REC Assessment Criteria for MHHS Qualification

26/03/2024





CHANGE HISTORY

Version	Status	Issue Date	Author	Comments
1.0	Final	05/09/2023	REC Code Manager	Approved by PAB
1.1	Draft	19/03/2024	REC Code Manager	 Draft for PAB approval. Changes include: Addition of Non-Functional and Migration Requirements Updates to align with the latest version of the Qualification Approach and Plan General housekeeping changes
2.0	Final	26/03/2024	REC Code Manager	V1.1 approved by PAB for publication

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2 INTRODUCTION

The Marketwide Half Hourly Settlement (MHHS) Programme is a major reform within the Electricity sector sponsored by Ofgem with the objective to develop and then implement an enduring process for MHHS that delivers benefits for consumers by maximising the opportunities provided by smart metering in enabling an intelligent, flexible electricity system. MHHS will change many processes that are governed under the Balancing and Settlement Code (BSC). However, it will also result in changes under the Retail Energy Code (REC), which will need changes to processes for electricity Suppliers, electricity Metering Equipment Managers (MEMs), Distribution Network Operators (DNOs, including the Registration Service operated by DNOs), Electricity Enquiry Service (EES) and Central Switching Service (CSS), with associated technology changes.

2.1 MHHS QUALIFICATION

The MHHS Programme does not deliver Qualification activities, with this responsibility remaining with the Balancing and Settlement Code Company (BSCCo) and the REC Code Manager.

MHHS Qualification assesses whether Programme participants that plan to operate in MHHS arrangements, have the appropriate systems, processes and controls in place to undertake relevant BSC and REC processes.

To assess this, the REC Code Manager and BSCCo are jointly developing the Qualification process in consultation with Programme participants through the Qualification Working Group (QWG).

2.2 ROLE OF THE REC PERFORMANCE ASSURANCE BOARD (PAB)

The REC PAB's role within the MHHS Qualification process is to:

- Set the policy, approach, and risk appetite for MHHS Qualification under REC.
- Take key decisions on the nature, extent, and timing of assurance activities.
- Discharge the responsibility to make individual Qualification decisions to the REC Code Manager.

2.3 APPROACH FOR MHHS QUALIFICATION

The REC Code Manager, jointly with the BSCCo, is responsible for developing two key artefacts for Qualification – the Qualification Approach and Plan (QA&P) and the Qualification Assessment Document (QAD).

The QA&P sets out the purpose of Qualification during the MHHS Programme and the high-level plan and requirements for Programme participants in relation to the BSC and REC. The latest version (v2.0) of the QA&P will be published in March 2024, following approval from the Qualification Advisory Group (QAG) of the MHHS Programme and the REC and BSC PABs. The Code Bodies (REC Code Manager and BSCCo) will continue to update this on an iterative basis as additional information is published by the MHHS Programme.

The Code Bodies are currently developing the Qualification Assessment Document (QAD) that will be based on the principles set within the QA&P and will provide a detailed view on MHHS Qualification

requirements for Programme participants by market roles they intend to operate in the new arrangements.

To develop this, the REC Code Manager, along with RECCo, has reviewed the business, migration and non-functional requirements by role for DNOs, electricity Suppliers and electricity MEMs published by MHHS Programme to identify areas relevant for REC, assessed the associated retail risks, and developed the assessment criteria by role as outlined in this document and approved by REC PAB. This is based on the existing requirements within the current design baseline. The lower-level detail, including the approach to testing new response timescales (defined in the Operational Choreography) will be applied following agreement of the high-level approach. Some areas of design are still outstanding, e.g. service management requirements. We expect these to be developed and tested centrally through SIT Operational testing facilitated by MHHS Programme. These may also need to be tested during Qualification and covered through questions within the QAD. This document will be updated once further clarity is available from the MHHS Programme.

2.4 HIGH-LEVEL REQUIREMENTS FOR QUALIFICATION

To complete MHHS Qualification, a Programme participant needs to complete the following:

- Pre-Integration Testing (PIT)¹: All participants will complete internal testing to evidence they have designed, built and tested their systems to operate within the MHHS arrangements. This evidence will be used to also cover risks where testing is not possible in the central integrated environment, as well as in cases where sufficient assurance can be gained from the review of PIT evidence, and further testing within the central integrated environment is not required.
- System Integration Testing (SIT) or Qualification Testing (QT): Depending on the route to
 Qualification a participant opts for, they will need to complete end-to-end testing in an integrated
 environment either through SIT facilitated by the Programme, or through QT facilitated by the
 Code Bodies to prove interoperability with other Market Participants.
- QAD: All participants will complete the QAD, where they will provide details and evidence that their business solution – comprising business processes, local work instructions, management procedures and IT applications – meets their Code requirements that are changing.

¹ As per the E2E Testing and Integration Strategy published by MHHS Programme, Programme participants are expected to carry out a final test where all components are tested for business scenarios in an end-to-end manner which is often referenced as User Acceptance Testing (UAT). PIT refers to this UAT and not to any earlier tests carried out as part of development.

3 APPROACH FOR QUALIFICATION TESTING

3.1 PURPOSE OF QUALIFICATION TESTING

The REC Code Manager and BSCCo will use Qualification Testing to satisfy the following objectives:

- <u>Mitigating risk:</u> Testing beyond what has been tested by the Participant in PIT, allows us to cover high-risk interfaces and business processes.
- <u>Efficiency during QAD completion:</u> By conducting a test, we can reduce the amount of evidence required to demonstrate participant's ability to meet the requirements.
- <u>Efficiency during testing review:</u> To have a test conducted with defined scripts mitigates the risk of different parties operating the test differently.

3.2 ASSUMPTIONS

The REC Code Manager has made the following assumptions, which may be revised as further information is made available:

- No Qualification Testing will be required where MHHS requirements are entirely reflective of
 existing functionality. For example, existing Data Transfer Network (DTN) interfaces that will be
 retained under MHHS, Supplier interfaces with CSS, execution of on-site metering works by
 MEMs.
- The Data Interface Platform (DIP) Manager / MHHS Programme will support Programme
 participants' onboarding to the DIP, including appointment of security officers and provision of
 testing security certificates.
- Previously, we had assumed the DIP Manager / MHHS Programme will provide a minimum level of DIP Connectivity Testing, which covers testing the sending / receipt of each DIP Interface relevant to each market role the participant is applying to qualify for, and were intending to place reliance on this testing to support Qualification. However, the scope of testing completed as part of DIP onboarding has been clarified and is no longer expected to cover the sending / receipt of each DIP interface relevant to each market role the participant is applying to qualify for. Instead, it will only cover the sending and receipt of one DIP interface. Therefore, requirements previously marked as covered by DIP Connectivity Testing have now been moved into the scope for Qualification Testing.
- No testing is required for the Unmetered Supplies Operator (UMSO) under the REC.
- Registration Service functionality relating to exchange and validation² of DIP Interfaces sits with the Supplier Meter Registration Service (SMRS) under the Balancing and Settlement Code (BSC)

² The IF/PUB messages sent over the DIP are subject to the following validation checks:

[•] The DIP will check for errors within message structure and invalid values within fields (i.e., character type and length, but not combination of values) at the following levels:

o Level 1: Synchronous errors that are returned by the API.

Level 2: Asynchronous errors that are returned using a message status transaction.

The recipient will perform the following validation checks wherein the combination of values will be checked for errors:

Level 3: Synchronous errors that are returned using a message status transaction.

- governance. Therefore, REC will place reliance on BSC testing, provided this includes testing of all DIP interactions relevant to the Registration Service role using a version of the MPRS solution hosted by each DNO.
- The User Interface Testing (UIT) environment will include integration with DIP to cover level 1 and level 2 validation² of DIP interface flows during testing.
- The UIT environment will include integration with the Registration Service, or a Registration Service emulator will be available to support testing, to cover level 3 and level 4 validation² and business rule validation² completed by the Registration Service.
- Where Qualification Testing is required in the UIT environment, SIT test scenarios will cover the
 required scope of testing and will be adapted for use by the REC Code Manager and BSCCo.
 Where required, test scenarios may be combined to facilitate end-to-end scenarios which allow
 coverage of more requirements through fewer tests.
- Appointment of Data Service, Transfer of Reads, Data Collection, Data Processing, Annual
 Consumption and Consumption Amendment processes are not governed under the REC and
 therefore not captured in this document. The Code Manager will place reliance on BSC-led testing
 to mitigate any associated REC risks.
- MEMs will need to specify whether they wish to Qualify for Smart and / or Advanced Market Segments and their individual Qualification requirements will reflect this. This may require creation of additional test case variants to ensure each participant can demonstrate sufficient coverage of the Market Segment they intend to operate.
- Supplier role doesn't accommodate Qualification to be restricted to only Smart or only Advanced Market Segment. Therefore, all Suppliers will be required to demonstrate they have systems and processes in place to manage both Market Segments to gain MHHS Qualification.
- BSC PAB have however approved that Suppliers who do not operate or intend to operate
 Unmetered Supplies (UMS) can opt for an exemption from those requirements for MHHS
 Qualification. These are governed under the BSC only and therefore do not impact the Supplier's
 scope for MHHS Qualification under the REC.
- Migration Design will be tested through SIT. Qualification Testing will assure individual Participants ability to complete Migration scenarios.
- Non-Functional Requirements will be assured in line with the approach proposed within MHHS-DEL2128 NFR Categorisation document produced by MHHS Programme through consultation with the Non-Functional Testing Working Group (NFTWG) and reviewed by BSC and REC.

o Level 4: Asynchronous errors that are returned using a message status transaction.

Level 5: Business Process Validation (e.g., the request date is on or after the MPAN creation date) returned using a defined IF/PUB message.

Level 6: Third Party Request Outcome i.e. where the request is accepted or rejected using a defined IF/PUB message.

4 REC ASSESSMENT CRITERIA FOR MHHS QUALIFICATION

The following assessment criteria by role has been developed by the REC Code Manager and approved by REC PAB on 05 September 2023. This will be updated as further information is published by the MHHS Programme.

4.1 FUNCTIONAL REQUIREMENTS

The following assessment criteria to cover MHHS Business Requirements (Functional) by role has been developed by the REC Code Manager and approved by REC PAB on 05 September 2023. This will be updated as further information is published by the MHHS Programme. This is based on:

- MHHSP-BRS002 Metering Services Requirements v5.5
- MHHSP-BRS003 Registration Services Requirements v5.4
- MHHSP-BRS004 Supplier Overview Requirements v5.2
- MHHSP-BRS005 LDSO Overview Requirements v5.2

4.1.1 DNO (INCLUDING REGISTRATION SERVICE)

Market	Area	MHHSR	equirements	Retails	Risk Rating	Rationale of Risk Rating			Proposed Qualific	ation Approach
Role				Risks	for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
DNO	MEM	MHHS-	LDSO must obtain Metering	Retail Risk 7:	Low	Existing requirement – MHHS	√	✓	√	QAD question to determine whether the
	Appointment –	BR-	Service de-appointments via the	Inaccurate		change is limited to the use of the				DNO is amending existing systems /
	DNO requires	LD-002	appropriate interface on the Data	meter point		DIP (IF036 / IF037)				processes.
	MEM details to		Integration Platform and maintain	master data						
	support		records accordingly. In the case	results in		DNO can check MEM details via the				PIT evidence demonstrating how the DNO
	metering		where Related MPANs or	errors that		EES.				maintains MEM appointment data
	activities		Import/Export linked meters exist,	impact						
			LDSO should expect to receive	consumers.						Where the DNO is using the DIP, the Code
			de-appointment notifications for							Manager will require evidence of coverage
			all the MPANs in the Related							of the DIP Interface within Qualification
			MPAN or Import/Export group.							Testing.
		MHHS-	LDSO must obtain Metering							
		BR-	Service notification updates via							
		LD-003	the appropriate interface on the							
			Data Integration Platform,							
			maintain records accordingly and							
			investigate any discrepancies							
			with data received from the							
			Metering Service via the DTN. In							
			the case where Related MPANs							
			or Import/Export linked meters							
			exist, LDSO should expect to							
			receive appointment notifications							

Market	Area	MHHS R	equirements	Retails	Risk Rating	Rationale of Risk Rating			Proposed Qualific	ation Approach
Role				Risks	for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
			for all the MPANs in the Related							
			MPAN or Import/Export group.							
		MHHS-	LDSO must obtain Service							
		BR-	Provider de-appointment							
		LD-021	notifications via the appropriate							
			interface on the Data Integration							
			Platform and maintain records							
			accordingly.							
DNO	Energisation	MHHS-	LDSO must obtain updates on	Retail Risk 7:	Low	Existing requirement – MHHS	√	√	√	QAD question to determine whether the
	Status Details -	BR-	Change of Energisation status	Inaccurate		change is limited to the use of the				DNO is amending existing systems /
	DNOs requires	LD-024	via the appropriate interface on	meter point		DIP (IF008, IF041) and receipt of				processes.
	details of		the Data Integration Platform and	master data		data from Data Service (D0010).				
	energisation		maintain records accordingly.	results in						PIT evidence demonstrating how the DNO
	status change	MHHS-	LDSO must receive Change of	errors that		DNO can check energisation status				maintains Energisation Status data.
	and associated	BR-	Energisation cumulative reads	impact		via the EES.				
	reads	LD-025	sent by the Metering Service via	consumers.						Where the DNO is using the DIP, the Code
			the appropriate interface and							Manager will require evidence of coverage
			maintain records accordingly.							of the DIP Interface within Qualification
		MHHS-	LDSO must receive Change of							Testing.
		BR-	Energisation register reads from							
		LD-026	the Data Service via the							
			appropriate interface and							
DNIC	DNO SI	N. 11 / 12	maintain records accordingly.	D. (-11-D) 1-	1.					CAR
DNO	DNO Change	MHHS-	LDSO must be able to receive a	Retail Risk 7:	Low	Existing requirement – MHHS	√	√		QAD question regarding the change
	of Energisation	BR-	Change of Energisation status	Inaccurate		change is limited to the new market				required to reflect the new MEM Market
	Status – DNO	LD-022	request via the appropriate	meter point		roles for MEM DTN messages				Roles within DTN messaging.
	requirements	N 41 11 10	interface.	master data		(D0139 / D0179)				DIT outdones demonstrative a testina
	to take and	MHHS-	LDSO must be able to process a	results in						PIT evidence demonstrating testing
	share reads	BR-	Change in Energisation status	errors that						completed using the new DTN market roles.
	when they	LD-023	and provide the outcome and	impact						No Qualification Testing assessed to
	change the		reads, where appropriate, to the	consumers.						No Qualification Testing expected.

Market	Area	MHHS R	equirements	Retails	Risk Rating	Rationale of Risk Rating			Proposed Qualific	cation Approach
Role				Risks	for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
	energisation		Metering Service via the							
	status		appropriate interface.							
DNO	Maintenance of	MHHS-	LDSO must, for Advanced	Retail Risk 7:	Low	Existing requirement – MHHS	√	√	✓	QAD question to determine whether the
	Meter	BR-	Meters, receive the Meter	Inaccurate		change is limited to the use of the				DNO is amending existing systems /
	Technical	LD-027	Technical Details,	meter point		DIP (IF006) and receipt of MTDs				processes for interactions with the DIP.
	Details (MTDs)		Commissioning Flows and Meter	master data		from MEMs with new Market Roles				
			Readings from the Metering	results in		via the DTN (D0149 / 150 and				QAD question regarding the change
			Service via the appropriate	errors that		D0268).				required to reflect the new MEM Market
			interfaces and maintain records	impact						Roles within DTN messaging.
			accordingly.	consumers.		DNO can check MTDs via the EES.				
		MHHS-	LDSO must, for Traditional	1						PIT evidence demonstrating how the DNO
		BR-	Meters, receive the new Meter							maintains MTDs, including tests completed
		LD-028	Technical Details & register							using the new DTN market roles and
			readings from the Metering							potentially the DIP Simulator.
			Service via the appropriate							
			interfaces and maintain records							Where the DNO is using the DIP, the Code
			accordingly.							Manager will require evidence of coverage
		MHHS-	LDSO must obtain Change of	1						of the DIP Interface within Qualification
		BR-	Metering acceptances via the							Testing.
		LD-030	appropriate interface on the Data							
			Integration Platform and maintain							
			records accordingly							
		MHHS-	LDSO must obtain Change of	1						
		BR-	Metering acceptances, following							
		LD-054	on site works by the prospective							
			Metering Service for a Change in							
			Market Segment, via the							
			appropriate interface on the Data							
			Integration Platform and maintain							
			records accordingly.							
DNO	Sharing Site	MHHS-	LDSO must, on receipt of a	Retail Risk 7:	Low	Existing requirement – MHHS	✓	✓		QAD question regarding the change
	Technical	BR-	Metering Service request	Inaccurate		change is limited to the new market				required to reflect the new MEM Market
	Details – DNO	LD-	(D0170), send Site Technical	meter point		roles for MEM DTN messages				Roles within DTN messaging.
	required to	012.1	Details to the Metering Service	master data		(D0170 / D0215)				
	share details		via the appropriate interface	results in						PIT evidence demonstrating testing

Market	Area	MHHS R	equirements	Retails	Risk Rating	Rationale of Risk Rating			Proposed Qualific	eation Approach
Role				Risks	for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
	on request			errors that						completed using the new DTN market roles.
	from the MEM.			impact						
				consumers.						No Qualification Testing expected.
DNO	Disconnection	MHHS-	LDSO must be able to receive a	Retail Risk 7:	Low	Existing requirement – MHHS	 	✓	│ ✓	QAD question to determine whether the
	– DNO to	BR-	customer disconnection request	Inaccurate		change is limited to receipt of				DNO is amending existing systems /
	disconnect	LD-016		meter point		disconnection notification from the				processes.
	metering point		disconnection where the request	master data		SMRS (IF-009)				
	and send		is valid.	results in						PIT evidence demonstrating how the DNO
	notifications	MHHS-	LDSO must be able to receive a	errors that						maintains connection status of metering
		BR-	disconnection request from the	impact						points.
		LD-017	Supplier via the appropriate flow	consumers.						
			and carry out the physical							Where the DNO is using the DIP, the Code
			disconnection where the request							Manager will require evidence of coverage
			is valid.							of the DIP Interface within Qualification
		MHHS-	LDSO must update records of	•						Testing.
		BR-	any disconnected MPANs and							
		LD-018	notify the Registration Service on							
			completion of a physical							
			disconnection via an internal							
			flow.							
		MHHS-	LDSO must be able to send a							
		BR-	rejection to the Supplier with a							
		LD-019								
			disconnection request is not							
			valid, via the appropriate							
			interface.							
		MHHS-	LDSO must obtain details of							
		BR-	disconnections from the							
		LD-020	G							
			appropriate interface on the Data							
			Integration Platform.							

