Administered Settlement Policy

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1 Introduction

In accordance with section 6.247 of the Trading and Settlement Code (TSC), SEMO is obliged to obtain prior written approval from the Regulatory Authorities (RAs) for the detailed calculations and methodology used for Administered Settlement. On 20th October 2009, after consultation, the SEM Committee approved the methodology[1], known as "Option 2" in the consultation paper "Options for Administered Settlement Request for Approval".

With the introduction of Intraday Trading (IDT) the methodology used for Administered Settlement requires updating to account for the additional Ex-Ante and Within Day gates that will be present.

This Administered Settlement Policy document provides SEMO's methodology for Administered Settlement after the introduction of Intraday Trading. It covers the methodology and calculations to be used for Ex-Ante, Within Day, and Ex-Post pricing runs, as well as subsequent settlement of the Single Electricity Market (SEM). In addition it provides the methodology in the case of Electrical System Collapse (ESC).

The methodology is in keeping with principles of the original "Option 2" approach approved in October 2009. Namely, in the event of Administered Settlement:

- To provide Interconnector Users with timely and confirmed nominations
- To ensure cash flows in the SEM continue

The likelihood of needing to implement Administered Settlement for the SEM is extremely low. There have been no cases of Administered Settlement being implemented in the four years of the existence of the SEM. It should be considered that the measures outlined below are unlikely to occur and cater for an extremely rare event.

The following definitions are used throughout the remainder of the document:

Administered Settlement	means the process of settling an Administered Price or an Administered Schedule as set out in Section 6 of the TSC
Administered Schedule	Means a schedule which sets out Administered Prices for each trading period and Administered Quantities for each Generator Unit in each Trading Period in the event of Administered Settlement
Administered Price	Means the System Marginal Price for a trading Period under circumstances of Administered Settlement
Administered Quantity	Means the Market Schedule Quantity for a Generator Unit for a Trading Period under circumstances of Administered Settlement

2 Trigger for Implementation

As defined in the TSC, if one of the following criteria have been met then Administered Settlement will be triggered:

[1] SEM Committee Approval of Administered Settlement Methodology

a. Market Schedule & Price (MSP) Failure resulting in an inability to produce a Vvalid MSP Ssolution

Or

b. Electrical System Collapse (ESC) where all Generators have ceased in part of the Transmission System resulting no electricity supply the Black Start process.

Time will be taken prior to the calling of Administered Settlement to establish the issue can be resolved before it affects the publishing timelines for pricing information.

3 Approach for Calculations

3.1 MSP Failure

MSP Failure occurs when the MSP Software fails to produce a Vvalid MSP sSolution for reasons related to the functioning of the MSP Software. This results in the Central Market Systems not being able to calculate and/or publish: System Marginal Price (SMP) and Market Schedule Quantity (MSQ) information, or to determine Modified Interconnector Unit Nominations (MIUNs) and Dispatch Quantities.

In the event of a MSP Failure, the Market Operator is obligated to produce Administered Quantity and Administered Price using an alternative method as per Trading and Settlement Code Section 6.247.

The Market Operator will first endeavor to obtain and publish a Valid MSP Solution using a certified Solver other than the Primary Solver. If this is not possible, then Ffor each run type the approach used for Administered Settlement is provided in Table 1 below. These approaches ensure the relevant and timely information is provided to the required Parties, and to ensure the output is as close as possible as to what would have been calculated under normal processing:

Run Type	Approach	Admin Price	Admin Schedule	MIUNs	DQs
EA1[*3]	'Historical Day'	'Historical Day' Prices	'Historical Day' Schedule	MIUN_EA1 set to zero	n/a
EA2	Cancellation[*1]	n/a	n/a	MIUN_EA1 as for EA1 MIUN_EA2 set to zero	n/a
WD1	Cancellation[*1]	n/a	n/a	MIUN_EA1 as for EA1 MIUN_EA2 as for EA2 MIUN_WD1 set to zero	n/a
EP1[*4]	Defer[*2], then 'Prior run' type for Trading Day	'Prior run' type for Trading Day i.e. WD1	'Prior run' type for Trading Day i.e. WD1	MIUNs from EA1/EA2/WD1	Determine from Metered Generation
EP2[*5]	Defer[*2], then 'Use EP1' for the same Trading Day	'Use EP1' for the same Trading Day	'Use EP1' for the same Trading Day	'Use EP1' for the same Trading Day	'Use EP1' for same Trading Day

Table 1: Approaches for Administered Settlement

Notes:

