Single Electricity Market

SEM RELEASE "G" – JUNE 2021

APPROVED RELEASE SCOPE – HIGH LEVEL IMPACT ASSESSMENT

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Document History

Version	Date	Author	Comment
0.1	January 2021	SEMO	Initial Approved Scope
0.3	March 2021	SEMO	Text update

1 INTRODUCTION

This document is intended to provide an overview of those approved changes for implementation in the June 2021 release (SEM Release "G") to the Central Market Systems (CMS). SEM Release G is due for deployment in June of 2021, subject to successful completion of testing.

The approved scope will not result in functional impact on interfaces between the CMS and Market Participant systems. Updates on Release G progress will be provided via the Market Operator User Group (MOUG) meetings.

2 FUNCTIONAL SCOPE APPROVED FOR THE JUNE 2021 RELEASE - SEM RELEASE G

This section provides at a summary level details of those Central Market Systems' change requirements which will be implemented in SEM Release G.

For each of the changes, SEMO has provided an assessment of the complexity for delivery of each change, based on the common understanding that existed between the systems vendor and SEMO at the end of the release design phase.

Change Request Reference	Summary	Business Case for Change	Interfacing Impact?
CR-072 (MOD_08_19)	**Clarification to Intra-Day Quantity and Payment**	This change will bring the calculation of QDIFFTRACK for each Supplier Unit which is not a Trading Site Supplier Unit, in line with the original calculation design. The intent of the equation is that only negative trades up to the Ex-ante Quantity should be eligible for a payment, which mirrors the logic for difference charges where only positive trades up to the Obligated Capacity Quantity would be exposed to Difference Charges.	None
CR-079	**Registered Capacity Report Amendments**	Currently, the Registered Capacity Report shows zero in the Registered Capacity column for Demand Side Units which is misleading for users. Whilst Demand Side Units do not have a Registered Capacity (as is defined in the Grid Code), each Demand Side Unit instead has a Dispatchable Capacity (which is analogous to the Registered Capacity for Generator Units). Currently, a value of zero in the Registered Capacity for Demand Side Units and the Dispatchable Capacity for Demand Side Units is not published elsewhere. This Change Request will ensure that equivalent treatment in terms of publication of total capacity values is afforded to both Generator Units and Demand Side Units.	None
CR-081 (MOD_03_19)	**Amendment of conditions in which the Market Backup Price is used**	Approved Modification Proposal MOD_03_19 will amend the application of the Market Back Up Price such that it can be used as a replacement for any Imbalance Price that fails to calculate rather than solely the Imbalance Settlement Price. By doing so the Imbalance Settlement Price will incorporate any Imbalance Price(s) that have successfully calculated in an Imbalance Settlement Period into its calculation, rather than reverting to the Market Back Up Price for all periods, which is based on Ex Ante market prices and may not be reflective of Balancing Market conditions. Currently, the Imbalance Settlement Price is set equal to the Market Backup Price where any of the Imbalance Prices (i.e. for any Imbalance Pricing Period within the Imbalance Settlement Period) is not calculated. This	None

Change Request Reference	Summary	Business Case for Change	Interfacing Impact?

		change will replace only missing Imbalance Prices with the Market Backup Price and calculate the Imbalance Settlement Price as the average of the associated six Imbalance Prices (some of which may be populated with the Market Backup Price).
		
		In summary, the new logic for calculation of the Imbalance Settlement Price will be as follows:
		
		• If there is any Imbalance Pricing Period within the Imbalance Settlement Period where an Imbalance Price has not been calculated, then
		  ○ Set the missing Imbalance Price to the Market Backup Price
		  ○ Set the Market Backup Price Usage Flag to Y
		  ○ Calculate the Imbalance Settlement Price as the average of the relevant six Imbalance Prices
		• Else
		  ○ Calculate the Imbalance Settlement Price as the average of the relevant six Imbalance Prices	