Market	Area	MHHS F	Requirements	Retails	Risk Rating	Rationale of Risk Rating			Proposed Qualific	ation Approach
Role				Risks	for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
DNO	Meter Removal	MHHS-	LDSO must follow existing	Retail Risk 7:	Low	Existing requirement – MHHS	√	√		QAD question regarding the change
	- existing	BR-	processes for notifying Suppliers	Inaccurate		change is limited to the new market				required to reflect the new MEM Market
	requirements	LD-031	and Metering Services of any	meter point		roles for MEM DTN messages				Roles within DTN messaging.
	to remove		LDSO led removal of metering	master data		(D0010)				
	meters e.g.		equipment (e.g. Emergencies).	results in						PIT evidence demonstrating testing
	emergencies			errors that						completed using the new DTN market roles.
				impact						
				consumers.						No Qualification Testing expected.
DNO	Address Data	MHHS-	LDSO must send notification to	Retail Risk 6:	Low	Existing requirement – no change for	√			QAD question to confirm whether any
	– DNOs	BR-	the Registration Service of any	Inaccurate		MHHS				changes have been made to existing
	required to	LD-033	changes of MPL Address and/or	Address						systems / processes.
	maintain MPL		GSP Group ID via internal	Management						
	Address		interface.	data results						No Qualification Testing expected.
				in errors that						
				impact						
				consumers.						
DNO	Domestic	MHHS-	Registration Service must check	Retail Risk 7:	Low	MHHS change is limited to the use of	✓	✓	✓	QAD question to determine whether the
	Premise	BR-	for any linked Export MPANs	Inaccurate		the DIP (IF018).				DNO is amending existing systems /
	Indicator /	RS-	when a Metering Service	meter point						processes.
	Energy	034	appointment has been confirmed.	master data		DNO can check MTDs via the EES.				
	Direction /	MHHS-	Registration Service must hold a	results in						PIT evidence demonstrating how the DNO
	Metered Status	BR-	history of Metering Service	errors that						maintains Related Metering Point data.
		RS-	customer direct contract flags	impact						
		040	against each MPAN. This must	consumers.						Where the DNO is using the DIP, the Code
			consist of the following new data							Manager will require evidence of coverage
			items:							of the DIP Interface within Qualification
			Customer Direct Contract							Testing.
			Metering Service DIP ID							
			Customer Direct Contract							
			Metering Service Effective To							
			Date.							
		MHHS-	Registration Service must obtain							
		BR-	Supplier Service Appointment							
		RS-	Requests for a proposed Data							
		043	Service via the appropriate							

Market	Area	MHHS Requirements		Retails	Risk Rating	Rationale of Risk Rating			Proposed Qualific	ation Approach
Role				Risks	for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
			interface on the Data Integration							
			Platform.							
DNO	Related	MHHS-	LDSO must obtain successful	Retail Risk 7:	Low	Existing requirement - MHHS change	√	√	✓	QAD question to determine whether the
	Metering	BR-	Related MPAN updates, issued	Inaccurate		is limited to the use of the DIP				DNO is amending existing systems /
	Points – DNOs	LD-037	by Registration Service on the	meter point		(IF020).				processes.
	required to		Data Integration Platform, via the	master data						
	maintain		appropriate interface and	results in		DNO can check MTDs via the EES.				PIT evidence demonstrating how the DNO
	records		maintain records accordingly.	errors that						maintains Related Metering Point data.
				impact						
				consumers.						Where the DNO is using the DIP, the Code
										Manager will require evidence of coverage
										of the DIP Interface within Qualification
										Testing.
DNO	Change of	MHHS-	LDSO must receive requests	Retail Risk 7:	Low	Existing provisions exist for changing	√	√		QAD question to confirm that the DNO
	Connection	BR-	from the Supplier to change the	Inaccurate		Connection Type – MHHS change				understands the link between this process
	Type – limited	LD-047	Connection Type via a bilaterally	meter point		relates to operational choreography				and wider MEM / Registration Service
	to coordination		agreed communication method.	master data		to ensure any associated change of				activities.
	with MEM on	MHHS-	LDSO must liaise with the	results in		market segment / change of meter is				
	MTD updates	BR-	Supplier to agree and confirm a	errors that		co-ordinated.				QAD question requiring evidence that
		LD-048	target work date.	impact						procedure documentation reflects the
		MHHS-	LDSO must carry out the agreed	consumers.						engagement with MEMs and updating
		BR-	change of Connection Type site							SMRS within [2WDs].
		LD-049	work in line with the Supplier							
			request and on the agreed date.							No Qualification Testing required for the
		MHHS-	LDSO must notify the Supplier]						REC but option to place reliance on BSC
		BR-	via a bilaterally agreed							testing covering the end to end change of
		LD-050	mechanism, if the Connection							market segment process.
			Type site work cannot be							
			completed on the agreed date							

Market	Area	MHHS R	equirements	Retails	Risk Rating	Rationale of Risk Rating	Proposed Qualification Approach				
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during	
					Qualification		Question	evidence	Qualification	Qualification	
									Test Scenario		
		MHHS-	LDSO must notify the								
		BR-	Registration Service via internal								
		LD-051	interface, when the Connection								
			Type has been successfully								
			updated. LDSO should provide								
			the update as quickly as								
			possible, but no later than 2								
			working days after completion of								
			the work. In the case of Related								
			MPANs the LDSO must update								
			and notify changes for all								
			Secondary MPANs in line with								
			the Connection Type for the								
			Primary MPAN. In the case of								
			linked Import/Export MPANs, the								
			LDSO must update and notify								
			changes for all Export MPANs in								
			line with the Connection Type for								
			the linked Import MPAN.								
DNO	Commissioning	MHHS-	LDSO must obtain Change of	Retail Risk 7:	Low	Existing requirement – MHHS	√	√		QAD question regarding the change	
	– requirement	BR-	Metering acceptances, following	Inaccurate		change is limited to the new market				required to reflect the new MEM Market	
	on DNO to	LD-054	on site works by the prospective	meter point		roles for MEM DTN messages				Roles within DTN messaging.	
	share		Metering Service for a Change in	master data		(D0383 / D0384)					
	commissioning		Market Segment, via the	results in						PIT evidence demonstrating testing	
	details		appropriate interface on the Data	errors that						completed using the new DTN market roles.	
			Integration Platform and maintain	impact							
			records accordingly.	consumers.						No Qualification Testing expected.	
DNO	ISD – DNOs	MHHS-	All Parties must obtain Industry	Various	Low	The majority of ISD data required to	✓	✓	√	QAD question to determine whether the	
	required to	BR-	Standing Data (ISD) update			support retail activities is available				DNO is amending existing systems /	
	receive ISD	LD-059	notifications via the appropriate			within the EES.				processes.	
	updates		interface, and if required take								
			necessary steps to obtain			Potential duplication if this				PIT evidence demonstrating how the DNO	
			refreshed ISD data, maintain			functionality is being tested under the				maintains standing data.	
			their records accordingly and			BSC.					
			reference/ utilise ISD as							Where the DNO is using the DIP, the Code	

Market	Area	MHHS R	equirements	Retails	Risk Rating	Rationale of Risk Rating			Proposed Qualific	ation Approach
Role				Risks	for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
			appropriate as part of the service							Manager will require evidence of coverage
			delivery.							of the DIP Interface within Qualification
										Testing.
DNO	Generic	MHHS-	All Parties must publish data	Various	Low	The DNO requirements reference the	√	√	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	QAD question to determine whether the
	requirements	BR-	following ISO8601 format -			following DIP interfaces:				DNO is utilising the DIP (NB: this is
	associated with	LD-058				- IF036 / IF037 – receipt of MEM				dependent on outcome of Programme query
	DIP Interfaces		DDTHH:MM:SS±TZH:TZM.			appointment / de-appointment				on whether DIP interfaces are mandatory for
		MHHS-	All Parties must utilise Industry			(expect this to be tested under the				DNOs).
		BR-	Standing Data to identify the			BSC in relation to Data Service				
		LD-	relevant DIP ID/Role or DTN			Appointment). Do not see the need to				PIT evidence demonstrating interactions
		059.1	Market Participant ID/Role, as			test receipt of the de-appointment				using the DIP simulator.
			appropriate, to be used when			IF037.				Miles de BNO de side de BID de Octo
			communicating over the			15044				Where the DNO is using the DIP, the Code
			DIP/DTN.	_		- IF041 – receipt of read data				Manager will require evidence of coverage
		MHHS-	All Parties must derive and			(expect this to tested under the BSC				of the DIP Interface within Qualification
		BR-	populate the DIP addressing			in relation to Data Service sharing of				Testing.
		LD-	(primary recipients) for all			reads.)				
		059.2	outbound interfaces in line with			IE 000 receipt of disconnection				
			the rules described in the			- IF-009 – receipt of disconnection data. Do not think there are any retail				
		MULIC	interface specification			risks associated with the DNO not				
		MHHS- BR-	All Parties must obtain Data			receiving this data as long as the				
		LD-062	Integration Platform error messages in line with the End to			registration service has the correct				
		LD-002	End Solution Architecture			status				
			Document, review the impacted			Status				
			data and re-issue corrected			- IF008 – receipt of change of				
			messages/transactions as			energisation status. Potential flow				
			required			may be tested under the BSC.				
		MHHS-	All Parties must return Data	-		,				
		BR-	Integration Platform error			- IF006 – receipt of MTDs. To be				
		LD-063	messages in line with the End to			tested.				

Market	Area	MHHS R	equirements	Retails	Risk Rating	Rationale of Risk Rating		Proposed Qualification Approach					
Role				Risks	for MHHS		QAD	PIT	SIT /	Further comments on coverage during			
					Qualification		Question	evidence	Qualification	Qualification			
									Test Scenario				
			End Solution Architecture.										
			Unexpected and/or un-			- IF020 – receipt of metering point							
			processable messages should be			relationships (expect this to be tested							
			returned to the DIP/ originating			under the BSC in relation to import /							
			party			export associations)							
		MHHS-	All Parties, when transacting via										
		BR-	the DIP, must ensure that they			- IF018 / IF026 receipt of updates to							
		LD-064	implement monitoring so as to			registration data. To be tested.							
			identify where expected										
			responses are not received within										
			standard DIP SLAs, as outlined										
			in the Operational Choreography,										
			so that the appropriate										
			investigative/ resolution activity										
			can be undertaken.										
DNO	Meter Data	MHHS-	Registration Service must, on	Retail Risk 2:	Low	New process and amended interface	√	✓		QAD question regarding implementation of			
	Retriever	BR-	notification that a Meter Data	The privacy		introduced via R0044. Inaccurate				the change to gain evidence from testing.			
	(MDR)	RS-	Retriever MDR appointment is	of consumer		MDR data is not a retail risk but this							
	Appointment	078.1	ending, send an update to	data is		is a key process to support				PIT evidence demonstrating interactions			
	Update to CSS		CSS/DCC to end date the MDR	compromised		settlement activities.				using the CSS simulator.			
	- new		appointment using the existing	by									
	requirement to		Electricity Retail Data Service	inappropriate						The Code Manager will place reliance on			
	send MDR		(ERDS) interface	use of						SIT evidence demonstrating end to end			
	data and	MHHS-	Registration Service must, on	Parties'						process within MPRS (the system used by			
	receive	BR-	successful completion of a	processes						the Registration Service).			
	response as	RS-	Change in Meter Data Retriever	and									
	per R044	078	(MDR), send an update to	protocols									
			CSS/DCC of the new MDR using										
			the existing Electricity Retail Data										
			Service (ERDS) interface.										

Market	Area	MHHS Requirements		Retails Risk Rating		Rationale of Risk Rating	Proposed Qualification Approach				
Role				Risks	for MHHS		QAD	PIT	SIT /	Further comments on coverage during	
					Qualification		Question	evidence	Qualification	Qualification	
									Test Scenario		
		MHHS-	Registration Service must								
		BR-	populate the ERDS interface								
		RS-	with:								
		078.2	1. The four digit Market								
			Participant Identifier derived from								
			the DIP/DTN routing look-up list								
			in ISD, based on the DIP ID/ DIP								
			Role code provided in the								
			appointment								
			2. The Role Code for MDR								
			should be set to "MDR"								
			3. The Effective From Date of the								
			MDR								
			4. The Effective To Date of the								
			MDR (Only expected when end								
			dating following notification of								
			"de-appointment")								
			5. CSS Registration ID								
		MHHS-	Registration Service must receive	•							
		BR-	a response from CSS/DCC as to								
		RS-	whether the MDR details have								
		079	been updated, using the								
			Electricity Retail Data Service								
			(ERDS) interface. Registration								
			Service should maintain a flag								
			against the SDS/MDR								
			appointment record to show the								
			most recent CSS update								
			outcome.								
DNO	MEM	N/A	N/A	N/A – current	Low	Existing process. Only change is that	✓	√		QAD question regarding implementation of	
	Appointment			process is		the ERDS will need to take both				the change to gain evidence from testing.	
	Update to CSS			monitored via		Smart and Advanced MEM details					
	- existing			ERDA SLA		and send with role code M.				PIT evidence demonstrating interactions	
	requirement to			reporting,						using the CSS simulator.	
				and this is							

Market	Area	MHHS Requirements	Retails	Risk Rating	Rationale of Risk Rating	Proposed Qualification Approach			
Role			Risks	for MHHS		QAD	PIT	SIT /	Further comments on coverage during
				Qualification		Question	evidence	Qualification	Qualification
								Test Scenario	
	send MEM		deemed as						SIT evidence demonstrating end to end
	data to CSS		low risk.						process – reliance to be places on the
									testing conducted by St Clements and the
									SIT participants.

4.1.2 SUPPLIER

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
Supplier	New	MHHS-	Supplier must request LDSO to	Retail Risk 1:	Low	Existing business processes in	√	✓		QAD question regarding the changes to the
	connection -	BR-	create a new MPAN when a new	Consumer		terms of interaction with the DNO.				existing process in particular recognition of the
	covering initial	SU-	Connection is required. Supplier	supply point		Changes to reflect new data				new data items required within a request to the
	establishment	048.1	will need to specify the	interruption		required in the SDEP message.				DNO for a new metering point to be
	of the metering		anticipated: Connection Type,	due to a lack						established (see SDEP requirements).
	point		Energy Direction, Metered/Un-	of action or		This scenario has not captured the				
			Metered Indicator & Market	incorrect		Initial Registration with CSS, agent				PIT evidence demonstrating how the Supplier
			Segment required for the new	action by REC		appointment or meter installation				has tested the changes to the request for new
			MPAN.	Parties.		as they are reflected below				metering points solution.
										No Qualification Testing expected
Supplier	Initial	MHHS-	Supplier must be able to obtain	Retail Risk 8:	Low	DIP interfaces replace existing	√	✓	√	QAD question relating to controls in place to
	Registration	BR-	registration details via the	Delayed		DTN flows. Whilst the IF002				monitor for missing or erroneous DIP
	and Switch –	SU-	appropriate interface on the Data	Switches		notification of a Pending Switch				interfaces.
	In addition to	001	Integration Platform and maintain	provides a		triggers agent appointment, the				
	receiving the		records accordingly.	negative		Supplier triggered the Switch				PIT evidence demonstrating how the Supplier
	existing CSS	MHHS-	Supplier must be able to obtain	customer		request so should be expecting the				has tested the changes to the Switch process
	flows, a	BR-	registration details via the	experience of		DIP message. Similarly, the IF001				(including agent appointment).
	Supplier will	SU-	appropriate interface on the Data	the energy		is received at Secured Active and				
	receive DIP	004	Integration Platform and maintain	market.		should coincide with the notification				The Code Manager will require evidence of
	interfaces		records accordingly.			from CSS.				coverage of the DIP Interface within
	which trigger	MHHS-	Supplier must be able to receive	-						Qualification Testing. This will be covered as
	downstream	BR-	notification that initial registration							part of appointment scenarios – see below.
	activities	SU-	is secured from CSS.							
		048								
		MHHS-	Supplier must be able to obtain	1						
		BR-	registration details for an Initial							
		SU-	Registration via the appropriate							
		049	interface on the Data Integration							
			Platform and maintain records							
			accordingly.							
Supplier	Metering	MHHS-	Supplier must determine when it	Retail Risk 1:	Medium	Significant change from existing	✓	✓	✓	QAD question(s) regarding the Supplier's
	Service	BR-	requires to appoint a new	Consumer		appointment process.				implementation of the revised MEM (and Data
	Appointment /		Metering Service as part of a	supply point						Service for BSC) process. In particular this

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating	QAD PIT SIT/		Proposed Qualit	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
	De-	SU-	Change of Supplier, New	interruption		New event driven architecture and				should capture the distinction between new
	appointment	005	Connection, Change of Market	due to a lack		reduced settlement timetable				market segments and the need to appoint
			Segment or Change of Metering	of action or		places onus on Supplier to ensure				agents with appropriate qualification and the
	NB: This		Service process.	incorrect		activities are completed in a timely				approach to design, build and test of the new
	includes	MHHS-	Supplier must publish a new	action by REC		manner.				end to end process.
	scenarios both	BR-	Metering Service appointment	Parties.						
	with and	SU-	request using the appropriate			Includes sending and receiving DIP				QAD question regarding the Supplier's controls
	without a	006	interface on the Data Integration	Retail Risk 8:		interfaces (IF-031, IF-032. IF-035,				in place to manage Supplier Agent activities to
	Switch.		Platform.	Delayed		IF-036, IF-037, IF-039) and existing				ensure the end to end process is carried out
		MHHS-	Supplier should check that the	Switches		process for notifying customer and				within MHHS defined timescales.
		BR-	request is in line with the	provides a		PSR details.				
		SU-	validation rules outlined in the	negative						QAD question regarding the changes required
		007	appropriate interface	customer		Also includes steps related to MTD				to reflect the new MEM Market Roles within
			specification.	experience of		receipt via the IF006 and relevant				DTN messaging.
		MHHS-	Supplier must obtain initial	the energy		DTN flows.				
		BR-	Metering Service rejected	market.						PIT evidence demonstrating Supplier's testing
		SU-	appointments from the							of the new process, including different
		800	Registration Service via the							scenarios: Switch, Change of MEM without a
			appropriate interface on the Data							Switch and Initial Registration for different
			Integration Platform, maintain							market segments and testing the new DTN
			records accordingly and re-issue							market roles, and new DIP interfaces using the
			Metering Service appointment							DIP Simulator.
			request as appropriate.							
		MHHS-	Supplier must obtain initial	1						The Code Manager will require evidence of
		BR-	Metering Service accepted							coverage of the DIP Interface within
		SU-	appointments from the							Qualification Testing.
		009	Registration Service via the							
			appropriate interface on the Data							End to end business process to be assured
			Integration Platform and maintain							through Qualification Testing within the UIT
			records accordingly.							environment, including integration with the
		MHHS-	Supplier must obtain Registration	1						Registration Service or an equivalent stub.
		BR-	Service Appointment Status							This should include Switch, Change of MEM
		SU-	Notification updates, with							without a Switch (including change of Market
		010	Prospective Metering Service							Segment) and Initial Registration for individual
			accepted appointments, via the							Metering Points and those with related

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
			appropriate interface on the Data							secondary metering points or associated
			Integration Platform and maintain							export.
			records accordingly.							
		MHHS-	Supplier must obtain Registration	-						
		BR-	Service Appointment Status							
		SU-	Notification updates, with							
		011	Prospective Metering Service							
			lapsed/rejected appointments,							
			via the appropriate interface on							
			the Data Integration Platform,							
			maintain records accordingly and							
			re-issue a new Metering Service							
			appointment request as							
			appropriate.							
		MHHS-	Supplier must obtain Metering	1						
		BR-	Service de-appointment							
		SU-	notifications via the appropriate							
		012	interface on the Data Integration							
			Platform and maintain records							
			accordingly.							
		MHHS-	Supplier must obtain Registration							
		BR-	Service Notification of Service							
		SU-	Appointment & Supporting Info							
		013	via the appropriate interface on							
			the Data Integration Platform and							
			update registration and metering							
			details. For the avoidance of							
			doubt this is the message that							
			indicates that a Metering Service							
			appointment will/has taken effect.							

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
		MHHS-	Supplier must receive Meter							
		BR-	Technical Details for Advanced							
		SU-	meters via the appropriate							
		014	interface (D0268 on DTN) from							
			Metering Service and maintain							
			records accordingly. In the case							
			where Related MPANs or							
			Import/Export linked meters							
			exist, Supplier should expect to							
			receive Meter Technical Details							
			for all the MPANs in the Related							
			MPAN or Import/Export group.							
		MHHS-	Supplier must receive Meter	1						
		BR-	Technical Details for Traditional							
		SU-	meters via the appropriate							
		015	interfaces (D0149 and D0150 on							
			DTN) from Metering Service and							
			maintain records accordingly. In							
			the case where Related MPANs							
			or Import/Export linked meters							
			exist, Supplier should expect to							
			receive Meter Technical Details							
			for all the MPANs in the Related							
			MPAN or Import/Export group.							
		MHHS-	Supplier must obtain de-	-						
		BR-	appointment notifications for any							
		SU-	Secondary Related MPANs							
		016	and/or linked Export MPANs,							
			sent from the Registration							
			Service on the Data Integration							
			Platform, via the appropriate							
			interface and maintain records							
			accordingly.							

