



Single Electricity
Market Operator

MARKET OPERATOR
SINGLE ELECTRICITY

SEMO KPI Performance 2015-2016

KPI Outturn Report 2015-2016

Abstract

This document presents SEMO's performance against the regulatory approved Key Performance Indicators (KPIs) for the 2015-2016 tariff year.

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Introduction

SEMO is currently incentivised to manage performance through Key Performance Indicator (KPI) incentives, for achieving outcomes aimed at improving performance, promoting customer service, increasing efficiencies and delivering value to customers.

In August 2013 the *Single Electricity Market Operator (SEMO) Revenue Requirement Price Control Decision Paper commencing 1 October 2013 (SEM-13-054)* was issued. This paper increased the number of KPIs, the weightings and the incentive pot. The decision paper stated,

'Greater emphasis has been placed on incentivising SEMO to focus on the importance of customer value and service delivery. This is evidenced by an increasing number of Key Performance Indicators (KPIs), which now include System Availability. In addition to this some existing KPIs have been strengthened together with the reward available increasing from 3% of OPEX to 4%.'

This KPI paper describes SEMO's outturn performance in relation to its seven regulatory approved Key Performance Indicators (KPIs) for year three (2015-2016) of the three year price control period.

Key Performance Indicators (KPIs)

SEMO is committed to delivering improved quality and performance levels in the processing of crucial Market Operations data. SEMO is currently incentivised against the delivery of seven Key Performance Indicators (KPIs) which incentivise outcomes aimed at improving performance, promoting customer service, increasing efficiencies and delivering value to customers.

The current seven Operational Key Performance Indicators were set out in SEMO's last Price Control (*SEM-13-054 Oct 13-Sept 16*) and monitor SEMO's performance across the following areas:

- Ex-Ante
- Ex-Post Initial
- Invoicing
- Credit Cover Increase Notice (CCINs)
- SEMO related ad hoc Resettlements
- General Queries
- Central Market System Availability

Ex-Ante

The Ex-Ante publication targets refer to the percentage of occurrences where the Ex-Ante 1 pricing reports are published on time. Currently the target time for publication is 11:00am every day, seven days a week. The Ex-Ante 1 pricing runs are carried out on D-1 and give the day-ahead forecast of Market Scheduled Quantities (MSQ) and System Marginal Price (SMP) for all units. The Ex-Ante 1 is also important for setting Interconnector Unit Nominations for Interconnector Units who have bought Interconnector Capacity, and calculating the residual Capacity that all other Interconnector Units could avail of in Ex-Ante 2 and Within-Day runs¹. Unlike prices and quantities, the Interconnector Nominations for day ahead are fixed and cannot be re-set after the Ex-Ante is published.

Ex-Post Initial

The Ex-Post Initial publication targets refer to the percentage of occurrences where the Ex-Post Initial pricing reports are published on time. Currently the target time for publication is 17:00 every day, seven days a week. The Ex-Post Initial pricing runs are carried out on D+4 and give the final SMPs and MSQs for all participants. These figures are used for the final settlement of all Market Participants.

¹ This is in application of the principle of 'use it or loose it' which underpinned the implementation of Intraday Trading

Invoicing

The Invoicing targets refer to the percentage of occurrences where Invoices to all participants are published on time. Currently for the weekly energy Market and Variable Market Operator Charge (VMOC) invoices the target is 12:00 each Friday. Capacity is invoiced at 12:00 seven working days after the end of the month, and the Fixed Market Operator Charge (FMOC) invoices are published on the first Friday after the end of the month at 12:00.

Credit Cover Increase Notice (CCINs)

The Credit Cover Increase Notice targets refer to the percentage of occurrences where the CCINs (issued as part of the Credit Cover Reports) are published on time. Currently the target time for publications is 17:00 every working day. CCIN reports are used to inform Market participants that their posted collateral cover is less than their required collateral cover. Participants then have two working days in which to rectify this on receipt of the CCIN.

SEMO related ad hoc Resettlements

If the Market is settled incorrectly, a Market Participant raises a query to ensure the error is rectified. This metric refers to upheld Formal Query from Market Participants which have identified errors attributed to SEMO's operations and processes. Correction of such errors is completed in either the scheduled Resettlement (M+4 and M+13) or in an ad hoc Resettlement. The materiality of a formal query determines whether an ad hoc Resettlement run is required.

Not all Formal Queries are the result of SEMO driven issues; others are driven by external factors outside of SEMO's control. The proposed measure is to reduce the number of SEMO related issues hence the number of SEMO upheld query incidents and Resettlements per Quarter.

General Queries

The General Queries targets refer to the percentage of occurrences where a General Query is not addressed within 20 Business days. While the Trading and Settlement Code places no obligation on SEMO to respond to general queries, SEMO has endeavored to answer all queries received (1,967 general queries in 2015-16) within set timelines. At times, depending on the complexity, scale, resource issues and operational performance, the time taken to respond to these queries can exceed 20 working days. This target is designed to maintain efficiency and customer focus within SEMO.

