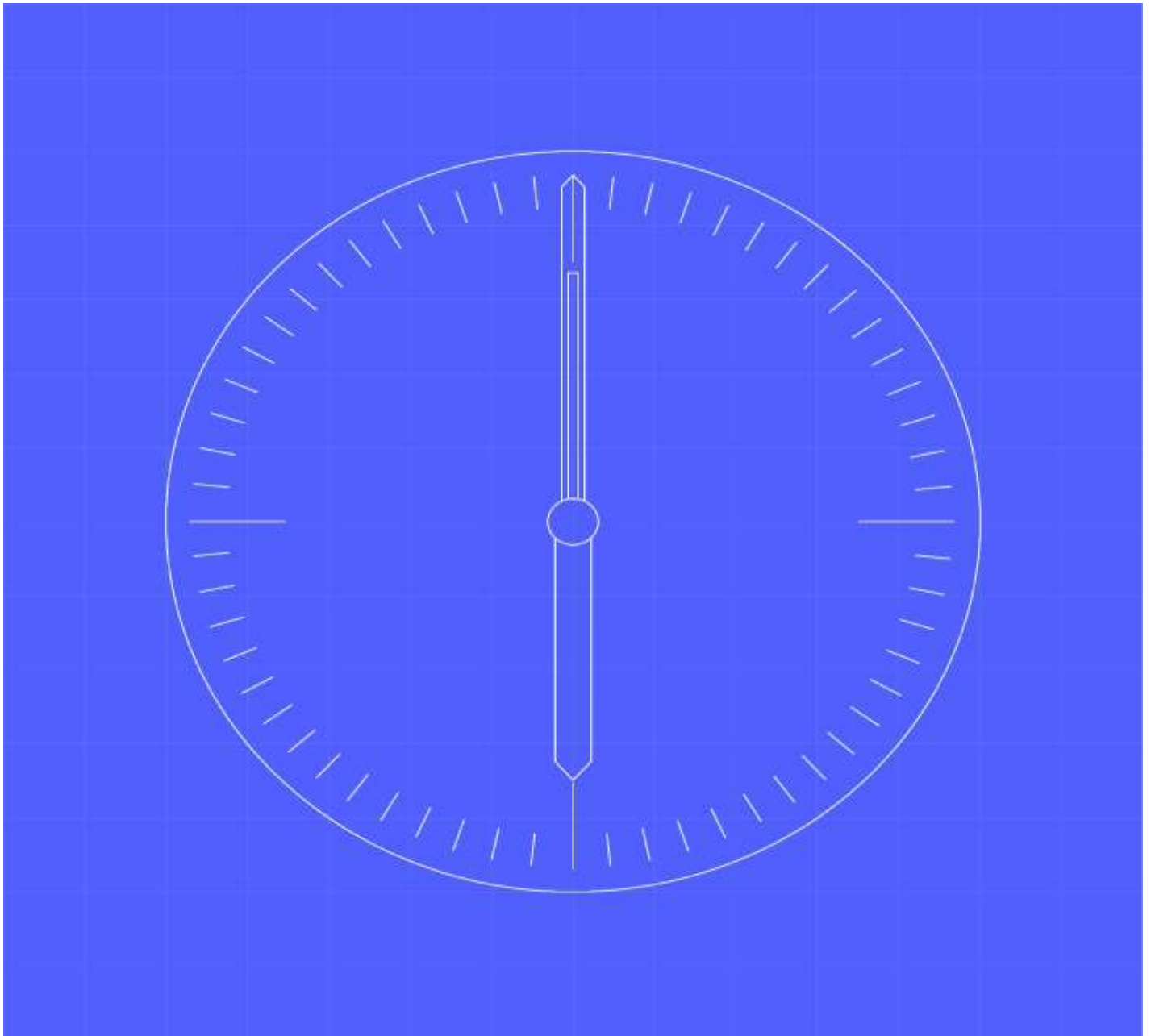


[03] Migration Capacity Calculations - Method Statements



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1.1 Change Record

Date	Author	Version	Change Detail
18/03/2024	Migration Team	0.1	Draft for Industry Consultation
19/04/2024	Migration Team	0.2	Revised Draft for Assurance Meeting
08/05/2024	Migration Team	1.0	Version Uplifted following MCAG Interim Approval