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
		MHHS-	Supplier must obtain							
		BR-	appointment notifications for any							
		SU-	Secondary Related MPANs							
		017	and/or linked Export MPANs,							
			sent from the Registration							
			Service on the Data Integration							
			Platform, via the appropriate							
			interface and maintain records							
			accordingly.							
		MHHS-	Supplier must obtain Service	1						
		BR-	Provider de-appointment							
		SU-	notifications via the appropriate							
		059	interface on the Data Integration							
			Platform and maintain records							
			accordingly.							
		MHHS-	Supplier must obtain de-	-						
		BR-	appointment notifications for any							
		SU-	Secondary Related MPANs							
		106	and/or linked Export MPANs,							
			sent from the Registration							
			Service (following MPAN							
			alignment monitoring) on the							
			Data Integration Platform, via the							
			appropriate interface and							
			maintain records accordingly.							
			Supplier should expect to receive							
			automatic notification of the							
			correct Service Provider.							
		MHHS-	Supplier must obtain	1						
		BR-	appointment notifications for any							
		SU-	Secondary Related MPANs							
		107	and/or linked Export MPANs,							
			sent from the Registration							
			Service (following MPAN							
			alignment monitoring) on the							

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating		Proposed G		cation Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
			Data Integration Platform, via the							
			appropriate interface and							
			maintain records accordingly.							
		MHHS-	Supplier must send Notification							
		BR-	of Customer Details to the Data							
		SU-	Service via the appropriate							
		135	interface on any change of							
			occupancy.							
		MHHS-	Supplier must send Priority							
		BR-	Service Details to the Data							
		SU-	Service via the appropriate							
		136	interface on any update to the							
			Priority Service Register.							
Supplier	Appointment	MHHS-	Supplier must determine when it	Retail Risk 7:	Low	Potentially not relevant to the REC.	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\		QAD question regarding the Supplier's
	Amendment	BR-	needs to vary the conditions of	Inaccurate		The process reflects the standard				expected use for this process to determine
		SU-	an existing Service Provider	meter point		appointment process (using a				whether the Supplier is amending existing
		031	appointment , for example to	master data		different event code) so no				systems and/or processes.
			change the contract code or	results in		additional testing proposed.				
			change the MDR (SDS only).	errors that						Reliance then placed on testing of the
		MHHS-	Supplier must publish a Supplier	impact						appointment process scenarios including the
		BR-	Service Appointment Request for	consumers.						Suppliers PIT and testing in the UIT
		SU-	a proposed Service Provider							environment for an Appointment Amendment
		032	amendment via the appropriate							scenario.
			interface on the Data Integration							
			Platform							

larket	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
		MHHS-	Supplier must obtain Registration							
		BR-	Service Response to Supplier							
		SU-	Service Appointment Requests,							
		033	with rejected appointments, via							
			the appropriate interface on the							
			Data Integration Platform,							
			maintain records accordingly and							
			re-issue the Service Provider							
			Appointment Amendment							
			request as appropriate							
		MHHS-	Supplier must obtain Registration	1						
		BR-	Service Response to Supplier							
		SU-	Service Appointment Requests,							
		034	with accepted appointments, via							
			the appropriate interface on the							
			Data Integration Platform and							
			maintain records accordingly							
		MHHS-	Supplier must obtain Registration	1						
		BR-	Service Appointment Status							
		SU-	Notification updates, with Service							
		035	Provider accepted amended							
			appointments, via the							
			appropriate interface on the Data							
			Integration Platform and maintain							
			records accordingly. This							
			confirms that the Service							
			Provider amendment has been							
			successfully completed.							
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Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
		MHHS-	Supplier must obtain Registration							
		BR-	Service Appointment Status							
		SU-	Notification updates, with Service							
		036	Provider rejected amended							
			appointments, via the							
			appropriate interface on the Data							
			Integration Platform, maintain							
			records accordingly and re-issue							
			a new Service Provider							
			appointment amendment request							
			as appropriate.							
Supplier	Missing or	MHHS-	Supplier must, where there is a	Retail Risk 5:	Low	Limited change to the existing	√	✓		QAD question regarding the change required
	Disputed	BR-	missing transfer read or there is	Consumers do		Disputed / Missing Read process				to reflect the amended Switch Meter Read
	Switch Meter	SU-	an issue with a transfer read	not receive an		(main change is associated with				exceptions process, specifically recognising
	Reads	158	received, provide a suggested	accurate first		the triggers rather than the				the amendments to the triggers for raising a
			transfer read to the other	and final bill,		business process).				dispute, the extension of the application to
			Supplier via the appropriate	which leads to						cover half hourly metering points and the
			interface	high customer		NB: the steps relating to the				differing approach for different market
		MHHS-	Supplier must receive proposed	dissatisfaction.		Supplier notifying the Data Service				segments.
		BR-	transfer reads via the appropriate			of the agreed read have not been				
		SU-	interface and validate that the			includes (SU-161 and SU-162) as				PIT evidence demonstrating how the Supplier
		159	read is acceptable			these should be reflected within				has tested the revised process, including
		MHHS-	Supplier must provide a	-		BSC elements of testing.				amended D0300 market message.
		BR-	response to the proposed read							
		SU-	request via the appropriate							No Qualification Testing expected.
		160	interface							
Supplier	Meter Works –	MHHS-	Supplier must, where	Retail Risk 1:	Low	Existing approach to requesting	✓	√	√	QAD question regarding the end to end meter
	covering	BR-	appropriate, following	Consumer		change (D0142, D0001), managing				works process – whilst most elements of this
	standard	SU-	appointment of the relevant	supply point		issues where activity has failed to				process are existing functionality, ensuring the
	requests for	050	Metering Service, request a new	interruption		complete (D0002, D0221) and				Supplier understands the changes to the
	the MEM to		meter is installed in line with the	due to a lack		receiving MTDs (D0149 / 150 and				existing process is important.
	carry out		Change of Metering process.	of action or		D0268) – MHHS change is limited				

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
	metering	MHHS-	Supplier must, where required,	incorrect		to the new market roles for MEM				QAD question regarding the change required
	activities	BR-	request that any existing	action by REC		DTN messages.				to reflect the new MEM Market Roles within
		SU-	metering equipment is removed	Parties.						DTN messaging.
		052	in line with the Change of			New DIP interface for receipt of				
			Metering process.	Retail Risk 13:		MTDs via the Registration Service				PIT evidence demonstrating testing completed
		MHHS-	Supplier must be able to send a	Retail		(IF006) and receipt of associated				using the new DTN market roles and the new
		BR-	request to fit, exchange or	consumers		cumulative meter reads (IF041).				DIP interfaces using the DIP simulator.
		SU-	remove a meter via the	have a						
		066	appropriate interface	negative		NB: Existing step to configure a				The Code Manager will require evidence of
		MHHS-	Supplier must be able to receive	customer		smart device in accordance with				coverage of the DIP Interface within
		BR-	Fault Resolution Report or	experience as		the SEC (SU-074 has not been				Qualification Testing.
		SU-	Request for decision on Further	part of the		included.)				
		067	action via the appropriate	metering						
			interface	works						
		MHHS-	Supplier must be able to receive	conducted.						
		BR-	Notification of Failure to Install or							
		SU-	Energise Metering System via							
		068	the appropriate interface							
		MHHS-	Supplier must be able to obtain							
		BR-	and process metering change							
		SU-	acceptances received from the							
		069	Registration Service via the							
			appropriate interface on the Data							
			Integration Platform							
		MHHS-	Supplier must be able to receive							
		BR-	Meter Technical Details and							
		SU-	register meter reads for							
		070	Advanced/Traditional meters via							
			the appropriate interfaces							
		MHHS-	Supplier should reconcile the	1						
		BR-	metering details received from							
		SU-	Registration Service with							
		071	information from the Metering							
			Service and investigate any							
			discrepancies if required.							

Market	Area	MHHS R	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
		MHHS-	Supplier must be able to obtain							
		BR-	and process metering change							
		SU-	cumulative reads received via							
		072	the appropriate interface on the							
			Data Integration Platform							
		MHHS-	Supplier must be able to install							
		BR-	and commission a Smart meter							
		SU-	in line with the Smart Energy							
		073	Code							
		MHHS-	Supplier must notify faulty							
		BR-	equipment it identifies to the ADS							
		SU-	and receive updates via the							
		132	appropriate interfaces as outlined							
			in the relevant BSCP.							
		MHHS-	Supplier must receive notification							
		BR-	of any faulty equipment from the							
		SU-	SDS via a D0001 or bilaterally							
		133	agreed interface as outlined in							
			the relevant BSCP. For Smart							
			and Traditional meters the							
			Supplier will take the lead							
			investigating faults. The Supplier							
			will be responsible for notifying							
			the Data Service if they require							
			data to be resubmitted as a							
			result of a fault.							
Supplier	Disconnection	MHHS-	Supplier must identify that a	Retail Risk 5:	Low	No change to existing interactions	√	√	✓	QAD question regarding the end to end
	- steps within	BR-	disconnection is required,	Consumers do		with the DNO – note that these are				disconnection process – whilst most elements
	BP007 cut	SU-	following existing internal	not receive an		captured in the DCUSA and the				of this process are existing functionality,
	across a	051	processes.	accurate first		BSC.				ensuring the supplier understands how these
	number of	MUULO	Complian mount has able to see a set	and final bill,						come together into a single business process
	scenarios	MHHS-	Supplier must be able to request	which leads to		Receipt of the IF009 (SU-056) is				is key.
	including meter	BR-	the LDSO to disconnect a Meter	high customer		the only new element within this				
		SU-	Point via the appropriate	dissatisfaction.		scenario.				PIT evidence demonstrating the end to end
		054	interface							

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
	works and	MHHS-	Supplier must be able to receive							process has been tested using DIP simulator.
	appointments	BR-	a rejection to the disconnection	Retail Risk 7:		NB: Existing steps to deactivate the				
		SU-	request from the LDSO via the	Inaccurate		CSS registration are not included				The Code Manager will require evidence of
		055	appropriate interface and action,	meter point		(SU-057.1, SU-058) and				coverage of the DIP Interface within
			as appropriate, based on the	master data		requirements relating to meter				Qualification Testing.
			rejection reason.	results in		removal (SU-052), de-energisation				
		MHHS-	Supplier must be able to receive	errors that		(SU-053) and agent appointment				
		BR-	confirmation of disconnection of	impact		(SU-059) are covered elsewhere.				
		SU-	an MPAN via the appropriate	consumers.						
		056	interface and maintain records							
			accordingly.							
Supplier	Change of	MHHS-	Supplier must, before	Retail Risk 7:	Low	Existing requirement regarding	√	√	✓	QAD question regarding the end to end
	Energisation	BR-	disconnection, ensure that the	Inaccurate		request for energisation status				change of energisation process – whilst most
	Status	SU-	Meter Point is de-energised.	meter point		change – MHHS change is limited				elements of this process are existing
		053		master data		to the new market roles for MEM				functionality, ensuring the supplier
		MHHS-	Supplier must, on identifying a	results in		DTN messages (D0134 / D0179				understands how these come together into a
		BR-	need to change energisation	errors that		D0010).				single business process is key.
		SU-	status for an MPAN, request the	impact						
		060	Meter Service or LDSO (as	consumers.		Receipt of the IF007 (SU-061),				QAD question regarding the change required
			appropriate) to change the			IF008 (SU-064) IF041 (SU-063) are				to reflect the new MEM Market Roles within
			energisation status via the	Retail Risk 8:		the only new elements within this				DTN messaging.
			appropriate interface.	Delayed		scenario.				
		MHHS-	Supplier must obtain notifications	Switches						PIT evidence demonstrating testing completed
		BR-	of a rejection or unable to action	provides a						using the new DTN market roles and new DIP
		SU-	a Change of Energisation	negative						interfaces using the DIP simulator.
		061	request via the appropriate	customer						
			interface on the Data Integration	experience of						The Code Manager will require evidence of
			Platform and action, as	the energy						coverage of the DIP Interface within
			appropriate, based on the	market.						Qualification Testing.
			rejection reason.							
		MHHS-	Supplier must, for traditional pre	1						
		BR-	payment meters, receive a							
		SU-	D0179 from the Metering Service							
		062	with the pre-payment change in							
			energisation details.							

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
		MHHS-	Supplier must obtain Advanced							
		BR-	and Smart cumulative reads for							
		SU-	the energisation change, sent by							
		063	the Metering Service on the Data							
			Integration Platform, via the							
			appropriate interface.							
		MHHS-	Supplier must obtain accepted							
		BR-	Change of Energisation status							
		SU-	notifications from the							
		064	Registration Service via the							
			appropriate interface on the Data							
			Integration Platform and maintain							
			records accordingly.							
		MHHS-	Supplier must receive register							
		BR-	reads, for non-Smart meters, for							
		SU-	the energisation change via the							
		065	appropriate interface.							
Supplier	Maintenance	MHHS-	Supplier must send Central	Retail Risk 7:	Medium	A summary of each data item is set	√	✓	✓	QAD question regarding maintenance of
	of Supplier	BR-	Switching Service updates on	Inaccurate		out below:				Supplier owned data – noting that a change to
	Owned	SU-	domestic premise indicator via	meter point						the notification process is only required for
	Registration	076	the appropriate interface.	master data		- Domestic Premises Indicator: No				IHD, SMSO and Profile Class /SSC updates.
	Data	MHHS-	Supplier must obtain domestic	results in		change to approach for updating				
		BR-	premise indicator updates via the	errors that		DPI via the CSS. The Supplier will				PIT evidence demonstrating testing completed
		SU-	appropriate interface on the Data	impact		receive update via IF018.				using the DIP simulator.
		077	Integration Platform and maintain	consumers.						
			records accordingly. Supplier			- Consent Granularity: governed				The Code Manager will require evidence of
			should consider if there is any	Retail Risk 10:		under the BSC.				coverage of the DIP Interface within
			impact on the Consent	Inaccurate						Qualification Testing. This will include IHD,
			Granularity Indicator.	data or data		- Related MPAN: see below.				SMSO and Profile Class / SSC updates.

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
		MHHS-	Supplier must be able to publish	that is not						
		BR-	Consent Granularity Indicator	maintained		- Import / Export association:				
		SU-	updates on the Data Integration	appropriately		governed under the BSC.				
		078	Platform via the appropriate	leads to delay						
			interface, following customer	in the		- IHD details: new requirement for				
			notification of a change in	switching		supplier to provide IHD details				
			consent, review following	process.		(IF025) and receive updates via				
			domestic premise indicator			IF026.				
			update or installation of a new							
			Smart meter.			- SMSO details: new requirement				
		MHHS-	Supplier must obtain Consent	1		for supplier to provide SMSO				
		BR-	Granularity Indicator updates via			details (IF025) and receive updates				
		SU-	the appropriate interface on the			via IF026.				
		079	Data Integration Platform and							
			action as appropriate.			- Profile Class / SSC details -new				
		MHHS-	Supplier must, where changes to	1		requirement for supplier to provide				
		BR-	In-House Display (IHD) details			Profile Class / SSC details (IF025)				
		SU-	are identified, publish an IHD			and receive updates via IF026.				
		090	update to Registration Service							
			via the appropriate interface on							
			the Data Integration Platform.							
		MHHS-	Supplier must obtain IHD							
		BR-	updates from Registration							
		SU-	Service via the appropriate							
		091	interface on the Data Integration							
			Platform and maintain records							
			accordingly.							
		MHHS-	Supplier must, where changes to]						
		BR-	Smart Metering System Operator							
		SU-	(SMSO) are identified, publish an							
		092	SMSO update to Registration							
			Service via the appropriate							
			interface on the Data Integration							
			Platform.							

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	cation Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
		MHHS-	Supplier must obtain SMSO							
		BR-	updates from Registration							
		SU-	Service via the appropriate							
		093	interface on the Data Integration							
			Platform and maintain records							
			accordingly.							
		MHHS-	Supplier must, where changes to	1						
		BR-	Import/Export linkages are							
		SU-	required, publish an Import/							
		094	Export linkage update to							
			Registration Service via the							
			appropriate interface on the Data							
			Integration Platform.							
		MHHS-	Supplier must, where changes to	-						
		BR-	legacy data items (Profile							
		SU-	Class/SSC) are identified,							
		096.1	publish a legacy data update to							
			Registration Service via the							
			appropriate interface on the Data							
			Integration Platform.							
		MHHS-	Supplier must obtain legacy data	1						
		BR-	item (Profile Class/SSC) updates							
		SU-	from Registration Service via the							
		096.2	appropriate interface on the Data							
			Integration Platform and maintain							
			records accordingly.							
		MHHS-	Supplier must be able to obtain	1						
		BR-	DCC enrolment updates via the							
		SU-	appropriate interface on the Data							
		096.3	Integration Platform and maintain							
			records accordingly.							