1) The rationale for using the cancellation process for EA2 and WD1 is that it utilizes the TSC rules around cancellation and the functionality that is already available in the Central Market Systems to deal with Administered Settlement. Cancellation is also a recognized process for Participants, A cancellation has the same effect as Administered Settlement in that the COD/TOD data is still available for use in subsequent runs (including ex-poste pricing runs) and sets MIUNs for the present run to zero (as is necessary). This approach ensures the immediate need for MIUN information is met, as well as ensuring the latest information is provided for the ex-poste pricing and settlement of the SEM. In accordance with paragraph 4.8D of the Trading and Settlement Code, EA1, EP1 and EP2 cannot be cancelled therefore this approach cannot be extended to these runs
2) The Market Operator shall use prudent practice to defer EP1 and/or EP2 as deemed appropriate until further delay would impact cash flows in the SEM.
3) Further details of calculations for 'Historical Day' are provided in Appendix A
4) Further details of calculations for 'Prior run' are provided in Appendix B
5) Further details of calculations for 'Use EP1' are provided in Appendix C

In accordance with TSC section 6.255 re-pricing will be undertaking as soon as reasonably possible where Administered Settlement of EP2 only has occurred.

3.2 Electrical System Collapse

ESC means that all generation has ceased in part of the Transmission System and there is no electricity supply. In this situation Black Start procedures will be initiated, as set out in the Grid Code.

In this event the Market Operator, for the Trading Days affected by the ESC, would produce MSQs and SMPs as per 6.256 of TSC. For the Settlement of Trading Periods outside the ESC, the Market Operator will utilize the SMPs and MSQs produced via the MSP Software. For the Settlement of Trading Periods during the ESC, section 6.256 to 6.259 of the TSC shall be invoked and Generator/Supplier Units will be settled based on their Metered Generation/Demand and the highest Market Offer Price of a Generator Unit with Metered Generation greater than zero in that Trading Period.

For this method, it is assumed that:

- The Central Market Systems are fully functional and the Market Operator would be able to produce all schedules, via the Central Market Systems.
- The System Operator(s) notify the Market Operator of the start and end of the electrical collapse i.e. Trading Period and Date.
- All Pricing Schedules for Trading Days prior to and post the ESC are produced. In the case where a full dataset has not been received for that day, the Market Operator may defer such schedules until such time as it has the full dataset.
- Corrected data will be consumed into the system under normal M+4 and M+13 resettlement.
- All SMPs and MSQs on the Trading Day of ESC will be calculated as normal; however, when the Trading Day is being settled the Trading Periods affected by the ESC will be calculated in accordance with Section 6 of the TSC.

No repricing will result from carrying out Administered Settlement due to an ESC

4 Data Publishing

The Market Operator will update the SEMO website and issue a market message notifying of an Administered Settlement event and stating which Trade Date and Run Type is affected. Further updates will be provided as the issue is progressed.

Where Administered Settlement occurs details of the methodology and calculations used will be provided on the SEMO website.

For EA1, EP1 and EP2, Administered Price and Administered Quantities will be made available in spreadsheet format on the SEMO website.

Where the Administered Settlement relates to EA2 or WD1 the only publication will be a run cancellation report generated by the Central Market Systems.

Administered Settlement publication times will be:

- EA1 @ 15:00 on TD-1
- EA2 @ 15:00 on TD-1 (report of cancellation only)
- WD1 @ 09:30 on TD (report of cancellation only)
- EP1 @ 17:00 (deferred until day before impact on EP2 publishing and associated cash flows in the SEM)
- EP2 @ 17:00 (deferred until day before it will have an impact on cash flows in the SEM)

APPENDIX A: MSP FAILURE - 'HISTORICAL DAY' METHOD

The 'HISTORICAL DAY' Method is based on the premise that the outcome of MSP Schedule for a Trading Day will resemble that of a similar historical day.

The following methodology applies when MSP Software occurs during EA1.

Selection of 'HISTORICAL DAY'

A.1 For EA1 the Market Operator shall exercise their judgement in selecting a 'HISTORICAL DAY' that most reasonably matches the day that the schedule applies to.

A.2 The MO will not be obliged to rerun the 'HISTORICAL DAY' Method for any particular Trading Day solely as a consequence of a rerun of the 'HISTORICAL DAY' Method for the preceding Trading Day.

Calculations using 'HISTORICAL DAY' Method

A.3 Values of Modified Interconnector Unit Nominations for each Interconnector Unit relating to EA1 shall be set to zero

A.4 For all Generator Units u except Interconnector Units for all Trading Periods h in Trading Day TD:

$$(MSQ_{uh})_{TD} = (MSQ_{uh})_{HTD} \text{ and } (SMP_h)_{TD} = (SMP_h)_{HTD}$$

where 'HTD' refers to a 'HISTORICAL DAY' Trading Day that has been selected.