Central Market System Availability

System availability is the ratio of time infrastructure systems are said to be in a functioning condition to the total time it is required or expected to be available. High availability ensures a prearranged level of operational performance will be met during a contractual measurement period (7AM – 5PM Mon - Sun). This target was introduced in the latest Revenue Requirement review, designed to capture Market Operations effectiveness for an IT point of view.

The agreed SEMO Key Performance targets are set out in table 1 below².

| Metric | Weighting | Lower Bound Target | Upper Bound Target |
|--|-----------|--------------------|--------------------|
| 1 Ex-Ante Pricing Report | 0.15 | 99% | 100% |
| 2 Ex-Post Initial Pricing Report | 0.1 | 99% | 100% |
| 3 Invoicing | 0.2 | 97% | 100% |
| 4 Credit Cover Increase Notices | 0.1 | 99% | 100% |
| 5 SEMO related formal Queries | 0.2 | 9 ³ | 5 ⁴ |
| 6 General Queries | 0.15 | 97% ⁵ | 99% ⁶ |
| 7 Central Market System Availability (7AM – 5PM Mon - Sun) | 0.1 | 99.5% ⁷ | 99.9% ⁸ |

Table 1 - Summary of the agreed Key Performance Indicators

Conditions to be applied to the KPIs

The decision paper also applied the following KPI conditions

'11.3.3 The following conditions will apply:

- *The metric is delivered within one hour of the targeted time;*
- *External factors which are demonstrably outside of the Market Operator's direct control are to be excluded e.g. Limited Communication failure by Market Participant, late provision of data by System Operators or the Meter Data Provider, Government policy changes, Regulatory Authorities' policy changes etc.;*
- *In terms of assessing the KPIs, a measure is to be taken at the end of each Quarter using the average value of each KPI over that period;*
- *KPI incentive pot to be set at 4% of the total OPEX revenue for each year. The increase (from 3%) is justified by the fact that the SEM Committee has increased the targets of several KPIs.'*

A number of weighting factors have also been adjusted, as a result of the additional KPI target and for the purpose of increasing emphasis on customer services.

² Extract from table 22 in SEMO Revenue Requirement Decision Paper (SEM-13-054)

³ 9 or less upheld queries incidents per quarter

⁴ 5 upheld queries incidents per quarter

⁵ 97% of Queries answered within 20 Business days

⁶ 99% of Queries answered within 20 Business days

⁷ 99.5% System availability between 7am and 5pm Monday - Sunday excluding planned outages

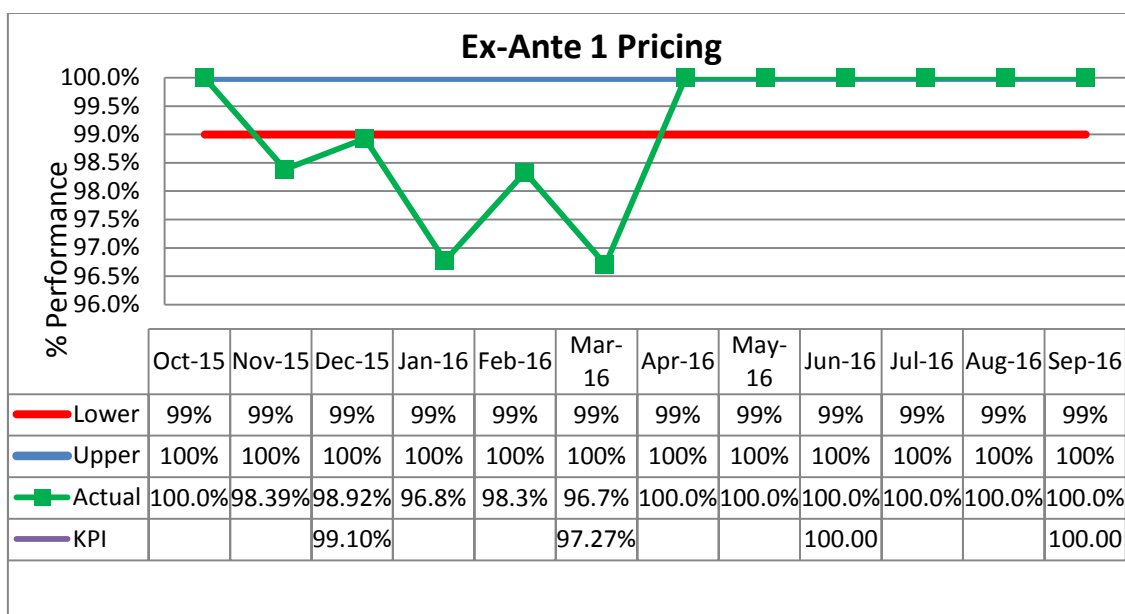
⁸ 99.9% System availability between 7am and 5pm Monday - Sunday excluding planned outages

Outturn Performance 2015-16

The SEMO Revenue Requirement Decision Paper (*SEM-13-054*), paragraph 11.3.3, states that the ‘KPI incentive pot to be set at 4% of the total OPEX revenue for each year’. The approved OPEX revenue for 2015-2016 was €10.140 million⁹. Four per cent of this OPEX amount translates to a KPI pot of €405,623. The following sections detail the actual operational outturn performance against each target set out in the Price Control decision paper.