Market	Area	MHHS R	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualification Approach		
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during	
					Qualification		Question	evidence	Qualification	Qualification	
									Test Scenario		
Supplier	Maintenance	MHHS-	Supplier must obtain MPL	Retail Risk 6:	Low	A summary of each data item is set	√	√	✓	QAD question regarding maintenance of Non	
	of Non	BR-	address/ GSP Group ID updates	Inaccurate		out below:				Supplier owned data – noting that the only	
	Supplier	SU-	via the appropriate interface on	Address						design change is receipt of data via a DIP	
	Owned	075	the Data Integration Platform and	Management		- MPL Address: No change to				interface.	
	Registration		maintain records accordingly.	data results in		approach for updating MPL					
	Data		Supplier should consider if there	errors that		address. Supplier to receive update				PIT evidence demonstrating testing completed	
			are any impacts on Service	impact		via IF018.				using the DIP simulator.	
			Provider appointments.	customers.							
		MHHS-	Supplier must notify the LDSO of			- DUoS Tariff Id: Not relevant to				The Code Manager will require evidence of	
		BR-	any changes to MPL address	Retail Risk 7:		REC.				coverage of the DIP Interface within	
		SU-	that it becomes aware of (outside	Inaccurate						Qualification Testing.	
		075.1	of the PUB-018 notification) via	meter point		- Energy Direction: No change to					
			email/ SDEP or other bilaterally	master data		approach for updating Energy					
			agreed mechanism	results in		Direction. Supplier to receive					
		MHHS-	Supplier must be able to obtain	errors that		update via IF018.					
		BR-	DUoS Tariff ID updates via the	impact							
		SU-	appropriate interface on the Data	consumers.		- Metered Status: No change to					
		080	Integration Platform			approach for updating Metered					
		MHHS-	Supplier must obtain MPL	Retail Risk 10:		Status. Supplier to receive update					
		BR-	address/ GSP Group ID updates	Inaccurate		via IF018.					
		SU-	via the appropriate interface on	data or data							
		075	the Data Integration Platform and	that is not		- Customer Direct Contract: New					
			maintain records accordingly.	maintained		data maintained by the Data					
			Supplier should consider if there	appropriately		Service / Metering Service.					
			are any impacts on Service	leads to delay		Supplier involvement limited to					
			Provider appointments.	in the		receipt of IF-039.					
		MHHS-	Supplier must, where required,	switching							
		BR-	request the LDSO to carry out	process.							
		SU-	the one time update to the								
		084	Energy direction via a bilaterally								
			agreed mechanism (eg SDEP or								
			email)								
		MHHS-	Supplier must manage any								
		BR-	rejections to the Energy Direction								

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
		SU-	update and re-submit as							
		085	appropriate							
		MHHS-	Supplier must be able to obtain							
		BR-	Energy Direction updates via the							
		SU-	appropriate interface on the Data							
		086	Integration Platform and maintain							
			records accordingly							
		MHHS-	Supplier must, where required,							
		BR-	request the LDSO to carry out							
		SU-	the one time update to the							
		087	Metered Status via a bilaterally							
			agreed mechanism (eg SDEP or							
			email)							
		MHHS-	Supplier must manage any							
		BR-	rejections to the Metered Status							
		SU-	update and re-submit as							
		088	appropriate							
		MHHS-	Supplier must be able to obtain							
		BR-	Metered Status updates via the							
		SU-	appropriate interface on the Data							
		089	Integration Platform and maintain							
			records accordingly							
		MHHS-	Supplier must be able to obtain	1						
		BR-	DCC enrolment updates via the							
		SU-	appropriate interface on the Data							
		096.3	Integration Platform and maintain							
			records accordingly							
		MHHS-	Supplier must obtain Customer	1						
		BR-	Direct Contract response via the							
		SU-	appropriate interface on the Data							
		018	Integration Platform and maintain							
			records accordingly. Supplier							
			should utilise this information in							
			future requests for Metering							

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
			Service appointments for the							
			notified MPANs.							
Cupplier	Maintananaa	MUUC	Cumplier must notify Degistration	Retail Risk 7:	Medium	Now and to and process for		√		QAD question regarding maintenance of
Supplier	Maintenance	MHHS- BR-	Supplier must notify Registration		Medium	New end to end process for	*	•	ľ	
	of Related		Service of any change required	Inaccurate		managing Related Metering point				Related Metering Point data and seeking
	Metering Point	SU-	to the Metering Point	meter point		relationship including IF019 to				assurance that the Supplier understands the
	data	081	Relationships using the	master data		notify the Registration Service				changes to the use of this data being
			appropriate interface on the Data	results in		about creation of, changes to or				introduced with MHHS e.g. auto appointment /
		MUULO	Integration Platform	errors that		ending relationship and IF020 to				de-appointment of agents.
		MHHS-	Supplier must be able to obtain	impact		receive notifications from the				DIT outdones demonstration testing completed
		BR-	Related MPAN updates via the	consumers.		Registration Service.				PIT evidence demonstrating testing completed
		SU-	appropriate interface on the Data			ND, MULC is introducing greater				using the DIP simulator.
		083	Integration Platform and maintain			NB: MHHS is introducing greater				The Code Manager will require avidence of the
		N. III I I I	records accordingly	-		reliance on related metering point				The Code Manager will require evidence of the
		MHHS-	All Parties, where required, must			relationships for agent				DIP Connectivity Testing conducted with the
		BR-	be able to identify (using the			appointments so ensuring this				DIP Manager as a part of the QAD.
		SU-	appropriate interface) and			works and suppliers have				Balan IMan in Brita a laterate la constant
		131	appropriately manage related			appropriate systems and process in				Related Metering Point updates to be assured
			MPANs as described in the			place for maintaining this data is				through Qualification Testing within the UIT
			Retail Energy Code.			key. However, the application of				environment, including integration with the
0 "		N411110		D . "D: I .		this process is infrequent.				Registration Service or an equivalent stub.
Supplier		MHHS-	Supplier must identify when a	Retail Risk 1:	Low	No change to existing interactions	\ \ \	\	*	QAD question regarding the end to end
	Market	BR-	Change of Connection Type or	Consumer		with the DNO regarding change to				change of market segment process. Whilst
	Segment	SU-	Market Segment is required	supply point		connection type. NB: these are				most elements of this process are existing
		097	following a customer request for	interruption		captured in the DCUSA and the				functionality, ensuring the Supplier
			change to the	due to a lack		BSC.				understands how these come together into a
			connection/metering. The	of action or						single business process is key.
			Supplier must liaise with the	incorrect		Also existing approach to				
			customer, LDSO and Metering	action by REC		requesting meter exchange with				QAD should be seeking assurance that the
			Service as appropriate to	Parties.		MEM (noting the change to DTN				Supplier understands the relevance of this
			coordinate the change and agree			flows to reflect new market roles).				process to wider aspects of the business e.g.
			a target work date.	Retail Risk 13:						appointment / de-appointment of agents.

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	cation Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
		MHHS-	Supplier must send a request to	Retail		Receipt of the IF043 for change of				
		BR-	the LDSO to change the	consumers		connection type and IF044 for				PIT evidence demonstrating the end to end
		SU-	Connection Type via a bilaterally	have a		change of market segment are is				process has been tested using DIP simulator.
		098	agreed communication method,	negative		the only new elements within this				
			where it is identified that a	customer		scenario.				The Code Manager will require evidence of
			Change of Connection Type is	experience as						coverage of the DIP Interface within
			required.	part of the		Whilst a number of process steps				Qualification Testing. This will be covered as
		MHHS-	Supplier must send a request to	metering		are governed under the DCUSA /				part of appointment scenarios – see above.
		BR-	the Proposed Metering Service	works		BSC, the impact on agent				
		SU-	to change the Metering via a	conducted.		appointment and metering updates				
		099	bilaterally agreed communication			means this is an area REC				
			method, where it is identified that			Qualification requirements should				
			a Change of Market Segment is			cover.				
			required.							
		MHHS-	Supplier must receive							
		BR-	confirmation from the LDSO of							
		SU-	the agreed target work date for							
		100	any Change to Connection Type							
			requests via a bilaterally agreed							
			communication method.							
		MHHS-	Supplier must receive							
		BR-	confirmation from the Proposed							
		SU-	Metering Service of the agreed							
		101	target work date for any Change							
			to Market Segment requests via							
			a bilaterally agreed							
			communication method.							
		MHHS-	Supplier must, where it identifies	1						
		BR-	that new Service Providers are							
		SU-	needed, trigger Service							
		102	Appointments using the Change							
			of Metering Service and Change							
			of Data Service processes, with							
			a scenario of "SEG".							

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
		MHHS-	Supplier must work closely with							
		BR-	all parties involved to ensure that							
		SU-	the Target Date will be achieved.							
		103	If Supplier is informed that the							
			date has had to be moved							
			Supplier should re-submit any							
			Service Appointments for the							
			new Target Date							
		MHHS-	Supplier must obtain Connection							
		BR-	Type updates from the							
		SU-	Registration Service via the							
		104	appropriate interface on the Data							
			Integration Platform and maintain							
			records accordingly. Supplier							
			should monitor for these updates							
			after the agreed target work date							
			and liaise with LDSO to ensure a							
			prompt update.							
		MHHS-	Supplier must obtain Market							
		BR-	Segment updates from the							
		SU-	Registration Service via the							
		105	appropriate interface on the Data							
			Integration Platform and maintain							
			records accordingly. Supplier							
			should monitor for these updates							
			after the agreed target work date							
			and liaise with Metering							
			Service/LDSO, as appropriate, to							
			ensure a prompt update.							

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
Supplier	Monitoring	MHHS-	Supplier must obtain Missing	Retail Risk 7:	Low	New advisory messages issued by	✓	√	✓	QAD question regarding receipt of advisory
	Service	BR-	Service Provider Advisory	Inaccurate		the Registration Service relating to				messages and controls / processes in place to
	Advisories	SU-	notifications, sent from the	meter point		missing supplier agents and invalid				resolve identified issues.
		108	Registration Service on the Data	master data		market segment.				
			Integration Platform, via the	results in						PIT evidence demonstrating testing completed
			appropriate interface and	errors that		Inconsistent consent advisory not				using the DIP simulator.
			investigate why no Service	impact		relevant to the REC (SU-110)				
			Provider has been appointed. If	consumers.						The Code Manager will require evidence of
			necessary Supplier should							coverage of the DIP Interface within
			trigger a new Service Provider							Qualification Testing.
			appointment.							
		MHHS-	Supplier must obtain Invalid							
		BR-	Market Segment Advisory							
		SU-	notifications, sent from the							
		109	Registration Service on the Data							
			Integration Platform, via the							
			appropriate interface. Supplier							
			must investigate with the							
			Metering Service and/or LDSO to							
			agree the necessary action to							
			resolve the mismatch of							
			Connection Type to Meter Type							
			combination.							

Market	Area	MHHS R	equirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
Supplier	Migration	N/A	N/A	Retail Risk 7:	Low	The migration process will be	√	√	√	QAD question to assure the Supplier's
	Requirements			Inaccurate		similar to a standard change of				understanding of the migration process and
				meter point		agent, therefore testing will be				the options available through a Switch e.g.
				master data		required as separate appointment				option to forward migrate or retain metering
				results in		scenario's (Switch and non Switch).				point in legacy arrangements.
				errors that						
				impact		The Supplier's ability to manage				PIT evidence and Qualification Testing to
				consumers.		the migration in line with the				demonstrate end to end migration with and
						Migration Plan is not in the scope				without Switch. This should be captured as a
						of REC Qualification and will be				separate scenario under the MEM appointment
						managed by the programme.				process described above.
						Legacy Supplier requirements for				
						e.g. the Gaining Supplier in a				
						Reverse Migration are not in the				
						scope of REC Qualification as				
						Suppliers will need to ensure they				
						can meet these requirements from				
						M11 / M12 which may precede				
						Qualification.				
Supplier	ISD -	MHHS-	All Parties must obtain Industry	Various	Low	The majority of ISD data required	√	√		QAD question to determine whether the
	Suppliers	BR-	Standing Data (ISD) update			to support retail activities is				Supplier is amending existing systems /
	required to	SU-	notifications via the appropriate			available within the EES.				processes.
	receive ISD	123	interface, and if required take							
	updates		necessary steps to obtain			Potential duplication if this				PIT evidence demonstrating how the Supplier
			refreshed ISD data, maintain			functionality is being tested under				maintains standing data.
			their records accordingly and			the BSC.				
			reference/ utilise ISD as							The Code Manager will require evidence of
			appropriate as part of the service							coverage of the DIP Interface within
			delivery.							Qualification Testing.
Supplier	Generic	MHHS-	All Parties must publish data	Various	Low	Suppliers are required to receive	√	√	✓	QAD question regarding approach to
	requirements	BR-	following ISO8601 format -			data via a variety of new DIP				implementing the new DIP interfaces and
	associated	SU-	YYYY-MM-			interfaces. These have been				controls in place to manage message
		122	DDTHH:MM:SS±TZH:TZM.			referenced against the specific				exceptions.

Market	Area	MHHS F	equirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
	with DIP	MHHS-	All Parties must utilise Industry			processes detailed above and will				
	Interfaces	BR-	Standing Data to identify the			be captured in testing as required.				PIT evidence demonstrating interactions using
		SU-	relevant DIP ID/Role or DTN			This row has been included to				the DIP simulator.
		123.1	Market Participant ID/Role, as			captured generic DIP related				
			appropriate, to be used when			requirements and is not proposing				The Code Manager will require evidence of
			communicating over the			any addition testing above that				coverage of the DIP Interface within
			DIP/DTN.			already detailed above.				Qualification Testing. This will capture core
		MHHS-	All Parties must derive and	1						business processes where the Supplier is
		BR-	populate the DIP addressing							sending messages to the Registration Service
		SU-	(primary recipients) for all							to initiate further downstream activities.
		123.2	outbound interfaces in line with							
			the rules described in the							
			interface specification.							
		MHHS-	All Parties must process data	-						
		BR-	and share outputs with other							
		SU-	parties in line with timescales set							
		124	out in the Operational							
			Choreography document.							
		MHHS-	All Parties must obtain Data	1						
		BR-	Integration Platform error							
		SU-	messages in line with the End to							
		126	End Solution Architecture							
			Document, review the impacted							
			data and re-issue corrected							
			messages/transactions as							
			required							
		MHHS-	All Parties must return Data	1						
		BR-	Integration Platform error							
		SU-	messages in line with the End to							
		127	End Solution Architecture.							
			Unexpected and/or un-							
			processable messages should							
			be returned to the DIP/							
			originating party							

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualifi	cation Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
		MHHS-	All Parties, when transacting via							
		BR-	the DIP, must ensure that they							
		SU-	implement monitoring so as to							
		128	identify where expected							
			responses are not received							
			within standard DIP SLAs, as							
			outlined in the Operational							
			Choreography, so that the							
			appropriate investigative/							
			resolution activity can be							
			undertaken.							
		MHHS-	All Parties must have familiarity	1						
		BR-	with and actively monitor any							
		SU-	Data Integration Platform tools							
		129	for tracking messages, as							
			outlined in the End to End							
			Solution Architecture, so that the							
			necessary investigative action							
			can be taken when required.							
		MHHS-	All Parties must maintain and	1						
		BR-	update their records with any							
		SU-	data received on interfaces to							
		140	ensure the most accurate and							
			efficient delivery of the service.							

4.1.3 MEM

MEM Meering Service must obtain Registration Service Request for Appointment Vin Appointment Service Service Proposed and without a Smitch I fall of action or roquest and publish a response (acceptance or rejection) on the Data Integration I response (acceptance or rejection) on the Data Integration Cested has appointment request and publish a response (acceptance or rejection) on the Data Integration Cested has Meering Service and other to control to the Data Integration Deforms and the sproprietal information contained in the proposed appointment request and publish a response (acceptance or rejection) on the Data Integration Deforms with an appropriate inferface. Where a regulate irreplaced has Meering Service must provide an appointment request and publish a response (acceptance or rejection) on the Data Integration Deforms with the appropriate inferface. Where a regulate irreplaced has Meering Service should be worner than the response vibration of the revised appointment activities to complete did in a timely manner. Redal Risk 2: The distinction service appointment activities to complete did in a timely manner. Service Appointment vibration of the revised appointment request and publish a response a regulate interface. Where a request is rejected to response a regulate interface, where a request is rejected to reason in the response. When the appointment request is necessary and the response should be worner that at the point the appointment request is necessary and protection and the point the appointment request is necessary. Retail Risk 7: Retail Risk 8: 2: The privacy of the design with a master data appointment request in a master data and protection and there is a popointment request in a master data and protection and there is a popointment request in a master data and protection and there is a popointment request is necessary and protection and the point in a master data and protection and the point in the revised appointment request and protection and the point in a finite protection and the	Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
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with and without a Switch / Initial Swit			001		1						The distinction between new market
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request is rejected the Metering Service must provide an appropriate rejection reason in the response. When the appointment request is accepted the Metering Service should be aware that at this point the master data appointment remains results in possibility that it may need to be lapsed at a later stage. recquest is rejected the Metering processes and protocols. Recognition of scenarios where the Mistogram and protocols. Recognition of scenarios where the Mistogram and protocols. Service e.g. following registration deactivation. Recognition of scenarios where the Mistogram and special state of the American service and the Metering Service e.g. following registration deactivation. Recognition of scenarios where the Mistogram and special state of the Metering Service e.g. following registration deactivation. Recognition of the American service activation. Recognition of the approach to managing appointments for relating and import / examples of the approach to managing appointments for relating and import / examples of the approach to managing appointments for relating and import / examples of the approach to managing appointments for relating and import / examples of the approach to managing appointments for relating and import / examples of the approach to managing appointments for relating and import / examples of the approach to managing appointments for relating and import / examples of the approach to managing appointments for relating and import / examples of the approach to managing appointment remains appointments for relating and import / examples of the approach to managing appointment remains appoint											
Service must provide an appropriate rejection reason in the response. When the appointment request is accepted the Metering Service should be aware that at this point the master data appointment remains appointment remains appointment remains apposibility that it may need to be lapsed at a later stage. Service must provide an approvide an appropriate rejection reason in the Recigistration of scenarios where the Meter Metering Service should be activation. Recagnition of scenarios where the Meter Metering Service e.g. following registration deactivation. Service e.g. following registration deactivation. Fecognition of scenarios where the Meter Metering Service e.g. following registration deactivation. Fecognition of scenarios where the Metering Service e.g. following registration deactivation. Fecognition of the approach to managing appointments for relating and import / expressibility that it may need to be lapsed at a later stage. FIT evidence demonstrating MEM testing the Metering Service e.g. following registration deactivation.				appropriate interface. Where a	use of parties'						Market Roles within DTN messaging.
appropriate rejection reason in the response. When the appointment request is accepted the Metering Service should be aware that at this point the appointment remains appointment remains appointment remains appointment remains appointments for relating and import / expressibility that it may need to be lapsed at a later stage. Be auto de-appointed by the Registration Service e.g. following registration deactivation. Service e.g. following registration deactivation. Retail Risk 7: Inaccurate meter point master data results in errors that import / expressibility that it may need to be lapsed at a later stage. PIT evidence demonstrating MEM testing the substitution of the approach to managing appointments for relating and import / expressibility that it may need to be lapsed at a later stage.				request is rejected the Metering	processes and						
the response. When the appointment request is accepted the Metering Service should be aware that at this point the appointment remains appointment remains appointment remains appointment remains appointment is a possibility that it may need to be lapsed at a later stage. Retail Risk 7: Inaccurate meter point mater point master data - Recognition of the approach to managing appointments for relating and import / expenses that impact consumers. PIT evidence demonstrating MEM testing materials appointment stage.					protocols.						- Recognition of scenarios where the MEM will
appointment request is accepted the Metering Service should be aware that at this point the approach to managing appointment remains appointment remains results in appointment is a possibility that it may need to be lapsed at a later stage. Inaccurate meter point activation. Recognition of the approach to managing appointments for relating and import / expective and there is a possibility that it may need to be lapsed at a later stage. PIT evidence demonstrating MEM testing activation.				appropriate rejection reason in							be auto de-appointed by the Registration
the Metering Service should be aware that at this point the approach to managing appointment remains appointment remains appointment is a possibility that it may need to be lapsed at a later stage. The Metering Service should be aware that at this point the master data appointment remains appointment remains appointments for relating and import / expressibility that it may need to be lapsed at a later stage. The Metering Service should be aware that at this point the approach to managing appointments for relating and import / expressibility that it may need to be lapsed at a later stage. The Metering Service should be aware that at this point the approach to managing appointments for relating and import / expressibility that it may need to be lapsed at a later stage. The Metering Service should be aware that at this point the approach to managing appointments for relating and import / expressibility that it may need to be lapsed at a later stage. The Metering Service should be aware that at this point the master data appointment for relating and import / expressibility that it may need to be lapsed at a later stage. The Metering Service should be aware that at this point the master data appointment for relating and import / expressibility that it may need to be lapsed at a later stage. The Metering Service should be appointment for relating and import / expressibility that it may need to be lapsed at a later stage. The Metering Service should be appointment for relating and import / expressibility that it may need to be lapsed at a later stage.				the response. When the	Retail Risk 7:						Service e.g. following registration de-
aware that at this point the approach to manage appointment remains results in appointments for relating and import / expressibility that it may need to be lapsed at a later stage. - Recognition of the approach to manage appointments for relating and import / expressibility that it may need to be lapsed at a later stage. - Recognition of the approach to manage appointments for relating and import / expressibility that it may need to be lapsed at a later stage. - Recognition of the approach to manage appointments for relating and import / expressible in the property of the approach to manage appointments for relating and import / expressible in the property of the approach to manage appointments for relating and import / expressible in the property of the approach to manage appointments for relating and import / expressible in the property of the approach to manage appointments for relating and import / expressible in the property of the appointments for relating and import / expressible in the property of the approach to manage appointments for relating and import / expressible in the property of the approach to manage appointments for relating and import / expressible in the property of the approach to manage appointment of the approach approa				appointment request is accepted	Inaccurate						activation.
appointment remains results in appointments for relating and import / expressibility that it may need to be lapsed at a later stage.				the Metering Service should be	meter point						
"prospective" and there is a possibility that it may need to be lapsed at a later stage. "prospective" and there is a possibility that it may need to be lapsed at a later stage. "PIT evidence demonstrating MEM testing in the consumers of the				aware that at this point the	master data						- Recognition of the approach to managing
possibility that it may need to be lapsed at a later stage. impact consumers.				appointment remains	results in						appointments for relating and import / export
lapsed at a later stage. consumers.				"prospective" and there is a	errors that						Metering Points.
				possibility that it may need to be	impact						
MHHS- Metering Service must, for any the new process, including different scenarios				lapsed at a later stage.	consumers.						PIT evidence demonstrating MEM testing of
			MHHS-	Metering Service must, for any	1						the new process, including different scenarios:
BR- proposed appointments it Switch, Change of MEM without a Switch			BR-	proposed appointments it							Switch, Change of MEM without a Switch
MS- rejects, delete any metering (including change of Market Segment) a			MS-	rejects, delete any metering							(including change of Market Segment) and
003 Initial Registration for different market			003								Initial Registration for different market

Market	Area	MHHS R	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
			details received, within 30 days							segments. Testing to include the new DTN
			of notifying the rejection.							market roles and new DIP interfaces using the
			, ,							DIP Simulator.
		MHHS-	Metering Service must be able							The Code Manager will require evidence of the
		BR-	to process requests to vary the							DIP Connectivity Testing conducted with the
		MS-	conditions of an existing							DIP Manager as a part of the QAD.
		004	appointment received via the							
			appropriate interface. For							End to end business process to be assured
			example change of contract							through Qualification Testing within the UIT
			code. These should be validated							environment, including integration with the
			and an outcome returned using							Registration Service or an equivalent stub.
			the appropriate interface. In the							This should include Switch, Change of MEM
			case of rejection the existing							without a Switch (including change of Market
			appointment will continue							Segment) and Initial Registration for individual
			unamended.							Metering Points and those with related
		MHHS-	Metering Service must obtain							secondary metering points or associated
		BR-	Registration Service Notification							export.
		MS-	of Service De-Appointments via							
		005	the appropriate interface on the							
			Data Integration Platform and							
			maintain records accordingly.							
		MHHS-	Metering Service must obtain							
		BR-	Registration Service							
		MS-	Appointment Status							
		006	Notifications, with prospective							
			Metering Service appointments,							
			via the appropriate interface on							
			the Data Integration Platform							
			and maintain records of							
			prospective Metering Service.							

