

SEMOpX Price Control

Draft Determination consultation paper

SEM-17-053

28th June 2017

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1 Introduction and Background

1.1 Form and scope of price control

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 introduction of the I-SEM requires the development and operation of a number of systems and processes that sit at the heart of the new market to facilitate and settle trades between energy traders (typically Generators and Suppliers). SEMOpx is the designated Nominated Electricity Market Operator for Ireland and Northern Ireland and will provide a trading platform for electricity up to a short time ahead of delivery.

As per SEM-17-044 it was decided that a Price Control would apply to SEMOpx for the initial period of designation, i.e. from I-SEM Go Live until October 2019. This is due to the fact that it is currently the only designated NEMO for I-SEM. In addition, there are licence conditions imposed on SEMO to carry out the functions of a NEMO. The Decision Paper also decided that the operating expenditure of SEMOpx will be based on an allowed revenue regime for the period of designation. Therefore, a correction factor will be applied at the end of the Price Control.

This price control is provided on a combined basis between EirGrid and SONI on a 75% to 25% basis respectively, with SEMOpx submitting the proposed costs.

SEMOpx has provided a submission and supporting information based on RA queries as part of the revenue control process. Based on the information provided and ongoing discussions with SEMOpx, the RAs now publish this draft determination paper, which details proposals on SEMOpx's price control allowance for a 16 month period. The RAs have assessed all areas of SEMOpx's submission and supporting information. Priority has been given to the most significant cost categories, particularly labour and third party costs. This paper outlines the RAs proposals in this regard.

A number of potential options for revenue regulation after this 16 month period are outlined in SEM-17-044 and are not within scope of this draft determination paper.

Revenue proposals summary

A summary of SEMOpx's revenue submission and RA proposals for this price control are outlined below;

	Pre Go-Live	May '18 to End Sep '18	Oct '18 to End Sep '19	Total
2017 monies	€	€	€	€
SEMOpx proposals	€ 184,000	€ 1,172,000	€ 3,510,000	€ 4866,000
RA proposals	€ 171,000	€ 1,004,000	€ 3004,000	€4,179,000

Having considered SEMOpx's submission the RAs are minded to reduce the requested Operating Expenditure by c.15%. These proposed reductions are based primarily on a reduction in the overhead allocation to SEMOpx, to align with the Price Controls enduring for the TSOs i.e. EirGrid and SONI. In addition, the RAs are minded not to permit SEMOpx's proposed management fee, primarily on the basis that a return attributable to SEMOpx establishment costs will be garnered via the TSOs RABs at the respective prevailing WACCs of EirGrid and SONI.

On the basis of the RAs proposed revenue allowances a range of tariff scenarios were developed by SEMOpx, and given market information the most likely scenario was chosen for the purposes of providing indicative SEMOpx charges. These charges are based on three elements; an entry fee to the exchange, an annual subscription fee and a variable fee per MWh. It should be noted that these charges are indicative, and are subject to finalisation as part of the SEMOpx Price Control Final Determination which is due in October.

Finally, the RAs are also proposing that given the central nature of the Day-Ahead and Intra-Day markets to the I-SEM market design, a range of performance standards should apply to SEMOpx focused on timely delivery of monitoring, quality of information etc. Stakeholders' views on these performance standards is requested.

1.2 Business Development

As part of this draft determination, the RAs have considered the balance of responsibilities between SEMOpx operating in a competitive environment and the fact that SEMOpx will operate in an environment where it is underwritten, at least initially. As outlined in previous SEM publications, SEMOpx is somewhat unusual in that it operates in an environment where competition amongst NEMOs is in place, but also where SEMOpx is designated under licence and will operate for this price control under an allowed revenue regime.

Given this, the RAs are mindful that the business development within SEMOpx is focused on the delivery of a service that may require a number of amendments in the early stages of the new market. The RAs are of the view that this necessitates robust resourcing to ensure that the requirements of I-SEM can be represented at a European level where many of these changes must be carried through.

In addition, while the submission is based on the period of designation and price control which runs until the 2nd of October 2019, it is not based on a wind down model to that date but on the basis of continued operations should EirGrid and SONI seek re-designation and if re-designation is granted. It should be noted that this working assumption is without prejudice to any re-designation of SEMOpx.

1.3 I-SEM Implementation Costs

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

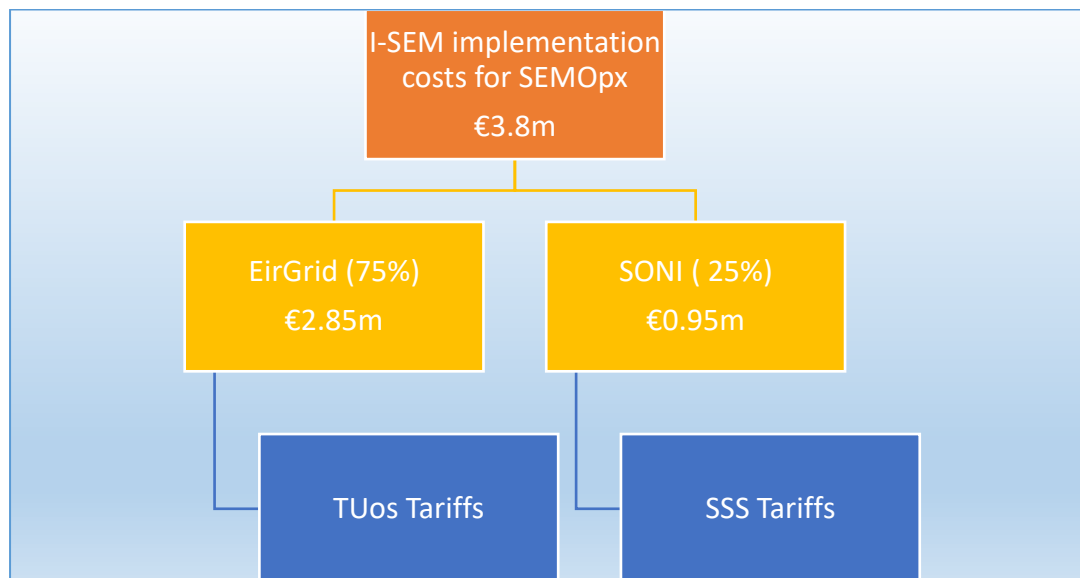
1. The costs of establishing the NEMO for the I-SEM (implementation costs)
2. The ongoing day to day costs of running the NEMO, which is the subject of this paper.

Implementation Costs for NEMO

EirGrid 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 NEMO, the current forecast of which is €3.8m.

As per SEM-17-044 it was decided that implementation costs for SEMOpx would be recovered via the TSOs RABs at an agreed proportion of 75% to EirGrid and 25% to SONI. Therefore, EirGrid will recover €2.85m and SONI will recover €0.95m. Each amount will attract the prevailing WACC of the TSOs and will be recovered through TUoS and SSS tariffs respectively.