Ex-Ante Pricing Report

The target for the Ex-Ante publications is 99% with an upper bound limit of 100%.



Graph 1 - Ex-Ante 1 Pricing Report Performance

A delay in the publication of the Within Day (WD1) Modified Interconnector Unit Nominations (MIUNs) for Trading Day 14/11/2015 delayed the initiation of the Market Schedule and Ex-Ante Pricing publication for Trading Day 15/11/2015. An issue in the Central Market System delayed the initiation of the Market Schedule and Ex-Ante Pricing publication for Trading Day 30/01/2016. A delay in the publication of the WD1 MIUNs for Trading Day 19/03/2016 delayed the initiation of the Market Schedule and Ex-Ante Pricing publication for Trading Day 20/03/2016. A delay in the publication of the WD1 MIUNs for Trading Day 20/03/2016 delayed the initiation of the Market Schedule and Ex-Ante Pricing publication for Trading Day 21/03/2016.

⁹ Price Control approved figure for 2015-2016 of 9.975 million with indices applied

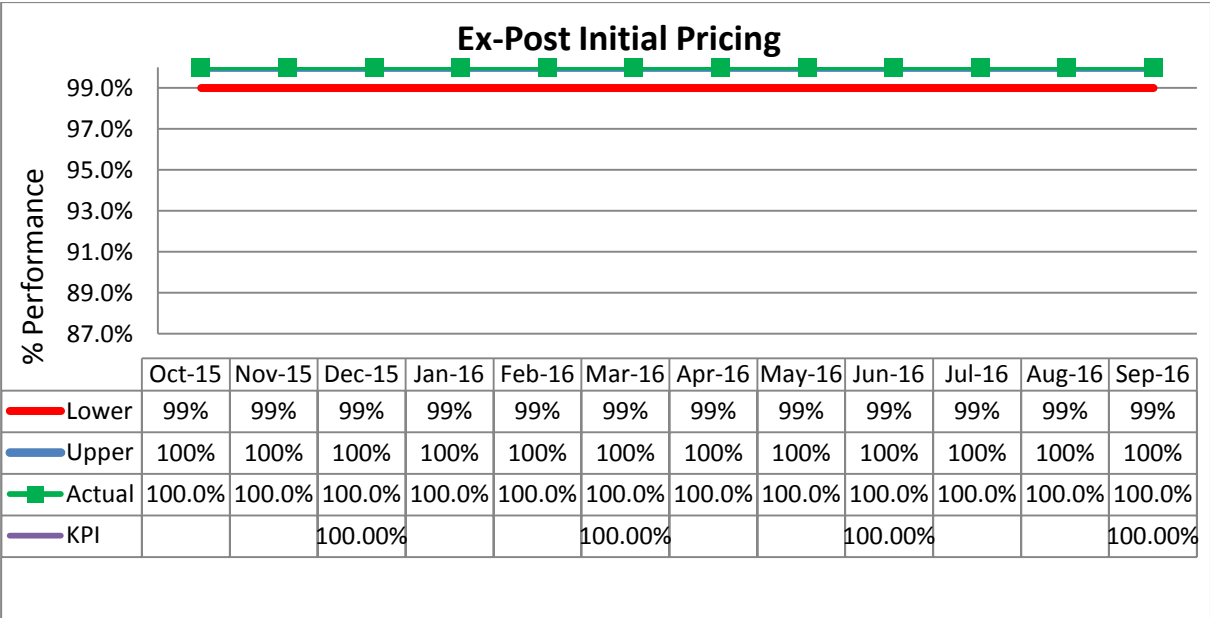
The bounds for this target are set very high, and just one delayed publication out of 92 in Quarter one, and three delayed publications out of 91 in Quarter two, were enough to prevent SEMO from achieving this objective. The monetary reward realised is illustrated in table 2 below.

| Quarter1 | Quarter2 | Quarter3 | Quarter4 | Total Reward |
|----------|----------|----------|----------|--------------|
| €1,581 | €0 | €15,211 | €15,211 | €32,003 |

Table 2 - Ex-Ante Pricing Report outturn

Ex-Post Initial Pricing Report

The target for the Ex-Post Initial KPI is 99% with an upper bound limit of 100%.