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
ole					for MHHS Qualification		QAD Question	PIT evidence	SIT / Qualification Test Scenario	Further comments on coverage during Qualification
		MHHS-	Metering Service must obtain							
		BR-	Registration Service							
		MS-	Appointment Status Notification							
		006.1	updates, acknowledging the							
			Prospective Metering Service							
			accepted/rejected appointments,							
			via the appropriate interface on							
			the Data Integration Platform							
			and maintain records							
			accordingly.							
		MHHS-	Metering Service must obtain	1						
		BR-	Registration Service Notification							
		MS-	of Service Appointment &							
		007	Supporting Info updates, with							
			confirmed Metering Service							
			appointments, via the							
			appropriate interface on the							
			Data Integration Platform and							
			update records with MPAN and							
			Meter Technical Details (ADS							
			and SDS only). For the							
			avoidance of doubt this is the							
			message that indicates that an							
			appointment will/has taken							
			effect.							

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
		MHHS-	MSA/MSS must obtain Export							
		BR-	MPAN appointments via the							
		MS-								
		008	appropriate interface on the Data Integration Platform and							
		000	update records with registration							
			_							
			and metering details. MSA/MSS should note this message will be							
			automatically triggered when a							
			change of Metering Service has							
			successfully completed for the linked import MPAN. (i.e.							
			acceptance of the Export MPAN							
			was implicit in the accepting the							
			appointment to the Import							
		MUUC	MPAN). MSA/MSS must obtain Related							
		MHHS- BR-								
		MS-	MPAN appointments via the							
			appropriate interface on the							
		008.1	Data Integration Platform and							
			update records with registration							
			and metering details. MSA/MSS							
			should note this message will be							
			automatically triggered when a							
			change of Metering Service has successfully completed for the							
			Primary Related MPAN.							
		MULIC								
		MHHS-	MSA/MSS must obtain Export							
		BR-	MPAN de-appointments via the							
		MS-	appropriate interface on the							
		009	Data Integration Platform and							
			maintain records accordingly.							
			MSA/MSS should note this							
			message will be automatically							
			triggered when a change of							

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
			Metering Service has							
			successfully completed for the							
			linked import MPAN.							
			minod import im 7 ii ii							
		141:::0	MOA/MOO							
		MHHS-								
		BR-	MPAN de-appointments via the							
		MS-	appropriate interface on the							
		009.1	Data Integration Platform and							
			maintain records accordingly.							
			MSA/MSS should note this							
			message will be automatically							
			triggered when a change of Metering Service has							
			successfully completed for the							
			Primary Related MPAN.							
		MHHS-								
		BR-	Meter Technical Details and							
		MS-	commissioning information to a							
		017	prospective MSA, on receipt of a							
			notification of that prospective							
			MSA, via the appropriate							
			interface. In the case where							
			Related MPANs or							
			Import/Export linked meters are							
			notified with the prospective							
			MSA, Meter Technical Details							
			must be sent for all the MPANs							
			in the Related MPAN or							
			Import/Export group.							

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
		MHHS-	MSS must be able to send							
		BR-	Meter Technical Details to a							
		MS-	prospective MSS for Traditional							
		018	meters, on receipt of a							
		010	notification of that prospective							
			MSS, via the appropriate							
			interface. In the case where							
			Related MPANs or							
			Import/Export linked meters are							
			notified with the prospective							
			MSA, Meter Technical Details							
			must be sent for all the MPANs							
			in the Related MPAN or							
			Import/Export group.							
		MHHS-	MSA must be able to receive							
		BR-	Meter Technical Details and							
		MS-	commissioning information from							
		019	the incumbent Metering Service							
		010	via the appropriate interfaces							
			and maintain records							
			accordingly.							
		MHHS-	MSS must be able to receive							
		BR-	Meter Technical Details from the							
		MS-	incumbent Metering Service for							
		020	Traditional meters via the							
		323	appropriate interface and							
			maintain records accordingly.							
		MHHS-	MSA/MSS must investigate with							
		BR-	the Metering Service where							
		MS-	Meter Technical Details are not							
		021	received for Advanced/							
		021	Traditional meters in expected							
			timescales as outlined in the							
			Operational Choreography.							
			Operational Onoreography.							

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
		MHHS-	MSA/MSS must be able to							
		BR-	investigate any discrepancies in							
		MS-	Meter Technical Details							
		022	received from the incumbent							
		022	Metering Service and those							
			received from the Registration							
			Service. This should identify if Meter Technical Details have							
			been updated between the							
			Metering Service originally							
			receiving the MTDs from the							
			incumbent Metering Service and							
			the time the appointment is							
			confirmed by the Registration							
			Service. In these circumstances							
			the new Metering Service							
			should request a refresh of the							
			MTDs from the incumbent							
			Metering Service.							
		MHHS-								
		BR-	Meter Technical Details to the							
		MS-	Supplier, LDSO and Data							
		023	Service via the appropriate							
			interface. In the event that the							
			Meter Technical Details get							
			refreshed from the incumbent							
			MSA, the new MSA should re-							
			send the MTDs on to the							
			Supplier, LDSO and Data							
			Service.							

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
		MHHS-	MSS must be able to send							
		BR-	Meter Technical Details to the							
		MS-	Supplier, LDSO and Data							
		024	Service for Traditional meters							
		024								
			via the appropriate interface. In							
			the event that the Meter							
			Technical Details get refreshed							
			from the incumbent MSS, the							
			new MSS should re-send the							
			MTDs on to the Supplier, LDSO							
			and Data Service.							
		MHHS-	Metering Service must obtain							
		BR-	Registration Service							
		MS-	Appointment Status							
		025	Notifications, with Metering							
			Service lapsed appointments,							
			via the appropriate interface on							
			the Data Integration Platform							
			and update records accordingly							
			so as to ensure that that the							
			appointment does not become							
			effective. Metering Service must							
			delete meter technical details							
			received for all lapsed							
			appointments within 30 days.							
		MHHS-	Metering Service must obtain	1						
		BR-	Registration Service Notification							
		MS-	of Service De-Appointments,							
		040	with a de-appointment reason of							
			disconnection, via the							
			appropriate interface on the							
			Data Integration Platform and							
			maintain records accordingly.							
			1						_	

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
		MHHS-	MSA/MSS must, on receipt of							
		BR-	updated customer details delete							
		MS-	or obfuscate the previously held							
		086	customer details as soon as							
		000	they are no longer required.							
		MHHS-	MSA/MSS must receive Priority	-						
		BR-	Service Details from the							
		MS-	Supplier via the appropriate							
		087	interface and maintain records							
		MULIC	accordingly.	_						
		MHHS-	MSA/MSS must, on receipt of							
		BR-	updated PSR details delete or							
		MS-	obfuscate the previously held							
		088	PSR details as soon as they are							
			no longer required.	_						
		MHHS-	MSA/MSS must, on receipt of a							
		BR-	de-appointment notification							
		MS-	becoming effective, delete or							
		088.1	obfuscate the previously held							
			PSR and customer details as							
			soon as they are no longer							
			required.							
MEM	Manage	MHHS-	Metering Service must publish a	Retail Risk 7:	Low	Whilst this is a new process	√	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	QAD question regarding the maintenance of
	Customer	BR-	Customer Direct Contract	Inaccurate		introduced for MHHS, the impact				Customer Direct Contract data and seeking
	Direct Contract	MS-	Advisory on the Data Integration	meter point		on parties and consumers is				assurance that the MEM understands the
		010	Platform via the appropriate	master data		relatively low as the flag is an				requirements and has systems and processes
			interface for each MPAN that	results in		optional indicator for Suppliers to				in place to maintain the data within the
			forms part of the contract, this	errors that		get visibility of Customer Direct				Registration Service.
			will also include the contract end	impact		Contracts.				
			date. This can be done only	consumers.						PIT evidence demonstrating MEM testing of
			where a contract has been							the new process using the DIP Simulator.
			formally agreed with the							
			customer.							The Code Manager will require evidence of the

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
		MHHS-	Metering Service must obtain							DIP Connectivity Testing conducted with the
		BR-	Registration Service Customer							DIP Manager as a part of the QAD.
		MS-	Direct Contract Advisory							I manager as a part or the arts.
		011	Responses via the appropriate							End to end business process to be assured
			interface on the Data Integration							through Qualification Testing within the UIT
			Platform.							environment, including integration with the
		MHHS-	Metering Service must, for							Registration Service or an equivalent stub.
		BR-	accepted responses, maintain							,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
		MS-	records to show which MPANs							
		012	have been flagged as a							
			customer direct contract.							
		MHHS-	Metering Service must continue	-						
		BR-	to manually coordinate the							
		MS-	appointment of MPANs within							
		013	the contract with other industry							
			participants.							
		MHHS-	Metering Service must have the	-						
		BR-	ability to cancel or change the							
		MS-	end date of a customer direct							
		014	contract using the appropriate							
			interface on the Data Integration							
			platform.							
		MHHS-	Metering Service must							
		BR-	investigate any rejections of							
		MS-	customer direct contracts and							
		015	re-submit as appropriate.							
		MHHS-	Metering Service must, in the							
		BR-	case of rejection for an existing							
		MS-	contract, liaise with their							
		016	customer and other participants							
			to determine why it appears							
			overlapping contracts might							
			exist.							

Market	Area	MHHS R	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
MEM	Change of	MHHS-	Metering Service must obtain	Retail Risk 7:	Low	The MEM is required to send MTDs	✓	✓		QAD question regarding the end to end Data
	Data Service –	BR-	Registration Service	Inaccurate		to the Data Service to support				Service Appointment process to ensure MEMs
	the MEM is	MS-	Appointment Status	meter point		settlement activities. NB: Whilst this				recognise the need to process IF035s relating
	captured	026	Notifications, with prospective	master data		does not have direct retail risk				to DS Appointment.
	within these		Data Service appointments, via	results in		impact, inaction or delay in action				
	requirements		the appropriate interface on the	errors that		from MEM can lead to inaccurate				QAD question regarding the change required
	on the basis		Data Integration Platform and	impact		meter point data being held across				to reflect the new Data Service Market Roles
	they must		maintain records of prospective	consumers.		the agents.				within DTN messaging.
	send MTDs to		Data Service.							
	the new DS	MHHS-	MSA must be able to send	-		Receipt of IF035 and IF036 DIP				PIT evidence demonstrating testing completed
		BR-	Meter Technical Details to a			interfaces will be covered through				using the new DTN market roles and the new
		MS-	prospective Advanced Data			the MEM appointment testing.				DIP interfaces using the DIP simulator.
		027	Service, on receipt of a							-
			notification of that prospective			The MTDs will be sent via existing				No Qualification Testing expected.
			ADS, via the appropriate			DTN flows, so the impact is limited				
			interface. In the case where			to the change required to reflect the				
			Related MPANs or			new Market Roles.				
			Import/Export linked meters are							
			notified with the prospective							
			ADS, Meter Technical Details							
			must be sent for all the MPANs							
			in the Related MPAN or							
			Import/Export group.							
		MHHS-	MSS must be able to send	1						
		BR-	Meter Technical Details to a							
		MS-	prospective Smart Data Service							
		028	for Traditional meters, on receipt							
			of a notification of that							
			prospective SDS, via the							
			appropriate interface. In the							
			case where Related MPANs or							
			Import/Export linked meters are							
			notified with the prospective							
			SDS, Meter Technical Details							

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
			must be sent for all the MPANs							
			in the Related MPAN or							
			Import/Export group.							
		MHHS-	Metering Service must obtain							
		BR-	Registration Service Notification							
		MS-	of Service Appointment &							
		030	Supporting Info updates, with							
			confirmed Data Service							
			appointments, via the							
			appropriate interface on the							
			Data Integration Platform and							
			maintain records accordingly.							
MEM	Manage Site	MHHS-	MSA/MSS must receive site	Retail Risk 7:	Low	Existing requirement – MHHS	✓	\		QAD question regarding the change required
	Technical	BR-	technical details from the LDSO	Inaccurate		change is limited to the new market				to reflect the new MEM Market Roles within
	Detail	MS-	via the appropriate interface.	meter point		roles for MEM DTN messages				DTN messaging.
	Requests	037.1		master data		(D0170 / D0215)				
		MHHS-	MSA/MSS must receive site	results in						PIT evidence demonstrating testing completed
		BR-	technical details from the LDSO	errors that						using the new DTN market roles.
		MS-	via the appropriate interface.	impact						
		037.1		consumers.						No Qualification Testing expected.
MEM	Change of	MHHS-	Metering Service must be able	Retail Risk 7:	Medium	Existing requirement regarding	✓	✓	\ \ \	QAD question(s) regarding the MEM
	Energisation	BR-	to receive a change of	Inaccurate		request for energisation status				implementation of the revised change of
		MS-	energisation status request via	meter point		change. MHHS change is limited to				energisation process. In particular this should
		041	the appropriate interface.	master data	<u> </u>	the new market roles for MEM DTN				capture:

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
		MHHS-	Metering Service must be able	results in		messages (D0134 / D0179 D0010).				
		BR-	to receive a change of	errors that						- The approach to design, build and test of the
		MS-	energisation status outcome	impact		However, there is a wider change				new end to end process including the new DIP
		042	from the LDSO via the	consumers.		to manage ongoing communication.				interfaces.
			appropriate interface.							
		MHHS-	Metering Service must be able	_		No change to the actual delivery of				- Controls in place to ensure responses are
		BR-	to publish a notification to the			physical meter works.				sent within MHHS defined timescales.
		MS-	Supplier, advising when a							
		042.1	change in energisation status							- Change required to reflect the new MEM
			cannot be actioned, to the Data							Market Roles within DTN messaging.
			Integration Platform via the							
			appropriate interface.							PIT evidence demonstrating MEM testing of
		MHHS-	MSA/MSS must be able to	-						the new process. Testing to include the new
		BR-	capture Advanced and Smart							DTN market roles and new DIP interfaces
		MS-	cumulative reads and publish							using the DIP Simulator.
		043	the reads to the Data Integration							
			Platform via the appropriate							The Code Manager will require evidence of the
			interface.							DIP Connectivity Testing conducted with the
		MHHS-	MSA/MSS should attempt to							DIP Manager as a part of the QAD.
		BR-	recover UTC Period Level							
		MS-	Consumption Data, for							End to end business process to be assured
		044	Advanced and Smart meters (through Qualification Testing within the UIT
			not UMS or Traditional), in line							environment, including integration with the
			with contractual agreements and							Registration Service or an equivalent stub.
			share via an agreed							This should include acceptance and rejection
			mechanism.							of the initial supplier request and interaction
		MHHS-	MSA must be able to process a	1						with meter installation, exchange and removal.
		BR-	change in energisation status for							
		MS-	an Advanced meter and provide							
		045	register reads to the Data							
			Service via the appropriate							
			interface.							

Market	Area	MHHS R	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
		MULIC	MCC recet has able to recess a							
		MHHS-	MSS must be able to process a							
		BR-	change in energisation status for							
		MS-	a Traditional meter and provide							
		046	register reads to Data Service							
			via the appropriate interface.							
		MHHS-	MSS must, for traditional pre							
		BR-	payment meters, issue a D0179							
		MS-	to the Supplier via the							
		046.1	appropriate interface.							
		MHHS-	Metering Service must be able							
		BR-	to provide updated energisation							
		MS-	status details to the Data							
		049	Integration Platform via the							
			appropriate interface.							
		MHHS-	Metering Service must be able							
		BR-	to obtain and process							
		MS-	Registration Service Notification							
		050	of Change of Energisation							
			Status updates via the							
			appropriate interface on the							
			Data Integration Platform. Any							
			rejections should be							
			investigated and re-submitted as							
			appropriate.							
MEM	Meter Works -			Retail Risk 7:	High	Existing approach to requesting	✓	✓	✓	QAD question(s) regarding the MEM
	including			Inaccurate		change (D0142, D0001), managing				implementation of the revised metering
	install,			meter point		issues where activity has failed to				process. In particular this should capture:
	remove,			master data		complete (D0002, D0221), sending				
	exchange,			results in		MTDs (D0149 / 150 and D0268)				- The approach to design, build and test of the
	plus general	MHHS-	MSA/MSS must be able to	errors that		and carrying out Proving Tests.				new end to end process including the new DIP
	fault resolution	BR-	receive a metering request via	impact						interfaces.
		MS-	the appropriate interface and	consumers.		However, there is a wider change				
			ine appropriate interiace and			to manage ongoing				- Controls in place to ensure responses are
		051								

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
			arrange for the meter works as			communications of reads and				sent within MHHS defined timescales.
			per the request.			MTDs.				Sent within with 3 defined timescales.
			per the request.			WILDS.				- Change required to reflect the new MEM
						No change to the actual delivery of				Market Roles within DTN messaging.
		MHHS-	MSA/MSS must be able to notify	-						Market Roles within DTN messaging.
		BR-	a Fault Resolution Report or			physical meter works – change is focused on the communication.				DIT ovidence demonstrating MEM testing of
		MS-	Request for decision on Further			locused on the communication.				PIT evidence demonstrating MEM testing of
		052	action via the appropriate			Diels realing driver by the feet this is				the new process. Testing to include the new
		032	interface.			Risk rating driven by the fact this is				DTN market roles and new DIP interfaces
		MHHS-				a high frequency activity with a				using the DIP Simulator.
		BR-	provide Notification of Failure to			number of new DIP interfaces.				The Code Management II as suite a video of the
		MS-	'							The Code Manager will require evidence of the
		053	Install or Energise Metering							DIP Connectivity Testing conducted with the
		053	System via the appropriate interface.							DIP Manager as a part of the QAD.
		MHHS-		_						Ford to and business are seen to be accounted
										End to end business process to be assured
		BR-	capture cumulative reads from							through Qualification Testing within the UIT
		MS-	the meter while on site.							environment, including integration with the
		054		_						Registration Service or an equivalent stub.
		MHHS-	MSA/MSS must, in line with							This should include acceptance and rejection
		BR-	bilateral service agreements, be							of the initial supplier request and interaction
		MS-	able to capture Advanced and							with change of energisation process.
		055	Smart UTC Period Level							
			Consumption Data and provide							
			the data to the Supplier.							
		MHHS-								
		BR-	install, remove and exchange							
		MS-	meters in line with industry							
		056	codes.							
		MHHS-	MSA/MSS must, if required, be							
		BR-	able to update the energisation							
		MS-	status of a newly fitted meter.							
		057								

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
		MHHS-	MSA/MSS must be able to							
		BR-	publish updated metering details							
		MS-	on the Data Integration Platform							
		058	via the appropriate interface.							
		MHHS-								
		BR-	of installation/ removal of assets							
		MS-	using the appropriate interface.							
		058.1	and appropriate interiores							
		MHHS-	MSA/MSS must receive updates							
		BR-	to the Meter Asset Provider							
		MS-	(MAP) via the appropriate							
		058.2	interface and maintain records							
			accordingly.							
		MHHS-								
		BR-	MAP details on the Data							
		MS-	Integration Platform via the							
		058.3	appropriate interface.							
		MHHS-	MSA/MSS must be able to							
		BR-	obtain and process meter							
		MS-	change acceptances received							
		059	via the appropriate interface on							
			the Data Integration Platform.							
		MHHS-	MSA/MSS must be able to							
		BR-	obtain and investigate feedback							
		MS-	on meter change rejections							
		060	received via the appropriate							
			interface on the Data Integration							
			Platform.							
		MHHS-	MSA/MSS must, for Smart and							
		BR-	Advanced meters, be able to							
		MS-	publish meter change							
		061	cumulative reads on the Data							
			Integration Platform via the							
			appropriate interface.							