CR-088	**Changes to configuration of event GET_EXCHANGERATE**	The original design for the system was to receive the FX Rate on D-2 of the intended Trade Date. Therefore, MMS would project the FX rate forward to D+2. This design has since been updated so that the Trade Date FX Rate will be received on the morning (10:05:00AM) of D. As such, when MMS pulls the FX Rate from the source location using event GET_EXCHANGE_RATE, it will now need to be written as D+1.	None
CR-119 (MOD_20_19)	**Changing Day-ahead Difference Quantity to Day-ahead Trade Quantity in Within-day Difference Charge Calculations**	When investigating the calculations for Difference Charges to answer a settlement query, some unintended consequences were found in relation to how the day-ahead quantities were taken into account in the within-day calculations. In particular there are aspects of the equations for the Within-Day Trade Difference Charge Quantity, and the tracking variables (Balancing and Intraday Tracked Difference Quantities) which were intended to represent the current net traded position of the unit as at or just before the trade for which the potential charge is being calculated. In these parts of the equations, the quantity included is the Day-ahead Difference Quantity, rather than the Day-ahead Trade Quantity. This results in an incorrect outcome because the Day-ahead Difference Quantity is capped by the Obligated Capacity Quantity or the Ex-Ante Quantity, meaning if those caps apply, it is from that initial point that the calculation of the current net traded position is, rather than considering the actual traded position from day-ahead trades.	None

Change Request Reference	Summary	Business Case for Change	Interfacing Impact?
		This change will incorporate the Day-ahead Trade Quantity in the correct parts of the equations to replace the Day-ahead Difference Quantity, so that the correct reference point for representing the currently traded net position for the unit is calculated using the actual day-ahead trade position rather than that position capped by the Ex-Ante Quantity or Obligated Capacity Quantity.	
CR-126	**Definition of Variable Market Operator Prices in CSB**	The current implementation of CSB only allows the Variable Market Operator Price (PVMO) to be entered and applied for an entire Calendar Year (i.e. 1 January each year). As these rates are currently approved on a Tariff Year basis (October to September each year), the CSB implementation needs to be updated such that the Market Operator (Settlements User) can define a start and end date for each Variable Market Operator Price, as and when required.	None
CR-129 (MOD_22_19)	**Correction of QUNDELOTOL Calculations**	The current calculation of QUNDELOTOL is incorrectly including a MW value, as opposed to a MWh value.	None
CR-158	**Repricing and relationship with Instruction Profiling**	The current system design means Market Operations cannot currently retrieve all data required from Instruction Profiler (IP) save cases. This causes issues when a repricing batch has to be performed for a given period(s). Subsequent save cases created for resettlement following the repricing of a given period/day requires an updated TNIV (NIV TAG) (Tagged Net Imbalance Volume) and FSO (System Operator Flag). These unfortunately are not updated via the required database table and are therefore not retrievable which means Flags and Tags cannot be displayed or used within the save case data. This is necessary in determining whether Complex or Simple Commercial Offer Data is used for a given unit for a given period(s) when the market is to be settled. <u>Detailed overview and description of change:</u> When the instruction profiler is run for IP Reruns, it retrieves the following data from save case OR MI to determine which COD data is used, Simple or Complex: 1. Balancing Resources and their associated Technical Offer Data (Generation Operational Characteristics)	None

Change Request Reference	Summary	Business Case for Change	Interfacing Impact?
		2. Trading Sites 3. COD (simple/complex) 4. Trading Sites 5. Physical Notifications 6. Ex-Post Dispatch Instructions 7. Ex-Post Availabilities 8. Meter Data 9. Pseudo Dispatch Instructions 10. Interconnector Reference Programme (ICRP) 11. Results from MA_IMBAL_PRICE_OUTPUT table The results of the data output from Repricing Reruns are updated within the MA_IMBAL_PRICE_OUTPUT_OT table for each unit, for each 5-minute period. The current issue means only data contained originally within the save case is considered, so when a repricing batch has been completed, and the subsequent save cases created for resettlement, the TNIV (NIV TAG) (Tagged Net Imbalance Volume) and FSO (System Operator Flag) are not determined or contained within the save case data. This is necessary in determining whether Complex or Simple Commercial Offer Data is used for a given unit for a given period(s) Ultimately, incorrect data is therefore pushed to the Settlements application. A front-end process within the OUI Resettlement Configuration Screen is therefore required to enable the market operator restore specific save cases whilst also having the facility to update the TNIV (NIV TAG) and FSO flags for each unit for the time frame in question.	

Table 1: Approved Modification Proposals in SEM Release G Scope.

3 TECHNICAL SCOPE FOR THE JUNE 2021 RELEASE – SEM RELEASE G

At this point in time, there are no technical or third-party software upgrades planned for SEM Release G