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R0097 – SOLUTION DEVELOPMENT REPORT

R0097 - CONSEQUENTIAL CHANGE FOR CSS SMART METER DATA RETRIEVER APPOINTMENTS

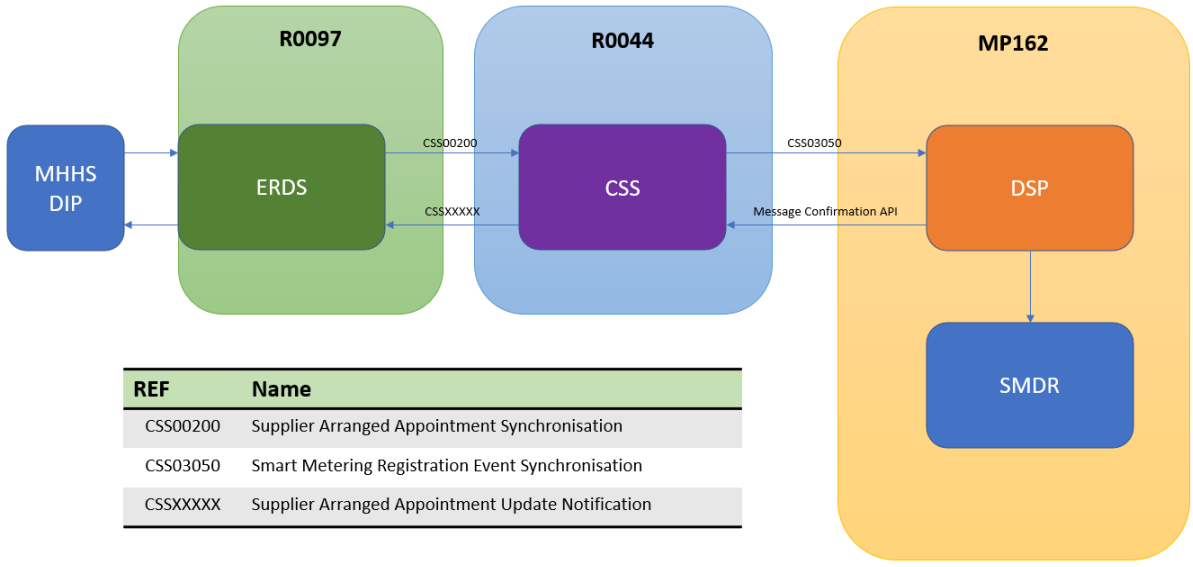
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1 CHANGE PROPOSAL SUMMARY

Change Proposal R0044 'MHHS Programme Changes Required to Central Switching Service' has been progressed to allow for Smart Meter Data Retriever (SMDR) appointment data to be transferred through the Central Switching Service (CSS) to the Smart Meter Data Service Provider (SMDSP), as specified in the MHHS Target Operating Model (TOM).

During the R0044 detailed design impacted Service Providers and the Code Manager identified and proposed changes that will enable them to reduce additional demand on their systems and operate the proposed solution more efficiently. The Code Manager has subsequently raised a new Change Proposal (R0097 - Consequential Change for CSS Smart Meter Data Retriever Appointments), to take forward these changes, as well as the required updates to the Data Specification. This will not impact the delivery of R0044, see below diagram which outlines which changes cover the SMDR appointment end-to-end process.



REF	Name
CSS00200	Supplier Arranged Appointment Synchronisation
CSS03050	Smart Metering Registration Event Synchronisation
CSSXXXXX	Supplier Arranged Appointment Update Notification

Change Proposal R0097 has been raised to progress the identified consequential change and should be considered high priority and a critical dependency to ensuring the successful delivery of the MHHS TOM.

2 SOLUTION

2.1 PROBLEM STATEMENT

The implementation of Change Proposal R0044, will result in the CSS providing an asynchronous response to the Electricity Retail Data Service (ERDS) upon a successful, or unsuccessful SMDR appointment within the SMDSP. This will significantly increase the volume of CSS messages, as there is currently no mechanism for the CSS to recognise when a response is required. The increased volume could have a significant impact on central system performance.