Graph 2 - Ex-Post Initial Pricing Report Performance

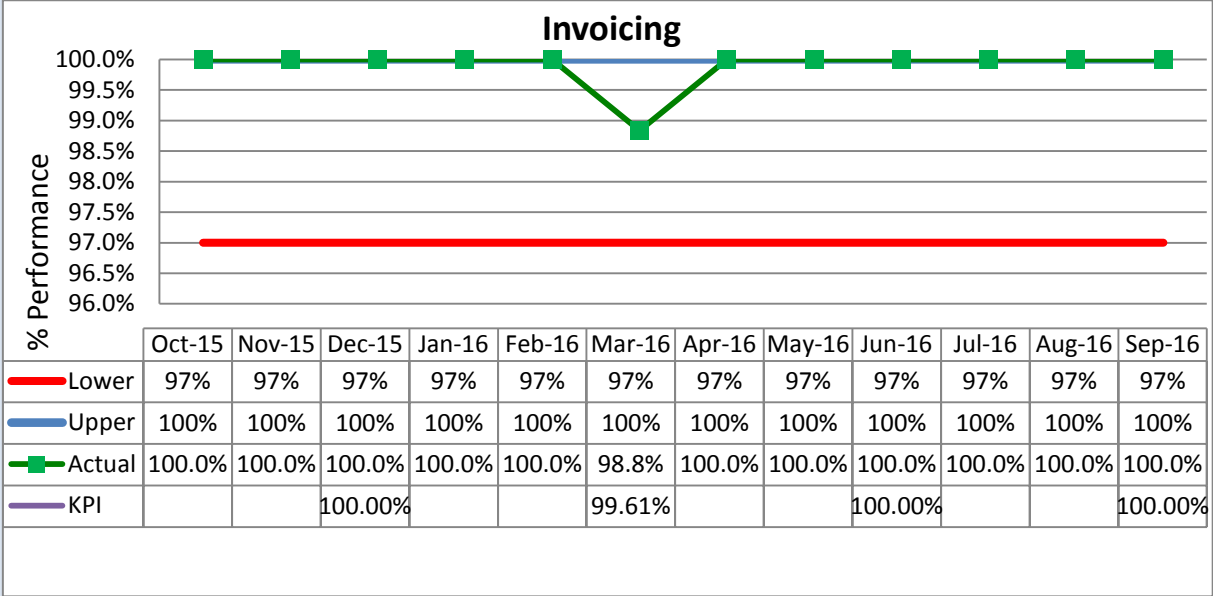
The lower and upper bound targets have been achieved in all Quarters of the Financial Year, as shown in Graph 2 above. The monetary reward for meeting these targets is illustrated in table 3 below.

| Quarter1 | Quarter2 | Quarter3 | Quarter4 | Total Reward |
|----------|----------|----------|----------|--------------|
| €10,141 | €10,141 | €10,141 | €10,141 | €40,562 |

Table 3 - Ex-Post Initial Pricing Report outturn.

Invoicing

The target for the Invoicing KPI is 97% (up from 95% in previous years) with an upper bound limit of 100%.



Graph 3 - Invoicing Performance

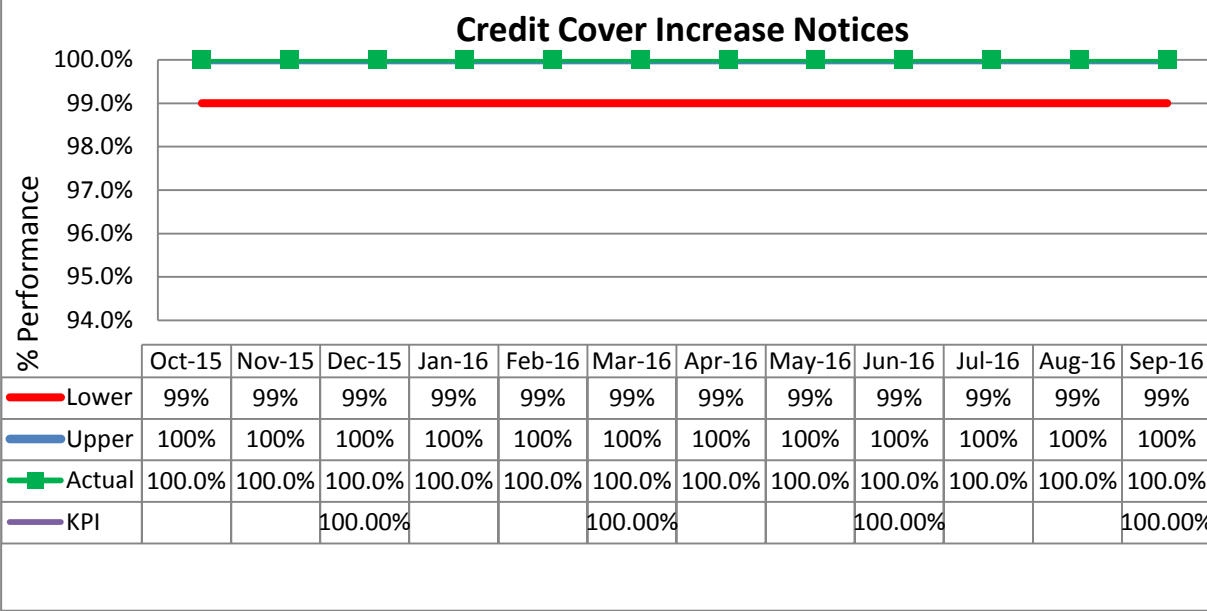
The lower bound target has been achieved in all Quarters of the Financial Year, as shown in Graph 3 above. The upper bound target was not achieved in Quarter two. An issue was encountered in the Settlement system which prevented the Capacity Invoicing run from completing successfully, the issue was raised with the vendor and a script deployed to production to fix the issue. The bounds for this target are set very high, and the delay to Initial Capacity publication was enough to prevent SEMO from achieving the objective in Quarter two.