A.5 For all Interconnector Units u for all Trading Periods h in Trading Day TD:

$$(MSQ_{uh})_{TD} = 0$$

A.6 For all Interconnector Units u for all Trading Periods h in Trading Day TD:

$$(MIUN_{uh})_{TD} = (MSQ_{uh})_{TD}$$

Outputs from 'HISTORICAL DAY' Method

A.7 All details on the 'HISTORICAL DAY' selected will be made available to Participants following the event

A.8 The Market Operator shall use the 'HISTORICAL DAY' Method to calculate and publish the following values:

a) the Administered Price (SMPh) for each Trading Period h;

b) the Administered Schedule (MSQuh) for each Generator Unit u in each Trading Period h;

A.9 The outputs from EA1 Administered Settlement shall be published by 15:00 the day prior to the Trading Day

APPENDIX B: MSP FAILURE - USE 'PRIOR DAY' METHOD

The 'PRIOR RUN' Method is based on the premise that the outcome of MSP Schedule for a Trading Day will resemble that of a prior run type for the same Trading Day.

The following methodology applies when MSP Software occurs during EP1.

Selection of 'PRIOR RUN'

B.1 For the 'PRIOR RUN' Method the Market Operator shall use the prior run type for the Trading Day.

Calculations using 'PRIOR RUN' Method

B.2 For all Generator Units u, including Interconnetor Units, for all Trading Periods h in Trading Day TD:

$$\left(MSQ_{uh}\right)_{TD} = \left(MSQ_{uh}\right)_{PRTD} \text{ and } \left(SMP_{h}\right)_{TD} = \left(SMP_{h}\right)_{PRTD}$$

where 'PRTD' refers to values determined from the prior run type for the Trading Day.

B.3 For Generator Units u except Interconnector Units the Dispatch Quantities (DQ) for all Trading Periods h in the Trading Day TD will be determined from Metered Generation

$$\left(DQ_{uh}\right)_{TD} = \left(MG_{uh} / TPD\right)_{TD}$$

B.4 For all Interconnector Units u the Dispatch Quantities (DQ) for all Trading Periods h in Trading Day TD will be:

$$\left(DQ_{uh}\right)_{TD} = \left(MSQ_{uh}\right)_{TD}$$

$$\left(DQ_{u'h}\right)_{TD} = \left(SIEQ_{uh} + SIIQ_{uh}\right)_{TD}$$

Outputs from 'PRIOR RUN' Method

B.5 All details on the 'PRIOR RUN' selection will be made available to Participants following the event

B.6 The Market Operator shall use the 'PRIOR RUN' Method to calculate and publish the following values:

a) the Administered Price (SMPh) for each Trading Period h;

b) the Administered Schedule (MSQuh) for each Generator Unit u in each Trading Period h;

B.7 The Market Operator shall use prudent practice to defer EP1, as deemed appropriate, until further delay would impact on the publication on EP2 and the associated cash flows in the SEM. At which time the outputs from EP1 Administered Settlement shall be published by 17:00 hours the day before it will have an impact on cash flows in the SEM

APPENDIX C: MSP FAILURE – 'USE EP1' METHOD

The 'USE EP1' Method is based on the premise that the outcome of the EP2 MSP Schedule for a Trading Day will resemble that of EP1 for the same Trading Day.

The following methodology applies when MSP Software occurs during EP2.

Selection of 'USE EP1'

C.1 For the 'USE EP1' Method the Market Operator shall use the EP1 run for the Trading Day.

Calculations using 'USE EP1'Method

C.2 For all Generator Units, including Interconnector Units, for all Trading Periods h in Trading Day TD:

$$\left(MSQ_{uh}\right)_{TD} = \left(MSQ_{uh}\right)_{EP1\_TD} \text{ and } \left(SMP_{h}\right)_{TD} = \left(SMP_{h}\right)_{EP1\_TD}$$

where EP1_TD refers to EP1 run type for this Trading Day.

C.3 For Generator Units u except Interconnector Units the Dispatch Quantities (DQ) for all Trading Periods h in the Trading Day TD will be determined from Metered Generation

$$\left(DQ_{uh}\right)_{TD} = \left(MG_{uh} / TPD\right)_{TD}$$

C.4 For all Interconnector Units u for all Trading Periods h in Trading Day TD:

$$\left(DQ_{uh}\right)_{TD} = \left(MSQ_{uh}\right)_{TD}$$

$$\left(DQ_{u'h}\right)_{TD} = \left(SIEQ_{uh} + SIIQ_{uh}\right)_{TD}$$

Outputs from 'USE EP1' Method

C.5 All details on the 'USE EP1' selection will be made available to Participants following the event

C.6 The Market Operator shall use the 'USE EP1' Method to calculate and publish the following values:

c) the Administered Price (SMPh) for each Trading Period h;

d) the Administered Schedule (MSQuh) for each Generator Unit u in each Trading Period h;

C.7 The Market Operator shall use prudent practice to defer EP2, as deemed appropriate, until further delay would impact cash flows in the SEM. At which time the outputs from EP2 Administered Settlement shall be published by 17:00 hours the day before it will have an impact on cash flows in the SEM