SEMO Price Control

Draft Determination consultation paper

SEM-17-075

28 September 2017

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1 Introduction and Background

1.1 Background

The Integrated Single Electricity Market (I-SEM) is a new wholesale electricity market arrangement for Ireland and Northern Ireland. The new market arrangements are designed to integrate the all-island electricity market with European electricity markets, enabling the free flow of energy across borders.

The current SEMO Price Control covers the period from the 1st of October 2016 to March 2019, during which time the current SEM market will be wound down. This covers an active period of SEM activities, the resettlement of the market and decommissioning.

On May 23rd 2018, the I-SEM SEMO will become active. SEMO in I-SEM will have a new range of roles and responsibilities which differ from SEM SEMO, and as such will require a revenue allowance that allows it to fulfil its functions. This paper sets out the Regulatory Authorities (RAs) views on the relevant level of funding required for I-SEM SEMO. This price control will run from May 2018 to October 2021, a period of nearly 3 and a half years.

This price control will reflect the changes in SEMO's roles and responsibilities in I-SEM versus SEM. For example SEM Committee Decision Paper 'I-SEM Roles and Responsibilities Decision Paper SEM-15-077 identified two roles to be carried out by SEMO in I-SEM in addition to its role as Balancing Market Operator namely, Imbalance Settlement and Capacity Settlement. SEMO will therefore continue to carry out the administration and maintenance of the Single Electricity Market Trading and Settlement Code as required by licence and as amended and developed for the I-SEM. A separate process is being undertaken for its responsibilities as the designated NEMO for I-SEM in the SEMOpx price control (see draft determination SEM-17-053).

The Imbalance Settlement process settles discrepancies between the amount of electricity that a company has contracted to generate or provide through demand-side and the amount of electricity which the company actually generated or provided by demand side response. If a difference between forecast and actual exists, a party is regarded as being 'in imbalance' and these differences in quantity are settled at the imbalance price.

In terms of Capacity Settlement, SEMO will be responsible for the collection of capacity charges and the distribution of payments to capacity providers (including Reliability Option difference payments). This will include the collection of all data necessary for that determination from the Capacity Delivery Body and metered settlement and pricing data, and the management of disputes relating to that data.

1.2 Summary of price control

Currently, SEMO is responsible for administering the SEM and exists as a cross jurisdictional joint venture between EirGrid and SONI, the Transmission System Operators (TSOs) in ROI and NI respectively. Although the responsibilities of SEMO will change in the forthcoming I-SEM, there is no change to the underlying structure of SEMO.

Consistent with previous SEMO price controls this price control is provided on a combined basis between EirGrid and SONI on a 75% to 25% basis respectively, with revenues being ascribed to EirGrid in its capacity as market operator for Ireland and to SONI in its capacity as market operator for Northern Ireland.

This price control will run from May 2018 to October 2021, a period of nearly 3 and a half years. A summary of each area considered in this consultation paper is presented below.

I-SEM SEMO Implementation Costs

As per SEM-17-044 it was decided that implementation costs for SEMO would be recovered via the TSOs RABs at an agreed proportion of 75% to EirGrid and 25% to SONI.

Each amount will attract the prevailing WACC of the TSOs and will be recovered through TUoS and SSS tariffs respectively. Recovery through TUoS tariffs in Ireland will be through the supplier TUoS charge.

As such, these implementation costs do not form part of this draft determination but an overview of the components of these costs is presented here for information.

As part of the establishment of SEMO a number of costs have been incurred;

1. The costs of establishing the systems for SEMO for the I-SEM (implementation costs) and the pre-Go Live capital costs incurred in the pre-Go Live period.
2. The ongoing day to day costs of running the SEMO and any additional CAPEX that will be required for the duration of the price control, which is the subject of this draft determination.
3. Additional contingent capital requirements and costs arising from the new market also arise and these are being separately assessed by the RAs

EirGrid and SONI have submitted resource costs, capital costs, project costs and market coupling costs associated with overall I-SEM implementation. This includes costs associated with establishing the SEMO for I-SEM as well as the costs associated with the TSOs and development of the market as a whole.

An Information Paper will be published shortly outlining the full I-SEM establishment costs, including the implementation costs for SEMO.

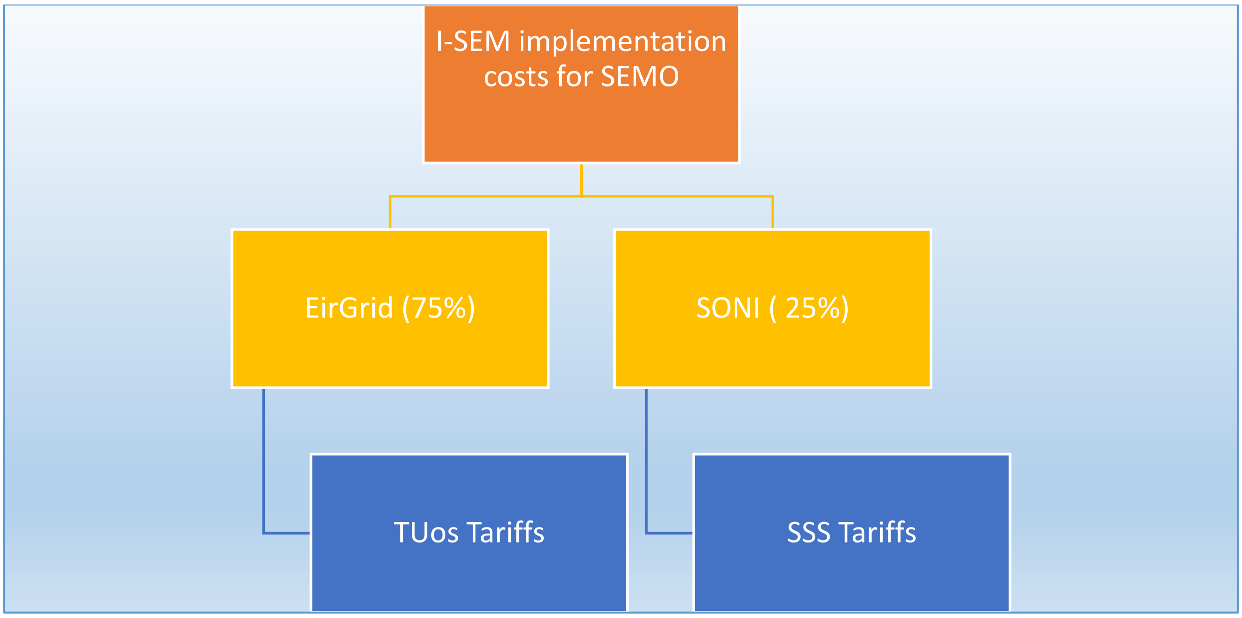


Figure 1.1

SEMO Revenues

As the implementation costs of SEMO are being recovered via the TSOs RABs, the focus of this draft determination is on the ongoing Operating Costs (Opex) of SEMO and any Capital Expenditure (Capex) that SEMO has included in its submission to the RAs.

Proposed Operating expenditure includes Payroll, IT & Communications, Facilities and Insurance, Professional fees, General and Administrative costs and costs associated with Corporate Services.

Capital Expenditure proposed by SEMO is at this time low compared to SEM SEMO, in part due to set-up costs being included in implementation costs as noted above. This is also partly due to the fact that there is some uncertainty at this point in time over what IT requirements may be required post go live of I-SEM to facilitate the market. As a result of this, the RAs propose mechanisms by which SEMO's IT expenditure is reviewed under the headings of predictable and unpredictable capex (see below).

In addition, to incentivise SEMO in its operations the RAs propose a range of efficiency mechanisms to be put in place to ensure that SEMO is delivering best value for customers.

SEMO's revenues will be recovered via a range of SEMO charges which include Market Operator charges. In addition, as SEMO will also provide the Agent of Last Resort (AOLR) function, the AOLR function fees will be charged separately from the Market Operator charges.

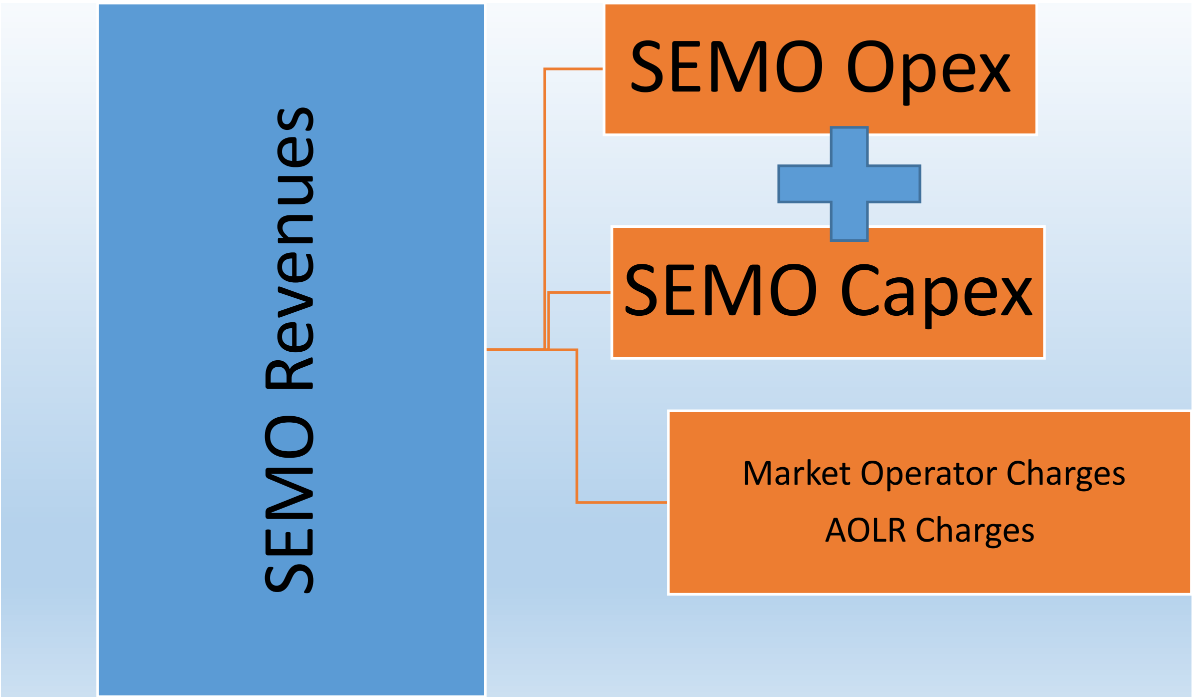


Figure 1.2

Operating Expenditure (OPEX)

The RAs are minded to continue to incentivise OPEX under Revenue Cap (RPI-X) regulation. Revenue Cap regulation incentivises the regulated company to reduce costs by increased efficiency of processes and lower input prices. Any efficiency and price savings are retained by the regulated company while overspends must be absorbed by the regulated company.

In the 2016-2019 price control the RAs applied RPI-0.3[1] to SEMO's price control allowance. No change is proposed to the factor for the forthcoming Price Control.

Capital Expenditure (CAPEX)

Some Capex has been included in this submission under unpredictable business Capex. No predictable Capex has been submitted, but is expected during the course of the Price Control.

Given the uncertainty the RAs are proposing that an unpredictable allowance is permitted, but on a pass through basis, whereby actuals are corrected each year as part of annual tariff adjustments.

In addition, there may be other Capex projects related to enduring I-SEM requirements. These projects will be assessed on an extra-over basis as they arise and adjusted and where necessary this will be adjusted on an annual basis.

[1] The deducted 0.3% is seen as a dead band and this incentivises SEMO to make efficiencies over and above inflation.

For the forthcoming Price Control, the RAs are minded to continue with rate of return regulation. This method of regulation provides a return to SEMO based on their Regulatory Asset Base (RAB) where Capex expenditure is placed on the RAB.

The RAB value is indexed each year, to account for inflation, and a rate of return (representing compensation for risk and the opportunity cost of the capital) is provided. This rate of return is referred to as the Weighted Average Cost of Capital (WACC) and is directly derived from a combination of the WACC applicable to EirGrid and SONI.

Application of Management Fee (margin)

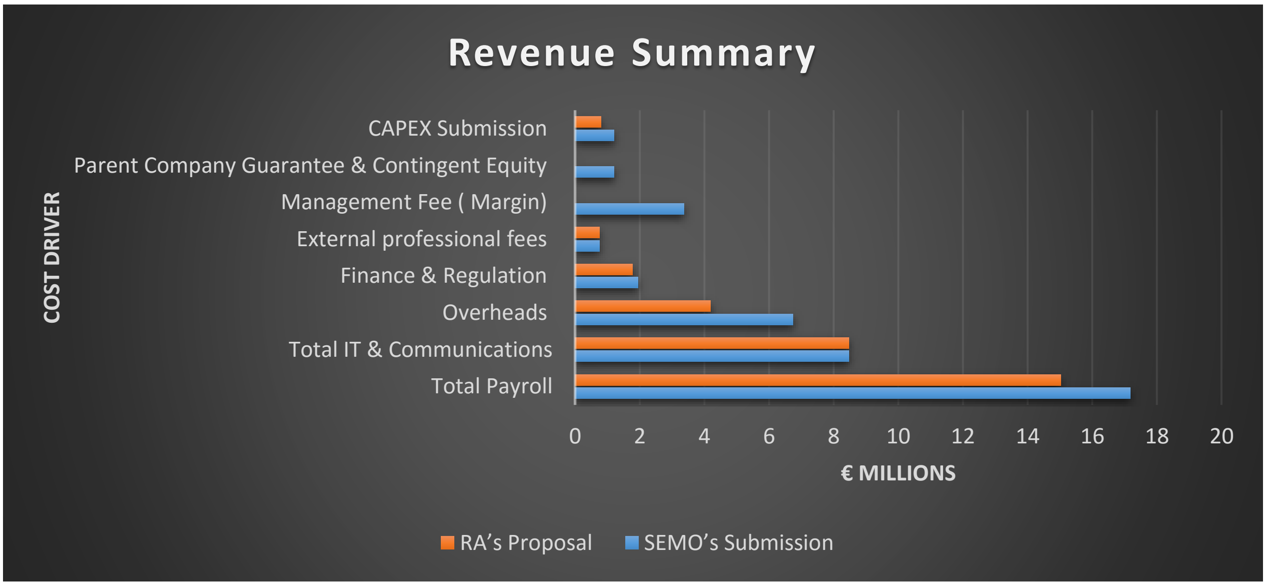
As part of the consultation on the Revenue Recovery Principles to apply to SEMO and SEMOpx (SEM-17-044), the RAs considered the merits of the RAB WACC approach vs. a margin approach which has been proposed by SEMO.

In that consultation paper, the RAs undertook analysis on the applicability of either approach but concluded that the RAB WACC approach continued to be applicable to SEMO. In the RAs Draft Determination on SEMOpx's Revenues, the RAs were of the view that as the implementation costs of SEMOpx would be recovered via the TSOs RAB, the application of a margin as well on operating expenditure was not appropriate.

The RAs are of the view that the WACC RAB approach to SEMO is robust and quantifiable. This is because the respective WACCs of the parent companies can be verified using market data and therefore is transparent for end customers. This aspect is considered further in this paper.

Summary of SEMOs submission and RAs proposals

SEMO's submission and the RAs draft proposals are set out below in graph and table form.



Cost driver	SEMO's Submission € million	RA's Proposal €million
Total Payroll	17.178	15.023
Total IT & Communications	8.469	8.469
Overheads **-Facilities** **-Recruitment, HR & Administration** **-Corporate Costs**	6.749	4.195
Finance & Regulation	1.941	1.784
External professional fees	0.759	0.759
Total Opex	**35.01**	30.23
Management Fee (Margin)	**3.371**	0
Parent Company Guarantee & Contingent Equity	1.200	Pending
CAPEX Submission	1.200	0.800
Total (Opex & Capex, excluding depreciation)	**39.581**	31.03

Table 1.1

As can be seen above the RAs have broadly accepted SEMOs proposals regarding IT & Telecommunications and external professional fees. In the areas of payroll, overheads and finance and regulation the RAs agree with SEMOs work areas but do not concur with the allowances requested, in particular in the latter years of the Price Control.