| Quarter1 | Quarter2 | Quarter3 | Quarter4 | Total Reward |
|----------|----------|----------|----------|--------------|
| €20,281 | €17,661 | €20,281 | €20,281 | €78,504 |

Table 4 Invoicing outturn.

Credit Cover Increase Notices

The CCIN publication is due by 17:00 each Working Day. The target for the Credit Cover Increase Notices (CCIN's) KPI is 99% with an upper bound limit of 100%. This is a very strict range; however, no delays were recorded in this period.



Graph 4 - Credit Cover Increase Notice Performance

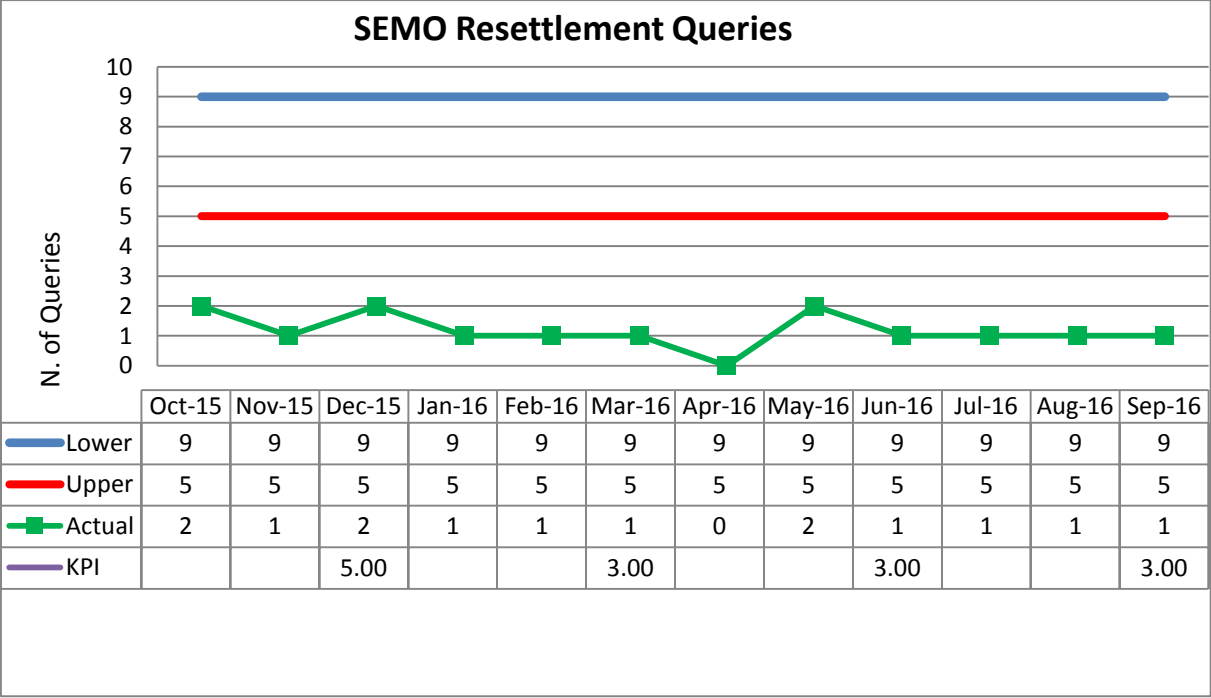
The upper and lower bound targets have been achieved in all Quarters of the Financial Year, as shown in Graph 4 above. The monetary reward for meeting these targets is illustrated in table 5 below.

| Quarter1 | Quarter2 | Quarter3 | Quarter4 | Total Reward |
|----------|----------|----------|----------|--------------|
| €10,141 | €10,141 | €10,141 | €10,141 | €40,562 |

Table 5 - Credit Cover Increase Notice outturn

SEMO Resettlement Related Queries

Compared to the previous Price Control period, the target for SEMO Resettlement Related Queries has been lowered from 'less than 15' to 'less than 9' upheld queries which require Resettlement per Quarter.



Graph 5 - SEMO Resettlement Related Queries Performance

The upper bound of this metric is five per Quarter. This target was achieved in Quarter One, and exceeded in Quarter Two, Three and Four. This is illustrated in Graph 5 above.