1.2 References

Document	Publisher	Published	Additional Information
REF-01 [01] Migration Framework Foundations v1.0	Migration Team	09/05/2024	Migration FW
REF-02 [02] Migration Framework - Principles and Guidelines v1.0	Migration Team	09/05/2024	Migration FW
REF-03 [03] Migration Capacity Calculations - Method Statements v1.0	Migration Team	09/05/2024	Migration FW
REF-04 [03a] Migration Capacity Calculations – Parameters v1.0	Migration Team	09/05/2024	Migration FW
REF-05 [04] Migration Requirements and Processes v1.0	Migration Team	09/05/2024	Migration FW
REF-06 [04a] Migration Business Process Models v1.0	Migration Team	09/05/2024	Migration FW
REF-07 MHHS-DEL961 – Migration Design Document v1.0	Migration Team	03/04/2023	
REF-08 MHHS-DEL953 – Data Assessment Report v1.0	Migration Team	21/02/2023	
REF-09 MHHS-DEL1128 – Migration, Cutover and Data Strategy v1.0	Migration Team	02/06/2023	
REF-10 MHHS-DEL1648 - Migration Thresholds Document v1.0	Migration Team	20/11/2023	
REF-11 MHHS-DEL813 – Overarching Test Data Approach and Plan v1.0	Testing Team	19/07/2023	
REF-12 MHHS-DEL1181 – Data Cleanse Plan v2.0	Migration Team	24/02/2024	
REF-13 MHHS-DEL1792 - M15 Acceptance Criteria v1.0	Migration Team	13/12/2023	

1.3 Terminology

Term	Description
BAU Process	This refers to a process within the MHHS arrangements as set out within the MHHS Core Design.
BSC	Balancing and Settlement Code
Central Services / Systems	MHHS Programme term referring to the parties and systems that comprise the supporting infrastructure for MHHS business processes and services, namely the Elexon Central Services, Electricity Enquiry Service, Data Service Provider, Central Switching Service, Data Transfer Network, and the Data Integration Platform.
CoA	Change of Agent
CoS	Change of Supplier
CSS	Central Switching Service
Daily Planned Migration Threshold	This is an industry-wide limit on the maximum planned for number of migrations that can take place on a given day under normal circumstances (200,000).
Data Cleanse Plan	The approach and activities required to improve and populate data prior to Migration start.
DC	Data Collector
DIP	Data Integration Platform
DS	Data Service
DSP	Data Services Provider
ECS	Elexon Central Services
EES	Electricity Enquiry Service
Export MPAN	An MPAN that exports energy to the grid from a premises.
Forward Migration	The process through which MPANs will move from legacy arrangements to MHHS arrangements.
IDNO	Independent Distribution Network Operator
Import MPAN	An MPAN that imports energy from the grid to a premises
ISD	Industry Standing Data
LDSO	Licensed Distribution System Operator
LDSO Portfolio Thresholds	Limits set for each LDSO based on the size of their portfolio, ensuring balanced migration across different operators See MHHS-DEL1648 - Migration Thresholds Document v1.0
Legacy Arrangements	The existing arrangements set out under the BSC and REC. For the purposes of the Migration Design, this is primarily the REC Metering Services Schedule and the Balancing and Settlement Procedures related to Data Collection.
MCC	Migration Control Centre
MFW	Migration Framework
MHHS	Market-Wide Half-Hourly Settlement
MHHS Arrangements	The new MHHS arrangements as set out in the MHHS Core Design Artefacts.
Migration Design	The technical articulation of how MPANs will move from legacy to new MHHS arrangements. See MHHS-DEL961 – Migration Design Document v1.0
Migration Period	The period denoted by the Programme as occurring between the M11 and M15 milestones.
Migration Planning and Management Tool (MPMT)	Application to be developed for use by the MCC to manage the end to end migration process
MOP	Meter Operator
MPAN	Meter Point Administration Number
MPID	Market Participant Identifier
MS	Metering Service
MWG	Migration Working Group
NFR	Non-Functional Requirement