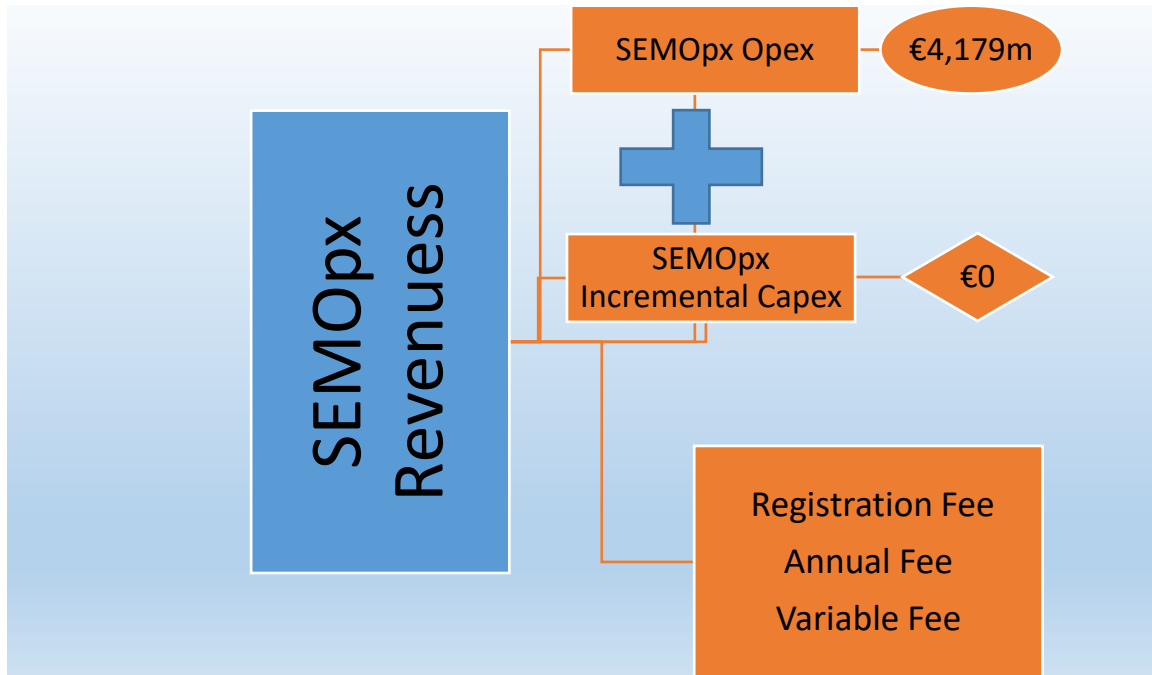
An Information Paper will be published shortly outlining the full I-SEM establishment costs, including the implementation costs for SEMOpx.



SEMOPx revenues

As the implementation costs of SEMOPx are being recovered via the TSOs RABs, the focus of this paper is on the ongoing Operating Costs of SEMOPx and any incremental Capital Expenditure that SEMOPx may propose. As SEMOPx have not submitted any incremental Capital Expenditure, the focus therefore is on the Operating Costs of SEMOPx.

These revenues will be recovered via the range of NEMO charges (registration fee, annual fee and variable fee) outlined on page 29 of this paper.



2 SEMOpx Costs

SEMOpx has been designated as Nominated Electricity Market Operator for the all-Ireland market and this Draft Determination is an outcome of the revenue principles decided in SEM-17-044. This Decision Paper stated that;

1. The establishment costs associated with I-SEM, including those associated with SEMOpx will be recovered via the System Operators Regulated Asset Base (RAB). These costs will be capitalised and recovered over a five year period via TUoS and SSS charges as indicated in Section 1.3 above.
2. Any incremental Capex and ongoing Operating Expenditure of SEMOpx would be recovered via SEMOpx charges.
3. Given the particular circumstances of the establishment of SEMOpx including licence obligations and the requirement to ensure that at least one NEMO is available for I-SEM go live, SEMOpx will operate under an ex-ante allowed revenue regime for this Price Control period.

This price control therefore looks at the SEMOpx costs not included in these “establishment” costs, and is focused on the costs of operating the new NEMO from May 2018 to October 2019. In addition, costs associated with running registration and auctions prior to go-live on 23rd May 2018 have been included in the submission.

As the NEMO functions are a new licensed activity that is being undertaken by SEMOpx in I-SEM, in order to establish an assessment of its costs, SEMOpx has been asked to complete a business plan questionnaire to provide an estimate of the level of costs that would be required to operate the NEMO from ‘Go-Live’ of I-SEM, 23rd May 2018, to the end of its designation as NEMO, 3rd October 2019. As part of this questionnaire SEMOpx was also required to provide supporting narrative on the key assumptions and basis surrounding its estimates.

	Pre Go-Live (@ 20%)	May '18 to Sep '18 (100%)	Oct '18 to Sep '19 (100%)	Total
<u>2017 monies</u>	€	€	€	€
Labour costs	€682,000	€390,000	€1,169,000	€ 2,241,000
IT & Telecommunications	0	€25,000	€75,000	€ 100,000
Facilities & Insurance	€109,000	€60,000	€181,000	€ 350,000
Recruitment, HR and Admin costs	€80,000	€32,000	€95,000	€ 207,000
Finance and Regulation costs	0	€67,000	€200,000	€ 267,000
Corporate costs	€50,000	€143,000	€428,000	€ 621,000
Ongoing implementation costs	0	€455,000	€1,362,000	€ 1,817,000
Total	€921,000	€1,172,000	€3,510,000	€ 5,603,000
Pre Go-Live costs to recover under SEMOpx (20% of PGL costs)	€184,000	n/a	n/a	€ 4,866,000
Period	6-12 months prior to launch	4 months	12 months	

Table 1, SEMOpx Submission

From table 1 above, Pre-Go Live costs from SEMOpx relate to staff and staff related costs for 6-12 months prior to launch, facilitating market registration for example. The next sections consider each of the individual cost drivers associated with SEMOpx and the RAs views on the proposed costs.

2.1 Pre Go-Live Costs

Pre-Go-Live costs represent staff and staff related costs incurred in the months prior to I-SEM implementation. These costs reflect the staff that are estimated to be necessary to be in place to facilitate market registration and auctions etc. prior to implementation. It is expected that an increased number of staff will be required for initial registration and to be in place 12 months prior to implementation of I-SEM. All Pre Go-Live capital costs are treated as part of the overall I-SEM Implementation costs, 20% of which will be recovered through the SEMOpx price control. This is the reasonable level of costs that may be treated as “operational” under applicable accounting standards. The remaining SEMOpx team are expected to be recruited 6 months prior to go-live to participate in market trialling and testing.