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
		MHHS-	MSA must be able to send ,							
		BR-	following receipt of a meter							
		MS-	change acceptance from the							
		062	Registration Service, Meter							
		002	Technical Details,							
			commissioning details and							
			register meter readings via the							
			appropriate interfaces to the							
			Data Service, Supplier and							
			LDSO.							
		MHHS-	MSS must be able to send,	-						
		BR-	following receipt of a meter							
		MS-	change acceptance from the							
		063	Registration Service, Meter							
			Technical Details, mapping							
			details and register meter							
			readings via the appropriate							
			interface to the Data Service,							
			Supplier and LDSO.							
		MHHS-	MSA must investigate and	-						
		BR-	provide feedback on any faulty							
		MS-	equipment notified by the ADS							
		078	or Supplier via the appropriate							
			interfaces as outlined in Retail							
			Energy Code (REC) Schedule							
			14 – Metering Operations.							
		MHHS-	MSS must investigate any faulty	†						
		BR-	equipment notified by the							
		MS-	Supplier via the appropriate							
		079	interface as outlined in Retail							
			Energy Code (REC) Schedule							
			14 – Metering Operations.							
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Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification Test Scenario	Qualification
MEN		MHHS- BR- MS- 080.1	MSA must manage proving test processes in line with the existing Half Hourly Data Collection processes as outlined in BSCP-502 section 3.5.							
MEM	MTD Update	N/A	There are no specific requirements within MHHS relating to generic update to MTDs outside a wider metering business process.	Retail Risk 7: Inaccurate meter point master data results in errors that impact consumers.	High	In practice MEMs are required to maintain MTDs and provide updates where attributes change or where they identify an earlier error. This is captured by a Meter Update or Meter History Update within the IF005.				QAD question regarding the MEM approach to providing generic meter updates. PIT evidence demonstrating MEM testing of the interface using the DIP Simulator. The Code Manager will require evidence of the DIP Connectivity Testing conducted with the DIP Manager as a part of the QAD. End to end business process to be assured through Qualification Testing within the UIT environment, including integration with the Registration Service or an equivalent stub. This should include positive and negative testing to reflect the IF005 validation rules.
MEM	Maintenance of Registration Data	MHHS- BR- MS- 065	Metering Service must obtain MPL address/ GSP Group ID updates via the appropriate interface on the Data Integration Platform and maintain records accordingly.	Retail Risk 6: Inaccurate Address Management data results in errors that	Low	A summary of each data item is set out below: - MPL Address: No change to approach for updating MPL address. MEM to receive update	✓	✓ ·	✓	QAD question regarding maintenance of registration data – noting that the only design change is receipt of data via a DIP interface. Propose a specific question regarding Related Metering Points and Import / Export associations based on the new appointment

Market	Area	MHHS R	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
		MHHS-	MSA/MSS must obtain domestic	impact		via IF018.				considerations.
		BR-	premise indicator updates via	customers.		VIG. II 9 191				
		MS-	the appropriate interface on the			- Domestic Premises Indicator:				PIT evidence demonstrating testing completed
		066	Data Integration Platform,	Retail Risk 7:		MEM will receive update via IF018.				using the DIP simulator.
			maintain records accordingly	Inaccurate		linani in recente apaste tia ii e ter				
			and consider impacts to service	meter point		- Related MPAN: Key data for MEM				The Code Manager will require evidence of the
			delivery as required.	master data		to be aware of. MEM will receive				DIP Connectivity Testing conducted with the
		MHHS-	MSA/MSS must be able to	results in		update via IF020.				DIP Manager as a part of the QAD.
		BR-	obtain Related MPAN updates	errors that						
		MS-	via the appropriate interface on	impact		- Energy Direction: MEM to receive				Qualification Testing scope to be confirmed
		066.1	the Data Integration Platform	consumers.		update via IF018.				one DIP Connectivity Testing scope if made
			and maintain records							available. The Code Manager will need
			accordingly.			- Metered Status: MEM to receive				assurance that one receipt of updates via the
		MHHS-	Metering Service must be able			update via IF018.				DIP, the data held by the MEM is updated
		BR-	to obtain Energy Direction							
		MS-	updates via the appropriate			- SMSO details: MEM to receive				
		066.2	interface on the Data Integration			updates via IF026.				
			Platform and maintain records							
			accordingly.			- Import / Export association:				
		MHHS-	Metering Service must be able			governed under the BSC. Key data				
		BR-	to obtain Metered Status			for MEM to be aware of. MEM will				
		MS-	updates via the appropriate			receive update via IF020.				
		066.3	interface on the Data Integration							
			Platform and maintain records			- Profile Class / SSC details: MEM				
			accordingly.			to receive updates via IF026.				
		MHHS-	MSS must obtain SMSO	1						
		BR-	updates from Registration							
		MS-	Service via the appropriate							
		066.4	interface on the Data Integration							
			Platform and maintain records							
			accordingly.							

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role		for MHHS Qualification			QAD Question	PIT evidence	SIT / Qualification Test Scenario	Further comments on coverage during Qualification		
		MHHS-	Metering Service must be able							
		BR-	to obtain Import/Export linkage							
		MS-	updates via the appropriate							
		066.5	interface on the Data Integration							
			Platform and maintain records							
			accordingly.							
		MHHS-	Metering Service must obtain							
		BR-	legacy data item (Profile							
		MS-	Class/SSC) updates from							
		066.6	Registration Service via the							
			appropriate interface on the							
			Data Integration Platform and							
			maintain records accordingly.							
		MHHS-	All services, where required,							
		BR-	must be able to identify (using							
		MS-	the appropriate interface) and							
		077	appropriately manage related							
			MPANs as described in the							
			relevant BSCP.							
MEM	Change of	MHHS-	MSA/MSS must, following initial	Retail Risk 1:	Medium	No change to existing interactions	√	✓	✓	QAD question regarding the end to end
	Market	BR-	engagement from a Supplier, be	Consumer		with the DNO regarding change to				change of market segment process, ensuring
	Segment	MS-	able to receive a request to	supply point		connection type.				the MEM understands how these come
		092	carry out a Change of Segment	interruption						together into a single business process is key.
			meter exchange, via a bilaterally	due to a lack		Also existing approach for the				
			agreed mechanism, even when	of action or		Supplier to request a meter				QAD should be seeking assurance that the
			they are not the currently	incorrect		exchange (NB: the change to DTN				MEM understands the relevance of this
			appointed Metering Service.	action by REC		flows to reflect new market roles).				process to wider aspects of the business e.g.
		MHHS-	MSA/MSS must respond to the	Parties.						appointment / de-appointment of agents.
		BR-	Supplier, via a bilaterally agreed			However, the link with agent				
		MS-	mechanism, confirming that they	Retail Risk 13:		appointment and choreography				PIT evidence demonstrating the end to end
		093	can carry out the Change of	Retail		issues increased the risk				process has been tested using DIP simulator.
			Segment exchange on the	consumers .		associated with the process to be				
			agreed target date.	have a						The Code Manager will require evidence of the

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating	Proposed Qualification Approach					
Role				for MHH	for MHHS	for MHHS	QAD	PIT	SIT /	Further comments on coverage during		
					Qualification		Question	evidence	Qualification	Qualification		
									Test Scenario			
		MULIC	MSA/MSS must be able to	nagativa		tooted including various according				DID Connectivity Testing conducted with the		
		MHHS-		negative		tested, including various scenarios				DIP Connectivity Testing conducted with the		
		BR-	publish Change of Segment	customer		to test sequencing of activities.				DIP Manager as a part of the QAD.		
		MS-	Meter Exchange details and	experience as						E. H H		
		094	reads via the appropriate	part of the						End to end business process to be assured		
			interfaces, where it is not	metering						through Qualification Testing within the UIT		
			formally appointed as the	works						environment, including integration with the		
			Metering Service but does have	conducted.						Registration Service or an equivalent stub.		
			an accepted prospective							This is a combination of a MEM Appointment		
			appointment (Appointment							and Meter Exchange scenario therefore listed		
			Scenario = "SEG"). The							separately.		
			MSA/MSS must issue the work									
			update to Registration at the									
			earliest opportunity but within [x]									
			days of completion at the latest.									
		MHHS-	MSA/MSS must be able to									
		BR-	obtain a Registration Service									
		MS-	Change of Segment Meter									
		095	Exchange confirmation with									
			MTDs and readings via the									
			appropriate interface on the									
			Data Integration Platform, even									
			when it is from a 3rd party									
			Metering Service.									
		MHHS-	MSA must be able to receive									
		BR-	Commissioning details from the									
		MS-	LDSO following a connection									
		096	type update, via the appropriate									
			interface, and maintain records									
			accordingly.									
		MHHS-	MSA/MSS must be able to	1								
		BR-	obtain Registration Service									
		MS-	Change of Connection Type									
		097	notifications via the appropriate									
			interface on the Data Integration									

Market	Area	MHHS Requirements			Risk Rating Rationale of Risk Rating for MHHS	Rationale of Risk Rating	Proposed Qualification Approach				
Role						QAD	PIT	SIT /	Further comments on coverage during		
					Qualification		Question	evidence	Qualification	Qualification	
									Test Scenario		
			Platform and maintain records								
			accordingly.								
		MHHS-	MSA/MSS must obtain Invalid								
		BR-	Market Segment Advisory								
		MS-	notifications, sent from the								
		097.1	Registration Service on the Data								
			Integration Platform, via the								
			appropriate interface.								
MEM	Monitoring	MHHS-	MSA/MSS must obtain Invalid	Retail Risk 7:	Low	New advisory messages issued by	_	\ \frac{1}{2}	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	QAD question regarding receipt of advisory	
	Service	BR-	Market Segment Advisory	Inaccurate		the Registration Service relating to				messages and controls / processes in place to	
	Advisories	MS-	notifications, sent from the	meter point		missing supplier agents and invalid				resolve identified issues.	
		097.1	Registration Service on the Data	master data		market segment.					
			Integration Platform, via the	results in						PIT evidence demonstrating testing completed	
			appropriate interface.	errors that						using the DIP simulator.	
				impact							
				consumers						The Code Manager will require evidence of the	
										DIP Connectivity Testing conducted with the	
										DIP Manager as a part of the QAD.	
										No Qualification Testing expected.	
MEM	Migration	N/A	N/A	Retail Risk 7:	Medium	The migration process will be	√	√		QAD question to assure the MEM's	
	Requirements			Inaccurate		similar to a standard change of				understanding of the migration process and	
				meter point		agent, therefore testing will be				how this differs from a standard change of	
				master data		required as separate appointment				agent.	
				results in		scenario's (Switch and non Switch).					
				errors that		However, MEMs will need to				QAD question to understand how MEMs will	
				impact		support data cleanse activity				ensure MTD accuracy for migration.	
				consumers		(especially with regards to quality of					
						MTDs) in preparation for migration.				PIT evidence and Qualification Testing to	
										demonstrate end to end migration with and	
						Legacy MEM requirements for e.g.				without Switch. This should be captured as a	

Market	Area	MHHS F	MHHS Requirements		Risk Rating	Rationale of Risk Rating	Proposed Qualification Approach				
Role				for MH	for MHHS		QAD	PIT	SIT /	Further comments on coverage during	
					Qualification		Question	evidence	Qualification	Qualification	
									Test Scenario		
						the Gaining MEM in a Reverse				separate scenario under the MEM appointment	
						Migration or a Losing MEM in a				process described above	
						forward migration are not in the				process described above	
						scope of Code Qualification as					
						MEMs will need to ensure they can					
						meet these requirements from M11					
						/ M12 which may precede					
						Qualification.					
						Qualification.					
MEM	ISD – MEMs	MHHS-	All services must obtain Industry	Various	Low	The majority of ISD data required to	√	√	√	QAD question to determine whether the MEM	
	required to	BR-	Standing Data (ISD) update			support retail activities is available				is amending existing systems / processes.	
	receive ISD	MS-	notifications via the appropriate			within the EES.					
	updates	071	interface, and if required take							PIT evidence demonstrating how the MEM	
			necessary steps to obtain							maintains standing data.	
			refreshed ISD data, maintain								
			their records accordingly and							The Code Manager will require evidence of the	
			reference/ utilise ISD as							DIP Connectivity Testing conducted with the	
			appropriate as part of the							DIP Manager as a part of the QAD.	
			service delivery.								
										No Qualification Testing expected.	
MEM	Generic	MHHS-	MSA/MSS must publish data	Various	Low	MEMs are required to receive data	✓	✓	/	QAD question regarding approach to	
	requirements	BR-	following ISO8601 format -			via a variety of new DIP interfaces.				implementing the new DIP interfaces and	
	associated	MS-	YYYY-MM-			These have been referenced				controls in place to manage message	
	with DIP	070	DDTHH:MM:SS±TZH:TZM.			against the specific processes				exceptions.	
	Interfaces		Au	1		detailed above and will be captured					
		MHHS-	All services must utilise Industry			in testing as required. This row has				PIT evidence demonstrating interactions using	
		BR-	Standing Data to identify the			been included to captured generic				the DIP simulator.	
		MS-	relevant DIP ID/Role or DTN			DIP related requirements and is not					
		071.1	Market Participant ID/Role, as							The Code Manager will require evidence of the	
			appropriate, to be used when							·	

Market	Area	MHHS F	Requirements	Retails Risks	Risk Rating	Rationale of Risk Rating			Proposed Qualif	ication Approach
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during
					Qualification		Question	evidence	Qualification	Qualification
									Test Scenario	
			communicating over the			proposing any addition testing				DIP Connectivity Testing conducted with the
			DIP/DTN.			above that already detailed above.				DIP Manager as a part of the QAD.
			Bill /BTIV.			above that already detailed above.				bir Manager as a part of the QAB.
										Qualification Testing to capture core business
										processes where the MEM is sending
		MHHS-	All services must derive and							messages to the Registration Service
		BR-	populate the DIP addressing							regarding metering related activities.
		MS-	(primary recipients) for all							
		071.2	outbound interfaces in line with							
			the rules described in the							
			interface specification.							
		MHHS-	All services must process data							
		BR-	and share outputs with other							
		MS-	parties in line with timescales							
		072	set out in the Operational							
			Choreography document.							
		MHHS-	All Services must obtain Data							
		BR-	Integration Platform error							
		MS-	messages in line with the End to							
		073	End Solution Architecture,							
			review the impacted data and							
			re-issue corrected							
			messages/transactions as							
			required.							
		MHHS-	All services, when transacting							
		BR-	via the DIP, must ensure that							
		MS-	they implement monitoring so as							
		074	to identify where expected							
			responses are not received							
			within standard DIP SLA's, as							
			outlined in the Operational							
			Choreography, so that the							
			appropriate investigative/							

Market	Area	MHHS F	Requirements	Retails Risks		Rationale of Risk Rating	Proposed Qualification Approach				
Role					for MHHS		QAD	PIT	SIT /	Further comments on coverage during	
					Qualification		Question	evidence	Qualification	Qualification	
									Test Scenario		
			resolution activity can be								
			undertaken.								
			undertaken.								
		MHHS-	All services must have familiarity								
		BR-	with and actively monitor any								
		MS-	Data Integration Platform tools								
		075	for tracking flows, as outlined in								
			the End to End Solution								
			Architecture, so that the								
			necessary investigative action								
			can be taken when required.								
		MHHS-	All Services should implement								
		BR-	data validation steps and								
		MS-	techniques that they feel are								
		083	appropriate to ensure the most								
			accurate and efficient delivery of								
			the service.								
		MHHS-	All Services must maintain and								
		BR-	update their records with any								
		MS-	data received on interfaces to								
		091	ensure the most accurate and								
			efficient delivery of the service.								

4.2 MIGRATION REQUIREMENTS

The following assessment criteria to cover MHHS-DEL974 MHHS Migration Design Requirements Log v1.0 by role has been developed by the REC Code Manager and presented to REC PAB for approval on 26 March 2024. This will be updated as further information is published by the MHHS Programme.

4.2.1 DNO (INCLUDING REGISTRATION SERVICE)

Market Role	Migration Scenario	Area	MHHS Reference	MHHS Requirement Description	QAD Question	PIT Evidence	SIT / Qualification Testing Evidence	Further comments on coverage
DNO (including Registration Service)	Forward Migration	Change of Supply	MHHS-Migration-CoS- RS-001	In the scenario that a Legacy MPAN is switching to a MHHS Qualified Supplier, the Registration Service will send both the IF-002 and the D0217 / D0260 to the incoming Supplier at the same time.		~	·	Migration design covered through SIT.
DNO (including Registration Service)	Forward Migration	Change of Supply	MHHS-Migration-CoS-RS-002	Each time a Pending registration is received, Registration Service to consult ISD to determine Qualification status of Supplier in respect to the status of the MPAN.	√	✓		Migration design covered through SIT.
DNO (including Registration Service)	Forward Migration	Change of Supply	MHHS-Migration-CoS-RS-003	Registration Service to send the D0217/D0260 the next working day at the very latest after the IF-002 (although in most cases the messages will be sent only a few hours apart).	√	√		Migration design covered through SIT.
DNO (including Registration Service)	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-RS-001	Registration Service must send a D0170 to the outgoing MOP to request they send the MTDs to the new MS. This D0170 will include a specific enumeration value within the data item 'Requested Action Code' which will specify whether a CoA or CoS Migration is occurring.	√	✓		Migration design covered through SIT.
DNO (including Registration Service)	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-RS-002	In the scenario that a Migration is already underway and a Pending switch is received, when the D-1 effective from status of the Agent appointment is reached, Registration Service must send IF-035 in place of an IF-036 with specific Migration cancellation value within the 'Event Code' data item to inform incoming Service Providers and incumbent Supplier that the Migration has been cancelled.	V	*	V	
DNO (including Registration Service)	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-RS-004	Related MPANs: Following receipt of a PUB-031, the Registration Service must reject any requested change to the Related status of an MPAN.		√	✓	
DNO (including Registration Service)	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-RS-005	Related MPANs: The Registration Service must automatically migrate Secondary MPANs alongside Primary MPANs.		V	V	
DNO (including Registration Service)	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-RS-007	Once the Registration Service receives an IF-031, subsequent D0205's should be rejected.		V		Migration design covered through SIT.