In their submission, SEMO proposed a margin approach to the business, similar to that which had been proposed for SEMOpx. The RAs do not accept this proposal. We consider that SEMO has not demonstrated that, in principle, application of the RAB WACC approach is not appropriate and have not justified the level of margin proposed. SEMO capitalised implementation costs are therefore being rewarded on the TSO's RAB and this approach will also be applied to subsequent capitalised expenditure on a SEMO RAB.

Finally, in the area of Parental Company Guarantee (PCG) and contingent equity, this aspect is being considered alongside a separate analysis addressing the additional capital requirements of the TSOs in their role as market operators (SEMO).

At a total level the RAs propose an allowance of €31.03m over the duration of the Price Control, including unpredictable Capex. This is a reduction of 21.6% on SEMOs proposals. The primary driver for this is the management fee (8%) and overheads (reduced by 38%). It should be noted that certain aspects (PCG and Contingent Equity) is subject to further consideration as noted.

Key Performance Indicators (KPIs)

The RAs are of the view that it will be important to continue to provide SEMO with appropriate incentives on performance levels. However given the changes between SEM and I-SEM, a 'bedding in' period for these KPIs to apply may be appropriate.

Key Performance Indicators (KPIs) are currently applied to SEMO in the current SEM market to improve performance, promote customer service and increase efficiencies, with the incentives pot set at a maximum of 4% of total Opex revenues for each year. As the roles and responsibilities of SEMO will change in I-SEM a review of the incentives to be placed on SEMO has been carried out as part of this consultation paper.

These Key Performance indicators are focused on improving performance, customer service and information and data provision to the RAs. It should be noted that for the purposes of this Consultation Paper the RAs have not provided a minded to view on neither the range of KPIs, performance parameters, the level of incentivisation nor when KPIs should begin to apply. As a number of KPIs are focused on market participants, respondents are actively encouraged to provide feedback on this aspect.

Duration

The duration of this price control will be 3 years and 4 months, from May 2018 to October 2021. The 2016-2019 price control has been extended on a pro-rata basis to take account of the revised Go-Live date for I-SEM. The total revenue allowances will be recovered concurrently meaning that as one operator becomes active (I-SEM SEMO) the other will decommission (SEM SEMO). This will require a combination of active revenues and decommissioning revenues. The resettlement and decommissioning revenues for SEMO have previously been determined as part of the annual tariff setting process for 2017/18.

Indexation

Market Operator tariffs will be adjusted for out-turn inflation each year and any further adjustment will be recognised in the k-factor adjustment mechanism. All costs as part of this submission are based on March 2017 prices.

The indexation rate applicable to the current price control is a blended rate of the Consumer Price Index[2], in ROI (75%) and the Retail Price Index[3], in NI (25%). The RAs are minded to continue with the existing blended indexation approach for the duration of this Price Control.

Provision of Comments

Comments are invited from interested parties on the proposals within this Draft Determination. Responses should be sent to Gina Kelly (gkelly@cer.ie) and Joe Craig (Joe.Craig@uregni.gov.uk)

[2] Based on publication by the Central Statistics Office, Ireland
[3] Based on publication by the Office for National Statistics, UK

2 Introduction

2.1 I-SEM compared to SEM

EU legislation is driving the coming together of energy markets across Europe with the aim of creating a fully liberalised internal electricity market. The new wholesale market will be known as the Integrated Single Electricity Market (I-SEM).

This price control will cover the new I-SEM market. With the introduction of differing functions in the I-SEM, the functions of SEMO will change. For example, under I-SEM SEMO will be responsible for a market for balancing, Imbalance Settlement Operator functions and Settlement of Capacity Payments and Charges. As there will be a change in the responsibilities the resourcing requirements as set out in this Price Control for the functions carried out by SEMO will inevitably also change. . The new market will also involve changes for the TSOs and has given rise to the new roles performed by SEMOpx, through designation of SEMO as NEMO for Ireland and Northern Ireland. Below sets out some of the features of the previous market versus the new market.

Features of Current Market	Features of New Market
Single Market for energy trading	Multiple markets for energy trading
Gross pool auction	Price formation varies by market timeframe
Single sided auctions	Double sided auctions
Mandatory participation	Voluntary/Mandatory participation
Trading Day 06:00-06:00	Trading day 23:00-23:00
Ex-post pricing	Varies by market timeframe
Single system marginal price	Multiple prices in different markets
Constraints settle the difference between scheduled and dispatched	Constraint payments continue

Table 2.1

2.2 Role of SEMO

The development of the SEM led to the requirement for a Single Electricity Market Operator (SEMO), to administer the market. SEMO exists as a contractual joint venture between the system operator in the Republic of Ireland (EirGrid) and the system operator for Northern Ireland (SONI) and is not a separate legal entity in its own right.

SEMO's role in the market is explicitly defined in the SEM Trading and Settlement Code (TSC), which sets out the rules, procedures and terms and conditions, which all parties, including SEMO, must adhere to. Additionally, both EirGrid and SONI must comply with the conditions imposed on this activity by their respective Market Operator (MO) Licences.

The roles and responsibilities of I-SEM SEMO are set out in decision papers, the Trading & Settlement Code and in the Market Operator (MO) licences granted to EirGrid and SONI.

Imbalance and Capacity Settlement

I-SEM Roles and Responsibilities Decision Paper SEM-15-077 sets out some responsibilities of SEMO in I-SEM. This decision paper stated that the role of Imbalance settlement Operator would be carried out by the TSOs, and that the role of Imbalance Settlement would be carried out by SEMO. In addition, this paper set out that the role of capacity market settlement would be carried out by

SEMO given that there are synergies between the two functions in terms of payments to generators and levying of charges on suppliers for capacity and energy imbalances.

In addition, under the licences granted to the Market Operator (MO) SEMO is responsible for entering into and at all times administering the Single Electricity Market Trading and Settlement Code. The details of the areas which SEMO is responsible for under the Trading and Settlement Code are outlined below.

Chapter B	Governance of the Trading & Settlement Code Management of modifications to the TSC Management of Disputes Queries Registration Deregistration Suspension & termination
Chapter C, D & Appendix G of TSC and Capacity Market Code	Publication of data REMIT obligations
Chapter E	Calculation of Imbalance Prices
Chapter F	Balancing Market & Capacity Market Settlement Imbalance Settlement
Chapter G	Credit & collateral calculation Administration of settlement Reallocation

In addition to the above roles and responsibilities as outlined in the TSC and Capacity there are other functions which SEMO will undertake. These include;

1. Fuel Mix disclosure which is a requirement in Ireland and Northern Ireland.
2. AOLR function

Fuel Mix Disclosure

The CER and SEM publish respective annual reports on the fuel mix suppliers in the Single Electricity Market. It is the role of the Single Electricity Market Operator (the SEMO) to administer and calculate the fuel mix figures from the information provided by the electricity suppliers. The calculation covers the jurisdictions of Ireland and Northern Ireland and is performed by SEMO on behalf of the Regulatory Authorities.

The fuel mix of suppliers and associated environmental impact information (emissions) is calculated for the period from January to December by the SEMO in accordance with the SEM Committee's decisions. This calculation is completed at the end of the second quarter of each year.

Suppliers are obligated to reproduce the most recent applicable FMD data on their bills and promotional materials. Additionally, CO2 and radioactive waste emissions data is calculated and must be published along with the Fuel Mix information on bills and promotional materials.

AOLR

With the introduction of I-SEM, Participants will have the opportunity to trade in multiple timeframes. Participants will have the option to buy and sell energy in the day-ahead market and the intraday market, with dispatchable generators including demand side units having bids or offers accepted in the balancing market based on commercial offers for deviations from their physical notifications as provided to the System Operators (SOs).

The SEM Committee decision on the High Level Design provided for an entity, the Agent of Last Resort (AOLR), to act on behalf of generator units where it was considered that interaction with the ex-ante markets through preparation and submission of orders would present a barrier to their participation in these markets. The role of the AOLR is to act as a bidding agent in the ex-ante markets on behalf of eligible generators. SEMO is obligated under its respective licences to undertake this activity.

Other roles

SEMO will also play a role in market modelling and monitoring of the market and the RAs will discuss this role further with SEMO.

The range of responsibilities and functions outlined above will also require a range of support functions across IT, regulatory, Legal and customer care functions. The resourcing requirements considered necessary to carry out these functions are outlined in this Draft Determination.

SEMO will not have responsibility for the Day Ahead and Intra-Day markets, which shall be the responsibility of SEMOpx. Proposed revenue requirements have been consulted upon by the RAs and responses received. These will be considered before publication of a final decision on the SEMOpx price control.

SEMO Revenue Principles

As part of the process of consultation for the SEMOpx Price Control and the SEMO Price Control, the RAs undertook an evaluation of the revenue principles that would apply to SEMO in I-SEM. Details of these are outlined in SEM-17-44.

For Capital Expenditure that Decision Paper outlined that the capitalised costs associated with SEMO would be recovered via the TSOs RABS, including the applicable Weighted Average Cost of Capital (WACC). Any Capital Expenditure expected to arise during the Price Control would continue to apply rate of return regulation, whereby it would be placed on SEMO's RAB and attract a blended WACC (EirGrid and SONI).

For Operating Expenditure the RAs concluded that SEMO's Operating Expenditure would be subject to Revenue Cap regulation (RPI-X). This is consistent with previous price controls, where an efficiency factor of 0.3 applied. Further details of the Efficiency Factor to apply for SEMO in this Price Control are included in Section 3.

In line with previous price controls, SEMO's price control allowance will be attributable to SONI and EirGrid, as per the agreed specified proportions. The agreed current apportionment between EirGrid and SONI is 75% and 25% respectively and this is based on comparative levels of energy consumption in the Republic of Ireland and Northern Ireland. This current apportionment is also detailed in the Market Operator Agreement between EirGrid and SONI.

3 Operational Expenditure (OPEX)

Operational expenditure cost assumptions

Cost projections analysed are based on a number of assumptions as submitted by SEMO. The RAs working assumptions are outlined below.

- **Business-as-Usual / Uncertain Costs:** Given the stage of market development, it is possible that there may be additional Capex submissions during the course of the Price Control. Where such Capex proposals arise, the RAs are of the view that a materiality threshold of €500,000 is reasonable for the TSOs to raise such an "extra over" item.

- **Exchange rates passed through:** This is consistent with the design decisions for the I-SEM; noting this only applies to exchange rate effects directly related to managing the dual currency element of offers and bids to I-SEM markets; it would not apply to any other exchange rate exposure that SEMO may choose to enter into.

- **Only I-SEM operational costs:** This is in line with the approach to the SEM Price Control and I-SEM implementation.

- **Incentives**. The RAs are of the view that incentives should be realised over 3 rather than 5 years. This will limit the exposure of SEMO and the consumer.

- **Pre-Go-Live costs:** All Pre-Go-Live capital costs will be considered as part of the overall I-SEM pre implementation costs, approximately 20% of which cannot be capitalised, and hence will need to be recovered through the SEMO Price Control. This is because this is the reasonable level of costs that may be treated as "operational" under applicable accounting standards and which are required in advance of the I-SEM SEMO becoming fully operational at I-SEM Go-Live.

3.1 Summary of Opex proposals

As part of its submissions SEMO submitted Operating Costs across the various cost drivers of the business. SEMO have requested a total of €38.3 million of Opex for the 2018- 2021 Price Control Period.

Proposed OPEX includes Payroll, IT & Communications, Facilities and Insurance, Professional fees, General and Administrative costs and costs associated with Corporate Services. These are set out below.

The costs submitted for this price control are based on a 'Business as Usual 'approach to operating and maintaining the market and SEMO have stated in their submission that it does not cover operational expenditure associated with major/exceptional market changes, regulatory decisions or changes to legislation.

It has also been stated in SEMO's submission that costs presented are based on best estimates and the uncertainty around these costs is greater compared to previous SEMO price controls due to the commencement of the new I-SEM market.

SEMO submission	Pre Go-Live	May '18 to Sep '18	Oct '18 to Sep '19	Oct '19 to Sep '20	Oct '20 to Sep '21	Total
2017 monies	€	€	€	€	€	**€**
Payroll	378,000	1,604,000	4,880,000	5,105,000	5,211,000	**17,178,000**
IT & Telecommunications	111,000	918,000	2,753,000	2,384,000	2,303,000	**8,469,000**
Facilities & property management	64,000	273,000	818,000	838,000	841,000	**2,834,000**
Recruitment, HR and Admin costs	21,000	109,000	326,000	344,000	337,000	**1,137,000**
Corporate Costs	54,000	268,000	805,000	824,000	827,000	**2,778,000**
Finance and Regulation costs[4]	0	606,000	1,820,000	1,770,000	1,745,000	**5,941,000**
Total	**628,000**	**3,778,000**	**11,402,000**	**11,265,000**	**11,264,000**	**38,337,000**

Table 3.1

Pre Go Live Operational costs have been included in SEMO's submission to the RAs. SEMO has stated that the key drivers of Pre Go Live costs are;

1. The establishment of an operational team a number of months in advance of the market go-live date of May 2018; and
2. IT costs (licences, support etc) required during Market Trial.

The Pre Go Live costs in this submission are only those which are treated as operational under IFRS standards. All Pre Go Live capital costs are treated as part of the overall I-SEM Implementation costs as detailed in section 1.2.

3.2 Comparison between SEM and I-SEM SEMO

The changes to the market design and move from the SEM to I-SEM will significantly alter the Market Operator's role, IT systems and resource requirements. Under I-SEM, SEMO will be responsible for imbalance settlement (to settle discrepancies between the amounts of energy that a company has contacted to provide versus the amount that was actually generated) and capacity settlement. Other roles include the Agent of Last Resort (AOLR) registration etc. These are detailed in Section 2.2.

Table 3.2 below shows the change in terms of total Opex requirements from 2009 to 2016 compared to SEMO's Opex proposals for this price control period. It should be noted that SEMO was winding down its operations in the current SEM market from 2015 onwards. Therefore, in terms of analysis 2014 is a more robustly comparable year as it represents a "Business as Usual" year.

[4] This includes PCG and Contingent Equity submission the total of which over the Price Control is €4m (€1.2m per annum + 400,0000 for the 4 months from May to September '18)

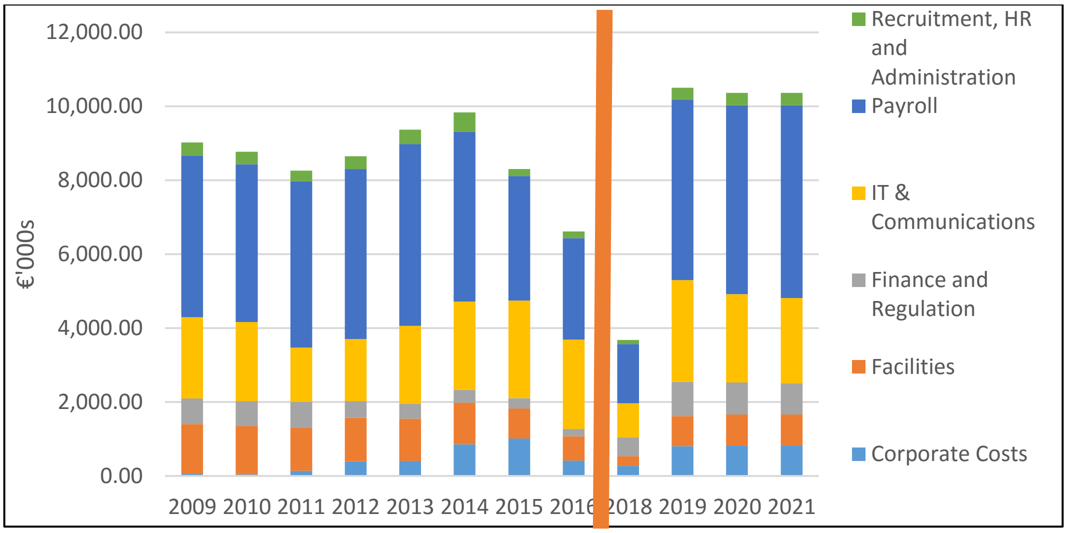


Figure 3.1

Table 3.3 presents each of the key costs SEMO has incurred in the past and proposed for this price control as a % of total Opex.