2.2 Labour costs

Broadly speaking there are two levels of labour costs associated with SEMOpx; directly incurred labour costs and indirectly incurred labour costs. Directly incurred labour costs are labour that is involved directly in the operation of SEMOpx. Indirect labour costs are those incurred at a group level and are attributed to SEMOpx. The FTEs indicated below are a blend of both direct and indirect labour costs.

In order to establish the level of resource required in the future, SEMOpx has assessed the various roles required to undertake the necessary scope of activities and the numbers of people required to fulfil those activities.

Having estimated that resource commitment, the RAs understand that EirGrid and SONI subsequently undertook a top-down review of the resources necessary across the entirety of the SEMO and NEMO activities as a combined team, taking advantage of economies of scale and scope from the operation through single combined functions. This approach was taken in consideration of the requirements of CACM, REMIT obligations and the SEMOpx obligations reflected in the SEMOpx Rules. These benefits have been included within the estimate of ongoing resource provided by SEMOpx in the following analysis:

	Pre Go-Live (@ 20%)	May '18 – Sep '18	Oct '18- Sep '19	Description
Labour Costs	€136,000	€390,000	€1,169,000	These relate to directly incurred labour costs for 12.75 FTEs across participant management, vendor management and support services.

Table 2, SEMOpx labour submission

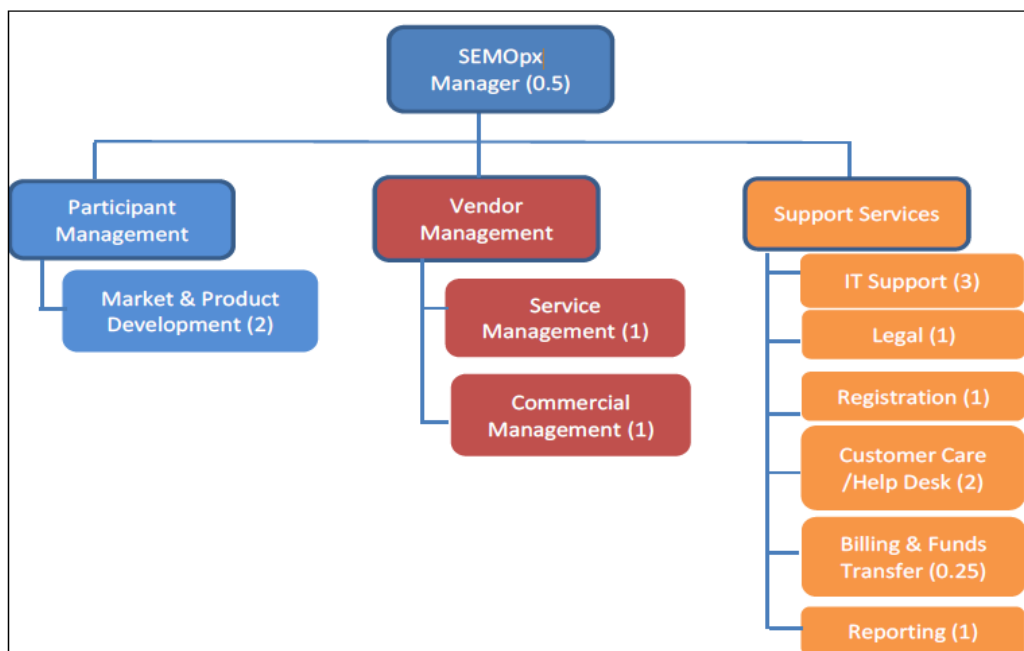


Figure 1

Summary of roles

Detail on the rationale for each resource outlined in figure 1 has been provided in SEMOpx’s submission. A summary of the activities of each proposed resource is outlined below.

- **SEMOpx Manager (0.5 FTE):** The manager will have responsibility for the management of SEMOpx including its specific obligations under the SEMOpx Rules.

- **Market and Product development (2 FTEs):** SEMOpx have stated that two resources are required for the ongoing development of the intraday and day ahead markets, EU policy decisions or local design changes by the SEM Committee. This will include changes to interim solutions for the day-ahead and intraday markets. For the first period of I-SEM, the main body of work to be carried out in this area will be to ensure that the DA/ID market is operating as expected and fit for purpose.
- **Service Management (1 FTE):** This proposed role involves management of a range of contracts related to SEMOpx and a number of third party service providers in order to ensure that the obligations imposed by operating agreements are being complied with.
- **Commercial Management (1 FTE):** This proposed role involves commercial negotiation, business development, market research and the development a statement of charges with the RAs. This resource will also be responsible for compliance with licence conditions.
- **IT Support (3 FTEs):** Between a number of combined resources from within the group (equalling 3 FTEs), providing 24/7 support for the maintenance and support of systems including market monitoring systems, Oracle Middleware, CRM/Query management and accounting systems.
- **Legal (1 FTE):** This resource will manage legal and contractual arrangements with third parties, operational agreements with other parties such as TSOs, ICOs, JAO MRC and PCR and compliance with legally binding codes and directions.
- **Registration (1 FTE):** Facilitation of customer registration in a timely manner.
- **Helpdesk/Customer Care (2 FTEs):** Resolution of customer complaints and queries in a timely manner.
- **Billing and Funds Transfer (0.25 FTE):** Administration of debt collection and accounting for SEMOpx participant fees. EirGrid and SONI need to maintain full financial accounts for these invoiced fees in order to meet both internal, regulatory and CACM obligations.
- **Reporting (1 FTE):** This proposed resource is required for carrying out SEMOpx's market monitoring, surveillance and reporting function as required by REMIT and for the publication of market data.

RA analysis

In order to ensure ourselves of the validity of the resources required to undertake this new activity we have reviewed the nature of the roles envisaged and considered any overlap or duplication. In their submission SEMOpx indicated a total cost over the Price Control of €1,695,000. This equates to €1,169,000 on a per annum basis. The RAs have conducted analysis on both the;

- level of resourcing required;
- The cost of labour proposed.

Whilst it is difficult to find any directly comparable information with other NEMOs we have compared both the scope of the roles envisaged with similar market entities and have considered comparators where the individual activities can be assessed (for example, the Hungarian Power Exchange, HUPX). HUPX has a similar operating model to SEMOpx, whereby it has outsourced its trading activities to a third party. The Hungarian power market size is 27.1TWhs, in comparison to 25.3 TWh in the Island of Ireland with 2014 taken as an example year. Its cost base included 28 employees in January 2017. However, the RAs note that there are limitations to benchmarking of NEMOs, primarily due to the fact that robust benchmarking data is often not available due to the primarily “commercial” nature of NEMOs in Europe.

We conclude that given the business position of SEMOpx the level of resourcing, utilising internal efficiencies is reasonable.

In relation to the cost of labour proposed, the RAs have considered the cost of employment in comparison with other recent price control determinations conducted by the RAs for EirGrid, SONI and SEMO and concluded that the SEMOpx labour costs are broadly comparable to these price controls.