The lower bound of this metric is nine per Quarter. This target has been exceeded in all four Quarters of the financial year, as shown in Graph 5 above.

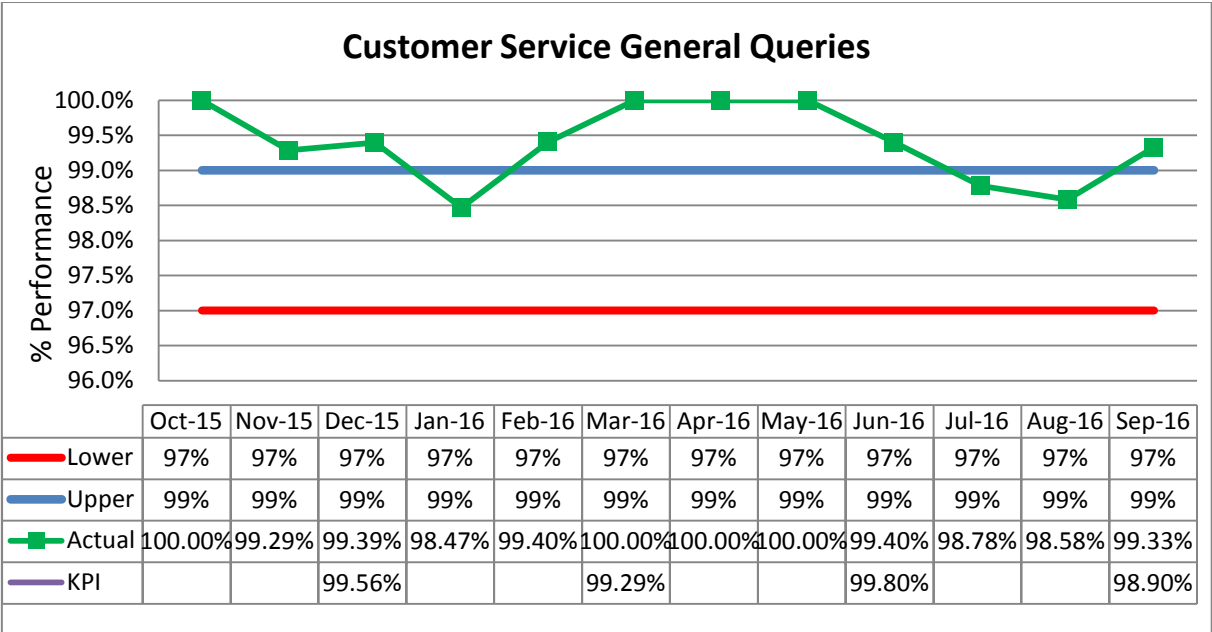
The monetary reward for achieving this target is illustrated in table 6 below.

| Quarter1 | Quarter2 | Quarter3 | Quarter4 | Total Reward |
|----------|----------|----------|----------|--------------|
| €20,281 | €20,281 | €20,281 | €20,281 | €81,125 |

Table 6 - SEMO Related Resettlement Queries outturn

General Queries

The target for the General Queries Delivery KPI is 97% with an upper bound limit of 99%. The KPI requires that SEMO resolves 99% of its queries within 20 working days. SEMO in financial year 2015-2016 handled 1,967 helpdesk general queries. The resolution time can be impacted by a number of factors, for example, the complexity and scale of the query received, resources available, priority given to formal and urgent queries, the nature of the request which could require cross functional assistance and operational performance.



Graph 6 - General Queries Performance

The lower bound targets have been achieved in all four Quarters of the financial year, as shown in Graph 6 above. The upper bound target was achieved in Quarters One, Two and Three but not in Quarter four.

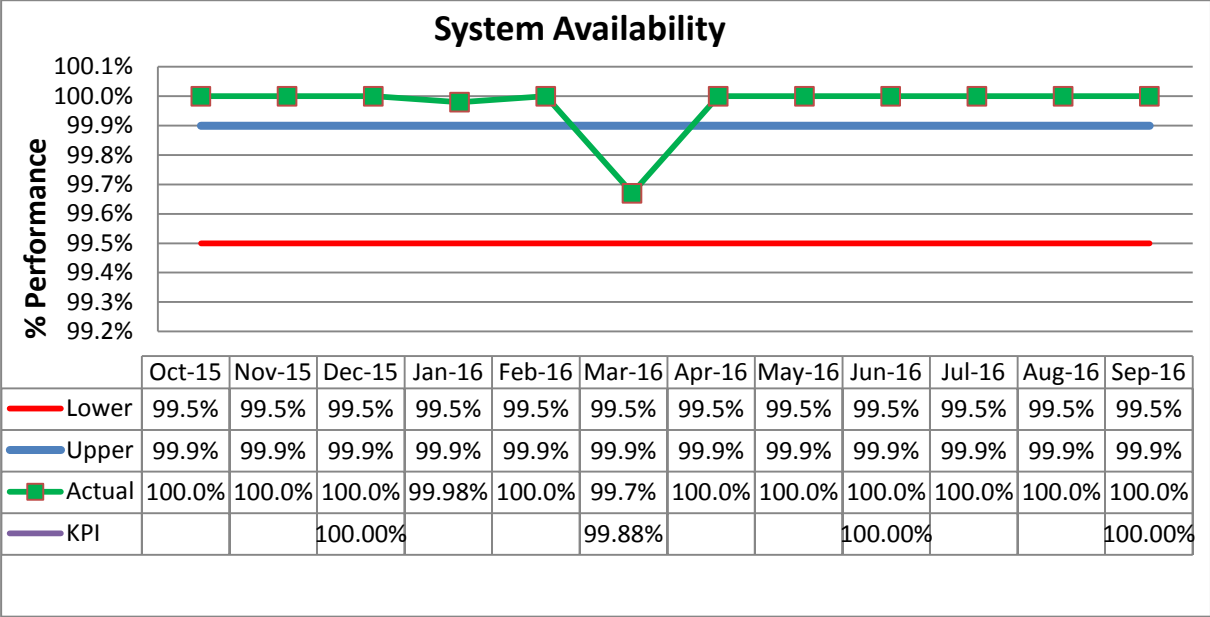
The monetary reward realised is illustrated in table 7 below.

