



Single Electricity Market

CENTRAL MARKET SYSTEMS DECOMMISSIONING POST I-SEM GO- LIVE APPROACH AND OPTIONS

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1 DOCUMENT OVERVIEW

As the all-island electricity market prepares for the introduction of the Integrated Single Electricity Market (I-SEM) arrangements, the existing SEM will move from a design and build market to an operate and maintain market model, through the closing of the market, the resettlement period of M+13 and to the eventual decommissioning of the SEM. Figure 1 below illustrates the timeline for the closing of the market through to decommissioning. The 2016-2019 SEMO Price Control Decision Paper (SEM-16-043) took account of this. SEM-16-043 states in relation to a decommissioning plan that *'the SEMC require that SEMO consults on the options available... in order to gain market participant feedback on the best option to pursue'*.

Post I-SEM Stocktake SEMO Timeline							
Tariff Year 16/17 Oct-16 - Sep-17	Tariff Year 17/18 Oct17 - May Jun-18 Jul-18 - Sep 18			Tariff Year 18/19 Oct-18 - Jul 19 Aug-19 Sep-19		Tariff Year 19/20 Oct 19 - Nov 19	
SEM Trading Up to I-SEM Go Live	Final Settlement of SEM	Period 2 - Resettlement Period (M+13)			Formal Query Period	Decommissioning Period	
Period 1 - SEM Operation		Period 2 - SEM Resettlement			Period 3 - SEM Decommissioning		

Figure 1 SEMO Timeline Post I-SEM Stocktake

The SEMO Price Control initially specified a date of 31 July 2017 for agreement of a plan. In light of the revision of the I-SEM Go-Live date to May 2018, it was agreed with the SEMC to revise the deadline for having a decommissioning plan finalised and in place to September 2017.

SEMO has now completed a high level review of the decommissioning of the existing Central Market Systems (hardware and software) in the context of I-SEM Go-Live. This document provides proposals on SEMO's recommended approach to the decommissioning of the existing SEM Central Market Systems (CMS). Market participants are now invited to provide their views on these proposals. All responses should be made to markethelpdesk@sem-o.com by 7 September 2017.

2 INTRODUCTION

The SEMO CMS comprises of a number of complex business software application solutions delivered on multiple infrastructure platforms and supported by a number of third-party products and vendors.

These products typically comprise I.T. infrastructure (servers etc), operating systems, database management systems, software applications, finance systems etc.

The Central Market Systems are currently operating under “Maintenance Mode”, the agreed roadmap option from a consultation as part of the SEMO Price Control 2016-2019 process. This means that no further upgrades to any of the existing Central Market Systems will take place for the remainder of their operational life with the exception of Operating System or Product Patches and Security Upgrades.

2.1 KEY ASSUMPTIONS

The following key assumptions were made during the review of potential decommissioning options:

- I-SEM go-live will occur in May 2018.
- I-SEM market arrangements will be supported by an entirely new and separate suite of systems.
- The Regulatory approved resettlement window, agreed as M+13, will determine the final operational date of the current CMS currently end August 2018 as per Figure 1 above, which will determine when decommissioning activities will commence.
- Bi-Annual Maintenance Mode activities will continue on the existing CMS after this date (and up to the final agreed operational date) which will include technical updates such as patching or certificate renewal and data archival.
- The agreed Roadmap option (“Maintenance Mode”) will remain in place until the final agreed operational date of the existing CMS.
- During the Resettlement window the existing CMS will be rationalised and not all services/systems (e.g. Scheduling) will be required.
- There is a requirement to maintain the current SEMO Website available for 2 years following the final Resettlement within the SEM (at the end of the Regulatory agreed Resettlement Window).
- Data queries following the Resettlement window will incur an additional cost as the systems and subsequent data will no longer be supported.
- Existing SEMO URLs will remain in place with new URLs provided for I-SEM for data submission. Should I-SEM confirm otherwise then alternatives will be configured to feed the Resettlement Systems of any necessary external provided data.
- Following the decommissioning of the CMS and associated Hardware and Software it will not be possible to recover (re-instate) an operational SEM CMS. This is not a requirement.
- No KPI’s will apply during the decommissioning period as agreed under SEM-16-043.

3 APPROACH

The following section outlines SEMO's approach for the decommissioning of the SEM Market Systems following I-SEM Go-Live.

Decommissioning will comprise two distinct phases, as indicated in SEM-16-043;

- Wind Down Phase
- Decommissioning Phase

3.1 WIND DOWN PHASE

The Wind Down Phase will commence immediately following the final EP2 Pricing and Scheduling Run for the final agreed Trading Day, following I-SEM Go-Live. This will involve shutting down all non-essential systems no longer required during the M+13 resettlement period. This will include the externally facing environment specifically purposed for Market Test phases and CCQT. The SEM Market Systems at this point will be referred to as the "SEM Resettlement System" as the I-SEM related systems will now be the Live Central Market System.