Based on the RAs analysis, we are of the view that the expectation of resources to undertake the NEMO activities post I-SEM implementation to be broadly reasonable, however we note the following:

1. The efficient costs assume an ability to utilise a single team across a number of activities shared with SEMO. This is intended to lead to synergies of €80,000 which would not be realised if there was a requirement for the two activities to be kept separate. Currently we are not of the view that any such separation is required given that the SEMOpx function is a licence condition of SEMO, noting that the revenue allowances are being set separately.
2. The Full Time Equivalent (FTE) estimates include resources to be employed for ongoing customer driven support and product development within both Participant Management and Vendor Management functions. We estimate that the equivalent of 2 FTEs are to be directed to this activity as an efficient cost, including associated overheads and corporate costs, of €210,000. We expect the implementation project to deliver systems that comply with industry requirements. However, whilst for the purposes of consultation the RAs are of the view that it is imperative that a robust resourcing requirement is in place for I-SEM go

live, this is not to say that such a resource may be required after the initial embedding in period i.e. the medium to long term.

2017 monies	Pre Go-Live	May '18- Sep '18	Oct '18 –Sep '19	Total
SEMOpX submission	€136,000*	€390,000	€1,169,000	€1,695,000
RA proposal	€136,000	€390,000	€1,169,000	€1,695,000

Table 3, labour costs

*This is 20% of the total directly incurred labour costs.

2.3 Facilities costs/ Overheads allocated to NEMO

Submission summary

SEMOPx has estimated the overheads necessary to support its operation. These are in respect of the following areas. Please note that pre Go –Live are at 20% of each of the individual cost drivers e.g. 20% of €109,000 for Facilities and Insurance. SEMOPx’s submissions are detailed below.

	Pre Go-Live (@ 20%)	May '18 – Sep '18	Oct '18- Sep '19	Description
IT and Telecommunications	0	€25,000	€75,000	This amount reflects the estimated share of EirGrid’s costs across the group. Since the key trading activities are outsourced to EPEX we understand that no hardware support is incorporated into this amount.
Facilities and Insurance	€22,000	€60,000	€181,000	Facilities costs are allocated on a per head basis and separate insurance policies are put in place for each licence.
Recruitment, HR and Admin	€16,000	€32,000	€95,000	This is based upon an estimate of training, recruitment and travel costs per FTE.
Finance and Regulation	0	€67,000	€200,000	This reflects an estimate of the likely external and internal audits to be conducted e.g. market audit; statutory audit; internal audit and a small balance for any legal professional fees.
Corporate Costs	€10,000	€36,000	€106,000	This reflects an allocation of the Market Operator Director’s costs based upon an estimate of his focus in respect of SEMOPx; an allocation of the EirGrid Board’s costs and those of Group Finance and Regulation on a per head basis. It is assumed that other group costs associated with SEMO Px e.g. Procurement will be minimal following system implementation and Go-Live.
Facilities/overhead totals	€48,000	€220,000	€657,000	

Table 4, facilities & overheads costs

RA analysis

In respect of the above costs we have reviewed the basis for SEMOpx's estimates and also the basis of allocation. We have also reviewed the overall costs in line with other current price controls to ensure the overhead allocations are consistent and efficient in comparison to other regulatory allowances. When compared against the enduring Price Controls on a per annum basis the overhead costs submitted for SEMOpx are 1.7 times the overhead cost of an FTE under the enduring Price Controls i.e. €36,000 versus €21,000.

	Enduring TSO, SONI and SEMO PC ¹	SEMOpx 12 month equivalent
Total cost per FTE	€105,000	€120,000
Overheads per FTE	€21,000	€36,000
Payroll costs per FTE	€84,000	€84,000

Table 5, price control comparisons

The comparison with enduring TSO and MO price controls would suggest that forecast overhead costs are some €151,000 per annum higher than allowed in other Price Controls and hence we would propose to reduce the allowed revenue accordingly.

In respect of IT & Telecommunications and Finance and Regulation costs, these reflect specific systems maintenance and expected audit requirements where an assessment of the costs can be made from similar activities. However, from the ongoing review of I-SEM set up costs market monitoring systems are now considered out of scope and are planned to utilise systems operated by EPEX. As such, this IT support cost (€32,000 p.a.) should be removed from scope.

2017 monies	Pre Go-Live	May '18- Sep '18	Oct '18 –Sep '19
SEMOpx submission	€48,000	€220,000	€657,000
RA reduction of market surveillance system support	€0	(€11,000)	(€32,000)
Reduction in overhead allocation	(€13,000)	(€50,000)	(€151,000)
RA Proposal	€35,000	€159,000	€474,000

Table 6, RA proposals on facilities & overheads

¹ The TSO, SONI and SEMO allowed costs within enduring price controls, and SEMOpx forecast costs, for Facilities and Insurance; Recruitment HR and Admin and Corporate Costs (excluding the management charge of €322k) are reported on a consistent basis and hence we have sought to compare these costs with ongoing efficient allowances elsewhere

2.4 Ongoing Implementation costs

Ongoing implementation costs reflect the monies paid to third parties in respect of supporting systems and other industry costs associated with operating as a NEMO. The majority of these costs are currently uncertain and the RAs have neither a view on nor have approved these costs.

SEMOpX have also included costs associated European market costs which have been approved and allocated on a pan-European level and as such will be treated on a pass through basis to users. The RAs have verified these costs at CACM Task Force level.

NEMO committee costs are split across 19 NEMOs with EirGrid and SONI each being allocated 1/19th each of the total estimated cost. While EirGrid and SONI intend to operate SEMOpX on a joint venture basis, they are considered separate by the NEMO Committee.

Price Coupling Region (PCR) Operation costs related to the Euphemia algorithm have not yet been allocated but SEMOpX have estimated these as a percentage of the volumes in the SEM of the 27 Member States. Market Coupling Region (MCR) costs have not yet been estimated and therefore no estimate has been submitted for this revenue control.

	Pre Go-Live (@ 20%)	May '18 – Sep '18	Oct '18- Sep '19	Description
Ongoing Implementation costs	0	€455,000	€1,362,000	Associated costs for outsourcing, NEMO committee, PCR and market coupling.

Table 7

RA analysis

1. Where third party costs can be agreed or predicted with a reasonable level of certainty then the RAs will include an updated allowance in the final determination in October. Indicative estimates have been submitted and used strictly for the purposes of generating indicative tariff levels.
2. Where the costs are considered to be outside of the control of SEMOpX then the RAs will consider allowing the costs to be passed through to users. This is particularly the case regarding European integration costs such as those related to CACM, PCR and the NEMO Committee.

It is expected that the majority of these cost drivers outside the control of SEMOpX and the RAs will be concluded by the final determination in October.

2.5 Capital Requirements

In the Decision Paper on the revenue recovery principles for SEMOpx, it was stated that any incremental Capex would be reviewed and recovered through SEMOpx's price control. No Capex was included in SEMOpx's submission as it is not envisaged that significant Business As Usual capex would be incurred in the first 16 month period of operation.