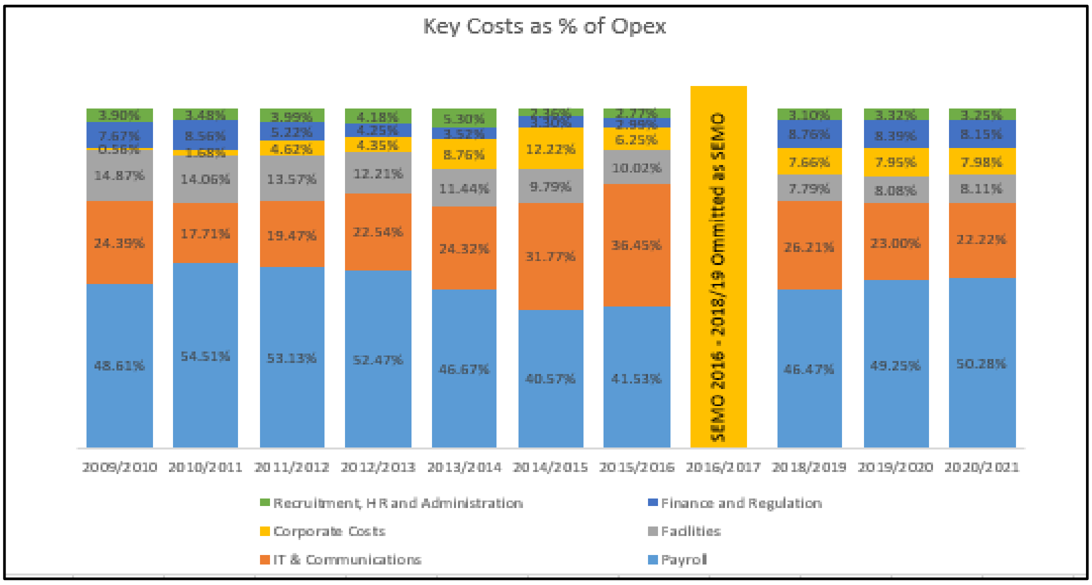


Figure 3.2

3.3 Payroll

Labour costs represent the largest category of Opex for this Price Control, accounting for between 42% - 47% of costs for each period of the submission. This section discusses SEMO's proposed Labour costs and the RAs assessment of these costs.

SEM Comparison

Figure 3.3 below presents a comparison between historic payroll costs and costs proposed as part of this price control.

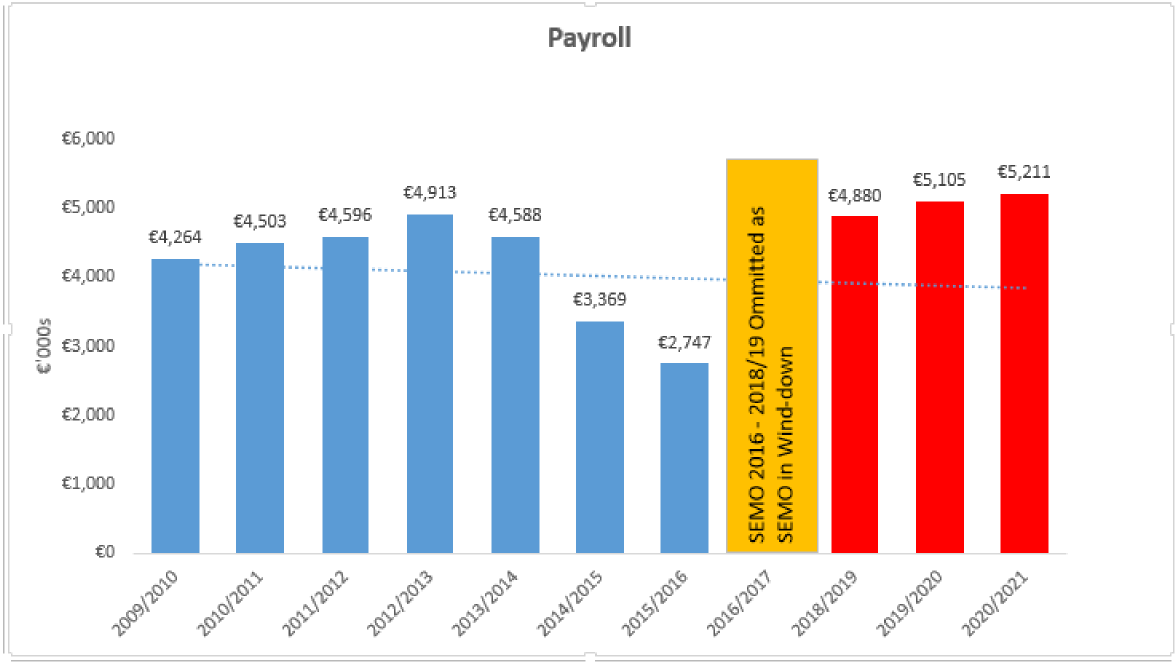


Figure 3.3

Figure 3.4 presents a comparison of average payroll costs for 2010-2014 versus 2018-2021.

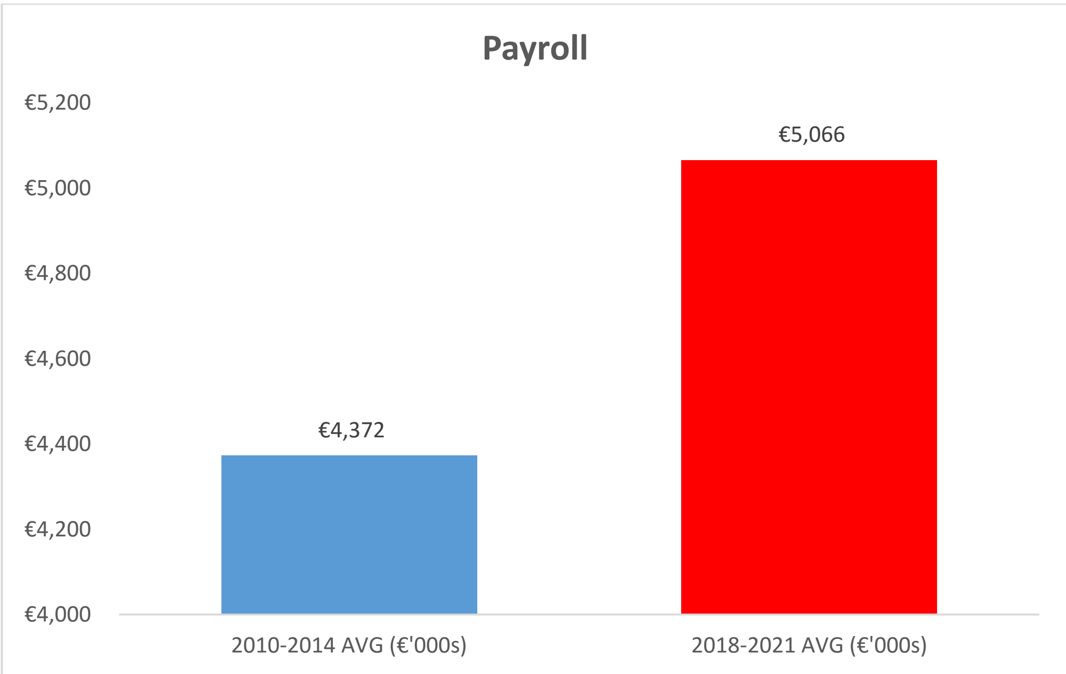


Figure 3.4

SEMO Submission

There are two parts of total payroll costs: those directly incurred in the operation of SEMO; and those indirectly incurred as overheads. Overheads are addressed in section 4.4.

I-SEM Full Time Equivalents (FTE)[5] requirements by function as submitted by SEMO are outlined below, as an average across the Price Controls.

In certain instances, there is a step up in resourcing requested between the beginning of the Price Control (May '18) and the latter years. An example of this is IT service management, where external resources are expected to be replaced by internal resources.

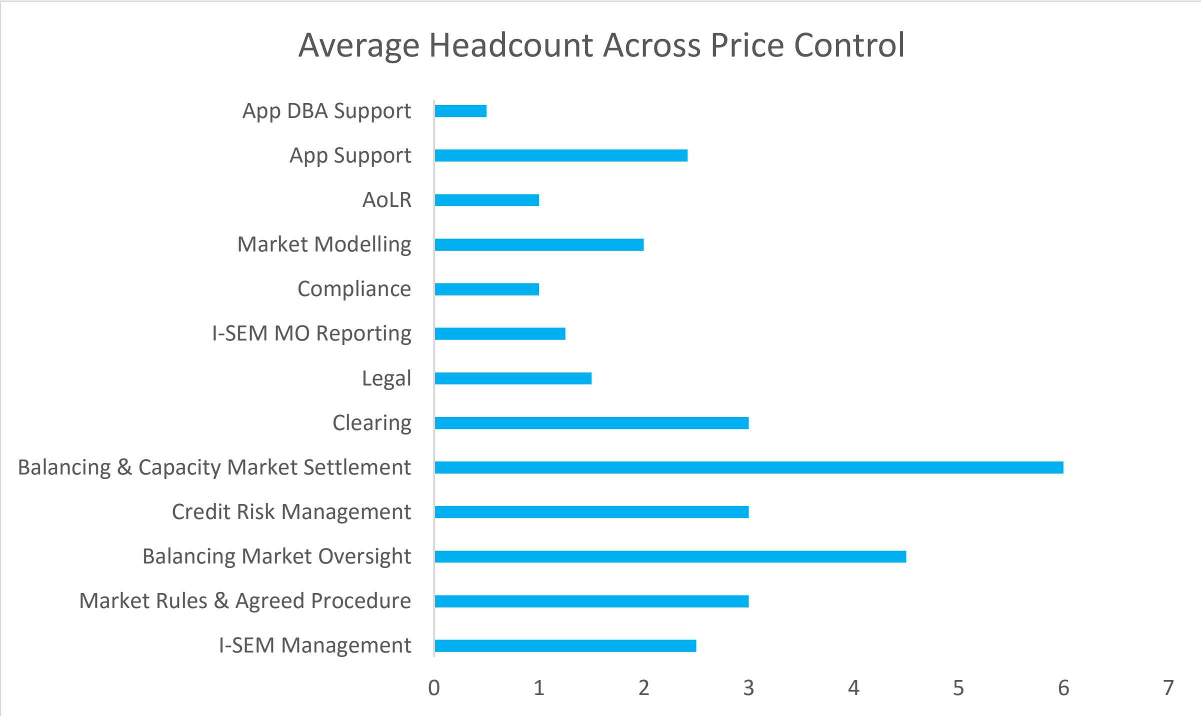


Table 3.1

Included within payroll costs are all staff costs including salaries, performance related payments, employer's PRSI/national insurance, employer's pension contribution, overtime, contract staff and other staff costs. The average cost per FTE over the price control period is €86,000, as submitted by SEMO.

Staff Costs (SEMO submission)						
		Sep-18	**Sep-19**	**Sep-20**	**Sep-21**	**Total**
€'000s	**Pre Go Live**	**4M**	**12M**	**12M**	**12M**	
Salary	278,000	1,179,000	3,588,000	3,754,000	3,831,000	12,630,000
Social Security	32,000	135,000	409,000	427,000	437,000	1,440,000
Bonus	22,000	94,000	287,000	300,000	307,000	1,010,000
Pension	46,000	196,000	596,000	623,000	636,000	2,097,000
Total	**378,000**	**1,604,000**	**4,880,000**	**5,105,000**	**5,211,000**	**17,178,000**

Table 3.2

[5] FTE is not necessarily representative of one employee, as a number of employees time may be within the FTE.

RA Analysis

In terms of the number and structure of FTEs, the RAs are at present of the view that the proposed numbers of FTEs appear reasonable. They do not vary significantly from the last year of comparable SEM data (2013/14) despite the increase in complexity I-SEM has introduced (58 FTEs in 2013/14). This must be placed in the context of the additional staff resources provided through SEMOpx so that the additional resource needs from I-SEM are recognised and addressed through both price controls.

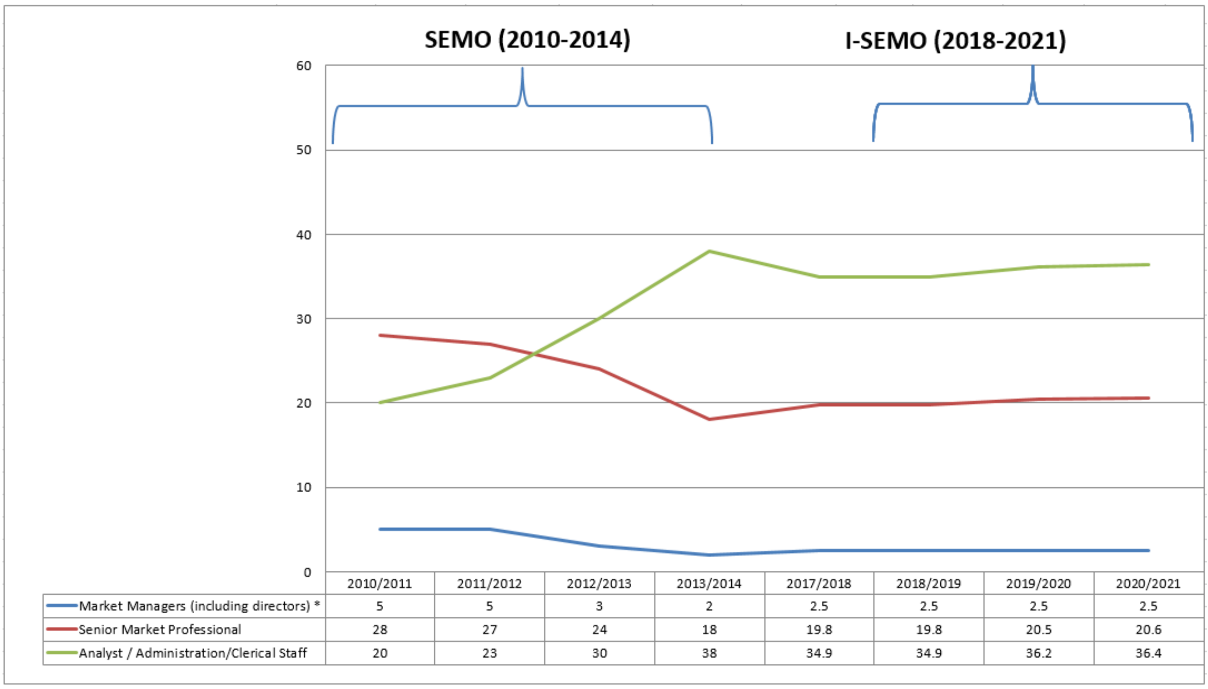
What can be seen below is that broadly speaking, the number of analyst/administration roles is expected to increase. This is reflected in the types of roles being proposed for SEMO across areas such as customer care, credit assessment, queries, dispute settlement and publication requirements for the TSC and CMC.

In its submission, SEMO has stated that the Market Operator under I-SEM should be treated as a 'greenfield' organisation and cannot be directly compared to the Market Operator under SEM. This has some merit given the changes that I-SEM has introduced, however, steady-state SEM operations (i.e. pre-2014/15) provide a relevant data point for internal benchmarking, taking account of the change in roles.

Whilst there was a notable increase in FTE numbers from 2010/11 to 2013/14, it was accompanied by a shift towards more junior roles. This is partly reflected in flat payroll costs and a slight reduction in average FTE costs from 2010/11 to 2013/14[6]. The high level structure of grades in terms of managers, senior market professionals and junior market professionals is also due to remain flat across the price control. In terms of the average headcount and structure of the headcount, the forecasts are reasonable from a top-down perspective.

It is important to note as well that in addition to SEMO, SEMOPx will also provide certain Day Ahead and Intra Day trading functions which are new to the all island energy market. As such, although the RAs are of the view that the number of FTEs in I-SEM SEMO are reasonable these should be seen in the context of an overall rise in FTEs when seen across both SEMO and SEMOpx.

[6] A spike in payroll costs did occur in 2012/13 as both average headcount and average FTE costs increased, this returned to 2010/11 and 2011/12 levels in 2013/14.



	2010/2011	2011/2012	2012/2013	2013/2014	2017/2018	2018/2019	2019/2020	2020/2021
Market Managers (including directors) *	5	5	3	2	2.5	2.5	2.5	2.5
Senior Market Professional	28	27	24	18	19.8	19.8	20.5	20.6
Analyst / Administration/Clerical Staff	20	23	30	38	34.9	34.9	36.2	36.4

Figure 3.5

The RAs have analysed SEMO's resource proposals based on;

1. A comparison of the activities, resources and costs incurred by SEMO in SEM, noting that a number of activities between SEM and I-SEM are not directly comparable.
2. Benchmarking analysis has also been carried out on a top down basis with other market operators in Europe, including Elexon, Xoserve and APCS[7].
3. The RAs have also considered each proposed FTE based on their function, and reviewed this internally with subject matter experts in the RAs.