| Quarter1 | Quarter2 | Quarter3 | Quarter4 | Total Reward |
|----------|----------|----------|----------|--------------|
| €15,211 | €15,211 | €15,211 | €14,227 | €60,060 |

Table 7 - General Query’s outturn

System Availability

The target for the System Availability KPI is 99.5% with an upper bound limit of 99.9%.



Graph 7 – System Availability Performance

The lower bound of this metric has been achieved in all four Quarters of the financial year. The upper bound of this metric has been achieved in Quarter one, three and four, while Quarter two fell short. On Saturday 19/03/2016 at approximately 01:30 AM both power supplies available (direct power and UPS) to the Belfast Central Market Systems (CMS) failed, this resulted in all production servers being forcibly shutdown for approximately 20 minutes. When power was re-established, the affected servers, network equipment etc. re-started as expected, however, issues were encountered as the forcible removal of power did not allow an orderly shutdown of processes and equipment.

The monetary reward realised for these targets is illustrated in table 8 below.

| Quarter1 | Quarter2 | Quarter3 | Quarter4 | Total Reward |
|----------|----------|----------|----------|--------------|
| €10,141 | €9,718 | €10,141 | €10,141 | €40,140 |

Table 8 – System Availability outturn

Performance Summary against KPI Targets

Table 9 below, summarises the overall Regulatory Approved KPI targets and the outturn KPI figures per Quarter. The light grey area indicates the KPI targets agreed in the SEMO Revenue Requirement Decision Paper (SEM-13-054). The darker grey columns show the percentage outturn achieved by SEMO for each KPI per Quarter while the blue column indicates the average performance over the four Quarters. These were challenging for SEMO in Quarters one and two, as the metrics were strengthened to focus on the importance of customer value and service delivery, and the System Availability was tracked for the third year.

| SEMP KPI Outturn 2015-2016 | | | | | | | | |
|---|-----------|--------|-------------|------------------------|------------|-------------|-------------|---------------------|
| SEMO Revenue Requirement Decision Paper (SEM-13-054) paragraph 11.3.2 | | | | Performance by Quarter | | | | Overall Performance |
| Metric | Weighting | Target | Upper Bound | Oct-Dec Q1 | Jan-Mar Q2 | Apr-June Q3 | Jul-Sept Q4 | 2015-2016 |
| Ex-Ante 1 Pricing | 0.15 | 99% | 100% | 98.21% | 97.27% | 100.00% | 100.00% | 98.87% |
| Ex-Post Initial Pricing | 0.1 | 99% | 100% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |
| Invoicing | 0.2 | 97% | 100% | 100.00% | 99.61% | 100.00% | 100.00% | 99.90% |
| Credit Cover Increase Notices | 0.1 | 99% | 100% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |
| SEMO Resettlement | 0.2 | <9 | <5 | 5 | 3 | 3 | 3 | 14 (total) |
| Customer Service | 0.15 | 97% | 99% | 99.56% | 99.29% | 99.80% | 98.90% | 99.55% |
| System Availability (7am to 5pm Mon - Sun) ¹⁰ | 0.1 | 99.5% | 99.9% | 100.00% | 99.88% | 100.00% | 100.00% | 99.94% |

Table 9 - SEMO Performance 2015-2016

Incentive earned by SEMO

The SEMO Revenue Requirement Decision Paper (SEM-13-054) paragraph 11.3.1 states that the 'KPI incentive pot to be set at 4% of the total OPEX revenue for each year'. The approved OPEX revenue for 2015-2016 was €10.140 million. Four percent of this OPEX amount translates to a KPI pot of €405,623. The increase in the incentive from 3% in 2012-2013 to 4% in 2013-2014 was justified by the fact that the SEM Committee increased the targets of several KPIs and added a seventh metric. This incentive remained at 4% for both the previous year 2014-2015 and the year 2015-2016.