2.6 Proposed management fee

In their submission, SEMOpx proposed a management fee representing 10% of the Opex cost base (including the management fee itself) related to the risks that the business bears. SEMOpx argue that this management fee is consistent with the lowest end of that which investors would expect in an 'A' rated business and equivalent to the upper end of BBB+/Baa and compare this to the EBIT margins of regulated postal services in the United Kingdom.

EirGrid and SONI applied for NEMO designation and agreed to the introduction of licence conditions in the Market Operator Licences. Under Article 76(3) of CACM, NEMOs are entitled to recover costs which have not been borne by TSOs by means of fees or other appropriate mechanisms only if the costs are 'reasonable and proportionate'. No reference is made to an appropriate level of return.

	Pre Go-Live (@ 20%)	May '18 – Sep '18	Oct '18- Sep '19	Description
Proposed management fee	€0	€107,000	€323,000	This represents 10% of the Opex cost base (including the management fee itself).

Table 8

Application of RAB WACC vs. Margin approach

Most utility businesses are regulated under a RAB/WACC approach, whereby a monopolistic system operator is allowed to recover revenues in respect of operating expenditure, capital expenditure, incentive payments, and a return on the RAB commensurate with its systematic risk. This approach is applied to both EirGrid and SONI as System Operators with the level of WACC reflecting the risk involved in the businesses.

Alternatively, some regulated businesses e.g. asset light businesses such as energy or water retail have used a margin-based approach as an alternative model of revenue regulation. However, the application of the margin approach is limited in so far as there is no proven model for determining an appropriate margin commensurate with the level of risk that a business may face. In some instances benchmarking has been applied, whereby the margins of comparable businesses are used.

There are a number of issues arising out of such an approach when applied to SEMOpx;

1. Benchmarking of SEMOpx against comparable entities particularly as a standalone electricity trading platform may not take account of shared costs and therefore direct benchmarking on this basis might lead to over-compensation for costs incurred and risks borne. Applying a margin approach to such a function carries the risk of "double counting".
2. SEMOpx is a function being carried out by SEMO which is part of wider TSO businesses. Therefore, it benefits from the capital raising ability of its parent entities via higher gearing and credit ratings.

3. It should be noted that as per SEM Committee Decision Paper 17-044, the setup costs of SEMOpx are being recovered via capitalised costs attributed to the respective parent companies of SEMOpx i.e. EirGrid and SONI. Such capitalised costs will earn a return on capital at the respective TSO WACC rates for EirGrid and SONI. The prevailing WACCs are 4.95% for EirGrid and 4.72% for SONI (post –tax). Based on a depreciation profile of 5 years, this equates to a return for the TSOs of c. €464,788 over the full depreciation period. A pro-rata return based on the duration of this price control (16 months) would be c. €123,943. On this basis, the RAs are of the view that the application of a return via the RAB-WACC approach compensates for the level of residual risk borne by the designated NEMOs. The application of a margin approach may constitute a double reward when there is a return being earned on the TSOS RABs.
4. Irrespective of whether a RAB/WACC approach, as detailed above, or a margin approach is applied, the appropriate benchmark return should reflect levels of risk borne by the regulated business and the level of returns that investors in financial markets would require in return for bearing that risk. A range of mechanisms have been put in place through this price control process that reduce the level of risk that SEMOpx faces for the designation period. This being the case the RAs do not concur with SEMOpx’s views that the level of residual risk reflects a requirement for an operating cost margin of 10% to be applied. Reasons for this include;
 - SEMOpx does not bear all of the risks arising from its activities as there are provisions to allow the business to recover revenue shortfalls through the application or a correction factor at the end of the price control period. This differs from the level of risk that an unregulated NEMO would face, where revenue shortfalls would not be recovered.
 - SEMOpx’s proposal of 10% margin on operating costs is based on a comparison with the Post Office in the United Kingdom, where a Universal Service Obligation (USO) exists. The RAs note that the proposed level of 10% is at the upper end of regulated margins which range from 0.5% to 12%, some of which apply to internal costs only².
 - Taking into consideration the points above, the RAs are of the view that the return via the RAB WACC approach is of a sufficient level to cover the risks borne, and has the additional benefit of being based on an established RAB WACC approach.

² A large proportion of SEMOpx’s costs are third party costs rather than internal.

Year	Entities	Regulator	Application of benchmarking	Used for price setting?	EBIT Margin
2017	DCC	Ofgem	Fixed margin applied to Internal Costs; price control reflects level of risk relating to DCC's monopoly role	Yes	12%
2016	UK Big Six Energy Firms	CMA	Competitive benchmark profit margins for retail energy supply based on analysis of the Big Six firms	No	2%
2014	UK Water retailers	Ofwat	Appropriate retail net margins for household (HH) and non-household (non-HH) customers, assuming an efficient company with normal return	Yes	0.5-2.0% (HH); 1.0-4.0% (Non-HH)
2013	Power NI	UR	Determined allowable margin applied to forecast regulated turnover; increase in allowed margin since last decision reflects increased risk from emergence of competitive market	Yes	2.2%
2013	New South Wales electricity retailers	IPART	Estimation of retail margin for regulated electricity tariffs using three different approaches; estimated margin provides compensation for systematic risk	No	4.5%
2012	Royal Mail	Ofcom	Reasonable commercial rate of return for Royal Mail to remain financeable in the medium-term	No	5-10%

Table 9

In summary, taking account of the fact that the setup costs are being borne by the TSOs and will earn a return on capital through the respective TSO WACCs the RAs do not agree with SEMOpX's assertion that a margin of 10% is required to compensate for the level of risk, given the decision to capitalise costs via the TSOS and the fact that the price control is being conducted on an allowed revenue regime.

In addition, the RAs note that it is SEMO that is obligated to undertake NEMO functions as a licence condition, and that whilst SEMOpX refer to the 10% management approach as being consistent with an investment grade rating for SEMOpX on a standalone basis, SEMOpX cannot raise finance as it is not a separate legal entity. As such, an investment grade rating is not considered necessary by the RAs. We are therefore currently minded to underwrite SEMOpX efficient operating costs only in setting tariffs and remove any management fee for the purpose of this draft determination paper, noting our previous statements on establishment costs.

We note that this aspect is also under consideration for the SEMO Price Control, and we invite feedback on this aspect from interested stakeholders. Having considered this aspect carefully the RAs have, as outlined above noted that they are of the view that the return via the TSOs RAB WACC is at a level that sufficiently remunerates EirGrid/SONI for the risk borne in undertaking the functions of a NEMO. Nonetheless, the RAs invite feedback on this aspect.