Bottom up assessment

SEMO has demonstrated to a reasonable extent that it has undertaken a bottom-up assessment of the obligations flowing from SEM Committee (SEMC) decision papers and the Trading and Settlement Code (TSC). For most resource line items, a clear explanation of how decision papers and the TSC translate into functions and processes, as well as high-level activities, has been provided.

The RAs requested FTE proposals and costs to be provided on an activity basis. SEMO has argued that activity-based costing is not feasible given this is the first price-control under I-SEM and resources will be undertaking multiple activities in parallel. The RAs are of the view that whilst there may be difficulties for such an analysis for the beginning of I-SEM, a clearer activity based methodology will need to be considered in future price controls.

In the absence of activity-based costing we would expect some functional-level comparative analysis between the costs of similar functions (e.g. in SEM and I-SEM participant helpdesk FTEs). SEMO has provided analysis of FTE differences between SEM and I-SEM as a whole – the summary chart from the detailed supplementary analysis is shown below.

[7] Comparable market operators in the UK and Europe

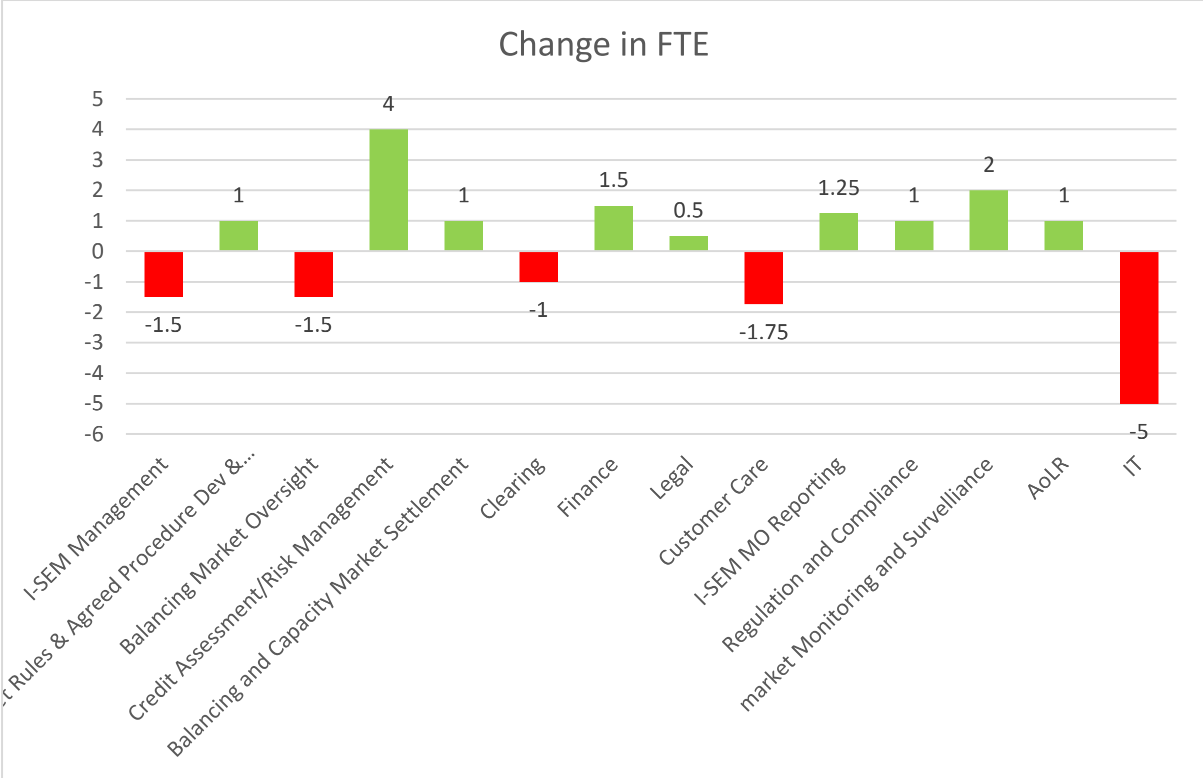


Figure 3.6

Benchmarking against comparators

Benchmarking FTE numbers and average FTE costs against international peers has provided an indication that SEMO's submission is reasonable on a comparative basis. The lack of comparability[8] and publicly available data limits the analysis to a small pool of market operators (MOs). Elexon[9] is the most comparable market operator of the 22 potential comparators reviewed and has comparable average FTE costs. However, the RAs note that there are differences between the operators. For example, SEMO has obligations in terms of Fuel Mix, AOLR etc. In addition, the budgets of Elexon are approved by its members whereas SEMOs allowances are subject to regulatory approval.

Cost per Full Time Equivalent

In terms of the FTE costs for the price control period, SEMO has proposed €85,000 per employee in 2018/19, €86,000 per employee in 2019/20 and €87,000 per employee in 2020/21.

This compares to a figure of €76,000 per employee in 2013/14[10].The costs proposed by SEMO are based on an average FTE (salary) costs that rise from previous price control periods by 11.6% in real-terms[11] and an annualised above inflation increase of 2.2%.

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[8] There are major differences in market design and market operator scope, roles and responsibilities
[9] Great Britain market operator
[10] The last comparable period for SEMO. Prior to that SEMO's average cost of FTEs increased from 2010/11 (€78k) to 2012/13 (€81k) and then fell back in 2013/14 (€76k).
[11] Throughout the document we have only used SEMO date from and pre-dating 2013/14. SEMO was winding down SEM operations in the financial years 2014/15 and 2015/16

The average FT cost increase within the price control may be attributed to Real Price Effects (RPE) which SEMO has applied. This approach can be useful for labour costs where the trend upwards or downwards in labour costs are determined separately from inflation. In SEM-17-018 the RAs state that as SEMO's Opex is relatively stable over the price control period, the scale of SEMO does not justify an RPE approach. It is the RAs view that consideration of RPE is more applicable to utilities were a major cost driver in the business may change independently from general headline inflation.

Whilst projected costs are comparable with other Ireland and Northern Ireland price controls for the TSOs as a whole, as well for Elexon, the RAs require justification for the increase from €76,000 per employee to €85,000 per employee.

RA Proposal

The RAs are of the view that the scope of functions of SEMO does not justify an RPE approach. Where underlying costs shift significantly, then it would be expected that SEMO would furnish the RAs with such analysis as part of the annual tariff setting process, should such shifts occur.

Currently, the RAs do not have evidence to justify the increase in costs per employee from €76,000 to €85,000, and in the absence of additional evidence are minded to allow FTE costs of €76,000, in line with 2013/14. This leads to a proposed reduction of €1.8 million over the price control period.

Payroll						
2017 monies		**Sep-18**	**Sep-19**	**Sep-20**	**Sep-21**	**Total**
€'000s	**Pre Go Live**	**4M**	**12M**	**12M**	**12M**	
Total	378,000	1,604,000	4,880,000	5,115,000	5,211,000	17,178,000
RA proposal	278,666	1,444,000	4,332,000	4,484,000	4,484,000	15,022,666
Number of FTES	22	57	57	59	59	

Table 3.3

3.4 Overhead Costs

Overhead costs presented here include costs for facilities and property management, recruitment, HR and administration and corporate costs.

A comparison of costs in each area historically as compared to SEMO's submission for this price control is presented under each category of costs.

Facilities and property management SEM Comparison

Facilities costs are allocated on a blended per head basis of €13,000 and cover all shared office space including cleaning, maintenance, car parking, security, mail service, copy bureau, switch board, catering, canteen services, rent and utilities. Facilities also includes the cost of maintaining the servers, routers and telecommunications equipment.

Figure 3.7 below illustrates the SEM vs. ISEM facilities allowances. This broadly reflects a downward trend in facilities costs to SEMO during the SEM period.

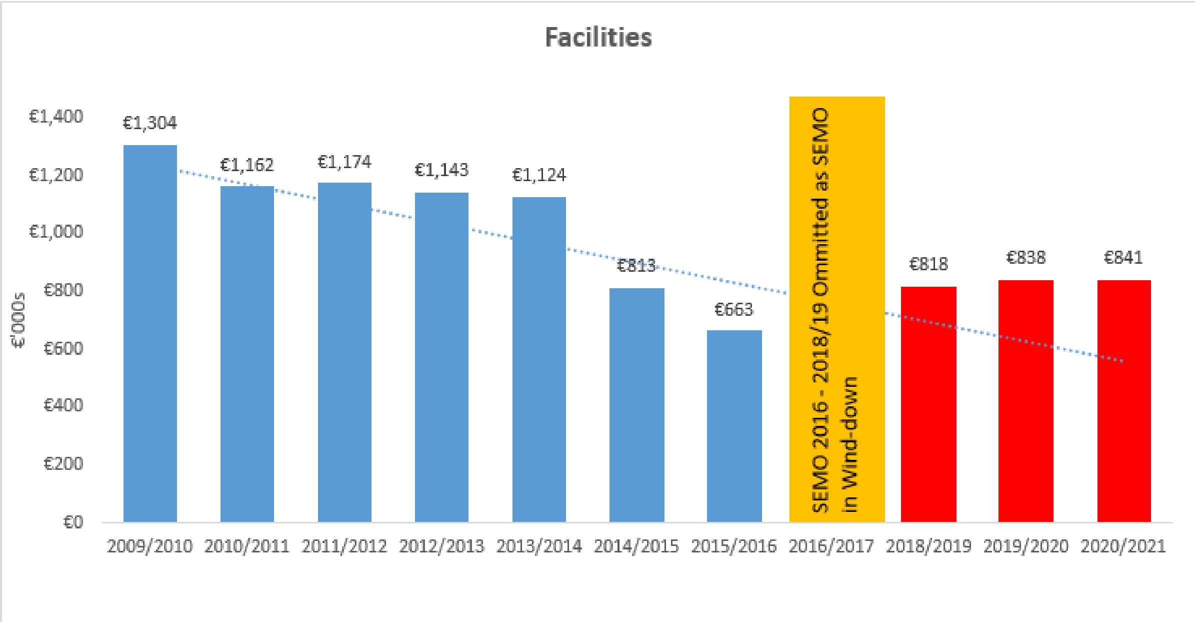


Figure 3.7

Figure 3.8 presents average facilities costs for 2010 – 2014 compared to 2018-2021. The average cost for the 2018-2021 period is lower than 2010-2014.

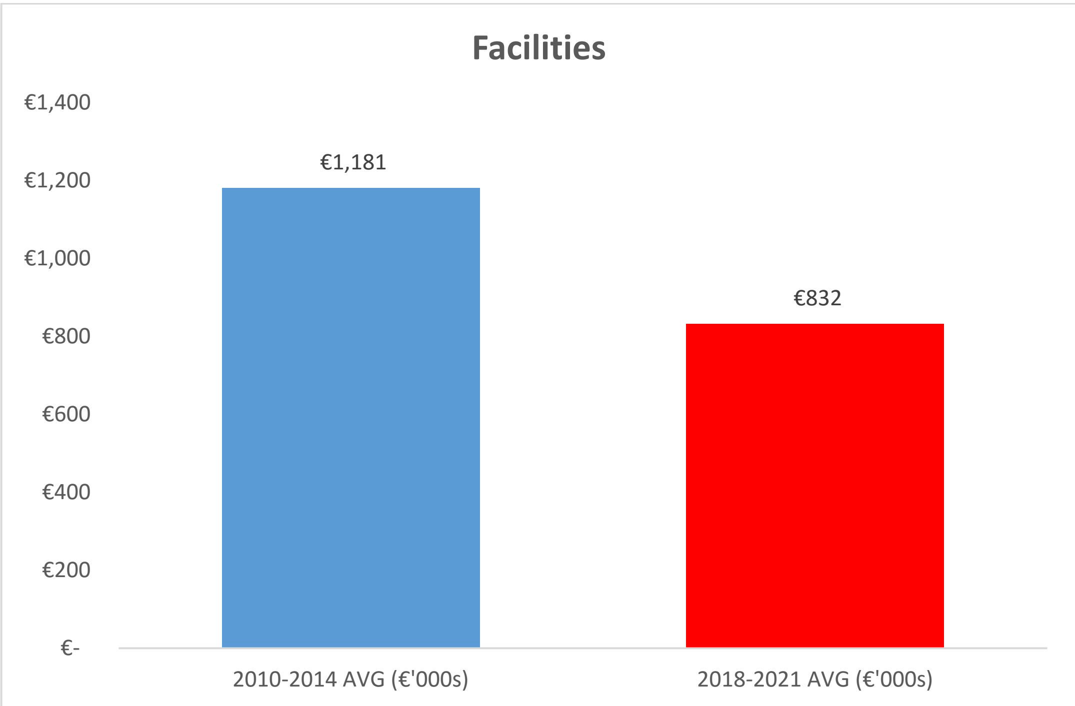


Figure 3.8

Recruitment, HR and Administration SEM Comparison

Below illustrates the Recruitment, HR and Administration costs of SEMO between SEM and I-SEM SEMO. This reflects a rising trend in this cost category for most of the SEM period until it's winding down and relatively flat profile projected in I-SEM.

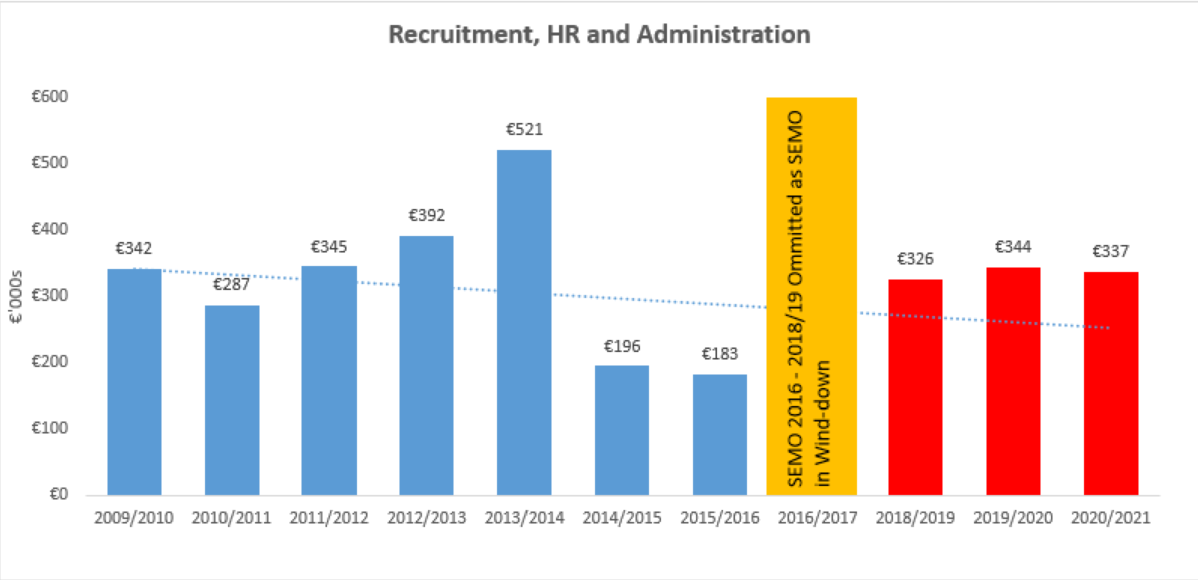


Figure 3.9

Figure 3.10 presents average recruitment, HR and Admin costs between 2010-2014 and 2018-2021.