2.2 PROPOSED SOLUTION

Whilst undertaking the R0044 detailed design, the CSS Provider identified the need to introduce a mechanism to allow for the identification of SMDR appointment messages, such that the asynchronous response will be issued SMDR appointments only. The Code Manager held several workshops with the CSS Provider, Electricity Retail Data Agent (ERDA) and the SMDSP Provider, with all parties agreeing approach set out below would be preferable to ensure the R0044 requirements could be delivered in full.

The preferred approach would see the introduction of an ‘acknowledgement required flag’ parameter to the RECM_SN_CSS00200 (SupplierArrangedAppointments) and the REC_SN_CSS03050 (Smart Metering Registration Event Synchronisation), so that the data owner (ERDS) can specify when a response is required.

The additional data field should be included as an extension to the URL ERDS call for RECM_SN_CSS00200 (i.e. the data field is not in the message, but rather in the address), so that there is no impact to other users of the SupplierArrangedAppointments message, such as the Gas Retail Data Service (GRDS).

Furthermore, the ERDA will also receive a confirmation notification from CSS, notifying that the SMDR appointment has been successful, or unsuccessful. The confirmation message has been included in the R0044 design to capture the CSS Provider changes. Change Proposal R0097 includes the ERDA impacts.

2.2.1 R0044 API CALLING CONVENTION

The R0044 detailed design includes reference to the additional API calling convention for the RECM_SN_CSS00200 that must be applied to the ERDS URL call, such that the ‘acknowledgement required flag’ is included. Please see below the relevant details from the R0044 Detailed Design:

> *The API calling convention is extended to include support for an optional query string parameter defined in the table below.*

Parameter name	Data Type	Usage
confirmationRequired	Boolean	**true –** API caller requests confirmation on the success or failure of the update to appointments for role SMDR by the DCCSM. **false –** API caller does not expect a confirmation message for the update **omitted** – API caller does not expect a confirmation message for the update

Inclusion of the confirmationRequired *parameter is optional with usage limited to:*

- *ERDA use the parameter to indicate whether a confirmation message is expected from DCCSM for a SAA update*
- *GRDA should not use the parameter*

Validation of the new query string parameter is performed as part of the existing API schema validation applied to API calls.

As per standard practice, the query string parameter is added to the URL when calling the API. In the case of the update SAA API each of the following URL specifications is valid:

1. /registrations/{registrationId}/supplierarrangedappointments
2. /registrations/{registrationId}/supplierarrangedappointments?confirmationRequired=true
3. /registrations/{registrationId}/supplierarrangedappointments?confirmationRequired=false

The R0097 requirements specification has been included in Attachment A.

2.2.2 CONFIRMATION NOTIFICATION

The R0044 detailed design includes reference to the confirmation notification that must be applied to ensure that ERDA's can determine whether an update has been successful, or unsuccessful. Please see below the relevant details from the R0044 Detailed Design:

In order to communicate the DCCSM provided confirmations of Supplier Arranged Appointment (SAA) updates for role MDR back to the ERDA system that provided the update to CSS, the existing CSS webhook messaging system will be used along with a new Event Type.

CSS context type ERDA is required to subscribe a Webhook URL to receive messages for the new event type of SupplierArrangedAppointmentUpdateNotification. No other CSS context is authorised to subscribe to receive SupplierArrangedAppointmentUpdateNotification events.

The new Event Type data payload is defined below following the conventions documented in the "CSS Interface Design Specification" section 5.4 "Webhook API".

ContextType: ERDA
SupplierArrangedAppointmentUpdateNotification
Data:

```
{
        "confirmingMpid": "string",
        "registrationId": "string",
        "updateSucceeded": "string",
    "supplierArrangedAppointments": [{
                    "mpId": "string",
                     "role": "string",
                     "fromDate": "string",
                     "toDate": "string"
        }]
}
```

confirmingMpid *contains the mpid of the market participant that applied the SAA update for role SMDR to their system. This will always be DCCSM for the initial release being the only party currently required to confirm SAA update processing for role MDR.*

updateSucceeded *is set to true when the SAA update was applied successfully and to false when it was not successful (based on whether the confirmation received by CSS from the confirmingMpid contained a populated errors array). When set to false the errors array provided to CSS by the confirmingMpid is included in the standard CSS Webhook Payload errors object.*

registrationId *identifies the registration for which the SAA data has been updated and is included in response to the Solution Variation Request:*

"ERDS Adapters do not have visibility of EventID and correlationId associated with the MDR appointment. The Asynchronous Response back to ERDS should include the registrationId so that ERDS can link it back to the original message"

It should be noted that the corrrelationId assigned to the original update SAA API call is included in the standard CSS Webhook Payload data. If multiple SAA updates are made to the same registration the subsequent SupplierArrangedAppointmentUpdateNotification messages will contain the same registrationId and it is the correlation id that links the original update SAA API call, the RegistrationEventSynchronisation message sent to DCCSM, the confirmation response received from DCCSM and the SupplierArrangedAppointmentUpdateNotification sent to ERDA.