Term	Description
Primary MPAN	The MPAN, within a Related MPAN arrangement, for which a Switch is initiated, or a forward migration (via an IF-031) is initiated.
Qualified Supplier	A Supplier recognised in ISD as both having passed the relevant BSC qualification requirements; and declared that their service is operational within the MHHS arrangements.
Registration Service	The Registration Service is the LDSO service that holds Meter point standing data information about each MPAN within its Distribution Region. Data includes the BRP the processing and metering services appointed to the MPAN. It also includes information on the type of customer, the Measurement Class, Energisation Status and Line Loss Factor Class.
REC	Retail Energy Code
Reverse Migration	The process through which MPANs will move from MHHS arrangements to legacy arrangements.
Secondary MPAN	The MPAN, within a Related MPAN arrangement, for which a forward migration occurs when an IF-031 is received for a Primary MPAN.
Switch	The process by which a new Supplier Registration supersedes an existing Supplier Registration, managed by the CSS.
Upper Migration Threshold	This is an industry-wide limit on the maximum number of migrations that can take place on a given day under exceptional circumstances (300,000). See MHHS-DEL1648 - Migration Thresholds Document v1.0
Supplier Capacity Envelope	A daily profile covering the whole migration period detailing the maximum number of migrations a given Supplier in a LDSO may undertake.
Supplier Submission	A Supplier's forward view of planned migrations at LDSO level that falls within the Supplier Capacity Envelope provided and includes all MPANs within their portfolio within each LDSO area.

2 Supplier Migration Capacity Calculations: Method Statement

2.1 Introduction

This document details the calculations required to set the Scaled Supplier Capacity Envelopes within each LDSO Region (defined by the Supplier Market Participant Identifier: $MPID_{XR}$). These envelopes will inform Suppliers of the Capacity within which it is expected that they shall submit their Migration Schedules. The calculations use the Parameters defined in the [03a] Migration Capacity Calculations – Parameters

2.2 Load Contention

The calculations accommodate competing ‘thresholds’ set out in the Migration design artefact MHHS-DEL1648-Migration Threshold Document v1.0. Thresholds are set for both Central System Parties (200-300K per Migration Date) and by each LDSO Region (10-40K per Migration Date).

2.3 Approach

These calculations shall be undertaken for each LDSO Region and Supplier combination. The approach set out in the calculations below initially adjust the Central Service Migration Threshold to accommodate small LDSO Market Participant Identifiers (MPIDs) with MPAN Volumes that are below a De-Minimis Threshold. An Adjusted LDSO Migration Threshold is then calculated to include capacity that is reserved for re-tries and re-migrations following reverse Migration activity. The Adjusted LDSO Migration Threshold also excludes Supplier MPIDs that have portfolios that are below a De-Minimis Supplier Threshold. The Adjusted LDSO Migration Threshold Capacity is then split proportionally between qualified Suppliers within the LDSO Region weighted to ensure late qualifying Parties have sufficient capacity to complete their Migration activities by the ‘M15’ Milestone.

2.4 Detailed Calculations for Scaled Supplier Capacity Envelopes

The following Identifiers are used in this document:

Identifier	Data item
D	Migration Date
R	LDSO Region
X	Supplier

2.5 Setting the Central Service Migration Threshold

The daily Central Service Migration Threshold ($CSMT_D$) for Migration Date “D” shall have a default value of 200K. This value may be flexed up to 300K to accommodate peak Migration Periods.