Market Role	Migration	Area	MHHS Reference	MHHS Requirement Description	QAD Question	PIT Evidence	SIT / Qualification	Further comments on coverage
	Scenario	7.052		and the quantum second parent			Testing Evidence	
DNO (including Registration Service)	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-RS-008	Registration Service to remove MPAN from inclusion in the Legacy EES Extract upon successful completion of Forward Migration, indicated through the send of an IF-036.	√	√		Migration design covered through SIT.
DNO (including Registration Service)	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-RS-009	If MPAN is Legacy and an IF-031 is sent using a non- Migration appointment code in the 'Service Provider Appointment Scenario' data item, this will be rejected using REG1094 validation rule.		✓	✓	
DNO (including Registration Service)	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-RS-010	If an IF-031 is rejected due to MPAN being Legacy and the IF-031 is sent using a non-Migration appointment code in the 'Service Provider Appointment Scenario' data item, an IF-032 will be sent back with specific Response Code and Response Message.		✓	*	
DNO (including Registration Service)	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-RS-011	Related MPANs: If MPAN is a Secondary MPAN and an IF- 031 is sent using a Migration appointment code in the 'Service Provider Appointment Scenario' data item, the IF- 031 will be rejected using REG1039 validation rule.		✓	✓	
DNO (including Registration Service)	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-RS-012	If an IF-031 is rejected due to MPAN being a Secondary MPAN and the IF-031 is sent using a Migration appointment code in the 'Service Provider Appointment Scenario' data item, an IF-032 will be sent back with specific Response Code and Response Message.		✓	✓	
DNO (including Registration Service)	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-RS-013	In the scenario that a Pending switch is already in place and a Migration is initiated, Registration Service must reject the IF-031 using REG1095 validation rule.		✓	√	
DNO (including Registration Service)	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-RS-014	If an IF-031 is rejected due to Pending switch already being in place, an IF-032 will be sent back with specific Response Code and Response Message.		✓	✓	
DNO (including Registration Service)	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-RS-016	Registration Service will not automatically migrate Export MPAN following successfully Migration of the Import MPAN; they will be migrated independently of one another.	V	✓	✓	
DNO (including Registration Service)	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-RS-017	Registration Service to automatically appoint same MS and DS to Related MPANs post-Forward Migration.		√	✓	
DNO (including Registration Service)	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-RS-018	Registration Service to send the IF-036 at the Service Appointment effective from date.		✓	*	

Market Role	Migration Scenario	Area	MHHS Reference	MHHS Requirement Description	QAD Question	PIT Evidence	SIT / Qualification Testing Evidence	Further comments on coverage
DNO (including Registration Service)	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-RS-019	Once a Forward Migration is initiated (indicated through the send of an IF-031) or if a MPAN is MHHS, the Registration Service will not accept Legacy D flows for a given MPAN.	√	√	√	
DNO (including Registration Service)	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-LDSO-001	LDSO to receive PUB-036 from Registration Service (via the DIP), containing MS appointment notification and MTD.		✓	✓	
DNO (including Registration Service)	Reverse Migration	Change of Supply	MHHS-RMigration- CoS-RS-001	In the scenario that a MHHS MPAN is switching to a Legacy Supplier, the Registration Service will only send the D0217 / D0260 to the incoming Supplier. No IF-002 will be sent.		✓	√	
DNO (including Registration Service)	Reverse Migration	Change of Supply	MHHS-RMigration- CoS-RS-002	Related MPANs: The Registration Service will automatically initiate a Reverse Migration for all Secondary MPANs following receipt of a Pending Registration for a Secondary MPAN.		✓	V	
DNO (including Registration Service)	Reverse Migration	Change of Supply	MHHS-RMigration- CoS-RS-003	Each time a Pending registration is received, Registration Service to consult ISD to determine qualification status of Supplier in respect to the status of the MPAN.	V	✓		
DNO (including Registration Service)	Reverse Migration	Change of Supply	MHHS-RMigration- CoS-RS-004	If a Pending registration prompts a Reverse Migration and the MPAN did not previously exist in Legacy arrangements, MPRS to populate default Legacy data.	V	✓	✓	
DNO (including Registration Service)	Reverse Migration	Change of Supply	MHHS-RMigration- CoS-RS-005	If a Pending registration prompts a Reverse Migration and the MPAN previously existed in Legacy arrangements, MPRS to populate data items from the previous Legacy Registration.	V	✓	*	
DNO (including Registration Service)	Reverse Migration	Change of Supply	MHHS-RMigration- CoS-RS-008	Once a Reverse Migration is initiated (indicated through the receipt of a Pending Registration) or if a MPAN is Legacy, the Registration Service will not accept DIP flows for a given MPAN.	√	✓	✓	
DNO (including Registration Service)	Reverse Migration	Change of Agent	MHHS-RMigration- CoA(MS)-RS-001	In the case of Smart Meters only, Registration Service to include new Supplier details as part of IF-003 which is sent to outgoing MS (via the DIP).	√	√	√	
DNO (including Registration Service)	Reverse Migration	Change of Agent	MHHS-RMigration- CoA(MS)-RS-003	Although the Registration Service can process multiple D0205's, it will only use information from the last accepted D0205 before Secured Active processing at 1800 hours to generate an IF-003 at Secured Active acceptance.	√	✓		Migration design covered through SIT.
DNO (including Registration Service)	Reverse Migration	Change of Agent	MHHS-RMigration- CoA(MS)-RS-004	D0205 batch processing to occur within the Registration Service on a frequent basis with batch processing running every 2 hours or more frequently, in the majority of cases.	√	√		

Market Role	Migration Scenario	Area	MHHS Reference	MHHS Requirement Description	QAD Question	PIT Evidence	SIT / Qualification Testing Evidence	Further comments on coverage
DNO (including Registration Service)	Reverse Migration	Change of Agent	MHHS-RMigration- CoA(MS)-RS-005	Registration Service to include identity of MOP in IF-003 if this data was provided in the D0205.	√	√	V	
DNO (including Registration Service)	Reverse Migration	Change of Agent	MHHS-RMigration- CoA(MS)-RS-007	As soon as an IF-003 is sent, marking the completion of a Reverse Migration, Registration Service to add MPAN back into the Legacy EES Extract.	√	V		Migration design covered through SIT.
DNO (including Registration Service)	Reverse Migration	Change of Agent	MHHS-RMigration- CoA(MS)-LDSO-001	LDSO to receive PUB-003 from Registration Service (via the DIP), informing of MS de-appointment notification.		V	V	
DNO (including Registration Service)	Reverse Migration	Change of Agent	MHHS-RMigration- CoA(MS)-LDSO-002	The receipt of a PUB-003 will serve as the definitive statement to each service that a Reverse Migration has occurred.	V			
DNO (including Registration Service)	Cancellation of Migration	Change of Agent	MHHS-Migration-Can- RS-001	Registration Service cancels a CoA Migration and follows the BAU lapsed appointment process, issuing an IF-035.	V	V	V	
DNO (including Registration Service)	Cancellation of Migration	Change of Agent	MHHS-Migration-Can- RS-002	Registration Service cancels a CoA Migration and sends a D0209.	V	V	*	
DNO (including Registration Service)	Cancellation of Migration	Change of Supply	MHHS-Migration-Can- RS-003	A Migration CoS is cancelled and the Registration Service follows the BAU lapsed appointment process, issuing an IF-035.	V	√	√	
DNO (including Registration Service)	Cancellation of Migration	Change of Supply or Change of Agent	MHHS-Migration-Can- RS-005	If subsequent IF-031's are received before the initial Migration completes, the original IF-031 should be lapsed and the IF-031 with the most recent timestamp should be used instead.	√	√	√	
DNO (including Registration Service)	Cancellation of Migration	Change of Supply or Change of Agent	MHHS-Migration-Can- RS-006	If MPAN state changes to terminated, an IF-035 would be sent which would cancel the Migration.		✓	V	
DNO (including Registration Service)	Miscellaneous	Change of Supply or Change of Agent	MHHS-Migration-Mis- RS-002	Registration Service will need to check for incomplete Migrations and issue an IF-045 where a Supplier has only migrated either the MS or DS, to inform the Supplier that their Migration is incomplete.	V	✓	V	
DNO (including Registration Service)	Miscellaneous	Change of Supply or Change of Agent	MHHS-Migration-Mis- RS-003	If a Forward Migration is underway or MPAN is already MHHS and a D0205 is sent, this will be rejected. A D0203 will be sent back with enumeration value 62 in the 'Rejection Reason Code' data item to specify the rejection reason.		√	✓	

Market Role	Migration Scenario	Area	MHHS Reference	MHHS Requirement Description	QAD Question	PIT Evidence	SIT / Qualification Testing Evidence	Further comments on coverage
DNO (including Registration Service)	Miscellaneous	Change of Supply or Change of Agent	MHHS-Migration-Mis- RS-004	If a Forward Migration is underway or MPAN is already MHHS and a D0205 is sent, this will be rejected. A D0203 will be sent back with enumeration value 62 in the 'Rejection Reason Code' data item to specify the rejection reason.		√	✓	
DNO (including Registration Service)	Miscellaneous	Change of Supply or Change of Agent	MHHS-Migration-Mis- RS-005	If a Forward Migration is underway or MPAN is already MHHS and a D0304 is sent, this will be rejected. A D0304 will be sent back with enumeration value Q in the 'MPAS D0304 Response Code' data item to specify the rejection reason.		✓	✓	
DNO (including Registration Service)	Miscellaneous	Change of Supply or Change of Agent	MHHS-Migration-Mis- RS-006	If a Forward Migration is underway or MPAN is already MHHS and a D0312 is sent, this will be rejected. A D0312 will be sent back with enumeration value AD in the 'MOP Flow Response Code' data item to specify the rejection reason.		✓	✓	
DNO (including Registration Service)	Miscellaneous	Change of Supply or Change of Agent	MHHS-Migration-Mis- RS-007	If a Forward Migration is underway or MPAN is already MHHS and a D0386 is sent, this will be rejected. A D0386 will be sent back with enumeration value Y in the 'Related MPAN Response Code' data item to specify the rejection reason.		√	√	
DNO (including Registration Service)	Miscellaneous	Change of Supply or Change of Agent	MHHS-Migration-Mis- RS-008	If a Reverse Migration is underway or MPAN is Legacy and an IF-005 is sent, this will be rejected using REG1029 validation rule.		V	✓	
DNO (including Registration Service)	Miscellaneous	Change of Supply or Change of Agent	MHHS-Migration-Mis- RS-009	If an IF-005 is rejected due to MPAN either undergoing Reverse Migration or being Legacy, an IF-006 will be sent back with specific Response Code and Response Message.		✓	✓	
DNO (including Registration Service)	Miscellaneous	Change of Supply or Change of Agent	MHHS-Migration-Mis- RS-010	If a Reverse Migration is underway or MPAN is Legacy and an IF-019 is sent, this will be rejected using REG1066 validation rule.		V	✓	
DNO (including Registration Service)	Miscellaneous	Change of Supply or Change of Agent	MHHS-Migration-Mis- RS-011	If an IF-019 is rejected due to MPAN either undergoing Reverse Migration or being Legacy, an IF-020 will be sent back with specific Response Code and Response Message.		√	✓	
DNO (including Registration Service)	Miscellaneous	Change of Supply or Change of Agent	MHHS-Migration-Mis- RS-012	If a Reverse Migration is underway or MPAN is Legacy and an IF-025 is sent, this will be rejected using REG1046 validation rule.		✓	✓	
DNO (including Registration Service)	Miscellaneous	Change of Supply or Change of Agent	MHHS-Migration-Mis- RS-013	If an IF-025 is rejected due to MPAN either undergoing Reverse Migration or being Legacy, an IF-026 will be sent back with specific Response Code and Response Message.		√	✓	

Market Role	Migration Scenario	Area	MHHS Reference	MHHS Requirement Description	QAD Question	PIT Evidence	SIT / Qualification Testing Evidence	Further comments on coverage
DNO (including Registration Service)	Miscellaneous	Change of Supply or Change of Agent	MHHS-Migration-Mis- RS-014	If a Reverse Migration is underway or MPAN is Legacy and an IF-038 is sent, this will be rejected using REG1075 validation rule.		√	√	
DNO (including Registration Service)	Miscellaneous	Change of Supply or Change of Agent	MHHS-Migration-Mis- RS-015	If an IF-038 is rejected due to MPAN either undergoing Reverse Migration or being Legacy, an IF-039 will be sent back with specific Response Code and Response Message.		V	V	
DNO (including Registration Service)	Miscellaneous	Change of Supply or Change of Agent	MHHS-Migration-Mis- RS-016	If a Reverse Migration is underway or MPAN is Legacy and an IF-040 is sent, this will be rejected using Level 4 validation rule RCP1076.		V	V	
DNO (including Registration Service)	Miscellaneous	Change of Supply or Change of Agent	MHHS-Migration-Mis- RS-017	If a Forward Migration is underway and an IF-019 is sent, this will be rejected using REG1067 validation rule.		V	V	
DNO (including Registration Service)	Miscellaneous	Change of Supply or Change of Agent	MHHS-Migration-Mis- RS-018	If an IF-019 is rejected due to MPAN undergoing Forward Migration, an IF-020 will be sent back with specific Response Code and Response Message.		√	*	
DNO (including Registration Service)	Miscellaneous	Change of Supply or Change of Agent	MHHS-Migration-Mis- RS-019	Reverse Migration: Registration Service to adhere to the SLAs specified within the MHHS BAU Design as part of the various read/MTD sharing processes, unless explicitly called out.		√		
DNO (including Registration Service)	Miscellaneous	Change of Supply or Change of Agent	MHHS-Migration-Mis- RS-020	When sending and processing DIP messages, Registration Service to adhere to the BAU MHHS Design SLAs, which will apply unchanged throughout the Migration period.		√		
DNO (including Registration Service)	Miscellaneous	Change of Supply or Change of Agent	MHHS-Migration-Mis- RS-021	Registration Service to send all Legacy Data Flows via the DTN or via other agreed means.		V		
DNO (including Registration Service)	Miscellaneous	Change of Supply or Change of Agent	MHHS-Migration-Mis- RS-022	Registration Service to auto-align Import / Export MPANs which have been fully migrated but appointed to different Agents.	V	V	V	
DNO (including Registration Service)	Miscellaneous	Change of Supply or Change of Agent	MHHS-Migration-Mis- LDSO-001	When sending and processing DIP messages, LDSOs to adhere to the BAU MHHS Design SLAs, which will apply unchanged throughout the Migration period.		✓ 		
DNO (including Registration Service)	Miscellaneous	Change of Supply or Change of Agent	MHHS-Migration-Mis- LDSO-002	LDSOs to send all Legacy Data Flows via the DTN or via other agreed means.		√		

4.2.2 SUPPLIER

Market Role	Migration Scenario	Area	MHHS Reference	MHHS Requirement Description	QAD Question	PIT Evidence	SIT / Qualification Testing Evidence	Further comments on coverage
Supplier	Forward Migration	Change of Supply	MHHS-Migration-CoS- SUP-001	If the Supplier is Qualified and they inherit a MHHS MPAN, under no circumstances can the MPAN be reverted to Legacy as part of this particular switch. Reverse Migration is not permitted.	✓			
Supplier	Forward Migration	Change of Supply	MHHS-Migration-CoS- SUP-002	If MPAN is Legacy and the incoming Supplier is MHHS Qualified, the incoming Supplier will make a decision whether to migrate MPAN or continue operating under Legacy arrangements.	V			
Supplier	Forward Migration	Change of Supply	MHHS-Migration-CoS- SUP-003	Supplier to check whether MPAN is MHHS or Legacy within EES.	√			Migration design covered through SIT.
Supplier	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-SUP-001	Supplier to send IF-031 to Registration Service and include Migration-specific codes within the 'Service Provider Appointment Scenario' data item to make explicit the intent to migrate the MPAN.		V	✓	
Supplier	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-SUP-002	In the case of CoA only, incumbent Supplier to send a D0151 to outgoing Meter Operator with specific value in 'Termination Reason' (J0279) data item.		√		
Supplier	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-SUP-003	In the case of CoS only, outgoing Supplier to send a D0151 to the outgoing Meter Operator with specific value in 'Termination Reason' (J0279) data item.		√		
Supplier	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-SUP-004	Suppliers, as standard business process, should ensure the effective from date for CoA appointments is at least 1 day in the future from the transmission date of the IF-031.	√			
Supplier	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-SUP-005	Suppliers to ensure they do not have open IF-031's which are left unresponded to by Agents beyond appointment effective from dates. Suppliers to chase Agents to respond with an IF-034 with an Accept or Reject in this case.	✓			
Supplier	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-SUP-006	For Traditional and HH Advanced CoS only, the D0151 that is sent from outgoing Supplier to outgoing MOP must have data item 'New Supplier ID' (J1194) populated.		√		
Supplier	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-SUP-007	Supplier should send the D0151 using Legacy SLAs.		√		
Supplier	Reverse Migration	Change of Supply	MHHS-RMigration- CoS-SUP-001	If the Supplier is Qualified and they inherit a MHHS MPAN, under no circumstances can the MPAN be reverted to Legacy as part of this particular switch. Reverse Migration is not permitted.	✓			
Supplier	Reverse Migration	Change of Supply	MHHS-RMigration- CoS-SUP-002	Supplier to check whether MPAN is MHHS or Legacy within EES.	√			Migration design covered through SIT.