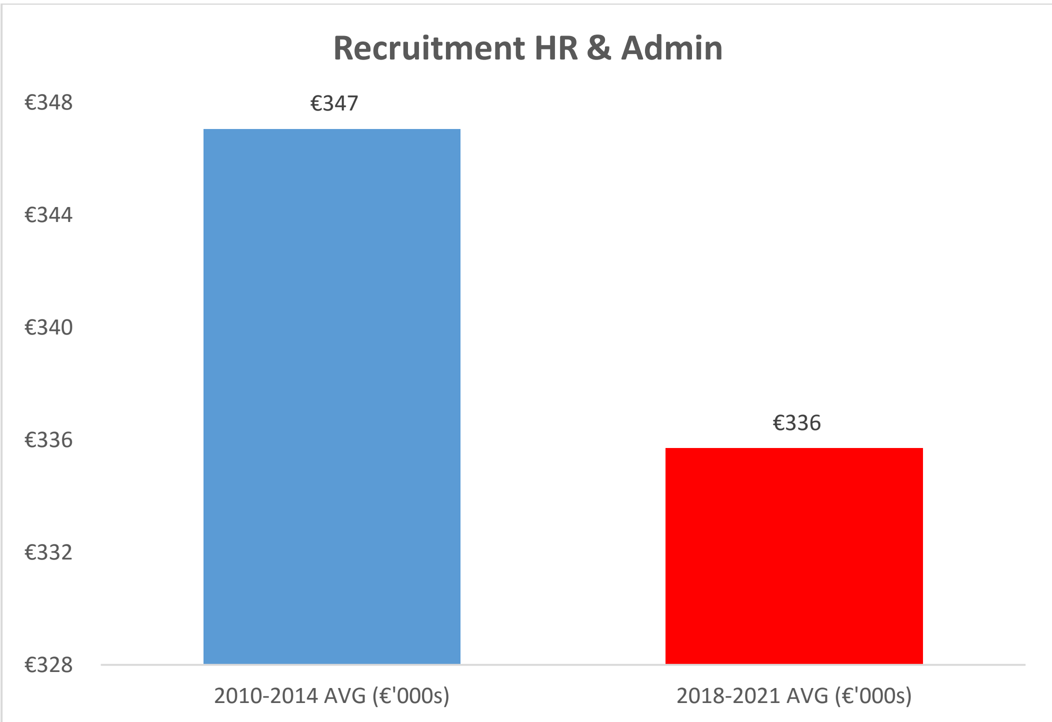


Figure 3.10

Corporate Costs SEM Comparison

These include the allocation of 40% of the Market Operator Director's cost/time to SEMO and the allocation of Group costs associated with the CEO, Board, Group Finance, Group Regulation, HR and procurement based on the number of FTEs in SEMO. An allocation of c. €12,300 per FTE has been allocated to SEMO giving an annual cost of c. €700,000.

In comparison with Recruitment, HR and Administration, this cost category has trended significantly upwards (on average) from €452,000 to €819,000 per annum.

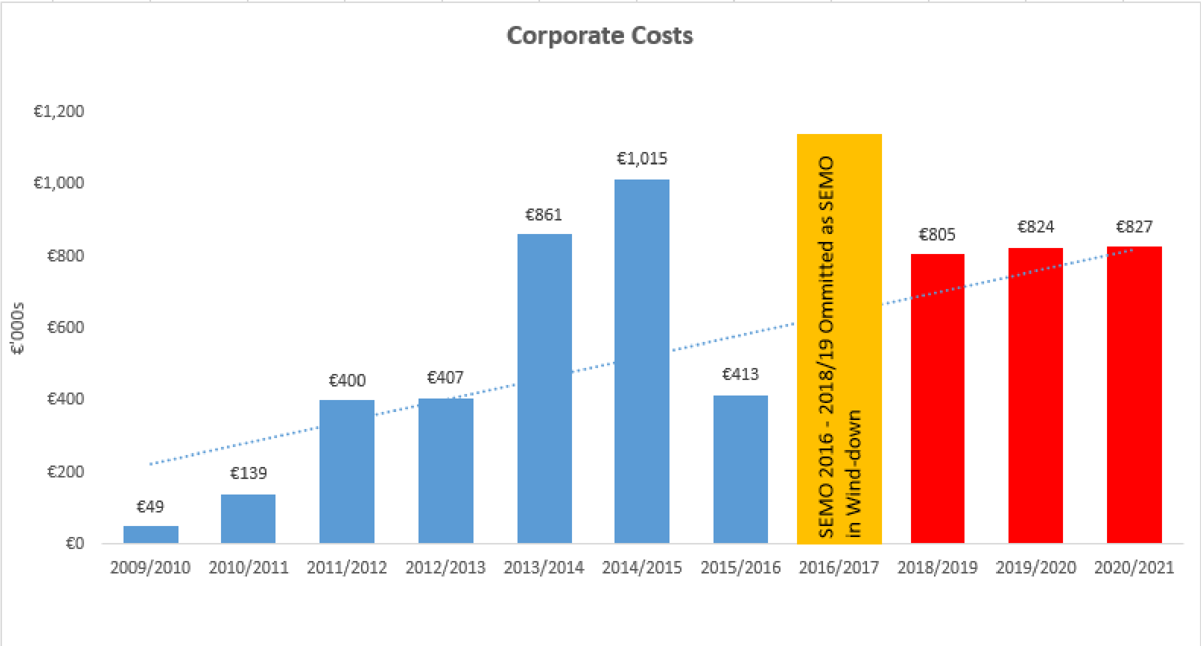


Figure 3.11

Figure 3.11 below provides a comparison between corporate costs for 2010-2014 and 2018-2021. Average corporate costs are higher for 2018-2021.

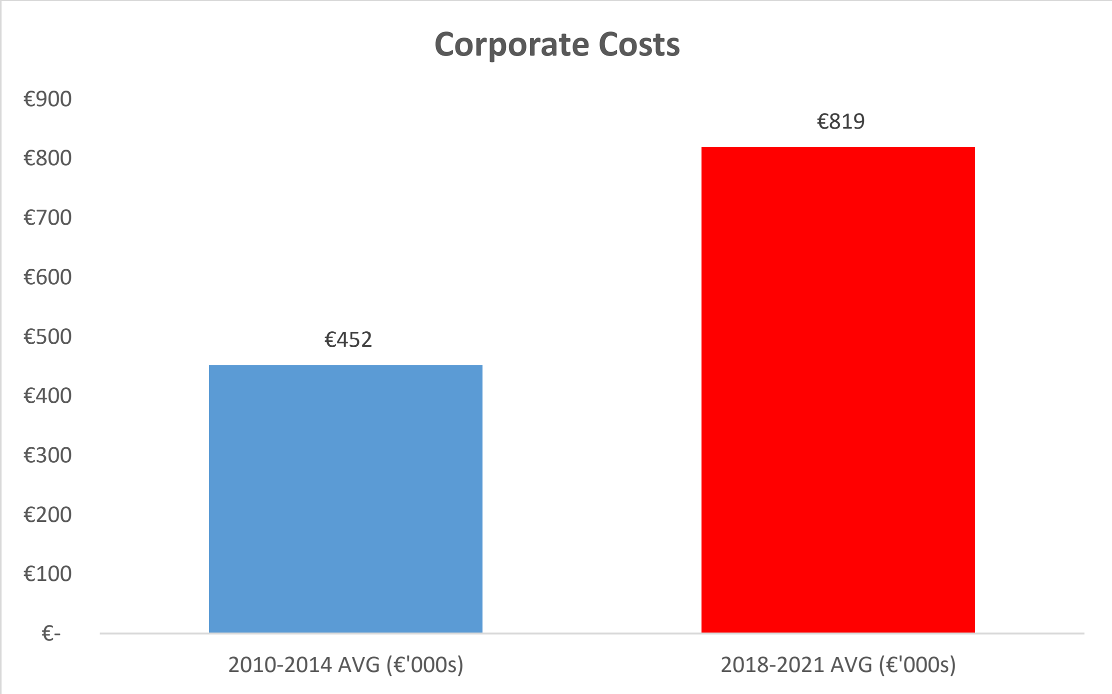


Figure 3.12

SEMO Submission

SEMO has estimated the overheads necessary to support its operation as set out in table 3.4 below.

Pre-Go Live costs reflect an estimate of 20% of each of the individual cost areas reflecting the amount that SEMO do not expect to be capitalised under accounting conventions and are therefore expecting to be recovered over the duration of the SEMO price control.

Overhead Costs (SEMO submission)						
€'000s	Pre Go Live	Sep-18 (4M)	Sep-19 (12M)	Sep-20 (12M)	Sep-21 (12M)	Total
Facilities & Property Management	64,000	273,000	818,000	838,000	841,000	**2,834,000**
Recruitment, HR & Admin	21,000	109,000	326,000	344,000	337,000	**1,137,000**
Corporate Costs	54,000	268,000	805,000	824,000	827,000	**2,778,000**
Overhead totals	**139,000**	**650,000**	**1,949,000**	**2,006,000**	**2,005,000**	**6,749,000**

Table 3.4

Recruitment, HR and Administration includes an estimated €4.8k per FTE for staff travel, with training estimated at €750 per FTE. It is assumed that 50% of SEMO staff will be recruited externally with 15% of the employee salary paid as a recruitment fee.

Recruitment, HR and Administration					
€'000	Sep-18 (4M)	Sep-19 (12M)	Sep-20 (12M)	Sep-21 (12M)	Total
General Administration	94	283	290	291	958
Training	14	43	44	44	145
Recruitment	-	-	10	1	11
Total	**108**	**326**	**344**	**337**	**1115**

Table 3.5

RA analysis

Comparison with enduring TSO Price Controls

When compared against the enduring Price Controls (For EirGrid and SONI) on a per annum basis, the overhead costs submitted for SEMO appear 1.6 times the overhead cost of an FTE under the enduring Price Controls (i.e. €34,000 versus €21,000).

	TSO, SONI & SEMO PC	SEMO Pre Go-Live	May 18 – Sep 18	Oct 18 – Sep 19	Oct 19 – Sep 20	Oct 20 – Sep 21
Total cost per FTE	€105,433	€23,500	€39,544	€119,807	€120,525	€122,305
Overheads per FTE	€21,141	€6,318	€11,404	€34,193	€34,000	€33,983
Payroll costs per FTE	€84,292	€17,182	€28,140	€85,614	€86,525	€88,323
% overhead/Payroll	25%	37%	41%	40%	39%	39%
FTE		22	57	57	59	59

Table 3.6

Discussions with SEMO

The RAs have queried these costs with SEMO, who claim that the different resourcing and accounting models between the TSOs and SEMO limit this comparison and argue that the structure of the respective price controls and the nature of the costs in each of the jurisdictions differs:

- HR, Legal and Procurement salary costs are captured as a direct cost to the TSOs in that the costs are included within headcount and staff costs and not identified as an ‘overhead’. Such costs would have been assessed as part of the resourcing and efficiency assessment of those price controls in respect of headcount and cost per FTE. SEMO has sought to quantify the impact of this inconsistency, approximately €11,000 per FTE.

- The treatment of facilities costs is similarly different both in EirGrid and SONI and hence between TSOs and SEMO. SEMO highlights that since the premises in NI are owned and expensed through the RAV as a capital cost this cost would not show in any overhead calculation whereas the lease cost of a building would do so in EirGrid. The blended allocation of costs therefore omits part of the property costs in comparison to EirGrid but partially includes them in comparison with SONI
- Since the initial analysis was undertaken, SEMO has revised the TSO analysis to include an additional €700,000 of 'overheads' in respect of 'selling and advertising and rates' which would have little or no relevance to SEMO in any comparison.

RA proposal

The RAs are currently assessing the additional information provided by SEMO which seeks to justify the difference seen between the overhead allocation to SEMO in comparison to the allowances within the respective TSO and SONI price controls.

Overhead Costs						
€'000s	**Pre Go**	**Sep-18**	**Sep-19**	**Sep-20**	**Sep-21**	**Total**
SEMO Submission	139,000	650,000	1,949,000	2,006,000	2,005,000	**6,749,000**
RA reduction in overhead allocation	44,200	248,000	744,000	759,000	758,000	**2,553,200**
RA Proposal	94,800	402,000	1,205,000	1,247,000	1,247,000	**4,195,800**

Table 3.7

3.5 IT & Telecommunications Costs

IT and Telecommunications Costs represent the second largest category of OPEX for this price control, accounting for between 20%-27% of costs for each period of the submission. In previous SEMO price controls IT and Telecommunications Costs represented the largest category of Opex.

A significant operational cost for SEMO is the ongoing support and development of the SEM Central Market Systems and its underlying communication links. It is essential that market participants are provided with secure and performing systems that provide real time 24/7 access to carry out their market related activities.

SEM Comparison

As can be seen below, this cost category has increased on average between SEM and I-SEM.

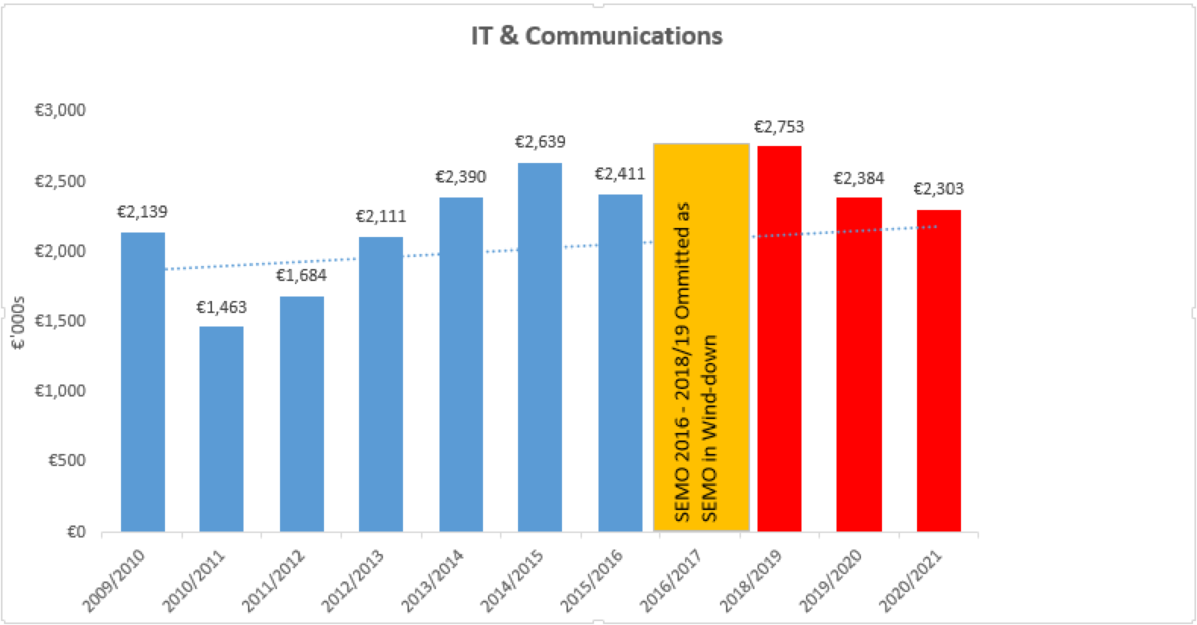


Figure 3.13

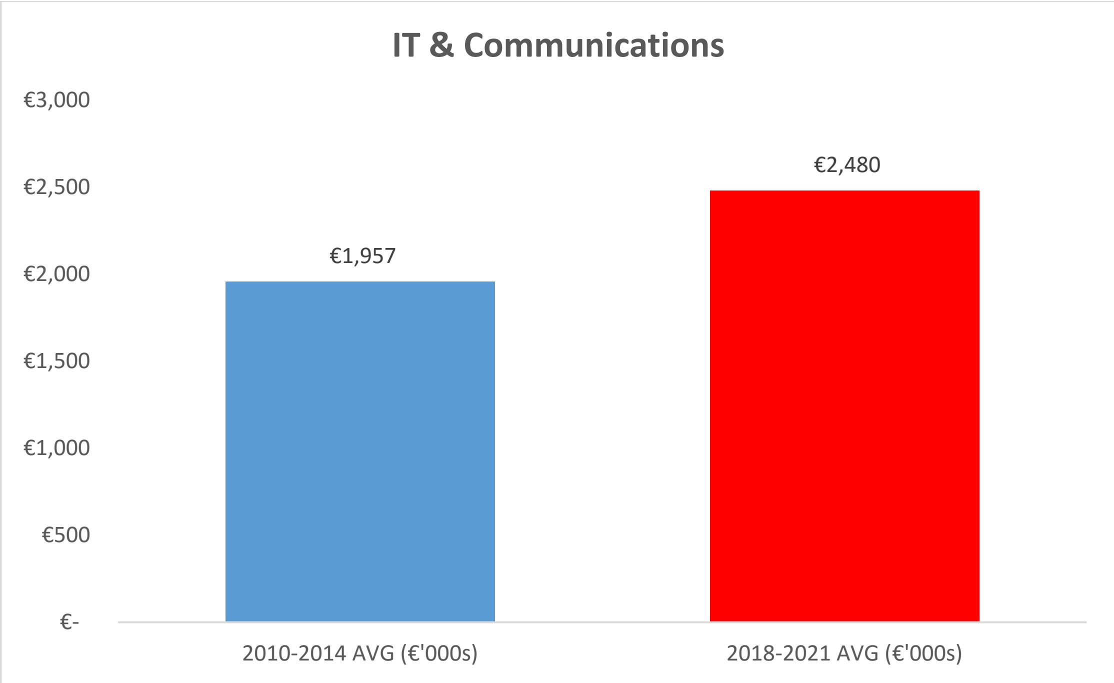


Figure 3.14

SEMO Submission

IT costs are SEMO's deemed share of total IT costs across the EirGrid Group. These comprise a significant operations cost for SEMO due to the ongoing support and development of Central Market Systems and underlying communication links.