2.7 Revenue proposals

Having conducted a review of the NEMO costs proposed by SEMOpx, including labour, overheads, ongoing implementation costs as well as the application of a management fee, the RAs are currently minded to allow for the recovery of efficient operating costs as follows:

	Pre Go-Live	May '18 to End Sep '18	Oct '18 to End Sep '19	Total
2017 monies	€	€	€	
SEMOpx proposals	€ 184,000	€ 1,172,000	€ 3,510,000	€4,866,000
Deduction of maintenance of market surveillance system support		(€ 11,000)	(€ 32,000)	€ 43,000
Reduction in overhead allocation	(€ 13,000) ³	(€ 50,000)	(€ 151,000)	€214,000
Removal of management fee		(€ 107,000)	(€ 323,000)	€ 430,000
RA proposals	€ 171,000	€ 1004,000	€ 3,004,000	€4,179,000

Table 10

Under these initial proposals it is considered that **€4.179m** of costs be considered the appropriate level of efficient costs to be recovered via SEMOpx tariffs notwithstanding certain uncertain costs which will require final review. It should be noted that the management fee proposal constituted €430,000 of this reduction, and is the aspect that is still undergoing RA review.

This is 15% less than the **€4.866m** proposed in the SEMOpx submission. We look forward to comments concerning this calculation and judgement in order that a final decision can then be made and incorporated into a final revenue decision.

³ Calculated as being a comparable efficient proportion of overheads to direct labour costs as per the annual assessment made in section 2.2 (25.8% of directly incurred labour)

3 Cost uncertainty

The submission of costs reflects SEMOpx’s best estimate of the expenditure required for providing a power exchange for the wholesale integrated electricity market for the island of Ireland over the period of its current designation. In association with this cost submission are a number of key assumptions:

- That I-SEM Go-live remains 23rd May 2018 and that implementation costs remain recoverable through TSO TUoS and SSS tariffs in accordance with a prescribed split of 75% to EirGrid and 25% to SONI;
- That the price control underwrites the continuing efficient costs of providing a NEMO service for the designation period, irrespective of the market share that SEMOpx maintains;
- Unforeseen costs that cannot reasonably be foreseen should be subject to separate provision e.g. costs resulting from subsequent changes in legislation or regulation;
- Costs resulting from major or exceptional market change are excluded from the cost estimates submitted;
- SEMO and SEMOpx are operating on the basis that there are no restrictions concerning the sharing of premises, personnel or systems from each other or an affiliate or related undertaking.
- Third party costs associated with the Power Exchange and Central Counterparty are not yet negotiated and therefore cannot yet be predicted with any certainty;
- Any costs directly attributed to a participant have not been factored into these cost estimates but will be billed to them as a pass-through rather than socialising through tariffs;
- That exchange rate effects should be incorporated on a pass-through basis in line with the pre-existing standards in place for SEMO; and

We therefore set out below how the RAs propose to deal with each of these cost uncertainties:

Risk	RA Response
Change to I-SEM Go-live	Should the Go-live date be subject to further change then an assessment will be made as to the appropriateness of an apportionment of relevant costs for the remainder of the price control
Changes in market share	The provision of a NEMO service is predominantly a fixed cost. Some of the costs are likely to vary however with market share and will be managed through a correction factor and reviewed at the end of this price control period.
Changes in legislation or regulation	We would not expect to re-open the price control to allow for cost increases resulting from any or all changes to the market or from legislation or regulation. Some changes might benefit SEMOpx and some might impose additional costs. We therefore propose to introduce a re-opener where costs escalate either individually or in aggregate over the period of the price control above a material threshold.
Major or exception changes in market	
Current uncertainty in some third party costs	Such costs should be known at Final Proposals and hence will be updated in allowed costs accordingly
Increase in costs from individual participant requirements	Any incremental costs imposed on SEMOpx should be incurred by the party imposing such costs and hence we

	agree that SEMOpx should be held cost neutral from such requests
Exchange rate fluctuation	We would agree that exchange rate fluctuations are not controllable in this context and can be passed through

Table 11

We believe that where costs are capable of being managed by the licensee then the associated risks and opportunities should also reside with the licensee based upon an ex-ante allowance. This approach provides certainty and predictability for both SEMOpx and participants and consumers alike. It also provides incentives for SEMOpx to operate efficiently and reduce costs where possible. Where however factors exist outside of SEMOpx's control or the implications cannot be reasonably predicted then the licensee should be protected from those cost increases, but in a way that still ensures they manage the implications in an efficient manner.

In the table above we have sought to identify the areas raised by SEMOpx and where the RAs are of the view it appropriate to pass on those risks and uncertainties but in a manner that still ensures efficient management.

The costs associated with SEMOpx and SEMO are being set separately and recovered via separate mechanisms such that no cross-subsidisation shall occur. For clarity, the RAs require that the operation of the functions of SEMOpx shall be consistent with the licence obligations in the EirGrid and SONI Market Operator licences, including requirements as to independence.

Where stakeholders are of the view there are better approaches to deal with uncertainty but continue to give SEMOpx the protection necessary, the RAs invite such comments.

K-Factor

Any difference between forecasted and actual market demand or assumptions outlined in the table above will necessitate a balancing of the resultant over or under recovery experienced by SEMOpx at the end of this price control period and thus at the end of the initial designation period. As outlined in the Decision Paper on Revenue Recovery Principles, SEM-17-044, there are a number of possible scenarios for the treatment of any k factor;

1. Over or under recovery by SEMOpx, where they continue in the market beyond the end of this Price Control period under a revenue regulated regime.
2. Over or under recovery by SEMOpx, where they continue in the market without revenue regulation.
3. Over or under recovery by SEMOpx, where market exit has occurred.

In scenario one, the correction factor would be applied to SEMOpx and would be corrected via future regulated revenue streams. For example, if SEMOpx over-recovered or under-recovered its revenues as set out in the revenue control final determination to be published in November 2017 and it was decided that a second revenue control would apply, a correction factor would be applied to the revenue control for SEMOpx.

In scenario 2, where SEMOpx continues in the market but where sufficient competition has developed and it is decided that a revenue regulated regime will not apply, the treatment of any correction factor would need to be considered carefully in order to ensure that there is no distortion

to a level playing field for competition. This correction factor could either apply to SEMOpx or to SEMO given that the licence conditions pertaining to the NEMO are ascribed to the Market Operator licences. However, a decision will be made on this aspect of the treatment of any correction factor once the market conditions at the time are better known.

In scenario 3, where SEMOpx exits the market, any correction factor would be attributed to SEMO as the licence conditions pertaining to the NEMO are ascribed to the Market Operator licences.

The RAs are of the view that these methods of correcting any correction factor that may arise provides both certainty for the current price control and allows for delineation between the market circumstances pertaining to I-SEM go-live and the relevant articles in CACM relating to a competitive NEMO environment.

4 Performance standards for SEMOpx

As part of this Draft Determination Paper the RAs are considering a range of performance standards that should apply to SEMOpx given its role in I-SEM design. A number of these performance standards are currently in development through for example, the SEMOpx publication requirements as set out in the SEMOpx Rules as well as in tandem with the RA's market surveillance role.

