDS)	means the electricity registration services provided under this Code to support the provision of electricity retail data to the CSS and other services.

TERM	DEFINITION
Gas Enquiry Service (GES)	means: (a) until CSS Go-Live Date, the enquiry service provided pursuant to the UNC which allows authorised users to access Gas Retail Data; and (b) from CSS Go-Live Date, the service of that name procured by RECCo pursuant to the Data Access Schedule.
Gas Retail Data Agent (GRDA)	means the provider of a Gas Transporter's Gas Retail Data Service.
Gas Retail Data Services (GRDS)	means the gas registration services provided under this Code to support the provision of gas retail data to the CSS and other services.
Gate Closure	means, 17:00 hours on the day before the Supply Effective From Date of a Switch or Initial Registration.
Losing Shipper	means the Shipper nominated by the Losing Supplier (or, for a Change of Shipper Request, the incumbent Shipper at the time of the Change of Shipper Request).
Losing Supplier	means, in relation to a proposed Switch (or Switch), the Energy Supplier which will cease to be the Registered Supplier at an RMP as a result of that proposed Switch (or which has ceased to be the Registered Supplier as a result of that Switch).
Registration Data	means the data recorded in relation to a Registration.
Smaller Supply Point (SSP)	is a Supply Point in respect of which the Annual Quantity is not greater than 73,200 kWh (2,500 therms)" – as per the Uniform Network Code of Gas Transporters.
Smart Meter Data Service Provider (SMDSP)	means the DCC in its role as provider of the Smart Meter Data Service.
Switch	means a change to the Registered Supplier for an RMP.
Switching Data Service	means each of the Central Switching Service, the Gas Retail Data Service, the Electricity Retail Data Service, the Smart Meter Data Service, the Electricity Enquiry Service and the Gas Enquiry Service.
Switching Data Service Providers (SDSPs)	means the CSS Provider, the SMDSP (in respect of the services provided under the Smart Energy Code), the Gas Retail Data Agent, the Electricity Retail Data Agents and the Enquiry Service Providers.
Switching Programme	means the programme established by the Authority to implement new switching arrangements in retail energy markets.

TERM	DEFINITION
System Integration Testing (SIT)	involves the overall testing of a complete system of many subsystem components or elements.