The share has been allocated across the licences based on consultations with internal Subject Matter Experts as IT is now managed on a group wide basis. Telecommunications costs cover the cost of telecommunications links between SEMO's two sites in Dublin and Belfast to enable resilience in the event of a failure.

IT & Telecommunications Costs						
		Sep-18	Sep-19	Sep-20	Sep-21	Total
€'000s	Pre Go Live	4M	12M	12M	12M	
Managed Services	97,000	198,000	594,000	335,000	304,000	1,528,000
24/7 Support	14,000	91,000	273,000	273,000	273,000	924,000
Total Outsourced Resources	111,000	289,000	867,000	608,000	577,000	2,452,000
Apps Support	-	468,000	1,405,000	1,287,000	1,237,000	4,397,000
IT Hardware and Software Support	-	100,000	301,000	209,000	309,000	919,000
Telecommunications	-	60,000	180,000	180,000	180,000	600,000
Total IT & Telecommunications	**111,000**	**918,000**	**2,753,000**	**2,384,000**	**2,303,000**	**8,469,000**

Table 3.8

SEMO has included details in its submission on drivers for increases in this cost category between SEM and I-SEM. These include;

- Managed services are currently being tendered for and are required to operate I-SEM systems to mandated service levels.

- The high service levels required for I-SEM system availability of 99.95% will require 24/7 support rather than on call resources to resolve incidents and monitor systems.
- Apps support costs account for over half of IT and Telecommunications costs at €4.5m. These include MMS (Market Management Systems), AoLR (Agent of Last Resort), Oracle Middleware and CRM/Query Management

This results in a total cost of €1 million estimated over the price control period and is expected to be relatively stable at €0.3 million per annum. The indicative enduring cost allocation for telecommunications to SEMO is €180k.

RA Analysis

The RAs broadly accept the IT and Telecoms costs as set out in SEMO's submission. Many of these costs reflect estimates provided by EirGrid/SONI Subject Matter Experts (SMEs), both in respect to the ongoing costs of maintaining hardware and software, and the share attributed to SEMO. Many of these costs are estimates as they not yet negotiated and will not become known until later in 2017 or 2018.

SEMO has provided these estimates at a granular level and also given the basis and scale of allocation of these costs between EirGrid's licensed activities i.e. MO, TSOs, NEMO and Interconnectors. In most cases these costs are split 50:50 between MO and TSOs but where the systems are wholly in respect of one licensed activity or another then the costs are wholly attributed to that business.

Despite increased complexity, average costs proposed for this price control are comparable with those incurred in the last three years of the SEM.

A typical benchmark for support and maintenance costs would amount to 10% of the purchase costs for an 'off-the-shelf' product and this might extend to 15-18% for a more bespoke system application.

Applications and hardware and software support which make up around two-thirds of IT&T costs represent 15%; 14% and 13.8% of this build cost for 2019, 2020 and 2021. These are at the more efficient end of industry benchmarks for a bespoke system such as I-SEM.

The historic costs of providing telecommunications to SEMO over the period 2011-2015 range from €182,000 to €250,000 with an average of €225,000. The current estimate of cost of €180,000 via a dedicated ring represents a saving of 20% historic levels of spend.

RA Proposal

Based on the above evidence and given the uncertainty of the nature of the costs likely to be incurred the RAs are of the view that the submitted estimates provided by SEMO are reasonable and in line with industry levels and past spend.

IT & Telecommunications Costs						
		Sep-18	Sep-19	Sep-20	Sep-21	Total
€'000s	Pre Go Live	4M	12M	12M	12M	
SEMO Submission	111,000	918,000	2,753,000	2,384,000	2,303,000	8,469,000
RA Proposal	111,000	918,000	2,753,000	2,384,000	2,303,000	8,469,000

Table 3.9

3.6 Finance and Regulation

Finance and Regulation costs include audit fees, professional fees, banking costs and modifications committee costs.

SEM Comparison

Below illustrates that the costs of Finance & Regulation have increased significantly between SEM and I-SEM, with Audit and professional fees in particular being a major cost driver.

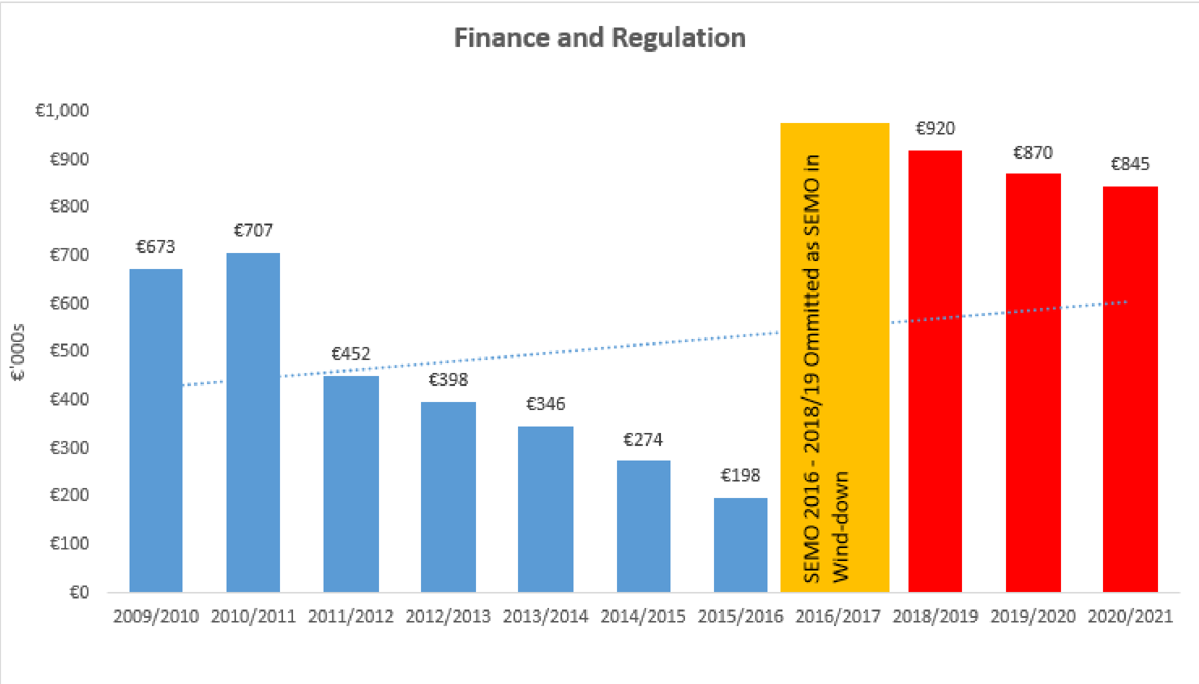


Figure 3.15

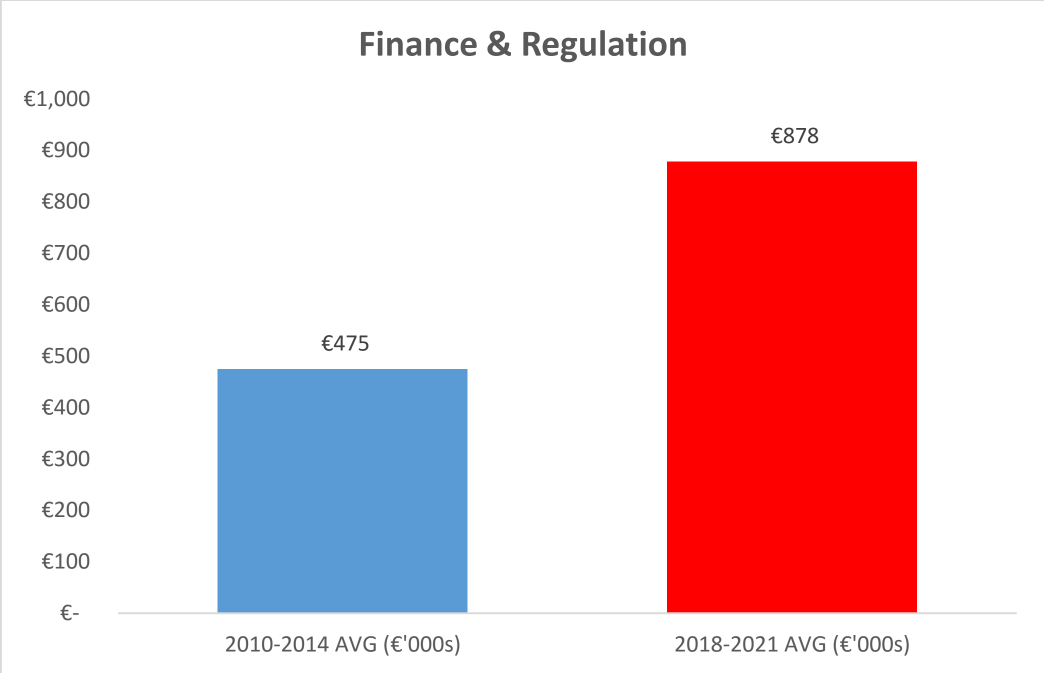


Figure 3.16

SEMO Submission

An overview of SEMO's submission is presented in table 3.10. Banking costs are estimated at €30k per annum, while Modification Committee Costs are estimated to be €10k per annum, based on the assumption that there will be 6 committee meetings per year in I-SEM.

Audit fees are broken down into market audit fees, statutory audit fees and internal audit fees. Market audit fees are estimated at €250k per annum and are expected to be higher than historical costs of €180k due to a revised scope for the audit. External Statutory Audit Fees are estimated at €50k per annum while internal audit fees are estimated at €15k per annum.

Finance and Regulation						
		Sep-18	**Sep-19**	**Sep-20**	**Sep-21**	
€'000	**Pre Go Live**	**4M**	**12M**	**12M**	**12M**	
Audit Fees	-	105,000	315,000	315,000	315,000	1,050,000
Professional Fees	-	88,000	265,000	215,000	190,000	758,000
Banking Costs	-	10,000	30,000	30,000	30,000	100,000
Modifications Committee Cost	-	3,000	10,000	10,000	10,000	33,000
FX Costs (pass through)	-	-	-	-	-	
Total	**-**	**206,000**	**620,000**	**570,000**	**545,000**	**1,941,000**

Table 3.10

Professional fees cover SEMO's requirements for external consultancy support, Disputes and Modifications Committee support and regulatory and legal support. These costs are broken down in the table below.

External Professional Fees						
		Sep-18	**Sep-19**	**Sep-20**	**Sep-21**	
€'000	**Pre Go Live**	**4M**	**12M**	**12M**	**12M**	
Modifications committee legal advice		33,000	100,000	75,000	50,000	258,000
SEM Market Legal advice		17,000	50,000	50,000	50,000	167,000
Cyber security advice		17,000	50,000	50,000	50,000	167,000
Mifid 2		17,000	50,000	25,000	25,000	117,000
Systems Certifications		5,000	15,000	15,000	15,000	50,000
Total		**89,000**	**265,000**	**215,000**	**190,000**	**759,000**

Table 3.11

Parental Company Guarantee (Contingent Equity including PCG)

There is a requirement for EirGrid to put in place a Parent Company Guarantee (PCG) which has been placed in the SONI Market Operator licence. As part of the 2016-19 price control the SEM Committee determined an allowance of €0.300 million per annum as being appropriate remuneration for SEMO to facilitate their licence requirements in this regard. SEMO has requested the same amount for this Price Control in respect of the PCG in respect of the SONI licence.

However, an additional contingent equity allowance of €900,000 has also been requested for the provision of contingent equity in respect of the EirGrid Market Operator licence. This gives a total allowance requested of €1.2m per annum for the Parental Company Guarantee/ Contingent Equity. In their submission, SEMO has stated that the scale of contingent capital exposure is increasing.

However, the RAs are of the view that there are differences between the SONI and EirGrid licence. In the first instance, the requirement for a PCG is a SONI requirement, due to the nature of the ownership structure by EirGrid Group. As such, the PCG allowance covers the SONI licence requirement placed in its MO licence. There is no requirement in the EirGrid licence to provide a Parental Company Guarantee. As such, the RAs do not see what rationale there is for the allowance of €900,000 to be included for EirGrid; an allowance which has not been required in previous SEMO Price Controls.

The RAs are cognisant that the level of contingency capital on standby by EirGrid and SONI may rise in I-SEM, in particular in the early years of the new market. However, this aspect is covered by contingency capital in the form of short term debt that EirGrid and SONI will have on standby.

Where there is a cost associated with the holding of this contingency then it is reasonable that the various entities which benefit from the holding of this contingency capital will contribute to the recovery of the holding cost. This may include the TSOs and the Market Operator i.e. SEMO. The decision relating to the recovery of this will be made as part of finalisation of a contingency capital review which is being carried out by the RAs and which will inform the SEMO final determination.

It should be noted that as the level of contingency capital (as debt) that the TSOs will hold in I-SEM is currently subject to discussions between the RAs and EirGrid/SONI, and for the purposes of this Draft Determination the request has been removed, pending further analysis and discussion.

RA Analysis

Audit fees

In its submission SEMO has argued that the new and more complex I-SEM market will drive higher fees than in the past and has estimated an increase of almost 50% from the cost of the equivalent audits in 2014. SEMO has provided analysis of prior years to illustrate this higher cost of audits at the start of I-SEM.

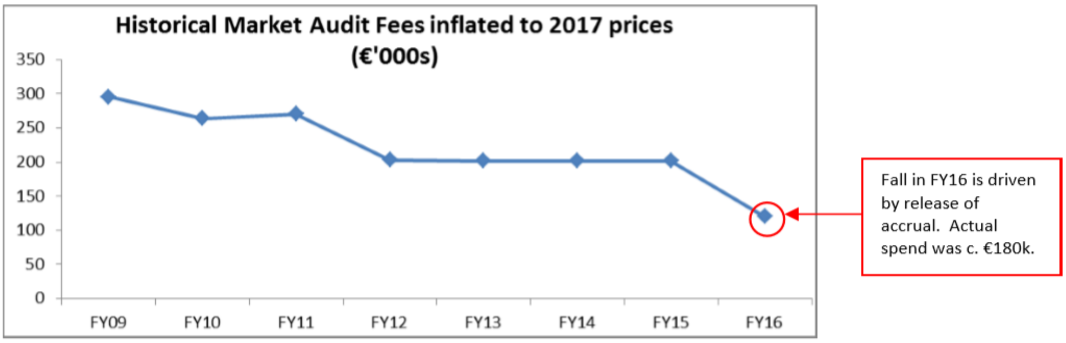


Figure 3.17

This may be the case in the first years of I-SEM, however it will be expected that ongoing fees fall back towards historic levels. This is reflected in the historic cost data provided by SEMO which shows that for the period 2009-11 the average cost for market audit fees was €277,000 (plus an estimated share of financial audit costs of €30,000 for external financial audit) whereas in subsequent years 2012-15 the cost reduced to €200,000 (+€25,000).

The RAs propose that the allowances in year 1 and Year 2 are broadly in line with SEMOs proposals, as these costs are likely to be higher than historic levels, at least initially. However, on the basis of the reduction seen in audit costs in SEM SEMO, the RAs proposals are that there should be a reduction in Audit costs after an initial bedding in period.

On this basis the RAS are minded to allow a total audit fees allowance of €941,000 over the Price Control, a reduction of €109,000 over the price control period.