The performance standards proposed in this Draft Determination paper do not contain the detailed definitions that will be required for the final set of KPIs to apply to SEMOpx, given that the timings of data publications and reports are currently in development.

Feedback was requested regarding suggested KPIs for SEMOpx in SEM-17-018 'Revenue Recovery Principles for SEMO and Designated NEMO (SEMOpx) from I-SEM go-live'. A range of responses on the types of KPIs that could apply were received, detailed here;

- In their response to the consultation, SSE Airtricity provided some proposals for incentives. They have proposed that the provision of accurate and timely information is incentivised for; Market Results, Trade Confirmations, ETS bid files, Block Bid Order files and Buy and Sell curves.
- SSE Airtricity also proposed that a KPI based on platform reliability should be considered following the 'bedding in' period for the platform. It was proposed that the reliability of the platform is particularly important given that the SEMOpx platforms are the only route to market for physical power in I-SEM.
- BGE believes that to ensure compliance with CACM on the efficient recovery of costs by SEMOpx, that explicit obligations and related KPIs for SEMOpx are necessary. BGE is of the view that the publication of certain data within particular timelines is also critical to efficient market functioning. This data includes for example early ex-post prices. Other KPIs should include the need for system availability and resolution of queries within usefully narrow timelines. Credit cover and invoicing are also relevant parameters.
- Viridian believe data transparency from NEMOs should be a licence obligation, and proposed a consultation by the RAs on what data should be provided to the market. They suggested that once data requirements are in place, the market should be allowed to operate for a time, after which a review of performance against targets should be completed.

Performance standards applied to 2009 SEMO Price Control

Using a comparison with SEMO's KPIs for SEM, the SEM Committee decided to introduce an incentive scheme based on four target KPIs, weighted according to the importance of each indicator for the 2009 SEMO Price Control following one year of operation. Four KPIs were proposed and a reward only mechanism was used for this one year period of SEMO's price control⁴.

⁴ See SEM-09-089 for details of these KPIs

Where SEMO's performance was above target, it would earn rewards which would increase linearly up to a maximum level. These KPIs are described below.

KPI	Description
Ex-ante (Pricing Report)	The Ex-ante publication targets refer to the percentage of occurrences where the Ex-ante Pricing reports are published on time.
Ex-post Initial (Pricing Report)	The Ex-post Initial publication targets refer to the percentage of occurrences where the Ex-Post Initial pricing reports are published on time.
Invoicing	The Invoicing targets refer to the percentage of occurrences where Invoices to all participants are published on time.
Credit Cover Increase Notice (CCINs)	The credit cover increase notice targets refer to the percentage of occurrences where the CCINs are published on time.

Table 12

In terms of assessing the performance standards the RAs decided that a measurement was taken at the tariff year end, using the average value of each KPI over the full year. A reward mechanism equivalent to 2.5% of total internal costs was implemented, with the targets and weights of each KPI outlined in the table below.

Metric	Weighting	Target	Upper Bound
Ex-Ante Pricing Report	0.2	99%	100%
Ex-Post Initial Pricing Report	0.2	99%	100%
Invoicing	0.4	90%	95%
Credit Cover Increase Notices	0.2	98%	100%

Table 13

KPIs applied to SEMO in 2016-2019 price control

The 2013-2016 Price Control for SEMO increased the number of KPIs, weightings and incentive pot to incentivise SEMO to focus on the importance of customer value and service delivery.

In the 2016-2019 SEMO price control, KPIs were assessed on a quarterly basis, based on the average value of each KPI over that period. The incentives pot was based on 4% of annual OPEX for the first period of the price control. The KPIs applied to SEMOpx and their associated weightings are shown in the table below;

	Weightings	Target	Upper Bound
Ex-ante pricing report	0.19	99%	100%
MIUN publication	0.05	99%	100%
Ex-post initial pricing report	0.10	99%	100%
Invoicing	0.20	97%	100%
Credit Cover Increase Notices	0.10	99%	100%
SEMO related resettlement queries	0.20	<9	<5
General Queries	0.15	97%	99%
System Availability (7am to 5pm Mon-Sun)	0.10	99.4%	99.8%

Table 14

Proposed performance standards for SEMOpX

At this time, the RAs are cognisant that this Price Control is limited in duration, and that the application of performance standards may necessitate a “bedding in” period. In addition, as per the revenue principles in SEM-17044 there is no certainty that the RAs will continue to revenue regulate SEMOpX beyond this initial price control period. This creates a level of uncertainty on how any financial aspect of incentive related performance standards would apply.

Nonetheless, the RAs are now proposing that a broad range of performance standards should be introduced, with a view to requesting further feedback on the suitability and ease of applicability of the performance standards to include aspects such as a view on the proposed performance standards as well as the applicability of a financial based incentive mechanism. The proposed performance standards are outlined below and are influenced by the current work ongoing through the SEMOpX Rules and Data Publication Guide.

KPI	Definition
Timely and accurate delivery of data publications and performance of market monitor	Timely and accurate delivery of reports as per the specifications for set out in the Data Publication Guide and provision of accurate data to RAs in a timely manner if irregularities in the market are noticed.
Timely delivery of market results	Publication of accurate Market Results for the day ahead and intraday markets in line with the timelines outlined in the Data Publication Guide and SEMOpX Operating procedures. Timely is defined as meeting the specification for the time after the trading period for publication of preliminary and final market results.
General queries and customer service	Queries and customer service issues resolved within a certain number of business days

The data publications that will be available for the Ex-Ante Market have been grouped into two categories by SEMOpx, Market Development and Market Data. Market development includes the process by which the SEMOpx rules (and associated obligations) are agreed, modified and reported, along with the processes by which Disputes are handled and Regulatory Authority decisions published.

Market data includes the data and information published in relation to Ex-Ante market registration, auction conduct and results, continuous intra-day trading results, and DAM/IDM settlement. Ex-ante market data will include auctions results and continuous trading results.

As of the 5th of May 2017, the working draft version of the I-SEM Data Publication Guide published by EirGrid and SONI presented a number of reports to be published in the EX-Ante (SEMOpx) market, outlined in table 9.

In addition, the SEMOpx Rules state that SEMOpx shall publish market data in accordance with the Operating Procedures. For the day ahead market, the draft Operating Procedures currently state that SEMOpx shall publish the outcomes for each Auction no earlier than the time specified for publication in Appendix A.

For the intraday market, the draft Operating Procedures currently state that SEMOpx shall publish the outcomes for each Auction no earlier than the time specified for publication in A.2 for the intraday auction.

The current range of data that is to be published is outlined below.