Table 10 below illustrates:

- The earned reward per Quarter
- The maximum available reward per Quarter

¹⁰ New metric first added for 2013-2014 year as per SEMO Revenue Requirement Decision Paper (SEM-13-054).

- The percentage KPI reward achieved per Quarter

| Incentive earned per Quarter | | | | | |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|
| Performance Indicator | Oct-Dec | Jan-Mar | Apr-June | Jul-Sept | |
| | Q1 | Q2 | Q3 | Q4 | TOTAL |
| Ex-Ante 1 Pricing | €1,581 | €0 | €15,211 | €15,211 | €32,003 |
| Ex-Post Initial Pricing | €10,141 | €10,141 | €10,141 | €10,141 | €40,562 |
| Invoicing | €20,281 | €17,661 | €20,281 | €20,281 | €78,504 |
| Credit Cover Increase Notices | €10,141 | €10,141 | €10,141 | €10,141 | €40,562 |
| SEMO Resettlement | €20,281 | €20,281 | €20,281 | €20,281 | €81,125 |
| Customer Service | €15,211 | €15,211 | €15,211 | €14,427 | €60,060 |
| System Availability (7am to 5pm Mon - Sun) | €10,141 | €9,718 | €10,141 | €10,141 | €40,140 |
| KPI reward per Quarter | €87,776 | €83,152 | €101,406 | €100,622 | €372,956 |
| Maximum Available Reward in Quarter | €101,406 | €101,406 | €101,406 | €101,406 | €405,623 |
| Percentage of Total Achieved in Quarter | 86.56% | 82.00% | 100.00% | 99.23% | 91.95% |

Table 10 – Summary of the KPI monetary reward 2015-2016

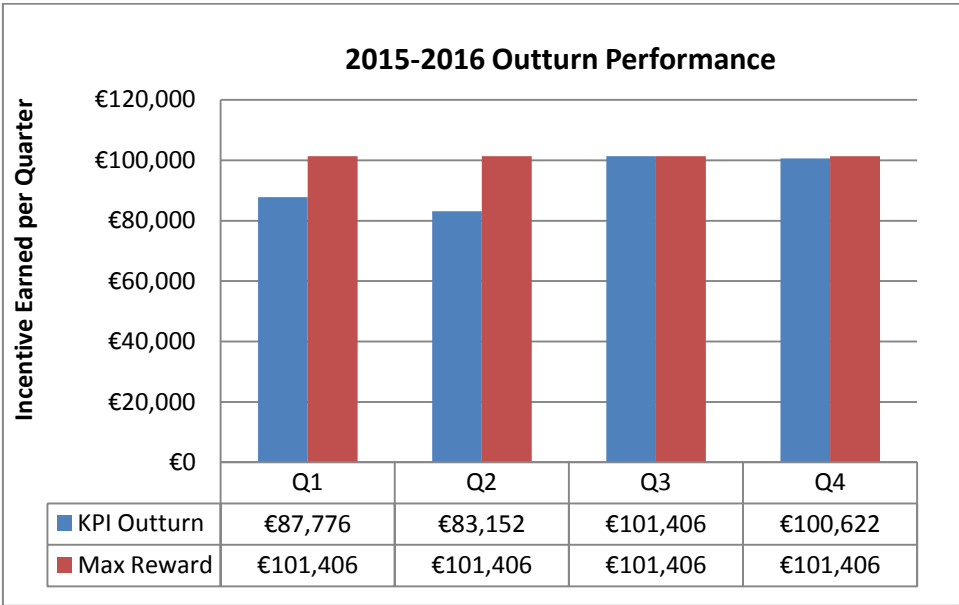
Based on a comprehensive set of KPI data SEMO have calculated the KPI reward in Table 10 above to be **€372,956**. This represents an overall percentage reward of 91.95% of the maximum amount available. The percentage is lower than the previous year 2014-2015 recovery (93.56%).

This KPI reward is to be recovered through the adjustment of the K Factor (see paragraph 12.3.4 of the SEMO Revenue and Tariffs Decision Paper).

Conclusion on SEMO’s Overall performance

The KPIs set by the Regulatory Authorities remained challenging to attain during 2015-2016.

It is in the first and second Quarters during 2015-2016, that the lowest results were achieved. A system issue (failure in power supplies) and other delays in the Within-Day Pricing publication negatively affected the Ex-Ante Pricing target. In addition, a separate system issue negatively affected the Invoicing target. In the third Quarter, SEMO had a very good performance; it was the only quarter in which all targets were achieved. A good performance was achieved in the fourth Quarter; only the Customer Service target was not met due to five general queries (of 454) taking more than 20 working days to resolve. The delay in resolving these calls was due to the complexity of the query which required input and support from multiple areas/resources.



Graph 8 – Overall KPI Outturn Performance per Quarter