Professional fees

SEMO have incorporated into their cost assessment an estimate for professional and legal fees in a number of areas – legal advice sought by the modifications committee and in respect of the SEM itself; cyber security advice and advice associated with governance, risk and compliance under Mifid II and systems certification.

The estimates put forward by SEMO range from €265,000 in 2018/19 to €190,000 in 2020/21 compared to an average spend in 2009-14 of €150,000 (having adjusted for a one-off piece of work in 2011 which resulted from an EU change on intraday trading).

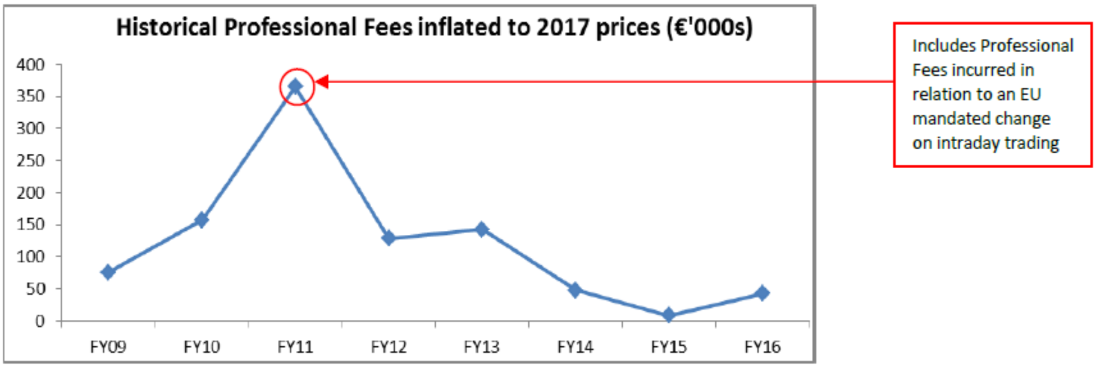


Figure 3.18

The RAs are of the view that professional fees are significantly higher than the previous historic allowance, with the exception of 2011 where a rise was due to an EU mandated change on intraday trading. As such, the RAs are of the view that in line with audit fees that the allowances would be expected to be higher in Year 1, but that these would decrease in Years 2 and 3. On this basis the RAs propose an allowance of €710,000, a reduction of €48,000 over the price control period.

Banking costs, modifications committee and External Professional fees

In addition, SEMO identify the increasing risk of cyber-crime as a new area of concern and include an estimate of €50,000 in each of the years to undertake advice and assurance checking. SEMO has also identified the need to comply with Mifid II from January 2018 as a further driver of cost (€50,000 initially and €25,000 in subsequent years).

The RAs are of the view that the costs associated with these are reasonable and propose no changes to the allowance.

RA Proposal

The RAs are aware that many of the costs submitted by SEMO for finance and regulation reflect estimates in a revised market and are therefore likely to be higher than recent historic levels, at least initially. The RAs have reviewed these costs with a view to their return to historic levels by 2020/21. This leads to a decrease in the SEMO allowance of €106,000 over the price control period for audit fees and a decrease in SEMO's proposed professional fees of €48,000.

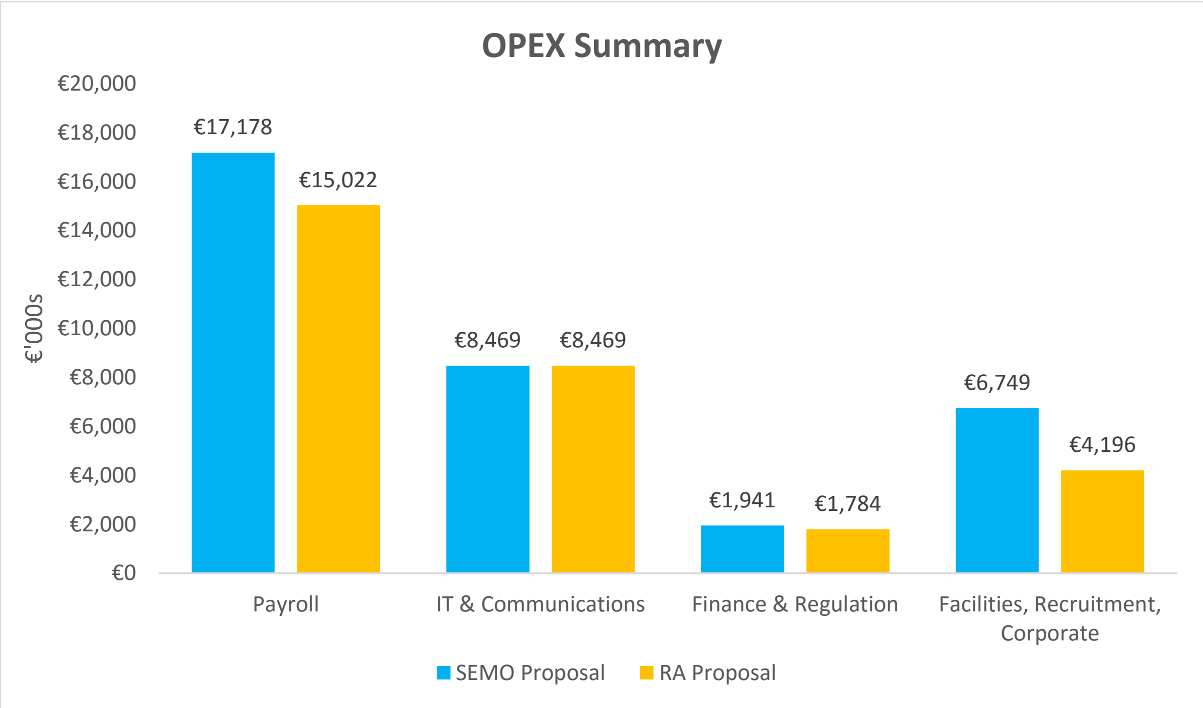
Finance and Regulation						
SEMO submission	-	206,000	620,000	570,000	545,000	1,941,000
RA reductions		11,000	23,000	23,000	100,000	157,000
RA Proposal	-	195,000	597,000	547,000	445,000	1,784,000

Table 3.12

External professional fees						
SEMO submission	-	89,000	265,000	215,000	190,000	759,000
RA Proposal	-	89,000	265,000	215,000	190,000	759,000

Summary of RAs Opex Proposals

Having considered each of the cost categories above, a summary of the RAs proposed allowances are outlined below, including an indication of SEMO's proposals. For clarity, contingency capital has been removed entirely from both SEMOs submission and hence the RAs proposals.



Opex Proposals							
2017 monies			**Sep-18**	**Sep-19**	**Sep-20**	**Sep-21**	**Total**
		Pre Go Live	**4M**	**12M**	**12M**	**12M**	
Payroll	SEMO	378,000	1,604,000	4,880,000	5,110,000	5,210,000	17,178,000
	RA	**278,666**	**1,444,000**	**4,332,000**	**4,484,000**	**4,484,000**	**15,022,666**
Overheads	SEMO	139,000	650,000	1,949,000	2,006,000	2,005,000	6,749,000
	RA	**94,800**	**402,000**	**1,205,000**	**1,247,000**	**1,247,000**	**4,195,800**
IT & Telecoms	SEMO	111,000	918,000	2,753,000	2,384,000	2,303,000	8,469,000
	RA	**111,000**	**918,000**	**2,753,000**	**2,384,000**	**2,303,000**	**8,469,000**
Finance & Regulation[12]	SEMO	-	206,000	620,000	570,000	545,000	1,941,000
	RA	-	**195,000**	**597,000**	**547,000**	**445,000**	**1,784,000**
External professional fees	SEMO	-	89,000	265,000	215,000	190,000	759,000
	RA	**-**	**89,000**	**265,000**	**215,000**	**190,000**	**759,000**

RPI – X

In the 2016- 2019 Price Control, the SEM Committee determined that Opex should be subject to Revenue Cap (RPI-X) Regulation with an X of 0.3 applied.

RPI-X regulation incentivises SEMO to reduce costs by increased efficiency of processes and lower input prices. Any efficiency and price savings are retained by SEMO; overspends must conversely be absorbed by it. According to the CSO, prices on average, as measured by the EU Harmonised Index of Consumer Prices (HICP), have remained stable with an increase of 0.4% from August 2016, with the most notable changes in price being the energy sector and service industry[13].

The RAs recognise that SEMO is similar to a ‘business service provider’. An assessment of an annual total factor productivity growth percentage was therefore determined with this in mind. A productivity growth rate of 0.3% was identified as being particularly relevant for the forthcoming years to a labour intensive business such as SEMO.

[12] Excluding PCG and contingent equity
[13] http://www.cso.ie/en/releasesandpublications/er/cpi/consumerpriceindexaugust2017/

4 Capital Expenditure

In addition to the operating costs outlined in section 4 of this consultation paper, SEMO has outlined capital expenditure that is expected during the price control period. However, it should be noted that at this time of the Price Control, there is a high level of uncertainty regarding what level of Capex may be required during the Price Control period. This is due to the change in market design. As such, SEMO has not included any predictable Capex proposals at this time nor Biannual Market Releases.

On this basis, SEMO have submitted costs associated only with Unpredictable Capex. The RAs have outlined principles of review associated with predictable Capex, as part of this draft determination.

CAPEX						
		Sep-18	**Sep-19**	**Sep-20**	**Sep-21**	**Total**
€'000	**Pre Go Live**	**4M**	**12M**	**12M**	**12M**	
Unpredictable Business Capex	-	-	400,000	400,000	400,000	1,200,000

Table 4.1

4.1 Treatment of Capex in previous price controls

As revenue allowances, including Capex, are set ex-ante, it is not uncommon for there to be a level of uncertainty regarding the forecast level of Capex spend that will be required. During different SEMO Price Controls, different mechanisms have been employed to incentivise efficient capital expenditure.

Such approaches are outlined below.

Menu regulation

Menu regulation is a regulatory model whereby companies are presented with a choice of regulatory contracts. In the case of SEMO's previous Price Controls the application of menu regulation applied to Capex investment, whereby SEMO was incentivised to outperform against its Capex budget through an outturn incentive payment linked to what percentage of the Capex allowance was actually spent by SEMO. This approach was applied in the 2010-2013 and 2013-2016 Price Controls.

Case by case review

In 2008, the RAs worked with EirGrid and SONI to determine the costs associated with the establishment of the SEM, with the shared costs of the SEM Establishment program making up the SEMO RAB. In the case of I-SEM SEMO these costs will be recovered via the TSOs' RAB.

A range of Day 1+ projects followed on from the delivery of the SEM to allow for enduring solutions to be implemented for the market. While SEMO requested a discretionary fund for small capital projects, it was decided that SEMO would be required to submit requests for capital expenditure to the RAs for consideration on a case by case basis.

4.2 Unpredictable Business Capex

The unpredictable business Capex is a discretionary fund requested by SEMO to cover the costs of unexpected business Capex. This has been broken down into two components:

1. Failing or obsolete software or hardware components; new business requirements that demand a different set of components; the availability of new products on the market that would address longstanding issues; or the fact that a software upgrade on one side of the business may mean that existing software on another side may be incompatible.

2. The need to provide for corporate developments which are emerging from SONI/EirGrid to which SEMO would contribute.

SEMO has requested an annual allowance of €400,000 per annum to be included in SEMO's overall Capex allowance.

4.3 Predictable Business Capex

A predictable CAPEX allowance enables SEMO to plan for hardware and software upgrades and the implementation of additional operational support systems. For the purposes of this Price Control no predictable Capex has been submitted. Where SEMO are of the view that predictable capex may arise during the Price Control, then such submissions will need to meet the following principles;

1. Any submission should meet a materiality threshold of €500,000
2. Submissions should be made in a timely manner, at least 4 months prior to annual tariff setting so as to allow the RAs sufficient time to scrutinise and review.
3. Submissions which may arise should be based on costed estimates, rather than forecast estimates.

Where such predictable Capex is accepted by the RAs, it will be subject to final outturn review as part of the next Price Control, in line with normal practice pertaining to the TSOs Price Controls. This will include efficiency review of the Capital Expenditure and any inefficiency (plus return) will be corrected where deemed inefficient.

Within this definition, predictable business Capex may arise in relation to specific capital projects such as the Day 2 I-SEM project, which would require review and agreement with the RAs.

In addition, SEMO has proposed in their submission that appropriate incentives are put in place in relation to the delivery of capital projects in order to incentivise timely delivery of capital projects and efficiency of costs. It is proposed that there should be equal sharing of any savings against the Regulatory Approved allowance with the delivery of the capital project to scope and on time.

RA analysis on Future Unpredictable Capex

This category of Capex includes unpredictable IT issues which are required to be rectified short term i.e. within year. This may include immediate fixes to IT installations such as servers, IT security issues so as to ensure normal services to market participants are ensured. Previously, an allowance of €200,000 was allowed for this category of IT.

There are three potential options for consideration of an unpredictable Capex allowance;

- this can be provided on an Ex-Ante basis, as requested by SEMO in its submission;

- any unpredictable Capex spend can be reviewed and corrected for on an ex-post basis in each tariff year;
- Unpredictable Capex can be treated on a pass through basis.

No specific Capital Projects have been identified against any of these categories, however a €400,000 per year unpredictable business Capex allowance has been requested. This is just under twice the level of equivalent unpredictable business Capex that has been allowed in SEM, however SEMO argues that a larger allowance is merited given the nature of the new I-SEM market.

The RAs have considered this proposal and are of the view that these costs may be higher than those observed at the beginning of SEM. This is due to the fact that;

1. The frequency of trading events and the volume of trades will be significantly higher which in turn leads to higher data volumes;
2. Real time communication will be required to ensure that Market Participant actions and MO responses are coordinated;
3. IT Support is required 24/7
4. There are additional technology providers that will require integration.

The RAs note the following with regards to unpredictable Capex:

1. In the first instance, as many of these systems are new they should be covered under warranty by the service provider;
2. Nonetheless, it is expected that with the increase in IT demand from the new market, that it is prudent to ensure that short term IT aspects can be addressed immediately without recourse to the RAs for revenue approval.

On this basis, the RAs are proposing a mixture of the options above for unpredictable Capex.

1. In Year 1 an allowance of €400,000 will be permitted for unpredictable Capex on an ex-ante basis. This is commensurate with the level of risk that may be seen in the new market. This allowance is considered a pass through item, whereby actual spends are accounted for as part of the annual correction factors. Actual spends will be verified through an ex-post review and the revenues corrected in line with annual correction factors.

2. In Year 2 and Year 3 an allowance of €200,000 will be permitted for unpredictable Capex. This is because the level of risk would be expected to decrease as the new market develops. Again this allowance will be considered a pass through whereby actual spends are accounted for as part of the annual correction factors.

At this time, given the scale of certain vs uncertain Capex submitted as part of this price control, the RAs are not minded to include this menu regulation incentivisation approach to this price control, though the RAs see the value of this approach for future price controls where better estimates of Capex costs can be submitted.

CAPEX						
		Sep-18	Sep-19	Sep-20	Sep-21	Total
€'000	Pre Go Live	4M	12M	12M	12M	
Unpredictable Business Capex	-	-	400,000	400,000	400,000	1,200,000
RA Proposal	-	-	400,000	200,000	200,000	800,000

Table 4.2

5 Financeability

5.1 Remuneration for risk

In their submission, SEMO has argued that the regulatory framework which pertained in SEM is not suitable for SEMO to be financeable in I-SEM. The two main reasons that they give for this are;

1. The assets to deliver I-SEM are not assets of the Market Operator but of the System Operator, which means that the Market Operator does not have an opening Regulatory Asset Base and will have a relatively low RAB in future.

2. The scale and extent of differentials between receipts and payments in the market, whether in respect of Dispatch Balancing Costs, Capacity Market differentials, and the application of the Residual Error or other factors is also expected to increase.

Based on this SEMO has requested that a margin based approach is applied for this price control as opposed to the RAB-WACC approach which has applied in previous price controls, and argues that SEMO faces a higher level of overall systematic risk than other traditional asset based utilities.

SEMO has requested a 10% margin on controllable operating costs.

The RAs have asked SEMO to provide a quantitative breakdown of the cost of external funding required by SEMO for I-SEM compared to the level of financial capital required by SEMO historically.

This information has not been submitted as part of SEMO's revenue submission. However further information and feedback is welcomed through this consultation paper.