2.6 Setting the De-Minimis LDSO Threshold Flag

Where for an LDSO Region “R” the LDSO Metering Point Count ($LMPC_{RD}$) is less than the De-Minimis LDSO Threshold ($DMLT_R$) value then the De-Minimis LDSO Threshold Flag ($DLTF_R$) shall be set as follows:

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If  $LMPC_{RD} < DMLT_R$ 
  then set the LDSO MPID “R”  $DLTF_R = “T”$ ,
else  $DLTF_R = “F”$ 

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2.7 Setting the De-Minimis Supplier Threshold Flag

Where for a Supplier “X” the Initial Supplier Portfolio (ISP_X) is less than the De-Minimis Supplier Portfolio Threshold (DMSPT_X) value then the De-Minimis Supplier Threshold Flag (DSTF_{XR}) shall be set as follows:

If $ISP_X < DMST_X$
 then set the Supplier MPID “X” DSTF_{XR} = “T”,
 else DSTF_{XR} = “F”

2.8 Determining the Adjusted Central Service Migration Threshold

The daily Adjusted Central Service Migration Threshold (ACSMT_D) shall be determined using the Central Service Migration Threshold (CSMT_D) and the De-Minimis LDSO Threshold Daily Volume (LTDV_{RD}) as follows:

$$ACSMT_D = CSMT_D - \sum_{R=1 \text{ to } n} LMDV_{RD}$$

Where the LDSOs “R” has a DLTF_R = “T” and n is the number of LDSOs.

2.9 Determining the Reserved Capacity

The daily Reserved Capacity (RC_{RD}) shall be determined using the Unadjusted LDSO Migration Threshold (ULMT_{RD}) and the Reserved Capacity Factor (RCF_{RD}):

$$RC_{RD} = (ULMT_{RD} * RCF_{RD}) - ULMT_{RD}$$

2.10 Determining the Adjusted LDSO Migration Threshold

The daily Adjusted LDSO Migration Threshold (ALMT_{RD}) shall be determined using the Adjusted Central Service Migration Threshold (ACSMT_{RD}) the LDSO Metering Point Count (LMPC_D) the De-Minimis Supplier Portfolio Daily Volume (DSPDV_{RXD}) and the Reserved Capacity (RC_{RD}) as follows:

$$ALMT_{RD} = ACSMT_D * (LMPC_{RD} / \sum LMPC_D * 100) + RC_{RD} - \sum_{X=1 \text{ to } n} DSPDV_{RXD}$$

Where the LDSO “R” has a DLTF_R = “F” and where the Supplier “X” has a DSTF_{XR} = “T”

2.11 Determining the Scaled Supplier Capacity Envelope

The daily Scaled Supplier Capacity Envelope (SSCE_{XR}) shall be determined using the Adjusted LDSO Migration Threshold (ALMT_{RD}), the Initial Supplier Portfolio (ISP_{RX}) and the Supplier Scaling Factor (SSF_{XR}) as follows:

$$SSCE_{XR} = ALMT_{RD} * (ISP_{RX} * SSF_{XR} / (\sum_{X=1 \text{ to } n} (ISP_{RX} * SSF_{XR})))$$

Where SSCE_{XR} is for Supplier MPID “X” for whom the envelope is being calculated and “n” are all the qualified Suppliers migrating on Migration Date “D” and have a DSTF_{XR} = “F”. The Supplier Scaling Factor (SSF_{XR}) as defined

in the MHHS-DEL2429 - [03a] Migration Capacity Calculations - Parameters shall be configured for each Supplier for each Sprint.