Auction Results	Continuous Trading Results
ETS Market Results	Intraday Market Results Trade
ETS Bid File	Intraday Market Results Order
Block Bid Order File	Intraday Market Results Statistics
Bid/Ask Curves	
Resilience Results Files	
Exchange Transparency	

Table 15

Details of the timing for publication of preliminary and final results are not published in Appendix A.1 and Appendix A2 of the draft SEMOpx Operating Procedures yet. It is proposed that the performance standards of SEMOpx are linked to ensuring that these specifications are met.

5 Tariffs

Stakeholder feedback on form of tariffs

Stakeholder feedback was requested in SEM-17-018 on the issue of tariffs and their structure ahead of the consultation paper on the principles to apply to SEMOpx's price control.

- PrePayPower is of the view that a lower fixed cost, higher transaction cost tariff structure is more in line with the market design and the smaller size of market participants in the SEM, rather than a high fixed cost, low transaction cost tariff structure.
- SSE Airtricity considers that the establishment of an appropriate tariff mechanism will have a direct impact on liquidity in the market. Variable transaction or volume based tariffs will prevent the development of liquidity through disincentivising small volumes being posted and traded. Based on this, SSE has proposed that per transaction fees are avoided and volume fees are kept to a minimum.
- In their response, Gaelectric highlighted the difficulty market participants may face related to increased fixed costs to participate in I-SEM.
- BGE believes that an appropriate balance must be struck as between fixed and variable (floating) charges in order that all sizes of market participants can access market timeframes. In this context BGE is in favour of applying variable fees on a per MWh basis.
- Viridian support tariffs based on a cost 'per MWh' charging structure.

Tariff setting process

Condition 3A of the EirGrid Market Operator Licence and Condition 15A of the SONI Market Operator Licence reference the SEMOpx statement of charges;

'The Licensee shall at all times charge in respect of its NEMO Activity in accordance with its NEMO Statement of Charges and with the requirements of the CACM Regulation. The Authority shall specify from time to time by direction the form of the NEMO Statement of Charges, which shall include a price list.'

In addition, the Market Operator Licences state;

'The Licensee shall obtain the Authority's prior approval to the NEMO Statement of Charges. In the event that the Authority considers there to be sufficient competition for NEMO services in the Single Electricity Market, it may issue a direction removing the foregoing requirement for such period of time as it specifies and in any case, until such time as it issues a further direction to re-apply such requirement.'

For this price control, an indicative statement of charges is published alongside this draft determination paper, in order to give participants the potential range of fees for SEMOpx in time for registration with SEMOpx. The final statement of charges will be approved by the RAs following the final determination on SEMOpx's revenues. It should be noted that the final SEMOpx statement of charges approved by the RAs may differ from the fees presented here, but the parameters for potential changes have been outlined in as much detail as possible.

The tariffs presented in this draft determination reflect the allowed revenues proposed for SEMOpX. Once a final determination on SEMOpX's revenues for the 16 month price control period is published SEMOpX will provide a statement of charges based on this revenue for approval by the RAs.

Modelling of different tariff types and their impact on different market participants has been conducted in order to ensure that tariffs are equitable and enable participation from a broad range of stakeholders. The information on tariffs presented in this paper is indicative of the tariff structure that may be introduced including a balance of fixed and variable charges. There are three potential elements to the SEMOpX tariffs;

Once off Entry Fee: This fee is a once off joining fee payable by each exchange member.

Annual Fee: This is an annual fee for participation in the day ahead and intraday markets for each Exchange Member.

Per/MWh fee: The fee per MWh will be the same in the Day-Ahead and Intraday Markets.

The level of tariffs set out in this chapter are broadly indicative only based on the proposals outlined in this consultation paper and cannot be considered the basis for comparison.

Scenario development

A number of scenarios have been developed based on different market assumptions, outlined in the table below.

Scenario				
Total Market Volumes	67TWhs	67TWhs	67TWhs	67TWhs
% of total market traded in the DAM and IDM	95%	95%	80%	80%
Number of participants	96	50	96	50

Table 17

Total Market Volumes of 67TWhs have been estimated based on current market volumes on a gross "double sided" basis based on average metered demand including errors for 2015 and 2016. The starting point in the model is:

- $(33.8\text{TWhs for 2016} + 33.2\text{TWhs for 2015}) \times 2 = 134 \text{ TWhs}$ (gross double sided for 2 years)
- $134 \text{ TWhs} / 2 = 67 \text{ TWhs}$ average for 2015 + 2016 (gross double sided average for 1 year)

A market volume growth index is applied to the average volumes in the model. The source for the growth index is the All Island Generation Capacity Statement 2016-2025 and the Median electricity demand forecast annual growth rate outlined in the Generation Capacity Statement was applied.

The number of assumed participants will depend on whether participants register at a group entity level or a legal entity level as Exchange Members.

The scenario that has been used for the purposes of the tariffs accompanying this draft determination paper assumes the 95% of total market volumes will be traded through SEMOpx based on comparisons with other markets. It also assumes 50 Exchange Members registered with SEMOpx.

Any changes between the indicative tariffs published in this draft determination paper and the final determination will relate to changes in costs due for example to uncertainty around Third Party and EU Costs or different allowed revenues to those proposed in this paper based on feedback through the consultation process. These indicative tariffs are presented below.

The indicative tariffs illustrated are for the provision of services adequate to trade energy in the DA and ID markets. Additional, optional, services such as provision of multi user or read only access will attract an additional fee.

Fee Structure	Cost
Once off entry fee (€)	5,000
Annual subscription fee (€ per annum) ⁵	5,000
Variable trading fee DAM (€ per MWh)	0.041
Variable trading fee IDM (€ per MWh)	0.041

The variable fee shown in the table above is a flat fee regardless of whether the volumes traded are in the Day Ahead or Intra Day Market. An illustrative example of SEMOpx fees for an Exchange Member for the first tariff period (16 months ending 30th of September 2019) is shown below.

Volumes traded (MWhs)	50,000MWh
Once off Entry Fee	€5,000
Annual Subscription Fee	€5,000
Variable Trading Fee €/MWh	€2,050
Total Fees	€12,050

⁵ This is a general fee and allows trading in both the DAM and IDM

6 Conclusion and Next Steps

This consultation paper outlines the RAs views on the revenue requirements pertaining to SEMOpx for the period of designation up to 2019. Broadly speaking, whilst the RAs see many of the cost drivers as reasonable, the RAs do not view the application of a margin based approach to SEMOpx as reasonable given that a return is also applied via the TSOs RABs.

On this basis, the RAs invite feedback from interested parties on the proposals outlined in this paper, in particular the applicability and suitability of applying performance standards to SEMOpx.

The NEMO will at all times charge in respect of its activity in accordance with its Statement of Charges, which shall include a price list. We are also seeking views on the specification of the detail required in the Statement of Charges.

The closing date for responses to this Draft Determination is the 8th of September 2017. Responses can be sent to Gina Kelly gkelly@cer.ie and Joe Craig Joe.Craig@uregni.gov.uk