The SupplierArrangedAppointments array has been added to the SupplierArrangedAppointmentsUpdatesNotification, in response to the risk that messages sent with the same registrationID in quick succession may result process failure (see Section 6). The CSS Provider has confirmed the addition will be reflected in the R0044 final design document.

2.2.3 DATA SPECIFICATION UPDATES

Change Proposal R0097 requires data specification changes to the CSS RECM_SN_CSS00200 (SupplierArrangedAppointments) and REC_SN_CSS03050 (Smart Metering Registration Event Synchronisation). For the avoidance of doubt, Change Proposal R0097 covers the Data Specification updates only, whilst the functional changes to CSS will be delivered as part of R0044 build activities.

Furthermore, Data Specification updates are required to include the additional SupplierArrangedAppointmentsUpdateNotification message to be sent by ERDS, which is covered in Change Proposal R0097. We have also included two fixes to the CSS RECM_SN_CSS00200 (SupplierArrangedAppointments) and REC_SN_CSS03050 (Smart Metering Registration Event Synchronisation), which amends data items 'MPxN' to 'MPID'. For the avoidance of doubt, this is a Data Specification correction only, no further action is required.

The proposed Data Specification changes are summarised in Attachment B.

2.2.4 SMART METER DATA RETRIEVER (SMDR) ROLE CODE

A REC party called out in their initial assessment response that the solution will require a new role code for SMDR appointments. New roles are added to Market Domain Data (MDD), hosted by the Balancing and Settlement Code (BSC), which will prompt an update to the Switching Operational Data (SOD) in the REC. Conversations to date indicate that the role will be 'MDR', yet will be progressed outside of this Change Proposal.

3 IMPACT ASSESSMENT

The R0097 solution is expected to impact ERDAs, specifically the ERDS adapter service providers. The Code Manager proposed that the CSS Provider and GRDA should also undertake an initial assessment, which validated the assumption that there are no impacts to these services.

4 IMPLEMENTATION

This Change Proposal will need be implemented in alignment with the MHHS delivery timetable to ensure the end-to-end solution is delivered together in time for MHHS System Integration Testing (SIT). The MPRS provider, with the ERDAs has noted that it is currently targeting January 2024 for this. Implementation of R0097 will need to align to MHHS go live, alongside other related changes. Delivery planning will need to ensure that ERDA can achieve its MHHS SIT entry plans.

5 ASSUMPTIONS AND DEPENDENCIES

The following assumptions and dependencies have been identified for R0097.

Ref	Assumptions and Dependencies
001	The proposed solution does not impact GRDA
002	Change Proposal impact is limited to the ERDA and associated adapters
003	Failure to implement R0097 will result in the R0044 solution not working and cause significant MHHS Programme delays and downstream costs
004	Failure to implement R0097 ahead of ERDA SIT will result in MHHS Programme delays
005	Technical changes to the REC_SN_CSS03050 are being delivered as part of R0044
006	CSS impacts are captured under Change Proposal R0044 and are required in order to deliver R0044 requirements in full.

6 RISKS

ERDA has flagged that in the event the MHHS Smart Data Service sends two SMDR updates, with the same registrationID, within a short period of each other, which have different outcomes, ERDS will be unable to identify which asynchronous response relates to which update.

The Code Manager has discussed the outlined scenario with representatives from ERDA and understand the above scenario to be an edge case. The current understanding suggests that it may only occur where erroneous messages are sent and a corrective message is sent soon afterwards.

Subsequent to identifying the risk, the CSS Provider has amended the design of the SupplierArrangedAppointmentsUpdatesNotification to include the SupplierArrangedAppointments array. This will provide ERDAs more information in which to differentiate the messages.