5.2 Capitalised setup costs

In the case of I-SEM, SEMO will not initially hold capital assets and therefore no opening RAB will arise. This is because the implementation costs associated with establishing the systems necessary for SEMO to operate in ISEM will be recovered via EirGrid's and SONI's respective TSO RABs, at an agreed proportion of 75% to EirGrid and 25% to SONI.

As with the SEMOpx Price Control, the RAs are of the view that as the assets that relate to the SEMO will receive a return through EirGrid's and SONI's TSO RAB, this satisfies the financing requirements of EirGrid and SONI as Market Operator licensees. The rationale for this is outlined below;

1. SEMO does not have capability to raise finances as it is not a legal person. Rather it is a CJV of EirGrid and SONI TSOs as Market Operators licence holders. As such, the duty of financeability accrues not to SEMO, but rather to EirGrid and SONI as Market Operator licensees.

2. The capitalisation of the implementation costs via the TSO's RAB provides remuneration of the risks that the licensees face. This return is outlined below in graph 1 which shows the return (in € millions) that EirGrid and SONI would earn on their implementation costs as currently submitted[14] (RAB WACC) over a 5 year period. The margin graph shows the return

[14] This includes all implementation costs minus NEMO costs (€3.8m) – Regional Coupling Costs (€0.85m).

that SEMO would generate were a margin of 10% applied on controllable costs. The RAB WACC + Margin graph shows what would be the de facto return to EirGrid and SONI were the capitalised costs and the margin approach both applied.

3. It is the RAs view that the financeability requirements of EirGrid and SONI have been satisfied through the application of the RAB WACC approach.

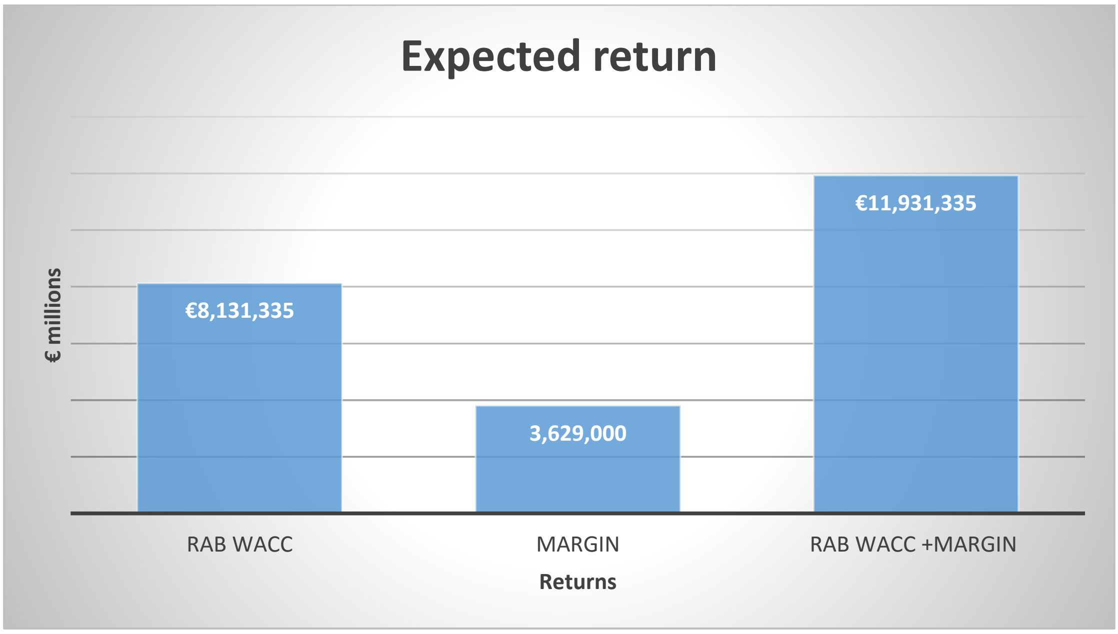


Figure 5.1

The RAs further note the following;

1. SEMO is expected to have a number of capitalised projects in time. This differs from SEMOPx where no projects are expected for the duration of the Price Control, which is 16 months in duration.

2. As such, SEMO will not be an assetless entity as it will be expected to capitalise costs when IT projects are finalised. If a margin was applied alongside the application of a RAB WACC approach then this would constitute a change from previous SEMO Price Controls for which no justification has been provided.

3. These projects will earn a return via the RAB WACC approach and where EirGrid and SONI must undertake to finance such projects, a return will be received via the WACC, thereby compensating longer term debt risk on such projects.

4. SEMO has made an argument that it faces “systematic” risk. However, through regulatory revenue regimes the risk SEMO faces is low in the market, and is mitigated through regulatory mechanisms to both mitigate risk (correction factors, project reopeners) as well as through incentivisation regulation i.e. revenue reward through Opex incentivisation.

5. Indeed, SEMO explicitly refer to this concept of Incentivisation of Performance whereby "to *counter this level of risk exposure SEMO propose introducing an incentive equal to 4% of the total SEMO Opex revenue amount"*.

6. It would seem perverse to apply both a margin to compensate for risk as well as incentivisation of performance through revenue reward. This would signal a regime that was based both on "commercial "aspects (margin) as well as "regulatory" aspects (Opex related performance standards) which the RAs do not accept as valid. Indeed, this must also be considered against the backdrop of a regime where the licensees (EirGrid and SONI) will earn a return on the capitalised set up costs associated with SEMO via the applicable WACCs.

I-SEM Costs

The SEMO price control is one of a number of RA interventions to ensure that the new market arrangements are fully resourced. The RAs have received responses to the SEMOpx draft determination published in July and will be publishing a final determination on the funding of the I-SEM NEMO in November.

The financeability of the TSOs and their Market Operator obligations is also being progressed through the funding of the Implementation Costs of the market, including the capital costs of SEMO and SEMOpx, which costs are being placed on the TSOs RAB. As noted, further SEMO capex will be placed on a SEMO RAB.

As noted, the external funding requirements that SEMO has under I-SEM (e.g. its contingent capital requirements and the cost of the EirGrid-SONI parent company guarantee) will be considered in the light of SEMO's further submissions.

€ million	SEMO's Submission	RA's Proposal
Management Fee (Margin)	3,629,000	No management fee should apply

Table 5.1

6 Key Performance Indicators

As part of this Draft Determination Paper the RAs are considering a range of performance standards that should apply to SEMO given its role in I-SEM design.

These KPIs will apply to both market participants and for the purposes of facilitating the RAs Market Surveillance functions.

6.1 KPIs applied to SEMO in SEM

As part of the current price control framework SEMO are incentivised to manage performance through Key Performance Indicators (KPIs). The KPIs currently in place are aimed at improving performance, promoting customer service, increasing efficiencies and delivering value to customers. The KPI incentive pot is currently set at a maximum of 4% of total OPEX revenue for each year.

SEMO are assessed on the following KPIs, on a quarterly basis.

	Weightings	Target	Upper Bound
Ex-ante pricing report	0.15	99%	100%
Ex-post initial pricing report	0.1	99%	100%
Invoicing	0.2	97%	100%
Credit Cover Increase Notices	0.1	99%	100%
SEMO related resettlement queries	0.2	<9[19]	<5[20]
General Queries	0.15	97%[21]	99%[22]
System Availability (7am to 5pm Mon-Sun)	0.1	99.5%[23]	99.9%[24]

Figure 6.1

Each year, SEMO produces a KPI Outturn Report to present SEMO's performance against regulatory approved Key Performance Indicators for the preceding tariff year. In the most recent price control for SEMO in SEM, seven key performance indicators were applied with a total reward of 4% of Opex available. Each performance indicator is detailed briefly below.

Ex-ante pricing report

This refers to the percentage of occurrences where Ex-Ante pricing reports are published on time, which give a day-ahead forecast of Market Scheduled Quantities (MSQ) and System Marginal Price (SMP) for all units in the market.

Ex-post initial pricing report

This refers to the percentage of occurrences where Ex-Post Initial pricing reports are published on time. These are carried out on D+4 and give the final SMPs and MSQs for all participants and are used for the final settlement of all Market Participants.

Invoicing

This refers to the percentage of occurrences where invoices to participants are published on time. This includes invoices for the weekly energy market and Variable Market Operator Charge, Capacity charges and the Fixed Market Operator Charge.

Credit Cover Increase Notices

This refers to the percentage of occurrences where credit cover increase notices are published on time. These are used to inform market participants that their posted collateral cover is less than their required collateral cover.

SEMO related ad hoc Resettlements

This refers to queries from market participants which have identified errors in settling the market which are attributed the SEMO's operations and processes. Such errors are corrected during scheduled resettlement (M+4 and M+13) or in ad hoc Resettlement.

General Queries

This refers to the percentage of occurrences where a General Query is not addressed within 20 business days. This target is designed to maintain efficiency and customer focus within SEMO.

Central Market System Availability

This is the ratio of time infrastructure systems are functioning compared to the time they are expected or required to be available. The period during which this ratio is measured is 7am-5pm Monday to Sunday.

6.2 SEMO Proposals

SEMO proposes retaining aspects of the above KPIs in the new I-SEM market, with revised weightings, targets and upper bounds. In its submission, SEMO has proposed eight KPIs;

SEMO KPIs
Invoicing
Credit Cover Increase Notices
SEMO Resettlement Queries
General Queries
System Availability
Support the timely publication of key market information
Surveying and acting on participant service levels
Customer training/stakeholder engagement

Table 6.1

A number of these KPIs are related to the KPIs which have previously applied to SEMO in SEM. The main difference relates to SEMO's reporting requirements and the key market information it will need to publish in I-SEM. For example, the KPIs in SEM for publication of an Ex-Ante Pricing Report and Ex-Post Initial Pricing Report will need to be matched to KPIs for corresponding key market information in I-SEM.

SEMO has also proposed an incentive equal to 4% of the total SEMO Opex revenue amount for this price control. SEMO has also proposed the following assumptions to apply to the KPIs;

1. Where applicable each metric should be delivered within one hour of the targeted time;
2. External factors outside the Market Operators direct control are excluded e.g. Limited Communication failure by a Market Participant, late provision of data by System Operators

or the Meter Data Provider, Government policy changes, Regulatory Authorities' policy changes etc.

3. The first two weeks after a System Release are excluded from the annual target.
4. A measure is taken at the end of each month using the average value of each KPI over that period. Should the KPI be achieved in the given period the reward for that month should be earned to incentivise SEMO to perform should it not deliver against a KPI in any particular month during the year.

6.3 RA Analysis

A number of participant comments on proposed KPIs were published in SEM-17-044 'Revenue Recovery Principles for SEMO and SEMOpx', broadly related to the timely publication of essential market information and system availability. The RAs see merit in retention of some of the current Key Performance indicators applied to SEMO, particularly those aimed at service quality and customer service.

The RAs also propose additional KPIs related to provision of timely, accurate information and the availability of information in a format requested by the RA's in order to enable them to carry out their market surveillance role. This complements the specific obligations that SEMO has under REMIT[15] in terms of market monitoring and is obliged to;

1. Establish and maintain effective arrangements and procedures to identify breaches of Article 3 (prohibition on the use of inside information) and Article 5 (prohibition of market manipulation) of REMIT; and

2. Notify the Commission for Energy Regulation and the Utility Regulator (as the applicable national regulatory authority in the Republic of Ireland or Northern Ireland) where it suspects that a transaction might breach Article 3 or Article 5 of REMIT.

In particular, the provision of accurate and timely provision of public and market participant user data to the MMU within the RAs, is of importance for the RAs. This will include a range of regular reporting requirements imposed on SEMO.

Under the KPI, SEMO will be required to liaise with the MMUs IT consultants and assist in the development of an automated mechanism that would transfer relevant data from their database into the MMUs IT infrastructure. SEMO would configure and maintain the systems such that the MMU and other users are able to smoothly automate (from client side) the accessing of data from either the website itself, a relevant mirror or the supporting IT infrastructure via an agreed protocol. The RAs are also cognisant that SEMO are in a position to ensure that a fully functioning website is in place for market go live.

[15] Regulation on Wholesale Energy Market Integrity and Transparency

A summary of RA proposals is shown below.

SEMO KPIs	Description	Review Period
Invoicing	**T**he percentage of occurrences where invoices to participants are published on time	
Credit Cover Increase Notices	The percentage of occurrences where credit cover increase notices are published on time.	
SEMO Resettlement Queries	The time taken to resolve queries from market participants which have identified errors in settling the market which are attributed the SEMO's operations and processes	
General Queries	The percentage of occurrences where a General Query is not addressed within 20 business days.	
System Availability	Availability of central market systems on a 24 hour basis Monday to Friday	
Support the timely publication of key market information	Publication of market information in a timely manner, including for example; Forecast Imbalance, Four Day Rolling Wind Power Unit Forecast by Unit, Net Imbalance Volume Forecast, Accepted Bid Quantity, Accepted Offer Quantity, Anonymised Inc/Dec Price Quantity Pairs and Daily Load Forecasts.	1 year after Go-Live
Customer training/stakeholder engagement		
I-SEM Data Publication Guide	Obtain necessary approval and publication of I-SEM data Publication Guide by January 2018	
Website availability for Go-Live	A fully functioning website will be in place for market Go Live. This will include but not limited to all data outlined in the I-SEM data publication guide being made available to the public.	
Data provision to the RAs	Timely reporting of accurate information to the RAs in the requested format to enable the RAs to monitor the market effectively.	1 year after Go-Live
Automated transfer of data reports to the MMU IT systems	Configure and maintain the systems such that the MMU and other users are able to smoothly automate (from client side) the accessing of data reports from SEMO. For clarity, the MMU does not expect to be given user access to the SEMO IT infrastructure.	

Table 6.2

The proposed additional indicators for publication of key market information and data provision to the RAs could be reviewed following one year of market operation to assess data requirements for both market participants and the RAs. If necessary, a revised set of indicators may apply for the 2019/20 tariff year onwards.

In their submission SEMO has proposed that Performance Incentives should be suspended for the first six months of the market based on their experience in the initial SEM period in 2007 where the amount of helpdesk queries and emergency market releases was significantly higher than under normal operations. The RA's agree that a certain bedding in period is required before certain Key

Performance Indicators apply and welcome feedback from stakeholders on the proposed period of six months.

While a range of feedback has already been received through the Price Control Principles Consultation Paper, the RAs are also seeking interested stakeholder's views on relevant performance indicators for the SEMO price control.

Conclusions and Next Steps

This consultation paper outlines the RAs views on the revenue requirements pertaining to SEMO for the period between May 2018 and October 2021. As indicated in the paper, there are a number of areas where the RAs do not agree with SEMO's submissions and invite feedback on these. In addition, feedback is also requested on the KPIs proposed in this paper.

The closing date for responses to this Draft Determination is 9 November 2017. Responses can be sent to Gina Kelly: gkelly@cer.ie and Joe Craig: Joe.Craig@uregni.gov.uk

Appendix 1- Number of FTEs

Summary of FTE requirements by function (SEMO submission)				
	Sep-18	**Sep-19**	**Sep-20**	**Sep-21**
Function	**4M**	**12M**	**12M**	**12M**
I-SEM management	2.5	2.5	2.5	2.5
Registration	3	3	3	3
Market Rules and Agreed Procedure Document	3	3	3	3
Secretariat	2	2	2	2
Balancing Market Oversight	4.5	4.5	4.5	4.5
Credit Assessment	3	3	3	3
Credit Risk Management	3	3	3	3
Payments in advance	1	1	1	1
Balancing & Capacity Market Settlement	6	6	6	6
General Queries and dispute analysis	4	4	4	4
Clearing (funds transfer)	3	3	3	3
Finance	3.5	3.5	3.5	3.5
Legal	1.5	1.5	1.5	1.5
Customer Care	3.25	3.25	3.25	3.25
I-SEM MO Reporting	1.25	1.25	1.25	1.25
Regulation	1	1	1	1
Compliance	1	1	1	1
Fuel Mix Disclosure	1	1	1	1
Market Modelling	2	2	2	2
Market Monitoring and Surveillance	2	2	2	2
AoLR	1	1	1	1
IT Service Management	2.25	2.25	2.5	2.5
App Support	1.5	1.5	2.75	3
App Infra Support	0.5	0.5	1	1
App DBA Support	0.5	0.5	0.5	0.5
Total	57.25	57.25	59.25	59.5