At present the SEM Systems are configured with 2 Production environments, P1 and P2, although only 1 environment is ever Live in operation at any one time. The 2nd environment is available in Standby mode should a Major incident occur within the Live environment. Each Production environment is split cross-site in Belfast and Dublin to provide redundancy across the 2 sites.

During the Wind Down Phase SEMO proposed to remove the cross-site redundancy capability and maintain a single environment from one location only. The secondary production environment (within site) will be available for redundancy should a Major Incident occur within the Primary Production Environment. This will reduce our server footprint and therefore reduce our extended support costs with 3rd party vendors as well as internal support costs (OpEx). This approach introduces risk in that a significant system issue will result in an unplanned outage to the Resettlement Systems and potential delayed publishing of resettlement information. This risk is considered minor as there will be redundancy within the single operational site.

In addition elements of the Central Market Systems, used for Day Ahead or In Day Scheduling, will no longer be required at this time. As a result applications such as RCUC will be switched off and decommissioned immediately along with any feeds to and from these systems.

All non-production/test environments will be decommissioned at this time, with the exception of 1 Non-Production environment which will be maintained for testing any data fixes required to support any resettlement issues which may arise during the M+13 resettlement period. This environment will also be scaled down to reflect the SEM Resettlement System. This environment will be retained exclusively for Market Operator use and will not be available to Market Participants.

All Hardware or Virtual Images that are decommissioned during this phase will be completed in line with the EirGrid Media Handling Policy.

3.2 DECOMMISSIONING PHASE

The Decommissioning Phase will commence immediately following the final resettlement run and formal query period, as outlined in Figure 1, and is estimated to take 3 months to complete in full.

Market messages to this effect will be communicated as per the normal operating procedure of the SEM, confirming timelines of Market Participant impacted processes. Communication channels will be shared within these communications.

This phase will result in the total decommissioning of all remaining SEM Central Market Systems/Resettlement Systems and their associated Hardware and Software with the exception of the SEMO Website. As per SEM-16-043, SEMO are required to keep the SEMO website fully functional for two years beyond the end of the resettlement period. Consequently the decommissioning of the SEMO website and its associated hardware and software is out of scope of this paper.

Following the final Resettlement run publication a number of key processes will be completed within SEMO Market Systems, including, but not limited to;

- The Suspension of all Market Participant access to the Resettlement Systems.
- A full backup of all production data will be completed and the resulting backup media used will be removed from the media pool, labelled and placed into secure storage, this will ensure SEMO have a complete dataset should a restore be required at a future date at regulatory request. It should be noted that this will relate to data only, i.e. the CMS will not be available to restore.
- All Databases further archived to Offline Storage in line with EirGrid Data Retention Policy.
- All SEM Resettlement Systems are fully powered down.
- As the hardware in the existing Market is End of Life and cannot be re-purposed then it will be decommissioned in line with the EirGrid Media Handling Policy.

This approach will result in the total decommissioning of all SEM Systems and as such access to data following the final resettlement run will be by exception and will incur a charge to the requestor. Also recovery of data will take longer as it will need to be restored from backup media.

The SEMO website, although available, will remain static following the decommissioning period. i.e. no new data will be published to the website. Dynamic Reporting within the website will also become unavailable at the end of the resettlement period. In order to provide Dynamic Reporting beyond the resettlement period, a subset of the CMS would need to be maintained which would incur support costs from the system vendors along with the maintenance of unsupported end of life hardware. During the two year period following the final resettlement run the “isolated” SEMO Website and Hardware will incur a support cost and require additional support from IT resources to ensure that the hardware remains patched in line with EirGrid Security policies where possible. As per SEM 16 043, the RAs require SEMO to maintain the website for this two year period, so this is a necessary cost.

Interested parties are invited to provide their views on SEMO’s proposal for the decommissioning of Central Market Systems as outlined above.

4 SUMMARY

The SEM CMS Decommissioning will take a phased approach following the final market run in the existing SEM.

Market messages will be issued to inform participants of any action by which they are impacted during the SEM Decommissioning.

During the resettlement period the CMS will be rescaled to a “Resettlement System” and will continue to run for the duration of the resettlement period.

After an agreed period following the completion of the final run within the Resettlement Window any data queries will incur an additional cost to SEMO which will need provision.

The SEMO Website will remain available for 2 years following the end of the resettlement period as per SEM-16-043, although all data thereon will remain static. Dynamic Reporting will no longer be available.

All hardware disposals will be completed in line with the EirGrid Media Handling Policy.

Interested parties are now invited to provide their views on the proposals outlined in this paper. All responses should be made to markethelpdesk@sem-o.com. The deadline for response is 7 September 2017.