3 Scaled Supplier Capacity Envelope: Worked Example

The following is a worked example for the Distribution Region 'XMPL_R' and for the Supplier 'MIGR_{RX}' for Migration Date 'D'. For the purposes of this example:

The Central Service Migration Threshold (CSMT_D) = 200,000

The Total LSDO Metering Point Count = 33,000,000

LDSO Data

LDSO MPID	LDSO Metering Point Count (LMPC)	Unadjusted LDSO Migration Threshold (ULMT)	De-Minimis LDSO Threshold Flag (DLTF)	De-Minimis LDSO Threshold Daily Volume (DLTDV)	Reserved Capacity Factor (RCF)
XMPL _R	3,800,000	40,000	F	N/A	1.02
DSTB	70,000	10,000	T	5,000	N/A
DISTC	50,000	10,000	T	5,000	N/A
Total De-Minimis LDSO Daily Volume				10,000	

Supplier Data

Supplier MPID	Initial Supplier Portfolio (ISP)	De-Minimis Supplier Threshold Flag (DSTF)	De-Minimis Supplier Portfolio Daily Volume (DSPDV)	Supplier Scaling Factor (SSF)	Scaled Supplier Portfolio (ISP * SSF)
MIGR _{RX}	950,000	F	N/A	1.0	950,000
SUPB	578,500	F	N/A	1.0	578,500
SUPC	533,000	F	N/A	0.7	373,100
SUPD	450,000	F	N/A	0.7	315,000
SUPE	10,000	T	1,000	N/A	N/A
SUPF	5,000	T	1,000	N/A	N/A
Total De-Minimis Supplier Portfolio Daily Volume			2,000		
Total Scaled Supplier Portfolio					2,216,600

NOTE: The De-Minimis values shown in the above tables are for illustration purposes only.

3.1 Determining the Adjusted Central Service Migration Threshold

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The daily Adjusted Central Service Migration Threshold (ACSMT_D) shall be determined using the Central Service Migration Threshold (CSMT_D: 200,000) and the De-Minimis LDSO Threshold Daily Volume (LTDV_{RD}: 10,000) as follows:

$$ACSMT_D = 200,000 - 10,000 = 190,000$$

3.2 Determining the Reserved Capacity for XMPL_R

The daily Reserved Capacity (RC_{RD}) shall be determined using the Unadjusted LDSO Migration Threshold (ULMT_{RD}: 40,000) and the Reserved Capacity Factor (RCF_{RD}: 1.02):

$$RC_{RD} = (40,000 * 1.02) - 40,000 = 800$$

3.3 Determining the Adjusted LDSO Migration Threshold

The daily Adjusted LDSO Migration Threshold (ALMT_{RD}) shall be determined using the Adjusted Central Service Migration Threshold (ACSMT_{RD}: 190,000) the LDSO Metering Point Count (LMPC_D: 3,800,000) the De-Minimis Supplier Portfolio Daily Volume (DSPDV_{RXD}: 800) and the Reserved Capacity (RC_{RD}: 2000) as follows:

$$ALMT_{RD} = 190,000 * (3,800,000 / 33,000,000) + 800 - 2,000 = 20,679$$

3.4 Determining the Scaled Supplier Capacity Envelope for Supplier MIGR_{RX}

The daily Scaled Supplier Capacity Envelope (SSCE_{XRD}) shall be determined using the Adjusted LDSO Migration Threshold (ALMT_{RD}: 20,679), the Initial Supplier Portfolio (ISP_{RX}: 950,000), the Supplier Scaling Factor (SSFX_{RD}: 1.0) and the Total Scaled Supplier Portfolio (TSSP: 2,216,600) as follows:

$$SCE_{XRD} = 20,679 * (950,000 / 2,216,600) = 8,863$$

3.5 Final Allocation for Suppliers in LDSO XMPL_R for Migration Date D

Completing the calculations for all Suppliers in the Supplier Data Table above gives the following allocation of Scaled Capacity Envelopes.

Supplier MPID	Initial Supplier Portfolio
MIGR _{RX}	8,863
SUPB	5,397
SUPC	3,481
SUPD	2,939
SUPE	1,000
SUPF	1,000
Total Allocation	22,680