Market Role	Migration Scenario	Area	MHHS Reference	MHHS Requirement Description	QAD Question	PIT Evidence	SIT / Qualification Testing Evidence	Further comments on coverage
Supplier	Reverse Migration	Change of Agent	MHHS-RMigration- CoA(MS)-SUP-001	New Supplier to appoint Legacy Agent by sending a D0155 to the new MOP. Will add an additional Group 318 to indicate a Reverse Migration is occurring.		√	V	
Supplier	Reverse Migration	Change of Agent	MHHS-RMigration- CoA(MS)-SUP-002	New Supplier to send D0205 to the Registration Service before Secured Active sync is received from CSS.		√		Migration design covered through SIT.
Supplier	Reverse Migration	Change of Agent	MHHS-RMigration- CoA(MS)-SUP-003	The receipt of a PUB-003 will serve as the definitive statement to each service that a Reverse Migration has occurred.	✓			
Supplier	Reverse Migration	Change of Agent	MHHS-RMigration- CoA(MS)-SUP-004	In the case that a D0205 is not sent to the Registration Service before the IF-003 is issued and MTDs must be transferred manually, Supplier to request their MOP manually provides the details of the incoming MOP and DC to the outgoing MS.	V			
Supplier	Cancellation of Migration	Change of Agent	MHHS-Migration-Can- SUP-001	Supplier to send a D0151 with the switch date and specific enumerated value in Termination Reason (J0279) data item to existing MOP and DC.		V		
Supplier	Cancellation of Migration	Change of Supply	MHHS-Migration-Can- SUP-002	The Supplier needs to be able to follow the standard process for informing their existing Agents that their appointment is still in place.	✓	√		
Supplier	Miscellaneous	Change of Supply and Change of Agent	MHHS-Migration-Mis- SUP-001	Suppliers will not be able to change Market Segment as part of a Migration. They must set Services that match the current Market Segment.	✓	V	V	
Supplier	Miscellaneous	All	MHHS-Migration-Mis- SUP-002	All Suppliers will need to have made changes to their services and business processes by M11 to support the Migration of MPANs away from their portfolios when a Migration CoS occurs.	√			Covered by the Pre-Qualification Submission for Non-SIT Participants.
Supplier	Miscellaneous	All	MHHS-Migration-Mis- SUP-003	All Suppliers wishing to operate the Reverse Migration process (to Switch consumers whose MPAN is under the MHHS arrangements) must have made changes to their services and business processes by M11.	✓			Covered by the Pre-Qualification Submission for Non-SIT Participants.
Supplier	Miscellaneous	Change of Supply	MHHS-Migration-Mis- SUP-004	Reverse Migration: Suppliers to adhere to the SLAs specified within the MHHS BAU Design as part of the various read/MTD sharing processes, unless explicitly called out.		√		
Supplier	Miscellaneous	Change of Agent or Change of Supply	MHHS-Migration-Mis- SUP-005	When sending and processing DIP messages, Suppliers to adhere to the BAU MHHS Design SLAs, which will apply unchanged throughout the Migration period.		✓		

Market Role	Migration Scenario	Area	MHHS Reference	MHHS Requirement Description	QAD Question	PIT Evidence	SIT / Qualification Testing Evidence	Further comments on coverage
Supplier	Miscellaneous	Change of Agent or Change of Supply	MHHS-Migration-Mis- SUP-006	Suppliers to send all Legacy Data Flows via the DTN or via other agreed means.		✓		

4.2.3 MEM

Market Role	Migration Scenario	Area	MHHS Reference	MHHS Requirement Description	QAD Question	PIT Evidence	SIT / Qualification Testing Evidence	Further comments on coverage
MEM (Legacy)	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-MOP-001	When outgoing MOP receives the D0170 from the Registration Service and the enumerated values within the 'Requested Action Code' data item indicate that either a Migration CoA or CoS is occurring, the MOP must operate specific Forward Migration processes which differs from Legacy processes.		✓		Not required for new organisations entering the market as MHHS MEM only.
MEM (Legacy)	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-MOP-002	When no meter is installed, no MTDs should be sent.	√	√		Not required for new organisations entering the market as MHHS MEM only.
MEM (Legacy)	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-MOP-003	Advanced only: Outgoing MOP to convert current MTDs, stored in a D0150 format, into a D0268.		√		Not required for new organisations entering the market as MHHS MEM only.
MEM (Legacy)	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-MOP-004	In the case of NHH Advanced meters, outgoing MOP will need to convert D0149/D0150 and D0313 into D0268 format.	✓	✓		Not required for new organisations entering the market as MHHS MEM only.
MEM (Legacy)	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-MOP-005	In the case of NHH Advanced meters, MOP may be required to undertake re-programming of the meter.	√			Not required for new organisations entering the market as MHHS MEM only.
MEM (Legacy)	Forward Migration	Change of Agent	MHHS-Migration- CoA(MS)-MOP-006	The MPID assigned to the MOP needs to refer to the MS and the MTDs should be sent to role code MS over the DTN.	✓	√		Not required for new organisations entering the market as MHHS MEM only.
MEM (Legacy)	Reverse Migration	Change of Agent	MHHS-RMigration- CoA(MS)-MOP-001	New MOP to issue MTDs to incoming DC and incoming Supplier within 5 working days.	✓	✓		Not required for new organisations entering the market as MHHS MEM only.
MEM (Legacy)	Reverse Migration	Change of Agent	MHHS-RMigration- CoA(MS)-MOP-002	New MOP to operate Reverse Migration processes instead of Legacy processes when receiving D0155 with specific Group 318 values.	✓	✓		Not required for new organisations entering the market as MHHS MEM only.
MEM (Legacy)	Reverse Migration	Change of Agent	MHHS-RMigration- CoA(MS)-MOP-003	If Supplier requests their MOP manually provide details of incoming MOP and DC to the outgoing MS, MOP to fulfil this request within 2 working days.	✓	√		Not required for new organisations entering the market as MHHS MEM only.

Market Role	Migration Scenario	Area	MHHS Reference	MHHS Requirement Description	QAD Question	PIT Evidence	SIT / Qualification Testing Evidence	Further comments on coverage
MEM (Legacy)	Cancellation of Migration	Change of Agent	MHHS-Migration-Can- MOP-001	The existing MOP will receive a D0155 from the incumbent Supplier when a Forward Migration CoA or CoS is cancelled.		✓		Not required for new organisations entering the market as MHHS MEM only.
MEM (Legacy)	Miscellaneous	All	MHHS-Migration-Mis- MOP-001	All Agents will need to have made changes to their services and business processes by M11 to support the Migration of MPANs away from their portfolios when a Migration CoS occurs.	✓			Not required for new organisations entering the market as MHHS MEM only. Covered by the Pre-Qualification Submission for Non-SIT Participants.
MEM (Legacy)	Miscellaneous	All	MHHS-Migration-Mis- MOP-002	All Agents wishing to operate the Reverse Migration process (to Switch consumers whose MPAN is under the MHHS arrangements) must have made changes to their services and business processes by M11.	✓			Not required for new organisations entering the market as MHHS MEM only. Covered by the Pre-Qualification Submission for Non-SIT Participants.
MEM (Legacy)	Miscellaneous	Change of Supply	MHHS-Migration-Mis- MOP-003	Reverse Migration: MOPs to adhere to the SLAs specified within the MHHS BAU Design as part of the various MTD sharing processes, unless explicitly called out.		✓		Not required for new organisations entering the market as MHHS MEM only.
MEM (Legacy)	Miscellaneous	Change of Agent or Change of Supply	MHHS-Migration-Mis- MOP-004	When sending and processing DIP messages, MOPs to adhere to the BAU MHHS Design SLAs, which will apply unchanged throughout the Migration period.		✓		Not required for new organisations entering the market as MHHS MEM only.
MEM (Legacy)	Miscellaneous	Change of Agent or Change of Supply	MHHS-Migration-Mis- MOP-005	MOPs to send all Legacy Data Flows via the DTN or via other agreed means.		✓		Not required for new organisations entering the market as MHHS MEM only.
MEM (Legacy)	Miscellaneous	Change of Agent or Change of Supply	MHHS-Migration-Mis-MOP-006	If MTDs change after these have already been sent by the MOP to the MS, MOP to re-send new MTDs.	✓			Not required for new organisations entering the market as MHHS MEM only.
MEM (MHHS)	Reverse Migration	Change of Agent	MHHS-RMigration- CoA(MS)-MS-001	In the case of Smart Meters only, 'Skeleton' D0150 is sent by outgoing MS to both new Supplier and incoming MOP with the following business rules: - All mandatory data items are populated - If unknown, the value of the Manufacturers Make and Type is noted as 'not recorded' - Meter Register Details is only populated with Smart Meter Cumulative Register. TOU registers are not included		✓	✓	
MEM (MHHS)	Reverse Migration	Change of Agent	MHHS-RMigration- CoA(MS)-MS-002	Outgoing MS to adhere to BAU Design SLAs in the sending of MTDs to the new MOP.		√		
MEM (MHHS)	Reverse Migration	Change of Agent	MHHS-RMigration- CoA(MS)-MS-003	If outgoing MS is requested to transfer MTDs manually to incoming MOP and DC, they must action this within 5 working days.	✓	✓		

Market Role	Migration Scenario	Area	MHHS Reference	MHHS Requirement Description	QAD Question	PIT Evidence	SIT / Qualification Testing Evidence	Further comments on coverage
MEM (MHHS)	Cancellation of Migration	Change of Agent	MHHS-Migration-Can- MS-001	Registration Service cancels a CoA Migration and follows the BAU de-appointment process.		√		
MEM (MHHS)	Cancellation of Migration	Change of Supply	MHHS-Migration-Can- MS-002	Registration Service cancels a CoS Migration and follows the BAU de-appointment process.		√		
MEM (MHHS)	Miscellaneous	All	MHHS-Migration-Mis- MS-001	All Agents will need to have made changes to their services and business processes by M11 to support the Migration of MPANs away from their portfolios when a Migration CoS occurs.	·			
MEM (MHHS)	Miscellaneous	All	MHHS-Migration-Mis- MS-002	All Agents wishing to operate the Reverse Migration process (to Switch consumers whose MPAN is under the MHHS arrangements) must have made changes to their services and business processes by M11.	V			
MEM (MHHS)	Miscellaneous	Change of Supply	MHHS-Migration-Mis- MS-003	Reverse Migration: MS to adhere to the SLAs specified within the MHHS BAU Design as part of the various MTD sharing processes, unless explicitly called out.		✓		
MEM (MHHS)	Miscellaneous	Change of Agent or Change of Supply	MHHS-Migration-Mis- MS-004	When sending and processing DIP messages, MS's to adhere to the BAU MHHS Design SLAs, which will apply unchanged throughout the Migration period.		✓		
MEM (MHHS)	Miscellaneous	Change of Agent or Change of Supply	MHHS-Migration-Mis- MS-005	MS's to send all Legacy Data Flows via the DTN or via other agreed means.		√		
MEM (MHHS)	Miscellaneous	Change of Agent or Change of Supply	MHHS-Migration-Mis- MS-006	If MTDs change so MOP needs to re-send MTDs to MS, MS to supersede old MTDs with those that have been received most recently and use these details instead.	✓	√		

4.3 NON-FUNCTIONAL REQUIREMENTS (NFR)

The following assessment criteria to cover MHHS Non-Functional Requirements by role has been developed by the REC Code Manager based on MHHS-DEL2128 NFR Categorisation v2.0 and presented to REC PAB for approval on 26 March 2024. This will be updated as further information is published by the MHHS Programme.

4.3.1 ALL ROLES – DNO (INCLUDING REGISTRATION SERVICE), SUPPLIER AND MEM

Market Role	NFR Category	NFR Sub- Category	NFR Reference	NFR Title	NFR Description	QAD Question	PIT Evidence	SIT / Qualification Testing Evidence	Recommended Test Type
All	Compatibility	Interoperability	E2E0014	Messaging Interfaces	All services shall send and receive messages for all DIP interfaces and publications via the API definitions in the MHHS Swagger documentation (E2E003)		·	✓	Demonstrated through Functional Testing.
All	Compatibility	Interoperability	E2E0108	Message Validation (Level 1)	All services shall interpret the http response code to determine the outcome of DIP validation level 1 for each message sent referenced by Sender Unique Reference & Transaction Id		✓	✓	Demonstrated through Non-Functional Testing.
All	Compatibility	Interoperability	E2E0109	Message Validation (Level 2)	All services shall connect to the Receive Status Messages webhook DIP to establish the outcome of level 2,3,4 validation with messages referenced by Transaction Id		✓	✓	Demonstrated through Functional Testing.
All	Compatibility	Interoperability	E2E0201	Schema validation	Services shall undertake Level 3 message validation including structure and the format of individual data fields/elements shall be performed against the appropriate message schema definition of all interface interactions.		√	✓	Demonstrated through Functional Testing.
All	Compatibility	Interoperability	E2E0207	Content Validation	Level 4 validation of the message content shall be established during processing by the Recipient and reported back to the Sender via the Send Status Messages API using the corresponding status code		✓	✓	Demonstrated through Functional Testing.
All	Compatibility	Interoperability	E2E0211	Message Receipt	All messages received by DIP Participant systems shall be initially acknowledged as received in the http response of the API transaction		V	✓	Demonstrated through Functional Testing.
All	Performance Efficiency	Capacity	E2E1004	Message Throughput	All Services (see exceptions) shall have capacity to process the following volumes of messages: - average daily volume of 66,000 - peak daily volume of 300,000 - average hourly volume of 2,750 - peak hourly volume of 35,000 - annual volume of 24M		\	✓	Demonstrated through Non-Functional Testing.
All	Performance Efficiency	Capacity	E2E1005	Message Throughput (Secure Active)	All Services (unless explicitly referenced below) shall have capacity to process the following volumes of messages: - peak daily volume of 300,000 2,100,000 * portfolio coefficient - peak hourly volume of 300,000 2,100,000 * portfolio coefficient - annual volume of 110M * portfolio coefficient		√	✓ ————————————————————————————————————	Demonstrated through Non-Functional Testing.

Market Role	NFR Category	NFR Sub- Category	NFR Reference	NFR Title	NFR Description	QAD Question	PIT Evidence	SIT / Qualification Testing Evidence	Recommended Test Type
All	Performance Efficiency	Capacity	E2E1006	Message Channel Scalability	All services shall be designed to cope with an increase in message volumes of 25% over 5 years	V	√		Demonstrated through Non-Functional Testing.
All	Performance Efficiency	Capacity	E2E1007	Message Throughput (Transition)	During transition all meter points (ca. 31M) will be transition between the old and new services. Therefore, assuming a linear migration over the year this would result in the load below, hence services shall be capable of processing the following volumes: - average daily volume of 680,000 - peak daily volume of 2.4M 5.0M - annual volume of 248M 500M	V	✓		Demonstrated through Non-Functional Testing.
All	Performance Efficiency	Resource Utilisation	E2E0208	Participant Message/Event Consumption	DIP Participants shall be able to process messages at their own speed, independently to other consumers	√	√		Demonstrated through Non-Functional Testing.
All	Performance Efficiency	Resource Utilisation	E2E1008	Message Pattern B Payloads	Services sending messages via the 'Pattern B' model shall provide a publicly available (or using a Federated Identity Management (FIM) capability) URI location that other Services/ Market Participants can access and download content		✓	✓	Demonstrated through Functional Testing.
All	Performance Efficiency	Time behaviour	E2E0101	API Message Capacity	All services shall have the capability to control the number of messages that are sent within a single API call	V	√	√	Demonstrated through Non-Functional Testing.
All	Performance Efficiency	Time behaviour	E2E1003	Level 3 Processing Times (synchronous)	All Services shall provide an initial synchronous response (Level 3 validation) to a message within the following timeframes: - up to average hourly volume, mean response time of 2s or less - up to average hourly volume, 90th percentile response time of 4s or less - from average hourly to peak hourly volume, mean response time of 5s or less - from average hourly to peak hourly volume, 90th percentile response time of 8s or less		✓	V	Demonstrated through Non-Functional Testing.
All	Performance Efficiency	Time behaviour	E2E1009	Level 4 Processing Times (Asynchronous)	All Services shall provide an asynchronous response (Level 4 validation) to a message within the following timeframes - up to average hourly volume, mean response time of 6s or less - up to average hourly volume, 90th percentile response time of 12s or less - from average hourly to peak hourly volume, mean response time of 10s or less - from average hourly to peak hourly volume, 90th percentile response time of 16s or less				Demonstrated through Non-Functional Testing.

Market Role	NFR Category	NFR Sub- Category	NFR Reference	NFR Title	NFR Description	QAD Question	PIT Evidence	SIT / Qualification Testing Evidence	Recommended Test Type
All	Reliability	Availability	E2E0105	Participant Back Off & Retry	Each service after invoking a DIP API shall implement an exponential backoff and retry with jitter policy in the event of a comms failure with the DIP resulting from a http 429 response	✓	√	✓	Demonstrated through Non-Functional Testing.
All	Reliability	Availability	E2E0106	Message/Event Buffering	In the event of a failure to communicate with the DIP, the Service shall be able to buffer messages for a period of at least 72 hours		V	V	Demonstrated through Non-Functional Testing.
All	Reliability	Availability	E2E0206	Message/Event Receipt	In the event of a failure to communicate with the DIP, Participant systems shall be able to buffer messages for a period of at least 72 hours	✓	√	√	Demonstrated through Non-Functional Testing.
All	Reliability	Availability	E2E0402	Participant Downtime	When participant systems/services are unavailable from both unplanned and planned outages the outage shall be communicated to the DIP via e-mail or via the DIP portal **TBC once DIP governance procedures are available**	✓			Non-Testable so covered through self-declaration as part of QAD.
All	Reliability	Availability	E2E1001	Service Availability	All services (those components that physically interface with the DIP, i.e. send and receive messages), unless explicitly defined, shall have an availability of 98% outside planned outage periods	✓			Non-Testable so covered through self-declaration as part of QAD.
All	Reliability	Availability	E2E1009	Unplanned Outages	All services (involved in BP affecting the Secured Active process), shall not plan outages within the Secured Active processing window		V	√	Demonstrated through Non-Functional Testing.
All	Reliability	Fault Tolerance	E2E0204	Participant Idempotency (SUR)	Participant systems shall check for duplicate messages with the same SUR under Level 3 or Level 4 validation		V	~	Demonstrated through Non-Functional Testing.
All	Reliability	Fault Tolerance	E2E0205	Participant Idempotency (Transaction Id)	Participant systems shall check for duplicate messages with the same Transaction Id under Level 3 or Level 4 validation		V	√	Demonstrated through Non-Functional Testing.
All	Reliability	Fault Tolerance	E2E0210	Participant Idempotency	In terms of handling messages all participant systems shall be idempotent and have mechanism for handling duplicate messages		V	√	Demonstrated through Non-Functional Testing.
All	Reliability	Maturity	E2E0401	Participant Software/Systems	Participants shall maintain all DIP facing systems so that all operating system, programming languages and their runtime libraries are at minimum supported versions from their respective vendors	√			Non-Testable so covered through self-declaration as part of QAD.
All	Reliability	Maturity	E2E0404	Participant Software/Systems	Participants shall maintain all DIP facing systems so that all operating system, programming languages and their runtime libraries are at recommended supported versions from their respective vendors	V			Non-Testable so covered through self-declaration as part of QAD.

Market Role	NFR Category	NFR Sub- Category	NFR Reference	NFR Title	NFR Description	QAD Question	PIT Evidence	SIT / Qualification Testing Evidence	Recommended Test Type
All	Reliability	Recoverability	E2E0011	Data Loss	There shall be no data loss in the event of a single component failing	V	√	√	Demonstrated through Non-Functional Testing.
All	Reliability	Recoverability	E2E0403	Participant Data Retention	Participant systems shall maintain an archive of all transactional data for 24 months	√			Non-Testable so covered through self-declaration as part of QAD.
All	Reliability	Recoverability	E2E1002	Service Recovery	In the event of an unplanned outage, each service shall be able to resume operation within 1 hour.	✓	√	✓	Demonstrated through Non-Functional Testing.
All	Security	Accountability	E2E0012	Instance Separation	DIP Participants shall ensure measures are put in place to ensure separation of production and non-production environments	✓			Non-Testable so covered through self-declaration as part of QAD.
All	Security	Authenticity	E2E0103	Signing Messages	All Services shall digitally sign messages		✓	✓	Demonstrated through Functional Testing.
All	Security	Authenticity	E2E0202	Signing Messages	All services shall check that messages are digitally signed with the correct certificate from the Sender of the message	✓	✓	✓	Demonstrated through Non-Functional Testing.
AII	Security	Non-repudiation	E2E0102	Sender Unique Reference	All Services shall generate a Sender Unique Reference (SUR) for each message/event		√	✓	Demonstrated through Functional Testing.
All	Security	Non-repudiation	E2E0104	Sender Unique Reference/ Transaction Id	All Services shall use DIP generated Transaction Ids returned in the response body of the API transaction to map against messages for audit and tracking purposes		✓	✓	Demonstrated through Functional Testing.
All	Security	Non-repudiation	E2E0107	Message Receipt	When sending messages all services shall use the http response of the API transaction to establish whether a message has been received by the DIP		√	√	Demonstrated through Functional Testing.
AII	Security	Non-repudiation	E2E0209	Message/Event Replay Response	DIP Participants shall put in measures to differentiate the processing of replayed messages c.f. original messages		√	✓	Demonstrated through Non-Functional Testing.
All	Usability	Operability	E2E0203	Error Reporting	When Level 3 validation fails, e.g. when payload contents cannot be reconciled (schema validation), a response with the corresponding error code shall be reported back to the DIP via the http response in the webhook call-back		<u> </u>	✓	Demonstrated through Non-Functional Testing.

Further information on MHHS Qualification can be found on the MHHS Programme website: https://mhhsprogramme.sharepoint.com/sites/Market-wideHalfHourlySettlement/SitePages/Qualification.aspx



To find out more please contact: REC Code Manager enquiries@recmanager.co.uk

